

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

**FORM 20-F**

**REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934**

**OR**

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the fiscal year ended December 31, 2018**

**OR**

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**OR**

**SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Date of event requiring this shell company report \_\_\_\_\_

**For the transition period from \_\_\_\_\_ to \_\_\_\_\_**

Commission file number 0-30070

**AUDICODES LTD.**

(Exact name of Registrant as specified in its charter and translation of Registrant's name into English)

ISRAEL

(Jurisdiction of incorporation or organization)

1 Hayarden Street, Airport City Lod 7019900, Israel

(Address of principal executive offices)

Shabtai Adlersberg, CEO and President, Tel: 972-3-976-4105, Fax: 972-3-9764040, 1 Hayarden Street, Airport City, Lod 7019900 Israel

(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Ordinary Shares, nominal value NIS 0.01 per share	Nasdaq Global Select Market

Securities registered or to be registered pursuant to Section 12(g) of the Act:

None
(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None
(Title of Class)

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

As of December 31, 2018, the Registrant had outstanding 29,091,176 Ordinary Shares, nominal value NIS 0.01 per share.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes  No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark whether registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of “large accelerated filer,” “accelerated filer,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large Accelerated filer                       Accelerated filer                       Non-accelerated filer                       Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards<sup>†</sup> provided pursuant to Section 13(a) of the Exchange Act.

<sup>†</sup> The term “new or revised financial accounting standard” refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP                       International Financial Reporting Standards as issued by the International Accounting Standards Board                       Other

If “Other” has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17  Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes  No

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## PRELIMINARY NOTE

This Annual Report contains “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, or the Securities Act, and Section 21E of the Securities Exchange Act, or the Exchange Act. These forward-looking statements can generally be identified as such because the context of the statement will include words such as may, “will,” “intends,” “plans,” “believes,” “anticipates,” “expects,” “estimates,” “predicts,” “potential,” “continue,” or “opportunity,” the negative of these words or words of similar import. Similarly, statements that describe our business outlook or future economic performance, anticipated revenues, expenses or other financial items, introductions and advancements in development of products, and plans and objectives related thereto, and statements concerning assumptions made or expectations as to any future events, conditions, performance or other matters, are also forward-looking statements. Forward-looking statements are subject to risks, uncertainties and other factors that could cause actual results to differ materially from those stated in such statements. Factors that could cause or contribute to such differences include, but are not limited to, those set forth under Item 3.D, “Key Information - Risk Factors” of this Annual Report.

Our actual results of operations and execution of our business strategy could differ materially from those expressed in, or implied by, the forward-looking statements. In addition, past financial and/or operating performance is not necessarily a reliable indicator of future performance and you should not use our historical performance to anticipate results or future period trends. We can give no assurances that any of the events anticipated by the forward-looking statements will occur or, if any of them do, what impact they will have on our results of operations and financial condition. In evaluating our forward-looking statements, you should specifically consider the risks and uncertainties set forth under Item 3.D, “Key Information - Risk Factors” of this Annual Report.

## PART I

Unless the context otherwise requires, “AudioCodes,” “us,” “we” and “our” refer to AudioCodes Ltd. and its subsidiaries.

### ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

### ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

### ITEM 3. KEY INFORMATION

#### A. SELECTED FINANCIAL DATA

The selected financial data, set forth in the table below, have been derived from our audited historical financial statements for each of the years from 2014 through 2018. The selected consolidated statement of operations data for the years ended December 31, 2016, 2017 and 2018, and the selected consolidated balance sheet data as of December 31, 2017 and 2018, have been derived from our audited consolidated financial statements set forth elsewhere in this Annual Report. The selected consolidated statement of operations data for the years ended December 31, 2014 and 2015, and the selected consolidated balance sheet data as of December 31, 2014, 2015 and 2016 have been derived from our previously published audited consolidated financial statements, which are not included in this Annual Report. The selected financial data should be read in conjunction with our consolidated financial statements, and are qualified entirely by reference to these consolidated financial statements. Unless otherwise indicated, in this Annual Report all currency references are to United States dollar (“dollar”).

**Year Ended December 31,**

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>(In thousands, except per share data)</b>					
<b>Statement of Operations Data:</b>					
Revenues:					
Products	\$ 118,561	\$ 101,990	\$ 102,279	\$ 107,482	\$ 119,887
Services	33,018	37,769	43,292	49,257	56,336
Total revenues	<u>151,579</u>	<u>139,759</u>	<u>145,571</u>	<u>156,739</u>	<u>176,223</u>
Cost of revenues:					
Products	54,349	47,227	46,935	47,445	51,878
Services	8,243	9,744	10,295	11,449	13,739
Total cost of revenues	<u>62,592</u>	<u>56,971</u>	<u>57,230</u>	<u>58,894</u>	<u>65,617</u>
Gross profit	88,987	82,788	88,341	97,845	110,606
Operating expenses:					
Research and development, net	32,275	27,996	29,139	30,348	34,661
Selling and marketing	45,534	43,360	45,084	48,954	49,335
General and administrative	7,677	8,726	6,364	8,893	10,251
Total operating expenses	<u>85,486</u>	<u>80,082</u>	<u>80,587</u>	<u>88,195</u>	<u>94,247</u>
Operating income	3,501	2,706	7,754	9,650	16,359
Financial income (expenses), net	196	(442)	160	(10)	228
Income before taxes on income	<u>3,305</u>	<u>3,148</u>	<u>7,594</u>	<u>9,640</u>	<u>16,587</u>
Tax benefit (taxes on income)	3,391	2,782	(8,644)	(5,610)	(3,094)
Net income (loss)	<u>\$ (86)</u>	<u>\$ 366</u>	<u>\$ 16,238</u>	<u>\$ 4,030</u>	<u>\$ 13,493</u>
Earnings (loss) per share:					
Basic	<u>\$ (0.00)</u>	<u>\$ 0.01</u>	<u>\$ 0.46</u>	<u>\$ 0.13</u>	<u>\$ 0.47</u>
Diluted	<u>\$ (0.00)</u>	<u>\$ 0.01</u>	<u>\$ 0.45</u>	<u>\$ 0.13</u>	<u>\$ 0.45</u>
Weighted average number of shares used in computations of earnings (loss) per share (in thousand):					
Basic	<u>42,286</u>	<u>40,178</u>	<u>35,174</u>	<u>31,104</u>	<u>28,928</u>
Diluted	<u>42,286</u>	<u>40,565</u>	<u>35,779</u>	<u>32,168</u>	<u>30,220</u>

	<b>December 31,</b>				
	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Balance Sheet Data:</b>					
Cash and cash equivalents	\$ 14,797	\$ 18,908	\$ 24,344	\$ 24,235	\$ 31,503
Short-term and restricted bank deposits, marketable securities and accrued interest	8,173	8,141	10,179	9,826	31,983
Working capital	34,218	30,376	34,951	32,015	59,327
Long-term and restricted bank deposits and long-term marketable securities	62,750	53,328	34,947	24,682	1,894
Total assets	200,384	189,820	186,976	170,938	179,372
Bank loans	9,791	11,370	11,944	8,756	6,174
Total equity	133,721	117,453	108,659	92,381	94,548
Capital stock (*)	235,885	238,638	243,183	248,269	257,072

(\*) Capital stock represents share capital plus additional paid-in capital.

B. *CAPITALIZATION AND INDEBTEDNESS*

Not applicable.

C. *REASONS FOR THE OFFER AND USE OF PROCEEDS*

Not applicable.

D. *RISK FACTORS*

We are subject to various risks and uncertainties relating to or arising out of the nature of our business and general business, economic, financing, legal and other factors or conditions that may affect us. We believe that the occurrence of any one or some combination of the following factors could have a material adverse effect on our business, financial condition, cash flows and results of operations.

***Risks Related to Our Business and Industry***

**We have invested significant resources in developing products compatible with Microsoft Skype for Business, Microsoft Teams and related solutions of other partners of ours. If Microsoft or our other partners, such as Genesys, Avaya or BroadSoft (acquired by Cisco), abandon their solutions compatible with our products, or decide to promote products of our competitors instead of our products (including as a result of acquiring one of our competitors), or become unwilling to continue to recognize AudioCodes as a partner or fail to achieve the expected growth of solutions compatible with our products, our results of operations will be adversely affected.**

We have invested significant resources in complying with Microsoft's requirements for the purpose of becoming a Microsoft recognized partner for their unified communication solutions for the enterprise market, which are known as Microsoft Skype for Business (formerly known as Microsoft Lync) and Microsoft Teams. We have adapted some of our gateway products, IP phones, session border controllers, survivable branch applications, value added applications and professional services to operate in the Skype for Business and Teams environments. We believe that recognition as a Microsoft partner enhances our access to and visibility in markets relevant to our products. We are dependent on the users of Skype for Business and Teams to select our compatible products and purchase them. If Microsoft were to abandon (or significantly change) Skype for Business and Teams, decides to promote the products of our competitors instead of our products (including as a result of an acquisition of one of our competitors such as Ribbon Communications (formerly Sonus Networks), Plantronics or Yealink), becomes unwilling to continue to recognize AudioCodes as a Skype for Business and Teams partner or fails to achieve the expected growth of Skype for Business or Teams, our results of operations will be adversely affected.

Similarly, we have invested in the development of products and capabilities and achieving certifications for the solutions of other partners of ours, such as Genesys and Avaya contact centers or BroadSoft's BroadWorks and BroadCloud (acquired by Cisco). If those partners decide to promote products of our competitors instead of our products, are unwilling to continue to recognize AudioCodes as a partner or fail to achieve the expected growth of solutions compatible with our products, our results of operations may be adversely affected.

**Funding of our new R&D Center may not be continued and we may not be able to develop commercially profitable products at the Center.**

In June 2016, the Israel National Authority for Technology and Innovation (formerly known as the Office of the Chief Scientist of the Israeli Ministry of Economy and Industry) ("IIA"), approved a three-year program (2016-2018) for approximately NIS 107 million (equal to approximately \$27.8 million based on the exchange rate in effect as of December 31, 2016). In June 2018, IIA reduced our grant with respect to 2018, which has not yet been fully funded, by approximately NIS 21 million. Our receipt of the remaining funds granted to us under the 2016-2018 program are subject to conditions relating to grants by IIA. With respect to 2019 and later years, we may be unable to secure new program grants from IIA. In the event we do not receive the remaining funds granted to us under the 2016-2018 program or are unable to secure new grants from IIA for 2019 or later years, our results of operations may be negatively affected and we may be unable to complete research and development projects that could lead to new product launches and sales.

**We have reported losses in the past. We may report additional losses in the future.**

We reported a net loss in 2014. The majority of our expenses are directly and indirectly related to the number of people we employ. Most of our wages are denominated in New Israeli Shekels ("NIS"). Fluctuations in exchange rates may cause our expenses to increase in dollars. We may increase our expenses based on projections of revenue growth. If at any given time we do not meet our expectations for growth in revenues, our expenses incurred in anticipation of projected revenues may cause us to incur a loss. We may not be able to anticipate the correct amount of expenses in relation to our revenue and adjust our variable costs accordingly. As a result, we may report additional losses in the future.

**Our gross margin could be negatively impacted by amortization expenses in connection with acquisitions, increased manufacturing costs and other factors. This could adversely affect our results of operations.**

Our gross margin has fluctuated in the past. Our gross margin has been negatively affected in the past and could continue to be negatively affected by amortization expenses in connection with acquisitions, expenses related to share-based compensation, increases in manufacturing costs, a shift in our sales mix towards our less profitable products, increased customer demand for longer product warranties, fixed expenses that are applied to a lower revenue base and increased cost pressures as a result of increased competition. Acquisitions of new businesses could also negatively affect our gross margin. A decrease in our gross margin could cause an adverse effect on our results of operations.

**Uncertain economic conditions may adversely affect our business.**

In the past, uncertain global and local economic conditions have had a significant impact on the technology industry and our major customers and potential customers. Conditions may continue to be uncertain or may be subject to deterioration, which could lead to a reduction in consumer and customer spending overall and result in an adverse impact on sales of our products. A disruption in the ability of our significant customers to access liquidity could cause serious disruptions or an overall deterioration of their businesses, which could lead to a significant reduction in their orders of our products and the inability or failure on their part to meet their payment obligations to us, any of which could have a material adverse effect on our results of operations and liquidity. A significant adverse change in a customer's financial and/or credit position could also require us to assume greater credit risk relating to that customer's receivables or could limit our ability to collect receivables related to previous purchases by that customer. As a result, our allowance for doubtful accounts and write-offs of accounts receivable could increase.

**We may need additional financing to operate or grow our business. We may not be able to raise additional financing for our capital needs on favorable terms, or at all, which could limit our ability to grow and to continue our longer term expansion plans.**

We may need additional financing to operate our business, continue our longer term expansion plans or acquire other businesses. To the extent that we cannot fund our activities and acquisitions through our existing cash resources and any cash we generate from operations, we may need to raise equity or debt funds through additional public or private financings. We cannot be certain that we will be able to obtain additional financing on commercially reasonable terms, or at all. This could inhibit our growth, increase our financing costs or cause us severe financial difficulties.

**We could be forced to repay our bank debt if we are unable to satisfy the covenants in our loan agreements.**

In December 2015, we borrowed \$3 million and 3 million Euro pursuant to loan agreements with our banks. These amounts are repayable in 20 equal quarterly installments from March 2016 through December 2020. In December 2016, we borrowed an additional \$6 million which is repayable in 20 equal quarterly installments which began in March 2017 and continue through December 2021. If we are unable to make payments when required by these loan agreements or if we do not comply with covenants in our loan agreements with respect to maintaining shareholders' equity, cash balances, and liabilities to banks at specified levels or achieving certain levels of operating income, we could be required to repay all or a portion of these bank loans prior to their maturity date.

**We may desire to expand our business through acquisitions that could result in diversion of resources and extra expenses. This could disrupt our business and affect our results of operations.**

Part of our strategy is to pursue acquisitions of, or investments in, businesses and technologies or to establish joint ventures to expand our business. The negotiation of acquisitions, investments or joint ventures, as well as the integration of acquired or jointly developed businesses or technologies, could divert our management's time and resources. Acquired businesses, technologies or joint ventures may not be successfully integrated with our products and operations. The markets for the products produced by the companies we acquire may take longer than we anticipated to develop and to result in increased sales and profits for us. We may not realize the intended benefits of any acquisition, investment or joint venture and we may incur losses from any acquisition, investment or joint venture.

Acquisitions could result in:

- substantial cash expenditures;
- potentially dilutive issuances of equity securities;
- the incurrence of debt and contingent liabilities;
- a decrease in our profit margins;
- amortization of intangibles and potential impairment of goodwill and intangible assets;
- reduction of management attention to other parts of the business;
- failure to invest in different areas or alternative investments;
- failure to generate expected financial results or reach business goals;
- increased expenditures on human resources and related costs; and
- decreased growth of our professional services.

If acquisitions disrupt our sales or marketing efforts or operations, our business may suffer.

**If new products we introduce or expect to introduce in the future fail to generate the level of demand we anticipated, we will realize a lower than expected return from our investment in research and development with respect to those products, and our results of operations may suffer.**

Our success is dependent, in part, on the willingness of our customers to transition or migrate to new products, such as our expanded offering of session border controller products, our multi service business routers (MSBRs), our IP Phones, our software solutions and value added application products, our services or expected future products. We are involved in a continuous process of evaluating changing market demands and customer requirements in order to develop and introduce new products, features and applications to meet changing demands and requirements. We need to be able to interpret market trends and the advancement of technology in order to successfully develop and introduce new products, features and applications. If potential customers defer transition or migration to new products, our return on our investment in research and development with respect to products recently introduced or expected to be introduced in the near future will be lower than we originally anticipated and our results of operations may suffer.

**Because of the rapid technological development in the communications equipment market and the intense competition we face, our products can become outmoded or obsolete in a relatively short period of time, which requires us to provide frequent updates and/or replacements to existing products. If we do not successfully manage the transition process to the next generation of our products, our operating results may be harmed. Furthermore, the Communication Platform as a Service (CPaaS) is developing fast and it may have a negatively affect our Unified Communications as a Service (UCaaS) market which is one of our main revenue sources.**

The communications equipment market is characterized by rapid technological innovation and intense competition. Accordingly, our success depends in part on our ability to develop next generation products in a timely and cost-effective manner. The development of new products is expensive, complex and time consuming. If we do not rapidly develop our next generation products ahead of our competitors, we may lose both existing and potential customers to our competitors. Further, if a competitor develops a new, less expensive product using a different technological approach to delivering informational services over existing networks, our products would no longer be competitive. Conversely, even if we are successful in rapidly developing new products ahead of our competitors, if we do not cost-effectively manage our inventory levels of existing products when making the transition to the new products, our financial results could be negatively affected by high levels of obsolete inventory. If any of the foregoing were to occur, then our operating results would be harmed.



**Our industry is constantly evolving and we may not be able to keep pace with technological changes, which could adversely affect our business.**

The transmission of multimedia over data networks is constantly evolving. Short product life cycles place a premium on our ability to manage the transition from current products to new products. Our future success in generating revenues will depend on our ability to enhance our existing products and to develop and introduce new products and product features. These products and features must keep pace with technological developments and address the increasingly sophisticated needs of our customers. The development of new technologies and products is increasingly complex and uncertain. This increases the difficulty in coordinating the planning and production process and can result in delay in the introduction of new technologies and products.

**The increased adoption of IP networks may adversely affect the demand for media gateway products.**

Media gateway products are primarily intended to transmit voice from traditional telephony networks to IP networks and vice versa. Along with the growth and adoption of IP networks, there has been an increase in the amount of information that is sent directly from one IP network to another IP network. This direct network communication potentially obviates the need to use a media gateway. A reduction in the demand for media gateways may adversely affect the demand for our media gateway products and, in turn, adversely affect our results of operations. This transition is ongoing and has resulted in a decline in our revenues from such products. Various regulators and service providers have announced planned deadlines for transition to all IP networks. While this transition could result in new sales opportunities, we believe the overall trend is a decline in revenues in the media gateway business.

**The ongoing transition to the use of cloud-based software creates challenges for us.**

The use of cloud-based software as a service or SaaS is a software licensing and delivery model in which software is licensed on a subscription basis and is centrally hosted in the cloud. Recently, our partners have started adopting this model. For example, Microsoft offers a cloud based alternative to Skype for Business and is encouraging business customers to use that model instead of an on premises alternative. Many of our products are intended for on premises use. Currently, our revenue is generated primarily from on premises deployments. The transition to cloud-based delivery impacts the architecture and role of our products in the overall solution. We may not succeed in transitioning in time or at all to the new technologies, products, solutions and services adopted by our partners and their customers. We may not succeed in aligning our solutions with our partners' solutions and be unable to bring sufficient value to them or their end customers. Our inability to adapt to the ongoing transition to the use of cloud-based software could have an adverse effect on us. Furthermore, SaaS pay-per-use licensing models may have an adverse effect on our short-term revenue recognition.

**New industry standards, the modification of our products to meet additional existing standards or the addition of features to our products may delay the introduction of our products or increase our costs.**

The industry standards that apply to our products are continually evolving. In addition, since our products are integrated into networks consisting of elements manufactured by various companies, they must comply with a number of industry standards and practices established by various international bodies and industry forums. Should new standards gain broad acceptance, we will be required to adopt those standards in our products. We may also decide to modify our products to meet additional existing standards or add features to our products. Standards may be adopted by various industry interest groups or may be proprietary and nonetheless accepted broadly in the industry. It may take us a significant amount of time to develop and design products incorporating these new standards.

**Our original equipment manufacturers, or OEM customers or potential customers or partners may develop or prefer to develop their own technical solutions, or purchase third party technology, and as a result, would not buy our products.**

Our products are sold also as components or building blocks to large OEMs and NEPs. These customers incorporate our products into their product offerings, usually in conjunction with value-added services of their own or of third parties. OEM or NEP customers or potential customers may prefer to develop their own technology or purchase third party technology. They could also manufacture their own components or building blocks that are similar to the ones we offer. Large customers have already committed significant resources in developing integrated product offerings. Customers may decide that this gives them better profitability and/or greater control over supplies, specifications and performance. Customers may therefore not buy components or products from an external manufacturer such as us. This could have an adverse impact on our ability to sell our products and our revenues.

**We have a limited order backlog. If revenue levels for any quarter fall below our expectations, our results of operations will be adversely affected.**

We have a limited order backlog, which makes revenues in any quarter substantially dependent on orders received and delivered in that quarter. A delay in the recognition of revenue, even from one customer, may have a significant negative impact on our results of operations for a given period. We base our decisions regarding our operating expenses on anticipated revenue trends, and our expense levels are relatively fixed, or require some time for adjustment. Because only a small portion of our expenses varies with our revenues, if revenue levels fall below our expectations, our results of operations will be adversely affected.

**Generally, we sell to OEMs, network equipment providers or system integrator customers, as well as to distributors. As a result, we have less information with respect to the actual requirements of end-users and their utilization of equipment. We also have less influence over the choice of equipment by these end-users.**

We typically sell to system integrators, distributors as well as to OEM customers, network equipment providers. Our customers usually purchase equipment from several suppliers and may be trying to fulfill one of their customers' specific technical specifications. We rely heavily on our customers for sales of our products and to inform us about market trends and the needs of their customers. We cannot be certain that this information is accurate. If the information we receive is not accurate, we may be manufacturing products for which no customer demand exists or fail to manufacture products that end-users want. Because we are selling products to OEMs, system integrators and distributors rather than directly to end-users, we have less control over the ultimate selection of products by end-users.

**The markets we serve are highly competitive and many of our competitors have competitive advantages over us, which may make it difficult for us to maintain profitability.**

Competition in our industry is intense and we expect competition to increase in the future. Our competitors currently sell products that provide similar benefits to those that we sell. There has been a significant amount of merger and acquisition activity, frequently involving major telecommunications equipment manufacturers acquiring smaller companies, as well as strategic alliances entered into by competitors. We expect that these activities will result in an increasing concentration of market share among these companies, many of whom are our customers.

Our principal competitors in the area of analog media gateways (2 to 24 ports) for access and enterprise are Grandstream, Natex, Iskratel, Zyxel, Adtran, Media5, Cisco, Sangoma, Innovaphone AG, Patton, Dialogic and Ribbon.

In the area of low and mid density digital gateways we face competition from companies such as Ribbon Communications (formerly Sonus Networks), Huawei, Cisco, Dialogic, NewRock, Ribbon, Patton, Ferrari and Sangoma.

Our competitors in the area of MSBRs are companies such as Cisco, Juniper, Adtran, One-Access, Patton, Huawei, HP/3COM and Alcatel-Lucent.

Specifically in the area of enterprise class session border controller technology we compete with Oracle, Cisco, Avaya, Ribbon Communications (formerly Sonus Networks), MetaSwitch, Ingate and Ribbon.

Our competitors in the Microsoft Skype for Business certified gateways, session border controller, Survivable Branch Appliance and IP Phone markets include Ribbon Communications (formerly Sonus Networks), Oracle, Plantronics and Yealink.

Our competitors in the area of contact center vendors are Ribbon Communications (formerly Sonus Networks), Oracle, Plantronics and Yealink.

Our competitors in the area of Call Recording are companies such as Verint, Nice, ACS, Red Box, Teleware and Dubber.

Our competitors in the area of voice recognition are companies such as Microsoft, Google, Amazon and Nuance, and a group of startup companies.

Our principal competitors in the sale of signal processing chips are DSP Group, Broadcom, Octasic and Mindspeed. Other indirect competition is a result of the integration of VoIP functionality into processors (running VoIP signal processing on generic ARM/MIPS cores), thus decreasing the need for dedicated signal processing chips in the VoIP product. Examples of such manufacturers are Cavium and Texas Instruments. Our principal competitors in the communications board market are Dialogic, Sangoma and PIKA Technologies.

Our principal competitors in the area of IP Phones are comprised of “best-of-breed” IP phone vendors and end-to-end IP telephony vendors. “Best of breed” IP phone vendors sell standards-based SIP phones that can be integrated into any standards-based IP-PBX or hosted IP telephony system. These competitors include Plantronics, HP, Grandstream, Yealink, VTEC (acquired SNOM) and many others. End-to-end IP telephony vendors sell IP phones that only work in their proprietary systems. These competitors include Cisco, Avaya, Alcatel-Lucent, Siemens, Mitel and NEC. In the areas of Skype for Business/Microsoft Teams, our competitors are certified vendors – Yealink and Plantronics.

Some of our competitors are also customers of our products and technologies.

Many of our competitors have the ability to offer vendor-sponsored financing programs to prospective customers. Some of our competitors with broad product portfolios may also be able to offer lower prices on products that compete with ours because of their ability to recoup a loss of margin through sales of other products or services. Additionally, voice, audio and other communications alternatives that compete with our products are being continually introduced.

In the future, we may also develop and introduce other products with new or additional telecommunications capabilities or services. As a result, we may compete directly with VoIP companies and other telecommunications infrastructure and solution providers, some of which may be our current customers. Additional competitors may include companies that currently provide communication software products and services. The ability of some of our competitors to bundle other enhanced services or complete solutions with VoIP products could give these competitors an advantage over us.

**Offering to sell directly to carriers or service providers may expose us to requirements for service which we may not be able to meet.**

We also sell our products directly to telecommunications carriers, service providers or other end-users. We have traditionally relied on third party distributors and OEMs to test and/or sell our products and to inform us about the requirements of end-users. Telecommunications carriers and other service providers have great bargaining power in negotiating contracts. Generally, contracts with end-users tend to be more complex and impose more obligations on us than contracts with third party distributors. We may be unable to meet the requirements of these contracts. If we are unable to meet the conditions of a contract with an end-user customer, we may be required to pay liquidated damages or become subject to liabilities that could result in a material adverse effect on our results of operations.

Selling directly to end-users and VARs may adversely affect our relationship with our current third party distributors upon whom we will continue to rely for a significant portion of our sales. Loss of third party distributors and OEMs, or a decreased commitment by them to sell our products as a result of direct sales by us, could adversely affect our sales and results of operations.

**We rely on third-party subcontractors to assemble and original design manufacturers to design and manufacture some of our products, and therefore do not directly control manufacturing costs, product delivery schedules or manufacturing quality.**

Our products are assembled and tested by third-party subcontractors. As a result of our reliance on third-party subcontractors, we cannot directly control product delivery schedules. We have in the past experienced delays in delivery schedules. Any problems that occur and persist in connection with the delivery, quality or cost of the assembly and testing of our products could have a material adverse effect on our business, financial condition and results of operations. This reliance could also lead to product shortages or quality assurance problems, which, in turn, could lead to an increase in the costs of manufacturing or assembling our products.

In addition, we have engaged several original design manufacturers, or ODMs, based in Asia to design and manufacture some of our products and may engage additional ODMs in the future. Any problems that occur and persist in connection with the delivery, quality, cost of the assembly or testing of our products, as well as the termination of our commercial relationship with an ODM or the discontinuance of the manufacturing of the respective products could have a material adverse effect on our business, financial condition and results of operations.

**If a small number of third-party suppliers do not provide us with key components on a timely basis, we may not be able to deliver our products to our customers, and substantial reengineering costs may be incurred.**

Texas Instruments Incorporated supplies all of the chips for our signal processor product line. Our signal processor line is used both as a product line in its own right and as a key component in our other product lines. Motorola and Cavium Networks manufacture all of the communications and network processors currently used in our embedded communications boards and network products.

We have not entered into any long-term supply agreements or alternate source agreements with our suppliers and, while we maintain an inventory of critical components, our inventory of chips would likely not be sufficient in the event that we had to engage an alternate supplier for these components.

An unexpected termination of the supply of the chips provided by Texas Instruments or the communications processors supplied by Motorola or Cavium Networks or disruption in their timely delivery would require us to make a large investment in capital and personnel to shift to using chips or signal processors manufactured by other companies and may cause a delay in introducing replacement products. Customers may not accept an alternative product design. Supporting old products or redesigning products may make it more difficult for us to support our products.

**We depend on other sole source suppliers to produce components for us without the benefit of long-term supply agreements or alternative source agreements.**

Some of our sole source suppliers custom produce components for us based upon our specifications and designs while other of our sole source suppliers are the only manufacturers of certain components required by our products. We have not entered into any long-term supply agreements or alternative source agreements with our suppliers and while we maintain an inventory of components from single source providers, our inventory would likely not be sufficient in the event that we had to engage an alternate supplier of these single source components. In the event of any interruption in the supply of components from any of our sole source suppliers, we may have to expend significant time, effort and other resources in order to locate a suitable alternative manufacturer and secure replacement components. If no replacement components are available, we may be forced to redesign certain of our products. Any such new design may not be accepted by our customers. A prolonged disruption in supply may force us to redesign and retest our products. Any interruption in supply from any of these sources or an unexpected technical failure or termination of the manufacture of components could disrupt production, thereby adversely affecting our ability to deliver products and to support products previously sold to our customers.

In addition, if demand for telecommunications equipment increases, we may face a shortage of components from our suppliers. This could result in longer lead times, increases in the price of components and a reduction in our margins, all of which could adversely affect the results of our operations.

**Our customers may require us to produce products or systems to hold in inventory in order to meet their “just in time,” or short lead time, delivery requirements. If we are unable to sell this inventory on a timely basis, we could incur charges for excess and obsolete inventory which would adversely affect our results of operations.**

Our customers expect us to maintain an inventory of products available for purchase off the shelf subsequent to the initial sales cycle for these products. This may require us to incur the costs of manufacturing inventory without having a purchase order for the products. The VoIP industry is subject to rapid technological change and volatile customer demands, which result in a short product commercial life before a product becomes obsolete. If we are unable to sell products that are produced to hold in inventory, we will need to write-off all or a part of the inventory value of these products. Write-offs could adversely affect our operating results and financial condition. We wrote off inventory in an aggregate amount of \$2.2 million in 2016 and \$1.9 million in both 2017 and 2018. We have incurred write-offs as a result of slow moving items, excess inventories, discontinued products and products with net realizable value lower than cost.

**The right of our customers to return products and their right to exchange products may affect our ability to recognize revenues which could adversely affect the results of our operations.**

Some of our customers expect us to permit them to return some or all of the products they purchase from us. If we contractually agree to allow a customer to return products, the customer may be entitled to a refund for the returned products or to receive a credit for the purchase of replacement products. If we agree to this type of contractual obligation, it could affect our ability to recognize revenues. In addition, if we are not able to resell any products that are returned, we would have to write off this inventory. This could adversely affect our results of operations.

**We have depended, and expect to continue to depend, on a small number of large customers. The loss of one of our large customers or the reduction in purchases by a significant customer or failure of such customer to pay for the products it purchases from us could have a material adverse effect on our revenues.**

In 2016, 2017 and 2018, Sales to ScanSource Communications Group, our largest customer, accounted for 16.7%, 17.5% and 17.8%, respectively, of our total revenues, and sales to Westcon Group accounted for 11.9%, 12.7% and 11.1%, respectively, of our total revenues. Both ScanSource and Westcon act as distributors/order fulfillment of smaller orders from other customers and are not purchasing the products for internal use. If we lose a large customer, or if purchases made by such customers are significantly reduced, or if a large customer fails to pay for the products it purchases from us, our revenues and results of operations could be adversely affected.

**Our products generally have long sales cycles and implementation periods, which increase our costs in obtaining orders and reduce the predictability of our revenues.**

Our products are technologically complex and are typically intended for use in applications that may be critical to the business of our customers. Prospective customers generally must make a significant commitment of resources to test and evaluate our products and to integrate them into larger systems. Many of our customers are large organizations with complex and lengthy evaluation, decision making and negotiation processes. As a result, our sales process is often subject to delays associated with lengthy approval processes that typically accompany the design and testing of new communications equipment. The sales cycles of our products to new customers are approximately four to twelve months after a design win, depending on the type of customer and complexity of the product. This time period may be further extended because of internal testing, field trials and requests for the addition or customization of features or acceptance testing. This delays the time until we realize revenue and results in significant investment of resources in attempting to make sales.

Long sales cycles also subject us to risks not usually encountered in a short sales span, including customers' budgetary constraints, internal acceptance reviews and cancellation. In addition, orders expected in one quarter could shift to another because of the timing of customers' procurement decisions. The time required to implement our products can vary significantly with the needs of our customers and generally exceeds several months; larger implementations can take multiple calendar quarters. This complicates our planning processes and reduces the predictability of our revenues.

**Our proprietary technology is difficult to protect, and our products may infringe on the intellectual property rights of third parties. Our business may suffer if we are unable to protect our intellectual property or if we are sued for infringing the intellectual property rights of third parties.**

Our success and ability to compete depend in part upon protecting our proprietary technology. We rely on a combination of patent, trade secret, copyright and trademark laws, nondisclosure and other contractual agreements and technical measures to protect our proprietary rights. These agreements and measures may not be sufficient to protect our technology from third-party infringement, or to protect us from the claims of others.

Enforcement of intellectual property rights may be expensive and may divert attention of management and of research and development personnel away from our business. Intellectual property litigation could also call into question the ownership or scope of rights owned by us. Additionally, our products may be manufactured, sold, or used in countries that provide less protection to intellectual property than that provided under U.S. or Israeli laws or where we do not hold relevant intellectual property rights.

We believe that the frequency of third-party intellectual property claims is increasing, as patent holders, including entities that are not in our industry and that purchase patents as an investment or to monetize such rights by obtaining royalties, use infringement assertions as a competitive tactic and a source of additional revenue. Any intellectual property claims against us, even if without merit, could cost us a significant amount of money to defend and divert management's attention away from our business. We may not be able to secure a license for technology that is used in our products and we may face injunctive proceedings that prevent distribution and sale of our products even prior to any dispute being concluded. These proceedings may also have a deterrent effect on purchases by customers, who may be unsure about our ability to continue to supply their requirements. We may be forced to repurchase our products and compensate customers that have purchased such infringing products. We may be forced to redesign the product so that it becomes non-infringing, which may have an adverse impact on the results of our operations.

In addition, claims alleging that the development, use, or sale of our products infringes third parties' intellectual property rights may be directed either at us or at our direct or indirect customers. We may be required to indemnify such customers against claims made against them. We may be required to indemnify them even if we believe that the claim of infringement is without merit.

**Multiple patent holders in our industry may result in increased licensing costs.**

There are a number of companies besides us that hold patents for various aspects of the technology incorporated in our industry's standards and our products. We expect that patent enforcement will be given high priority by companies seeking to gain competitive advantages or additional revenues. We have been sued a number of times in recent years for alleged patent infringement. If holders of patents take the position that we are required to obtain a license from them, we cannot be certain that we would be able to negotiate a license agreement at an acceptable price or at all. Our results of operations could be adversely affected by the payment of any additional licensing costs or if we are prevented from manufacturing or selling a product.

**Changes in governmental regulations in the United States or other countries could slow the growth of the VoIP telephony market and reduce the demand for our customers' products, which, in turn, could reduce the demand for our products.**

VoIP and other services are not currently subject to all of the same regulations that apply to traditional telephony. Nevertheless, it is possible that foreign or U.S. federal or state legislatures may seek to impose increased fees and administrative burdens on VoIP, data, and video providers. The FCC requires VoIP service providers to meet various emergency service requirements relating to delivery of 911 calls, known as E911, and to accommodate law enforcement interception or wiretapping requirements, such as the Communications Assistance for Law Enforcement Act, or CALEA. In addition, the FCC may seek to impose other traditional telephony requirements such as disability access requirements, consumer protection requirements, number assignment and portability requirements, and other obligations, including additional obligations regarding E911 and CALEA. The cost of complying with FCC regulations could increase the cost of providing Internet phone service which could result in slower growth and decreased profitability for this industry, which would adversely affect our business.

The enactment of any additional regulation or taxation of communications over the Internet in the United States or elsewhere in the world could have a material adverse effect on our customers' (and their customers') businesses and could therefore adversely affect sales of our products. We do not know what effect, if any, possible legislation or regulatory actions in the United States or elsewhere in the world may have on private telecommunication networks, the provision of VoIP services and purchases of our products.

**Use of encryption technology in our products is regulated by governmental authorities and may require special development, export or import licenses. Delays in the issuance of required licenses, or the inability to secure these licenses, could adversely affect our revenues and results of operations.**

Growth in the demand for security features may increase the use of encryption technology in our products. The use of encryption technology is generally regulated by governmental authorities and may require specific development, export or import licenses. Encryption standards may be based on proprietary technologies. We may be unable to incorporate encryption standards into our products in a manner that will insure interoperability. We also may be unable to secure licenses for proprietary technology on reasonable terms. If we cannot meet encryption standards, or secure required licenses for proprietary encryption technology, our revenues and results of operations could be adversely affected.

**We are subject to regulations that require us to use components based on environmentally friendly materials. We may be subject to various regulations relating to management and disposal of waste with respect to electronic equipment. Compliance with these regulations has increased our costs. Failure to comply with these regulations could materially adversely affect our results of operations.**

We are subject to an increasing number of directives and regulations requiring the use of environmentally-friendly materials. For example, pursuant to a European Community directive, equipment suppliers are required to stop using specified materials that are not environmentally friendly. Some of our customers may also require products that meet higher standards than those required by the directive, such as complete removal of additional harmful substances from our products. We are dependent on our suppliers for components and sub-system modules, such as semiconductors and purchased assemblies and goods, to comply with these requirements. This may harm our ability to sell our products in regions or to customers that may adopt such directives. Compliance with these directives, has required us to undertake significant expenses with respect to meeting the basic requirements and the updates of those regulations and of implementing new similar regulations and directives. In addition, we may be required to pay higher prices for components that comply with those directives. We may not be able to pass these higher component costs on to our customers. Compliance with these directives have increased and could continue to increase our product design and manufacturing costs. New designs may also require qualification testing with both customers and government certification boards.

Some of our operations use substances regulated under various federal, state, local and international laws governing the environment, including laws governing the management and disposal of waste with respect to electronic equipment. We could incur substantial costs, including fines and civil or criminal sanctions, if we were to violate or become liable under environmental laws or if our products become non-compliant with environmental laws. We also face increasing complexity in our product design and procurement operations as we adjust to new and future requirements relating to the materials that compose our products. The EU has enacted the Waste Electrical and Electronic Equipment Directive, which makes producers of electrical goods financially responsible for specified collection, recycling, treatment and disposal of past and future covered products. Similar legislation has been or may be enacted in other jurisdictions, including the United States, Canada, Mexico, China and Japan.

Our inability or failure to comply with these regulations could have a material adverse effect on our results of operations. In addition, manufacturers of components that do not meet the new requirements may decide to stop manufacturing those components prior to the required compliance date. These actions by manufacturers of components could result in a shortage of components that could adversely affect our business and results of operations.

**We have a significant presence in international markets and plan to continue to expand our international operations, which exposes us to a number of risks that could affect our future growth.**

We have a worldwide sales, marketing and support infrastructure that is comprised of independent distributors and value added resellers, and our own personnel resulting in a sales, marketing and support presence in many countries, including markets in North America, Western and Eastern Europe, the Asia Pacific region and Latin America. We expect to continue to increase our sales headcount, our applications development headcount, our field support headcount, our marketing headcount and our engineering headcount and, in some cases, establish new relationships with distributors, particularly in markets where we currently do not have a sales or customer support presence. As we continue to expand our international sales and operations, we are subject to a number of risks, including the following:

- greater difficulty in enforcing contracts and accounts receivable collection, as well as longer collection periods;
- increased expenses incurred in establishing and maintaining office space and equipment for our international operations;
- fluctuations in exchange rates between the dollar and foreign currencies in markets where we do business;
- greater difficulty in recruiting local experienced personnel, and the costs and expenses associated with such activities;
- general economic and political conditions in these foreign markets (for example changes in oil prices and the global economy have affected growth and ultimately the demand for our products in China);
- economic uncertainty around the world;
- management communication and integration problems resulting from cultural and geographic dispersion;
- risks associated with trade restrictions and foreign legal requirements (such as privacy and cyber security), including the importation, certification, and localization of our solutions required in foreign countries, such as high import taxes in Brazil and other Latin American markets where we sell our products;
- greater risk of unexpected changes in regulatory practices, tariffs, and tax laws and treaties;
- the uncertainty of protection for intellectual property rights in some countries;
- greater risk of a failure of employees to comply with both U.S. and foreign laws, including antitrust regulations, the U.S. Foreign Corrupt Practices Act (FCPA), and any trade regulations ensuring fair trade practices; and
- heightened risk of unfair or corrupt business practices in certain regions and of improper or fraudulent sales arrangements that may impact financial results and result in restatements of, or irregularities in, financial statements.

Any of these risks could adversely affect our international operations, reduce our revenues from outside the United States or increase our operating costs, adversely affecting our business, results of operations and financial condition and growth prospects. There can be no assurance that all of our employees and channel partners will comply with the formal policies we have and will implement, or applicable laws and regulations. Violations of laws or key control policies by our employees and channel partners could result in delays in revenue recognition, financial reporting misstatements, fines, penalties or the prohibition of the importation or exportation of our software and services and could have a material adverse effect on our business and results of operations.

**A data security or privacy breach could adversely affect our business.**

The protection of customer, employee and company data is critical to us. Customers have a high expectation that we will adequately protect their personal or other information from cyberattack or other security breaches. A significant breach of customer, employee, or company data could damage our reputation and result in lost sales, fines, or lawsuits. Our business involves the receipt and storage of personal and other information about customers and employees. The secure processing, maintenance and transmission of this information is critical to our operations and business strategy. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breaches due to employee error, malfeasance or other disruptions. Any such breach or attack could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen.

Because the methods used to obtain unauthorized access change frequently and may not be immediately detected, we may be unable to anticipate these methods or promptly implement preventative measures. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, disrupt our operations and the services we provide to customers and damage our reputation, which could adversely affect our business, revenues and competitive position. In addition to taking the necessary precautions ourselves, we require that third-party service providers implement reasonable security measures to protect our customers' identity and privacy. We do not, however, control these third-party service providers and cannot guarantee that no electronic or physical computer break-ins and security breaches will occur in the future.

Our use and handling of personally identifiable data is regulated at the international, federal and state levels. The regulatory environment surrounding information security and privacy is increasingly demanding. For example, the General Data Protection Regulation (GDPR), which came into effect on May 25, 2018, implemented stringent operational requirements for companies that are established in the EU or, where not established in the EU, offer goods or services to individuals in the EU or monitor the behavior of individuals in the EU. Failure to comply with the GDPR can result in fines of up to EUR 20 million or up to 4% of the total worldwide annual turnover of the preceding financial year, whichever is higher.

The requirements of the GDPR include, for example, expanded disclosures about how personal data is processed, mandatory data breach notification requirements, a strengthened data subject rights regime and higher standards for obtaining consent from individuals to process their personal data (including in certain circumstances for marketing), all of which involve significant ongoing expenditure. The principle of accountability likewise requires us to put significant documentation in place to demonstrate compliance. While the GDPR in large part harmonizes data protection requirements across EU countries, some provisions allow EU Member States to adopt additional or different requirements, which could limit our ability to use and share personal data or could require localized changes. We may also be affected by legal challenges to the validity of EU mechanisms for transfers of personal data outside the EU, and our business could be impacted by changes in law as a result of future review of these mechanisms by European regulators under the GDPR, as well as current challenges to these mechanisms in the European courts.

In addition, existing privacy-related laws and regulations in the United States and other countries are evolving and are subject to potentially differing interpretations, and various U.S. federal and state or other international legislative and regulatory bodies may expand or enact laws regarding privacy and data security-related matters. Due to the fact that privacy and information security laws and regulations are subject to change from time to time, our compliance with them may result in cost increases due to necessary systems changes and the development of new processes. If we fail to comply with these laws and regulations, we could be subjected to legal risk. Increasing costs associated with information security, such as increased investment in technology, the cost of compliance and costs resulting from consumer fraud could cause our business and results of operations to suffer materially.



**The ongoing trade war between China and the United States and its potential escalation may have an adverse effect on our business operations and revenues.**

Starting in April 2018, the United States imposed a 25% tariff on steel and a 10% tariff on aluminum imports from other countries. On July 6, the United States imposed 25% tariffs on \$34 billion worth of Chinese goods. President Trump further stated that the US would impose additional 10% tariffs on another \$200 billion worth of Chinese imports if China retaliates against the imposed U.S. tariffs. China has instituted retaliatory tariffs on certain U.S. goods, and have indicated a willingness to impose additional tariffs on U.S. products. Since we operate in the U.S. and deliver products and services to customers in the U.S., the trade war has adversely affected us, and especially if and when it is escalated, may cause global economic turmoil and adversely impact the supply chain for our products, the cost of our products and the demand for our products and, thus, may have a material adverse effect on our business and results of operations.

**The prices of our products may become less competitive due to foreign exchange fluctuations.**

Although we have operations throughout the world, the majority of our revenues and our operating costs in 2018 were denominated in, or linked to, the dollar. Accordingly, we consider the dollar to be our functional currency. However, a significant portion of our operating costs in 2018 were incurred in NIS. During 2018, the NIS depreciated against the dollar, which resulted in a decrease in the dollar cost of our operations in Israel. As a result of this differential, from time to time we may experience increases in the costs of our operations outside the United States, as expressed in dollars. If there is a significant increase in our expenses, we may be required to increase the prices of our products and may be less competitive. Currently, our international sales are denominated primarily in dollars. Therefore, any devaluation in the local currencies of our customers relative to the dollar could cause customers to decrease or cancel orders or default on payment.

Our sales to European customers denominated in Euros are increasing. Sales denominated in Euros could make our revenues subject to fluctuation in the Euro/ dollar exchange rate. If the dollar appreciates against the Euro, we may be required to increase the prices of our products that are denominated in Euros. In 2018, the Euro depreciated against the dollar, which resulted in an increase in the prices of our products that are denominated in Euros.

**Our independent sales representatives may fail to market our products effectively.**

A significant portion of our marketing and sales involves the aid of independent sales representatives that are not under our direct control. We cannot be certain that our current independent sales representatives will continue to distribute our products or that, even if they continue to distribute our products, they will do so successfully. These representatives are not subject to any minimum purchase requirements and can discontinue marketing our products at any time. In addition, these representatives often market products of our competitors. Accordingly, we must compete for the attention and sales efforts of our independent sales representatives.

**Our products could contain defects, which would reduce sales of those products or result in claims against us.**

We develop complex and evolving products. Despite testing by us and our customers, undetected errors or defects may be found in existing or new products. The introduction of products with reliability, quality or compatibility problems could result in reduced revenues, additional costs, increased product returns and difficulty or delays in collecting accounts receivable. The risk is higher with products still in the development stage, where full testing or certification is not yet completed. This could result in, among other things, a delay in recognition or loss of revenues, loss of market share or failure to achieve market acceptance. We could also be subject to material claims by customers that are not covered by our insurance.

**Obtaining certification of our products by national regulators may be time-consuming and expensive. We may be unable to sell our products in markets in which we are unable to obtain certification.**

Our customers may expect us to obtain certificates of compliance with safety and technical standards set by national regulators, especially standards set by U.S. or European regulators. There is no uniform set of standards, and each national regulator may impose and change its own standards. National regulators may also prohibit us from importing products that do not conform to their standards. If we make any change in the design of a product, we are usually required to obtain recertification of the product. The process of certification may be time-consuming and expensive and may affect the length of the sales cycle for a product. If we are unable to obtain certification of a product in a market, we may be unable to sell the product in that market.

**We depend on a limited number of key personnel who would be difficult to replace.**

Because our products are complex and our market is evolving, the success of our business depends in large part upon the continuing contributions of our management and key personnel. Specifically, we rely heavily on the services of Shabtai Adlersberg, our Chief Executive Officer and President, and Lior Aldema, our Chief Business Officer. Both are also directors. If our Chief Executive Officer or our Chief Business Officer are unable or unwilling to continue with us, our results of operations could be materially and adversely affected. We do not carry key person insurance for our key personnel.

The success of our business also depends upon our continuing ability to attract and retain other highly-qualified management, technical, sales and marketing personnel. We need highly-qualified technical personnel who are capable of developing technologies and products and providing the technical support required by our customers. We experience competitive pressure with respect to retaining and hiring employees in the high technology sector in Israel. If we fail to hire and retain skilled employees, our business may be adversely affected.

**If we do not manage our operations effectively, our results of operations could be adversely affected.**

We have expanded our operations in the past and may continue to expand them in the future. This expansion has required, and may continue to require, the application of managerial, operational and financial resources. We cannot be sure that we will continue to expand, or that we will be able to expand our operations successfully. In particular, our business requires us to focus on multiple markets, including the VoIP, wireline, cable, enterprise unified communications and wireless markets. In addition, we work simultaneously with a number of large OEMs and network equipment providers each of which may have different requirements for the products that we sell to them. We may not have sufficient personnel, or may be unable to devote this personnel when needed, to address the requirements of these markets and customers. If we are unable to manage our operations effectively, our revenues may not increase, our cost of operations may rise and our results of operations may be adversely affected.

As we grow we may need new or enhanced systems, procedures or controls. The transition to such systems, procedures or controls, as well as any delay in transitioning to new or enhanced systems, procedures or controls, may seriously harm our ability to accurately forecast sales demand, manage our product inventory and record and report financial and management information on a timely and accurate basis.

**The growth in our product portfolio means that we have to service and support more products. This may result in an increase in our expenses and an adverse effect on our results of operations.**

The size of our product portfolio has increased and continues to increase. As a result, we are required to provide product support to our customers. Customers have requested that we provide a contractual commitment to support a product for a specified period of time. This period of time may exceed the working life of the product or extend past the period of time that we may intend to manufacture or support a product. We are dependent on our suppliers for the components (hardware and software) needed to provide support and may be unable to secure the components necessary to satisfy our service commitments. We do not have long-term contracts with our suppliers, and they may not be obligated to provide us with products or services for any specified period of time. We may need to purchase an inventory of replacement components and parts in advance in order to try to provide for their availability when needed. This could result in an increased risk of write-offs with respect to our replacement component inventory to the extent that we cannot accurately predict our future requirements under our customer service contracts. If any of our component suppliers cease production, cease operations or refuse or fail to make timely delivery of orders, we may not be able to meet our contractual commitments for product support. We may be required to supply enhanced components or parts as substitutes if the original versions are no longer available. Product support may be costly and any extra service revenues may not cover the hardware and software costs associated with providing long-term support.

**Terrorist attacks, or the threat of such attacks, may negatively impact the global economy which may materially adversely affect our business, financial condition and results of operation and may cause our share price to decline.**

Financial, political, economic and other uncertainties following terrorist attacks throughout the world may negatively impact the global economy. As a result, many of our customers and potential customers have become much more cautious in setting their capital expenditure budgets, thereby restricting their telecommunications procurement. Uncertainties related to the threat of terrorism have had a negative effect on global economy, causing businesses to continue slowing spending on telecommunications products and services and further lengthen already long sales cycles. Any escalation of these threats or similar future events may disrupt our operations or those of our customers, distributors and suppliers, which could adversely affect our business, financial condition and results of operations.

**Macroeconomic changes and trade wars may impact our business.**

Changes in regional and global politics are leading to changes in the globalization and harmonization trends that prevailed in recent decades. Threats of trade barriers, customs and duties and other political considerations are causing instability in the accepted world order and the stability of financial markets. This may impact both our ability to manufacture and sell our products and services which would affect our results of our operations and may also affect the price of our ordinary shares.

**As part of our go to market strategy, we have become certified solution partners of technological leaders such as Microsoft, Genesys and BroadSoft (acquired by Cisco). These companies change their go to market strategy and product mix and technology requirements often and do so on reasonably short notice. We may be unable or unwilling to change our products in time and as may be required in order to remain a certified partner.**

In recent years we have invested heavily in our product offerings that meet the requirements of the Microsoft Skype for Business eco-system. The nature of this Microsoft solution is undergoing major change and, as part of this change, we are also witnessing a shift from on-premises solutions to cloud-based or hybrid on-premises and cloud-based solutions. This directly impacts the suitability of our products to end users and impacts end user demand for products in a changing technical environment. In 2018 Cisco completed the acquisition of BroadSoft. This acquisition is likely to impact BroadSoft's future directions and, as a result, our investment in being compatible with the BroadSoft BroadWorks and BroadCloud solutions. These changes may affect our derived revenues from selling into BroadSoft/Cisco solutions. Genesys is a long term partner of us and is also shifting from on-premise solutions to cloud-based or hybrid on-premises and cloud-based solutions with potential impact on the suitability and demand of our products in Genesys contact center deployments. Changes by our third party partners, over which we have little control and influence, can negatively impact the results of our operations on reasonably short notice. We may be unable to recover or adapt to such changes.

**We are subject to taxation in several countries. Tax matters, including changes in tax laws or rates, adverse determinations by taxing authorities and imposition of new taxes could adversely affect our results of operations and financial condition.**

Because we operate in several countries, we are subject to taxation in multiple jurisdictions. We are required to report to and are subject to local tax authorities in the countries in which we operate. In addition, our income that is derived from sales to customers in one country might also be subject to taxation in other countries. We cannot be sure of the amount of tax we may become obligated to pay in the countries in which we operate. The tax authorities in the countries in which we operate may not agree with our tax position. Our tax benefits from carry forward losses and other tax planning benefits such as Israeli approved and beneficiary enterprise programs, may prove to be insufficient due to Israeli tax limitations, or may prove to be insufficient to offset tax liabilities from foreign tax authorities. Foreign tax authorities may also use our gross profit or our revenues in each territory as the basis for determining our income tax, and our operating expenses might not be considered for related tax calculations, which could adversely affect our results of operations.

We are subject to taxation in the United States, where some our operations are located. In December 2017, the U.S. enacted significant tax reform through the Tax Cut and Jobs Act ("TCJA"). The TCJA enacted significant changes affecting the year ended December 31, 2018.

As of December 31, 2018, we have completed the accounting for all the impacts of the TCJA. However, in the absence of guidance on various uncertainties and ambiguities in the application of certain provisions of the TCJA, we will use what it believes are reasonable interpretations and assumptions in applying the TCJA. It is possible that the Internal Revenue Service, as well as state tax authorities, could issue subsequent guidance or take positions on audit that differ from our interpretations and assumptions, which could have a material adverse effect on our cash tax liabilities, results of operations, and financial condition. In addition, the TCJA could be subject to potential amendments and technical corrections, any of which could materially lessen or increase certain adverse impacts of the legislation on our business. We will continue to evaluate the effects of the TCJA as federal and state tax authorities issue additional regulations and guidance, and if and when amendments and technical corrections are enacted with respect to the TCJA, they could cause changes to previous estimates and could materially affect our financial positions and results of operations.

## ***Risks Related to Operations in Israel***

### **Conditions in Israel affect our operations and may limit our ability to produce and sell our products and instability in the Middle East may adversely affect us.**

We are incorporated under the laws of the State of Israel, and our principal executive offices and principal research and development facilities are located in the State of Israel. Political, economic and military conditions in Israel directly affect our operations. There has been an increase in unrest and terrorist activity in Israel, which has continued with varying levels of severity for many years through the current period of time. This has led to ongoing hostilities between Israel, the Palestinian Authority, other groups in the West Bank and Gaza Strip, and the northern border of Lebanon, as well as in the Golan Heights. The future effect of these conflicts on the Israeli economy and our operations is unclear. The Israeli-Palestinian conflict may also lead to political instability between Israel and its neighboring countries. Ongoing violence between Israel and the Palestinians, as well as tension between Israel and its neighboring countries, may have a material adverse effect on our business, financial conditions and results of operations.

Political events in various countries in the Middle East, such as Syria, Iraq, Iran and Egypt, have weakened the stability of those countries, and have allowed extreme terrorists organizations, such as ISIS, to operate in certain territories in the Middle East. This instability may lead to deterioration of the geo-political conditions in the Middle East. In addition, this instability has affected the global economy and marketplace through fluctuations in oil and gas prices. Our headquarters and research and development facilities are located in the State of Israel. Any events that affect the State of Israel may impact us in unpredictable ways. For example, recent activities of the global movement for a campaign of Boycott, Divestment and Sanctions (BDS) against Israel may adversely affect our sales in certain countries. We have contingent plans for alternative manufacturing and supply sources, but these plans may be insufficient. Should our operations be impacted in a significant way, this may adversely affect the results of our operations.

We cannot predict the effect on us of an increase in these hostilities or any future armed conflict, political instability or violence in the region. Additionally, some of our officers and employees in Israel are obligated to perform annual military reserve duty and are subject to being called for additional active duty under emergency circumstances. Some of our employees live within conflict area territories and may be forced to stay at home instead of reporting to work. We cannot predict the full impact of these conditions on us in the future, particularly if emergency circumstances or an escalation in the political situation occur. If many of our employees are called for active duty, or forced to stay at home, our operations in Israel and our business may be adversely affected.

A number of countries and organizations continue to restrict or ban business with Israel or Israeli companies or companies doing business with Israel or Israeli companies, which may limit our ability to make sales in those countries. In addition, there have been increased efforts by activists to cause companies and consumers to boycott Israeli goods based on Israeli government policies. Such actions, particularly if they become more widespread, may adversely impact our ability to sell our products.

### **We are adversely affected by the changes in the value of the dollar against the NIS and could be adversely affected by the rate of inflation in Israel.**

We generate most of our revenues in dollars and, in 2018, a significant portion of our expenses, primarily salaries, related personnel expenses and the leases of our buildings in Israel, were incurred in NIS. We anticipate that a significant portion of our expenses will continue to be denominated in NIS.

Our NIS related costs, as expressed in dollars, are influenced by the exchange rate between the dollar and the NIS. During 2016 and 2017, the NIS appreciated against the dollar, which resulted in an increase in the Dollar cost of our operations in Israel, and during 2018, the NIS depreciated against the Dollar, which resulted in a decrease in the Dollars cost of our operations in Israel. To the extent the Dollar weakens against the NIS, we could experience an increase in the cost of our operations, which are measured in Dollars in our financial statements, which could adversely affect our results of operations. In addition, in periods in which the Dollar appreciates against the NIS, we bear the risk that the rate of inflation in Israel will exceed the rate of such devaluation of the NIS in relation to the Dollar or that the timing of such devaluations were to lag considerably behind inflation, which will increase our costs as expressed in Dollars.

A decrease in value of the Dollar in relation to the NIS could have the effect of increasing the cost in Dollars of these expenses. Our Dollar-measured results of operations were adversely affected in 2016 and 2017 when the NIS appreciated against the dollar. This could happen again if the dollar were to decrease in value against the NIS.

In order to manage the risks imposed by foreign currency exchange rate fluctuations, from time to time, we enter into currency forward and put and call options contracts to hedge some of our foreign currency exposure. We can provide no assurance that our hedging arrangements will be effective. In addition, if we wish to maintain the dollar-denominated value of our products in non-U.S. markets, devaluation in the local currencies of our customers relative to the dollar may cause our customers to cancel or decrease orders or default on payment.

Because exchange rates between the NIS and the dollar fluctuate continuously, exchange rate fluctuations have an impact on our profitability and period-to-period comparisons of our results of operations. In 2018, the value of the dollar increased in relation to the NIS by 8.1% and the inflation rate in Israel was 0.8%. In 2017, the value of the dollar decreased in relation to the NIS by 9.8% and the deflation rate in Israel was 0.4%. In 2016, the value of the dollar decreased in relation to the NIS by 1.5% and the deflation rate in Israel was 0.2%. Our results of operations may be adversely affected in case of a decrease in the value of the dollar to the NIS.

**The Israeli government programs in which we currently participate, and the tax benefits we currently receive require us to meet several conditions and may be terminated or reduced in the future, which would increase our costs.**

Currently there are five programs under the Israeli Law for the Encouragement of Capital Investments, 1959, (the "Investment Law"), that entitle us to certain tax benefits. Our facilities in Israel have been granted Approved Enterprise status according to the Investment Law under three programs of Approved Enterprise. We have also two programs that qualify as Beneficiary Enterprises pursuant to an amendment to the Investment Law that came into effect in April 2005 (the "2005 Amendment"). Among other things, the 2005 Amendment, provides tax benefits to both local and foreign investors and simplifies the approval process. Such amendments do not apply to investment programs approved prior to December 31, 2004. Therefore, our Approved Enterprise programs are not subject to the provisions of the 2005 amendment, but our two Beneficiary Enterprise programs are subject to the amendment.

In order to be eligible for tax benefits under the Investment Law, our Approved Enterprise and Beneficiary Enterprises must comply with various conditions set forth in the Investment Law and the criteria set forth in the applicable certificate of approval for the Approved Enterprise, as well as periodic reporting obligations. If we fail to meet these requirements, we would be subject to corporate tax in Israel at the regular statutory rate. Additionally, some of these programs and the related tax benefits are available to us for a limited number of years, and these benefits expire from time to time. We could also be required to refund tax benefits, with interest and adjustments for inflation based on the Israeli consumer price index. See Note 13 to our Consolidated Financial Statements for additional information with respect to tax benefits under the Investment Law.

If the Government of Israel discontinues or modifies these programs and potential tax benefits, our business, financial condition and results of operations could be materially and adversely affected.

**The government grants we have received for research and development expenditures limit our ability to manufacture products and transfer technologies outside of Israel and require us to satisfy specified conditions. If we fail to satisfy these conditions, we may be required to refund grants previously received together with interest and penalties. In addition, the government grants may be discontinued or reduced in the future.**

In connection with research and development grants we received from IIA, we must pay royalties to IIA on the revenue derived from the sale of products, technologies and services developed with the grants from IIA. The terms of IIA grants and the law pursuant to which grants are made restrict our ability to manufacture products or transfer technologies outside of Israel if IIA grants funded the development of the products or technology, without special approvals from IIA. Furthermore, the consideration available to our shareholders in a transaction involving the transfer outside of Israel of technology or know-how developed with IIA funding (such as a merger or similar transaction) may be reduced by any amounts that we are required to pay IIA. These restrictions may limit our ability to enter into agreements for such transactions without IIA approval. We cannot be certain that any approval of IIA will be obtained on terms that are acceptable to us, or at all.

In order to meet specified conditions in connection with the grants and programs of IIA, we have made representations to the Government of Israel concerning our Israeli operations. If we fail to meet the conditions related to the grants, including the maintenance of a material presence in Israel, or if there is any material deviation from the representations made by us to the Israeli government, we could be required to refund the grants previously received (together with an adjustment based on the Israeli consumer price index and an interest factor) and would likely be ineligible to receive IIA grants in the future and, in certain cases, may be subject to criminal charges. In addition, manufacturing products outside the State of Israel (as we currently do) increases the rates of royalties to be paid to IIA. Any inability to receive these grants would result in an increase in our research and development expenses.

In 2018, we recognized a royalty-bearing grant of \$5.7 million from the Government of Israel, through IIA, for the financing of a portion of our research and development expenditures in Israel. The IIA budget has been subject to reductions, which may affect the availability of funds for these prospective grants and other grants in the future. As a result, we cannot be certain that we will continue to receive grants at the same rate, or at all. In addition, the terms of any future IIA grants may be less favorable than our past grants. As of December 31, 2018, we have a contingent obligation to pay royalties in the amount of approximately \$66.1 million.

**It may be difficult to enforce a U.S. judgment against us, our officers and directors, assert U.S. securities law claims in Israel or serve process on substantially all of our officers and directors.**

We are incorporated in Israel. Most of our executive officers and directors are nonresidents of the United States, and a majority of our assets and the assets of these persons are located outside the United States. Therefore, it may be difficult to enforce a judgment obtained in the United States against us or any such persons or to effect service of process upon these persons in the United States. Israeli courts may refuse to hear a claim based on a violation of U.S. securities laws because Israel is not the most appropriate forum to bring such a claim. In addition, even if an Israeli court agrees to hear a claim, it may determine that Israeli law and not U.S. law is applicable to the claim. If U.S. law is found to be applicable, the content of applicable U.S. law must be proved as a fact which can be a time-consuming and costly process. Certain matters of procedure will also be governed by Israeli law. There is little binding case law in Israel addressing these matters. Additionally, there is doubt as to the enforceability of civil liabilities under the Securities Act and the Exchange Act in original actions instituted in Israel.

**Israeli law and provisions in our articles of association may delay, prevent or make difficult a merger with or an acquisition of us, which could prevent a change of control and therefore depress the price of our shares.**

Provisions of Israeli law may delay, prevent or make undesirable a merger or an acquisition of all or a significant portion of our shares or assets. Israeli corporate law regulates acquisitions of shares through tender offers and mergers, requires special approvals for transactions involving significant shareholders and regulates other matters that may be relevant to these types of transactions. These provisions of Israeli law could have the effect of delaying or preventing a change in control and may make it more difficult for a third party to acquire us, even if doing so would be beneficial to our shareholders. These provisions may limit the price that investors may be willing to pay in the future for our ordinary shares. In addition, our articles of association contain certain provisions that may make it more difficult to acquire us, such as a staggered board, the ability of our board of directors to issue preferred stock and limitations on business combinations with interested shareholders. Furthermore, Israel tax considerations may make potential transactions undesirable to us or to some of our shareholders.

**The rights and responsibilities of our shareholders are governed by Israeli law which may differ in some respects from the rights and responsibilities of shareholders of U.S. corporations.**

Since we are incorporated under Israeli law, the rights and responsibilities of our shareholders are governed by our articles of association and Israeli law. These rights and responsibilities differ in some respects from the rights and responsibilities of shareholders in United States corporations. In particular, a shareholder of an Israeli company has a duty to act in good faith and in a customary manner in exercising its rights and performing its obligations towards the company and other shareholders and to refrain from abusing its power in the company, including, among other things, in voting at a general meeting of shareholders on certain matters, such as an amendment to a company's articles of association, an increase of a company's authorized share capital, a merger of a company and approval of related party transactions that require shareholder approval. In addition, a controlling shareholder or a shareholder who knows that it possesses the power to determine the outcome of a shareholders' vote or to appoint or prevent the appointment of an office holder in a company or has another power with respect to a company, has a duty to act in fairness towards the company. However, Israeli law does not define the substance of this duty of fairness. Some of the parameters and implications of the provisions that govern shareholder behavior have not been clearly determined. These provisions may be interpreted to impose additional obligations and liabilities on our shareholders that are not typically imposed on shareholders of United States corporations.

#### ***Risks Relating to the Ownership of our Ordinary Shares***

**The price of our ordinary shares may fluctuate significantly.**

The market price for our ordinary shares, as well as the prices of shares of other technology companies, has been volatile. Between January 1, 2014 and March 14, 2019, the trading price of our shares on Nasdaq has fluctuated from a low of \$2.69 to a high of \$14.96. The following factors may cause significant fluctuations in the market price of our ordinary shares:

- fluctuations in our quarterly revenues and earnings or those of our competitors;
- shortfalls in our operating results compared to levels forecast by securities analysts or by us;
- announcements concerning us, our competitors or telephone companies;
- announcements of technological innovations;
- the introduction of new products;
- changes in product price policies involving us or our competitors;
- market conditions in the industry;
- integration of acquired businesses, technologies or joint ventures with our products and operations;
- the conditions of the securities markets, particularly in the technology and Israeli sectors; and
- political, economic and other developments in the State of Israel and worldwide.

In addition, stock prices of many technology companies fluctuate significantly for reasons that may be unrelated or disproportionate to operating results. The factors discussed above may depress or cause volatility of our share price, regardless of our actual operating results.

**Our quarterly results of operations have fluctuated in the past and we expect these fluctuations to continue. Fluctuations in our results of operations may disappoint investors and result in a decline in our share price.**

We have experienced and expect to continue to experience significant fluctuations in our quarterly results of operations. In some periods, our operating results may be below public expectations or below revenue levels and operating results reached in prior quarters or in the corresponding quarters of the previous year. If this occurs, the market price of our ordinary shares could decline.

The following factors have affected our quarterly results of operations in the past and are likely to affect our quarterly results of operations in the future:

- size, timing and pricing of orders, including order deferrals and delayed shipments;
- launching of new product generations;
- length of approval processes or market testing;
- technological changes in the telecommunications industry;
- competitive pricing pressures;
- the timing and approval of government research and development grants;
- accuracy of telecommunication company, distributor and original equipment manufacturer forecasts of their customers' demands;
- changes in our operating expenses;
- disruption in our sources of supply;
- temporary or permanent reduction in purchases by our significant customers; and
- general economic conditions.

Therefore, the results of any past periods may not be relied upon as an indication of our future performance.

**Our actual financial results might vary from our publicly disclosed financial forecasts.**

From time to time, we publicly disclose financial forecasts and other performance metrics. Our forecasts reflect numerous assumptions concerning our expected performance, as well as other factors which are beyond our control and which might not turn out to be correct. As a result, variations from our forecasts could be material. Our financial results are subject to numerous risks and uncertainties, including those identified throughout this “Risk Factors” section and elsewhere in this Annual Report. If our actual financial results are worse than our financial forecasts, the price of our ordinary shares may decline. A large portion of our sales is made during the last month of each quarter. As a result, any delay in our receipt of orders could affect our results for a quarter and the accuracy of our forecasts.

**It is our policy that we will generally not provide quarterly forecasts of the results of our operations. This policy could affect the willingness of analysts to provide research with respect to our ordinary shares, which could affect the trading market for our ordinary shares.**

It is our policy that we will generally not provide quarterly forecasts of the results of our operations. This could result in the reduction of research analysts who cover our ordinary shares. Any reduction in research coverage could affect the willingness of investors, particularly institutional investors, to invest in our shares which could affect the trading market for our ordinary shares and the price at which our ordinary shares are traded.

**As a foreign private issuer whose shares are listed on Nasdaq, we follow certain home country corporate governance practices instead of certain Nasdaq requirements.**

As a foreign private issuer whose shares are listed on Nasdaq, we are permitted to follow certain home country corporate governance practices instead of certain requirements contained in the Nasdaq listing rules. We do not comply with the Nasdaq requirement that we obtain shareholder approval for certain dilutive events, such as for the establishment or amendment of certain share-based compensation plans. Instead, we follow Israeli law and practice which permits the establishment or amendment of certain share-based compensation plans to be approved by our board of directors without the need for a shareholder vote, unless such arrangements are for the compensation of directors or the chief executive officer, in which case they also require compensation committee and shareholder approval.

As a foreign private issuer listed on the Nasdaq, we may also elect in the future to follow home country practice with regard to, among other things, director nominations, composition of the board of directors and quorum at shareholders’ meetings, as well as not obtain shareholder approval for certain dilutive events.

Accordingly, our shareholders may not be afforded the same protection as provided under Nasdaq’s corporate governance rules.

**Our ordinary shares are listed for trading in more than one market and this may result in price variations.**

Our ordinary shares are listed for trading on Nasdaq and on the Tel Aviv Stock Exchange (“TASE”). Trading in our ordinary shares on these markets is made in different currencies (dollars on Nasdaq and NIS on TASE), and at different times (resulting from different time zones, different trading days and different public holidays in the United States and Israel). Actual trading volume on the TASE is generally lower than trading volume on Nasdaq, and as such could be subject to higher volatility. The trading prices of our ordinary shares on these two markets often differ resulting from the factors described above, as well as differences in exchange rates. Any decrease in the trading price of our ordinary shares on one of these markets could cause a decrease in the trading price of our ordinary shares on the other market.

**There can be no assurance that we will continue to declare cash dividends.**

In July 2018 and January 2019, our Board of Directors declared cash dividends on our ordinary shares. Prior to the declaration of these dividends we had never declared a cash dividend. Under the Israeli Companies Law, we may pay dividends only out of our profits as determined for statutory purposes, unless court approval is granted for the payment of dividends despite the lack of statutory profits. Accordingly, the declaration and payment of future dividends is subject to the Board’s discretion and will be dependent upon future earnings, cash flows, the requirements of the Israeli Companies Law, the receipt of court approval, if required, and other factors. There can be no assurance that we will continue to declare regular cash dividends on our ordinary shares.



**U.S. shareholders face certain income tax risks in connection with their acquisition, ownership and disposition of our ordinary shares. In any tax year, we could be deemed a passive foreign investment company, which could result in adverse U.S. federal income tax consequences for U.S. shareholders.**

Based on the composition of our gross income, the composition and value of our gross assets and the amounts of our liabilities for each taxable year from 2004 through 2018, we do not believe that we were a passive foreign investment company, or PFIC, for U.S. federal income tax purposes during any of such tax years. It is likely, however, that we were a PFIC in each of 2001, 2002 and 2003. There can be no assurance that we will not become a PFIC in the current tax year or any future tax year in which, for example, the value of our assets, as measured by the public market valuation of our ordinary shares, declines in relation to the value of our passive assets (generally, cash, cash equivalents and marketable securities). If we are a PFIC for any tax year, U.S. shareholders who own our ordinary shares during such year may be subject to increased U.S. federal income tax liabilities and reporting requirements for such year and succeeding years, even if we cease to be a PFIC in such succeeding years. A U.S. holder of our ordinary shares will be required to file an information return containing certain information required by the U.S. Internal Revenue Service for each year in which we are treated as a PFIC with respect to such holder.

We urge U.S. holders of our ordinary shares to carefully review Item 10.E – “Taxation - U.S. Federal Income Tax Considerations” in this Annual Report and to consult their own tax advisors with respect to the U.S. federal income tax risks related to owning and disposing of our ordinary shares and the consequences of PFIC status.

**We are subject to ongoing costs and risks associated with complying with extensive corporate governance and disclosure requirements.**

As a foreign private issuer subject to U.S. federal securities laws, we spend a significant amount of management time and resources to comply with laws, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, United States Securities and Exchange Commission (“SEC”) regulations and Nasdaq rules. While we have developed and instituted corporate compliance programs and continue to update our programs in response to newly implemented or changing regulatory requirements, we cannot provide assurance that we are or will be in compliance with all potentially applicable corporate regulations. If we fail to comply with any of these regulations, we could be subject to a range of regulatory actions, fines or other sanctions or litigation. In connection with our compliance with the internal control provisions of Section 404 and the other applicable provisions of the Sarbanes-Oxley Act, our management and other personnel devote a substantial amount of time, and may need to hire additional accounting and financial staff, to assure that we comply with these requirements. The additional management attention and costs relating to compliance with the Sarbanes-Oxley Act, the Dodd-Frank Act and other corporate governance requirements could materially and adversely affect our financial results.

The internal control over financial reporting required by Section 404 of the Sarbanes-Oxley Act may not prevent or detect misstatements because of certain of its limitations, including the possibility of human error, the circumvention or overriding of controls, or fraud. As a result, even effective internal controls may not provide reasonable assurances with respect to the preparation and presentation of financial statements. We cannot provide assurance that, in the future, our management will not find a material weakness in connection with its annual review of our internal control over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act. We also cannot provide assurance that we could correct any such weakness to allow our management to assess the effectiveness of our internal control over financial reporting as of the end of our fiscal year in time to enable our independent registered public accounting firm to state that such assessment will have been fairly stated in our Annual Report on Form 20-F or state that we have maintained effective internal control over financial reporting as of the end of our fiscal year. Discovery and disclosure of a material weakness in our internal control over financial reporting could have a material impact on our financial statements and could cause our stock price to decline.

**The conflict minerals disclosure rules in the United States are complex and compliance with the rules could be difficult.**

We are subject to SEC disclosure obligations relating to our use of so-called “conflict minerals”—columbite-tantalite, cassiterite (tin), wolframite (tungsten) and gold. These minerals are present in a significant number of our products; as a result, we are required to file a conflicts minerals report with the SEC on an annual basis by May of each year.

The preparation of our report is dependent upon the implementation and operation of our systems and processes and information supplied by our suppliers of products that contain, or potentially contain, conflict minerals. We have incurred and will continue to incur costs associated with complying with the supply chain due diligence procedures required by the SEC. To the extent that the information that we receive from our suppliers is inaccurate or inadequate or our processes in obtaining that information do not fulfill the SEC’s requirements, we could face both reputational and SEC enforcement risks. In addition, our efforts to comply with the disclosure rules and to otherwise implement conflict-free sourcing policies could result in changes to our supply chain that could disrupt existing supply sources or cause more uncertainty with respect to our supply chain.

## **ITEM 4. INFORMATION ON THE COMPANY**

### **A. HISTORY AND DEVELOPMENT OF THE COMPANY**

AudioCodes Ltd. was incorporated in 1992 under the laws of the State of Israel. Our principal executive offices are located at 1 Hayarden Street, Airport City, Lod, 7019900 Israel. Our telephone number is +972-3-976-4099. Our agent in the United States is AudioCodes Inc., 200 Cottontail Lane, Suite A101E, Somerset NJ 08873.

### **MAJOR DEVELOPMENTS SINCE JANUARY 1, 2018**

#### **Virtualized Session Border Controller**

There continues to be increased penetration of Cloud and Network Function Virtualization (NFV) in the service provider space. Service providers seek to harmonize their infrastructure with common off the shelf servers, instead of using proprietary hardware. In 2018, AudioCodes continued to invest in cloud and NFV technologies by adding more capabilities to its software session border controller (SBC) product line. This includes increasing scale in multiple dimensions and high availability schemes for private and public clouds, as well as utilizing standard acceleration technologies for efficient utilization of virtualized infrastructure.

#### **IP Phones**

During 2018, we continued to evolve our IP Phones offering for Microsoft Skype for Business, contacts centers and hosted business services by developing additional capabilities and offering tighter manageability and control of the phones from the One Voice Operations Center. Additionally, we introduced the 405 IP Phone for price-sensitive customers and to help our penetration into Asia Pacific and Latin American markets, as well as the 450 IP Phone which is a high-end executive phone. In addition, we introduced the Huddle Room Solution (HRS), which delivers a meeting room solution for businesses.

#### **Multi-Service-Business-Routers**

During 2018, we continued to evolve our MSBR product line with more hardware configurations as required by service provider customers and enhanced management and operation capabilities, such as WEB GUI, used to enable end user restricted configuration without involving the service provider.

#### **VoIP Management and Routing**

Our One Voice operations center ("OVOC") offers management applications for large-scale cloud or premise-based unified communications deployments. It monitors, manages and operates AudioCodes' session border controllers (SBC), media gateways, Microsoft survivable branch appliances (SBA), multi-service business routers (MSBR) and IP phones. During 2018 we invested in the following modules and functionalities of OVOC:

New OVOC: We integrated AudioCodes' Element Management System (EMS) with AudioCodes' Session Experience Manager (SEM) into a single application - the New OVOC. The new OVOC provides device management and Voice quality management on a single pane of glass. The new OVOC provides a unique user interface and user experience, the system operator can see the device quality status with its operational status on the same window. In addition we enhanced the new OVOC with capabilities such as support for multi-tenancy and call signaling ladder for assisting root cause analysis.

AudioCodes Routing Manager (ARM) enables system administrators of large and multi-site enterprise VoIP networks to manage their call routing and policy enforcement configuration in a unified logical view. ARM is a centralized solution aimed at simplifying the task of managing increasingly complex VoIP networks, thereby saving time and reducing operational costs. ARM enables routing policies to be enforced based on a multi-variate decision mechanism and supports centralized dial plans and call routing within multi-vendor environments. ARM enables operational efficiency delivered with intuitive GUI for network views, and single-click network topology creation. ARM is a highly scalable solution providing control over many network elements.

In 2018, we enriched the routing capabilities of our ARM through various network conditions and user policies such as quality based routing, location based routing and call prioritization for emergency calls, time based routing and enhanced load balancing. We also added offline VoIP network planner module and simpler user operation by means of single sign on to the managed devices.

### CloudBond 365, Cloud Connector Edition (CCE) appliances, and User Management Pack 365 (UMP 365)

AudioCodes CloudBond™ 365 is a modular, adaptable solution for the data center, customer premises or the branch. A versatile all-in-one Skype for Business appliance designed for hybrid environments, it combines Skype for Business server, the Cloud-PBX and the service provider's voice services. While Microsoft's Cloud PBX offering is still evolving into a full PBX replacement, CloudBond 365 bridges the gap, creating the critical bond between UC and the developing cloud business.

AudioCodes CloudBond 365 CCE appliances, allows Microsoft Skype for Business cloud PBX customers to connect to their local existing voice services (Like E1/T1, ISDN, and SIP Trunks). AudioCodes Mediant CCE appliances package Microsoft code along with AudioCodes SBC and gateway technology, along with a management application for simplified installation and operations.

AudioCodes User Management Pack 365 (UMP 365) is a software management application that allows IT managers and service providers to easily operate Skype for Business deployments. UMP 365 does not require knowledge and expertise in Microsoft's PowerShell tools, and instead, allows helpdesk level engineers to operate the daily tasks using an intuitive graphical user interface.

### Speech recognition and natural language understanding (NLU) technologies

During 2018, We continued to enrich our speech recognition platform with better support in more languages – German, English US and Spanish. Additional new feature of the platform is Advanced Call Routing and Hunting. Call Hunting is performed if the callee is not available (busy or not answering), followed by an action if the callee is not reachable (e.g., callee is not answering the call). For easier deployment and upgrades - A software installer is now available. HTTPS for On-premises Web interface is now supported. Infrastructure for quick integration with SMS gateways is now available. For On-premises deployments, we now support full high-availability capabilities based on the Active-Active approach. System alarms were added and can be sent to configurable email addresses. Providers can now limit the number of concurrent channels for a Service.

### SmartTAP – Call recorder

During 2018, we added to SmartTAP the capabilities to support recording of Skype-For-Business Video and Video conference calls. We enhanced call recording filtering and allow flexible selective recording.

We integrated SmartTAP into AudioCodes' One Voice Operations Center ("OVOC") so it can benefit OVOC features. We enhanced SmartTAP Announcement Server to allow configuration of announcement per each call type and generate "Beep Tone" during recorded calls. We added to SmartTAP the capability to record malicious calls. We enhanced SmartTAP robustness by enhanced system monitoring and generating test calls for total system coverage.

### PRINCIPAL CAPITAL EXPENDITURES

We have made and expect to continue to make capital expenditures in connection with expansion of our operation and production capacity. The table below sets forth our principal capital expenditures incurred for the periods indicated (amounts in thousands):

	Year Ended December 31,		
	2016	2017	2018
Computers and peripheral equipment	\$ 1,322	\$ 1,024	\$ 1,111
Office furniture and equipment	114	392	160
Leasehold improvements	41	158	69
Total	<u>\$ 1,477</u>	<u>\$ 1,574</u>	<u>\$ 1,340</u>

## **B. BUSINESS OVERVIEW**

### **Introduction**

AudioCodes designs, develops and sells advanced Voice over-IP (VoIP) and converged VoIP and data networking solutions, products and applications that facilitate secured, resilient and high quality Unified Communications (UC) and Contact Center (CC) services whether deployed on-premise or delivered from the cloud. Providing IP Phones, Customer Premise Equipment (CPE), and cloud-based platforms and applications, our solutions and products are geared to meet the growing needs of enterprises and service providers realigning their operations towards the transition to All-IP networks and hosted business services.

AudioCodes is a VoIP technology market leader focused on converged VoIP and data communications offering technology, products and solutions for Enterprise Unified Communications, contact centers, service provider business services, mobile VoIP and Cloud virtualized Data Centers. Our products are deployed globally in enterprise, service provider cloud networks. AudioCodes' products include IP phones, session border controllers (SBC), media gateways, Multi-Service Business Routers (MSBRs), residential gateways, media servers, mobile communications solutions, value added applications, life cycle management solutions and professional services. AudioCodes high definition (HD) VoIP technologies and products provide enhanced intelligibility and a better end user experience in emerging voice communications services.

AudioCodes' vision is to be the innovative leading supplier of converged VoIP and data solutions for enterprises, Value Added Resellers (VARs), System Integrators (SIs), service providers and Over the Top (OTT) communication providers worldwide. AudioCodes VoIP technology contains voice quality enhancements and best-of-breed VoIP network elements, and has a proven track record in product and network interoperability with the industry's leading companies.

With 25 years in the telecommunications market, AudioCodes' offers a broad range of solutions for both enterprise and service provider deployments. These solutions are built around our field-proven VoIP product range. With full support for industry standard protocols such as SIP, and proven interoperability with all industry leading soft switches, PBXs, IP-PBXs and unified communications platforms, AudioCodes delivers innovative solutions for virtually any voice communications environment, offering reduced total cost of ownership (TCO), enhanced features, and superior voice quality.

### **Historical Overview**

AudioCodes was established in 1993 to develop its low-bit-rate speech compression technology. Our first achievement was developing the speech compression algorithm that was selected by the International Telecommunication Union (ITU) as a basis for the ITU-T G.723.1 standard.

Over the years, we continued to expand our focus. Our development and expansion focused on different technologies and solutions as VoIP progressed:

- 1993-1997 – Algorithm Development
- 1995-2007 – Chips, Blades
- 2002-2016 – Networking Products
- 2011-2017 – Solutions and Services
- 2017-2018 – Virtualized products and cloud based products and services

Through acquisitions and partnerships, we were able to grow our business and expand our focus, while taking advantage of our core competence –voice processing and knowhow – which gave us the ability to mix and match technologies and become a solutions provider.

We expanded to compact PCI boards, achieving a transition to a higher capacity that helped develop the gateway market. In 2001, AudioCodes released its first media gateway independent platform, based on our blade and chip technology. The first product was an analog media gateway that was followed by a family of media gateways combining analog and digital interfaces. We then began to develop and sell high density media gateways and media servers.

We entered the field of call recording in 2004 when we acquired Ai-Logix. Ai-Logix was a leading provider of advanced voice recording technology and integration cards for the call recording and voice/data logging industries. AudioCodes used VoIP communications boards as we leveraged Ai-Logix's technology, strategic partnerships and customer base. We currently sell our call recording solutions mainly in the connection with Microsoft solutions.

In 2006, we teamed with BroadSoft (acquired by Cisco) to help service providers deliver hosted VoIP service. By 2009, we had launched a strategic initiative with BroadSoft to simplify deployments of IP voice networks and, in 2014, BroadSoft and AudioCodes announced that they were collaborating on “One Voice for Hosted Services”. The One Voice initiative included BroadSoft’s unified communication services and AudioCodes’ IP phones, routers, SBCs and gateways serving as a one stop shop for service providers that are offering enterprises next generation VoIP services.

AudioCodes continued to expand its product portfolio with session border controllers, multi-service business gateways/routers and IP Phones to be able to offer a wider range of products for leading UC and CC software vendors.

In January 2013, AudioCodes launched “AudioCodes One Voice for Microsoft Lync”, a unified product and service program intended to simplify and accelerate voice-enablement of Microsoft Skype Lync (now Skype for Business and Teams) implementations with a complete portfolio of IP phones, media gateways, enterprise session border controllers (E-SBCs), survivable branch appliances (SBAs), session experience manager (SEM) network management tools, support and professional services. The program supports migration to Microsoft Skype for Business/Teams and co-existence with current telephony systems in multi-site and multi-national deployment.

On December 31, 2015, AudioCodes acquired Active Communications Europe to further strengthen our ability to provide advanced software solutions for the emerging Microsoft Skype for Business online application. In 2016, AudioCodes leveraged the Active Communications Europe acquisition and promoted several products around Microsoft Skype for Business, including CloudBond 365 and User Management Pack 365 (UMP 365).

In 2018, AudioCodes continued to work on new product offerings of software only virtual session border controller and its Voice.AI initiative, a suite of products combining voice recognition and intelligent analysis of speech for various practical applications.

AudioCodes began working in the call center telecommunications sector in 2003 with VoiceGenie, which was acquired by Alcatel-Lucent-owned Genesys in 2006. In 2011, we were designated a vendor in the Genesys SIP Select program specifically for our Mediant 1000 and Mediant 2000 gateway products, that provide the interface between the PSTN and Genesys SIP Server. In 2016, AudioCodes and Genesys expanded their program pursuant to which Genesys and its partners offer a complete integrated end-to-end solution that includes the Genesys Customer Experience Platform along with AudioCodes’ IP phones, session border controllers, media gateways and centralized management and monitoring applications to allow customers to benefit from a quick and easy migration to an all-IP contact center.

AudioCodes now has tens of millions of SBC, media gateway and media server channels deployed in over 100 countries across the globe. Our high availability platforms (Mediant media gateways, Mediant session border controllers and IPmedia media servers) cover the spectrum of low, mid and high-density applications for service providers and large enterprises.

## **INDUSTRY BACKGROUND AND MARKET TRENDS**

The networking and telecommunications industries continue to experience rapid change. Below are some of the major market trends affecting the industry, as well as the evolving focus of the AudioCodes solutions and products.

### **Unified Communications**

With the move to VoIP and the network integration between voice and data based on Ethernet and IP, enterprises can adopt a unified communications and collaboration solution. Unified communications solutions integrate all means of communications into a single platform, providing on line (e.g., voice, data presence, instant messaging, white boarding and desktop sharing) and off line (voice mail, email and fax) integration into a single communication system shared across a variety of end user devices. Unified communications can be accessed through devices such as PCs, tablets, desktop phones or mobile smartphones. Unified communications can be either on-premises or cloud based. Alternatively, enterprises can adopt a hybrid approach where they keep the real time media path portion of their unified communications on-premises and the applications hosted in the cloud.

### **Unified Communications as a Service (UCaaS)**

Unified communications as a service (UCaaS) is a delivery model in which a variety of communication and collaboration applications and services are hosted by a third-party provider in public or private cloud data center and delivered over the Wide Area Network (WAN). In this category, the growth of hosted business services is widely affecting the communications world. Enterprises are adopting hosted and cloud services. Hosted unified communications and contact centers that are driven by Microsoft, BroadSoft (acquired by Cisco), Genesys and others are gaining traction within the enterprise community and are growing fast as an alternative to on-premises solutions. Microsoft’s Skype for Business unified communications offering is a market leader in this area.

## **SIP Trunking**

SIP trunking is a VoIP service based on SIP by which service providers deliver IP telephone connectivity services to customers equipped with SIP-based private branch exchange (IP-PBX) and unified communications facilities. More and more service providers are adopting SIP trunking as the technology of choice for connecting on-premise IP based business voice systems. SIP trunking technology is not new. For several years, Over the Top (OTT) service providers, sometimes called alternative service providers or Internet Telephony Service Providers (ITSP), have offered competitive voice services based on SIP trunking technology while the traditional telco companies continue to offer legacy PSTN services. Market data shows a clear migration of telcos moving towards SIP trunking services as well.

## **All IP Transformation**

Many telcos are moving towards a complete replacement of their legacy TDM networks with all-IP networks. Among the factors that drive telcos to replace legacy networks are end of life of the traditional TDM switches, real estate that is occupied by these switches and energy savings, together with the need to compete with the growing alternative service providers. Two typical strategies employed for the business sector by service providers in the move towards all-IP networks are placing CPEs (VoIP Media Gateways, Session Border Controllers or Multi-Service-Business-Routers) to connect the customers' legacy or IP equipment or systems to their IP network, or alternatively aggregate large number of TDM links (PRI primarily) at centralized Point of Presences utilizing large capacity VoIP Media Gateways.

## **Virtualization, Cloud and Network Function Virtualization (NFV)**

NFV is a transition of network infrastructure services to run on virtualized computing infrastructure using cloud technology, management, automation and orchestration solutions to provide network functionality with dynamic scaling of load as well as self-healing of virtual network functions (VNFs). The significance of software only virtualized products for the telecommunications market is increasing as operators and enterprises are seeking to move away from dedicated hardware platforms to common generic computing platforms that are enabling data centers. NFV aims to leverage standard IT virtualization technology to consolidate potentially all network functions (including SBCs) onto industry standard high volume servers, switches and storage, which could be located in datacenters, network nodes and on end user premises (vCPE – virtual customer premise equipment and vE-CPE, also known as uCPE – virtual enterprise customer premise equipment). NFV infrastructure, management and orchestration promises to introduce agility and enable quick introduction of new services to service providers' networks, similar to those characterizing internet and cloud services. There are a number of challenges that NFV needs to address, including real time performance, scale, resilience, management and automation. These and other technical challenges are being addressed in a network operator-led industry specification group under the auspices of ETSI, an industry standards setting body, as well as by leading public cloud vendors such as Amazon, Microsoft and Google.

## **WebRTC**

WebRTC is a free, open project that provides web browsers and mobile applications with real-time communications (RTC) capabilities via simple application programming interface, or APIs. The WebRTC components have been optimized to best serve this purpose. WebRTC enables rich, high quality RTC applications to be developed for the standard web browser, mobile platforms, and content delivery systems, and allows them all to communicate via a common set of protocols. The WebRTC initiative is a project supported by Google, Microsoft, Mozilla and Opera, among others. WebRTC support is available by default mainstream web browsers like Chrome, Edge, Opera and Firefox, and also as a library for developing mobile applications. WebRTC is making a major impact in real time communications as it is natively supported by web browsers and therefore does not require a user to download a specific application. Similar to other open source projects, WebRTC makes a complex technology (such as voice compression and packetization, mitigation of network impairments, security and encryption of real time sessions and peer to peer connectivity of devices regardless of their location) accessible to the big and growing community of web developers, allowing them to quickly and easily develop real time communications services without requiring specific knowhow in voice and video communications. To enable connecting SIP based communication services (e.g., enterprise unified communications or contact centers) with WebRTC, a WebRTC gateway is required to mediate between the incompatible media and signaling of the different systems, as well as enable centralized functions such as compliance recording. WebRTC gateway functionality may be standalone or incorporated into an SBC, in which case it benefits from SBC capabilities such as VoIP security and interoperability. Additionally, a WebRTC Software Development Kit (SDK) is often required to complement the WebRTC GW, making it simple for Web developers to quickly develop WebRTC clients for Web and Smartphones.

## **Software-Defined Networking (SDN) and Software-Defined Wide Area Network (SD-WAN)**

SDN is an emerging technology and architecture for designing, building and operating networks that brings a degree of agility and flexibility to networking, similar to what abstraction, virtualization and orchestration have brought to server and storage infrastructures. SDN architecture decouples the network control and forwarding functions enabling the network control to become directly programmable and the underlying infrastructure to be abstracted for applications and network services. Similar to NFV, SDN technology is expected to reduce OPEX and CAPEX associated with building and maintaining networks and also enable innovation.

SD-WAN is a specific application of SDN technology applied to WAN connections, which are used to connect enterprise networks –including branch offices and data centers – over large geographic distances. A WAN might be used, for example, to connect branch offices to a central corporate network, or to connect data centers separated by distance. In the past, these WAN connections often used technologies (such as MPLS) that required special proprietary hardware and were sold at premium prices by service providers that offered a high degree of security, resiliency and quality of service. The SD-WAN technology seeks to modernize the network edge technology using a software approach and leverage on the wide availability of low cost broadband and internet services to offer cost effective alternatives to legacy WAN services.

### **Mobility Plus**

There are nearly 1,000 MVNOs (mobile virtual network operator) in the world. The Mobility Plus product line offers a solution to this market. The solution enables use of the data network as an alternative option to cellular (GSM) calling and provides a significant saving to the cost of operations of MVNOs. Mobility Plus is offered as a SaaS solution and is installed on Amazon web services (AWS). Other features include high definition voice quality, advanced messaging and seamless handover between WiFi and 3G/4G/LTE networks.

Wireline service providers are facing increased pressure to add new revenue generating services. They can now use their customers' mobile devices, such as smartphones and tablets, to deliver next generation mobile services by using VoIP over Wi-Fi or cellular data. Service providers can offer mobility services to reduce customers' cellular roaming costs and divert revenue of roaming users from mobile providers to themselves. In parallel, enterprises are increasingly relying on a mobile workforce and are requiring communications services and solutions that enable employee mobility and productivity.

### **VoiceAI**

The momentum of the market around cognitive services, and speech applications in particular, is increasing. The technology giants are offering an array of technologies as a service, and service providers and Enterprise customers keep looking for innovative technologies, products and solutions, cloud-based and on premises, in order to automate customer care services, to shorten the call handling time and to make their customer care processes more efficient.

## **BUSINESS STRATEGY**

AudioCodes' business strategy is focused on increasing its position as a leading vendor of advanced UC-SIP enterprise voice and voice networking and media processing solutions for the digital workplace. The following are key elements of our strategy:

*Maintain and extend technological leadership.* We intend to capitalize on our expertise in voice compression technology and voice signaling protocols and proficiency in designing voice communications systems. We continually upgrade our product lines with additional functionalities, interfaces and densities. We are also migrating our product functionality to be software-based and run natively in cloud environments, to comply with the industry trend of migrating to private and public clouds. We have invested heavily and are committed to continued investment in developing technologies that are key to providing high performance voice, data and fax transmission over packet networks and to be at the forefront of technological evolution in our industry.

*Strengthen and expand strategic relationships with key partners and customers.* We sell our products to service providers and enterprises worldwide, leading enterprise channels, regional and global system integrators, global equipment manufacturers and value-added resellers (VAR), in the telecommunications and networking industries and establish and maintain long-term working relationships with them. We work closely with our customers to engineer products and solutions that meet their particular needs. The on-going development and integration cycles frequently result in close working relationships with our customers and partners. By focusing on leading solution vendors, system integrators and channels with large volume potential, we believe that we reach a substantial segment of our potential customer base while controlling the cost and complexity of our marketing efforts.

*Expand and enhance the development of highly-integrated products.* We plan to continue designing, developing and introducing new product lines and product features that address the increasingly sophisticated needs of our customers. We believe that our knowledge of core technologies and system design expertise enable us to offer better solutions that are more complete and contain more features than those available in competitive alternatives. We believe that the best opportunities for our growth and profitability will come from offering a broad range of highly-integrated network product lines and product features, the integration of data services into our VoIP products, and the expansion into the unified communications and contact center markets.

*Build upon existing technologies to penetrate new markets.* The technology we developed originally for the OEM market has served us in building products that now sell into the service provider and enterprise markets. The same products and technology can also be used to create application-specific products and solutions, which helps us penetrate and serve various types of customers. Key segments that we focus on are unified communications, contact centers, SIP trunking and hosted services markets that have been adopting VoIP solutions.

*Work close to market and customers.* Our partners and customers are distributed around the world, and part of our ability to serve them is by being close by. For this reason, we are investing in building local operations in key countries and regions, including sales, marketing and support resources to closely serve our partners and customers.

*Develop a network of strategic partners.* We sell our products through, or in cooperation with, customers that can offer or certify our products as part of a full-service solution to their customers. We expect to further develop our strategic partner relationships with solution providers, system integrators and other service providers in order to increase our customer base. Our strategic partners include companies such as Microsoft, BroadSoft (now part of Cisco), Genesys (including Interactive Intelligence).

*Acquire complementary businesses and technologies.* We may pursue the acquisition of complementary businesses and technologies or the establishment of joint ventures to broaden our product offerings, enhance the features and functionality of our systems, increase our penetration in targeted markets and expand our marketing and distribution capabilities.

*Engage enterprise customers in direct sales effort.* We are pursuing a strategy of engaging large enterprise customers on a global level, as part of the AudioCodes product fit within leading enterprise solutions, mainly with Microsoft and Genesys. Our ability to engage these enterprises directly enhances our ability to influence solution design and procurement decisions. This, in turn, is designed to increase demand, which is expected to allow our business partners to fulfill this demand based on their relationship with AudioCodes.

*Develop and expand professional services offering.* AudioCodes has a rich portfolio of product-led services. We offer to our customers expert professional services to assist them with design, implementation and support of our products. We are planning to expand our services offering in line with the new products and solutions. Systems Integrators, Value-Add Resellers (VAR) and Service Providers (SP) are able to leverage AudioCodes professional services to complement their own, and are able to offer them under their own brand to the end customers.

## **AUDICODES SOLUTIONS, PRODUCTS AND SERVICES**

### **Overview**

Our products are intended for voice networking and media processing solutions for the digital workplace and they also facilitate the transmission of voice, data and fax over packet networks. We are a leading vendor of advanced voice networking and media processing solutions for the digital workplace. We have incorporated our algorithms, technologies and systems design expertise in both our networking and technology product lines.

Our products and services revenues are derived from networking and technology products. Networking products consist of connectivity platforms (Gateways, SBC and MSBR), IP Phones and management server suite. We further split the networking products to Gateways, UC-SIP and Applications. The Gateways are comprised of the TDM Voice over IP Media Gateways (analog and digital). UC-SIP consists of SBC, MSBR, IP Phones, Microsoft specific appliances (CloudBond 365 and Mediant CCE appliance) as well as call routing, element and voice quality management suite, all together management server suite. Applications include mobile VoIP solutions and other value added application products. Sales of networking products accounted for approximately 61% of our revenues in 2016, 60% of our revenues in 2017 and 61% of our revenues in 2018. Network services accounted for approximately 29% of our revenues in 2016, 31% of our revenues in 2017 and 32% of our revenues in 2018.



Technology products are enabling in nature and consist of our chips and boards business products. These are sold primarily to original equipment manufacturers, or OEMs, through distribution channels. Our chips and boards serve as building blocks that our customers incorporate in their products. In contrast, our networking products are used by our customers as part of a broader technological solution and are a box level product that interacts directly with other third party products. Sales of technology products accounted for approximately 9% of our revenues in 2016, 8% of our revenues in 2017 and 7% of our revenues in 2018. Technology services accounted for less than 1% of our revenues in 2016, 2017 and 2018.

To support today's complex multi-service networks, AudioCodes has developed a comprehensive professional services program intended to provide responsive, preventive, and consultative support of AudioCodes networking products. AudioCodes professional services support networking devices, applications and infrastructures, allowing large organizations and service providers to realize the potential of a high-performance multi-service network. The foundation for AudioCodes professional services is a network life-cycle model based on the four basic phases of planning, design, implementation and operations. The result is a specially designed portfolio of complementary and synergistic service components.

## **AudioCodes Solutions**

### **Solutions for Microsoft Skype for Business/Teams**

AudioCodes One Voice for Skype for Business and Microsoft Teams includes AudioCodes' Microsoft-qualified end-to-end voice elements, wide-ranging services and extensive expertise to enhance Microsoft Skype for Business voice implementations. These products and services are suitable for all Microsoft-approved unified communications architectures, including on-premise, cloud-based and hybrid.

Coexistence, Migration and SIP Trunking allow for smooth and controlled migration of existing telephony system or telephony services. AudioCodes delivers a comprehensive solution for migration, integration and SIP trunking connectivity. Compatible with virtually any PBX, AudioCodes' simplified dialing plan Active Directory (AD) integration protects investment in legacy equipment.

Security and Fraud Prevention solutions prevent attacks causing voice disruptions, theft of services or other threats exposing a customer's voice infrastructure. AudioCodes secures the integration of unified communications and external voice services with attack detection and topology hiding.

Devices and Productivity improves employee efficiency while integrating UC into the work environment. AudioCodes delivers desk phone products and huddle room solutions that are intuitive to work with and deliver excellent quality.

Compliance and recording meets regulatory and compliance requirements. AudioCodes helps businesses address compliance and regulation with E911 location services support and compliance recording.

Resiliency and recovery enables recovery from failures and survival of voice network interruptions. AudioCodes has a broad portfolio of resiliency products and solutions. AudioCodes products are designed for functionality and cost effectiveness.

All-in-One Voice Solution is based on CloudBond™ 365 and enables a wide range of solutions for cloud-hybrid deployments, remote branch offices, PBX replacement and UC pilots.

Skype for Business and Teams Management Solutions deliver operational excellence with full life-cycle management. AudioCodes One Voice Operations Center is a management suite providing full coverage of the entire set of actions required to manage a voice network in a Skype for Business unified communications environment.

### **Enterprise UC and PBX Connectivity**

AudioCodes' products are essential elements of an enterprise telephony network, adding VoIP capabilities to existing TDM equipment, or complementing IP-PBX or unified communications deployments with media gateway, IP phone, and enterprise session border controller (E-SBC) solutions.

AudioCodes' suite of products provides the scalability, flexibility and reliability needed to aid the successful deployment of best-of-breed, SIP-based enterprise communications systems. The solution delivers SIP and TDM Trunking, analog device connectivity, and enterprise branch survivability.

### **Managed IP Phone**

Comprehensive IP phone management is the key to an excellent user experience. Voice remains the most fundamental method of employee collaboration and the ability to control the user experience is critical for improved productivity.

AudioCodes Managed IP Phones solution defines the IP phone as an IT-managed entity and delivers unique and complete life-cycle management of end-user desktop devices. The solution provides administrators with powerful and easy-to-use tools to simplify tasks such as configuration, troubleshooting and monitoring to increase efficiency and ensure user satisfaction.

With the ability to deploy devices, monitor voice quality, identify problems and fix them rapidly and efficiently, AudioCodes' solution is designed to deliver employee satisfaction, increased productivity and lower IT expenses.

### **Solutions for Contact Centers**

VoIP and Unified Communications have altered and evolved the business environment in which modern contact centers operate. The new IP Contact Center offers lower costs, greater flexibility, higher customer satisfaction, improved productivity and increased revenue.

AudioCodes VoIP network solutions for Contact Centers, including SBC, IP Phones and Gateways, are designed to help enterprises and service providers in their transition towards an all-IP voice infrastructure by providing the network elements required to enable and support the smooth operation of the contact center application suite while mitigating the risks of migrating into an IP environment. Additionally, our virtualized VoIP connectivity and management solutions help cloud contact center vendors to build highly reliable and scalable Contact Center as a Service (CCaaS) offering.

### **Virtualization, Cloud and NFV**

Enterprises and service providers adopt virtualized solutions either in privately own data centers or in public clouds, following the Network Function Virtualization (NFV) architecture and concepts. This enables scale and quick introduction of new innovative communication services without the overhead typically associated with hardware-based solution deployments. Realizing this opportunity requires flexible Virtual Network Function (VNF) Session Border Controllers (SBCs) capable of running both as access and peering/Interconnect SBCs, as well as VNFs on enterprise virtualized data centers or Virtual Enterprise CPE devices (vE-CPE, also known as uCPE).

AudioCodes offers a comprehensive and flexible set of solutions spanning from vE-CPE appliances that can host third party VNFs as well as a scalable virtualized SBC. AudioCodes' virtual SBC. VoIP routing and lifecycle management runs on any vE-CPE device, as well as in the Enterprise, Service or Cloud provider's virtualized infrastructure, functioning as an access or peering/Interconnect SBC. By offering a single scalable product, covering all capacity needs with unified control and management interface, Enterprises, Service and Cloud providers can leverage its deployment and operations simplicity to introduce new communications services rapidly and cost-effectively. Running on most public cloud infrastructure, the AudioCodes virtualized SBCs enable Enterprises and Software as a Service (SaaS) vendors to quickly integrate and launch VoIP services out of the public cloud infrastructure.

### **SIP Trunking Solutions**

AudioCodes' SIP Trunking solutions are used by service providers deploying SIP Trunking services. These solutions allow service providers to benefit from quick, easy and reliable deployments as well as address their customers' needs to continue using their existing PBX and IP-PBX systems while migrating from TDM to SIP Trunking services. This migration can be done with minimum business disruption while providing high quality communication services. Additionally, the modular design of AudioCodes SIP Trunking devices enables service providers to leverage SIP Trunking services to allow for quick and easy remote migration to hosted UC services in the future.

## **PSTN Migration**

AudioCodes' PSTN migration solutions are targeted at fixed-line service providers who are transforming their TDM fixed-line networks to all-IP. The solutions consist of a set of scalable CPE devices, central office gateways, and management and monitoring application suites, working seamlessly together and designed to enable fixed-line providers a quick, reliable and cost-effective path from TDM to All-IP services.

AudioCodes enables fixed-line service providers the ability to benefit from a wide-range of PSTN migration solutions that cover on-premises CPE, street cabinet and central office PSTN to IP migration option, business customers from SOHOs up to large enterprises, PRI, ISDN and analog interface and configuration, and VoIP gateway, Session Border Controller (SBC), routing and NFV applications.

## **UCaaS**

Designed to enable reliable and quality delivery of cloud-based services, AudioCodes' UCaaS solutions are comprised of a comprehensive portfolio of hardware and software products. AudioCodes solutions are used by service providers who are deploying Cloud and Hosted UC services. Based on their survivability, resiliency, high voice quality assurance, and advanced remote management features, AudioCodes' UCaaS solutions enable service providers to deliver to their business customers reliable and quality cloud services, as well as provide them with the confidence they need to place their key communications functions in the cloud.

## **MobilityPLUS**

AudioCodes MobilityPLUS enables operators to offer mobile voice, video and messaging, over cellular data and Wi-Fi networks.

AudioCodes MobilityPLUS offers a large-scale platform, comprised of comprehensive backend servers, cellular to Wi-Fi handover and a variety of white label mobile applications. AudioCodes MobilityPLUS supports Apple® iOS™ and Google Android™ for smartphones, tablets, soft clients supporting Microsoft Windows™ for PCs and laptops and WebRTC client for web browsers.

## **VocaNOM**

AudioCodes VocaNOM is a cloud-driven voice communication application for businesses and organizations allowing voice-based dialing and routing. VocaNOM is improving internal communication between employees and staff as well as external calls to suppliers (outbound) or from customers (inbound). VocaNOM provides a solution for the problem of managing multiple business contacts and dialing on the go. The solution allows dialing by voice as the organizational phone directory is fully synced into the cloud alongside the speech recognition algorithms designed by AudioCodes.

## **VocaONE**

AudioCodes voice-driven calling assistant is an easy-to-use solution that enables organizations, public institutions and retailers to handle thousands of calls each day, while maintaining high-quality customer experience. Based on AudioCodes state-of-the-art voice recognition technology, VocaONE provides callers with an 'always-on', 24/7 calling solution that improves customer experience and satisfaction, while significantly reducing associated costs.

VocaONE includes a built-in guided NLU engine that provides a wide coverage of industry-related enterprise jargons, enabling users to use their natural language rather than having to learn a new set of operational terms and words. By allowing callers to use their familiar, every day, language, VocaONE increases both engagement and satisfaction, by presenting an authentic and unparalleled customer experience.

## **SmartTAP Call Recording**

AudioCodes SmartTAP Call Recording is an enterprise-wide compliance and liability recorder supporting Skype for Business as well as gateways and SBCs supporting SEPreC protocol. Though most recorders in the market focus on contact center features, SmartTAP is deployed across the enterprise to capture calls, either on-demand or, in some cases, full time. With an integral Skype for Business recording toolbar, enterprise users can be recorded with SmartTAP anywhere and anytime they are on Skype for Business calls. SmartTAP can initially be deployed on a small scale and then can be scaled up to support many thousands of users using its linear scalability feature. SmartTAP supports Skype For Business recording of voice, video, video conference, Instant Messaging and Desktop Sharing transactions.

## AudioCodes Products

### Core Technologies

#### *Narrowband and Wideband (HDVoIP) Voice Compression Algorithms*

Voice compression techniques are essential for the transmission of voice over packet networks. Voice compression exploits redundancies within a voice signal to reduce the bit rate required to digitally represent the voice signal, from 64 kilobits per second, or kbps, down to low bit rates ranging from 5.3 kbps to 8 kbps, while still maintaining acceptable voice quality. A bit is a unit of data. Different voice compression algorithms, or coders, make certain tradeoffs between voice quality, bit rate, delay and complexity to satisfy various network requirements. Use of voice activity detection techniques and silence removal techniques further reduce the transmission rate by detecting the silence periods embedded in the voice flow and discarding the information packets which do not contribute to voice intelligibility.

We are one of the innovators in developing low bit rate voice compression technologies. Our patented MP-MLQTM coder was adopted in 1995 by the ITU as the basis for the G.723.1 voice coding standard for audio/visual applications over circuit-switched telephone networks. By adhering to this standard, system manufacturers guarantee the interoperability of their equipment with the equipment of other vendors.

We also provide wideband compression techniques that provide high definition VoIP quality, which expands the sampled frequency range from the traditional narrowband frequency range of 3.3Khz to over 7Khz, providing better voice quality and intelligibility, and a better user experience. This technology is expanding and is expected to become a de-facto standard for future VoIP communications.

#### *Advanced Digital Signal Processing Algorithms*

To provide a complete voice over packet communications solution, we have developed a library of digital signal processing functions designed to complement voice compression coders with additional functionality, including: echo cancellation; voice activity detection; facsimile and data modem processing; and telephony signaling processing. Our extensive experience and expertise in designing advanced digital signal processing solutions allows us to implement algorithms using minimal processing memory and power resources.

Our algorithms include:

*Echo cancellation.* Low bit rate voice compression techniques introduce considerable delay, necessitating the use of echo cancellation algorithms. The key performance criterion of an echo canceller is its ability to deal with large echo reflections, long echo delays, fast changing echo characteristics, diverse telecommunications equipment and network effects. Our technology achieves low residual echo and fast response time to render echo effects virtually unnoticeable.

*Fax transmission.* There are two widely used techniques for real time transmission of fax over networks based on Internet protocols: fax relay and fax spoofing. Fax relay takes place when a fax is sent from a fax machine through a gateway over networks based on Internet protocols in real time to a fax machine at the other end of the network. At the gateway, the analog fax signals are demodulated back into digital data, converted into packets, routed over the packet network and reassembled at the receiving end. Fax relay is used when the round trip network delay is small (typically below one second). When the round trip network delay increases, one of the fax machines may time out while waiting for a response from the other fax machine to arrive.

*Data modem technology.* We have developed data modem technologies that facilitate data relay over packet networks. Our data modem relay software algorithms support all existing data modem standards up to a bit rate of 14.4 kbps.

*Telephony signaling processing.* Various telephony signaling standards and protocols are employed to route calls over the traditional telephone network, some of which use "in-band" methods, which means that the signaling tones are sent over the telephone line just like the voice signal. As a result, in-band signaling tones may have to undergo the compression process just like the voice signal. Most low bit-rate voice coders, however, are optimized for speech signals and exhibit poor tone transfer performance. To overcome this, our processors are equipped with tone detection and tone generation algorithms. To provide seamless transparency between the traditional telephone network and packet networks for signaling, we employ various digital signal processing techniques for efficient tone processing.

## *Voice Communications Software*

To transmit the compressed voice and fax over packet networks, voice packetization processes are required to construct and deconstruct each packet of data for transmission. The processing involves breaking up information into packets and adding address and control fields information according to the specifications of the appropriate packet network protocol. In addition, the software provides the interface with the signal processors and addresses packet delay and packet loss issues.

### *Media Processing*

Our media processing products provide the enabling technology and platforms for developing enhanced voice service applications for legacy and next generation networks. We have developed media processing technologies such as message recording/playback, announcements, voice coding and mixing and call progress tone detection that enable our customers to develop and offer advanced revenue generating services such as conferencing, network announcements, voice mail and interactive voice response.

Our media processing technology is integrated into our enabling technology platforms like Voice over Packet processors and VoIP blades, as well as into our network platforms like the Mediant media gateways and the IPMedia media servers. The same technology is also integrated into our multi-service business gateways, enabling the use of these platforms to run third party VoIP software, offloading media processing from the host CPU.

### *Addressing Multiple Networks and Standards Concurrently*

Convergence of wireline and wireless networks is becoming a key driver for deployment of voice over packet networks, enabling operators to use common equipment for both networks, thus lowering capital expenditures and operating expenses, while offering enriched services.

Our voice over packet products provide a cost-effective solution for these convergence needs, complying with the requirements of broadband wireline operators using xDSL technologies, cable operators, mobile operators, FTTx operators, Internet telephony service providers, or ITSPs, and virtual network operators (VNOs). This includes support for relevant vocoders (wireline and wireless concurrently), interfaces and protocols.

Our products are also positioned to support the requirement of all types of enterprise customers. From SOHO, SMB all the way up to large enterprises, our products can provide integrated VoIP services and service provider access to enterprises in multiple vertical markets.

### *Hardware Architectures for Dense Multi-Trunk Voice over Packet Systems*

Our voice over packet product offerings include high density, multi-trunk voice over packet systems for standards-based open telecommunications platforms in access equipment. Multi-trunk processing is centered on a design encompassing two key processing elements, signal processors performing voice, fax and data processing and a communications processor. Overall system performance, reliability, capacity, size, cost and power consumption are optimized, based on our hardware architecture, which supports high throughput rates for multi-trunk processing. On-board efficient network and system interfaces relieve the system controller from extensive real time data transfer and processing of data streams.

### *Carrier Grade System Expertise*

To provide state of the art carrier grade media gateways, we have developed a wide expertise in a number of fields essential to such a product line. We have developed or integrated the various components required to implement a full digital media gateway solution that behaves as a unified entity to the external world. This required a major investment in adapting standard cPCI and MicroTCA (AMC) platforms to our needs. Such adaptation included optimizing power supply and cooling requirements, adding centralized shelf controllers, fabric switches and alarm cards to the chassis. Another aspect of the expertise we developed relates to high availability software and hardware design. High availability is a required feature in any carrier grade media gateway platform. We have also developed a sophisticated EMS to complete our offering. Our EMS enables the user to provision and monitor a number of media gateways from a centralized location.

## Networking Products

### Session Border Controllers (SBC) and Media Gateways (MG)

AudioCodes' Mediant family of Session Border Controllers (SBCs) and Media Gateways (MG) is a line of versatile IP communications platforms that connect VoIP and TDM networks.

SBCs are deployed at the border between the enterprise and the service provider, as well as between the networks of different service providers. In the enterprise environment, SBCs form an effective demarcation point between the VoIP network of a business and the SIP Trunk or hosted VoIP service of a service provider. In this capacity, an SBC performs SIP protocol and media mediation (interoperability) and secures the enterprise VoIP network. In the service provider core, SBCs provide primarily VoIP security, protocol normalization, VoIP routing and service level agreement monitoring and enforcement.

The Mediant SBC family includes a range of hardware and software platforms that offer cost-efficient, scalable SBC and hybrid SBC-MG functionality (SIP to TDM, SIP to SIP) for enterprises, service providers and cloud deployments.

AudioCodes' family of High-Availability Media Gateways is a line of highly reliable IP communications platforms that connect VoIP and TDM networks. Featuring NEBS Level 3 compliance and cost-effective redundancy configurations, the AudioCodes platforms meet the stringent availability requirements of service providers. AudioCodes High-Availability Media Gateways serve as an efficient junction between VoIP networks, legacy TDM equipment, and the PSTN. They interwork with most market-leading softswitches, application servers, IP-PBXs, and other standards-based VoIP elements.

AudioCodes' MediaPack 1xx series of Analog VoIP Gateways are cost-effective, stand-alone VoIP gateways that provide superior voice technology for connecting legacy telephones, fax machines and PBX systems with IP telephony networks and IP-based PBX systems. The MediaPack 1xx gateways are fully interoperable with leading softswitches and SIP servers and support a wide variety of service provider and enterprise applications.

Service providers can use MediaPack gateways to connect Multi-Tenant Units (MTUs), IP Centrex subscribers, payphones, and rural users over wireless and satellite links.

Enterprises can use MediaPack gateways to connect their legacy PBX systems over an IP infrastructure. In addition, in IP Centrex and central IP-PBX applications, MediaPack enhances remote location availability and provides Stand Alone Survivability (SAS) when there is no IP connection between branch locations and a central SIP server, SIP proxy or central IP-PBX.

The MediaPack(MP)-1288 is a high density analog media gateway. Supporting up to 288 analog ports in a compact 3U chassis. The MP-1288 offers a cost-effective solution for organizations transitioning to all-IP that need to integrate large numbers of analog devices into their new infrastructure. The MP-1288 enables these organizations to protect the investment made in their analog devices and cabling while enjoying the functional and cost benefit of the move to the all-IP infrastructure.

### Multi-Service Business Routers (MSBR)

AudioCodes' family of Multi-Service Business Routers (MSBR) offers service providers a range of all-in-one SOHO, SMB and SME routers combining access, data, voice and security onto a single device. It is designed for managed data, SIP trunking, hosted PBX, and cloud-based services, and allows service providers to deploy flexible and cost-effective solutions.

AudioCodes' Multi-Service Business Routers allows service providers to provide their business customers much more than just an internet connection. In addition to its integrated powerful routing and security software, the MSBR also features a multi-core architecture that aids consistent high performance, allowing end customers to maximize their broadband connections for both data and voice applications.

Service providers offering hosted PBX or SIP trunking communication services will benefit from AudioCodes' MSBR, which includes integrated voice gateway, analog and digital interfaces with various codecs that support analog phones, fax, PBX and PSTN connectivity, and session border controllers (SBC).

## **IP Phones and Huddle Room Solution**

The AudioCodes 400HD series of IP Phones includes a range of easy-to-use, feature-rich products for the service provider hosted services, enterprise unified communications and contact center markets. Based on the same advanced, field-proven underlying technology as our other VoIP products, AudioCodes high quality IP phones enable systems integrators and end-customers to build end-to-end VoIP solutions. AudioCodes Huddle Room Solution (HRS) delivers a voice-meeting solution for small and medium sized meeting rooms.

## **Managed IP Phones solution**

AudioCodes IP phones can be offered as part of our of Managed IP Phones solution which defines the IP phone as an IT-managed entity and delivers complete life-cycle management of end-user desktop devices.

## **CloudBond 365, Cloud Connector Edition (CCE) appliances, and User Management Pack 365 (UMP 365)**

AudioCodes CloudBond™ 365 is a modular, adaptable solution for the data center, customer premises or the branch. A versatile all-in-one Skype for Business appliance designed for hybrid environments, it combines Skype for Business server, the Cloud-PBX and the service provider's voice services. While Microsoft's cloud unified communications offering is still evolving into a full PBX replacement, CloudBond 365 bridges the gap, creating the critical bond between UC and the developing cloud business.

AudioCodes CloudBond 365 CCE appliances allow Microsoft Skype for Business cloud PBX customers to connect to their local existing voice services (such as E1/T1, ISDN and SIP Trunks). AudioCodes CloudBond CCE appliances package Microsoft CCE code along with AudioCodes SBC and gateway technology and a management application for simplified installation and operation.

AudioCodes User Management Pack 365 (UMP 365) is a software management application that allows IT managers and service providers to easily manage user life-cycle in Skype for Business deployments. UMP 365 does not require knowledge and expertise in Microsoft's PowerShell tools. Instead, it allows helpdesk level engineers to operate the daily tasks using an intuitive graphical user interface.

## **Survivable Branch Appliances**

AudioCodes' family of Survivable Branch Appliances (SBA) is a line of enterprise-class integrated CPEs designed to ensure access to data and voice services in the event of a WAN outage. AudioCodes SBAs are an element in multisite Skype for Business deployments, and are fully certified by Microsoft for use with Skype for Business Server.

A Survivable Branch Appliance (SBA) is a hardware device that ensures the availability of enterprise-wide voice service and voice mail. It also contains a public switched telephone network (PSTN) gateway for use in the event of VoIP failure. As part of our One Voice for Skype for Business portfolio, AudioCodes offers Survivable Branch Appliances that fit any enterprise location size, providing branch office voice resiliency for up to 1000 users.

## **VoIP Management and Routing**

AudioCodes' management and operations solutions are a suite of holistic lifecycle applications suitable for large scale cloud or premises-based unified communications deployments. The management and operations suite supports the entire set of actions required to manage a voice network in a unified communications environment. In conjunction, the applications form the basis of a powerful network operation center (NOC) with complete end-to-end network control, service assurance capabilities and comprehensive optimization and future planning tools. The management and operations suite uniformly manages, monitors and operates the entire AudioCodes One Voice portfolio, including SBCs, Media Gateways, Microsoft specific appliances and IP phones.

AudioCodes One Voice Operations Center (OVOC) is a web-based voice network management solution that combines management of voice network devices and quality of experience monitoring into a single, intuitive web-based application. OVOC enables administrators to adopt a holistic approach to network lifecycle management by simplifying everyday tasks and assisting in troubleshooting all the way from detection to correction.

OVOC's clear GUI design, system allows administrators to manage the full lifecycle of VoIP devices and elements from a single centralized location, saving time and costs. Tasks that would normally be complex and time-consuming, such as performing root cause analysis, adding new devices to the VoIP network and initiating bulk software updates, can be carried out simply and rapidly using the AudioCodes OVOC management suite.

AudioCodes IP Phone Manager is a powerful and intuitive lifecycle management tool for enterprise IP phone deployments that enables administrators to deliver a reliable desktop phone service within their organization. With the ability to deploy and monitor AudioCodes 400HD IP phones, identify problems, and then fix them rapidly and efficiently, AudioCodes IP Phone Manager increases employee satisfaction and productivity and lower IT expenses.

Managing the dial plan and call routing rules of multi-site, multi-vendor enterprise VoIP networks can be extremely complicated. AudioCodes Routing Manager (ARM) delivers a powerful, innovative solution to this problem by enabling centralized control of all session routing decisions. Through ARM's highly intuitive graphical user interface, system administrators can design and modify their voice network topologies and call routing policies from a single location, resulting in significant time and cost savings. Time-consuming tasks such as adding a new PSTN or SIP trunk interconnection, adding a new branch office or modifying individual users' calling privileges can be carried out simply and rapidly.

#### **Mobility Plus**

AudioCodes MobilityPLUS is a Mobile VoIP (mVoIP) Solution from AudioCodes comprised of a Client Management System (CMS) and a variety of Mobile Soft Clients for leading Mobile Operating Systems and Smartphones. MobilityPLUS is currently available for leading smartphone operating systems including iOS and Android.

#### **VocaNOM**

AudioCodes VocaNOM allows callers to say the name of a person or a department and be automatically transferred to the requested party, thus, relieving the need for searching for phone numbers or waiting to speak to an operator. The solution can be used by external users and by company personnel for internal calls. Combining powerful speech recognition with a simple-to-use conversational interface, VocaNOM provides reliable, 24x7 call routing for organizations.

#### **SmartTAP Call Recording**

AudioCodes SmartTAP Call Recording is an enterprise-wide compliance and liability recorder supporting Skype for Business. Though most recorders in the market focus on Contact Center features, SmartTAP is deployed across the enterprise to capture calls, either on-demand or, in some cases, full time, when calls about compliance and liability occur more frequently. With an integral Skype for Business recording toolbar, enterprise users can record with SmartTAP anywhere and anytime they are on Skype for Business calls. SmartTAP can initially be deployed on a small scale and be scaled up to support many thousands of users using the product's linear scalability feature.

#### **Auto Attendant**

AudioCodes Auto Attendant is a powerful and flexible tool for managing inbound calls and delivering them efficiently to the correct destination based on the caller's selection. AudioCodes Auto Attendant supports advanced call queuing for Automatic Call Distribution (ACD) based on different routing modes and agent availability.

As part of AudioCodes One Voice for Skype for Business offering, AudioCodes' Auto Attendant application can be deployed together with AudioCodes' Survivable Branch Appliances (SBA) in branch offices to complement the Skype for Business Response Group Service (RGS) when the connection with the central servers is lost. AudioCodes Auto Attendant is a pure software application which can also be deployed on standard server hardware.

#### **Fax Server**

AudioCodes' Fax Server is a powerful and flexible tool for managing inbound and outbound enterprise fax transmissions. The Fax Server application is part of AudioCodes One Voice for Skype for Business, a unified product and service program intended to simplify and accelerate voice-enablement of Microsoft UC implementations. AudioCodes Fax Server is a software application which can be deployed on a standard server or on AudioCodes Mediant SBC/media gateways and Survivable Branch Appliances (SBA) in branch offices. For multi-site organizations the Fax Server application may be deployed at branch offices or as a centralized application in the datacenter serving all remote branches.

#### **SIP Phone Support**

AudioCodes SIP Phone Support (SPS) is a value-added application for AudioCodes Mediant Session Border Controllers (SBC) and gateways that enables smooth connectivity between IP DECT devices and Skype for Business. By connecting Skype for Business with IP DECT phones, SPS enables campus mobility for Microsoft UC deployments including advanced features such as simultaneous ringing, enhanced presence, Active Directory integration and seamless handover between DECT base stations.



## **Technology Products**

### *Voice over Packet Processors*

Our signal processor chips compress and decompress voice, data and fax communications. This enables these communications to be sent from circuit-switched telephone networks to packet networks. Our chips are digital signal processors on which we have embedded our algorithms. These signal processor chips are the basic building blocks used by our customers and us to enable their products to transmit voice, fax and data over packet networks. These chips may be incorporated into our communications boards, media gateway modules and analog media gateways for access and enterprise applications or they may be purchased separately and incorporated into other boards or customer products.

### *TrunkPack™ VoIP Communication Boards*

Our communications boards are designed to operate in gateways connecting the circuit-switched telephone network to packet networks based on Internet protocols. Our boards comply with VoIP industry standards and allow for interoperability with other gateways. Our boards support standards-based open telecommunications architecture systems and combine our signal processor chips with communications software, signaling software and proprietary hardware architecture to provide a cost efficient interoperable solution for high capacity gateways. We believe that using open architecture permits our customers to bring their systems to market quickly and to integrate our products more easily within their systems.

### *IPmedia™ Boards for Enhanced Services and Functionalities*

The IPmedia™ product family is designed to allow OEMs and application partners to provide sophisticated content and services that create revenue streams and customer loyalty through the ability to provide additional services. The IPmedia™ boards provides voice and fax processing capabilities to enable, together with our partners, an architecture for development and deployment of enhanced services.

### *Voice and Data Logging Hardware Integration Board Products*

The SmartWORKS™ family of products is our voice and data logging hardware integration board product line. SmartWORKS™ boards for the call recording and voice/data logging industry are compatible with a multitude of private branch exchange, or PBX, telephone system integrations.

## **AudioCodes Services**

AudioCodes offers a comprehensive portfolio of global planning, implementation, operations and support services. AudioCodes' The Voice Experts @ Your Service program allows partners to complement their own services offering with our modular portfolio of Professional Services. The result is a complete network life-cycle model. Our Professional Services portfolio enables seamless integration, high availability, and non-stop scalability to meet business and network demands.

AudioCodes offers flexible technical support services that ensure customer care and optimized network performance and availability. AudioCodes is committed to providing customers and partners with the most comprehensive, qualified customer support. Our global customer support team delivers customer-oriented technical support, training, and consulting that enhances the value provided by AudioCodes products.

AudioCodes Academy offers a comprehensive set of technical training courses for AudioCodes' partners and customers. By providing several levels of certification, distinct training programs and a combination of theory and hands-on studies, the academy is built to help system integrators, resellers, and distributors equip their people with the necessary skills to deploy and maintain AudioCodes networking technology in the field.

## **Customers**

Our customers consist of service providers (with direct and indirect relationship), enterprises (with indirect relationship) and a small percentage of OEM customers.

Our service provider customers include a range of tier 1, 2 and 3 service providers that deploy our solution as part of their voice service or UC or SIP trunk or others offering for their business customers. Our solutions are deployed both at the customer premise and at the service core to provide connectivity and high-quality voice services. AudioCodes' range of products and wide interoperability allows service providers to deploy our solutions in practically any third party solution environment (e.g., together with BroadSoft (acquired by Cisco) Huawei, Alcatel, MetaSwitch and others) and for a wide range of customers. Our solutions are sold to service provider customers in 100 countries mainly through a wide range of distributors and some via direct sales.

Our enterprise customers include a range of Fortune 1000 organizations as well as smaller enterprises that use our equipment to enable their UC solution. Our solutions are sold to enterprise customer through a wide network of resellers and distributors and the vast majority of the business is done in two tiers in over 100 countries. AudioCodes solutions are enabling enterprises to smoothly migrate their communications infrastructure to all-IP UC solution.

AudioCodes OEM customers include vendors that leverage on AudioCodes technology and quality to deliver VoIP products and solutions. Historically, a substantial portion of our revenue has been derived from OEM customers that sold our technology products as part of their voice solution.

### **Sales and Marketing**

Our sales and marketing strategy is to secure the leading channels and system integrators in each region, partner with leading application companies and achieve design wins with network equipment providers in our targeted markets. We select our partners based on their ability to provide effective field sales, marketing communications and technical support to our customers. In addition, we engage in direct sales and marketing with significant operators and enterprises. Prospective customers and channels generally must make a commitment of resources to test and evaluate our products and to integrate them into larger systems, networks and applications. As a result, our sales process is often subject to delays associated with lengthy approval processes that typically accompany the design and testing of new communications equipment. For these reasons, the sales cycles of our products to new customers are often lengthy; averaging approximately six to twelve months after achieving a design win. This time may be further extended because of internal testing, field trials and requests for the addition or customization of features.

We market our products in the United States, Europe, Asia, Latin America and Israel primarily through a direct sales force. We have invested significant resources in setting up local sales forces giving us a presence in relevant markets. We have given particular emphasis to emerging markets such as Latin America, Asia and Eastern Europe in addition to continuing to sell our products in developed countries.

We have generally entered into non-exclusive sales representation/distribution agreements with customers in each of the major countries in which we do business. These agreements are typically for renewable 12-month terms, or are terminable at will by us upon 90 days' notice, and do not commit the customer to inventory or to any minimum sales of our products to third parties. Some of our customers have the ability to return some of the products they have previously purchased and purchase more up to date models.

The One Voice marketing message positions AudioCodes as a one-stop-vendor for various echo systems telephony solutions. The marketing campaign started with the positioning of One Voice for LYNC (now called Skype for Business/Teams), which presented the AudioCodes value proposition as a vendor of comprehensive voice networking for Microsoft unified communications with a broad set of certified IP phones and connectivity products such as SBAs, gateways and SBCs. Additionally, One Voice positions AudioCodes as a vendor that can deliver end-to-end support and offers value-added professional services including design, implementation and network readiness assessment, among others. We also introduced One Voice for Hosted Services which similarly positions AudioCodes as a one-stop vendor for operators hosted services, mainly in collaboration with BroadSoft (now part of Cisco). AudioCodes believes it can deliver a full suite of voice and networking equipment that is required to connect business customers to an operator's network.

In 2018, we continued to enhance our field marketing efforts with direct touch enterprise engagements, along with channel recruitments and generic marketing activities including tradeshows, webinars, seminars, on-line and social marketing.

### **Manufacturing**

Some of our components are obtained from single suppliers. For example, Texas Instruments Incorporated supplies all of our DSP components, while Motorola and Cavium Networks provide embedded CPU and network processors. Other components are generic in nature and we believe they can be obtained from multiple suppliers.

We have not entered into any long-term supply agreements. However, we have worked for years in several countries with established global manufacturing leaders such as Flextronics and have had significant experience with their level of commitment and ability to deliver. To date, we have been able to obtain sufficient amounts of these components to meet our needs and do not foresee any supply difficulty in obtaining timely delivery of any parts or components. However, an interruption in supply from any of these sources, especially with regard to DSP components from Texas Instruments Incorporated and CPU and network processors from both Cavium Networks and Motorola, or an unexpected termination of the manufacture of certain electronic components, could disrupt production, thereby adversely affecting our results. We generally maintain an inventory of critical components used in the manufacture and assembly of our products although our inventory of signal processor chips would likely not be sufficient in the event that we had to engage an alternate supplier for these components.

We utilize contract manufacturing for substantially all of our manufacturing processes. Most of our manufacturing is carried out by third-party subcontractors in Israel and China. Our internal manufacturing activities consist primarily of the production of prototypes, test engineering, materials purchasing and inspection, final product configuration and quality control and assurance.

In addition, we have engaged several original design manufacturers, or ODM, based in Asia to design and manufacture some of our products. We may engage additional ODMs in the future. Termination of our commercial relationship with an ODM or the discontinuance of manufacturing of products by an ODM would negatively affect our business operations.

We are obligated under certain agreements with our suppliers to purchase goods and to purchase excess inventory. Aggregate non-cancellable obligations under these agreements as of December 31, 2018 were approximately \$19.5 million.

### **Industry Standards and Government Regulations**

Our products must comply with industry standards relating to telecommunications equipment. Before completing sales in a country, our products must comply with local telecommunications standards, recommendations of quasi-regulatory authorities and recommendations of standards-setting committees. In addition, public carriers require that equipment connected to their networks comply with their own standards. Telecommunication-related policies and regulations are continuously reviewed by governmental and industry standards-setting organizations and are always subject to amendment or change. Although we believe that our products currently meet applicable industry and government standards, we cannot be sure that our products will comply with future standards.

We are subject to telecommunication industry regulations and requirements set by telecommunication carriers that address a wide range of areas including quality, final testing, safety, packaging and use of environmentally friendly components. We comply with the European Union's Restriction of Hazardous Substances Directive (under certain exemptions) that requires telecommunication equipment suppliers to not use some materials that are not environmentally friendly. These materials include cadmium, hexavalent chromium, lead, mercury, polybrominated biphenyls and polybrominated diphenyl ethers. We expect that other countries, including countries we operate in, will adopt similar directives or other additional directives and regulations.

### **Competition**

Competition in our industry is intense and we expect competition to increase in the future. Our competitors currently sell products that provide similar benefits to those that we sell. There has been a significant amount of merger and acquisition activity, frequently involving major telecommunications equipment manufacturers acquiring smaller companies, as well as strategic alliances entered into by competitors. We expect that these activities will result in an increasing concentration of market share among these companies, many of whom are our customers.

Our principal competitors in the area of analog media gateways (2 to 24 ports) for access and enterprise are Grandstream, Natex, Iskratel, Zyxel, Adtran, Media5, Cisco, Sangoma, Innovaphone AG, Patton, Dialogic and Ribbon.

In the area of low and mid density digital gateways we face competition from companies such as Ribbon Communications (formerly Sonus Networks), Huawei, Cisco, Dialogic, NewRock, Ribbon, Patton, Ferrari and Sangoma.

Our competitors in the area of MSBRs are companies such as Cisco, Juniper, Adtran, One-Access, Patton, Huawei, HP/3COM and Alcatel-Lucent.

Specifically in the area of enterprise class session border controller technology we compete with Oracle, Cisco, Avaya, Ribbon Communications (formerly Sonus Networks), MetaSwitch, Ingate and Ribbon.

Our competitors in the Microsoft Skype for Business certified gateways, session border controller, Survivable Branch Appliance and IP Phone markets include Ribbon Communications (formerly Sonus Networks), Oracle, Plantronics and Yealink.

Our competitors in the area of contact center vendors are Ribbon Communications (formerly Sonus Networks), Oracle, Plantronics and Yealink.

Our competitors in the area of Call Recording are companies such as Verint, Nice, ACS, Red Box, Teleware and Dubber.

Our competitors in the area of voice recognition are companies such as Microsoft, Google, Amazon and Nuance, and a group of startup companies.

Our principal competitors in the sale of signal processing chips are DSP Group, Broadcom, Octasic and Mindspeed. Other indirect competition is a result of the integration of VoIP functionality into processors (running VoIP signal processing on generic ARM/MIPS cores), thus decreasing the need for dedicated signal processing chips in the VoIP product. Examples of such manufacturers are Cavium and Texas Instruments. Our principal competitors in the communications board market are Dialogic, Sangoma and PIKA Technologies.

Our principal competitors in the area of IP Phones are comprised of “best-of-breed” IP phone vendors and end-to-end IP telephony vendors. “Best of breed” IP phone vendors sell standards-based SIP phones that can be integrated into any standards-based IP-PBX or hosted IP telephony system. These competitors include Plantronics, HP, Grandstream, Yealink, VTEC (acquired SNOM) and many others. End-to-end IP telephony vendors sell IP phones that only work in their proprietary systems. These competitors include Cisco, Avaya, Alcatel-Lucent, Siemens, Mitel and NEC. In the areas of Skype for Business/Microsoft Teams, our competitors are certified vendors – Yealink and Plantronics.

Some of our competitors are also customers of our products and technologies.

Many of our competitors have the ability to offer vendor-sponsored financing programs to prospective customers. Some of our competitors with broad product portfolios may also be able to offer lower prices on products that compete with ours because of their ability to recoup a loss of margin through sales of other products or services. Additionally, voice, audio and other communications alternatives that compete with our products are being continually introduced.

In the future, we may also develop and introduce other products with new or additional telecommunications capabilities or services. As a result, we may compete directly with VoIP companies and other telecommunications infrastructure and solution providers, some of which may be our current customers. Additional competitors may include companies that currently provide communication software products and services. The ability of some of our competitors to bundle other enhanced services or complete solutions with VoIP products could give these competitors an advantage over us.

#### **Intellectual Property and Proprietary Rights**

Our success is dependent in part upon proprietary technology. We rely primarily on a combination of patent, copyright and trade secret laws, as well as confidentiality procedures and contractual provisions, to protect our proprietary rights. We also rely on trademark protection concerning various names and marks that serve to identify us and our products. While our ability to compete may be affected by our ability to protect our intellectual property, we believe that because of the rapid pace of technological change in our industry maintaining our technological leadership and our comprehensive familiarity with all aspects of the technology contained in our signal processors and communication boards is also significant to our success.

We own U.S. patents that relate to our voice compression and session border control technologies. We also actively pursue patent protection in selected other countries of interest to us. In addition to patent protection, we seek to protect our proprietary rights through copyright protection and through restrictions on access to our trade secrets and other proprietary information which we impose through confidentiality agreements with our customers, suppliers, employees and consultants.

There are a number of companies besides us who hold or may acquire patents for various aspects of the technology incorporated in the ITU's standards or other industry standards or proprietary standards, for example, in the fields of wireless and cable. While we have obtained cross-licenses from some of the holders of these other patents, we have not obtained a license from all of the holders. The holders of these other patents from whom we have not obtained licenses may take the position that we are required to obtain a license from them. Companies that have submitted their technology to the ITU (and generally other industry standards making bodies) for adoption as an industry standard are required by the ITU to undertake to agree to provide licenses to that technology on reasonable terms. Accordingly, we believe that even if we were required to negotiate a license for the use of such technology, we would be able to do so at an acceptable price. Similarly, third parties who also participate with respect to the same standards-setting organizations as do we may be able to negotiate a license for use of our proprietary technology at a price acceptable to them, but which may be lower than the price we would otherwise charge.

Third parties have claimed, and from time to time in the future may claim, that our past, current or future products infringe their intellectual property rights. Intellectual property litigation is complex and there can be no assurance of a favorable outcome of any litigation. Any future intellectual property litigation, regardless of outcome, could result in substantial expense to us and significant diversion of the efforts of our technical and management personnel. Litigation could also disrupt or otherwise severely impact our relationships with current and potential customers as well as our manufacturing, distribution and sales operations in countries where relevant third party rights are held and where we may be subject to jurisdiction. An adverse determination in any proceeding could subject us to significant liabilities to third parties, require disputed rights to be licensed from such parties, assuming licenses to such rights could be obtained, or require us to cease using such technology and expend significant resources to develop non-infringing technology. We may not be able to obtain a license at an acceptable price.

We have entered into technology licensing fee agreements with third parties. Under these agreements, we agreed to pay the third parties royalties, based on sales of relevant products.

#### **Legal Proceedings**

None.

#### *C. ORGANIZATIONAL STRUCTURE*

##### **List of Significant Subsidiaries**

AudioCodes Inc., our wholly-owned subsidiary, is a Delaware corporation.

AudioCodes Development Ltd., our wholly-owned subsidiary, is based in Beer Sheva, Israel.

#### *D. PROPERTY, PLANTS AND EQUIPMENT*

We lease our main office and warehouse facilities, located in Airport City, Lod, Israel, which occupy approximately 274,000 square feet for annual lease payments of approximately \$5.6 million (including management fees). The term of this lease extends until January 31, 2024.

Our U.S. subsidiary, AudioCodes Inc., leased an approximately 28,000 square foot facility in Somerset, New Jersey through November 30, 2018. As of December 1, 2018, AudioCodes Inc. moved to a new facility in the same area. AudioCodes Inc. also leases office in Raleigh. The annual lease payments in 2018 (including management fees) for all our offices in the United States were approximately \$500,000.

We lease additional offices in Israel as well as for our international offices. We do not believe the lease agreements for these offices to be material.

We believe that these properties are sufficient to meet our current needs. However, we may need to increase the size of our current facilities, seek new facilities, close certain facilities or sublease portions of our existing facilities in order to address our needs in the future.

#### **ITEM 4A. UNRESOLVED STAFF COMMENTS**

None.

## ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

### Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States of America, or U.S. GAAP. These accounting principles require management to make certain estimates, judgments and assumptions based upon information available at the time that they are made, historical experience and various other factors that are believed to be reasonable under the circumstances. These estimates, judgments and assumptions can affect the reported amounts of assets and liabilities as of the date of the financial statements, as well as the reported amounts of revenues and expenses during the periods presented.

Our management has reviewed our critical accounting policies and related disclosures with our Audit Committee. See Note 2 to our Consolidated Financial Statements included elsewhere in this Annual Report, which contain additional information regarding our accounting policies and other disclosures required by U.S. GAAP.

On an on-going basis, management evaluates its estimates and judgments. Management bases its estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Management believes the significant accounting policies that affect its more significant judgments and estimates used in the preparation of its consolidated financial statements and are the most critical to aid in fully understanding and evaluating AudioCodes' reported financial results include the following:

- Revenue recognition and allowance for sales returns;
- Allowance for doubtful accounts;
- Inventories;
- Intangible assets;
- Goodwill;
- Income taxes and valuation allowance;
- Share-based compensation;
- Contingent liabilities; and
- Contingent consideration.

#### *Revenue Recognition and Allowance for Sales Returns*

We generate our revenues mainly from the sale of products and related services. We sell our products through a direct sales force and sales representatives. Our customers include original equipment manufacturers, or OEMs, network equipment providers, systems integrators and distributors in the telecommunications and networking industries, all of whom are considered end-users.

By December 31, 2017, revenues from products and services were recognized in accordance with Accounting Standards Codification ("ASC") 605, "Revenue Recognition", when the following criteria were met: (i) persuasive evidence of an arrangement exists; (ii) delivery of the product has occurred; (iii) the fee is fixed or determinable; and (iv) collectability is reasonably assured.

As of January 1, 2018, we have adopted ASC 606, "Revenue from Contracts with Customers". As a result of this adoption, revenues from products and services are recognized in accordance with ASC 606, and we have revised our accounting policy for revenue recognition as detailed below. We recognize revenue under the core principle that transfer of control to our customers should be depicted in an amount reflecting the consideration we expect to receive in revenue. As such, we identify a contract with a customer, identify the performance obligations in the contract, determine the transaction price, allocate the transaction price to each performance obligation in the contract and recognize revenues when (or as) we satisfy a performance obligation. We have no obligation to customers after the date on which products are delivered, other than pursuant to warranty obligations and any applicable right of return. We grant to some of our customers the right of return or the ability to exchange a specific percentage of the total price paid for products they have purchased over a limited period for other products.

We maintain a provision for product returns and exchanges and other incentives. This provision is based on historical sales returns, analysis of credit memo data and other known factors. This provision amounted to \$1.9 million and \$2.3 million as of December 31, 2017 and 2018, respectively. Following the adoption of ASC 606, as of December 31, 2018, this provision was recorded as part of other payables and accrued expenses.

By December 31, 2017, under Accounting Standards Update (“ASU”) No. 2009-13, Topic 605, “Multiple-Deliverable Revenue Arrangements”, the selling price for a deliverable was based on its vendor-specific objective evidence (“VSOE”) if available, third-party evidence (“TPE”) if VSOE is not available, or estimated selling price (“ESP”) if neither VSOE nor TPE is available. We have recognized revenue on each deliverable in accordance with our policies for product and service revenue recognition.

As of January 1, 2018, and following the adoption of ASC 606, when we enter into contracts that included combinations of products and services that are capable of being distinct and accounted for as separate performance obligations, the products are distinct upon delivery as the customer can derive the economic benefit of it without any professional services, updates or technical support. We allocate the transaction price to each performance obligation based on its relative standalone selling price out of the total consideration of the contract. For support, we determine the standalone selling prices based on the price at which we separately sell a renewal contract on a stand-alone basis. For professional services, we determine the standalone selling prices based on the price at which we separately sell those services on a stand-alone basis.

Our products contain a significant element relating to its proprietary technology and its solutions offer substantially different features and functionality. As a result, the comparable pricing of products with similar functionality typically cannot be obtained. Additionally, as we are unable to reliably determine the selling prices of comparable products sold by competitors and generally does not sell the products separately on a stand-alone basis, the stand-alone selling prices are not directly observable. Therefore, we make estimates based on reasonably available information. The estimated selling price is established considering multiple factors including, but not limited to, pricing practices in different geographical areas and through different sales channels, gross margin objectives, internal costs, the pricing strategies of competitors and industry technology lifecycles.

Product revenues are recognized at the point of time when control is transferred, the product has been delivered and the benefit of the asset has transferred. Revenues from support are recognized ratably over the term of the underlying contract term. Renewals of support contracts create new performance obligations that are satisfied over the term with the revenues recognized ratably over the period. For professional services, the performance obligations are satisfied, and revenues are recognized, when the services are provided or once the service term has expired.

#### *Allowance for Doubtful Accounts*

Our trade receivables are derived from sales to customers located primarily in the Americas, the Far East, Israel and Europe. We perform ongoing credit evaluations of our customers and to date have not experienced any material losses from uncollected receivables. An allowance for doubtful accounts is determined with respect to those amounts that we have recognized as revenue and determined to be doubtful of collection. We usually do not require collateral on trade receivables because most of our sales are made to large and well-established companies. On occasion we may purchase credit insurance to cover credit exposure for a portion of our sales and this may mitigate the amount we need to write off as a result of doubtful collections.

#### *Inventories*

Inventories are stated at the lower of cost or net realizable value. Cost is determined using the “weighted average cost” method for raw materials and finished products. We periodically evaluate the quantities on hand relative to current and historical selling prices and historical and projected sales volume and technological obsolescence. Based on these evaluations, inventory write-offs are provided to cover risks arising from slow moving items, technological obsolescence, excess inventories, discontinued products and for net realizable value lower than cost. We wrote-off inventory in a total amount of \$2.2 million, \$1.9 million and \$1.9 million in the years ended December 31, 2016, 2017, and 2018, respectively.

#### *Intangible assets*

As a result of our acquisitions, our balance sheet included acquired intangible assets in the aggregate amount of approximately \$2.0 million and \$1.3 million as of December 31, 2017 and 2018, respectively.

We allocated the purchase price of the companies we have acquired to the tangible and intangible assets acquired and liabilities assumed based on their estimated fair values. These valuations require management to make significant estimations and assumptions, especially with respect to intangible assets. Critical estimates in valuing intangible assets include future expected cash flows from technology acquired, trade names, backlog and customer relationships. In addition, other factors considered are the brand awareness and market position of the products sold by the acquired companies and assumptions about the period of time the brand will continue to be used in the combined company's product portfolio. Management's estimates of fair value are based on assumptions believed to be reasonable, but which are inherently uncertain and unpredictable.

If we did not appropriately allocate these components or we incorrectly estimate the useful lives of these components, our computation of amortization expense may not appropriately reflect the actual impact of these costs over future periods, which will affect our operating results.

Intangible assets are comprised of acquired technology, customer relations and licenses. Intangible assets that are not considered to have an indefinite useful life are amortized using the straight-line basis over their estimated useful lives, which range from four and a half to ten years. Recoverability of these assets is measured by a comparison of the carrying amount of the asset to the undiscounted future cash flows expected to be generated by the assets. If the assets are considered to be impaired, the amount of any impairment is measured as the difference between the carrying value and the fair value of the impaired assets.

During the years ended December 31, 2016, 2017 and 2018, no impairment charges were identified.

#### *Goodwill*

As a result of our acquisitions, our balance sheet included acquired goodwill in the aggregate amount of approximately \$36.2 million as of December 31, 2017 and 2018. Goodwill represents the excess of the purchase price and related costs over the fair value of net tangible and identifiable intangible assets of businesses acquired and accounted for under the purchase method. In accordance with ASC 350, "Intangible, Goodwill and Other," goodwill is not amortized and is tested for impairment at least annually. Our annual impairment test is performed at the end of the fourth quarter each year. If events or indicators of impairment occur between the annual impairment tests, we perform an impairment test of goodwill at that date.

ASC 350 prescribes a two-phase process for impairment testing of goodwill. The first phase screens for impairment, while the second phase (if necessary) measures impairment. Goodwill impairment is deemed to exist if the net book value of a reporting unit exceeds its estimated fair value. In such case, the second phase is then performed, and we measure impairment by comparing the carrying amount of the reporting unit's goodwill to the implied fair value of that goodwill. An impairment loss is recognized in an amount equal to the excess. We have an option to perform a qualitative assessment to determine whether it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount prior to performing the two-step goodwill impairment test. If this is the case, the two-step goodwill impairment test is required. If it is more-likely-than-not that the fair value of a reporting unit is greater than its carrying amount, the two-step goodwill impairment test is not required.

During the years ended December 31, 2016, 2017 and 2018, no impairment losses were identified.

#### *Income Taxes and Valuation Allowance*

As part of the process of preparing our consolidated financial statements, we are required to estimate our income tax expense in each of the jurisdictions in which we operate. This process involves us estimating our actual current tax exposure, which is accrued as taxes payable, together with assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in deferred tax assets, which are included within our consolidated balance sheet. We may record a valuation allowance to reduce our deferred tax assets to the amount of future tax benefit that is more likely than not to be realized.

Although we believe that our estimates are reasonable, there is no assurance that the final tax outcome and the valuation allowance will not be different than those which are reflected in our historical income tax provisions and accruals.

We have filed or are in the process of filing U.S. federal, state and foreign tax returns that might be subject to audit by the respective tax authorities. Although the ultimate outcome is unknown, we believe that adequate amounts have been provided for and any adjustments that may result from tax return audits are not likely to materially adversely affect our consolidated results of operations, financial condition or cash flows.



### *Share-based compensation*

We account for share-based compensation in accordance with ASC 718, "Compensation-Stock Compensation". We utilize the Black-Scholes option pricing model to estimate the fair value of share-based compensation at the date of grant. The Black-Scholes model requires subjective assumptions regarding dividend yields, expected volatility, expected life of options and risk-free interest rates. These assumptions reflect management's best estimates. Changes in these inputs and assumptions can materially affect the estimate of fair value and the amount of our share-based compensation expenses relating to share options. Prior to January 1, 2016, we estimated the forfeiture rate based on historical forfeitures of equity awards and adjusted the rate to reflect changes in facts and circumstances, if any. We revised our estimated forfeiture rate if actual forfeitures differed from our initial estimates. Effective as of January 1, 2016, we adopted a change in accounting policy in accordance with ASU 2017-09, "Compensation Stock Compensation (Topic 718)" to account for forfeitures as they occur. The change was applied on a modified retrospective basis with a cumulative effect adjustment to retained earnings as of January 1, 2017. No prior periods were recast as a result of this change in accounting policy. We recognized share-based compensation expense of \$2.4 million, \$2.3 million and \$3.3 million in the years ended December 31, 2016, 2017 and 2018, respectively. As of December 31, 2018, there was approximately \$5.5 million of total unrecognized share-based compensation expense related to non-vested share-based compensation arrangements granted by us. As of December 31, 2018, that expense is expected to be recognized over a weighted-average period of 1.12 years.

### *Contingent liabilities*

We are, from time to time, involved in claims, lawsuits, government investigations, and other proceedings arising from the ordinary course of our business. We record a provision for a liability when we believe that it is both probable that a liability has been incurred, and the amount can be reasonably estimated. Significant judgment is required to determine both probability and the estimated amount. Such legal proceedings are inherently unpredictable and subject to significant uncertainties, some of which are beyond our control. Should any of these estimates and assumptions change or prove to have been incorrect, it could have a material impact on our results of operations, financial position and cash flows. No provision was recorded as of December 31, 2018.

### *Contingent consideration*

We measure liabilities related to earn-out payments at fair value at the end of each reporting period. The fair value was estimated by utilizing the income approach, taking into account the potential cash payments discounted to arrive at a present value amount, based on our expectation. The discount rate was based on the market interest rate and estimated operational capitalization rate.

### *Recently Issued and Adopted Accounting Pronouncements*

See Note 2z to our Consolidated Financial Statements included elsewhere in this Annual Report.

### *New accounting pronouncements not yet effective*

See Note 2aa to our Consolidated Financial Statements included elsewhere in this Annual Report.

## **A. OPERATING RESULTS**

You should read this discussion with the consolidated financial statements and other financial information included in this Annual Report.

### **Overview**

We design, develop and sell advanced products and services for advanced voice networking and media processing solutions for the digital workplace. We enable enterprises and service providers to build and operate all-IP voice networks for unified communications, contact centers, and hosted business services. We offer a broad range of innovative products, solutions and services that are used by large multi-national enterprises and leading tier-1 operators around the world.

Our products enable our customers to build high-quality packet networking equipment and network solutions and provide the building blocks to connect traditional telephone networks to VoIP networks, as well as connecting and securing multimedia communication between different packet-based networks. Our products are sold primarily to leading OEMs, system integrators and network equipment providers in the telecommunications and networking industries. We have continued to broaden our offerings, both from internal and external development and through acquisitions, as we have expanded in the last few years from selling chips to boards, subsystems, media gateway systems, media servers, session border controllers and messaging platforms. We have also increased our product portfolio to enhance our position in the market and serve our channels better as a one stop shop for voice over IP hardware.

We have invested significant development resources in complying with Microsoft's requirements for the purpose of becoming a Microsoft recognized partner for their unified communication solutions for the enterprise market, which are known as Microsoft Skype for business. We have adapted some of our gateway products, IP phones, session border controllers, survivable branch applications, value added applications and professional services to operate in the Microsoft Skype for business environment. Our products to the Skype for Business Unified Communications market are sold primarily to our channel partners that distribute and integrate the Skype for business solution to enterprises.

In June 2016, the Israel National Authority for Technology and Innovation (formerly known as the Office of the Chief Scientist) of the Israeli Ministry of Economy and Industry, or IIA approved a three-year program (2016-2018) relating to our R&D Center for approximately NIS 107 million (equal to approximately \$27.8 million based on the exchange rate in effect as of December 31, 2016). In June 2018, IIA reduced our grant with respect to 2018, which has not yet been fully funded, by approximately NIS 21 million. These grants are subject to conditions relating to grants by IIA. Funding for the whole term of the program is subject to the continued review and approval of the progress of the project by IIA. If any required approval is withheld or delayed, our results of operations will be negatively affected and we may be unable to complete research and development projects that could lead to new product launches and sales. This research and development center employed approximately 90 engineers as of December 31, 2018.

We offer a comprehensive professional services program intended to provide responsive, preventive, and consultative support of our networking products. Our professional services support networking devices, applications and infrastructures, allowing large organizations and service providers to realize the potential of a high-performance multi-service network.

Our headquarters and research and development facilities are located in Israel with research and development extensions in the U.S., China and U.K. We have other offices located in Europe, the Far East, and Latin America.

Historically, a substantial portion of our revenue has been derived from large purchases by a limited number of original equipment manufacturers, or OEMs, and network equipment providers, or NEPs, systems integrators and distributors. ScanSource Communications Group, our largest customer, accounted for 16.7%, 17.5% and 17.8% of our revenues in the years ended December 31, 2016, 2017 and 2018, respectively. In addition, Westcon Group accounted for 11.9%, 12.7% and 11.1% of our revenues in the years ended December 31, 2016, 2017 and 2018, respectively. Our top five customers accounted for 35.8%, 37.5% and 38.7% of our revenues in the years ended December 31, 2016, 2017 and 2018, respectively. If we lose a large customer and fail to add new customers to replace lost revenue, our operating results may be materially adversely affected.

Revenues, based on the location of our customers for the last three fiscal years, are as follows:

	Year Ended December 31,		
	2016	2017	2018
Americas	50.9%	51.7%	49.1%
Far East	18.0	15.5	14.7
Europe	26.9	31.4	33.6
Israel	4.2	1.4	2.6
Total	100.0%	100.0%	100.0%

Beyond run rate business usually repeated one purchased by distributors and service providers, we believe that prospective customers generally are required to make a significant commitment of resources to test and evaluate our products and to integrate them into their larger systems. Our sales process is often subject to delays associated with lengthy approval processes that typically accompany the design and testing of new communications equipment. For these reasons, the sales cycles of our products to new customers are often lengthy, averaging approximately six to twelve months. As a result, we may incur significant selling and product development expenses prior to generating revenues from sales.

The currency of the primary economic environment in which our operations are conducted is the dollar and, as such, we use the dollar as our functional currency. Transactions and balances originally denominated in dollars are presented at their original amounts. All transaction gains and losses from the remeasurement of monetary balance sheet items denominated in non-dollar currencies are reflected in the statement of operations as financial income or expenses, as appropriate.

The demand for Voice over IP, or VoIP, technology has increased during recent years. In recent years, the shift from traditional circuit-switched networks to next generation packet-switched networks continued to gain momentum. As data traffic becomes the dominant factor in communications, service providers are building and maintaining converged networks for integrated voice and data services. In developed countries, traditional and alternative service providers have adopted bundled triple play (voice, video and data) and quadruple play (voice, video, data and mobile) offerings. This trend, enabled by voice and multimedia over IP, has fueled competition among cable, wireline, ISP and mobile operators, increasing the pressure for adopting and deploying VoIP networks. In addition, underdeveloped markets without basic wire line service in countries such as China and India and certain countries in Eastern Europe are adopting the use of VoIP technology to deliver voice and data services that were previously unavailable.

The general economic uncertainty, including disruptions in the world credit and equity markets, has had and continues to have a negative impact on business around the world. This economic environment has had an adverse impact on the technology industry and our major customers. Conditions may continue to be uncertain or may be subject to deterioration which could lead to a reduction in consumer and customer spending overall, which could have an adverse impact on sales of our products. A disruption in the ability of our significant customers to access liquidity could cause serious disruptions or an overall deterioration of their businesses which could lead to a significant reduction in their orders of our products and the inability or failure on their part to meet their payment obligations to us, any of which could have a material adverse effect on our results of operations and liquidity. In addition, any disruption in the ability of customers to access liquidity could lead customers to request longer payment terms from us or long-term financing of their purchases from us. Granting extended payment terms or a significant adverse change in a customer's financial and/or credit position could also require us to assume greater credit risk relating to that customer's receivables or could limit our ability to collect receivables related to purchases by that customer. As a result, our allowance for doubtful accounts and write-offs of accounts receivable could increase.

## Results of Operations

The following table sets forth the percentage relationships of certain items from our consolidated statements of operations, as a percentage of total revenues for the periods indicated:

Statement of Operations Data:	Year Ended December 31,		
	2016	2017	2018
Revenues:			
Products	70.3%	68.6%	68.0%
Services	29.7%	31.4%	32.0%
Total revenues	100.0%	100.0%	100.0%
Cost of revenues:			
Products	32.2	30.3	29.4
Services	7.1	7.3	7.8
Total cost of revenues	39.3	37.6	37.2
Gross profit	60.7	62.4	62.8
Operating expenses:			
Research and development, net	20.0	19.4	19.7
Selling and marketing	31.0	31.2	28.0
General and administrative	4.4	5.7	5.8
Total operating expenses	55.4	56.3	53.5
Operating income	5.3	6.1	9.3
Financial income (expenses), net	(0.1)	0.0	0.1
Income before taxes on income	5.2	6.1	9.4
Tax benefit (taxes on income)	6.0	(3.6)	(1.7)
Net income	11.2%	2.5%	7.7%

## Year Ended December 31, 2018, Compared to Year Ended December 31, 2017

*Revenues.* Revenues increased 12.4% to \$176.2 million in the year ended December 31, 2018, from \$156.7 million in the year ended December 31, 2017.

Our revenues from sales of products in the year ended December 31, 2018 increased by 11.5% to \$119.9 million, or 68.0% of total revenues, from \$107.5 million, or 68.6% of total revenues, in the year ended December 31, 2017. The increase in revenues from sales of products was due to the increased adoption of SIP Trunk and unified communications and collaboration solutions by enterprises and the increased migration by contact center customers and service providers from traditional TDM networks to pure IP networks. This migration positively affected the demand for our UC SIP products, while supporting moderate growth of our media gateway products.

Our revenues from sales of services in the year ended December 31, 2018 increased by 14.4% to \$56.3 million, or 32.0% of total revenues, from \$49.2 million, or 31.4% of total revenues, in the year ended December 31, 2017. The increase in revenues from sales of services was primarily driven by the growth in sales of technical support services, which relate to sales of products in the year ended December 31, 2018 and in previous years and by the growth in professional services. Product support services attributable to sales of products in prior years resulted from renewal of support agreements and from support services for a larger amount of products being supported. The growth in sales of professional services is attributable to a broader portfolio of professional services offered by us and an increase in demand for such services.

*Cost of Revenues and Gross Profit.* Cost of revenues includes the cost of hardware, quality assurance, overhead related to professional and support customer services, overhead related to manufacturing activity, technology licensing and royalty fees payable to third parties and royalties payable to IIA. Gross profit increased to \$110.6 million in the year ended December 31, 2018, from \$97.8 million in the year ended December 31, 2017. Gross profit as a percentage of total revenues was 62.8% in the year ended December 31, 2018, compared to 62.4% in the year ended December 31, 2017. The increase in the gross profit as a percentage of total revenues was attributable to the higher increase in our revenues from sales of services, which have a significantly higher average gross margin and a more favorable mix in the sale of our products. In addition, our gross profit percentage benefited from our fixed overhead costs being spread over increased revenue volumes. In the year ended December 31, 2018, expenses included in cost of revenues related to share-based compensation were \$186,000, compared to \$84,000 in the year ended December 31, 2017.

Cost of revenues related to sales of products increased by 9.3% to \$51.9 million in the year ended December 31, 2018, from \$47.4 million in the year ended December 31, 2017.

Cost of revenues related to sales of services in the year ended December 31, 2018 increased by 20.0% to \$13.7 million, from \$11.4 million in the year ended December 31, 2017. This increase is primarily attributable to higher support personnel expenses associated with providing services and implementation of our products with service providers, as well as with enterprise customers. In the year ended December 31, 2018, the gross margin percentage from sales of services slightly decreased to 75.6%, from 76.8% in the year ended December 31, 2017.

*Research and Development Expenses, net.* Research and development expenses, net, consist primarily of salaries and related costs of employees engaged in ongoing research and development activities, development-related raw materials and the cost of subcontractors, less grants from IIA. Research and development expenses increased by 14.2% in the year ended December 31, 2018 to \$34.7 million, from \$30.3 million in the year ended December 31, 2017. As a percentage of total revenues, research and development expenses slightly increased to 19.7% in the year ended December 31, 2018, from 19.4% in the year ended December 31, 2017. The increase on an absolute basis is primarily due to the decrease in the grants recognized from IIA. In the year ended December 31, 2018, expenses included in research and development expenses related to share-based compensation were \$651,000, compared to \$383,000 in the year ended December 31, 2017. Grants recognized from IIA were \$5.7 million in the year ended December 31, 2018, compared to \$8.3 million in the year ended December 31, 2017.

*Selling and Marketing Expenses.* Selling and marketing expenses consist primarily of salaries and related costs (including sales commissions) of selling and marketing personnel, as well as exhibition, travel and related expenses. Selling and marketing expenses slightly increased by 0.8% in the year ended December 31, 2018 to \$49.3 million, from \$49.0 million in the year ended December 31, 2017. As a percentage of total revenues, selling and marketing expenses decreased to 28.0% in the year ended December 31, 2018, from 31.2% in the year ended December 31, 2017. The increase on an absolute basis is primarily due to an increase in the number of employees and related expenses associated with the additional employees. We added employees in an effort to increase our market share in the areas in which we sell our products and services. In the year ended December 31, 2018, expenses included in selling and marketing expenses related to share-based compensation were \$1.2 million, compared to \$1.0 million in the year ended December 31, 2017.

*General and Administrative Expenses.* General and administrative expenses consist primarily of salaries and related costs of finance, human resources and general management personnel, rent, network and allowance for doubtful accounts, as well as insurance and consultant services expenses. General and administrative expenses increased by 15.3% to \$10.3 million in the year ended December 31, 2018, from \$8.9 million in the year ended December 31, 2017. As a percentage of total revenues, general and administrative expenses slightly increased to 5.8% in the year ended December 31, 2018, from 5.7% in the year ended December 31, 2017. The increase in general and administrative expenses was primarily due to the income and expenses recorded as a result of the revaluation of a liability related to potential earn-out payments in the years ended December 31, 2017 and 2018 and due to the increase in the expenses related to share-based compensation. In the year ended December 31, 2018, expenses included in general and administrative expenses related to share-based compensation were \$1.2 million compared to \$0.8 million in the year ended December 31, 2017.

*Financial Income (Expenses), Net.* Financial income, net consists primarily of interest earned on cash and cash equivalents, marketable securities and bank deposits, net of interest on our bank loans and bank charges. Financial income, net, in the year ended December 31, 2018 were \$228,000, compared to Financial expenses, net of \$10,000 in the year ended December 31, 2017. The increase in financial income, net in the year ended December 31, 2018 was mainly due to higher interest income recorded with respect to our bank deposits.

*Taxes on income (tax benefit), Net.* We had a net income tax expense of \$3.1 million in the year ended December 31, 2018, compared to \$5.6 million in the year ended December 31, 2017. The decrease in the net income tax expenses is primarily a result of lower utilization of deferred tax assets and the decrease in the U.S. tax rate in 2017 as part of the TCJA.

#### **Year Ended December 31, 2017, Compared to Year Ended December 31, 2016**

*Revenues.* Revenues increased 7.6% to \$156.7 million in the year ended December 31, 2017, from \$145.6 million in the year ended December 31, 2016.

Our revenues from sales of products in the year ended December 31, 2017 increased by 5.1% to \$107.5 million, or 68.6% of total revenues, from \$102.3 million, or 70.3% of total revenues, in the year ended December 31, 2016. The increase in revenues from sales of products was due to the increased adoption of SIP Trunk and unified communications and collaboration solutions by enterprises and the increased migration by contact center customers and service providers from traditional TDM networks to pure IP networks. This migration positively affected the demand for our UC SIP products, while supporting moderate growth of our media gateway products.

Our revenues from sales of services in the year ended December 31, 2017 increased by 13.6% to \$49.2 million, or 31.4% of total revenues, from \$43.3 million, or 29.7% of total revenues, in the year ended December 31, 2016. The increase in revenues from sales of services was primarily driven by the growth in sales of technical support services, which relate to sales of products in the year ended December 31, 2017 and in previous years and by the growth in professional services. We have expanded our direct support programs and have launched advanced support programs that enable us to sell more support services per product. Product support services attributable to sales of products in prior years resulted from renewal of support agreements and from support services for a larger amount of products being supported. The growth in sales of professional services is attributable to a broader portfolio of professional services offered by us and an increase in demand for such services.

*Cost of Revenues and Gross Profit.* Cost of revenues includes the cost of hardware, quality assurance, overhead related to professional and support customer services, overhead related to manufacturing activity, technology licensing and royalty fees payable to third parties and royalties payable to IIA. Gross profit increased to \$97.8 million in the year ended December 31, 2017, from \$88.3 million in the year ended December 31, 2016. Gross profit as a percentage of total revenues was 62.4% in the year ended December 31, 2017, compared to 60.7% in the year ended December 31, 2016. The increase in the gross profit as a percentage of total revenues was attributable to the higher increase in our revenues from sales of services, which have a significantly higher average gross margin and a more favorable mix in the sale of our products. In addition, our gross profit percentage benefited from our fixed overhead costs being spread over increased revenues. In the year ended December 31, 2017, expenses included in cost of revenues related to share-based compensation were \$84,000 compared to \$118,000 in the year ended December 31, 2016.

Cost of revenues related to sales of products increased by 1.1% to \$47.4 million in the year ended December 31, 2017, from \$46.9 million in the year ended December 31, 2016.

Cost of revenues related to sales of services in the year ended December 31, 2017 increased by 10.7% to \$11.4 million, from \$10.3 million in the year ended December 31, 2016. This increase is primarily attributable to higher support personnel expenses associated with providing services and implementation of our products with service providers, as well as with enterprise customers. In the year ended December 31, 2017, the gross margin percentage from sales of services slightly increased to 76.8%, from 76.2% in the year ended December 31, 2016. The increase in such gross margin percentage was primarily attributable spreading our fixed overhead costs over the increased revenues from the sale of services.

*Research and Development Expenses, net.* Research and development expenses, net, consist primarily of salaries and related costs of employees engaged in ongoing research and development activities, development-related raw materials and the cost of subcontractors, less grants from IIA. Research and development expenses increased by 4.1% in the year ended December 31, 2017 to \$30.3 million, from \$29.1 million in the year ended December 31, 2016. As a percentage of total revenues, research and development expenses decreased to 19.4% in the year ended December 31, 2017, from 20.0% in the year ended December 31, 2016. The increase on an absolute basis is primarily due to the appreciation of the NIS against the dollar. In the year ended December 31, 2017, expenses included in research and development expenses related to share-based compensation were \$383,000, compared to \$459,000 in the year ended December 31, 2016. Grants recognized from IIA were \$8.3 million in the year ended December 31, 2017 compared to \$7.3 million in the year ended December 31, 2016.

*Selling and Marketing Expenses.* Selling and marketing expenses consist primarily of salaries and related costs of selling and marketing personnel, as well as exhibition, travel and related expenses. Selling and marketing expenses increased by 8.6% in the year ended December 31, 2017 to \$49.0 million, from \$45.1 million in the year ended December 31, 2016. As a percentage of total revenues, selling and marketing expenses slightly increased to 31.2% in the year ended December 31, 2017, from 31.0% in the year ended December 31, 2016. The increase on an absolute basis is primarily due to the appreciation of the NIS against the dollar and an increase in the number of employees and related expenses associated with the additional employees. We added employees in an effort to increase our market share in the areas in which we sell our products and services. This increase was in line with the increase in our revenues. In the year ended December 31, 2017, expenses included in selling and marketing expenses related to share-based compensation were \$1.0 million compared to \$1.1 million in the year ended December 31, 2016.

*General and Administrative Expenses.* General and administrative expenses consist primarily of salaries and related costs of finance, human resources and general management personnel, rent, network and allowance for doubtful accounts, as well as insurance and consultant services expenses. General and administrative expenses increased by 39.1% to \$8.9 million in the year ended December 31, 2017, from \$6.4 million in the year ended December 31, 2016. As a percentage of total revenues, general and administrative expenses increased to 5.7% in the year ended December 31, 2017 from 4.4% in the year ended December 31, 2016. The increase in general and administrative expenses was primarily due to the income recorded as a result of the revaluation of a liability related to potential earn-out payments in the year ended December 31, 2016 and the appreciation of the NIS against the dollar. In the year ended December 31, 2017, expenses included in general and administrative expenses related to share-based compensation were \$816,000 compared to \$736,000 in the year ended December 31, 2016.

*Financial Expenses, Net.* Financial expenses, net consists primarily of interest earned on cash and cash equivalents, marketable securities and bank deposits, net of interest on our bank loans and bank charges. Financial expenses, net, in the year ended December 31, 2017 were \$10,000, compared to \$160,000 in the year ended December 31, 2016. The decrease in financial expenses, net in the year ended December 31, 2017 was primarily due to lower expenses related to exchange rate fluctuations.

*Taxes on income (tax benefit), Net., Net.* We had a net income tax expense of \$5.6 million in the year ended December 31, 2017, compared to net income tax benefit of \$8.6 million in the year ended December 31, 2016. During the year ended December 31, 2016, we fully utilized the remaining amount of the deferred tax asset recorded in the year ended December 31, 2013. Based on our earnings history and expected future operating results, we recorded a deferred tax asset in the amount of \$11.6 million as of December 31, 2016. The net income tax benefit in the year ended December 31, 2016 reflected the effect of the tax benefit associated with the creation of this deferred tax asset. The Company estimates it will utilize the deferred tax asset over the next few years. The net income tax expense in the year ended December 31, 2017 mainly resulted from the decrease in deferred tax asset due to utilization and the new tax legislation enacted by the U.S. government in December 2017.

#### **Impact of Inflation, Devaluation and Fluctuation of Currencies on Results of Operations, Liabilities and Assets**

Since the majority of our revenues are paid in or linked to the dollar, we believe that inflation and fluctuations in the NIS/dollar exchange rate have no material effect on our revenues. However, a majority of the cost of our Israeli operations, mainly personnel and facility-related, is incurred in NIS. Inflation in Israel and dollar exchange rate fluctuations have some influence on our expenses and, as a result, on our net income. Our NIS costs, as expressed in dollar, are influenced by the extent to which any increase in the rate of inflation in Israel is not offset (or is offset on a lagging basis) by a devaluation of the NIS in relation to the dollar.

To protect against the changes in value of forecasted foreign currency cash flows resulting from payments in NIS, we may maintain a foreign currency cash flow hedging program. We hedge portions of our forecasted expenses denominated in foreign currencies with forward contracts. These measures may not adequately protect us from material adverse effects due to the impact of inflation in Israel.

The following table presents information about the rate of inflation in Israel, the rate of devaluation of the NIS against the dollar, and the rate of inflation in Israel adjusted for the devaluation:

Year Ended December 31,	Israeli inflation rate %	NIS devaluation or appreciation rate %	Israeli inflation adjusted for devaluation %
2016	(0.2)	(1.5)	(1.3)
2017	0.4	(9.8)	(10.2)
2018	0.8	8.1	7.3

#### B. *LIQUIDITY AND CAPITAL RESOURCES*

We have financed our operations for the last three years primarily from our cash and cash equivalents, bank deposits, bank borrowings and cash from operations.

As of December 31, 2018, we had \$65.4 million in cash and cash equivalents, marketable securities and bank deposits, an increase of \$6.7 million from \$58.7 million at December 31, 2017. As of December 31, 2018, we were restricted with respect to using approximately \$9.2 million of our cash as a result of provisions in our loan agreements, a lease agreement and foreign exchange derivatives transactions.

#### *Share Repurchase Program and Cash Dividends*

In each of January, May and October 2016, we received court approval in Israel to repurchase up to an additional \$15.0 million of our ordinary shares for an aggregate approval to repurchase up to an additional \$45 million of our ordinary shares. In May and November 2017, the court approved an additional \$15.0 million and \$20.0 million, respectively, in share repurchases. In June 2018, the court approved additional \$20.0 million in share repurchases and in January 2019, the court approved additional \$12.0 million. Each of these two most recent approvals allowed us to use the approved amounts for share repurchases or cash dividends. The Israeli court generally limits its approval to six months from the date of application. As a result, although the program does not have a set end date, it requires renewal each six months by submitting a new court application, based on the then prevailing facts. No shares were repurchased during the year ended December 31, 2018 other than through the repurchase program. Share purchases have and will take place in open market transactions or in privately negotiated transactions and may be made from time to time depending on market conditions, share price, trading volume or other factors. The repurchase program does not require us to purchase a specific number of shares and may be suspended from time to time or discontinued. In July 2016, we completed a cash self-tender offer and accepted for purchase a total of 3,000,000 of our ordinary shares, the maximum amount of shares subject to the offer. These shares were purchased under our repurchase program. During the year ended December 31, 2018, we acquired an aggregate of 1,795,814 of our ordinary shares for approximately \$14.3 million and declared and paid a cash dividend in the aggregate amount of \$5.8 million. During the year ended December 31, 2017, we acquired an aggregate of 3,749,462 of our ordinary shares for approximately \$25.6 million. During the year ended December 31, 2016, we acquired an aggregate of 6,198,363 of our ordinary shares for approximately \$29.4 million. In January 2019, we declared and paid a cash dividend in the aggregate amount of \$3.2 million. After the declaration of this dividend, we had approximately \$8.8 million available under the court approval in January 2019 for share repurchases or dividends.

#### *Bank Loans*

In December 2015, we entered into a loan agreement with an Israeli commercial bank that provided loans in the total principal amount of \$3.0 million and 3.0 million Euro. The loans bear interest at an annual rate equal to LIBOR plus 1%-2.5% and are repayable in 20 equal quarterly installments. As of December 31, 2018, there was an aggregate of \$3.2 million principal amount of these loans outstanding, based on the Euro/dollar exchange rate in effect on that date.

In December 2016, we entered into a loan agreement with an Israeli commercial bank that provided loans in the total principal amount of \$6.0 million. The loans bear interest at an annual rate equal to LIBOR plus 1.1%-2.5% and are repayable in 20 equal quarterly installments. As of December 31, 2018, there was \$3 million principal amount of these loans outstanding.

As of December 31, 2018, we were required to maintain an aggregate of \$3.0 million of compensating bank deposits with respect to our bank loans. The amount of the compensating balances we are required to keep decreases over time as we repay these loans.

The loan agreements require us, among other things, to meet certain financial covenants such as maintaining shareholders' equity, cash balances, and liabilities to banks at specified levels, as well as achieving certain levels of operating income.

As of December 31, 2018, we were in compliance with the financial covenants contained in our loan agreements.

#### *Cash from Operating Activities*

Our operating activities provided cash in the amount of \$25.6 million in the year ended December 31, 2018, primarily due to net income of \$13.5 million, an increase of \$9.4 million in deferred revenues, a decrease of \$2.3 million in deferred tax assets, an increase of \$1.4 million in other payables and accrued expenses and non-cash charges of \$2.3 million for depreciation and amortization and \$3.3 million for share-based compensation expenses, offset, in part, by an increase of \$6.3 million in inventories. Our deferred revenues increased mainly due to the increase in the revenues from services in the past years and the deferred tax assets decreased as a result of utilization of these assets. The increase in inventories is a direct result of the higher business volumes and revenues in the year ended December 31, 2018, compared to the year ended December 31, 2017.

Our operating activities provided cash in the amount of \$17.8 million in the year ended December 31, 2017, primarily due to net income of \$4.0 million, a decrease of \$4.9 million in deferred tax assets, a decrease of \$3.4 million in trade receivables and non-cash charges of \$2.4 million for depreciation and amortization and \$2.3 million for share-based compensation expenses, offset, in part, by a decrease of \$2.1 million in trade payables and an increase of \$1.3 million in other receivables and prepaid expenses. The decrease in deferred tax assets is the result of utilization of the deferred tax assets recorded in the year ended December 31, 2016 and the effect of the new tax legislation enacted by the U.S. government in December 2017.

Our operating activities provided cash in the amount of \$18.3 million in the year ended December 31, 2016, primarily due to a net income of \$16.2 million, an increase of \$3.2 million in deferred revenues, and non-cash charges of \$2.9 million for depreciation and amortization, \$1.0 million for amortization of marketable securities premiums and \$2.4 million for share-based compensation expenses, offset, in part, by an increase of \$9.5 million in deferred tax assets. The increase in deferred tax assets is the result of the creation of another deferred tax assets (following the utilization in the year ended December 31, 2016 of the remaining amount of the deferred tax asset recorded in the year ended December 31, 2013), related to the differences between the financial reporting and tax bases of assets and liabilities and to the available net carry forward tax losses based on expectations of generating taxable income in the foreseeable future. Our deferred revenues increased due to the increase in the revenues from services in the year ended December 31, 2016, compared to the year ended December 31, 2015.

#### *Cash from Investing Activities*

In the year ended December 31, 2018, we used \$1.1 million of cash in investing activities, primarily as a result of an increase of \$7.3 million in short-term and long-term bank deposits and capital expenditures of \$1.4 million, offset, in part by proceeds \$7.6 million from redemption of marketable securities.

In the year ended December 31, 2017, our investing activities provided cash in the amount of \$8.4 million from the proceeds \$8.1 million from redemption of marketable securities and from a decrease of \$1.9 million in short-term and long-term bank deposits, net, offset, in part, by capital expenditures of \$1.6 million.

In the year ended December 31, 2016, our investing activities provided cash in the amount of \$14.1 million, due to proceeds from sale of marketable securities of \$12.4 million, from redemption of marketable securities of \$3.2 million and a decrease in short-term bank deposits, net of \$2.3 million, offset, in part, by an increase in long-term bank deposits of \$2.4 million and capital expenditures of \$1.5 million.



### *Cash from Financing Activities*

In the year ended December 31, 2018, we used \$17.2 million of cash in financing activities, primarily as a result of \$14.3 million used to repurchase our shares, \$5.8 million used to pay a cash dividend to our shareholders and \$2.6 million used for repayment of bank loans, offset, in part, by \$5.5 million of proceeds from the issuance of shares upon exercise of share options.

In the year ended December 31, 2017, we used \$26.3 million of cash in financing activities, primarily as a result of \$25.6 million used to repurchase our shares and \$3.5 million used for repayment of bank loans, offset, in part, by \$2.8 million of proceeds from the issuance of shares upon exercise of share options.

In the year ended December 31, 2016, we used \$27.0 million of cash in financing activities, primarily as a result of \$29.4 million used to repurchase our shares and \$5.4 million used for repayment of bank loans, offset, in part, by \$6.0 million in proceeds from bank loans and \$2.0 million of proceeds from the issuance of shares upon exercise of share options.

### *Financing Needs*

We anticipate that our operating expenses will be a material use of our cash resources for the foreseeable future. We believe that our current working capital is sufficient to meet our operating cash requirements for at least the next twelve months, including payments required under our existing bank loans. Part of our strategy is to pursue acquisition opportunities. If we do not have available sufficient cash to finance our operations and the completion of additional acquisitions, we may be required to obtain additional debt or equity financing. We cannot be certain that we will be able to obtain, if required, additional financing on acceptable terms or at all.

### *C. RESEARCH AND DEVELOPMENT, PATENTS AND LICENSES, ETC.*

#### *Research and Development*

In order to accommodate the rapidly changing needs of our markets, we place considerable emphasis on research and development projects designed to improve our existing products and to develop new ones. We are developing analog and digital media gateways for carrier and enterprise applications, multi service business routers and session border controllers, IP phones, management routing and productivity applications, as well as specialized appliances for Microsoft Skype for Business such as SBA, CCE and CloudBond 365. Our platforms are expected to feature increased session capacity, new functionalities, enhanced signaling software and compliance with new protocols, as well as new management and productivity applications. We also invest in cloud and virtualization technologies, making sure our products and technologies suit and are optimized to cloud and hosted services. As of December 31, 2018, 264 of our employees were engaged primarily in research and development on a full-time basis.

Our research and development expenses, net were \$34.7 million in the year ended December 31, 2018, compared to \$30.3 million in the year ended December 31, 2017, and \$29.1 million in the year ended December 31, 2016. From time to time we have received royalty-bearing grants from IIA. As a recipient of grants from IIA, we are obligated to perform all manufacturing activities for projects subject to the grants in Israel unless we receive an exemption. Know-how from research and development which is used to produce products may not be transferred to third parties without the approval of IIA and may require significant payments. IIA approval is not required for the export of any products resulting from such research or development. Through December 31, 2018, we had obtained grants from IIA aggregating \$60.5 million for certain of our research and development projects. We are obligated to pay royalties to IIA, amounting to 1.3%-5% of the revenues from the sales of the products and other related revenues generated from such projects, up to 100% of the grants received, if no additional payments are required, linked to the dollar and bearing interest at the rate of LIBOR at the time of grant. The obligation to pay these royalties is contingent on actual sales of the products and in the absence of such sales no payment is required. As of December 31, 2018, we have contingent obligation to pay royalties in the amount of approximately \$66.1 million.

### *D. TREND INFORMATION*

The accelerated demand for VoIP technology continues to impact our business as it has done for several years, with the shift from traditional circuit-switched networks to next generation packet-switched networks gaining momentum. As data traffic becomes the dominant factor in communications, service providers are building and maintaining converged networks for integrated voice and data services. In addition, the growth in broadband access and related technologies has driven the emergence of alternative service providers. This in turn stimulates competition with incumbent providers, encouraging them to adopt voice over packet technologies. Additionally, aging legacy TDM switches, high-cost maintenance contracts and regulatory guidelines are driving service providers worldwide to announce "PSTN shutdown" programs with deadlines by which TDM services will no longer be available. This is another factor, pushing service providers and enterprises to adopt VoIP-based technologies and solutions.

Another important trend that is impacting our business is the emergence of private and public cloud-based services in the telecommunications world. Migrating to the cloud is an attractive proposition for service providers and enterprises alike, with the potential to deliver significant operational and capital cost savings, as well as increased productivity and flexibility. We offer a range of software-based products and solutions designed with the cloud in mind. While we predict sales of these software-based solutions to increase, this may result in lower revenues from our hardware-based session border controller products.

We are experiencing decreasing demand for our technology products from customers who previously manufactured network equipment products based on our enabling technology. These customers are migrating from AudioCodes' enabling technology products to diverse integrated comprehensive solutions and, as a result, the demand for our technology products is being adversely affected.

*E. OFF-BALANCE SHEET ARRANGEMENTS*

We do not have any "off-balance sheet arrangements" as this term is defined in Item 5E of Form 20-F.

*F. TABULAR DISCLOSURE OF CONTRACTUAL OBLIGATIONS*

As of December 31, 2018, our contractual obligations were as follows (U.S. dollars in thousands):

	PAYMENTS DUE BY PERIOD				TOTAL
	LESS THAN 1 YEAR	1-3 YEARS	3-5 YEARS	MORE THAN 5 YEARS	
Bank loans	\$ 2,487	\$ 3,687	\$ -	\$ -	\$ 6,174
Rent and lease commitments, net (1)	6,248	11,338	11,848	492	29,926
Accrued severance pay, net (2)	-	-	-	1,210	1,210
Payment to ACS shareholders	433	-	-	-	433
IIA	-	-	-	66,148	66,148
Other commitments (3)	21,130	-	-	-	21,130

- (1) Our obligation for rent and lease commitments as of December 31, 2018 was approximately \$31.6 million. We have rent and lease income in the amount of approximately \$1.7 million, leaving a net obligation of approximately \$29.9 million.
- (2) Our obligation for accrued severance pay under Israel's Severance Pay Law as of December 31, 2018 was \$18.7 million. This obligation is payable only upon termination, retirement or death of the respective employee. We have funded \$17.5 million through deposits into severance pay funds, leaving a net obligation of approximately \$1.2 million.
- (3) Related to non-cancelable inventory purchase commitments.

**ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES****A. DIRECTORS AND SENIOR MANAGEMENT**

The following table sets forth certain information with respect to our directors, senior executive officers and key employees at March 18, 2019:

<b>Name</b>	<b>Age</b>	<b>Position</b>
Stanley B. Stern	61	Chairman of the Board of Directors
Shabtai Adlersberg	66	President, Chief Executive Officer and Director
Niran Baruch	48	Chief Financial Officer
Lior Aldema	53	Chief Business Officer and Director
Ofer Nintsovich	50	Chief Operating Officer
Yair Hevdeli	54	Vice President, Research and Development
Eyal Frishberg	60	Vice President, Operations
Yehuda Herscovici	52	Vice President, Products
Nimrode Borovsky	47	Vice President, Marketing
Tal Dor	49	Vice President, Human Resources
Shaul Weissman	53	Vice President, Business Development
Joseph Tenne(1)(2)(3)	63	Director
Dr. Eyal Kishon(1)(2)(3)(4)	59	Director
Doron Nevo(1)(2)(3)(4)	63	Director
Zehava Simon (3)	60	Director

(1) Member of Audit Committee

(2) Member of Nominating Committee

(3) Member of Compensation Committee

(4) Outside Director under Israeli Law

*Stanley Stern* became a director and our Chairman of the Board in December 2012. From 2004 until 2013 Mr. Stern served in various positions at Oppenheimer & Co., including as a Managing Director and Head of Investment Banking, Technology, Israeli Banking and FIG. Since 2013, Mr. Stern has served as the president of Alnitak Capital, a private merchant bank and strategic advisory firm. From 2002 until 2004, he was a Managing Director and the Head of Investment Banking at C.E. Unterberg, Towbin where he focused on technology and defense related sectors. From January 2000 until January 2002, Mr. Stern was the President of STI Ventures Advisory USA Inc., a venture capital firm focusing on technology investments. Prior to his term at STI Ventures, he spent over 20 years at CIBC Oppenheimer in the investment banking department and started the technology banking group in 1990. From 2002 until 2012, Mr. Stern served as the Chairman of the Board of Directors of Tucows, Inc., an internet service provider that is public traded company on AMEX, and, from 2012 until 2013, he served as a Director of Tucows. From 2012 until February 2014, he served as a director of Given Imaging Ltd., a manufacturer of medical devices, until Given Imaging was acquired by another company. From 2004 until 2009, he served as a director of Odimo Inc. (DBA Diamond.com), an online jewelry vendor. From 2005 until its sale in 2011, he served as a director and Chairman of the Audit Committee of Fundtech Ltd. From February 2016, Mr. Stern served as a director at SodaStream International Ltd. and as from February 2015, Mr. Stern is serving as the Chairman of the Board at SodaStream International Ltd. Mr. Stern received his M.B.A. from Harvard Business School and a B.S. from Queens College.

*Shabtai Adlersberg* co-founded AudioCodes in 1993, and has served as our President, Chief Executive Officer and a director since inception. Until December 2012, Mr. Adlersberg also served as the Chairman of our Board of Directors. Mr. Adlersberg co-founded DSP Group, a semiconductor company, in 1987. From 1987 to 1990, Mr. Adlersberg served as the Vice President of Engineering of DSP Group, and from 1990 to 1992, he served as Vice President of Advanced Technology. As Vice President of Engineering, Mr. Adlersberg established a research and development team for digital cellular communication which was spun-off in 1992 as DSP Communications. Mr. Adlersberg holds a M.Sc. in Electronics and Computer Engineering from Tel Aviv University and a B.Sc. in Electrical Engineering from the Technion-Israel Institute of Technology, or the Technion.

*Niran Baruch* became has served as our Chief Financial Officer since July 2016 after serving as our Chief Accounting Officer since May 2015. He joined AudioCodes in 2005 as Director of Finance and became Vice President of Finance in 2011 responsible for the management of the finance department. Mr. Baruch has over 17 years of experience with Nasdaq traded public companies, and is a Certified Public Accountant (CPA) with a B.A. in Business Management and Accounting.

*Lior Aldema* has served as Chief Business Officer (“CBO”) since January 2018 as a director since July 2018, and as our Chief Operating Officer and Head of Global Sales from April 2012 to December 2017. Previously, he served as our Vice President, Product Management from 2002 until 2009, as well as our Vice President Marketing from February 2003 until 2009. He has been employed by us since 1998, when he was team leader and later headed our System Software Group in our research and development department. Prior to 1998, Mr. Aldema served as an officer in the Technical Unit of the Intelligence Corps of the Israeli Defense Forces (Major), heading both operational units and large development groups related to various technologies. Mr. Aldema holds an M.B.A. from Tel Aviv University and a B.Sc. from the Technion.

*Ofer Nimitsovich* has served as our Chief Operating Officer since January 2018 and as Vice President, Global Services from March 2013 to December 2018. From 2000 until February 2013, Mr. Nimitsovich served in various executive positions at Retalix, including Chief Information Officer, Executive Vice President of Global Services and, most recently as the head of the Software as a Service division of Retalix. From 1994 till 2000, Mr. Nimitsovich worked for Scitex Corporation Ltd., where he held various technical and management positions, including as the Global Microsoft Infrastructure manager for Scitex. Mr. Nimitsovich graduated from the Business Administration College in Israel in 1997 with a B.A. in Business Administration and Marketing, and also holds an M.B.A. degree from the University of Texas.

*Yair Hevdeli* joined AudioCodes in July 2013 as Vice President, Research and Development. From 2003 until 2013, Mr. Hevdeli served in various executive positions at Veraz/Dialogic, including Global Vice President, Research and Development and, most recently, as Senior Vice President, Research and Development and General Manager, Bandwidth Optimization BU. From 1998 until 2003, Mr. Hevdeli worked for ECI Ltd, where he held various technical and management positions. Mr. Hevdeli has over 20 years of experience leading large multidisciplinary global research and development teams in the telecom industry. Mr. Hevdeli graduated in 1995 with an M.B.A. in Business Management from Bar Ilan University, Israel and in 1992 received his B.A. in Computer Science and Economics, from Bar Ilan University.

*Eyal Frishberg* has served as our Vice President, Operations since October 2000. From 1997 to 2000, Mr. Frishberg served as Associate Vice President, SDH Operations in ECI Telecom Ltd., a major telecommunication company. From 1987 to 1997, Mr. Frishberg worked in various operational positions in ECI Telecom including as manager of ECI production facility and production control. Mr. Frishberg worked from 1994 until 1997 for ELTA company, part of Israeli Aircraft Industries in the planning and control department. Mr. Frishberg holds a B.Sc. in Industrial Engineering from Tel Aviv University and an M.B.A. from Ben-Gurion University of the Negev.

*Yehuda Herscovici* has served as our Vice President, Products, overlooking Product Management and Product Marketing since 2010. From 2003 till 2010, Mr. Herscovici served as our Vice President, Systems Group since 2003. From 2001 to 2003, Mr. Herscovici served as our Vice President, Advanced Products. From 2000 to 2001, Mr. Herscovici served as our Director of Advanced Technologies. From 1994 to 1998 and during 1999, Mr. Herscovici held a variety of research and development positions at Advanced Recognition Technologies, Ltd., a voice and handwriting recognition company, heading its research and development from 1999 to 2000 as Vice President, Research and Development. From 1998 to 1999, Mr. Herscovici was engaged in developing various wireless communication algorithms at Comsys, a telecommunications company. Mr. Herscovici holds an M.Sc. and a B.Sc., from the Technion both in the area of Telecommunications.

*Tal Dor* has served as our Vice President of Human Resources since March 2000. Prior to March 2000, Ms. Dor acted for several years as a consultant in Israel to, among others, telephone and cable businesses, as well as health and social service organizations. Ms. Dor holds a B.A. in Psychology, from Ben-Gurion University of the Negev and an M.A. in Psychology from Tel Aviv University.

*Nimrode Borovsky* has served as our Vice President, Marketing since October 2013 and heads the strategic global marketing and business development efforts with AudioCodes partners and channels. From January 2013 until October 2013, Mr. Borovsky served as our Vice President of Unified Communications. Mr. Borovsky has been with AudioCodes since 2005 and has served in numerous product, marketing and business development positions with us. He has worked in telecom and VoIP markets for approximately 20 years. Prior to joining AudioCodes, Mr. Borovsky spent eight years at VocalTec Communications where he served in several positions in research and development, product management and marketing. Mr. Borovsky holds a B.Sc. degree in Electrical Engineering from the New Jersey Institute of Technology, and a M.Sc. degree in Biomedical Engineering from Tel Aviv University.

*Shaul Weissman* has served as our Vice President, Business Development since January 2014. Mr. Weissman has been with AudioCodes since 1994, serving in various positions. From 2007 until 2014, Mr. Weissman served as our Residential Business Line Manager. In addition Mr. Weissman has served as our Vice President and Manager of our chip business line since 2006. From 2001 until 2005, Mr. Weissman served as our Support and Professional Services Manager for our chip business line; and from 1994 until 2000 he served as a digital signal processing engineer. Prior to joining AudioCodes, Mr. Weissman served as Captain in the Israeli Air Force. Mr. Weissman holds an M.Sc. and a B.Sc., from the Technion, both in the area of Telecommunications.

*Joseph Tenne* has served as one of our directors since June 2003. Since May 2017, Mr. Tenne has served as a financial advisor to Itamar Medical Ltd., an Israeli company listed on Nasdaq and on the Tel Aviv Stock Exchange. Mr. Tenne serves as a director of MIND CTI Ltd., an Israeli company listed on Nasdaq, OPC Energy Ltd., an Israeli company listed on the Tel Aviv Stock Exchange, Ability Inc., A Cayman Island company listed on Nasdaq and on the Tel Aviv Stock Exchange, and Ratio Oil Explorations (Finance) Ltd., an Israeli company listed on the Tel Aviv Stock Exchange. From August 2014 to April 2017, Mr. Tenne served as the Vice President Finance and Chief Financial Officer of Itamar Medical Ltd. From March 2014 to July 2014, Mr. Tenne served as the Chief Financial Officer of Orgenesis Inc., a U.S. company traded on Nasdaq. From March 2005 until April 2013, Mr. Tenne served as the Chief Financial Officer of Ormat Technologies, Inc., a company listed on the New York Stock Exchange and on the Tel Aviv Stock Exchange. From January 2006 until April 2013, Mr. Tenne also served as the Chief Financial Officer of Ormat Industries Ltd., an Israeli holding company which was listed on the Tel-Aviv Stock Exchange and was the parent company of Ormat Technologies, Inc. From 2003 to 2005, Mr. Tenne was the Chief Financial Officer of Treofan Germany GmbH & Co. KG, a German company, which is engaged in the development, production and marketing of oriented polypropylene films. From 1997 until 2003, Mr. Tenne was a partner in Kesselman & Kesselman, Certified Public Accountants in Israel (PwC Israel) and a member of PricewaterhouseCoopers International Limited. Mr. Tenne holds a B.A. in Accounting and Economics and an M.B.A. from Tel Aviv University. Mr. Tenne is also a Certified Public Accountant in Israel.

*Dr. Eyal Kishon* has served as one of our directors since 1997. Since 1996, Dr. Kishon has been Managing Partner of Genesis Partners, an Israel-based venture capital fund. From 1993 to 1996, Dr. Kishon served as Associate Director of Dovrat-Shrem/Yozma-Polaris Fund Limited Partnership. Prior to that, Dr. Kishon served as Chief Technology Officer at Yozma Venture Capital from 1992 to 1993. From 1991 to 1992, Dr. Kishon was a Research Fellow in the Multimedia Department of IBM Science & Technology. From 1989 to 1991, Dr. Kishon worked in the Robotics Research Department of AT&T Bell Laboratories. Dr. Kishon holds a B.A. in Computer Science from the Technion - Israel Institute of Technology and an M.Sc. and a Ph.D. in Computer Science from New York University.

*Doron Nevo* has served as one of our directors since 2000. Mr. Nevo is President and CEO of KiloLambda Technologies Ltd., an optical nano-technology company, which he co-founded in 2001. From 1999 to 2001, Mr. Nevo was involved in fund raising activities for Israeli-based startup companies. From 1996 to 1999, Mr. Nevo served as President and CEO of NKO, Inc. Mr. Nevo established NKO in early 1995 as a startup subsidiary of Clalcom Ltd. NKO designed and developed a full scale, carrier grade, IP telephony system platform and established its own IP network. From 1992 to 1996, Mr. Nevo was President and CEO of Clalcom Ltd. Mr. Nevo established Clalcom in 1992 as a telecom service provider in Israel. He also serves as a director of Ultracharge LTD.(ASX: UTR) and of a number of private companies. Mr. Nevo holds a B.Sc. in Electrical Engineering from the Technion – Israel Institute of Technology and an M.Sc. in Telecommunications Management from Brooklyn Polytechnic.

*Zehava Simon* was appointed a director in February 2014. Ms. Simon served as a Vice President of BMC Software Inc. from 2000 until September 2013, most recently as Vice President, Corporate Development. From 2002 to 2011, Ms. Simon served as Vice President and General Manager of BMC Software in Israel. Prior to joining BMC Software, Ms. Simon held a number of executive positions at Intel Corporation. In her last position at Intel, she led Finance and Operations and Business Development for Intel in Israel. Ms. Simon has served as a board member of various companies, including Tower Semiconductor from 1999-2004, M-Systems from 2005-2006 and InSightec from 2005-2012. Ms. Simon is also a board member at Nova Measuring Instruments Ltd, Amiad Water System Ltd. and Nice Statements Ltd. Ms. Simon holds a bachelor's degree in Social Sciences from the Hebrew University, a law degree (LL.B.) from the Interdisciplinary Center in Herzlia and a master's degree in Business and Management from Boston University.

#### *B. COMPENSATION*

The table and summary below outline the compensation granted to our five most highly compensated office holders during or with respect to the year ended December 31, 2018. We refer to the five individuals for whom disclosure is provided herein as our “Covered Executives.”

For purposes of the table and the summary below, “compensation” includes base salary, discretionary and non-equity incentive bonuses, share-based compensation, payments accrued or paid in connection with retirement or termination of employment, and personal benefits and perquisites such as car, phone and social benefits paid to or earned by each Covered Executive during the year ended December 31, 2018.

Name and Principal Position			Share-Based Compensation	All Other Compensation	Total
	Salary	Bonus (1)	(2)	(3)	
Shabtai Adlersberg – President and CEO	\$ 366,048	\$ 366,048	\$ 524,134	\$ 195,628	\$ 1,451,858
Lior Aldema – CBO	\$ 254,706	\$ 164,171	\$ 283,378	\$ 123,935	\$ 826,190
Niran Baruch – CFO	\$ 210,236	\$ 62,687	\$ 244,567	\$ 88,408	\$ 605,898
Nimrode Borovsky – VP Marketing	\$ 184,688	\$ 86,520	\$ 147,066	\$ 80,911	\$ 499,185
Yehuda Herscovici – VP Products	\$ 206,318	\$ 56,238	\$ 135,810	\$ 77,309	\$ 475,675

- (1) Amounts reported in this column represent annual incentive bonuses granted to the Covered Executives based on performance-metric formulas set forth in their respective employment agreements.
- (2) Amounts reported in this column represent the expense recorded in our financial statements for the year ended December 31, 2018, with respect to share-based compensation granted to the Covered Executive.
- (3) Amounts reported in this column include personal benefits and perquisites, including those mandated by applicable law. Such benefits and perquisites may include, to the extent applicable to the respective Covered Executive, payments, contributions and/or allocations for savings funds (e.g., Managers Life Insurance Policy), education funds (referred to in Hebrew as “keren hishtalmut”), pension, severance, vacation, car or car allowance, medical insurance and benefits, risk insurance (e.g., life insurance or work disability insurance), telephone expense reimbursement, convalescence or recreation pay, relocation reimbursement, payments for social security, and other personal benefits and perquisites consistent with the Company’s guidelines. All amounts reported in the table represent incremental cost to the Company.

The aggregate direct remuneration paid during the year ended December 31, 2018 to the 15 persons who served in the capacity of director, senior executive officer or key employee during 2018 was approximately \$4.3 million, including approximately \$517,000 which was set aside for pension and retirement benefits. The compensation amounts do not include amounts expended by us for automobiles made available to our officers, expenses (including business, travel, professional and business association dues and expenses) reimbursed to officers and other fringe benefits commonly reimbursed or paid by companies in Israel.

We currently pay each of our non-employee directors an annual fee of \$36,360 and a fee of \$1,120 for each board meeting or committee meeting attended. In the event that a director attends a meeting by phone or a resolution is adopted by written consent, then the fee is reduced to 60% and 50% of the regular meeting fee, respectively. Such fees are in accordance with the rates prescribed by the Israeli Companies Law Regulation for fees of outside directors. Only directors who are not officers receive compensation for serving as directors. Our director, Mr. Adlersberg, who also serves as our President and Chief Executive Officer and our director, Mr. Aldema who also serves as our Chief Business Officer, do not receive board meeting fees. Instead, each of them receive compensation in accordance with the terms of his respective employment agreement.

Upon election or reelection to the board of directors for a term of three years, each non-employee director is granted 7,500 restricted share units (“RSUs”), each year that vest over a three year period from the grant date.

Options to purchase our ordinary shares granted under our 2008 Equity Incentive Plan to persons who served in the capacity of director or executive officer are generally exercisable at the fair market value at the date of grant and expire seven years from the date of grant. The options generally vest in four equal annual installments, commencing one year from the date of grant.

A summary of our stock option and RSU activity and related information for the years ended December 31, 2016, 2017 and 2018 for the persons who served in the capacity of director, senior executive or key employee officer during those years is as follows:

	Year Ended December 31,					
	2016		2017		2018	
	Number of Options and RSUs	Weighted Average Exercise Price	Number of Options and RSUs	Weighted Average Exercise Price	Number of Options and RSUs	Weighted Average Exercise Price
Outstanding at the beginning of the year	2,225,048	\$ 3.83	2,030,210	\$ 3.95	2,084,162	\$ 3.82
Granted	315,217	\$ 2.87	456,293	\$ 3.02	373,800	\$ 2.49
Cancelled	(132,500)		-		-	
Options exercised / RSUs vested	(377,555)	\$ 2.42	(402,341)	\$ 3.54	(780,263)	\$ 3.44
Outstanding at the end of the year	2,030,210	\$ 3.95	2,084,162	\$ 3.82	1,677,699	\$ 3.71

As of December 31, 2018, options to purchase 774,045 ordinary shares were exercisable by the 15 persons who served as an officer or director during the year ended December 31, 2018 at an average exercise price of \$4.97 per share. As of December 31, 2018, the 15 persons who served as an officer, director or key employee during the year ended December 31, 2018 held an aggregate of 520,629 RSUs.

### C. BOARD PRACTICES

#### Corporate Governance Practices

We are incorporated in Israel and therefore are subject to various corporate governance practices under the Israeli Companies Law, 1999, or the Companies Law, relating to such matters as outside directors, the audit committee, compensation committee, the internal auditor and approvals of interested party transactions and of compensation of officers and directors. These matters are in addition to the ongoing listing conditions of the Nasdaq Global Select Market and other relevant provisions of U.S. securities laws. Under the Nasdaq rules, a foreign private issuer may generally follow its home country rules of corporate governance in lieu of the comparable Nasdaq requirements, except for certain matters such as composition and responsibilities of the audit committee and the independence of its members. For further information, see Item 16.G – “Corporate Governance.”

#### Independent Directors

Under the Companies Law, Israeli companies that have offered securities to the public in or outside of Israel are required to appoint at least two “outside” directors, unless the Company elects to exempt itself. The Board of Directors decided to remain subject to this requirement. Doron Nevo and Dr. Eyal Kishon currently serve as our outside directors. Under the requirements for listing on the Nasdaq Global Select Market, a majority of our directors are required to be independent as defined by Nasdaq rules. Doron Nevo, Dr. Eyal Kishon, Zehava Simon, Stanley Stern and Joseph Tenne qualify as independent directors under the applicable SEC and Nasdaq rules, as well as under the Companies Law.

Under the Companies Law, a person may not serve as an outside director if at the date of the person’s election or within the prior two years the person is a relative of the company’s controlling shareholder, or the person or his or her relatives, partners, employers, supervisors or entities under the person’s control, have or had any affiliation with us or with a controlling shareholder or relatives of a controlling shareholder, and, in the case of a company without a controlling shareholder or a shareholder holding at least 25% of the voting rights, any affiliation, at the time of election, to the chairman of the board of directors, the chief executive officer, an interested party or the company’s most senior finance officer. Under the Companies Law, “affiliation” includes:

- an employment relationship,

- a business or professional relationship maintained on a regular basis,
- control; and
- service as an office holder, excluding service as a director in a private company prior to the first offering of its shares to the public if such director was appointed or elected as a director of the private company in order to serve as an outside director following the initial public offering.

In addition, a person may not serve as an outside director:

- if the person or his or her relatives, partners, employers, supervisors or entities under the person's control, maintains a business or professional relationship with the company, even if such relationship is not on a regular basis, other than a negligible business or professional relationship; or
- if the person received compensation as an outside director in excess of the amounts permitted by the Companies Law and regulations thereunder.

In addition, no individual may serve as an outside director if the individual's position or other activities create or may create a conflict of interest with his or her role as an outside director or are likely to interfere with his or her ability to serve as a director. Until the lapse of two years from the termination of office, the company, a controlling shareholder and entities under the company's control may not grant the outside director or any of his or her relatives, directly or indirectly, any benefit, or engage the outside director or his or her relatives as an office holder of the company, of a controlling shareholders or of an entity under the company's control, and may not employ or receive services from the outside director or any of his or her relatives, either directly or indirectly, including through a corporation controlled by that person. The restriction on a relative that is not the spouse or child of the outside director is limited to one year from the termination of office instead of two years. Pursuant to the Companies Law, at least one of the outside directors appointed by a publicly-traded company must have "financial and accounting expertise." The other outside directors are required to possess "financial and accounting expertise" or "professional expertise," as these terms are defined in regulations promulgated under the Companies Law. Joseph Tenne is designated as the "audit committee financial expert" as that term is defined in SEC rules.

Outside directors are elected by a majority vote at a shareholders' meeting. In addition to the majority vote, the shareholder approval of the election of an outside director must satisfy either of two additional tests:

- the majority includes at least a majority of the shares voted by shareholders other than our controlling shareholders or shareholders who have a personal interest in the election of the outside directors (excluding a personal interest that is not related to a relationship with the controlling shareholders); or
- the total number of shares held by non-controlling shareholders and disinterested shareholders that voted against the election of the outside director does not exceed 2% of the aggregate voting rights of our company.

The initial term of an outside director is three years and may be extended for up to two additional three-year terms. Thereafter, he or she may be reelected by our shareholders for additional periods of up to three years each only if the audit committee and the board of directors confirm that, in light of the outside director's expertise and special contribution to the work of the Board of Directors and its committees, the reelection for such additional period is beneficial to the company. Reelection of an outside director may be effected through one of the following mechanisms: (1) the board of directors proposed the reelection of the nominee and the election was approved by the shareholders by the majority required to appoint outside directors for their initial term; or (2) one or more shareholders holding one percent or more of a company's voting rights or the outside director proposed the reelection of the nominee, and the reelection is approved by a majority of the votes cast by the shareholders of the company, excluding the votes of controlling shareholders and those who have a personal interest in the matter as a result of their relations with the controlling shareholders, provided that the aggregate votes cast in favor of the reelection by such non-excluded shareholders constitute more than two percent of the voting rights in the company.

Pursuant to the Companies Law, an Israeli company whose shares are publicly traded may elect to adopt a provision in its articles of association pursuant to which a majority of its board of directors (or a third of its board of directors in case the company has a controlling shareholder) will constitute individuals complying with certain independence criteria prescribed by the Companies Law. Pursuant to the related regulations, directors who comply with the independence requirements of the Nasdaq and SEC regulations are deemed to comply with the independence requirements of the Companies Law. We have not included such a provision in our articles of association since our board of directors complies with the independence requirements of the Nasdaq and SEC regulations described above. In any event, as described above, a majority of our board of directors and all members of our audit committee are directors who comply with the independence criteria prescribed by the Companies Law.



An outside director is entitled to compensation as provided in the regulations adopted under the Israeli Companies Law and is otherwise prohibited from receiving any other compensation, directly or indirectly, from the company. In accordance with such regulations, our shareholders approved that our outside directors are to receive compensation equal to that paid to the other members of the board of directors. For further information, please see Item 6.B - "Directors, Senior Management and Employees—Compensation" in this Annual Report.

#### **Audit Committee**

Under the Companies Law and the requirements for listing on the Nasdaq Global Select Market, our board of directors is required to appoint an audit committee. Our audit committee must be comprised of at least three directors, including all of the outside directors (one of whom must serve as the chair of the audit committee), and a majority of the committee members must comply with the director independence requirements prescribed by the Companies Law. The audit committee consists of: Dr. Eyal Kishon, Doron Nevo and Joseph Tenne, with Doron Nevo serving as the chairman of the audit committee. Our board of directors has determined that Joseph Tenne is an "audit committee financial expert" as defined in SEC rules and that all members of the audit committee are independent under the applicable SEC rules, Nasdaq rules and provisions of the Companies Law.

The audit committee may not include the chairman of the board, or any director employed by us, by a controlling shareholder or by any entity controlled by a controlling shareholder, or any director providing services to us, to a controlling shareholder or to any entity controlled by a controlling shareholder on a regular basis, or any director whose income is primarily dependent on a controlling shareholder, and may not include a controlling shareholder or any relatives of a controlling shareholder. Individuals who are not permitted to be audit committee members may not participate in the committee's meetings other than to present a particular issue. However, an employee who is not a controlling shareholder or relative may participate in the committee's discussions but not in any vote, and the company's legal counsel and corporate secretary may participate in the committee's discussions and votes if requested by the committee.

Under the Companies Law, a meeting of the audit committee is properly convened if a majority of the committee members attend the meeting, and in addition a majority of the attending committee members are independent directors within the meaning of the Companies Law and include at least one outside director.

We have adopted an audit committee charter as required by Nasdaq rules. The audit committee's duties include providing assistance to the board of directors in fulfilling its legal and fiduciary obligations in matters involving our accounting, auditing, financial reporting, internal control and legal compliance functions by approving the fees of, and services performed by, our independent accountants and reviewing their reports regarding our accounting practices and systems of internal accounting controls. The audit committee also oversees the audit efforts of our independent accountants and takes those actions as it deems necessary to satisfy itself that the accountants are independent of management. Under the Companies Law, the audit committee also is required to monitor deficiencies in the administration of our company, including by consulting with the internal auditor and independent accountants, to review, classify and approve related party transactions and extraordinary transactions, to review the internal auditor's audit plan and to establish and monitor whistleblower procedures.

#### **Nominating Committee**

Nasdaq rules require that director nominees be selected or recommended for the board's selection either by a committee composed solely of independent directors or by a majority of independent directors. Our nominating committee assists the board of directors in its selection of individuals as nominees for election to the board of directors and/or to fill any vacancies or newly created directorships on the board of directors. The nominating committee consists of Dr. Eyal Kishon, Doron Nevo and Joseph Tenne, with Doron Nevo serving as the chairman of the nominating committee. All members of the nominating committee are independent under the applicable Nasdaq rules and provisions of the Companies Law.

#### **Compensation Committee**

Under the Companies Law, the board of directors of any public company must establish a compensation committee. The compensation committee must consist of at least three directors, include all of the outside directors (including one outside director serving as the chair of the compensation committee), and a majority of the committee members must comply with the director independence requirements prescribed by the Companies Law. Similar to the rules that apply to the audit committee, the compensation committee may not include the chairman of the board, or any director employed by us, by a controlling shareholder or by any entity controlled by a controlling shareholder, or any director providing services to us, to a controlling shareholder or to any entity controlled by a controlling shareholder on a regular basis, or any director whose primary income is dependent on a controlling shareholder, and may not include a controlling shareholder or any of its relatives. Individuals who are not permitted to be compensation committee members may not participate in the committee's meetings other than to present a particular issue; *however*, an employee who is not a controlling shareholder or relative may participate in the committee's discussions, but not in any vote, and the company's legal counsel and corporate secretary may participate in the committee's discussions and votes if requested by the committee.

The compensation committee's duties include recommending to the board of directors a compensation policy for executives and monitor its implementation, approve compensation terms of executive officers, directors and employees affiliated with controlling shareholders, make recommendations to the board of directors regarding the issuance of equity incentive awards under our equity incentive plan and exempt certain compensation arrangements from the requirement to obtain shareholder approval under the Companies Law. The compensation committee meets at least twice a year, with further meetings to occur, or actions to be taken by unanimous written consent, when deemed necessary or desirable by the committee or its chairperson. For information regarding the compensation policy for executives, see Item 10.C - "Additional Information - Memorandum and Articles of Association – Compensation of Executive Officers and Directors; Executive Compensation Policy."

The compensation committee consists of Dr. Eyal Kishon, Doron Nevo, Joseph Tenne and Zehava Simon, with Doron Nevo serving as the chairman of the compensation committee. All members of the compensation committee are independent under the applicable SEC rules, Nasdaq rules and provisions of the Companies Law.

#### **Internal Auditor**

Under the Companies Law, our board of directors is also required to appoint an internal auditor proposed by the audit committee. The internal auditor may be our employee, but may not be an interested party or office holder, or a relative of any interested party or office holder, and may not be a member of our independent accounting firm. The role of the internal auditor is to examine, among other things, whether our activities comply with the law and orderly business procedure. Mr. Oren Grupi of KPMG Israel has been our internal auditor since July 2018.

#### **Board Classes**

Pursuant to our articles of association, our directors, other than our outside directors, are classified into three classes (classes I, II and III). The members of each class of directors and the expiration of his or her current term of office are as follows:

Zehava Simon	Class I	2019
Lior Aldema	Class I	2019
Joseph Tenne	Class II	2020
Shabtai Adlersberg	Class III	2021
Stanley B. Stern	Class III	2021

Our outside directors under the Companies Law, Doron Nevo and Dr. Eyal Kishon, are not members of any class and serve in accordance with the provisions of the Companies Law. Mr. Nevo's term ends in 2021 and Dr. Kishon's term ends in 2020.

#### **Chairman of the Board**

Under the Companies Law, the chief executive officer of a company (or a relative of the chief executive officer) may not serve as the chairman of the board of directors, and the chairman of the board of directors (or a relative of the chairman of the board of directors) may not serve as the chief executive officer, unless approved by the shareholders by a special majority vote prescribed by the Companies Law. The shareholder vote cannot authorize the appointment for a period of longer than three years, which period may be extended from time to time by the shareholders with a similar special majority vote. The chairman of the board of directors shall not hold any other position with the company (except as chief executive officer if approved in accordance with the above procedure) or in any entity controlled by the company, other than as chairman of the board of directors of a controlled entity, and the company shall not delegate to the chairman duties that, directly or indirectly, make him or her subordinate to the chief executive officer. Stanley B. Stern is our chairman of the board and Shabtai Adlersberg is our chief executive officer.

D. EMPLOYEES

We had the following number of employees as of December 31, 2016, 2017 and 2018 in the departments set forth in the table below:

	As of December 31,		
	2016	2017	2018
Research and development	284	280	264
Sales and marketing, technical service and support	297	303	327
Operations	81	77	77
Management and administration	38	38	38
	<u>700</u>	<u>698</u>	<u>706</u>

Our employees were located in the following areas as of December 31, 2016, 2017 and 2018.

	As of December 31,		
	2016	2017	2018
Israel	426	403	390
United States	124	130	131
Europe	54	59	66
Far East	83	92	106
Latin America	13	14	13
	<u>700</u>	<u>698</u>	<u>706</u>

Israeli labor laws and regulations are applicable to our employees in Israel. These laws principally concern matters such as paid annual vacation, paid sick days, length of the workday, pay for overtime, insurance for work-related accidents, severance pay and other conditions of employment. Israeli law generally requires severance pay, which may be funded by Manager's Insurance, described below, upon the retirement or death of an employee or termination of employment without cause (as defined under Israeli law). Furthermore, Israeli employees and employers are required to pay predetermined sums to the National Insurance Institute, which include payments for national health insurance. The payments to the National Insurance Institute currently range from approximately 6.95% to 19.5% of wages up to specified wage levels, of which the employee contributes approximately 55% and the employer contributes approximately 45%.

Our employees in Israel are subject to certain provisions of the collective bargaining agreements between the Histadrut (General Federation of Labor in Israel) and the Coordination Bureau of Economic Organizations (including the Industrialists Associations) by order of the Israeli Minister of Economy and Industry (formerly known as Minister of Industry, Trade and Labor). These provisions principally concern cost of living increases, recreation pay and other conditions of employment. We generally provide our employees with benefits and working conditions above the required minimums. Our employees, as a group, are not currently represented by a labor union. To date, we have not experienced any work stoppages.

Pursuant to an order issued by the Israeli Minister of Industry, Trade and Labor, provisions relating to pension arrangements in the collective bargaining agreements between the Histadrut and the Coordination Bureau of Economic Organizations apply to all employees in Israel, including our employees in Israel. We regularly contribute to a "Manager's Insurance Fund" or to a privately managed pension fund on behalf of our employees located in Israel. These funds provide employees with a lump sum payment upon retirement (or a pension, in case of a pension fund) and severance pay, if legally entitled thereto, upon termination of employment. We provide for payments to a Manager's Insurance Fund and pension fund contributions in the amount of 14.83% of an employee's salary on account of severance pay and provident payment or pension, with the employee contributing 6.0% of his salary. We also pay an additional amount of up to 2.5% of certain of our employees' salaries in connection with disability payments. In addition, we administer an Education Fund for our Israeli employees and pay 7.5% of these employees' salaries thereto, with the employees contributing 2.5% of their salary.

E. SHARE OWNERSHIP

The following table sets forth the share ownership of our directors and officers as of March 14, 2019 and the outstanding number of options held by them that vest within 60 days of March 14, 2019.

Name	Total Shares Beneficially Owned	Percentage of Ordinary Shares	Number of Options
Shabtai Adlersberg	4,830,390	16.5%	462,266
Stanley B. Stern	*	*	*
Niran Baruch	*	*	*
Lior Aldema	*	*	*
Ofer Nimitsovich	*	*	*
Yair Hevdeli	*	*	*
Eyal Frishberg	*	*	*
Yehuda Herscovici	*	*	*
Nimrode Borovsky	*	*	*
Tal Dor	*	*	*
Shaul Weissman	*	*	*
Joseph Tenne	*	*	*
Dr. Eyal Kishon	*	*	*
Doron Nevo	*	*	*
Zehava Simon	*	*	*

\* Less than one percent.

Our officers and directors have the same voting rights as our other shareholders.

The following table sets forth information with respect to the options to purchase our ordinary shares held by Mr. Adlersberg as of March 14, 2019.

Number of Options	Grant Date	Exercise Price	Exercised	Cancelled	Vesting	Expiration Date
113,876	December 14, 2012	\$ 3.02	50,000	-	4 years	December 14, 2019
116,031	December 14, 2013	\$ 6.69	-	-	4 years	December 14, 2020
127,829	December 14, 2014	\$ 4.60	-	-	4 years	December 14, 2021
114,275	December 14, 2015	\$ 4.03	-	-	4 years	December 14, 2022
95,293	March 20, 2017	\$ 6.90	-	-	4 years	March 20, 2024
15,000	December 14, 2017	\$ 7.13	-	-	4 years	December 14, 2024
15,000	March 14, 2018	\$ 7.56	-	-	4 years	March 14, 2025
15,000	June 14, 2018	\$ 7.33	-	-	4 years	June 14, 2025
15,000	September 14, 2018	\$ 10.59	-	-	4 years	September 14, 2025
15,000	December 14, 2018	\$ 10.66	-	-	4 years	December 14, 2025
15,000	March 14, 2019	\$ 13.27	-	-	4 years	March 14, 2026

The following table sets forth information with respect to the RSUs granted to Mr. Adlersberg as of March 14, 2019. These RSUs vest quarterly over a four-year period from the date of grant, subject to his continuing service to us.

Number of RSUs	Grant Date	Issued
38,092	December 14, 2015	28,568
32,717	December 14, 2016	16,357
60,000	December 14, 2017	15,000
60,000	December 14, 2018	-

#### Employee Share Plans

We have Employee Share Purchase Plans for the sale of shares to our employees and an Equity Incentive Plan for the granting of options, RSUs and restricted shares to our employees, officers, directors and consultants. Our 2008 Equity Incentive Plan is pursuant to the Israeli Income Tax Ordinance, entitling the beneficiaries who are our employees to tax benefits under Israeli law. There are various conditions that must be met in order to qualify for these benefits, including registration of the options in the name of a trustee for each of the beneficiaries who is granted options. For tax benefits each option, and any ordinary shares acquired upon the exercise of the option, must be held by the trustee at least for a period commencing on the date of grant and ending no later than 24 months after the date of grant, in accordance with the period of time specified by Section 102 of Israel's Income Tax Ordinance, and deposited in trust with the trustee.

#### Employee Share Option Plans

**2008 Equity Incentive Plan.** We adopted an equity incentive plan under Section 102 of the Israeli Income Tax Ordinance, or Section 102, which provides certain tax benefits in connection with share-based compensation to employees, officers and directors. This plan, our 2008 Equity Incentive Plan, was approved by the Israeli Tax Authority.

Under our equity incentive plan, we may grant our directors, officers and employees restricted shares, restricted share units and options to purchase our ordinary shares under Section 102. We may also grant other persons awards under our equity incentive plan. However, such other persons (controlling shareholders and consultants) will not enjoy the tax benefits provided by Section 102. The total number of ordinary shares that were originally available for grant under the 2008 Plan was 2,009,122, which was increased to 4,009,122 in 2010, 6,009,122 in 2013 and 8,009,122 in 2016. This number is reduced by one share for each equity grant we make under the 2008 Plan. During 2018, options to purchase 271,900 ordinary shares and 572,558 restricted share units were granted under the 2008 Plan. As of December 31, 2018, 466,733 ordinary shares remained available for grant under the 2008 Plan. As of December 31, 2018 there are 1,857,661 options to purchase ordinary shares and 930,596 restricted share units outstanding under the plan.

The Israeli Tax Authority approved the 2008 Plan under the capital gains tax track of Section 102. Based on Israeli law currently in effect and the election of the capital gains tax track, and provided that options, restricted shares and restricted shares units granted or, upon their exercise or vesting, the underlying shares, issued under the plan are held by a trustee for the two years following the date in which such awards are granted, our employees, officers and directors will be (i) entitled to defer any taxable event with respect to the awards until the underlying ordinary shares are sold, and (ii) subject to capital gains tax of 25% on the sale of the shares. However, if we grant awards at a value below the underlying shares' market value at the date of grant, the 25% capital gains tax rate will apply only with respect to capital gains in excess of the underlying shares' market value at the date of grant and the remaining capital gains will be taxed at the grantee's regular tax rate. We may not recognize a tax benefit pertaining to the employees' restricted shares, restricted share units and options for tax purposes except in the events described above under which the gain is taxed at the grantee's regular tax rate.

Restricted shares, restricted share units and options granted under the 2008 Plan will generally vest over four years from the grant date. If the employment of an employee is terminated for any reason, the employee (or in the case of death, the designated beneficiary) may exercise his or her vested options within ninety days of the date of termination (or within twelve months of the date of termination in the case of death or disability) and shall be entitled to any rights upon vested restricted shares and vested restricted share units to be delivered to the employee to the extent that they were vested prior to the date his or her employment terminates. Directors are generally eligible to exercise his or her vested options within twelve months from the date the director ceases to serve on the board of directors.

The holders of options under all of the plans are responsible for all personal tax consequences relating to the options. The exercise prices of the options are based on the fair value of the ordinary shares at the time of grant as determined by our board of directors. The current practice of our board of directors is to grant options with exercise prices that equal 100% of the closing price of our ordinary shares on the applicable date of grant.

**ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS****A. MAJOR SHAREHOLDERS**

To our knowledge, (A) we are not directly or indirectly owned or controlled (i) by another corporation or (ii) by any foreign government and (B) there are no arrangements, the operation of which may at a subsequent date result in a change in control of AudioCodes. The following table sets forth, as of March 14, 2019 the number of our ordinary shares, which constitute our only outstanding voting securities, beneficially owned by (i) all shareholders known to us to own more than 5% of our outstanding ordinary shares, and (ii) all of our directors and senior executive officers as a group.

<b>Identity of Person or Group</b>	<b>Amount Owned</b>	<b>Percent of Class</b>
Shabtai Adlersberg <sup>(1)</sup>	5,292,655	18.0%
Leon Bialik <sup>(2)</sup>	3,589,532	12.2%
Morgan Stanley <sup>(3)</sup>	2,293,111	7.8%
All directors and senior executive officers as a group (15 persons) <sup>(4)</sup>	5,561,952	19.0%

(1) Includes options to purchase 462,266 shares, exercisable within 60 days of March 14, 2019

(2) The information is derived from a statement on Schedule 13G/A, dated February 5, 2019, of Leon Bialik filed with the SEC.

(3) The information is derived from a statement on Schedule 13G/A, dated February 12, 2019, of Morgan Stanley and Morgan Stanley Capital Services LLC filed with the SEC.

(4) Includes 1,164,883 ordinary shares which may be purchased pursuant to options exercisable within sixty days following March 23, 2018 and 8,750 ordinary shares issuable pursuant to restricted share units that vest within 60 days of March 23, 2018.

Mr. Adlersberg held 18.3% of our ordinary shares as of December 31, 2018 as compared to 18.6% of our ordinary shares as of December 31, 2017 and 16.4% of our ordinary shares as of December 31, 2016.

Mr. Bialik held 12.3% of our ordinary shares as of December 31, 2018, as compared to 13.2% of our ordinary shares as of December 31, 2017 and 12.1% of our ordinary shares as of December 31, 2016.

Senvest Management, LLC (formerly Rima Senvest Management LLC) held less than 5% of our ordinary shares as of December 31, 2018, as compared to 7.0% of our ordinary shares as of December 31, 2017 and 8.5% of our ordinary shares as of December 31, 2016.

Morgan Stanley and Morgan Stanley Capital Services LLC held 7.9% of our ordinary shares as of December 31, 2018, as compared to 5.7% of our ordinary shares as of December 31, 2017, and, to our knowledge, less than 5.0% of our ordinary shares as of December 31, 2016.

As of March 14, 2019, there were approximately 7 holders of record of our ordinary shares in the United States, although we believe that the number of beneficial owners of the ordinary shares is significantly greater. The number of record holders in the United States is not representative of the number of beneficial holders nor is it representative of where such beneficial holders are resident since many of these ordinary shares were held of record by brokers or other nominees.

The major shareholders have the same voting rights as the other shareholders.

**B. RELATED PARTY TRANSACTIONS**

Not applicable.

C. *INTERESTS OF EXPERTS AND COUNSEL*

Not applicable.

**ITEM 8. FINANCIAL INFORMATION**

A. *CONSOLIDATED STATEMENTS AND OTHER FINANCIAL INFORMATION*

See Item 18.

***Legal Proceedings***

None.

***Dividend Policy***

For a discussion of our dividend policy, please see Item 10B-“Additional Information-Memorandum and Articles of Association-Dividends.”

B. *SIGNIFICANT CHANGES*

No significant change has occurred since December 31, 2018, except as otherwise disclosed in this Annual Report.

**ITEM 9. THE OFFER AND LISTING**

A. *OFFER AND LISTING DETAILS*

Our ordinary shares are listed on the Nasdaq Global Select Market and the TASE under the symbol “AUDC.”

B. *PLAN OF DISTRIBUTION*

Not applicable.

C. *MARKETS*

Our ordinary shares are listed for trading on the Nasdaq Global Select Market under the symbol “AUDC.” Our ordinary shares are also listed for trading on The Tel-Aviv Stock Exchange under the symbol “AUDC.” In addition, we are aware of our ordinary shares being traded on the following markets: Frankfurt Stock Exchange, Berlin Stock Exchange, Munich Stock Exchange, Stuttgart Stock Exchange, the German Composite and XETRA.

D. *SELLING SHAREHOLDERS*

Not applicable.

E. *DILUTION*

Not applicable.

F. *EXPENSES OF THE ISSUE*

Not applicable.

**ITEM 10. ADDITIONAL INFORMATION**

A. *SHARE CAPITAL*

Not applicable.

B. *MEMORANDUM AND ARTICLES OF ASSOCIATION*

**Objects and Purposes**

We were incorporated in 1992 under the laws of the State of Israel. Our registration number with the Israeli Registrar of Companies is 520044132. Our objects and purposes, set forth in Section 2 of our memorandum of association, are:

- to plan, develop and market voice signal systems;
- to purchase, import, market and wholesale and retail distribute, in Israel and abroad, consumption goods and accompanying products;
- to serve as representatives of bodies, entrepreneurs and companies from Israel and abroad with respect to their activities in Israel and abroad; and
- to carry out any activity as determined by the lawful management.

**Share Capital**

Our authorized share capital consists of NIS 1,025,000 divided into 100,000,000 ordinary shares, nominal value NIS 0.01 per share, and 2,500,000 preferred shares, nominal value NIS 0.01 per share. As of March 14, 2019, we had 29,347,342 ordinary shares outstanding (which does not include 28,998,379 treasury shares) and no preferred shares outstanding.

**Borrowing Powers**

The board of directors has the power to cause us to borrow money and to secure the payment of borrowed money. The board of directors specifically has the power to issue bonds or debentures, and to impose mortgages or other security interests on all or any part of our property.

**Amendment of Articles of Association**

Shareholders may amend our articles of association by a resolution adopted at a shareholders meeting by the holders of 50% of voting power represented at the meeting in person or by proxy and voting thereon.

**Qualification of Directors**

No person shall be disqualified to serve as a Director by reason of his not holding shares in the Company or by reason of his having served as a Director in the past.

**Dividends**

Under the Israeli Companies Law, we may pay dividends only out of our profits as determined for statutory purposes, unless court approval is granted for the payment of dividends despite the lack of statutory profits. (There is a unified statutory test for the payment of dividends and a company's repurchase of its outstanding shares.) In 2018 and again in early 2019, we received court approval to pay dividends (and repurchase our shares) up to certain ceilings, despite the lack of statutory profits. The current approval is valid until July 1, 2019. We may seek further approvals to repurchase our shares and to continue to pay dividends. The amount of any dividend to be distributed among shareholders is based on the nominal value of their shares. Our board of directors has determined that we will not distribute any amounts of our undistributed tax exempt income as dividend. We intend to reinvest our tax-exempt income and not to distribute such income as a dividend. Accordingly, no deferred income taxes have been provided on income attributable to our Approved Enterprise program as the undistributed tax exempt income is essentially permanent in duration.

**Voting Rights and Powers**

Unless any shares have special rights as to voting, every shareholder has one vote for each share held of record.

Under our articles of association, we may issue preferred shares from time to time, in one or more series. However, in connection with our listing on The Tel-Aviv Stock Exchange in 2001, we agreed that for such time as our ordinary shares are traded on The Tel-Aviv Stock Exchange, we will not issue any of the 2,500,000 preferred shares, nominal value NIS 0.01, authorized in our articles of association. Notwithstanding the foregoing, we may issue preferred shares if the preference of those shares is limited to a preference in the distribution of dividends and such preferred shares have no voting rights.



### **Business Combinations**

Our articles of association impose restrictions on our ability to engage in any merger, asset or share sale or other similar transaction with a shareholder holding 15% or more of our voting shares.

### **Winding Up**

Upon our liquidation, our assets available for distribution to shareholders will be distributed to them in proportion to the nominal value of their shares.

### **Redeemable Shares**

Subject to our undertaking to the Tel-Aviv Stock Exchange as described above, we may issue and redeem redeemable shares.

### **Modification of Rights**

Subject to the provisions of our memorandum of association, and without prejudice to any special rights previously conferred upon the holders of our existing shares, we may, from time to time, by a resolution approved by the holders of 75% voting power represented at the meeting in person or by proxy and voting thereon, provide for shares with such preferred or deferred rights or rights of redemption, or other special rights and/or such restrictions, whether in regard to dividends, voting repayment of share capital or otherwise, as may be stipulated in such resolution.

If at any time our share capital is divided into different classes of shares, we may modify or abrogate the rights attached to any class, unless otherwise provided by the articles of association, by a resolution approved by the holders of 75% voting power represented at the meeting in person or by proxy and voting thereon, subject to the consent in writing of the holders of 75% of the issued shares of that class.

The provisions of our articles of association relating to general meetings also apply to any separate general meeting of the holders of the shares of a particular class, except that two or more members holding not less than 75% of the issued shares of that class must be present in person or by proxy at that separate general meeting for a quorum to exist.

Unless otherwise provided by our articles of association, the increase of an authorized class of shares, or the issuance of additional shares thereof out of the authorized and unissued share capital, shall not be deemed to modify or abrogate the rights attached to previously issued shares of that class or of any other class.

### **Shareholder Meetings**

An annual meeting of shareholders is to be held once a year, within 15 months after the previous annual meeting. The annual meeting may be held in Israel or outside of Israel, as determined by the board of directors.

The board of directors may, whenever it thinks fit, convene a special shareholders meeting. The board of directors must convene a special shareholders meeting at the request of:

- at least two directors;
- at least one-quarter of the directors in office; or
- one or more shareholders who hold at least 5% of the outstanding share capital and at least 1% of the voting rights, or one or more shareholders who hold at least 5% of the outstanding voting rights.

A special shareholders meeting may be held in Israel or outside of Israel, as determined by the board of directors.

### **Notice of General Meetings; Omission to Give Notice**

The provisions of the Companies Law and the related regulations override the provisions of our articles of association, and provide for notice of a meeting of shareholders to be sent to each registered shareholder at least 21 days or 35 days in advance of the meeting, depending on the items included in the meeting agenda. Notice of a meeting of shareholders must also be published in two Israeli newspapers or on our website.

Notice of a meeting of shareholders must specify the type of meeting, the place and time of the meeting, the agenda, a summary of the proposed resolutions, the majority required to adopt the proposed resolutions, and the record date for the meeting. The notice must also include the address and telephone number of our registered office, and a list of times at which the full text of the proposed resolutions may be examined at the registered office.

The accidental omission to give notice of a meeting to any shareholder, or the non-receipt of notice sent to such shareholder, does not invalidate the proceedings at the meeting.

### **Limitations on Foreign Shareholders to Hold or Exercise Voting Rights**

There are no limitations on foreign shareholders in our articles of association. Israeli law restricts the ability of citizens of countries that are in a state of war with Israel to hold shares of Israeli companies.

### **Fiduciary Duties; Approval of Transactions under Israeli Law**

***Fiduciary duties.*** The Companies Law codifies the fiduciary duties that office holders, which under the Companies Law includes our directors and executive officers, owe to a company. An office holder's fiduciary duties consist of a duty of loyalty and a duty of care.

The duty of loyalty requires an office holder to act in good faith and for the benefit of the company, including to avoid any conflict of interest between the office holder's position in the company and personal affairs, and prohibits any competition with the company or the exploitation of any business opportunity of the company in order to receive a personal advantage for himself or herself or for others. This duty also requires an office holder to reveal to the company any information or documents relating to the company's affairs that the office holder has received due to his or her position as an office holder. A company may approve any of the acts mentioned above provided that all the following conditions apply: the office holder acted in good faith and neither the act nor the approval of the act prejudices the good of the company and, the office holder disclosed the essence of his personal interest in the act, including any substantial fact or document, a reasonable time before the date for discussion of the approval. A director is required to exercise independent discretion in fulfilling his or her duties and may not be party to a voting agreement with respect to his or her vote as a director. A violation of these requirements is deemed a breach of the director's duty of loyalty.

The duty of care requires an office holder to act with a level of care that a reasonable office holder in the same position would employ under the same circumstances. This includes the duty to use reasonable means to obtain information regarding the advisability of a given action submitted for his or her approval or performed by virtue of his or her position and all other relevant information material to these actions.

***Disclosure of personal interest.*** The Companies Law requires that an office holder promptly disclose to the company any personal interest that he or she may have and all related material information or documents known to him or her, in connection with any existing or proposed transaction by the company. "Personal interest," as defined by the Companies Law, includes a personal interest of any person in an act or transaction of the company, including a personal interest of his relative or of a corporation in which that person or a relative of that person is a 5% or greater shareholder, a holder of 5% or more of the voting rights, a director or general manager, or in which he or she has the right to appoint at least one director or the general manager, and includes shares for which the person has the right to vote pursuant to a power-of-attorney. "Personal interest" does not apply to a personal interest stemming merely from holding shares in the company.

The office holder must make the disclosure of his personal interest no later than the first meeting of the company's board of directors that discusses the particular transaction. This duty does not apply to the personal interest of a relative of the office holder in a transaction unless it is an "extraordinary transaction." The Companies Law defines an "extraordinary transaction" as a transaction that is not in the ordinary course of business, not on market terms or that is likely to have a material impact on the company's profitability, assets or liabilities.

**Approvals.** The Companies Law provides that a transaction with an office holder or a transaction in which an office holder has a personal interest requires board approval, unless the transaction is an extraordinary transaction or the articles of association provide otherwise. Our articles of association do not provide otherwise. The transaction may be approved only if it is in our best interest. If the transaction is an extraordinary transaction, then the approvals of the company's audit committee and the board of directors are required. If the transaction concerns exculpation, indemnification, insurance or compensation of an office holder, then the approvals of the company's compensation committee and the board of directors are required, except if the compensation arrangement is an immaterial amendment to an existing compensation arrangement of an officer who is not a director, in which case the approval of the compensation committee is sufficient. Exculpation, indemnification, insurance or compensation of a director or the Chief Executive Officer also requires shareholder approval.

A person who has a personal interest in a matter that is considered at a meeting of the board of directors or the audit committee generally may not attend that meeting or vote on that matter, unless a majority of the board of directors or the audit committee has a personal interest in the matter or if such person is invited by the chair of the board of directors or audit committee, as applicable, to present the matter being considered. If a majority of the board of directors or the audit committee has a personal interest in the transaction, shareholder approval also would be required.

## **Shareholders**

The Companies Law imposes on a controlling shareholder of a public company the same disclosure requirements described above as it imposes on an office holder. For this purpose, a "controlling shareholder" is any shareholder who has the ability to direct the company's actions, including any shareholder holding 25% or more of the voting rights if no other shareholder owns more than 50% of the voting rights in the company. Two or more shareholders with a personal interest in the approval of the same transaction are deemed to be one shareholder.

Approval of the audit committee, the board of directors and our shareholders, in that order, is required for extraordinary transactions, including a private placement, with a controlling shareholder or in which a controlling shareholder has a personal interest.

Approval of the compensation committee, the board of directors and our shareholders, in that order, is required for the terms of compensation or employment of a controlling shareholder or his or her relative, as an officer holder or employee of our company or as a service provider to the company, including through a company controlled by a controlling shareholder.

Shareholder approval must include the majority of shares voted at the meeting. In addition to the majority vote, the shareholder approval must satisfy either of two additional tests:

- the majority includes at least a majority of the shares voted by shareholders who have no personal interest in the transaction; or
- the total number of shares held by disinterested shareholders that voted against the approval of the transaction does not exceed 2% of the aggregate voting rights of our company.

Generally, the approval of such a transaction may not extend for more than three years, except that in the case of an extraordinary transaction, including a private placement, with a controlling shareholder or in which a controlling shareholder has a personal interest that does not concern compensation for employment or service, the transaction may be approved for a longer period if the audit committee determines that the approval of the transaction for a period longer than three years is reasonable under the circumstances.

## **Compensation of Executive Officers and Directors; Executive Compensation Policy**

In accordance with the Companies Law, we have adopted a compensation policy for our executive officers and directors. The purpose of the policy is to describe our overall compensation strategy for our executive officers and directors and to provide guidelines for setting their compensation, as prescribed by the Companies Law. In accordance with the Companies Law, the policy must be reviewed and readopted at least once every three years.

Approval of the compensation committee, the board of directors and our shareholders, in that order, is required for the adoption of the compensation policy. The shareholders' approval must include the majority of shares voted at the meeting. In addition to the majority vote, the shareholder approval must satisfy either of two additional tests:

- the majority includes at least a majority of the shares voted by shareholders other than our controlling shareholders or shareholders who have a personal interest in the adoption of the compensation policy; or

- the total number of shares held by non-controlling shareholders and disinterested shareholders that voted against the adoption of the compensation policy does not exceed 2% of the aggregate voting rights of our company.

Under the Companies Law, the compensation arrangements for officers (other than the Chief Executive Officer) who are not directors require the approval of the compensation committee and the board of directors; provided, however, that if the compensation arrangement is not in compliance with our executive compensation policy, the arrangement may only be approved by the compensation committee and the board of directors for special reasons to be noted, and the compensation arrangement shall also require a special shareholder approval. If the compensation arrangement is an immaterial amendment to an existing compensation arrangement of an officer who is not a director and is in compliance with our executive compensation policy, the approval of the compensation committee is sufficient.

Arrangements regarding the compensation of the Chief Executive Officer and of directors require the approval of the compensation committee, the board and the shareholders, in that order. In certain limited cases, the compensation of a new Chief Executive Officer who is not a director may be approved without approval of the shareholders.

**Duties of Shareholders.** Under the Israeli Companies Law, a shareholder also has a duty to act in good faith towards the company and other shareholders and refrain from abusing his or her power in the company, including, among other things, voting in the general meeting of shareholders on the following matters:

- any amendment to the articles of association;
- an increase of the company's authorized share capital;
- a merger; or
- approval of related party transactions that require shareholder approval.

In addition, any controlling shareholder, any shareholder who can determine the outcome of a shareholder vote and any shareholder who, under the company's articles of association, can appoint or prevent the appointment of an office holder, is under a duty to act with fairness towards the company. The Israeli Companies Law also provides that a breach of the duty of fairness will be governed by the laws governing breach of contract; however, the Israeli Companies Law does not describe the substance of this duty.

#### **Anti-Takeover Provisions Under Israeli Law**

The Companies Law provides that an acquisition of shares in a public company must be made by means of a tender offer if as a result of the acquisition the purchaser would hold 25% or more of the voting rights in the company, unless there is already another shareholder of the company with 25% or more of the voting rights. Similarly, the Companies Law provides that an acquisition of shares in a public company must be made by means of a tender offer if as a result of the acquisition the purchaser would hold more than 45% of the voting rights in the company, unless there is a shareholder with more than 45% of the voting rights in the company.

The Companies Law requires the parties to a proposed merger to file a merger proposal with the Israeli Registrar of Companies, specifying certain terms of the transaction. Each merging company's board of directors and shareholders must approve the merger. Shares in one of the merging companies held by the other merging company or certain of its affiliates are disenfranchised for purposes of voting on the merger. A merging company must inform its creditors of the proposed merger. Any creditor of a party to the merger may seek a court order blocking the merger, if there is a reasonable concern that the surviving company will not be able to satisfy all of the obligations of the parties to the merger. Moreover, a merger may not be completed until at least 50 days have passed from the time that the merger proposal was filed with the Israeli Registrar of Companies and at least 30 days have passed from the approval of the shareholders of each of the merging companies.

Finally, in general, Israeli tax law treats stock-for-stock acquisitions less favorably than does U.S. tax law. Israeli tax law provides for tax deferral in specified acquisitions, including transactions where the consideration for the sale of shares is the receipt of shares of the acquiring company. Nevertheless, Israeli tax law may subject a shareholder who exchanges his ordinary shares for shares in a foreign corporation to immediate taxation or to taxation before his investment in the foreign corporation becomes liquid, although in the case of shares of a foreign corporation that are traded on a stock exchange, the tax may be postponed subject to certain conditions.

## **Insurance, Indemnification and Exculpation of Directors and Officers; Limitations on Liability**

### *Insurance of Office Holders*

The Companies Law permits a company, if permitted by its articles of association, to insure an office holder in respect of liabilities incurred by the office holder as a result of:

- breach of the duty of care owed to the company or a third party;
- breach of the fiduciary duty owed to the company, provided that the office holder acted in good faith and had reasonable grounds to believe that his action would not harm the company's interests;
- monetary liability imposed on the office holder in favor of a third party; and
- reasonable litigation expenses, including attorney fees, incurred by the office holder as a result of an administrative enforcement proceeding instituted against him (without limiting from the generality of the foregoing, such expenses will include a payment imposed on the office holder in favor of an injured party as set forth in Section 52(54)(a)(1)(a) of the Israel Securities Law, 1968, as amended (the "Israeli Securities Law"), and expenses that the office holder incurred in connection with a proceeding under Chapters H'3, H'4 or I'1 of the Israeli Securities Law, including reasonable legal expenses, which term includes attorney fees).

### *Indemnification of Office Holders*

Under the Companies Law, a company can, if permitted by its articles of association, indemnify an office holder for any of the following obligations or expenses incurred in connection with his or her acts or omissions as an office holder:

- monetary liability imposed on an office holder in favor of a third party in a judgment, including a settlement or an arbitral award confirmed by a court;
- reasonable legal costs, including attorney's fees, expended by an office holder as a result of:
  - an investigation or proceeding instituted against the office holder by a competent authority, provided that such investigation or proceeding concludes without the filing of an indictment against the office holder, and either:
    - no financial liability was imposed on the office holder in lieu of criminal proceedings, or
    - financial liability was imposed on the office holder in lieu of criminal proceedings but the alleged criminal offense does not require proof of criminal intent; and (y) in connection with an administrative enforcement proceeding or a financial sanction (without derogating from the generality of the foregoing, such expenses will include a payment imposed on the Office Holder in favor of an injured party as set forth in Section 52(54)(a)(1)(a) of the Israeli Securities Law, and expenses that the Office Holder incurred in connection with a proceeding under Chapters H'3, H'4 or I'1 of the Israeli Securities Law, including reasonable legal expenses, which term includes attorney fees); and
- reasonable legal costs, including attorneys' fees, expended by the office holder or for which the office holder is charged by a court:
  - in an action brought against the office holder by or on behalf of the company or a third party, or
  - in a criminal action in which the office holder is found innocent, or
  - in a criminal action in which the office holder is convicted and in which a proof of criminal intent is not required.

- O A company may indemnify an office holder in respect of these liabilities either in advance of an event or following an event. If a company undertakes to indemnify an office holder in advance of an event, the indemnification, other than legal costs, must be limited to foreseeable events in light of the company's actual activities when the company undertook such indemnification, and reasonable amounts or standards, as determined by the board of directors.

#### *Exculpation of Office Holders*

Under the Companies Law, a company may, if permitted by its articles of association, also exculpate an office holder in advance, in whole or in part, from liability for damages sustained by a breach of duty of care to the company, other than in connection with distributions.

#### *Limitations on Exculpation, Insurance and Indemnification*

Under the Companies Law, a company may indemnify or insure an office holder against a breach of duty of loyalty only to the extent that the office holder acted in good faith and had reasonable grounds to assume that the action would not prejudice the company. In addition, a company may not indemnify, insure or exculpate an office holder against a breach of duty of care if committed intentionally or recklessly (excluding mere negligence), or committed with the intent to derive an unlawful personal gain, or for a fine or forfeit levied against the office holder in connection with a criminal offense.

Our articles of association allow us to insure, indemnify and exculpate office holders to the fullest extent permitted by law, provided such insurance or indemnification is approved in accordance with law. Pursuant to the Companies Law, exculpation of, procurement of insurance coverage for, and an undertaking to indemnify or indemnification of, our office holders must be approved by our audit committee and our board of directors and, if the office holder is a director, also by our shareholders.

We have entered into agreements with each of our directors and senior officers to insure, indemnify and exculpate them to the full extent permitted by law against some types of claims, subject to dollar limits and other limitations. These agreements have been ratified by our audit committee, board of directors and shareholders. We have acquired directors' and officers' liability insurance covering our officers and directors and the officers and directors of our subsidiaries against certain claims.

#### *C. MATERIAL CONTRACTS*

Not applicable.

#### *D. EXCHANGE CONTROLS*

Non-residents of Israel who own our ordinary shares may freely convert all amounts received in Israeli currency in respect of such ordinary shares, whether as a dividend, liquidation distribution or as proceeds from the sale of the ordinary shares, into freely-repatriable non-Israeli currencies at the rate of exchange prevailing at the time of conversion (provided in each case that the applicable Israeli income tax, if any, is paid or withheld).

Since January 1, 2003, all exchange control restrictions on transactions in foreign currency in Israel have been eliminated, although there are still reporting requirements for foreign currency transactions. Legislation remains in effect, however, pursuant to which currency controls may be imposed by administrative action at any time.

The State of Israel does not restrict in any way the ownership or voting of our ordinary shares by non-residents of Israel, except with respect to subjects of countries that are in a state of war with Israel.

#### *E. TAXATION*

The following is a summary of the material Israeli and United States federal tax consequences, Israeli foreign exchange regulations and certain Israeli government programs affecting us. To the extent that the discussion is based on new tax or other legislation that has not been subject to judicial or administrative interpretation, there can be no assurance that the views expressed in the discussion will be accepted by the tax or other authorities in question. The discussion is not intended, and should not be construed, as legal or professional tax advice, is not exhaustive of all possible tax considerations and should not be relied upon for tax planning purposes. Potential investors are urged to consult their own tax advisors as to the Israeli tax, United States federal income tax and other tax consequences of the purchase, ownership and disposition of ordinary shares, including, in particular, the effect of any foreign, state or local taxes.

## **Israeli Tax Considerations and Government Programs**

The following is a brief summary of the material Israeli income tax laws applicable to us, and certain Israeli Government programs that benefit us. This section also contains a discussion of material Israeli income tax consequences concerning the ownership and disposition of our ordinary shares. This summary does not discuss all the aspects of Israeli tax law that may be relevant to a particular investor in light of his or her personal investment circumstances or to some types of investors subject to special treatment under Israeli law. Examples of such investors include residents of Israel or traders in securities who are subject to special tax regimes not covered in this discussion. Several parts of this discussion are based on new tax legislation that has not yet been subject to judicial or administrative interpretation.

### ***General Corporate Tax Structure in Israel***

Israeli companies are generally subject to corporate tax on their taxable income. Taxable income of the Company is subject to a corporate tax rate as follows: in 2016 - 25%, in 2017 - 24% and in 2018 - 23%. In December 2016, the Israeli Parliament approved the Economic Efficiency Law (Legislative Amendments for Applying the Economic Policy for the 2017 and 2018 Budget Years), 2016 which reduces the corporate income tax rate to 24% (instead of 25%) effective from January 1, 2017 and to 23% effective from January 1, 2018. The deferred tax balances as of December 31, 2018 have been calculated based on the revised tax rates.

However, the effective tax rate payable by a company that qualifies as an Industrial Company that derives income from an Approved Enterprise, a Beneficiary Enterprise or a Preferred Enterprise (as discussed below) may be considerably less. Capital gains derived by an Israeli company are subject to the prevailing corporate tax rate.

### ***Law for the Encouragement of Capital Investments, 1959***

The Investment Law, provides certain incentives for capital investments in production facilities (or other eligible assets) by “Industrial Enterprises” (as defined under the Investment Law).

The Investment Law was significantly amended effective April 1, 2005, and further amended as of January 1, 2011 (the “2011 Amendment”) and January 1, 2018 (the “2018 Amendment”). Pursuant to the 2005 Amendment, tax benefits granted in accordance with the provisions of the Investment Law prior to its revision by the 2005 Amendment remain in force but any benefits granted subsequently are subject to the provisions of the 2005 Amendment. Similarly, the 2011 Amendment introduced new benefits to replace those granted in accordance with the provisions of the Investment Law in effect prior to the 2011 Amendment. However, companies entitled to benefits under the Investment Law as in effect prior to January 1, 2011 were entitled to choose to continue to enjoy such benefits, provided that certain conditions are met, or elect instead irrevocably to forego such benefits and have the benefits of the 2011 Amendment apply. The 2018 Amendment was designed to accommodate the implementation of the “Nexus Principles” (based on OECD guidelines published as part of the Base Erosion and Profit Shifting (BEPS) project).

### ***Tax Benefits Prior to the 2005 Amendment***

An investment program that is implemented in accordance with the provisions of the Investment Law prior to the 2005 Amendment, referred to as an “Approved Enterprise,” is entitled to certain benefits. A company that wished to receive benefits as an Approved Enterprise must have received approval from the Investment Center of the Israeli Ministry of Economy and Industry (formerly the Ministry of Industry, Trade and Labor), or the Investment Center. Each certificate of approval for an Approved Enterprise relates to a specific investment program in the Approved Enterprise, delineated both by the financial scope of the investment and by the physical characteristics of the facility or the asset.

In general, an Approved Enterprise is entitled to receive a grant from the Government of Israel and certain tax benefits under the “Grant Track” or an alternative package of tax benefits under the “Alternative Track”. The tax benefits from any certificate of approval relate only to taxable profits attributable to the specific Approved Enterprise. Income derived from activity that is not approved by the Investment Center or not integral to the activity of the Approved Enterprise does not enjoy tax benefits.

The tax benefits include a tax exemption for at least the first two years of the benefit period from the first year of taxable income (depending on the geographic location of the Approved Enterprise facility within Israel) and the taxation of income generated from an Approved Enterprise at a reduced corporate tax rate of between 10% to 25% for the remainder of the benefit period depending on the level of foreign investment in the company in each year as detailed below. The benefit period is ordinarily seven years commencing with the year in which the Approved Enterprise first generates taxable income. The benefit period is limited to 12 years from the operational year as determined by the Investment Center or 14 years from the start of the tax year in which approval of the Approved Enterprise is obtained, whichever is earlier.

A company that has an Approved Enterprise program is eligible for further tax benefits if it qualifies as a Foreign Investors Company, or a FIC, which is a company with a level of foreign investment, as defined in the Investment Law, of more than 25%. The level of foreign investment is measured as the percentage of rights in the company (in terms of shares, rights to profits, voting and appointment of directors), and of combined share and loan capital, that are owned, directly or indirectly, by persons who are not residents of Israel. The determination as to whether a company qualifies as a FIC is made on an annual basis. A company that qualifies as a FIC and has an Approved Enterprise program is eligible for an extended ten-year benefit period. As specified above, depending on the geographic location of the Approved Enterprise within Israel, income derived from the Approved Enterprise program may be exempt from tax on its undistributed income for a period of between two to ten years, and will be subject to a reduced tax rate for the remainder of the benefit period. The tax rate for the remainder of the benefits period will be 25%, unless the level of foreign investment exceeds 49%, in which case the tax rate will be 20% if the foreign investment is more than 49% and less than 74%; 15% if more than 74% and less than 90%; and 10% if 90% or more.

If a company elects the Alternative Track and distributes a dividend out of income derived from the Approved Enterprise during the tax exemption period, such dividend will be subject to tax on the gross amount distributed. The tax rate will be the rate which would have been applicable had the company not been tax-exempt under the alternative package of benefits. This rate is generally 10%-25%, depending on the percentage of the company's shares held by foreign shareholders. The dividend recipient is subject to withholdings of tax at the source by the company at the reduced rate applicable to dividends from Approved Enterprises, which is 15% (or such lower rate as may be provided in an applicable tax treaty) if the dividend is distributed during the tax exemption period or within 12 years after the period. This limitation does not apply to an FIC.

The benefits available to an Approved Enterprise are subject to the fulfillment of conditions stipulated in the Investment Law and its regulations and the criteria in the specific certificate of approval. If a company does not meet these conditions, it would be required to refund the amount of tax benefits, as adjusted by the Israeli consumer price index, and interest or other monetary penalty.

Our production facilities in Israel have been granted the status of an Approved Enterprise in accordance with the Investment Law under three separate investment programs. In accordance with the provisions of the Investment Law, we have elected the Alternative Track.

Therefore, our income derived from the Approved Enterprise will be entitled to a tax exemption for a period of two years and to an additional period of five to eight years of reduced tax rates of 10% -25% (based on the percentage of foreign ownership).

#### ***Tax Benefits Subsequent to the 2005 Amendment***

The 2005 Amendment changed certain provisions of the Investment Law. As a result of the 2005 Amendment, a company referred to as a "Beneficiary Enterprise", was no longer obliged to obtain Approved Enterprise status in order to receive the tax benefits previously available under the Alternative Track, and therefore generally there was no need to apply to the Investment Center for this purpose (Approved Enterprise status remains mandatory for companies seeking cash grants). Rather, the Company may claim the tax benefits offered by the Investment Law directly in its tax returns by notifying the Israeli Tax Authority within 12 months of the end of that year, provided that its facilities meet the criteria for tax benefits set out by the 2005 Amendment.

The 2005 Amendment applies to new investment programs and investment programs with an election year commencing after 2004, but does not apply to investment programs approved prior to April 1, 2005. The 2005 Amendment provides that terms and benefits included in any certificate of approval that was granted before the 2005 Amendment became effective (April 1, 2005) will remain subject to the provisions of the Investment Law as in effect on the date of such approval.

Tax benefits are available under the 2005 Amendment to production facilities (or other eligible facilities), which are generally required to derive more than 25% of their business income from export to specific markets with a population of at least 12 million (following an amendment which became effective as of July 2013, the export criteria was increased to markets with population of at least 14 million; such export criteria will further increase in the future by 1.4% per annum) and meet additional criteria stipulate in the amendment (referred to as a "Beneficiary Enterprise"). In order to receive the tax benefits, the 2005 Amendment states that a company must make an investment which meets all of the conditions, including exceeding a minimum investment amount specified in the Investment Law. Such investment may be made over a period of no more than three years ending at the end of the year in which the company requested to have the tax benefits apply to its Beneficiary Enterprise (the "Year of Election").



The extent of the tax benefits available under the 2005 Amendment to qualifying income of a Beneficiary Enterprise depend on, among other things, the geographic location in Israel of the Beneficiary Enterprise. The geographic location of the company at the year of election will also determine the period for which tax benefits are available. Such tax benefits include an exemption from corporate tax on undistributed income for a period of between two to ten years, depending on the geographic location of the Beneficiary Enterprise in Israel, and a reduced corporate tax rate of between 10% to 25% for the remainder of the benefits period, depending on the level of foreign investment in the company in each year if it is a qualified FIC. A company qualifying for tax benefits under the 2005 Amendment which pays a dividend out of income derived by its Beneficiary Enterprise during the tax exemption period will be subject to corporate tax in respect of the gross amount of the dividend at the otherwise applicable rate of 10%-25%. Dividends paid out of income attributed to a Beneficiary Enterprise are generally subject to withholding tax at source at the rate of 15% or such lower rate as may be provided in an applicable tax treaty.

The duration of tax benefits is subject to a limitation of the earlier of 7 to 10 years from the Commencement Year, or 12 years from the first day of the Year of Election.

The benefits available to a Beneficiary Enterprise are subject to the fulfillment of conditions stipulated in the Investment Law and its regulations. If a company does not meet these conditions, it may be required to refund the amount of tax benefits, as adjusted by the Israeli consumer price index, and interest, or other monetary penalties.

We have elected 2008 and 2011 as "Years of Election" under the Investment Law for our Beneficiary Enterprise status.

#### ***Tax Benefits under the 2011 and 2017 Amendments***

The 2011 Amendment canceled the availability of the benefits granted to companies under the Investment Law prior to 2011 and, instead, introduced new benefits for income generated by a "Preferred Company" through its "Preferred Enterprise" (as such terms are defined in the Investment Law) as of January 1, 2011. Similarly to "Beneficiary Company", a Preferred Company is an industrial company owning a Preferred Enterprise which meets certain conditions (including a minimum threshold of 25% export). However, under this new legislation the requirement for a minimum investment in productive assets was cancelled.

Pursuant to the 2011 Amendment, a Preferred Company is entitled to a reduced corporate tax rate of 16% in 2014, unless the Preferred Company is located in a certain development zone, in which case the rate will be 9%. Pursuant to the 2017 Amendment, in 2017 and thereafter, a Preferred Company is entitled to a reduced corporate tax rate of 16% and 7.5%, respectively.

Dividends paid out of income attributed to a Preferred Enterprise during 2014 and thereafter are generally subject to withholding tax at the rate of 20% or such lower rate as may be provided in an applicable tax treaty. However, if such dividends are paid to an Israeli company, no tax is required to be withheld (however, if afterward distributed to individuals or non-Israeli company a withholding of 20% or such lower rate as may be provided in an applicable tax treaty, will apply).

The 2011 Amendment also provided transitional provisions to address companies already enjoying existing tax benefits under the Investment Law. These transitional provisions provide, among other things, that unless an irrevocable request is made to apply the provisions of the Investment Law as amended in 2011 with respect to income to be derived as of January 1, 2011: (i) the terms and benefits included in any certificate of approval that was granted to an Approved Enterprise which chose to receive grants and certain tax benefits under the Grant Track before the 2011 Amendment became effective will remain subject to the provisions of the Investment Law as in effect on the date of such approval, and subject to certain conditions; and (ii) terms and benefits included in any certificate of approval that was granted to an Approved Enterprise under the Alternative Track before the 2011 Amendment became effective will remain subject to the provisions of the Investment Law as in effect on the date of such approval, provided that certain conditions are met; and (iii) a Beneficiary Enterprise can elect to continue to benefit from the benefits provided to it before the 2011 Amendment came into effect, provided that certain conditions are met.

We have reviewed and evaluated the implications and effect of the benefits under the 2011 Amendment, and, while potentially eligible for such benefits, we have not yet chosen to be subject to the tax benefits introduced by the 2011 Amendment.

The 2017 Amendment provides that a preferred enterprise located in development area A will be subject to a tax rate of 7.5% instead of 9% effective from January 1, 2017 and thereafter (the tax rate applicable to preferred enterprises located in other areas remains at 16%).

The 2017 Amendment provides new tax tracks as follows: Preferred Technology Enterprise - an enterprise for which total consolidated revenues of its parent company and all subsidiaries are less than NIS 10 billion for a tax year. A technological preferred enterprise, as defined in the Law, which is located in the center of Israel will be subject to tax at a rate of 12% on profits deriving from intellectual property (in development area A - a tax rate of 7.5%).

The above changes in the tax rates relating to technological enterprises were not taken into account in the computation of deferred taxes as of December 31, 2017 and 2018.

#### ***Tax Benefits and Funding for Research and Development***

Israeli tax law allows, under specific conditions, a tax deduction in the year incurred for expenditures, including capital expenditures, relating to scientific research and development projects, for the year in which they are incurred if:

- The expenditures are approved by the relevant Israeli government ministry, determined by the field of research;
- The research and development is for the promotion or development of the company; and
- The research and development is carried out by or on behalf of the company seeking the deduction.

However, the amount of such deductible expenses shall be reduced by the sum of any funds received through government grants for the finance of such scientific research and development projects. Expenditures not so approved are deductible over a three-year period if the R&D is for the promotion or development of the company.

#### ***Law for the Encouragement of Industry (Taxes), 1969***

The Law for the Encouragement of Industry (Taxes), 1969, generally referred to as the Industry Encouragement Law, provides several tax benefits for "Industrial Companies." We currently qualify as an Industrial Company within the meaning of the Industry Encouragement Law.

The Industry Encouragement Law defines an "Industrial Company" as a company resident in Israel, of which 90% or more of its income in any tax year, other than income from defense loans, is derived from an "Industrial Enterprise" owned by it and located in Israel. An "Industrial Enterprise" is defined as an enterprise whose principal activity in a given tax year is industrial production.

The following corporate tax benefits, among others, are available to Industrial Companies:

- amortization over an eight-year period of the cost of purchased know-how and patents and rights to use a patent and know-how which are used for the development or advancement of the company;
- under limited conditions, an election to file consolidated tax returns with related Israeli Industrial Companies; and
- expenses related to a public offering are deductible in equal amounts over a three-year period.

Eligibility for benefits under the Industry Encouragement Law is not contingent upon the approval of any governmental authority. The Israeli tax authorities may determine that we do not qualify as an Industrial Company, which could entail our loss of the benefits that relate to this status. There can be no assurance that we will continue to qualify as an Industrial Company or that the benefits described above will be available in the future.

#### ***Taxation of our Shareholders***

*Capital Gains Taxes Applicable to Non-Israeli Resident Shareholders.* A non-Israeli resident who derives capital gains from the sale of shares in an Israeli resident company that were purchased after the company was listed for trading on a stock exchange outside of Israel will be exempt from Israeli tax so long as the shares were not held through a permanent establishment that the non-resident maintains in Israel. However, non-Israeli corporations will not be entitled to the foregoing exemption if Israeli residents: (i) have a controlling interest of 25% or more in such non-Israeli corporation or (ii) are the beneficiaries of, or are entitled to, 25% or more of the revenues or profits of such non-Israeli corporation, whether directly or indirectly. Additionally, such exemption is not applicable to a person whose gains from selling or otherwise disposing of the shares are deemed to be business income.

Additionally, a sale of securities by a non-Israeli resident may be exempt from Israeli capital gains tax under the provisions of an applicable tax treaty. For example, under the United States-Israel Tax Treaty, the disposition of shares by a shareholder who is a United States resident (for purposes of the treaty) holding the shares as a capital asset is generally exempt from Israeli capital gains tax unless, among other things, (i) the capital gain arising from the disposition is attributed to business income derived by a permanent establishment of the shareholder in Israel; (ii) the shareholder holds, directly or indirectly, shares representing 10% or more of the voting capital during any part of the 12-month period preceding the disposition; or (iii) such U.S. resident is an individual and was present in Israel for 183 days or more in the aggregate during the relevant taxable year.

In some instances where our shareholders may be liable for Israeli tax on the sale of their ordinary shares, the payment of the consideration may be subject to the withholding of Israeli tax at source.

*Taxation of Non-Israeli Shareholders on Receipt of Dividends.* Non-Israeli residents (whether individuals or corporations) generally will be subject to Israeli income tax on the receipt of dividends paid on our ordinary shares at the rate of 25%, which tax will be withheld at source, unless relief is provided in a treaty between Israel and the shareholder's country of residence (subject to the receipt in advance of a valid certificate from the Israel Tax Authority allowing for a reduced tax rate). With respect to a person who is a "substantial shareholder" at the time of receiving the dividend or on any time during the preceding twelve months, the applicable tax rate is 30%. A "substantial shareholder" is generally a person who alone or together with such person's relative or another person who collaborates with such person on a permanent basis, holds, directly or indirectly, at least 10% of any of the "means of control" of the corporation. "Means of control" generally include the right to vote, receive profits, nominate a director or an executive officer, receive assets upon liquidation, or order someone who holds any of the aforesaid rights how to act, regardless of the source of such right.

However, a distribution of dividends to non-Israeli residents is subject to withholding tax at source at a rate of 15% if the dividend is distributed from income attributed to an Approved Enterprise or a Beneficiary Enterprise, unless a reduced tax rate is provided under an applicable tax treaty. If the dividend is being paid out of certain income attributable to a Preferred Enterprise, the dividend will be subject to tax at the rate of 20%. A different rate may be provided in a treaty between Israel and the shareholder's country of residence, as mentioned below.

In this regard, under the United States-Israel Tax Treaty, the maximum rate of tax withheld at source in Israel on dividends paid to a holder of our ordinary shares who is a United States resident (for purposes of the United States-Israel Tax Treaty) is 25%. Consequently, distributions to U.S. residents of income attributed to an Approved Enterprise or a Beneficiary Enterprise will be subject to withholding tax at a rate of 15% (20% with respect to Preferred Enterprise). However, generally, the maximum rate of withholding tax on dividends, not generated by an Approved Enterprise, a Preferred Enterprise or a Beneficiary Enterprise, that are paid to a United States corporation holding 10% or more of the outstanding voting capital throughout the tax year in which the dividend is distributed as well as during the previous tax year, is 12.5%, provided that not more than 25% of the gross income for such preceding year consists of certain types of dividends and interest. We cannot assure you that we will designate the profits that we may distribute in a way that will reduce shareholders' tax liability.

#### ***Surtax***

Individuals who are subject to tax in Israel (whether or not Israeli residents) have been subject to a surtax since 2016. In 2016 the rate was 2% of annual taxable income in excess of NIS 803,520, including, but not limited to, dividends, interest and capital gain; in 2017 the surtax increased to 3% on annual taxable income in excess of NIS 640,000, and for 2018 and subsequent years the threshold amount is linked to the annual change in the Israeli consumer price index, with no material difference than 2017.

#### ***U.S. Federal Income Tax Considerations***

The following summary describes the material U.S. federal income tax consequences to "U.S. Holders" (as defined below) arising from the acquisition, ownership and disposition of our ordinary shares. This summary is based on the Internal Revenue Code of 1986, as amended, or the "Code," the final, temporary and proposed U.S. Treasury Regulations promulgated thereunder and administrative and judicial interpretations thereof, all as of the date hereof and all of which are subject to change (possibly with retroactive effect) or different interpretations. For purposes of this summary, a "U.S. Holder" will be deemed to refer only to any of the following beneficial owners of our ordinary shares:

- an individual who is either a U.S. citizen or a resident of the United States for U.S. federal income tax purposes;
- a corporation or other entity taxable as a corporation for U.S. federal income tax purposes created or organized in or under the laws of the United States or any political subdivision thereof;
- an estate the income of which is subject to U.S. federal income tax regardless of the source of its income; and
- a trust, if (a) a U.S. court is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have the authority to control all substantial decisions of the trust, or (b) the trust has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person.

This summary does not consider all aspects of U.S. federal income taxation that may be relevant to particular U.S. Holders by reason of their particular circumstances, and does not consider the potential application of the U.S. federal estate, gift or alternative minimum tax, or any aspect of state, local or non-U.S. federal tax laws or U.S. federal tax laws other than U.S. federal income tax laws. In addition, this summary is directed only to U.S. Holders that hold our ordinary shares as “capital assets” within the meaning of Section 1221 of the Code and does not address the considerations that may be applicable to particular classes of U.S. Holders, including U.S. expatriates, banks, financial institutions, regulated investment companies, real estate investment trusts, pension funds, insurance companies, broker-dealers or traders in securities, commodities or currencies, tax-exempt organizations, grantor trusts, partnerships (including entities classified as partnerships for U.S. federal income tax purposes) or other pass-through entities, holders that will hold our ordinary shares in partnerships or other pass-through entities, holders whose functional currency is not the dollar, holders who have elected mark-to-market accounting, holders who acquired our ordinary shares through the exercise of options or otherwise as compensation for the performance of services, holders who hold our ordinary shares as part of a “straddle,” “hedge” or “conversion transaction,” holders selling our ordinary shares short, holders deemed to have sold our ordinary shares in a “constructive sale,” holders required to accelerate the recognition of any item of gross income with respect to our ordinary shares as a result of such income being recognized on an applicable financial statement, holders that are resident or ordinarily resident in or have a permanent establishment in a jurisdiction outside the United States; and holders, directly, indirectly or through attribution, of 10% or more (by vote or value) of our outstanding ordinary shares. If a partnership (or any other entity treated as a partnership for U.S. federal income tax purposes) holds our ordinary shares, the U.S. federal income tax consequences relating to an investment in our ordinary shares will depend in part upon the status of the partner and the activities of the partnership. Such a partner or partnership should consult its tax advisor regarding the U.S. federal income tax consequences of acquiring, owning and disposing of our ordinary shares in its particular circumstances.

**Each U.S. Holder should consult with its own tax advisor as to the particular tax consequences to it of the acquisition, ownership and disposition of our ordinary shares, including the effects of applicable tax treaties, state, local, foreign or other tax laws and possible changes in the tax laws.**

#### **Distributions With Respect to Our Ordinary Shares**

In 2018, we paid cash dividends and expect to do so in the foreseeable future. In the event we do make a distribution with respect to our ordinary shares, subject to the discussion below under “Passive Foreign Investment Company Status,” for U.S. federal income tax purposes, the amount of the distribution will equal the dollar value of the gross amount of cash and/or the fair market value of any property distributed, including the amount of any Israeli taxes withheld on such distribution as described above under “Israeli Tax Considerations – Taxation of Non-Israeli Shareholders on Receipt of Dividends.” Other than distributions in liquidation or in redemption of our ordinary shares that are treated as exchanges, a distribution with respect to our ordinary shares to a U.S. Holder generally will be treated as a dividend to the extent of our current and accumulated earnings and profits, as determined for U.S. federal income tax purposes. The amount of any distribution that exceeds these earnings and profits will be treated first as a non-taxable return of capital, reducing the U.S. Holder’s tax basis in its ordinary shares (but not below zero), and then generally as capital gain from a deemed sale or exchange of such ordinary shares. Corporate U.S. Holders generally will not be allowed a deduction under Section 243 of the Code for dividends received on our ordinary shares and thus will be subject to tax at the rate applicable to their taxable income. Currently, a noncorporate U.S. Holder’s “qualified dividend income” generally is subject to tax at lower long-term capital gains rates. For this purpose, “qualified dividend income” generally includes dividends paid by a foreign corporation if, among other things, the noncorporate U.S. Holder meets certain minimum holding period requirements, is not under an obligation to make related payments with respect to positions in substantially similar or related property, and either (a) the stock of such corporation is readily tradable on an established securities market in the U.S., including the Nasdaq Global Select Market, or (b) such corporation is eligible for the benefits of a comprehensive income tax treaty with the United States that includes an information exchange program and is determined to be satisfactory by the U.S. Secretary of the Treasury. The U.S. Secretary of the Treasury has indicated that the income tax treaty between the United States and Israel is satisfactory for this purpose. Dividends paid by us will not be treated as qualified dividend income, however, if we are treated, for the tax year in which the dividends are paid or the preceding tax year, as a “passive foreign investment company” for U.S. federal income tax purposes. See the discussion below under the heading “Passive Foreign Investment Company Status.” A noncorporate U.S. Holder may be subject to an additional tax based on its “net investment income,” (which generally is computed as gross income from interest, dividends, annuities, royalties and rents and gain from the sale of property (other than property held in the active conduct of a trade or business that does not regularly trade financial instruments or commodities), less the amount of deductions properly allocable to such income or gain. Such tax is equal to 3.8% of the lesser of an individual U.S. Holder’s (i) net investment income or (ii) the excess of such U.S. Holder’s “modified adjusted gross income” (adjusted gross income plus the amount of any foreign earned income excluded from income under Section 911(a)(1) of the Code, net of deductions and exclusions disallowed with respect to such foreign earned income) over a specified threshold amount (\$250,000 in the case of a joint return or surviving spouse, \$125,000 in the case of a married individual filing a separate return and \$200,000 in any other case). In the case of a U.S. Holder which is an estate or trust, the tax is equal to 3.8% of the lesser of (i) undistributed net investment income or (ii) the excess of adjusted gross income (as defined in Section 67(e) of the Code) over the dollar amount at which the highest tax bracket applicable to an estate or trust begins.

**U.S. Holders are urged to consult their own tax advisors regarding the U.S. federal income tax consequences of their receipt of any distributions with respect to our ordinary shares.**

A dividend paid by us in NIS will be included in the income of U.S. Holders at the dollar amount of the dividend, based on the “spot rate” of exchange in effect on the date of receipt or deemed receipt of the dividend, regardless of whether the payment is in fact converted into dollars. U.S. Holders will have a tax basis in the NIS for U.S. federal income tax purposes equal to that dollar value. Any gain or loss upon the subsequent conversion of the NIS into dollars or other disposition of the NIS will constitute foreign currency gain or loss taxable as ordinary income or loss and will be treated as U.S.-source income or loss for U.S. foreign tax credit purposes.

Dividends received with respect to our ordinary shares will constitute “portfolio income” for purposes of the limitation on the deductibility of passive activity losses and, therefore, generally may not be offset by passive activity losses. Dividends received with respect to our ordinary shares also generally will be treated as “investment income” for purposes of the investment interest deduction limitation contained in Section 163(d) of the Code, and generally as foreign-source passive income for U.S. foreign tax credit purposes. Subject to certain limitations, U.S. Holders may elect to claim as a foreign tax credit against their U.S. federal income tax liability for any Israeli income tax withheld from distributions with respect to our ordinary shares which constitute dividends under U.S. income tax law. A U.S. Holder that does not elect to claim a foreign tax credit may instead claim a deduction for Israeli income tax withheld, but only if the U.S. Holder elects to do so with respect to all foreign income taxes in such year. If a refund of the tax withheld is available under the applicable laws of Israel or under the Israel-U.S. income tax treaty, the amount of tax withheld that is refundable will not be eligible for such credit against your U.S. federal income tax liability (and will not be eligible for the deduction against your U.S. federal taxable income). In addition, special rules may apply to the computation of foreign tax credits relating to “qualified dividend income,” as defined above. The calculation of foreign tax credits and, in the case of a U.S. Holder that elects to deduct foreign income taxes, the availability of deductions involve the application of complex rules that depend on a U.S. Holder’s particular circumstances. U.S. Holders are urged to consult their own tax advisors regarding the availability to them of foreign tax credits or deductions in respect of any Israeli tax withheld or paid with respect to any dividends which may be paid with respect to our ordinary shares, including limitations pursuant to the U.S.-Israel income tax treaty.

#### **Disposition of Our Ordinary Shares**

Subject to the discussion below under “Passive Foreign Investment Company Status,” a U.S. Holder’s sale, exchange or other taxable disposition of our ordinary shares generally will result in the recognition by such U.S. Holder of capital gain or loss in an amount equal to the difference between the dollar value of the amount realized and the U.S. Holder’s tax basis in the ordinary shares disposed of (measured in dollars). This gain or loss will be long-term capital gain or loss if such ordinary shares have been held or are deemed to have been held for more than one year at the time of the disposition. Non-corporate U.S. Holders currently are subject to a maximum tax rate of 20% on long-term capital gains, also may be subject to the additional tax on “net investment income” described above in “Distributions With Respect to Our Ordinary Shares.” If the U.S. Holder’s holding period on the date of the taxable disposition is one year or less, such gain or loss will be a short-term capital gain or loss. Short-term capital gains generally are taxed at the same rates applicable to ordinary income. See “Israeli Tax Considerations - Capital Gains Taxes Applicable to Non-Israeli Resident Shareholders” for a discussion of taxation by Israel of capital gains realized on sales of our ordinary shares. Any capital loss realized upon the taxable disposition of our ordinary shares generally will be deductible only against capital gains and not against ordinary income, except that noncorporate U.S. Holders generally may deduct annually from ordinary income up to \$3,000 of net capital losses. In general, any capital gain or loss recognized by a U.S. Holder upon the taxable disposition of our ordinary shares will be treated as U.S.-source income or loss for U.S. foreign tax credit purposes, although the tax treaty between the United States and Israel may permit gain derived from the taxable disposition of ordinary shares by a U.S. Holder to be treated as foreign-source income for U.S. foreign tax credit purposes under certain circumstances.

A U.S. Holder's tax basis in its ordinary shares generally will be equal to the dollar purchase price paid by such U.S. Holder to acquire such ordinary shares. The dollar cost of ordinary shares purchased with foreign currency generally will be equal to the dollar value of the purchase price on the date of purchase or, in the case of ordinary shares that are purchased by a cash basis U.S. Holder (or an accrual basis U.S. Holder that so elects), on the settlement date for the purchase. Such an election by an accrual basis U.S. Holder must be applied consistently from year to year and cannot be revoked without the consent of the U.S. Internal Revenue Service. The holding period of each ordinary share owned by a U.S. Holder will commence on the day following the date of the U.S. Holder's purchase of such ordinary share and will include the day on which the ordinary share is sold by such U.S. Holder.

In the case of a U.S. Holder who uses the cash basis method of accounting and who receives NIS in connection with a taxable disposition of ordinary shares, the amount realized will be based on the "spot rate" of exchange on the settlement date of such taxable disposition. If such U.S. Holder subsequently converts NIS into dollars at a conversion rate other than the spot rate in effect on the settlement date, such U.S. Holder may have a foreign currency exchange gain or loss treated as ordinary income or loss for U.S. federal income tax purposes. A U.S. Holder who uses the accrual method of accounting may elect the same treatment required of cash method taxpayers with respect to a taxable disposition of ordinary shares, provided that the election is applied consistently from year to year. Such election may not be changed without the consent of the U.S. Internal Revenue Service. If an accrual method U.S. Holder does not elect to be treated as a cash method taxpayer (pursuant to U.S. Treasury Regulations applicable to foreign currency transactions), such U.S. Holder may be deemed to have realized an immediate foreign currency gain or loss for U.S. federal income tax purposes in the event of any difference between the dollar value of the NIS on the date of the taxable disposition and the settlement date. Any such currency gain or loss generally would be treated as U.S.-source ordinary income or loss and would be subject to tax in addition to any gain or loss recognized by such U.S. Holder on the taxable disposition of ordinary shares.

#### **Passive Foreign Investment Company Status**

Generally, a foreign corporation is treated as a passive foreign investment company ("PFIC") for U.S. federal income tax purposes for any tax year if, in such tax year, either (i) 75% or more of its gross income (including its pro rata share of the gross income of any company in which it is considered to own 25% or more of the shares by value) is passive in nature (the "Income Test"), or (ii) the average percentage of its assets during such tax year (including its pro rata share of the assets of any company in which it is considered to own 25% or more of the shares by value) which produce, or are held for the production of, passive income (determined by averaging the percentage of the fair market value of its total assets which are passive assets as of the end of each quarter of such year) is 50% or more (the "Asset Test"). Passive income for this purpose generally includes dividends, interest, rents, royalties and gains from securities and commodities transactions. Cash is treated as generating passive income.

There is no definitive method prescribed in the Code, U.S. Treasury Regulations or relevant administrative or judicial interpretations for determining the value of a publicly-traded foreign corporation's assets for purposes of the Asset Test. The legislative history of the U.S. Taxpayer Relief Act of 1997 (the "1997 Act") indicates that for purposes of the Asset Test, "the total value of a publicly-traded foreign corporation's assets generally will be treated as equal to the sum of the aggregate value of its outstanding stock plus its liabilities." It is unclear whether other valuation methods could be employed to determine the value of a publicly-traded foreign corporation's assets for purposes of the Asset Test.

We must make a separate determination each taxable year as to whether we are a PFIC. As a result, our PFIC status may change from year to year. Based on the composition of our gross income and the composition and value of our gross assets for each taxable year from 2004 through 2018, we do not believe that we were a PFIC during any of such tax years. It is likely, however, that under the asset valuation method described in the legislative history of the 1997 Act, we would have been classified as a PFIC for each of 2001, 2002 and 2003 primarily because (a) a significant portion of our assets consisted of the remaining proceeds of our two public offerings of ordinary shares in 1999, and (b) the public market valuation of our ordinary shares during such years was relatively low. There can be no assurance that we will not be deemed a PFIC for the current tax year or any future tax year in which, for example, the value of our assets, as measured by the public market valuation of our ordinary shares, declines in relation to the value of our passive assets (generally, cash, cash equivalents and marketable securities). If we are treated as a PFIC with respect to a U.S. Holder for any tax year, the U.S. Holder will be deemed to own ordinary shares in any of our subsidiaries that are also PFICs.

If we are treated as a PFIC for U.S. federal income tax purposes for any year during a U.S. Holder's holding period of our ordinary shares and the U.S. Holder does not make a QEF Election or a "mark-to-market" election (both as described below), the U.S. Holder would be subject to the following rules:

- (i) the U.S. Holder would be required to (a) report as ordinary income any "excess distributions" (as defined below) allocated to the current tax year and any period prior to the first day of the first tax year in which we were a PFIC, (b) pay tax on amounts allocated to each prior tax year in which we were a PFIC at the highest rate for individuals or corporations as appropriate in effect for such prior year, and (c) pay an interest charge on the tax due for prior tax years in which we were a PFIC at the rate applicable to deficiencies of U.S. federal income tax. "Excess distributions" with respect to any U.S. Holder are amounts received by such U.S. Holder with respect to our ordinary shares in any tax year that exceed 125% of the average distributions received by such U.S. Holder from us during the shorter of (i) the three previous years, or (ii) such U.S. Holder's holding period of our ordinary shares before the then-current tax year. Excess distributions must be allocated ratably to each day that a U.S. Holder has held our ordinary shares.
- (ii) the entire amount of any gain realized by the U.S. Holder upon the sale or other disposition of our ordinary shares also would be treated as an "excess distribution" subject to taxes described above.

If we are a PFIC for any tax year in which a U.S. Holder holds our ordinary shares, we generally will continue to be treated as a PFIC as to such U.S. Holder for all subsequent years during the U.S. Holder's holding period unless we cease to be a PFIC and the U.S. Holder elects to recognize gain based on the unrealized appreciation in such U.S. Holder's ordinary shares through the close of the tax year in which we cease to be a PFIC. Thereafter, so long as we do not again become a PFIC, such U.S. Holder's ordinary shares for which an election was made will not be treated as shares in a PFIC.

A U.S. Holder who beneficially owns shares of a PFIC must file U.S. Internal Revenue Service Form 8621 (Return by a Shareholder of a Passive Foreign Investment Company or Qualified Electing Fund) with the U.S. Internal Revenue Service for each tax year in which such U.S. Holder recognizes gain upon a disposition of our ordinary shares, receives certain distributions from us or makes the QEF Election or mark-to-market election described below.

For any tax year in which we are treated as a PFIC, a U.S. Holder may elect to treat its ordinary shares as an interest in a qualified electing fund (a "QEF Election"), in which case the U.S. Holder would be required to include in income currently its proportionate share of our earnings and profits in years in which we are a PFIC regardless of whether distributions of our earnings and profits are actually made to the U.S. Holder. Any gain subsequently recognized by the U.S. Holder upon the sale or other disposition of its ordinary shares, however, generally would be taxed as capital gain.

A U.S. Holder may make a QEF Election with respect to a PFIC for any tax year. The election is effective for the tax year for which it is made and all subsequent tax years of the U.S. Holder. Procedures exist for both retroactive elections and the filing of protective statements. A QEF Election is made by completing U.S. Internal Revenue Service Form 8621 and attaching it to a timely-filed (including extensions) U.S. federal income tax return for the first tax year to which the election will apply. A U.S. Holder must satisfy additional filing requirements each year the election remains in effect. Upon a U.S. Holder's request, we will provide to such U.S. Holder the information required to make a QEF Election and to make subsequent annual filings.

As an alternative to a QEF Election, a U.S. Holder generally may elect to mark its ordinary shares to market annually, recognizing ordinary income or loss (subject to certain limitations) equal to the difference, as of the close of each tax year, between the fair market value of its ordinary shares and the adjusted tax basis of such shares. A U.S. Holder will be allowed a deduction for the excess, if any, of the adjusted basis of its ordinary shares over their fair market value as of the close of the taxable year. However, deductions will be allowable only to the extent of any net mark-to-market gains on our ordinary shares included in the U.S. Holder's income for prior taxable years. Amounts included in a U.S. Holder's income under a mark-to-market election, as well as gain on the actual sale or other disposition of ordinary shares, will be treated as ordinary income. Ordinary loss treatment will also apply to the deductible portion of any mark-to-market loss on ordinary shares, as well as to any loss realized on the actual sale or disposition of ordinary shares, to the extent the amount of such loss does not exceed the net mark-to-market gains for such ordinary shares previously included in income. A U.S. Holder's basis in our ordinary shares will be adjusted to reflect any such income or loss amounts. If a U.S. Holder makes a mark-to-market election, any distributions we make would generally be subject to the rules discussed above under "—Distributions With Respect to Our Ordinary Shares," except the lower rates applicable to qualified dividend income would not apply. Once made, a mark-to-market election generally continues unless revoked with the consent of the U.S. Internal Revenue Service.

The mark-to-market election is available only for “marketable stock,” which is stock that is regularly traded on a qualified exchange or other market, as defined in applicable U.S. Treasury regulations. Our ordinary shares are traded on Nasdaq and TASE. Because a mark-to-market election cannot be made for equity interests in any lower-tier PFICs we own, a U.S. Holder generally will continue to be subject to the PFIC rules with respect to its indirect interest in any investments held by us that are treated as an equity interest in a PFIC for U.S. federal income tax purposes. Nasdaq is a qualified exchange, and we believe TASE should be treated as a qualified exchange but there can be no assurance that the trading in our ordinary shares will be sufficiently regular to qualify our ordinary shares as marketable stock. U.S. Holders should consult their own tax advisor as to the availability and desirability of a mark-to-market election, as well as the impact of such election on interests in any lower-tier PFICs.

**Due to the complexity of the PFIC rules and the uncertainty of their application in many circumstances, U.S. Holders should consult their own tax advisors with respect to the U.S. federal income tax risks related to owning and disposing of our ordinary shares, the consequence of our status as a PFIC and, if we are treated as a PFIC, compliance with the applicable reporting requirements and the eligibility, manner and advisability of making a QEF Election or a mark-to-market election.**

#### **Information Reporting and Backup Withholding**

Payments in respect of our ordinary shares that are made in the United States or by certain U.S.-related financial intermediaries may be subject to information reporting requirements and U.S. backup withholding tax, currently at a rate of 24%. The information reporting requirements will not apply, however, to payments to certain exempt U.S. Holders, including corporations and tax-exempt organizations. In addition, backup withholding will not apply to a U.S. Holder that furnishes a correct taxpayer identification number on U.S. Internal Revenue Service Form W-9 (or substitute form). The backup withholding tax is not an additional tax. Amounts withheld under the backup withholding tax rules may be credited against a U.S. Holder’s U.S. federal income tax liability, and a U.S. Holder may obtain a refund of any excess amounts withheld under the backup withholding tax rules by timely filing the appropriate claim for refund with the U.S. Internal Revenue Service. U.S. Holders should consult their own tax advisors regarding their qualification for an exemption from the backup withholding tax and the procedures for obtaining such an exemption, if applicable.

#### **Foreign Asset Reporting**

A U.S. Holder with interests in “specified foreign financial assets” (including, among other assets, our ordinary shares, unless such ordinary shares are held on such U.S. Holder’s behalf through a financial institution) may be required to file an information report with the U.S. Internal Revenue Service if the aggregate value of all such assets exceeds \$50,000 on the last day of the taxable year or \$75,000 at any time during the taxable year (or such higher dollar amount as may be prescribed by applicable U.S. Internal Revenue Service guidance). Regulations extend this reporting requirement to certain entities that are treated as formed or availed of to hold direct or indirect interests in specified foreign financial assets based on certain objective criteria. A U.S. Holder that fails to report the required information could be subject to substantial penalties. Each U.S. Holder should consult with its own tax advisor regarding its obligation to file such information reports in light of its own particular circumstances.

**The foregoing discussion of certain U.S. federal income tax considerations is a general summary only and should not be considered as income tax advice or relied upon for tax planning purposes. Accordingly, each U.S. Holder should consult with its own tax advisor regarding U.S. federal, state, local and non-U.S. income and other tax consequences of the acquisition, ownership and disposition of our ordinary shares.**

#### *F. DIVIDENDS AND PAYING AGENTS*

Not applicable.

#### *G. STATEMENT BY EXPERTS*

Not applicable.



H. DOCUMENTS ON DISPLAY

Our website is <http://www.audiocodes.com>. We are subject to the informational requirements of the Securities Exchange Act of 1934, as amended, applicable to foreign private issuers and fulfill the obligations with respect to such requirements by filing reports with the SEC. We make available, free of charge, on our website (under the heading "Investor Relations") our Annual Reports on Form 20-F, Reports on Form 6-K and amendments to those reports as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. No information contained on our website is intended to be included as part of, or incorporated by reference into, this Annual Report on Form 20-F. The SEC maintains an Internet site that contains reports, proxy statements and other information regarding issuers that file electronically with the SEC. The address of the SEC's website is <http://www.sec.gov>.

I. SUBSIDIARY INFORMATION

Not applicable.

**ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

We are exposed to financial market risk associated with changes in foreign currency exchange rates. To mitigate these risks, we use derivative financial instruments. The majority of our revenues and expenses are generated in dollars. A portion of our expenses, however, is denominated in NIS. In order to protect ourselves against the volatility of future cash flows caused by changes in foreign exchange rates, we use currency forward contracts and currency options. We usually hedge the part of our forecasted expenses denominated in NIS. If our currency forward contracts and currency options meet the definition of a hedge, and are so designated, changes in the fair value of the contracts will be offset against changes in the fair value of the hedged assets or liabilities through earnings. For derivative instruments not designated as hedging instruments, the gain or loss is recognized in current earnings during the period of change. Our hedging program reduces, but does not eliminate, the impact of foreign currency rate movements and due to the general economic slowdown along with the devaluation of the dollar, our results of operations may be adversely affected. Without taking into account the mitigating effect of our hedging activity, a 10% decrease in the dollar exchange rates in effect for the year ending December 31, 2018 would cause a decrease in net income of approximately \$5.7 million.

We are subject to market risk from exposure to changes in interest rates relating to borrowings under our loan agreements. The interest rate on these borrowings is based on LIBOR. Based on the scheduled amount of these borrowings to be outstanding in 2019, we estimate that each 100 basis point increase in our borrowing rates would result in additional interest expense to us of approximately \$49,300.

**ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES**

Not applicable.

**PART II**

**ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES**

Not applicable.

**ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS**

Not applicable.

**ITEM 15. CONTROLS AND PROCEDURES**

*Disclosure Controls and Procedures*

Our management, with the participation of our Chief Executive Officer and our Vice President Finance and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in 13a-15(e) under the Securities Exchange Act) as of December 31, 2018. Based on this evaluation, our Chief Executive Officer and Vice President Finance and Chief Financial Officer have concluded that, as of such date, our disclosure controls and procedures were (i) designed to ensure that material information relating to us, including our consolidated subsidiaries, is made known to our management, including our Chief Executive Officer and Vice President Finance and Chief Financial Officer, by others within those entities, as appropriate to allow timely decisions regarding required disclosure, particularly during the period in which this report was being prepared and (ii) effective, in that they provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms.

*Management's Annual Report on Internal Control Over Financial Reporting*

Our management, under the supervision of our Chief Executive Officer and our Vice President Finance and Chief Financial Officer, is responsible for establishing and maintaining adequate internal control over our financial reporting, as defined in Rules 13a-15(f) of the Exchange Act. Our internal control over financial reporting is designed to provide reasonable assurance to our management and board of directors regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Internal control over financial reporting includes policies and procedures that:

- pertain to the maintenance of our records that in reasonable detail accurately and fairly reflect our transactions and asset dispositions;
- provide reasonable assurance that our transactions are recorded as necessary to permit the preparation of our financial statements in accordance with generally accepted accounting principles;
- provide reasonable assurance that our receipts and expenditures are made only in accordance with authorizations of our management and board of directors (as appropriate); and
- provide reasonable assurance regarding the prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. In addition, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under the supervision and with the participation of our management, including our principal executive officer and our principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2018 based on the framework for Internal Control - Integrated Framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (COSO). Based on our assessment under that framework and the criteria established therein, our management concluded that the Company's internal control over financial reporting were effective as of December 31, 2018.

*Attestation Report of the Registered Public Accounting Firm*

This Annual Report includes an attestation report of our registered public accounting firm regarding internal control over financial reporting on page 3 of our audited consolidated financial statements set forth in Item 18 – “Financial Statements,” and is incorporated herein by reference.

*Changes in Internal Control Over Financial Reporting*

There were no changes in our internal controls over financial reporting identified with the evaluation thereof that occurred during the period covered by this Annual Report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting

**ITEM 16. [RESERVED]**

**ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT**

Our Board of Directors has determined that Joseph Tenne is an “audit committee financial expert” as defined in Item 16A of Form 20-F and is “independent” as defined in the applicable regulations.

**ITEM 16B. CODE OF ETHICS**

We have adopted a Code of Conduct and Business Ethics that applies to our chief executive officer, Vice President Finance and Chief Financial Officer and other senior financial officers. We adopted an updated Code of Conduct and Business Ethics in 2018. This Code has been posted on our website, [www.audiocodes.com](http://www.audiocodes.com).

**ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global, has served as our independent public accountants for each of the years in the three-year period ended December 31, 2018. The following table presents the aggregate fees for professional audit services and other services rendered by Kost Forer Gabbay & Kasierer in 2017 and 2018.

	Year Ended December 31, (Amounts in thousands)	
	2017	2018
Audit Fees	\$ 350	\$ 382
Audit Related Fees	52	38
Tax Fees	73	96
Total	<u>\$ 475</u>	<u>\$ 516</u>

Audit Fees consist of fees billed for the annual audit of the company's consolidated financial statements and the statutory financial statements of the company. They also include fees billed for other audit services, which are those services that only the external auditor reasonably can provide, and include services rendered for the integrated audit over internal controls as required under Section 404 of the Sarbanes-Oxley Act applicable in 2017 and 2018, the provision of consents and the review of documents filed with the SEC.

Audit Related Fees consist of fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the company's financial statements and include operational effectiveness of systems.

Tax Fees include fees billed for tax compliance services, including the preparation of tax returns and claims for refund; tax consultations, such as assistance and representation in connection with tax audits and appeals, transfer pricing, and requests for rulings or technical advice from taxing authorities; tax planning services; and expatriate tax compliance, consultation and planning services.

**Audit Committee Pre-approval Policies and Procedures**

The audit committee of AudioCodes' Board of Directors is responsible, among other matters, for the oversight of the external auditor subject to the requirements of Israeli law. The audit committee has adopted a policy regarding pre-approval of audit and permissible non-audit services provided by our independent auditors (the "Policy").

Under the Policy, proposed services either (i) may be pre-approved by the audit committee without consideration of specific case-by-case services as general pre-approval or (ii) require the specific pre-approval of the audit committee as specific pre-approval. The audit committee may delegate either type of pre-approval authority to one or more of its members. The appendices to the Policy set out the audit, audit-related, tax and other services that have received the general pre-approval of the audit committee, including those described in the footnotes to the table, above; these services are subject to annual review by the audit committee. All other audit, audit-related, tax and other services must receive a specific pre-approval from the audit committee.

The audit committee pre-approves fee levels annually for the audit services. Non-audit services are pre-approved as required. The financial expert of the audit committee may approve non-audit services of up to \$25,000 and then request the audit committee to ratify his decision.

During 2018, no services provided to AudioCodes by Kost Forer Gabbay & Kasierer were approved by the audit committee pursuant to the de minimis exception to the pre-approval requirement provided by paragraph (c)(7)(i)(C) of Rule 2-01 of Regulation S-X. We approve all such compensation by the audit committee.

**ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES**

Not applicable.

**ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS**

In 2018, we repurchased an aggregate of 1,795,814 of our ordinary shares for an aggregate consideration of approximately \$14.3 million, as set forth below:

<b>Period</b>	<b>(a) Total Number of Ordinary Shares Purchased (1)</b>	<b>(b) Average Price Paid per Ordinary Share (\$) (2)</b>	<b>(c) Total Number of Ordinary Shares Purchased as Part of Publicly Announced Program</b>	<b>(d) Approximate dollar Value of Shares That May Yet be Purchased under the Program (\$)</b>
January 1 – January 31, 2018	314,379	7.44	314,379	14,402,428
February 1 – February 28, 2018	349,885	7.57	349,885	11,743,955
March 1 – March 31, 2018	296,547	7.45	296,547	9,527,144
April 1 – April 30, 2018	191,846	7.09	191,846	8,160,806
May 1 – May 31, 2018	196,230	7.27	196,230	-
June 1 – June 30, 2018	64,267	7.56	64,267	19,512,038
July 1 – July 31, 2018	132,660	7.95	132,660	18,453,635
August 1 – August 31, 2018 (3)	-	-	-	12,692,636
September 1 – September 30, 2018	-	-	-	12,692,636
October 1 – October 31, 2018	-	-	-	12,692,636
November 1 – November 30, 2018	144,321	10.74	144,321	11,138,483
December 1 – December 31, 2018	105,679	11.31	105,679	9,940,469
<b>Total in 2018</b>	<b>1,795,814</b>	<b>7.94</b>	<b>1,795,814</b>	<b>15,701,468</b>

(1) In each of January, May and October 2016, we received court approval in Israel to repurchase up to an additional \$15 million of our ordinary shares for an aggregate approval of up to an additional \$45 million of our ordinary shares. In May 2017, November 2017, June 2018 and January 2019, the court approved additional share repurchases of \$15 million, \$20 million, \$20 million and \$12 million, respectively. Each of the two most recent approvals allowed us to use the approved amounts for share repurchases or cash dividends. The Israeli court generally limits its approval to six months from the date of application. Consequently, although the program does not have a set end date, it requires renewal each six months by submitting new court application based on the then prevailing facts. No shares were repurchased during 2018 other than through the repurchase program.

(2) Excluding commissions.

(3) In August 2018, we paid a cash dividend in the aggregate amount of \$5.8 million.

**ITEM 16F. CHANGE IN REGISTRANT'S CERTIFIED ACCOUNTANT**

Not applicable.

**ITEM 16G. CORPORATE GOVERNANCE**

As a foreign private issuer whose shares are listed on the Nasdaq Global Select Market, we are permitted to follow certain home country corporate governance practices instead of certain requirements of the Nasdaq Marketplace Rules.

We do not comply with the Nasdaq requirement that we obtain shareholder approval for certain dilutive events, such as for the establishment or amendment of certain share-based compensation plans (including amendments to increase the number of shares available for grant under our existing equity incentive plan). Instead, we follow Israeli law and practice which permits the establishment or amendment of certain share-based compensation plans approved by our board of directors without the need for a shareholder vote, unless such arrangements are for the compensation of directors and the chief executive officer, in which case they also require compensation committee and shareholder approval.

We may elect in the future to follow Israeli practice with regard to, among other things, director nomination, composition of the board of directors and quorum at shareholders' meetings. In addition, we may follow Israeli law, instead of the Nasdaq Marketplace Rules, which require that we obtain shareholder approval for an issuance that will result in a change of control of the company, certain transactions other than a public offering involving issuances of a 20% or more interest in the company and certain acquisitions of the stock or assets of another company.

A foreign private issuer that elects to follow a home country practice instead of Nasdaq requirements must submit to Nasdaq in advance a written statement from an independent counsel in its home country certifying that its practices are not prohibited by the home country's laws. In addition, a foreign private issuer must disclose in its annual reports filed with the SEC or on its website each such requirement that it does not follow and describe the home country practice followed by the issuer instead of any such requirement. Accordingly, our shareholders may not be afforded the same protection as provided under Nasdaq's corporate governance rules.

For a discussion of the requirements of Israeli law with respect to these matters, see Item 6.C - "Directors, Senior Management and Employees - Board Practices," and Item 10.B - "Additional Information - Memorandum and Articles of Association."

**ITEM 16H. MINE SAFETY DISCLOSURE**

Not applicable.

**PART III**

**ITEM 17. FINANCIAL STATEMENTS**

Not applicable.

**ITEM 18. FINANCIAL STATEMENTS**

Reference is made to pages 1 to 49 of the financial statements attached hereto.

**ITEM 19. EXHIBITS**

The following exhibits are filed as part of this Annual Report:

Exhibit No.	Document	Incorporated by Reference		
		Form	File No.	Date Filed
1.1†	Memorandum of Association of Registrant.	F-1	333-10352	5/13/1999
<a href="#">1.2</a>	<a href="#">Articles of Association of Registrant, as amended.</a>	<a href="#">20-F (2011)</a>	<a href="#">000-30070</a>	<a href="#">4/19/2012</a>
4.1	License Agreement between AudioCodes Ltd. and DSP Group, Inc., dated as of May 6, 1999.	F-1	333-10352	5/22/1999
<a href="#">4.2</a>	<a href="#">Employment Agreement between AudioCodes Ltd. and Shabtai Adlersberg.</a>	<a href="#">6-K</a>	<a href="#">000-30070</a>	<a href="#">11/12/2009</a>
<a href="#">4.3</a>	<a href="#">Amendment No. 1 to Employment Agreement between AudioCodes Ltd. and Shabtai Adlersberg.</a>	<a href="#">6-K</a>	<a href="#">000-30070</a>	<a href="#">8/8/2013</a>
<a href="#">4.4†*</a>	<a href="#">English Summary of Terms of Employment of Lior Aldema, as of March 2019.</a>			
<a href="#">4.5†</a>	<a href="#">Building and Tenancy Lease Agreement, dated May 11, 2007, by and between Airport City Ltd. and AudioCodes Ltd.</a>	<a href="#">20-F (2006)</a>	<a href="#">000-30070</a>	<a href="#">6/27/2007</a>
<a href="#">4.6†</a>	<a href="#">English Summary of Addendum, dated September 23, 2013, to Lease and Construction Agreement of November 14, 2000, between Airport City Ltd., as landlord and AudioCodes Ltd., as tenant.</a>	<a href="#">6-K</a>	<a href="#">000-30070</a>	<a href="#">1/6/2014</a>
<a href="#">4.7</a>	<a href="#">AudioCodes Ltd. 2008 Equity Incentive Plan.</a>	<a href="#">20-F (2008)</a>	<a href="#">000-30070</a>	<a href="#">6/30/2009</a>
<a href="#">4.8</a>	<a href="#">Amendment to AudioCodes Ltd. 2008 Equity Incentive Plan.</a>	<a href="#">S-8</a>	<a href="#">333-170676</a>	<a href="#">11/18/2010</a>
<a href="#">4.9</a>	<a href="#">Amendment No. 2 to AudioCodes Ltd. 2008 Equity Incentive Plan.</a>	<a href="#">S-8</a>	<a href="#">333-190437</a>	<a href="#">8/7/2013</a>
<a href="#">4.10</a>	<a href="#">Amendment No. 3 to AudioCodes Ltd. 2008 Equity Incentive Plan.</a>	<a href="#">S-8</a>	<a href="#">333-210438</a>	<a href="#">3/29/2016</a>
<a href="#">4.11</a>	<a href="#">Form of Insurance, Indemnification and Exculpation Agreement between the Registrant and each of its directors and executive officers.</a>	<a href="#">6-K</a>	<a href="#">000-30070</a>	<a href="#">11/10/2011</a>
<a href="#">4.12</a>	<a href="#">Form of AudioCodes Ltd. Executive Compensation Policy for the years 2016-2018.</a>	<a href="#">6-K</a>	<a href="#">000-30070</a>	<a href="#">11/10/2016</a>
<a href="#">4.13</a>	<a href="#">Summary of Request For Receipt Of A Loan In Foreign Currency - The First International Bank Of Israel Ltd.</a>	<a href="#">20-F (2015)</a>	<a href="#">000-30070</a>	<a href="#">3/29/16</a>
<a href="#">8.1*</a>	<a href="#">Subsidiaries of the Registrant.</a>			
<a href="#">12.1*</a>	<a href="#">Certification of Shabtai Adlersberg, President and Chief Executive Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</a>			
<a href="#">12.2*</a>	<a href="#">Certification of Niran Baruch, Vice President Finance and Chief Financial Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</a>			
<a href="#">13.1*</a>	<a href="#">Certification by Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</a>			
<a href="#">13.2*</a>	<a href="#">Certification by Vice President Finance and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</a>			
<a href="#">15.1*</a>	<a href="#">Consent of Kost Forer Gabbay &amp; Kasierer, a member of Ernst &amp; Young Global.</a>			
101.1*	Interactive Data Files (XBRL-Related Documents).			

- † English summary of Hebrew original.  
‡ English translation of Hebrew original.  
\* Filed herewith.

**SIGNATURES**

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this Annual Report on Form 20-F on its behalf.

AUDICODES LTD.

By: /s/ SHABTAI ADLERSBERG  
Shabtai Adlersberg  
President and Chief Executive Officer

Date: March 19, 2019

AUDIOCODES LTD.  
CONSOLIDATED FINANCIAL STATEMENTS  
AS OF DECEMBER 31, 2018  
IN U.S. DOLLARS  
INDEX

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**Kost Forer Gabbay & Kasierer**  
144 Menachem Begin Road, Building A,  
Tel-Aviv 6492102, Israel

Tel: +972-3-6232525  
Fax: +972-3-5622555  
ey.com

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM  
To the Shareholders and Board of Directors of  
AUDIOCODES LTD.**

**Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheets of AudioCodes Ltd. (the "Company") as of December 31, 2018 and 2017 and the related consolidated statements of operations, comprehensive income, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the consolidated financial position of the Company at December 31, 2018 and 2017, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated March 19, 2019, expressed an unqualified opinion thereon.

**Basis for Opinion**

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Kost Forer Gabbay & Kasierer, a Member of Ernst & Young Global

We have served as the Company's auditor since 1997.

Tel-Aviv, Israel  
March 19, 2019

**KOST FORER GABBAY & KASIERER**  
A Member of Ernst & Young Global



**Kost Forer Gabbay & Kasierer**  
 144 Menachem Begin Road, Building A  
 Tel-Aviv 6492102, Israel

Tel: +972-3-6232525  
 Fax: +972-3-5622555  
 ey.com

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM  
 To the Board of Directors and Shareholders of  
 AUDIOCODES LTD.**

**Opinion on Internal Control over Financial Reporting**

We have audited AudioCodes Ltd.'s (the "Company") internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of operations, comprehensive income, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes and our report dated March 19, 2019 expressed an unqualified opinion thereon.

**Basis for Opinion**

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures, as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

**Definition and Limitations of Internal Control over Financial Reporting**

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Kost Forer Gabbay & Kasierer, a Member of Ernst & Young Global

Tel-Aviv, Israel  
 March 19, 2019

## CONSOLIDATED BALANCE SHEETS

U.S. dollars in thousands

	December 31,	
	2017	2018
<b>ASSETS</b>		
<b>CURRENT ASSETS:</b>		
Cash and cash equivalents	\$ 24,235	\$ 31,503
Short-term and restricted bank deposits	2,739	12,381
Short-term marketable securities and accrued interest	7,087	19,602
Trade receivables (net of allowance for doubtful accounts of \$790 at December 31, 2017 and 2018)	22,059	22,279
Other receivables and prepaid expenses	4,693	5,885
Inventories	16,563	22,620
<b>Total current assets</b>	<b>77,376</b>	<b>114,270</b>
<b>LONG-TERM ASSETS:</b>		
Long-term marketable securities	20,475	-
Long-term and restricted bank deposits	4,207	1,894
Deferred income tax assets	6,685	4,350
Severance pay funds	20,138	17,518
<b>Total long-term assets</b>	<b>51,505</b>	<b>23,762</b>
<b>PROPERTY AND EQUIPMENT, NET</b>	<b>3,835</b>	<b>3,865</b>
<b>INTANGIBLE ASSETS, NET</b>	<b>2,000</b>	<b>1,253</b>
<b>GOODWILL</b>	<b>36,222</b>	<b>36,222</b>
<b>Total assets</b>	<b>\$ 170,938</b>	<b>\$ 179,372</b>

The accompanying notes are an integral part of the consolidated financial statements.

## CONSOLIDATED BALANCE SHEETS (Cont.)

U.S. dollars in thousands, except share and per share data

	December 31,	
	2017	2018
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES:</b>		
Current maturities of long-term bank loans	\$ 2,519	\$ 2,487
Trade payables	5,639	6,188
Other payables and accrued expenses	20,786	22,541
Deferred revenues	16,417	23,727
<b>Total current liabilities</b>	<b>45,361</b>	<b>54,943</b>
<b>LONG-TERM LIABILITIES:</b>		
Accrued severance pay	21,228	18,728
Long-term bank loans, net of current maturities	6,237	3,687
Deferred revenues and other liabilities	5,731	7,466
<b>Total long-term liabilities</b>	<b>33,196</b>	<b>29,881</b>
<b>COMMITMENTS AND CONTINGENT LIABILITIES</b>		
<b>SHAREHOLDERS' EQUITY:</b>		
Share capital -		
Ordinary shares of NIS 0.01 par value -		
Authorized: 100,000,000 shares at December 31, 2017 and 2018; Issued: 56,558,952 and 58,002,942 shares at December 31, 2017 and 2018, respectively; Outstanding: 29,443,000 and 29,091,176 shares at December 31, 2017 and 2018, respectively		
	93	92
Additional paid-in capital	248,176	256,980
Treasury stock at cost - 27,115,952 and 28,911,766 shares at December 31, 2017 and 2018, respectively	(115,476)	(129,792)
Accumulated other comprehensive loss	(44)	(276)
Accumulated deficit	(40,368)	(32,456)
<b>Total shareholders' equity</b>	<b>92,381</b>	<b>94,548</b>
<b>Total liabilities and shareholders' equity</b>	<b>\$ 170,938</b>	<b>\$ 179,372</b>

The accompanying notes are an integral part of the consolidated financial statements.

## CONSOLIDATED STATEMENTS OF OPERATIONS

U.S. dollars in thousands, except share and per share data

	Year Ended December 31,		
	2016	2017	2018
<b>Revenues:</b>			
Products	\$ 102,279	\$ 107,482	\$ 119,887
Services	43,292	49,257	56,336
<b>Total revenues</b>	<b>145,571</b>	<b>156,739</b>	<b>176,223</b>
<b>Cost of revenues:</b>			
Products	46,935	47,445	51,878
Services	10,295	11,449	13,739
<b>Total cost of revenues</b>	<b>57,230</b>	<b>58,894</b>	<b>65,617</b>
<b>Gross profit</b>	<b>88,341</b>	<b>97,845</b>	<b>110,606</b>
<b>Operating expenses:</b>			
Research and development, net	29,139	30,348	34,661
Selling and marketing	45,084	48,954	49,335
General and administrative	6,364	8,893	10,251
<b>Total operating expenses</b>	<b>80,587</b>	<b>88,195</b>	<b>94,247</b>
<b>Operating income</b>	<b>7,754</b>	<b>9,650</b>	<b>16,359</b>
<b>Financial income (expenses), net</b>	<b>(160)</b>	<b>(10)</b>	<b>228</b>
<b>Income before taxes on income</b>	<b>7,594</b>	<b>9,640</b>	<b>16,587</b>
<b>Tax benefit (taxes on income)</b>	<b>8,644</b>	<b>(5,610)</b>	<b>(3,094)</b>
<b>Net income</b>	<b>\$ 16,238</b>	<b>\$ 4,030</b>	<b>\$ 13,493</b>
<b>Earnings per share:</b>			
Basic	\$ 0.46	\$ 0.13	\$ 0.47
Diluted	\$ 0.45	\$ 0.13	\$ 0.45
<b>Weighted average number of shares used in computations of earnings per share:</b>			
Basic	35,173,562	31,103,703	28,928,060
Diluted	35,778,854	32,168,362	30,219,806

The accompanying notes are an integral part of the consolidated financial statements.

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

U.S. dollars in thousands

	Year Ended December 31,		
	2016	2017	2018
Net income	\$ 16,238	\$ 4,030	\$ 13,493
Other comprehensive income ("OCI") related to:			
Change in unrealized gains (losses) on marketable securities, net of tax:			
Gain on marketable securities recognized in OCI	376	17	12
Loss on marketable securities recognized in income	(27)	-	-
Other comprehensive income related to unrealized loss on marketable securities available-for-sale	349	17	12
Change in unrealized gains (losses) on cash flow hedges:			
Gain (loss) on derivatives recognized in OCI	608	1,739	(489)
Gain (loss) on derivatives (effective portion) recognized in income	(1,023)	(1,597)	245
Other comprehensive income (loss), related to unrealized gains (losses) on cash flow hedges	(415)	142	(244)
Other comprehensive income (loss)	(66)	159	(232)
Total comprehensive income	\$ 16,172	\$ 4,189	\$ 13,261

The accompanying notes are an integral part of the consolidated financial statements.

## CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

U.S. dollars in thousands, except share and per share data

	Share capital	Additional paid-in capital	Treasury stock	Accumulated other comprehensive loss	Accumulated deficit	Total equity
Balance as of January 1, 2016	\$ 112	\$ 238,525	\$ (60,542)	\$ (137)	\$ (60,505)	\$ 117,453
Purchase of treasury stock	(13)	-	(29,381)	-	-	(29,394)
Issuance of shares upon exercise of options and warrants	2	2,012	-	-	-	2,014
Cumulative effect adjustment resulting from adoption of ASU 2016-09 (Note 2s)	-	131	-	-	(131)	-
Share-based compensation related to options and RSUs granted to employees and non-employees	-	2,414	-	-	-	2,414
Other comprehensive loss	-	-	-	(66)	-	(66)
Net income	-	-	-	-	16,238	16,238
Balance as of December 31, 2016	101	243,082	(89,923)	(203)	(44,398)	108,659
Purchase of treasury stock	(10)	-	(25,553)	-	-	(25,563)
Issuance of shares upon exercise of options and warrants	2	2,787	-	-	-	2,789
Share-based compensation related to options and RSUs granted to employees and non-employees	-	2,307	-	-	-	2,307
Other comprehensive income	-	-	-	159	-	159
Net income	-	-	-	-	4,030	4,030
Balance as of December 31, 2017	93	248,176	(115,476)	(44)	(40,368)	92,381
Cumulative effect adjustment resulting from adoption of ASU 2014-09 (Note 2l)	-	-	-	-	180	180
Purchase of treasury stock	(5)	-	(14,316)	-	-	(14,321)
Issuance of shares upon exercise of options and warrants	4	5,517	-	-	-	5,521
Share-based compensation related to options and RSUs granted to employees and non-employees	-	3,287	-	-	-	3,287
Cash dividend paid (\$0.20 per share)	-	-	-	-	(5,761)	(5,761)
Other comprehensive loss	-	-	-	(232)	-	(232)
Net income	-	-	-	-	13,493	13,493
Balance as of December 31, 2018	\$ 92	\$ 256,980	\$ (129,792)	\$ (276)	\$ (32,456)	\$ 94,548

The accompanying notes are an integral part of the consolidated financial statements.

## CONSOLIDATED STATEMENTS OF CASH FLOWS

U.S. dollars in thousands

	Year Ended December 31,		
	2016	2017	2018
<b>Cash flows from operating activities:</b>			
Net income	\$ 16,238	\$ 4,030	\$ 13,493
Adjustments required to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	2,892	2,438	2,309
Amortization of marketable securities premiums and accretion of discounts, net	1,000	570	353
Realized gain on sale of marketable securities, net	(27)	-	-
Share-based compensation related to options and RSUs granted to employees and non-employees	2,414	2,307	3,287
Decrease (increase) in accrued interest on loans, marketable securities and bank deposits	114	403	(32)
Decrease (increase) in deferred income tax assets, net	(9,475)	4,922	2,251
Decrease (increase) in trade receivables, net	174	3,389	(220)
Decrease (increase) in other receivables and prepaid expenses	732	(1,316)	(1,012)
Decrease (increase) in inventories	445	(230)	(6,309)
Increase (decrease) in trade payables	406	(2,071)	549
Increase (decrease) in other payables and accrued expenses and other liabilities	(596)	1,714	1,437
Increase in deferred revenues	3,195	1,640	9,354
Increase (decrease) in accrued severance pay, net	830	(31)	120
Net cash provided by operating activities	18,342	17,765	25,580
<b>Cash flows from investing activities:</b>			
Purchase of property and equipment	(1,477)	(1,574)	(1,340)
Proceeds from sale of marketable securities	12,429	-	-
Investment in short-term deposits	-	-	(9,636)
Proceeds from short-term deposits	2,260	662	-
Proceeds from redemption of marketable securities upon maturity	3,215	8,116	7,577
Investment in long-term and restricted bank deposits	(2,367)	-	-
Proceeds from long-term and restricted bank deposits	-	1,200	2,307
Net cash provided by (used in) investing activities	14,060	8,404	(1,092)

The accompanying notes are an integral part of the consolidated financial statements.



## CONSOLIDATED STATEMENTS OF CASH FLOWS (Cont.)

U.S. dollars in thousands

	Year Ended December 31,		
	2016	2017	2018
<b>Cash flows from financing activities:</b>			
Purchase of treasury stock	(29,394)	(25,563)	(14,321)
Repayment of long-term bank loans	(5,353)	(3,504)	(2,508)
Proceeds from bank loans	6,000	-	-
Payment related to the acquisition of Mailvision	(233)	-	-
Payment related to the acquisition of ACS	-	-	(151)
Cash dividend paid	-	-	(5,761)
Proceeds from issuance of shares upon exercise of options and warrants	2,014	2,789	5,521
Net cash used in financing activities	(26,966)	(26,278)	(17,220)
Increase (decrease) in cash, cash equivalents and restricted cash	5,436	(109)	7,268
Cash, cash equivalents and restricted cash at the beginning of the year	18,908	24,344	24,235
Cash, cash equivalents and restricted cash at the end of the year	\$ 24,344	\$ 24,235	\$ 31,503
<b>Supplemental disclosure of cash flow activities:</b>			
Cash paid during the year for income taxes	\$ 612	\$ 741	\$ 933
Cash paid during the year for interest	\$ 363	\$ 297	\$ 267

The accompanying notes are an integral part of the consolidated financial statements.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS****U.S. dollars in thousands, except share and per share data**

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**NOTE 1:- GENERAL**

## a. Business overview:

AudioCodes Ltd. (the "Company") and its subsidiaries (together the "Group") design, develop and market products and services for advanced voice networking and media processing solutions for the digital workplace. The Company enables enterprises and service providers to build and operate all-IP voice networks for unified communications, contact centers, and hosted business services. The Company offers a broad range of innovative products, solutions and services that are used by large multi-national enterprises and leading tier-1 operators around the world.

The Company operates through its wholly-owned subsidiaries in the United States, Europe, Asia, Latin America, Australia and Israel.

## b. Acquisition of Active Communications Europe. ("ACS"):

On December 31, 2015 the Company acquired 100% of the outstanding shares of ACS, a Dutch company which provides unified communications solutions. (See also Note 3).

## c. The Group is dependent upon sole source suppliers for certain key components used in its products, including certain digital signal processing chips. Although there are a limited number of manufacturers of these particular components, management believes that other suppliers could provide similar components at comparable terms. A change in suppliers, however, could cause a delay in manufacturing and a possible loss of sales, which could adversely affect the operating results of the Group and its financial position.

## d. The Group had a major customer in the years ended December 31, 2016, 2017 and 2018, which accounted for 16.7%, 17.5% and 17.8%, respectively, of total revenues in those years. In addition, during the years ended December 31, 2016, 2017 and 2018, the Group had an additional major customer which accounted for 11.9%, 12.7% and 11.1%, respectively, of total revenues in those years. No other customer accounted for more than 10% of the Group's revenues in those periods.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES**

The consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America ("U.S. GAAP").

a. Use of estimates:

The preparation of the consolidated financial statements in conformity with U.S. GAAP requires management to make estimates, judgments and assumptions. Management believes that the estimates, judgments and assumptions used are reasonable based upon information available at the time they are made. These estimates, judgments and assumptions can affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the dates of the financial statements, and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

b. Financial statements in U.S. dollars ("dollars"):

A majority of the Group's revenues is generated in dollars. In addition, most of the Group's costs are denominated and determined in dollars and in new Israeli shekels. Management believes that the dollar is the currency in the primary economic environment in which the Group operates. Thus, the functional and reporting currency of the Group is the dollar.

Accordingly, monetary accounts maintained in currencies other than the dollar are remeasured into dollars in accordance with Accounting Standards Codification ("ASC") 830, "Foreign Currency Matters". All transaction gains and losses of the remeasured monetary balance sheet items are reflected in the statements of operations as financial income or expenses, as appropriate.

c. Principles of consolidation:

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. Intercompany transactions and balances, including profits from intercompany sales not yet realized outside the Group, have been eliminated upon consolidation.

d. Cash equivalents:

Cash equivalents represent short-term highly liquid investments that are readily convertible into cash with original maturities of three months or less, at the date acquired.

e. Short-term and restricted bank deposits:

Short-term and restricted bank deposits are deposits with maturities of more than three months, but less than one year. The deposits are mainly in dollars and bear interest at an average rate of 0.95% and 2.37%, for the years ended December 31, 2017 and 2018, respectively. Short-term and restricted deposits are presented at cost. Any accrued interest on these deposits is included in other receivables and prepaid expenses.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**

In connection with long-term bank loans and their related covenants, the Company is required to maintain compensating balances with the banks and to maintain deposits in the same banks that provided the loans to the Company (see Note 10). In addition, the Company maintains restricted deposits in connection with foreign exchange derivatives and an office lease agreement (see also Note 11a). Out of the short-term and restricted bank deposits, a total of \$2,739 and \$7,374, are restricted short-term deposits as of December 31, 2017 and 2018, respectively.

## f. Marketable securities:

The Group accounts for investments in debt securities in accordance with ASC 320, "Investments-Debt and Equity Securities".

Management determines the appropriate classification of its investments in marketable debt securities at the time of purchase and reevaluates such determinations at each balance sheet date.

As of December 31, 2017 and 2018, the Group classified all of its marketable securities as available-for-sale. Available-for-sale securities are carried at fair value, with the unrealized gains and losses, net of tax, reported in "accumulated other comprehensive loss" in shareholders' equity. Realized gains and losses on sale of investments are included in "financial income (expenses), net" and are derived using the specific identification method for determining the cost of securities.

The amortized cost of debt securities is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization together with interest on securities is included in "financial income (expenses), net".

The Group recognizes an impairment charge when a decline in the fair value of its investments in debt securities below the cost basis of such securities is considered to be other-than-temporary. Factors considered in making such a determination include the duration and severity of the impairment, the reason for the decline in value, the potential recovery period and the Group's intent to sell, including whether it is more-likely-than-not that the Group will be required to sell the investment before recovery of cost basis. For securities that are deemed other-than-temporarily impaired, the amount of impairment is recognized in the statements of operations and is limited to the amount related to credit losses, while impairment related to other factors is recognized in other comprehensive loss.

For the years ended December 31, 2016, 2017 and 2018, no other-than-temporary impairment losses have been identified.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)

## g. Inventories:

Inventories are stated at the lower of cost or market value. Cost is determined as follows:

Raw materials - using the "weighted average cost" method;

Finished products - using the "weighted average cost" method with the addition of direct manufacturing costs.

The Group periodically evaluates the quantities on hand relative to current and historical selling prices, historical and projected sales volume and technological obsolescence. Based on these evaluations, inventory write-offs are taken based on slow moving items, technological obsolescence, excess inventories, discontinuation of products lines, and for market prices lower than cost.

## h. Long-term and restricted bank deposits:

Bank deposits and the related accrued interest with maturities of more than one year are included in long-term investments and presented at their cost. Accrued interest that is payable within a one-year period is included in other receivables and prepaid expenses. The deposits are denominated in dollars and bear interest at an average rate of 2.05% and 3.29%, for the years ended December 31, 2017 and 2018, respectively. Out of the total long-term bank deposits, a total of \$4,207 and \$1,800, are restricted long-term deposits as of December 31, 2017 and 2018, respectively.

## i. Property and equipment:

Property and equipment are stated at cost, net of accumulated depreciation. Depreciation is calculated by the straight-line method over the estimated useful lives of the assets, at the following annual rates:

Computers and peripheral equipment	33%
Office furniture and equipment	6% – 20% (mainly 15%)
Leasehold improvements	Over the shorter of the term of the lease or the useful life of the asset

The Group's long-lived assets are reviewed for impairment in accordance with ASC 360-10-35, "Property, Plant and Equipment - Subsequent Measurement", whenever events or changes in circumstances indicate that the carrying amount of an asset (or asset group) may not be recoverable. Recoverability of assets (asset group) to be held and used is measured by a comparison of the carrying amount of an asset (asset group) to the future undiscounted cash flows expected to be generated by the asset if such assets are considered to be impaired. The impairment to be recognized is measured by the amount by which the carrying amount of the assets (asset groups) exceeds the fair value of the assets (asset groups). During the years ended December 31, 2016, 2017 and 2018, no impairment losses had been identified for property and equipment.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**

## j. Intangible assets:

Intangible assets are comprised of acquired technology, customer relations and licenses. Intangible assets that are not considered to have an indefinite useful life are amortized using the straight-line basis over their estimated useful lives, which range from 4.5 to 10 years. Recoverability of these assets is measured by a comparison of the carrying amount of the asset to the undiscounted future cash flows expected to be generated by the assets. If the assets are considered to be impaired, the amount of any impairment is measured as the difference between the carrying value and the fair value of the impaired assets.

During the years ended December 31, 2016, 2017 and 2018, no impairment losses have been identified with respect to intangible assets.

## k. Goodwill:

Goodwill and certain other purchased intangible assets have been recorded as a result of acquisitions. Goodwill represents the excess of the purchase price in a business combination over the fair value of net tangible and intangible assets acquired. Goodwill is not amortized, but rather is subject to an impairment test.

The Group performs an annual impairment test during the fourth quarter of each fiscal year, or more frequently if impairment indicators are present. The Group operates in one operating segment, and this segment comprises its only reporting unit.

ASC 350, "Intangibles – Goodwill and Other", prescribes a two-phase process for impairment testing of goodwill. The first phase screens for impairment, while the second phase (if necessary) measures impairment. Goodwill impairment is deemed to exist if the net book value of a reporting unit exceeds its estimated fair value. In such case, the second phase is then performed, and the Group measures impairment by comparing the carrying amount of the reporting unit's goodwill to the implied fair value of that goodwill. An impairment loss is recognized in an amount equal to the excess. The Group has an option to perform a qualitative assessment to determine whether it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount prior to performing the two-step goodwill impairment test. If this is the case, the two-step goodwill impairment test is required. If it is more-likely-than-not that the fair value of a reporting unit is greater than its carrying amount, the two-step goodwill impairment test is not required.

For each of the three years in the period ended December 31, 2018, the Group performed an annual impairment analysis, using market capitalization, and no impairment losses have been identified.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**

## 1. Revenue recognition:

The Group generates its revenues primarily from the sale of products through a direct sales force and sales representatives. The Group's products are delivered to its customers, which include original equipment manufacturers, network equipment providers, systems integrators and distributors in the telecommunications and networking industries, all of whom are considered end-users.

The Group adopted accounting standards codification 606, "Revenue from Contracts with Customers" ("ASC 606"), effective January 1, 2018. As a result of this adoption, revenues from products and services are recognized in accordance with ASC 606, and the Group revised its accounting policy for revenue recognition as detailed below. The Group recognizes revenue under the core principle that transfer of control to the Group's customers should be depicted in an amount reflecting the consideration the Group expects to receive in revenue. As such, the Group identifies a contract with a customer, identifies the performance obligations in the contract, determines the transaction price, allocates the transaction price to each performance obligation in the contract and recognizes revenues when (or as) the Group satisfies a performance obligation.

Product revenues are recognized at the point of time when control is transferred, the product has been delivered and the benefit of the asset has transferred.

Revenues from support are recognized ratably over the term of the underlying contract term. Renewals of support contracts create new performance obligations that are satisfied over the term with the revenues recognized ratably over the period.

For professional services, the performance obligations are satisfied, and revenues are recognized, when the services are provided or once the service term has expired.

The Group enters into contracts that can include combinations of products and services that are capable of being distinct and accounted for as separate performance obligations. The products are distinct upon delivery as the customer can derive the economic benefit of it without any professional services, updates or technical support. The Group allocates the transaction price to each performance obligation based on its relative standalone selling price out of the total consideration of the contract. For support, the Group determines the standalone selling prices based on the price at which the Group separately sells a renewal contract on a stand-alone basis. For professional services, the Group determines the standalone selling prices based on the price at which the Group separately sells those services on a stand-alone basis.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**

The Group's products contain a significant element relating to its proprietary technology and its solutions offer substantially different features and functionality. As a result, the comparable pricing of products with similar functionality typically cannot be obtained. Additionally, as the Group is unable to reliably determine the selling prices of comparable products sold by competitors and generally does not sell the products separately on a stand-alone basis, the stand-alone selling prices are not directly observable. Therefore, the Group makes estimates based on reasonably available information. The estimated selling price is established considering multiple factors including, but not limited to, pricing practices in different geographical areas and through different sales channels, gross margin objectives, internal costs, the pricing strategies of competitors and industry technology lifecycles.

The Group grants to certain customers a right of return or the ability to exchange a specific percentage of the total price paid for products they have purchased over a limited period for other products. The Group maintains a provision for product returns and exchanges and other incentives based on its experience with historical sales returns, analysis of credit memo data and other known factors, in accordance with ASC 606. This provision was deducted from revenues and amounted to \$1,926 and \$2,272, as of December 31, 2017 and 2018, respectively. Following the adoption of ASC 606, As of December 31, 2018, this provision was recorded as part of other payables and accrued expenses.

Deferred revenues include amounts invoiced to customers for which revenue has not yet been recognized. Deferred revenues are recognized as (or when) the Group performs the performance obligations under the contract.

The Group pays sales commissions to sales and marketing personnel based on their attainment of certain predetermined sales goals. Some sales commissions for support earned by its employees are capitalized and amortized on a straight line basis over the related contractual support period. Amortization expenses related to these costs are included in sales and marketing expenses in the consolidated statements of operations.

As of December 31, 2018, following the adoption of ASC 606, the Group has included an asset of costs to obtain a contract in its consolidated balance sheet in the amount of \$420, as part of other receivables and prepaid expenses.. In addition, the Group's consolidated statement of operations for the year ended December 31, 2018 included a reduction of expenses in the amount of \$240, net, compared to the accounting treatment under ASC 605.



**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**

## m. Warranty costs:

The Group usually provides an assurance-type warranty for a period of 12 months at no extra charge. The Group estimates the costs that may be incurred under its basic limited warranty and records a liability in the amount of such costs at the time product revenue is recognized. Factors that affect the Group's warranty liability include the number of installed units, historical and anticipated rates of warranty claims, and cost per claim. The Group periodically assesses the adequacy of its recorded warranty liability and adjusts the amount as necessary. As of December 31, 2017 and 2018, the provision for warranty amounted to \$339 and \$323, respectively.

## n. Research and development costs:

ASC 985-20, "Costs of Software to Be Sold, Leased, or Marketed", requires capitalization of certain software development costs subsequent to the establishment of technological feasibility.

Based on the Company's product development process, technological feasibility is established upon the completion of a working model. The Company does not incur material costs between the completion of a working model and the point at which the products are ready for general release. Therefore, research and development costs are charged to the consolidated statement of operations, as incurred.

Participation grants from the Israel National Authority for Technology and Innovation (formerly known as the Office of the Chief Scientist of the Israeli Ministry of Economy and Industry) ("IIA") for research and development activity are recognized at the time the Company is entitled to such grants on the basis of the costs incurred and included as a deduction of research and development costs. Research and development grants recognized during the years ended December 31, 2016, 2017 and 2018 were \$7,335, \$8,290 and \$5,734, respectively.

## o. Income taxes:

The Group accounts for income taxes in accordance with ASC 740, "Income Taxes" ("ASC 740"). ASC 740 prescribes the use of the liability method whereby deferred tax asset and liability account balances are determined based on differences between the financial reporting and tax bases of assets and liabilities and for carry forward tax losses. Deferred taxes are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The Group records a valuation allowance, if necessary, to reduce deferred tax assets to their estimated realizable value if it is more-likely-than-not that some portion of or the entire amount of the deferred tax asset will not be realized.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)

In addition, ASC 740 prescribes a recognition threshold and measurement attribute for financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The first step is to evaluate the tax position taken or expected to be taken in a tax return. This is done by determining if the weight of available evidence indicates that it is more-likely-than-not that, on an evaluation of the technical merits, the tax position will be sustained on audit, including resolution of any related appeals or litigation processes. The second step is to measure the tax benefit as the largest amount that is more than 50% likely to be realized upon ultimate settlement.

The Group accounts for deferred income taxes in accordance with Accounting Standards Update ("ASU") 2015-17, "Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes" which require that all deferred tax liabilities and assets be classified as noncurrent in the consolidated balance sheet.

Interest and penalties assessed by taxing authorities on an underpayment of income taxes are included as a component of income tax expense in the consolidated statements of operations.

## p. Accumulated other comprehensive income (loss) ("AOCI"):

The Company accounts for comprehensive income (loss) in accordance with ASC 220, "Comprehensive Income", which establishes standards for the reporting and presentation of comprehensive income (loss) and its components in a full set of general purpose financial statements. Comprehensive income (loss) generally represents all changes in shareholders' equity during the period except those resulting from investments by, or distributions to, shareholders.

The components of AOCI were as follows:

	<b>Unrealized gains (losses) on available- for-sale marketable securities</b>	<b>Unrealized gains (losses) on cash flow hedges</b>	<b>Total</b>
Balance as of January 1, 2018	\$ (44)	\$ -	\$ (44)
Other comprehensive income (loss) before reclassifications	12	(489)	(477)
Amounts reclassified from AOCI	-	245	245
Other comprehensive income (loss)	<u>12</u>	<u>(244)</u>	<u>(232)</u>
Balance as of December 31, 2018	<u>\$ (32)</u>	<u>\$ (244)</u>	<u>\$ (276)</u>

The effects on net income of amounts reclassified from AOCI in the year ended December 31, 2018 derive from realized gains on cash flow hedges recorded in operating expenses and from realized gains on available-for-sale marketable securities recorded in financial income (expenses), net.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**

## q. Concentrations of credit risk:

Financial instruments that potentially subject the Group to concentrations of credit risk consist principally of cash and cash equivalents, bank deposits, trade receivables, marketable securities and foreign currency derivative contracts.

The majority of the Group's cash and cash equivalents, bank deposits and foreign currency derivative contracts are invested in dollar instruments with major banks in Israel and the United States. Such investments in the United States may be in excess of insured limits and are not insured in other jurisdictions. Management believes that the financial institutions that hold the Group's investments are corporations with high credit standing.

Accordingly, management believes that low credit risk exists with respect to these financial investments.

Marketable securities include investments in dollar-linked corporate bonds. Marketable securities consist of highly liquid debt instruments with high credit standing. The Company's investment policy, approved by the Board of Directors, limits the amount the Group may invest in any one type of investment or issuer, thereby reducing credit risk concentrations. Management believes that the portfolio is well diversified and, accordingly, minimal credit risk exists with respect to these marketable debt securities.

The trade receivables of the Group are derived from sales to customers located primarily in the Americas, the Far East, Israel and Europe. Under certain circumstances, the Group may require letters of credit, other collateral, additional guarantees or advance payments.

Regarding certain credit balances, the Group is covered by foreign trade risk insurance. The Group performs ongoing credit evaluations of its customers and establishes an allowance for doubtful accounts based upon a specific review.

## r. Earnings per share:

Basic earnings per share are computed based on the weighted average number of ordinary shares outstanding during each year. Diluted earnings per share are computed based on the weighted average number of ordinary shares outstanding during each year, plus potential dilutive ordinary shares considered outstanding during the year, in accordance with ASC 260, "Earnings per Share".

Certain outstanding options, restricted share units ("RSUs") and warrants have been excluded from the calculation of the diluted earnings per share since such securities are anti-dilutive for all years presented. The total weighted average number of shares related to the outstanding options, RSUs and warrants that have been excluded from the calculation of diluted earnings per share was 1,927,281, 317,186 and 158,823 for the years ended December 31, 2016, 2017 and 2018, respectively.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**

## s. Accounting for share-based compensation:

The Company accounts for share-based compensation in accordance with ASC 718, "Compensation-Stock Compensation" ("ASC 718"). ASC 718 requires companies to estimate the fair value of share-based payment awards on the date of grant using an option-pricing model. The value of the portion of the award that is ultimately expected to vest is recognized as an expense over the requisite service periods in the Company's consolidated statement of operations.

The Company recognizes compensation expenses for the value of its awards based on the accelerated method over the requisite service period of each of the awards. Prior to January 1, 2016, share-based compensation expense was recorded net of estimated forfeitures in the Company's consolidated statements of operations and, accordingly, was recorded for only those share-based awards that the Company expected to vest. Effective as of January 1, 2016, the Company adopted a change in accounting policy in accordance with ASU 2016-09, "Compensation Stock Compensation (Topic 718)" ("ASU 2016-09") to account for forfeitures as they occur.

The Company applies ASC 718 and ASC 505-50, "Equity-Based Payments to Non-Employees" ("ASC 505-50") with respect to options and warrants issued to non-employees. Accordingly, the Company uses option valuation models to measure the fair value of the options and warrants at the measurement date as defined in ASC 505-50.

The weighted-average estimated fair value of employee stock options granted during the years ended December 31, 2016, 2017 and 2018, was \$2.01, \$3.05 and \$3.02 per share, respectively, using the Black-Scholes option pricing model. Fair values were estimated using the following weighted-average assumptions (annualized percentages):

	Year Ended December 31,		
	2016	2017	2018
Dividend yield	0%	0%	0%-2.66%
Expected volatility	47.64%-52.95%	41.78%-47.25%	37.74%-41.72%
Risk-free interest	1.11%-1.86%	1.81%-2.14%	2.40%-3.06%
Expected life	4.76-5.30 years	4.77-5.28 years	4.78-5.27 years

The Company used its historical volatility in accordance with ASC 718. The computation of volatility uses historical volatility derived from the Company's exchange traded shares. The expected term of options granted is estimated based on historical experience and represents the period of time that options granted are expected to be outstanding. The risk free interest rate assumption is the implied yield currently available on United States treasury zero-coupon issues with a remaining term equal to the expected life of the Company's options. The dividend yield assumption is based on the Company's historical experience and expectation of future dividend payouts and may be subject to substantial change in the future. The Company paid its first cash dividend during the third quarter of 2018 and currently expects to pay cash dividends in the future, although there can be no assurance that it will do so.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)

The total share-based compensation expenses relating to all of the Company's share-based awards recognized for the years ended December 31, 2016, 2017 and 2018 were included in items of the consolidated statements of operations, as follows:

	Year Ended December 31,		
	2016	2017	2018
Cost of revenues	\$ 118	\$ 84	\$ 186
Research and development expenses, net	459	383	651
Selling and marketing expenses	1,101	1,024	1,238
General and administrative expenses	736	816	1,212
Total share-based compensation expenses	<u>\$ 2,414</u>	<u>\$ 2,307</u>	<u>\$ 3,287</u>

## t. Treasury stock:

The Company has repurchased its ordinary shares from time to time in the open market, as well as pursuant to a self-tender offer in Israel and in the U.S. in the year ended December 31, 2016, and holds such repurchased shares as treasury stock. The Company presents the cost to repurchase treasury stock as a reduction of shareholders' equity. See also Note 12a.

## u. Severance pay:

The liability for severance pay for Israeli employees is calculated pursuant to Israel's Severance Pay Law, 1963 (the "Severance Pay Law"), based on the most recent salary of the employees multiplied by the number of years of employment as of the balance sheet date for all employees in Israel. Employees who have been employed for more than a one-year period are entitled to one month's salary for each year of employment or a portion thereof. The Group's liability for all of its Israeli employees is fully provided for by monthly deposits with severance pay funds, pension funds, insurance policies and by an accrual. The value of these deposits is recorded as an asset in the Company's consolidated balance sheet.

The deposited funds include profits accumulated up to the consolidated balance sheets date. The deposited funds may be withdrawn only upon the fulfillment of the obligation pursuant to the Severance Pay Law or labor agreements.

Since March 2011, the Group's agreements with new Israeli employees are under Section 14 of the Severance Pay Law. The Group's contributions for severance pay have replaced its severance pay obligation. Upon contribution of the full amount of the employee's monthly salary for each year of service, no additional calculations are conducted between the parties regarding the matter of severance pay and no additional payments are made by the Group to the employee upon termination. The Group is legally released from the obligations to employees once the deposit amounts have been paid, and therefore the severance pay liability is not reflected in the balance sheet.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**

Severance pay expenses for the years ended December 31, 2016, 2017 and 2018, amounted to \$3,217, \$2,631 and \$ 2,680, respectively.

## v. Employee benefit plan:

The Group has 401(k) defined contribution plans covering employees in the U.S. All eligible employees may elect to contribute a portion of their annual compensation to the plan through salary deferrals, subject to the IRS limit of \$18 during the years ended December 31, 2017 and 2018, plus a catch-up contribution of \$6 for participants age 50 or over. The Group matches 50% of employees' contributions, up to a maximum of 6% of the employees' annual pay. In the years ended December 31, 2016, 2017 and 2018, the Group matched contributions in the amount of \$286, \$287 and \$308, respectively.

## w. Advertising expenses:

Advertising expenses are charged to the statements of operations as incurred. Advertising expenses for the years ended December 31, 2016, 2017 and 2018 amounted to \$687, \$442 and \$627, respectively.

## x. Fair value of financial instruments:

The estimated fair value of financial instruments has been determined by the Group using available market information and valuation methodologies. Considerable judgment is required in estimating fair values. Accordingly, the estimates may not be indicative of the amounts the Group could realize in a current market exchange.

The following methods and assumptions were used by the Group in estimating its fair value disclosures for financial instruments:

The carrying amounts of cash and cash equivalents, short-term and restricted bank deposits, trade receivables, trade payables, other receivables and prepaid expenses and other payables and accrued expenses approximate their fair value due to the short-term maturity of such instruments. The fair value of long-term bank loans also approximates their carrying value, since they bear interest at rates close to the prevailing market rates.

The fair value of foreign currency contracts is estimated by obtaining current quotes from banks and market observable data of similar instruments.

The fair value of marketable securities is estimated by obtaining the fair value of the marketable securities from the bank, which is based on current quotes and market value provided by external service providers.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)

Fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or a liability. As a basis for considering such assumptions, ASC 820, "Fair Value Measurements and Disclosures" ("ASC 820") establishes a three-tier value hierarchy, which prioritizes the inputs used in the valuation methodologies in measuring fair value:

- Level 1 - Observable inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets
- Level 2 - Observable inputs, other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data
- Level 3 - Unobservable inputs which are supported by little or no market activity and that are significant to the fair value of the assets and liabilities. This includes certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs

The fair value hierarchy also requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. See also Note 8.

## y. Derivatives and hedging:

The Group accounts for derivatives and hedging based on ASC 815, "Derivatives and Hedging".

The Group accounts for its derivative instruments as either assets or liabilities and carries them at fair value. Derivative instruments that are not designated and qualified as hedging instruments must be adjusted to fair value through earnings. The changes in fair value of such instruments are included as gain or loss in "financial income (expenses), net" at each reporting period.

For derivative instruments that hedge the exposure to variability in expected future cash flows that are designated as cash flow hedges, the effective portion of the gain or loss on the derivative instrument is reported as a component of accumulated other comprehensive loss in equity and reclassified into earnings in the same period or periods during which the hedged transaction affects earnings and is classified as payroll and rent expenses. The ineffective portion of the gain or loss on the derivative instrument is recognized in current earnings and included in "financial income (expenses), net". To receive hedge accounting treatment, cash flow hedges must be highly effective in offsetting changes to expected future cash flows on hedged transactions.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**

## z. Recently issued and adopted accounting pronouncements:

On January 1, 2018, the Group adopted ASC Topic 606-10 using the modified retrospective method and applied the standard to those contracts which were not completed as of January 1, 2018. Results for reporting periods beginning after January 1, 2018 are presented under Topic 606-10, while prior period amounts are not adjusted and continue to be reported in accordance with the previous accounting under Topic 605. The Group recognized the cumulative effect of initially adopting Topic 606-10 as an adjustment to the opening balance of accumulated deficit as of January 1, 2018. The Group has identified and implemented changes to its accounting processes and controls to support the new revenue recognition and disclosure requirements. In connection with adopting Topic 606-10, the Group recorded a cumulative-effect adjustment to accumulated deficit of \$180 on January 1, 2018. This adjustment relates to the deferral of costs to obtain contracts that were previously expensed at the beginning of the contracts period.

In August 2016, the FASB issued ASU 2016-15, "Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments" ("ASU 2016-15"). ASU 2016-15 implements eight changes to how cash receipts and cash payments are presented and classified in the statement of cash flows. ASU 2016-15 is effective for fiscal years beginning after December 15, 2017. The Company adopted ASU 2016-15 effective January 1, 2018 and its adoption did not have a material impact on its consolidated financial statements and related disclosures.

## aa. New accounting pronouncements not yet effective:

In February 2016, the FASB issued ASU 2016-02, "Leases", on the recognition, measurement, presentation and disclosure of leases for both parties to a contract (i.e., lessees and lessors). ASC 842 supersedes the previous leases standard, ASC 840, "Leases". The new standard requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will determine whether lease expense is recognized based on an effective interest method or on a straight line basis over the term of the lease. A lessee is also required to record a right-of-use ("ROU") asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. The Company may elect, as a practical expedient, to account for leases with a term of 12 months or less in a manner similar to the accounting under pre-existing guidance for operating leases. In July 2018, the FASB issued amendments in ASU 2018-11, which provide another transition method in addition to the existing transition method, by allowing entities to initially apply the new lease accounting standard at the adoption date and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption, and to not apply the new guidance in the comparative periods they present in the financial statements. The guidance is effective for the interim and annual periods beginning on or after December 15, 2018, and the Company has elected to apply the standard using a modified retrospective transition method at the beginning of the period of adoption (January 1, 2019) through a cumulative-effect adjustment.



**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**

To adopt this new standard, the Company has implemented changes to its existing systems and processes in conjunction with a review of existing vendor agreements. The Company expects adoption of the standard to have a material impact on its consolidated balance sheets which will result in the recognition of ROU assets and lease liabilities of approximately \$30,000 to \$35,000 on January 1, 2019.

The most significant impact from recognition of ROU assets and lease liabilities relates to the Company's office space. However, the Company does not anticipate that the adoption of this standard will have a material impact on the operating expenses in its consolidated statements of operations, since the expense recognition under this new standard will be similar to current practice. The Company's financial income (expenses), net will be impacted by the revaluation of the lease liabilities in non-dollar denominated currencies.

In June 2016, the FASB issued ASU 2016-13, "Financial Instruments-Credit Losses (Topic 326)" ("ASU 2016-13"). ASU 2016-13 requires that financial assets measured at amortized cost be presented at the net amount expected to be collected. The allowance for credit losses is a valuation account that is deducted from the amortized cost basis. The measurement of expected credit losses is based upon historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. ASU 2016-13 will become effective for annual and interim periods beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted as of the fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The Company is currently evaluating the impact of ASU 2016-13 on its consolidated financial statements and related disclosures.

In January 2017, the FASB issued ASU 2017-04, "Intangibles – Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment" ("ASU 2017-04"). ASU 2017-04 eliminates the requirement to measure the implied fair value of goodwill by assigning the fair value of a reporting unit to all assets and liabilities within that unit (the "Step 2 test") from the goodwill impairment test. Instead, if the carrying amount of a reporting unit exceeds its fair value, an impairment loss is recognized in an amount equal to that excess, limited by the amount of goodwill in that reporting unit.

ASU 2017-04 will become effective for the Company beginning January 1, 2020 and must be applied to any annual or interim goodwill impairment assessments after that date. The Company is currently evaluating the effect of ASU 2017-04 on its consolidated financial statements and related disclosures.

In August 2017, the FASB issued ASU 2017-12, "Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities" ("ASU 2017-12"). The objectives of ASU 2017-12 are to improve the financial reporting of hedging relationships to better portray the economic results of an entity's risk management activities in its financial statements and to make certain targeted improvements to simplify the application of the hedge accounting guidance in current GAAP. ASU 2017-12 is effective for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years. The Company is currently evaluating the effect of the adoption of ASU 2017-12 on its consolidated financial statements and related disclosures.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES (Cont.)**

In June 2018, the FASB issued ASU 2018-07, "Compensation – Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting" (ASU 2018-07). ASU 2018-07 was issued to simplify several aspects of the accounting for nonemployee share-based payment transactions resulting from expanding the scope of Topic 718, "Compensation – Stock Compensation", to include share-based payment transactions for acquiring goods and services from nonemployees. The amendments specify that Topic 718 applies to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in a grantor's own operations by issuing share-based payment awards. The Company is currently evaluating the effect of the adoption of ASU 2018-07 on its consolidated financial statements and related disclosures and does not expect it to have a material impact.

**NOTE 3:- ACQUISITION OF ACS**

On December 31, 2015 (the "Closing Date"), the Company entered into a share purchase agreement, according to which the Company acquired 100% of the outstanding shares of ACS, a Dutch company which provides unified communications solutions. Following the transaction, ACS became a wholly-owned subsidiary of the Company.

As part of the share purchase agreement, the Company agreed to pay an earn-out amount based on the sales of the Company's products related to ACS technology (the "ACS Products") during the years 2016 until 2018. The earn-out amount is calculated based on: (a) 20% of the net revenues from ACS Products (the "ACS Revenues") after the first \$2,000 of ACS Revenues up to an earn-out payment of \$2,000, plus (b) an additional amount of 10% of ACS Revenues after the first \$20,000 of ACS Revenues (the "ACS Earn-Out"). In March 2018, the Company paid \$151 in relation to the ACS Earn-Out.

The acquisition was accounted for using the purchase method. The \$4,109 purchase price for the acquisition was composed of the following amounts: (i) a \$2,000 payment in cash payable on the Closing Date, and (ii) \$2,109, which represented the fair value of the ACS Earn-Out.

In addition, the Company agreed to pay \$500 after 12 months and an additional \$500 after 24 months following the Closing Date upon meeting cumulative conditions (including service conditions) for each of these two periods (the "Deferred Payments"). The Deferred Payments were recorded as payroll expenses during the periods for which the deferred payments remain contingent. The Company recorded \$750 and \$198 expenses related to the Deferred Payments during the years ended December 31, 2016 and 2017, respectively. In February 2017 and in March 2018, the Company paid \$448 and \$500, respectively, in relation to the deferred payments.

The fair value of the ACS Earn-Out was estimated by utilizing the income approach, taking into account the potential cash payments discounted to arrive at a present value amount, based on the Company's expectation as to future revenues of ACS Products in the three subsequent annual periods following the Closing Date. The discount rate was based on the market interest rate and estimated operational capitalization rate.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 3:- ACQUISITION OF ACS (Cont.)

Since the actual and expected revenues from ACS Products in the years ended December 31, 2017 and 2018 were different than the Company's original expectations, the Company recorded income of \$118 and expense of \$(206) in the years ended December 31, 2017 and 2018, respectively, as revaluation of the ACS Earn-Out liability. Such income (expense) is included in general and administrative expenses in the consolidated statements of operations for the years ended December 31, 2017 and 2018.

As of December 31, 2017 and 2018, the estimated fair value of the ACS Earn-Out amounted to \$378 and \$433, respectively.

## NOTE 4:- MARKETABLE SECURITIES AND ACCRUED INTEREST

The following is a summary of available-for-sale marketable securities:

	December 31, 2017			
	Amortized cost	Unrealized gains	Unrealized losses	Fair Value
Corporate bonds:				
Maturing within one year	\$ 6,883	\$ -	\$ (9)	\$ 6,874
Maturing between one to two years	20,510	10	(45)	20,475
Accrued interest	213	-	-	213
	<u>\$ 27,606</u>	<u>\$ 10</u>	<u>\$ (54)</u>	<u>\$ 27,562</u>
	December 31, 2018			
	Amortized cost	Unrealized gains	Unrealized losses	Fair Value
Corporate bonds:				
Maturing within one year	\$ 19,463	\$ -	\$ (32)	\$ 19,431
Accrued interest	171	-	-	171
	<u>\$ 19,634</u>	<u>\$ -</u>	<u>\$ (32)</u>	<u>\$ 19,602</u>

These investments were issued by highly rated corporations. Accordingly, it is expected that the securities would not be settled at a price less than the amortized cost of the Group's investment. As of December 31, 2017 and 2018, the Group did not have any investment in marketable securities that were in an unrealized loss position for a period of twelve months or greater. Since the Group had the ability and intent to hold these investments until an anticipated recovery of fair value, which may be until maturity, the Group did not consider these investments to be other-than-temporarily impaired as of December 31, 2017 and 2018. Unrealized gains (losses) are valued using alternative pricing sources and models utilizing observable market inputs.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 5:- INVENTORIES

	December 31,	
	2017	2018
Raw materials	\$ 5,146	\$ 6,156
Finished products	11,417	16,464
	<u>\$ 16,563</u>	<u>\$ 22,620</u>

In the years ended December 31, 2016, 2017 and 2018, the Group wrote-off inventories in a total amount of \$2,173, \$1,946 and \$ 1,892, respectively.

## NOTE 6:- PROPERTY AND EQUIPMENT, NET

	December 31,	
	2017	2018
Cost:		
Computers and peripheral equipment	\$ 29,806	\$ 31,003
Office furniture and equipment	12,099	12,259
Leasehold improvements	3,553	3,622
	<u>45,458</u>	<u>46,884</u>
Accumulated depreciation:		
Computers and peripheral equipment	28,295	29,312
Office furniture and equipment	10,723	10,951
Leasehold improvements	2,605	2,756
	<u>41,623</u>	<u>43,019</u>
Depreciated cost	<u>\$ 3,835</u>	<u>\$ 3,865</u>

Depreciation expenses amounted to \$1,700, \$1,606 and \$1,562 for the years ended December 31, 2016, 2017 and 2018, respectively.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 7:- INTANGIBLE ASSETS, NET

	Useful life (years)	December 31,	
		2017	2018
a. Impaired cost:			
Acquired technology and license	5 - 10	\$ 19,857	\$ 19,857
Customer relationship	4.5 - 9	4,750	4,750
		<u>24,607</u>	<u>24,607</u>
Accumulated amortization:			
Acquired technology and license		18,008	18,655
Customer relationship		4,599	4,699
		<u>22,607</u>	<u>23,354</u>
Amortized cost		<u>\$ 2,000</u>	<u>\$ 1,253</u>

b. Amortization expenses related to intangible assets amounted to \$1,192, \$832 and \$747 for the years ended December 31, 2016, 2017 and 2018, respectively.

c. Expected amortization expenses are as follows:

**Year ending December 31,**

2019	\$ 352
2020	332
2021	284
2022	272
Thereafter	13
	<u>\$ 1,253</u>

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 8:- FAIR VALUE MEASUREMENTS

In accordance with ASC 820, the Group measures its foreign currency derivative instruments, marketable securities and ACS Earn-Out liability related to the acquisition of ACS, at fair value. Investments in foreign currency derivative instruments and marketable securities are classified within Level 2 of the fair value hierarchy. This is because these assets (liabilities) are valued using alternative pricing sources and models utilizing market observable inputs. The ACS Earn-Out liability is classified within Level 3 of the fair value hierarchy because this liability is based on present value calculations and an external valuation model whose inputs include market interest rates, estimated operational capitalization rates and volatilities. Unobservable inputs used in this model are significant.

The Group's financial assets and liabilities measured at fair value on a recurring basis, consisted of the following types of instruments as of the following dates:

	December 31, 2018		
	Fair value measurements using input type		
	Level 2	Level 3	Total
Marketable securities	\$ 19,602	\$ -	\$ 19,602
Financial liabilities related to foreign currency derivative hedging contracts	(293)	-	(293)
Earn-Out liability related to the acquisition of ACS	-	(433)	(433)
<b>Total financial net assets (liabilities)</b>	<b>\$ 19,309</b>	<b>\$ (433)</b>	<b>\$ 18,876</b>

	December 31, 2017		
	Fair value measurements using input type		
	Level 2	Level 3	Total
Marketable securities	\$ 27,562	\$ -	\$ 27,562
Earn-Out liability related to the acquisition of ACS	-	(378)	(378)
<b>Total financial net assets (liabilities)</b>	<b>\$ 27,562</b>	<b>\$ (378)</b>	<b>\$ 27,184</b>

Fair value measurements using significant unobservable inputs (Level 3):

Balance at January 1, 2018	\$ (378)
Payment of earn out liability	151
Adjustment due to change in the forecast of earn-out consideration	(198)
Adjustment due to time change value	(8)
<b>Balance at December 31, 2018</b>	<b>\$ (433)</b>

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 9:- OTHER PAYABLES AND ACCRUED EXPENSES

	December 31,	
	2017	2018
Payroll and other employee related accruals	\$ 6,474	\$ 6,319
Vacation accrual	3,680	3,404
Royalties provision	1,620	1,770
Government authorities	1,105	1,525
Accrued expenses	7,245	6,525
Provision for return	-	2,272
Others	662	726
	<u>\$ 20,786</u>	<u>\$ 22,541</u>

Following the adoption of ASC 606, the provision for return was recorded as part of other payables and accrued expenses as of December 31, 2018.

## NOTE 10:- LONG-TERM BANK LOANS

In December 2015, the Company entered into loan agreements with an Israeli commercial bank that provided loans in the total principal amounts of \$3,000 and Euro 3,000 (the "2015 Loans"). Certain amounts of the 2015 Loans are required to be maintained as a compensating bank deposit that decreases as the loans are repaid. The loans bear interest at LIBOR plus 1%-2.5% and are repayable in 20 equal quarterly installments through December 2020.

In December 2016, the Company entered into loan agreements with an Israeli commercial bank that provided loans in the total principal amount of \$6,000 (the "2016 Loans"). Certain amounts of the 2016 Loans are required to be maintained as a compensating bank deposit that decreases over the repayment period of the loans. The loans bear interest at LIBOR plus 1.1%-2.5% and are repayable in 20 equal quarterly installments through December 2021.

As of December 31, 2017 and 2018, the banks have a lien on the Company's assets that secures the 2015 Loans and the 2016 Loans. As of December 31, 2017 and 2018, the Company is required to maintain a total of \$4,200 and \$3,000, respectively, in compensating balances with the banks, to secure the 2015 Loans and the 2016 Loans.

As of December 31, 2017 and 2018, the compensating balances are included in short-term and restricted bank deposits in the amount of \$1,200 for both years, and long-term and restricted bank deposits in the amount of \$3,000 and \$1,800, respectively. The amount of the compensating balances that is required decreases as the loans are repaid. The agreements with respect to the 2015 Loans and the 2016 Loans require the Company, among other things, to meet certain financial covenants such as maintaining shareholders' equity, cash balances, and liabilities to banks at specified levels, as well as achieving certain levels of operating income (the "Covenants").

As of December 31, 2017 and 2018, the Company was in compliance with all of the Covenants.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 11:- COMMITMENTS AND CONTINGENT LIABILITIES**

## a. Lease commitments:

The Group's facilities are leased under several lease agreements in Israel, Europe, Asia and the Americas for periods ending in 2024.

In addition, the Company has various operating lease agreements with respect to motor vehicles.

Future minimum rental commitments under non-cancelable operating leases are as follows:

**Year ending December 31,**

2019	\$	6,248
2020		5,749
2021		5,589
2022		5,930
2023 and thereafter		6,410
<b>Total minimum lease payments *)</b>	<b>\$</b>	<b>29,926</b>

\*) Minimum payments have been reduced by minimum sublease rental of \$1,657 due in the future under non-cancelable subleases.

In connection with the Company's facilities lease agreement in Israel, the lessor has a lien of approximately \$5,134 on certain bank deposits as of December 31, 2018. These deposits are included in short-term and restricted bank deposits.

Lease expenses for the years ended December 31, 2016, 2017 and 2018 were approximately \$5,784, \$6,027 and \$6,260, respectively. Lease expenses for the years ended December 31, 2016, 2017 and 2018 include an offset for sublease rental of \$801, \$1,183 and \$1,315, respectively.

## b. Inventory purchase commitments:

The Group is obligated under certain agreements with its suppliers to purchase specified items of excess inventory which are expected to be utilized in 2019. As of December 31, 2018, non-cancelable purchase obligations were approximately \$19,487.

## c. Royalty commitment to the IIA:

Under the research and development agreements of the Company and its Israeli subsidiaries with the IIA and pursuant to applicable laws, the Company and its Israeli subsidiaries are required to pay royalties at the rate of 1.3%-5% on sales to end customers of products developed with funds provided by the IIA, up to an amount equal to 100% of the IIA research and development grants received, linked to the dollar plus interest on the unpaid amount received based on the 12-month LIBOR rate (from the year the grant was approved) applicable to dollar deposits. The Company and its Israeli subsidiaries are obligated to repay the IIA for the grants received only to the extent that there are sales of the funded products.



**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 11:- COMMITMENTS AND CONTINGENT LIABILITIES (Cont.)**

The place of manufacturing of a product that was developed with the support of the IIA, or based on know-how developed with the support of the IIA, shall be in accordance with the Company's declaration in the application for support (including manufacturing abroad). In case the Company or any of its Israeli subsidiaries wish to transfer their manufacturing activities abroad, in addition to their statement in the application for support, they will be required to receive approval from the IIA research committee. The committee is entitled to increase both the royalty liability and the rate of the royalty payments. The increased repayment is calculated according to the percentage of the manufacturing activities that are intended to be carried out outside Israel, and can reach up to 300% of the original amount. When the manufacturing of the product is being done outside of Israel, the Company or any of its Israeli subsidiaries are required to pay an increased royalty rate of an additional 1%.

As of December 31, 2017 and 2018, the Company and its Israeli subsidiaries have a contingent obligation to pay royalties in the amount of approximately \$58,155 and \$66,148, respectively.

As of December 31, 2017 and 2018, the Company and its Israeli subsidiaries have paid or accrued royalties to the IIA in the amount of \$8,350 and \$9,255, respectively, which were recorded in cost of revenues.

On March 27, 2016, the Company received a notification from the IIA that according to an audit conducted on their behalf, the Company owes the IIA an amount of \$999 for underpaid royalties. The Company has reviewed the findings and presented an appeal of the claims under the audit. In November 2018, the Company received final confirmation from IIA that they agree with the appeal and no additional royalties are owed by the Company.

d. Royalty commitments to third parties:

The Group has entered into technology licensing fee agreements with third parties. Under the agreements, the Group agreed to pay the third parties royalties, based on sales of relevant products.

e. Legal proceedings:

1. In February 2018, a former employee filed a claim against the Company's subsidiary in Brazil alleging that he is entitled to approximately \$100 as a result of the termination of his employment by the subsidiary. In June 2018, the matter was settled without admission of liability for approximately \$50. The settlement was submitted to and approved by the court.
2. In March 2019, a complaint for patent infringement was filed against the Company's U.S. subsidiary. The proceedings were served and no monetary demands were made at this stage. At this early stage, the Company cannot predict the outcome of this matter.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 12:- SHAREHOLDERS' EQUITY**

## a. Treasury stock:

During the year ended December 31, 2014, the Company's Board of Directors approved a program to repurchase up to \$3,000 of its ordinary shares (the "share repurchase program") which is the amount that the Company could repurchase according to Israeli law without further approval from an Israeli court. During the four years ended December 31, 2017, the Company received court approvals to purchase up to an additional \$110,000 of its ordinary shares. In addition, in each of June 2018 and January 2019, the Company received court approval to purchase up to an additional \$20,000 and \$12,000, respectively, of its ordinary shares (the "Permitted Amount"). These two court approvals also permit the Company to declare a dividend of any part of the Permitted Amount during the approved validity period. The January 2019 court approval for share repurchases will expire on July 1, 2019.

As of December 31, 2018, pursuant to the share repurchase program, the Company had repurchased a total of 28,911,766 of its ordinary shares at a total cost of \$129,866 (of which 1,795,814 of its ordinary shares were repurchased during the year ended December 31, 2018 for aggregate consideration of \$14,321).

## b. Cash Dividend:

On July 24, 2018, the Company declared a cash dividend of \$0.20 per share. The dividend, in the aggregate amount of \$5,761, was paid on August 20, 2018 to all of the Company's shareholders of record on August 6, 2018.

See also Note 18.

## c. Employee and Non-Employee Share Option Plan:

In 2008, the Company's Board of Directors approved the 2008 Equity Incentive Plan (the "Plan") that became effective in January 2009. Under the Plan, options and RSUs may be granted to employees, officers, non-employee consultants and directors of the Company. As of December 31, 2018, the total number of shares authorized for future grant under the Plan is 466,733.

Share options granted under the Plan are generally exercisable at the fair market value of the ordinary shares at the date of grant and usually expire seven or ten years from the date of grant. The options generally vest over four years from the date of grant. Any options that are forfeited or cancelled before expiration become available for future grants

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 12:- SHAREHOLDERS' EQUITY (Cont.)

The following is a summary of the Company's stock option activity and related information for the year ended December 31, 2018:

	Amount of options	Weighted average exercise price	Weighted average remaining contractual term (in years)	Aggregate intrinsic value
Options outstanding at beginning of year	2,876,642	\$ 4.68	3.7	\$ 7,703
Changes during the year:				
Granted	271,900	\$ 8.40		
Exercised	(1,243,631)	\$ 4.44		
Forfeited	(52,250)	\$ 5.12		
Options outstanding at end of year	<u>1,852,661</u>	<u>\$ 5.38</u>	<u>3.9</u>	<u>\$ 8,354</u>
Options exercisable at end of year	<u>1,078,570</u>	<u>\$ 4.84</u>	<u>2.9</u>	<u>\$ 5,437</u>

The weighted-average grant-date fair value of options granted during the years ended December 31, 2016, 2017 and 2018 was \$2.01, \$3.05 and \$3.02, per option, respectively. The aggregate intrinsic value in the table above represents the total intrinsic value (the difference between the Company's closing share price on the last trading day of the fiscal year and the exercise price, multiplied by the number of in-the-money options) that would have been received by the option holders had all option holders exercised their options on the last trading day of the fiscal year. This amount changes based on the fair market value of the Company's ordinary shares.

Total intrinsic value of options exercised for the years ended December 31, 2016, 2017 and 2018 was \$1,583, \$1,562 and \$6,407, respectively.

The following is a summary of the Company's RSU activity and related information for the year ended December 31, 2018:

	Number of shares	Weighted average grant date fair value
RSUs outstanding at beginning of year	575,397	\$ 5.90
Changes during the year:		
Granted	572,558	\$ 8.38
Vested	(200,359)	\$ 5.55
Forfeited	(17,000)	\$ 7.47
RSUs outstanding at end of year	<u>930,596</u>	<u>\$ 7.47</u>

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 12:- SHAREHOLDERS' EQUITY (Cont.)

The following is a summary of warrants issued to non-employees for the year ended December 31, 2018:

	<u>Number of shares</u>	<u>Weighted average exercise price</u>
Warrants outstanding at beginning and end of year	5,000	\$ 5.00
Warrants exercisable at end of year	5,000	\$ 5.00

The Group recorded immaterial compensation expenses with respect to the grants of these warrants in accordance with ASC 505-50.

As of December 31, 2018, there was \$5,491 of total unrecognized compensation cost related to non-vested share-based compensation arrangements granted under the Plan. That cost is expected to be recognized over a weighted-average period of 1.12 years.

The options for employees and warrants for non-employees outstanding as of December 31, 2018, have been separated into ranges of exercise prices, as follows:

<u>Range of exercise price</u>	<u>Number of options outstanding as of December 31, 2018</u>	<u>Weighted average remaining contractual life (Years)</u>	<u>Weighted average exercise price</u>	<u>Number of options exercisable as of December 31, 2018</u>	<u>Weighted average exercise price of exercisable options</u>
\$ 1.67-3.97	418,417	2.75	\$ 3.43	278,042	\$ 3.26
\$ 4.03-5.80	782,354	3.50	\$ 4.71	545,723	\$ 4.76
\$ 6.25-7.75	512,990	4.50	\$ 6.89	256,695	\$ 6.68
\$ 8.17-10.59	143,900	6.70	\$ 9.32	3,110	\$ 8.92
	<u>1,857,661</u>	3.86	\$ <u>5.38</u>	<u>1,083,570</u>	\$ <u>4.84</u>

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 13:- TAXES ON INCOME**

## a. Israeli taxation:

## 1. Measurement of taxable income in U.S. dollars:

The Company has elected to measure its taxable income and file its tax return under the Israeli Income Tax Regulations (Principles Regarding the Management of Books of Account of Foreign Invested Companies and Certain Partnerships and the Determination of Their Taxable Income), 1986. Accordingly, results for tax purposes are measured in terms of earnings in dollars.

## 2. Tax benefits under the Israeli Law for the Encouragement of Capital Investments, 1959 (the "Investment Law"):

The Company's production facilities in Israel have been granted the status of an "Approved Enterprise" in accordance with the Investment Law under four separate investment programs. According to the provisions of the Investment Law, the Company has been granted the "Alternative Benefit Plan", under which the main benefits are tax exemptions and reduced tax rates.

Therefore, the Company's income derived from the "Approved Enterprise" will be entitled to a tax exemption for a period of two years and to an additional period of five to eight years of reduced tax rates of 10% - 25% (based on the percentage of foreign ownership). The duration of tax benefits of reduced tax rates is subject to a limitation of the earlier of 12 years from commencement of production, or 14 years from the approval date. The Company utilized tax benefits from the first program in 1998 and has not been eligible for benefits since 2007.

As of December 31, 2018, accumulated deficit included approximately \$540 in tax-exempt income earned by the Company's "Approved Enterprise". The Company's Board of Directors has decided not to declare dividends out of such tax-exempt income. Accordingly, no deferred income taxes have been provided on income attributable to the Company's "Approved Enterprise". Tax-exempt income attributable to the "Approved Enterprise" cannot be distributed to shareholders without subjecting the Company to taxes except upon complete liquidation of the Company. If such retained tax-exempt income is distributed in a manner other than upon the complete liquidation of the Company, it would be taxed at the corporate tax rate between 10% and 25%, applicable to such profits as if the Company had not elected the alternative tax benefits and an income tax liability would be incurred by the Company up to a maximum amount of \$180.

The entitlement to the above benefits is conditional upon the Company fulfilling the conditions stipulated by the Investment Law, regulations published thereunder and the certificate of approval for the specific investments in "Approved Enterprises". In the event of failure to comply with these conditions, the benefits may be canceled and the Company may be required to refund the amount of the benefits, in whole or in part, including interest. As of December 31, 2018, management believes that the Company is in compliance with all of the aforementioned conditions.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 13:- TAXES ON INCOME (Cont.)**

Income from sources other than the "Approved Enterprise" during the benefit period will be subject to tax at the regular tax rate prevailing at that time.

As of December 31, 2018, there was no taxable income attributable to the Approved Enterprise.

On April 1, 2005, an amendment to the Investment Law came into effect (the "2005 Amendment") that significantly changed the provisions of the Investment Law. The 2005 Amendment limits the scope of enterprises that may be approved by the Investment Center by setting criteria for the approval of a facility as a "Beneficiary Enterprise" including a provision generally requiring that at least 25% of the Beneficiary Enterprise's income will be derived from export. Additionally, the 2005 Amendment enacted major changes in the manner in which tax benefits are awarded under the Investment Law so that companies no longer require Investment Center approval in order to qualify for tax benefits. However, the Investment Law provides that terms and benefits included in any certificate of approval already granted will remain subject to the provisions of the Investment Law as they were on the date of such approval.

However, the Investment Law provides that terms and benefits included in any certificate of approval already granted will remain subject to the provisions of the Investment Law as they were on the date of such approval. Therefore, the Company's existing "Approved Enterprises" are generally not subject to the provisions of the 2005 Amendment (see below). As a result of the 2005 Amendment, tax-exempt income generated under the provisions of the Investment Law, as amended, will subject the Company to taxes upon distribution or liquidation and the Company may be required to record a deferred tax liability with respect to such tax-exempt income.

In January 2011, another amendment to the Investment Law came into effect ("the 2011 Amendment"). According to the 2011 Amendment, the benefit tracks in the Investment Law were modified and a flat tax rate applies to the Company's entire income subject to this amendment (the "Preferred Income"). Once an election is made, the Company's income will be subject to the amended tax rate of 16% from 2015 and thereafter (or 9% a preferred enterprise located in development area A).

The Company does not currently intend to adopt the 2011 Amendment and intends to continue to comply with the Investment Law as in effect prior to enactment of the 2011 Amendment.

In December 2016, the Economic Efficiency Law (Legislative Amendments for Applying the Economic Policy for the 2016 and 2017 Budget Years), 2016 which includes Amendment 73 to the Investment Law ("Amendment 73") was published. According to Amendment 73, a preferred enterprise located in development area A will be subject to a tax rate of 7.5% instead of 9% effective from January 1, 2016 and thereafter (the tax rate applicable to preferred enterprises located in other areas remains at 16%).

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

U.S. dollars in thousands, except share and per share data

**NOTE 13:- TAXES ON INCOME (Cont.)**

Amendment 73 also prescribes special tax tracks for technological enterprises, which are subject to regulations that were issued by the Minister of Finance in May 2017. The new tax tracks under Amendment 73 are as follows: Technological Preferred Enterprise ("TPE") - an enterprise for which total consolidated revenues of its parent company and all subsidiaries are less than NIS 10 billion. A TPE, as defined in the Investment Law, which is located in the center of Israel, will be subject to tax at a rate of 12% on profits deriving from intellectual property (in development area A - a tax rate of 7.5%).

The Company is still evaluating the potential effect on its financial statements, pending a decision to elect TPE status. Accordingly, the Company did not adjust its deferred tax balances as of December 31, 2018. The Company's position may change in the future.

3. Tax benefits under the law for the Encouragement of Industry (taxes), 1969 (the "Encouragement Law"):

The Encouragement Law provides several tax benefits for industrial companies. An industrial company is defined as a company resident in Israel, at least 90% of the income of which in a given tax year exclusive of income from specified government loans, capital gains, interest and dividends, is derived from an industrial enterprise owned by it. An industrial enterprise is defined as an enterprise whose major activity in a given tax year is industrial production activity.

Management believes that the Company is currently qualified as an "industrial company" under the Encouragement Law and, as such, is entitled to tax benefits, including: (i) deduction of purchase of know-how and patents and/or right to use a patent over an eight-year period; (ii) the right to elect, under specified conditions, to file a consolidated tax return with additional related Israeli industrial companies and an industrial holding company; (iii) accelerated depreciation rates on equipment and buildings; and (iv) expenses related to a public offering on the Tel Aviv Stock Exchange and on recognized stock markets outside of Israel, such as Nasdaq, are deductible in equal amounts over three years.

Eligibility for benefits under the Encouragement Law is not subject to receipt of prior approval from any governmental authority. No assurance can be given that the Israeli Tax Authorities will agree that the Company qualifies, that the Company will continue to qualify as an industrial company or that the benefits described above will be available to the Company in the future.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS****U.S. dollars in thousands, except share and per share data****NOTE 13:- TAXES ON INCOME (Cont.)**

## 4. Tax rates:

Taxable income of the Company is subject to a corporate tax rate as follows: in 2016 - 25%, in 2017 - 24% and in 2018 - 23%.

In December 2016, the Israeli Parliament approved the Economic Efficiency Law (Legislative Amendments for Applying the Economic Policy for the 2017 and 2018 Budget Years), 2016 which reduces the corporate income tax rate to 24% (instead of 25%) effective from January 1, 2017 and to 23% effective from January 1, 2018.

The deferred tax balances as of December 31, 2018 have been calculated based on the revised tax rates.

The effective tax rate payable by a company which is taxed under the Investment Law may be considerably lower (see also a2 above).

## b. U.S. Tax Reform:

In December 2017, the U.S. enacted significant tax reform through the Tax Cut and Jobs Act ("TCJA"). The TCJA enacted significant changes affecting the year ended December 31, 2017, including, but not limited to, (i) reducing the U.S. federal corporate income tax rate to 21%; and (ii) imposing a one-time Transition Tax ("Transition Tax") on certain un-repatriated earnings of foreign subsidiaries of U.S. companies that had not been previously taxed in the U.S.

The TCJA also established new tax provisions affecting 2018, including, but not limited to, (i) creating a new provision designed to tax global intangible low-tax income ("GILTI"); (ii) generally eliminating U.S. federal taxes on dividends from foreign subsidiaries; (3) eliminating the corporate alternative minimum tax ("AMT"); (iv) creating the base erosion anti-abuse tax ("BEAT"); (v) establishing a deduction for foreign derived intangible income ("FDII"); (vi) repealing domestic production activity deduction; and (vii) establishing new limitations on deductible interest expense and certain executive compensation.

ASC 740 requires companies to account for the tax effects of changes in income tax rates and laws in the period in which legislation is enacted (December 22, 2017). ASC 740 does not specifically address accounting and disclosure guidance in connection with the income tax effects of the TCJA.

The deferred tax balances as of December 31, 2017 and 2018 have been calculated based on the revised tax rates.



**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS****U.S. dollars in thousands, except share and per share data****NOTE 13:- TAXES ON INCOME (Cont.)**

As of December 31, 2018, the Group has completed the accounting for all the impacts of the TCJA. During 2018, as part of finalizing the analysis, the Company's U.S. subsidiary recorded adjustments that relate to the Transition Tax and GILTI in total amounts of approximately \$660 and \$520, respectively. However, in the absence of guidance on various uncertainties and ambiguities in the application of certain provisions of the TCJA, the Group will use what it believes are reasonable interpretations and assumptions in applying the TCJA. It is possible that the Internal Revenue Service, as well as state tax authorities, could issue subsequent guidance or take positions on audit that differ from the Group's interpretations and assumptions, which could have a material adverse effect on the Group's cash tax liabilities, results of operations, and financial condition. In addition, the TCJA could be subject to potential amendments and technical corrections, any of which could materially lessen or increase certain adverse impacts of the legislation on the Group's business. The Group will continue to evaluate the effects of the TCJA as federal and state tax authorities issue additional regulations and guidance, and if and when amendments and technical corrections are enacted with respect to the TCJA, they could cause changes to previous estimates and could materially affect the Group's financial positions and results of operations.

c. Net operating loss carry-forward:

As of December 31, 2018, the Company has total available carryforward tax losses of approximately \$4,000 which can be carried forward and offset against taxable income in the future for an indefinite period. As of December 31, 2018, the Company recorded a net deferred tax asset of \$3,342 in respect of such carry-forward tax losses and other temporary differences.

As of December 31, 2018, the Company's Israeli subsidiaries have total available carryforward tax losses of approximately \$69,200. The net operating losses may be claimed and offset against taxable income in the future for an indefinite period.

The Company's U.S. subsidiary has total available carryforward tax losses of approximately \$62,400 to offset against future U.S. federal taxable gains. These carryforward tax losses expire between 2022 and 2032. As of December 31, 2018, the Company's U.S. subsidiary recorded a deferred tax asset of \$1,008 in respect of such carryforward tax losses.

Utilization of U.S. net operating losses may be subject to substantial annual limitations due to the "change in ownership" provisions of the Internal Revenue Code of 1986 and similar state provisions. The annual limitation may result in the expiration of net operating losses before utilization.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 13:- TAXES ON INCOME (Cont.)

d. Income before taxes on income is comprised as follows:

	Year Ended December 31,		
	2016	2017	2018
Domestic	\$ 4,151	\$ 5,948	\$ 10,084
Foreign	3,443	3,692	6,503
	<u>\$ 7,594</u>	<u>\$ 9,640</u>	<u>\$ 16,587</u>

e. Taxes on income are comprised as follows:

	Year Ended December 31,		
	2016	2017	2018
Current taxes	\$ 831	\$ 688	\$ 843
Deferred tax expense (income)	(9,475)	4,922	2,251
	<u>\$ (8,644)</u>	<u>\$ 5,610</u>	<u>\$ 3,094</u>
Domestic	\$ (6,576)	\$ 2,979	\$ 1,610
Foreign	(2,068)	2,631	1,484
	<u>\$ (8,644)</u>	<u>\$ 5,610</u>	<u>\$ 3,094</u>

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 13:- TAXES ON INCOME (Cont.)

## f. Deferred income taxes:

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Group's deferred tax liabilities and assets are as follows:

	December 31,	
	2017	2018
Deferred tax assets:		
Net operating loss carryforward	\$ 34,708	\$ 30,330
Reserves and allowances	5,722	5,613
Net deferred tax assets before valuation allowance	40,430	35,943
Less - valuation allowance	(33,744)	(31,593)
Deferred tax asset	\$ 6,686	\$ 4,350
Deferred tax liability	\$ (389)	\$ (305)
Deferred tax asset:		
Domestic	5,013	3,342
Foreign	1,673	1,008
	\$ 6,686	\$ 4,350
Deferred tax liability:		
Foreign	\$ (389)	\$ (305)

- \*) During the year ended December 31, 2018, the Company recorded a correction of a prior-period balance related to its U.S. subsidiary, which increased the net deferred tax assets at December 31, 2017 by \$1,527, with a corresponding increase to the valuation allowance in the same amount, with a zero net impact on deferred tax asset.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 13:- TAXES ON INCOME (Cont.)

- g. Reconciliation of the theoretical tax expenses:

A reconciliation between the theoretical tax expense, assuming all income is taxed at the Israeli statutory corporate tax rate applicable to the income of the Company, and the actual tax expense (benefit) as reported in the statement of operations is as follows:

	Year Ended December 31,		
	2016	2017	2018
Income before taxes, as reported in the consolidated statements of operations	\$ 7,594	\$ 9,640	\$ 16,587
Israeli statutory corporate tax rate	25.0%	24.0%	23.0%
Theoretical tax expense on the above amount at the Israeli statutory corporate tax rate	\$ 1,898	\$ 2,314	\$ 3,815
Income tax at rate other than the Israeli statutory corporate tax rate	(749)	33	458
Non-deductible expenses, including share-based compensation expenses	744	629	384
Losses for which valuation allowance was provided (utilized)	(13,334)	2,692	(2,874)
Changes in exchange rates of subsidiaries	1,961	(1,717)	1,388
Impact of rate change	679	943	-
Unrecognized tax benefits	-	-	(386)
Impact of TCJA	-	396	271
Other	157	320	38
Actual tax expense (benefit)	\$ (8,644)	\$ 5,610	\$ 3,094

- h. Unrecognized tax benefits:

The Company's unrecognized tax benefits as of December 31, 2017 and 2018 are \$158 and \$0, respectively.

The Company recognized interest and penalties related to unrecognized tax benefits in tax expenses in the amount of \$9 and \$10 for the years ended December 31, 2016 and 2017, respectively. The liability for unrecognized tax benefits does not include the liability recorded for accrued interest and penalties of \$238 and \$0 as of December 31, 2017 and 2018, respectively.

- i. Tax assessments:

The Company has received a final tax assessment through the tax year 2015.

The Company is currently undergoing an income tax audit for the 2016-2017 tax years. The audit is in its early stage.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 14:- BASIC AND DILUTED EARNINGS PER SHARE

	Year Ended December 31,		
	2016	2017	2018
<b>Numerator:</b>			
Net income	\$ 16,238	\$ 4,030	\$ 13,493
<b>Denominator:</b>			
Denominator for basic earnings per share - weighted average number of ordinary shares, net of treasury stock	35,173,562	31,103,703	28,928,060
Effect of dilutive securities:			
Employee stock options, warrants and RSUs	605,292	1,064,659	1,291,746
Denominator for diluted earnings per share - adjusted weighted average number of shares	35,778,854	32,168,362	30,219,806

## NOTE 15:- FINANCIAL INCOME (EXPENSES), NET

	Year Ended December 31,		
	2016	2017	2018
<b>Financial expenses:</b>			
Loss related to non-hedging derivative instruments	\$ (90)	\$ (9)	\$ -
Interest	(262)	(294)	(266)
Amortization of marketable securities premiums and accretion of discounts, net	(853)	(570)	(353)
Exchange rate differences	(519)	(73)	(318)
Other	(283)	(273)	(265)
	(2,007)	(1,219)	(1,202)
<b>Financial income:</b>			
Gain related to non-hedging derivative instruments	-	-	305
Interest and other	1,847	1,209	1,125
	1,847	1,209	1,430
	\$ (160)	\$ (10)	\$ 228

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 16:- GEOGRAPHIC INFORMATION

- a. Summary information about geographic areas:

The Group manages its business on a basis of one reportable segment (see Note 1 for a brief description of the Group's business). The data is presented in accordance with ASC 280, "Segment Reporting". Revenues in the table below are attributed to geographical areas based on the location of the end customers.

The following presents total revenues for the years ended December 31, 2016, 2017 and 2018 and long-lived assets as of December 31, 2016, 2017 and 2018.

	2016		2017		2018	
	Total revenues	Long-lived assets	Total revenues	Long-lived assets	Total revenues	Long-lived assets
Americas, principally the U.S.	\$ 74,161	\$ 95	\$ 81,051	\$ 96	\$ 86,636	\$ 219
Europe	39,134	68	49,229	106	59,193	109
Far East	26,215	79	24,238	64	25,887	70
Israel	6,061	3,625	2,221	3,569	4,507	3,467
	<u>\$ 145,571</u>	<u>\$ 3,867</u>	<u>\$ 156,739</u>	<u>\$ 3,835</u>	<u>\$ 176,223</u>	<u>\$ 3,865</u>

The Group has derived approximately 42% of its revenues for the year ended December 31, 2018 from sales in the United States.

- b. Product lines:

Total revenues from external customers divided on the basis of the Company's product lines are as follows:

	Year Ended December 31,		
	2016	2017	2018
Networking	\$ 131,922	\$ 143,136	\$ 162,831
Technology	13,649	13,603	13,392
	<u>\$ 145,571</u>	<u>\$ 156,739</u>	<u>\$ 176,223</u>

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 17:- DERIVATIVE INSTRUMENTS

The Group enters into hedge transactions with a major financial institution, using derivative instruments, primarily forward contracts and options to purchase and sell foreign currencies, in order to reduce the net currency exposure associated with anticipated expenses (primarily salaries and rent expenses) in currencies other than the dollar. The Group currently hedges such future exposures for a maximum period of one year. However, the Group may choose not to hedge certain foreign currency exchange exposures for a variety of reasons, including but not limited to immateriality, accounting considerations and the prohibitive economic cost of hedging particular exposures. There can be no assurance the hedges will offset more than a portion of the financial impact resulting from movements in foreign currency exchange rates.

The Group records all derivatives in the consolidated balance sheet at fair value. The effective portions of cash flow hedges are recorded in other comprehensive income (loss) until the hedged item is recognized in earnings. The ineffective portions of cash flow hedges are adjusted to fair value through earnings in "financial income (expense), net". As of December 31, 2017, the Group did not have accumulated unrealized loss associated with cash flow hedges. As of December 31, 2018, the Group had accumulated unrealized loss of \$244 associated with cash flow hedges that was recorded in other comprehensive income (loss).

The Group entered into forward and options contracts that did not meet the requirement for hedge accounting. The Group measured the fair value of the contracts in accordance with ASC 820, at Level 2. The net losses (income) recognized in "financial expenses (income), net" during the years ended December 31, 2016, 2017 and 2018 were \$90, \$9 and \$(305), respectively.

As of December 31, 2017, the Group did not have outstanding forward and options collar (cylinder) contracts which were designated as payroll and rent hedging contracts.

As of December 31, 2018 the Group had outstanding forward and options collar (cylinder) contracts in the amount of \$20,150 which were designated as payroll and rent hedging contracts.

In addition, as of December 31, 2017 and 2018, the Group had \$2,500 and \$3,500 respectively, of outstanding forward contracts which were not designated as hedging contracts.

The fair value of the Group's outstanding derivative instruments and the effect of derivative instruments in cash flow hedging relationship on other comprehensive income for the years ended December 31, 2017 and 2018 are summarized below:

Foreign exchange forward and options contracts	Balance sheet	December 31,	
		2017	2018
Fair value of foreign exchange forward and options collar (cylinder) contracts	"Other payables and accrued expenses"	\$ -	\$ 293
Gains (losses) recognized in other comprehensive income (loss) (effective portion)	"Other comprehensive income (loss)"	\$ 142	\$ (244)

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. dollars in thousands, except share and per share data

## NOTE 17:- DERIVATIVE INSTRUMENTS (Cont.)

The effect of derivative instruments in cash flow hedging relationship on income for the years ended December 31, 2017 and 2018 is summarized below:

Foreign exchange forward and options contracts	Comprehensive Income (loss)	Year Ended December 31,	
		2017	2018
Comprehensive income (loss) from derivatives before reclassifications	"Other comprehensive income (loss)"	\$ 1,739	\$ (489)
Income (loss) reclassified from accumulated other comprehensive income (loss) (effective portion)	"Operating expenses (income)"	\$ 1,597	\$ (245)

## NOTE 18:- SUBSEQUENT EVENT

On January 28, 2019, the Company declared a cash dividend of \$0.11 per share. The dividend, in the aggregate amount of \$3,218, was paid on February 19, 2019 to all of the Company's shareholders of record on February 7, 2019.

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