

O2MICRO INTERNATIONAL LTD

Form 20-F

April 30, 2019

**UNITED STATES**

**SECURITIES AND EXCHANGE COMMISSION**

**WASHINGTON, DC 20549**

**FORM 20-F**

(Mark One)

Registration statement pursuant to Section 12(b) or 12(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

Commission file number: 0-30910

O<sub>2</sub>MICRO INTERNATIONAL LIMITED

(Exact Name of Registrant as Specified in Its Charter)

The Cayman Islands

(Jurisdiction of Incorporation or Organization)

Grand Pavilion Commercial Centre, West Bay Road

P.O. Box 32331 Grand Cayman KY1-1209, Cayman Islands

(Address of Principal Executive Offices)

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

<u>Title of Each Class</u>	<u>Name of Each Exchange On Which Registered</u>
American Depositary Shares	NASDAQ Global Select Market

Ordinary Shares, par value \$0.00002 per share Cayman Islands Stock Exchange

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, there were 1,298,808,750 ordinary shares, par value US\$0.00002 per share, outstanding.

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

Yes [ ] No [x]

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 [x] No [ ]

Note – Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

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 [x] No [ ]

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files).

Yes [x] 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

(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS)

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court.

Yes [ ] No [ ]

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Signatures

## Certain Definitions and Conventions

In this Annual Report on Form 20-F (“Annual Report”), references to “\$” and “dollars” are to United States dollars. Percentages and certain amounts contained herein have been rounded for ease of presentation. Any discrepancies in any table between totals and the sums of amounts listed are due to rounding.

### Special Note Regarding Forward-Looking Statements

This Annual Report contains statements of a forward-looking nature. These statements are made under the “safe harbor” provisions of the U.S. Private Securities Litigation Reform Act of 1995. You can identify these forward-looking statements by terminology such as “may,” “will,” “expects,” “should,” “could,” “plans,” “intends,” “anticipates,” “believes,” “predicts,” “potential” or “continue” or the negative of these terms and other comparable terminology. These forward-looking statements include, without limitation, statements regarding the following: our expectation to target and design products for specific applications; to increase expenses for personnel and new product development; to protect our technology and to expand our product offerings; our anticipation that sales to a relatively small number of customers will continue to account for significant portion of net sales; our expectation that we will no longer need to reduce costs and reduce our personnel expenses; our expectation that non-U.S. operations and sales will recover and continue to account for a substantial percentage of our net sales; our expectation to return to profitably and/or cash flow break even in the near future; our expectation that we will continue to incur substantial legal expenses that may vary with the level of activity in legal proceedings at any given point in time; our statements regarding the growing popularity of thinner displays, mobile computing, electric vehicles, more efficient general lighting, and portable devices; our belief that we participate in large and growing markets; our belief that potential future growth in the LED television, mobile computing, general lighting, industrial and automotive markets represents an attractive growth opportunity for us; our belief that the use of cold cathode fluorescent lamps (“CCFL”) is not a significant market for our current business model, our belief that manufacturers are turning to innovative new semiconductor technologies to manage capacity more efficiently; our belief that there is an increasing need for higher levels of system integration; our belief in the need for mixed-signal and analog integrated circuits specifically designed to optimize the power system usage in devices; our belief in the need to use advanced design methodologies to allow manufacturers to achieve rapid time-to-market with their new products; our expectation that our markets will be dominated by a small number of major brand name companies; our belief that the our success depends on our ability to develop and introduce new products selected for design into products in certain markets, our ability to develop and introduce products in a timely manner to meet customer demands; our expectation that analog and mixed-signal circuits have substantially longer life-cycles than digital integrated circuits; our ability to take advantage of cost-efficiencies associated with the “fabless” semiconductor business model; our intention is to expand the scope of our global operations; that we expect that our gross profit (loss) (as a percentage of net sales) will continue to fluctuate in the future as a result of the stages of our products in their life cycles; our time expectations and plans to bring the company back to profitability; variations in our product mix; the timing of our product introductions and specific product manufacturing costs; our future gross profits(losses); our expectation that gross margin on products we sell will typically decline over the life of the products; our expectation that gross margin on products will continue at their current and historical levels; our expectation that expenses for personnel and new product development will increase; our expectations regarding the need for future cost reduction measures; our expectation that research and development expenses as a percentage of net sales will continue to fluctuate; our expectation to continue development of innovative technologies and processes, and continued expansion and investment of our engineering, research and development resources; our expectation to continue to invest significant resources into research and development in the future; our expectation that the competition for qualified personnel will remain intense; our expectations regarding the outcome

of litigation matters and the effects of such to our company; our belief that the liquidity provided by existing cash, cash equivalents balances and short-term investment will be sufficient to meet our capital requirements for at least the next 12 months; our intention to continue research and development operations; our expectation that semiconductor companies will increasingly be subject to patent infringement and other litigation matters as the number of products and competitors in the semiconductor industry grows; our anticipation that we will not be paying cash dividends in the foreseeable future; our belief that our system-level expertise and extensive experience with power management systems allow us to develop proprietary solutions and foster long-term relationships with our customers; our intention to continue to evaluate additional investment opportunities in our supply chain; our belief that our current facilities are adequate for our needs for the foreseeable future, and that any additional space required will be available to us on commercially reasonable terms; our expectation that our results of operations or cash flows will not be affected to any significant degree by a sudden short-term change in market interest rates; our intention to diversify our customer base and market focus by providing new products used in particular markets; our statements regarding the effect of adoption of certain accounting policies; our expectation that our American Depositary Shares (“ADSs”) will satisfy the “readily tradable” requirement of the trading exchange; our expectation not to become a passive foreign investment company in the future; our intention to use the cash we have raised and conduct our business to reduce the risk of classification as a passive foreign investment company; and our expectation that we will retain our existing primary listing of ADSs on the NASDAQ Global Select Market (“NASDAQ”) in the United States for the foreseeable future. These forward-looking statements are based on our current assumptions and beliefs in light of the information currently available to us. Actual results, levels of activity, performance or achievements may differ materially from those expressed or implied in these forward-looking statements for a variety of reasons, including: changes in demand for devices that use our products; market conditions in the semiconductor industry and the economy as a whole; the stages of our products in their life cycles; variations, expansions or reductions in the mix of our product offerings; the growth and/or contraction of the company; the timing of our product introductions; changes in employment rates; changes in availability and cost of facilities; unpredictability of an inability to control the outcome or timing of litigation; changes in applicable laws or accounting standards; potential delisting of our ordinary shares and/or ADSs from NASDAQ; specific product manufacturing costs; increased competition; changes in laws, rules and regulations regarding our intellectual property; introduction of new competitors or competing technologies; and the increase of unexpected expenses and such other factors discussed under “Key Information - Risk Factors,” “Operating and Financial Review and Prospects” and elsewhere in this Annual Report. We assume no obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise. You are cautioned not to place undue reliance on these forward-looking statements, which apply only as of the date of this Annual Report.



## PART I

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

See Item 6 below.

## ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

## ITEM 3. KEY INFORMATION

**SELECTED CONSOLIDATED FINANCIAL DATA**

The selected consolidated statements of operations and cash flow data for the years ended December 31, 2018, 2017, and 2016, and the selected consolidated balance sheet data as of December 31, 2018 and 2017, are derived from our audited consolidated financial statements included elsewhere in this Annual Report and should be read in conjunction with, and are qualified in their entirety by reference to, these consolidated financial statements, including the notes to these consolidated financial statements and “Item 5. Operating and Financial Review and Prospects” as set forth below in this Annual Report. The selected consolidated statements of operations and cash flow data for the years ended December 31, 2015 and 2014 and the selected consolidated balance sheet data as of December 31, 2016, 2015 and 2014, are derived from our audited consolidated financial statements, which are not included in this Annual Report. These consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America.

	Years Ended December 31				
	2018	2017	2016	2015	2014
	<i>(in thousands, except per share data)</i>				
Consolidated Statement of Operations Data:					
Net sales	\$62,714	\$60,205	\$56,561	\$54,841	\$63,591
Cost of sales	30,741	29,426	27,317	27,145	30,856
Gross profit	31,973	30,779	29,244	27,696	32,735
Operating expenses:					
Research and development	19,766	17,989	15,645	18,493	21,885
Selling, general and administrative	20,332	19,047	19,481	23,632	24,721
Costs associated with exit activities	-	-	-	-	3,027
Litigation income	-	(19)	(23)	-	(75)
Total operating expenses	40,098	37,017	35,103	42,125	49,558
Loss from operations	(8,125)	(6,238)	(5,859)	(14,429)	(16,823)
Non-operating income (loss)– net	11,354	1,103	3,931	(2,026)	2,950

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Income (Loss) before income tax	3,229	(5,135 )	(1,928 )	(16,455 )	(13,873 )
Income tax expense	1,141	1,010	1,058	4,640	1,184
Net Income (loss)	2,088	(6,145 )	(2,986 )	(21,095 )	(15,057 )
Earning (loss) per share:					
Basic	\$-	\$-	\$-	\$(0.02 )	\$(0.01 )
Diluted	\$-	\$-	\$-	\$(0.02 )	\$(0.01 )
Number of shares used in earnings (loss) per share calculation					
Basic (in thousands)	1,300,795	1,288,977	1,282,141	1,301,465	1,362,465
Diluted (in thousands)	1,300,822	1,288,977	1,282,141	1,301,465	1,362,465
Earning (loss) per ADS (1):					
Basic	\$0.08	\$(0.24 )	\$(0.12 )	\$(0.81 )	\$(0.55 )
Diluted	\$0.08	\$(0.24 )	\$(0.12 )	\$(0.81 )	\$(0.55 )
Number of ADS shares used in earnings (loss) per share calculation					
Basic (in thousands)	26,016	25,780	25,643	26,029	27,249
Diluted (in thousands)	26,616	25,780	25,643	26,029	27,249

	December 31				
	2018	2017	2016	2015	2014
	<i>(in thousands)</i>				
Consolidated Balance Sheet Data:					
Cash and cash equivalents	\$32,414	\$28,520	\$31,332	\$41,199	\$41,069
Short-term investments	6,172	17,601	21,532	11,233	21,481
Working capital	53,396	58,735	61,871	59,904	70,725
Total assets	89,309	85,082	90,689	96,208	116,738
Long-term liabilities, excluding current portion	1,087	1,347	1,294	2,617	761
Net assets	79,046	76,555	80,784	83,117	107,266
Ordinary shares and additional paid-in capital	143,148	142,979	142,771	141,919	141,262

(1) Fifty ordinary shares equal one ADS

## CAPITALIZATION AND INDEBTEDNESS

Not applicable.

## REASONS FOR THE OFFER AND USE OF PROCEEDS

Not applicable.

## Risk Factors

We wish to caution readers that the following important factors, and those important factors described in other reports submitted to, or filed with, the Securities and Exchange Commission, among other factors, could affect our actual results and could cause our actual results to differ materially from those expressed in any forward-looking statements made by us or on our behalf and that such factors may adversely affect our business and financial status and therefore the value of your investment:

Global economic and financial, political instability or catastrophes caused or induced by natural disasters could negatively affect our business, results of operations, and financial condition.

The global economic and financial crisis that has been affecting global business, banking and financial sectors has also been affecting the semiconductor market. Uncertainty in various global markets, economic slowdown in China, and slow recovery in certain economic regions have resulted in sharp declines in electronic products sales from which we generate our income. Current global security concerns, political instability in the European Union and the United Kingdom, economic and political uncertainty in the United States, and international trade disputes (included unexpected global tariffs on imported goods and shipments), could also negatively affect sales, and have a negative effect on our supplies of raw goods and materials. The uncertainty in global financial markets could negatively affect our customers' product planning and decrease demand for our products. There could be a number of indirect effects from such turmoil on our business, including, without limitation, the following: significant decreases in orders from our customers; insolvency of key suppliers resulting in product delays; inability of customers to obtain credit to finance purchases of our products and/or customer insolvencies; and counterparty failures negatively impacting our treasury operations. If the effects of the global economic crisis continue unabated, we anticipate our results of operations may be materially and adversely affected. Natural disasters and related catastrophes could also negatively affect our operations. Any natural disaster, economic or financial crisis could cause revenues for the semiconductor industry as a whole to decline dramatically, as the industry as a whole is subject to unexpected change in response to fluctuating global market conditions. Also, if global economic conditions, or the financial condition of our customers, were to deteriorate, additional allowances for uncollectible accounts may be required in the future and such additional allowances would increase our operating expenses and therefore reduce our income from operations and net income. Any serious natural disaster and catastrophes, global economic and financial crisis could materially and adversely affect our results of operations.

If the markets for consumer electronics, computers, industrial, communications, or automotive products do not grow substantially or even decrease, our net sales may be harmed.

Our business focuses on designing, developing and marketing high performance integrated circuits and solutions for manufacturers of products in the consumer electronics, computer, industrial, communications, and automotive markets. As many of the leading sellers of these products have intermediaries to manufacture their products or those portions of their products containing our components, we currently derive the majority of our product revenues from sales to these intermediaries and/or their suppliers. We have targeted, and are designing products for, applications such as LCD and LED monitors, LCD and LED televisions, notebook computers, tablet computers, low/zero emission vehicles, mobile phones, power tools, energy efficient technology relating to sophisticated batteries, LED lighting (both in electronics and in the general lighting sector), and portable electronic equipment, such as camcorders. We believe that the important factors driving growth in these markets include the growing popularity of thinner displays, mobile computing, hybrid and electric vehicles, energy efficient lighting, and portable tools and media devices. In particular, if there is a decline in demand for products using LCDs or LEDs, as well as other devices using our products, or growth for such products is slower than we anticipate, our customers may experience lower demand for their products incorporating our products, which may cause our net sales to suffer. We cannot be certain that the markets for these products will continue to grow. We also cannot be sure that a significant slowdown in these markets will not occur.

Fluctuations in our quarterly operating results due to factors such as changes in the demand for electronic devices that utilize our products could adversely affect the trading price of our ADSs.

If our quarterly operating results fail to meet the expectations of securities analysts, the trading price of our ADSs could be adversely affected, and even trade at below the book value of the Company. Our quarterly operating results have varied substantially in the past and may vary substantially in the future depending upon a number of factors

described below and elsewhere in this Risk Factors section, including many factors that are beyond our control. These factors include changes in demand for devices that use our products; market conditions in the highly cyclical semiconductor industry and the economy as a whole; the timing and cancellation of customer orders; the level of orders received that can be shipped in a quarter; the availability of third party semiconductor foundry, assembly and test capacities; fluctuations in manufacturing yields; delays in the introduction of new products; changes in the mix of sales of higher margin products and lower margin products; seasonal changes in demand during the year-end holiday season for devices that use our products; and the amount of legal and other expenses incurred in a particular quarter.

In addition, the trading price of our ADSs may be affected by factors such as: significant price and volume fluctuations in our ADSs and financial markets in the U.S. and other countries, as well as relatively thin trading volume of our ADSs on the NASDAQ Global Select Market and the Cayman Islands Stock Exchange. Further, the trading markets for our ADSs are affected by the research reports that securities or industry analysts publish about us or our business. We do not have control over such coverage. If one or more analysts were to downgrade our ADSs, the price of our ADSs may decline. If one or more analysts cease coverage of our company or does not regularly publish reports on us, we may lose visibility in the financial markets, which could cause the price of our ADSs or trading volume to decline.

If orders for our products are cancelled or deferred, our net sales, operating margins and net income could be substantially reduced.

Orders for our products can be cancelled or deferred with little notice from and without significant penalty to our customers. A significant portion of our net sales in any financial reporting period depends on orders booked and shipped in that period. If a large amount of orders placed is cancelled or deferred, our net sales in that period could be substantially reduced. Since we do not have significant non-cancellable backlog, we typically plan our production and inventory levels based on internal forecasts of customer demand, which are highly unpredictable and are often based on a “just in time” inventory system, which can result in substantial fluctuation in ordering and/or last minute changes. In particular, in response to anticipated lengthy lead times, which in the past have been as much as ten weeks or more, to obtain inventory and materials from our suppliers, we place orders with these suppliers in advance of anticipated customer demand, which can result in excess inventory if the expected orders fail to materialize. We also expect to increase our expenses for personnel and new product development. It is difficult for us to reduce our production, inventory, personnel and new product development expenses quickly in response to any shortfalls in net sales resulting from cancelled or deferred orders. As a result, any cancellation or deferral of orders would not only harm our net sales, it would also likely have a disproportionately adverse effect on our operating margins and net income.

If we do not develop and introduce new products in a timely manner, our net sales and gross margins could be harmed.

Our success depends upon our ability to develop and introduce new products that our customers in turn select to design into their products in the consumer electronics, computer, industrial, communications, and automotive markets. If we are unable to develop new products in a timely manner, our net sales will suffer. In addition, because our gross margins typically decline over the life cycle of our products as a result of competitive pressures and voluntary pricing arrangements, any failure to develop new products in a timely manner will likely cause our gross margins to decline. The development of our new products is highly complex, and from time to time we have experienced delays in the introduction of new products. Successful product development and introduction of new products depend on a number of factors, including accurate new product definition; timely completion of new product designs; reliance on third party licenses and designers periodically; achievement of manufacturing yields; timely and cost-effective production of new products; delays within our manufacturing foundries; and timely delivery of new third-party supplied products used as key components in devices that incorporate our products. We often incur significant expenditures in the development of a new product without any assurance that it will be selected for design into our customers’ products. If we incur such expenditures for products that are not selected by our customers, our results of operations will be adversely affected and may fluctuate significantly from period to period. Furthermore, even if our products are selected for design into our customers’ products, we cannot be certain that these products will be commercially successful or that we will benefit from any associated sales.

If we fail to protect our intellectual property rights, competitors may be able to use our technology or trademarks, and this could weaken our competitive position, increase our costs, reduce our margins and reduce our net sales.

Our success is heavily dependent upon our proprietary technology. We rely primarily on a combination of patent, copyright and trademark laws, trade secrets, confidentiality procedures and contractual provisions to protect our proprietary technology and prevent competitors from using our technology in their products. These laws and procedures provide only limited protection. Our patents may not provide sufficiently broad protection or they may not prove to be enforceable in actions against alleged infringement.

Our ability to sell our products and prevent competitors from misappropriating our proprietary technology and trade names is dependent upon protecting our intellectual property. Despite the precautions we take, unauthorized third parties may copy aspects of our current or future products or obtain and use information that we regard as proprietary. Additionally, our competitors may independently develop similar or superior technology. Policing unauthorized use of patents, software, circuit design or semiconductor design is difficult and some countries’ laws do not adequately protect our proprietary rights to the same extent as the laws of the United States, China and other developed countries.

We have in the past initiated litigation to protect our intellectual property rights. Litigation may be necessary in the future to enforce our intellectual property rights (including patents), to protect our trade secrets or to determine the validity and scope of the proprietary rights of others. Litigation could result in substantial costs and diversion of resources, and could also result in a decision that our intellectual property is invalid or unenforceable and, could adversely affect our business, future results of operations and financial condition. See the section headed “Business Overview—Intellectual Property.”

We depend on third parties to manufacture, assemble and test our products and, if they are unable to do so, our ability to ship products and our business and results of operations will be harmed.

We do not own or operate the integrated circuit fabrication facilities that manufacture the products we design. Three foundries, China Resources Microelectronic Limited (“CR Micro”), Vanguard International Semiconductor Corporation (“VIS”), and TowerJazz Panasonic Semiconductor Co., Ltd. (“TPSC”) manufactured most of the integrated circuit products that we sold in 2018. These foundries manufacture integrated circuit products for us according to purchase orders. We do not have a long-term guaranteed level of production capacity at any of these foundries, and any one or more could raise prices without notice. Although we provide the foundries with rolling forecasts of our production requirements, the ability of each foundry to provide wafers to us is limited by the foundry’s available capacity. The term “wafers” refers to slices of silicon used to manufacture integrated circuits, and it is one of the principal raw materials in our products. These foundries could choose to prioritize capacity for other customers, particularly larger customers, reduce or eliminate deliveries to us on short notice or increase the prices they charge us. Accordingly, we cannot be certain that these foundries will allocate sufficient capacity, if any, to satisfy our requirements particularly during any industry-wide capacity shortages. In addition, if any of these foundries were unable to continue manufacturing our products in the required volumes at acceptable quality, yields and costs or in a timely manner, our business and results of operations would be seriously harmed.

There are other significant risks associated with our reliance on these foundries, including the disruption in our ability to ship products caused by the length of time, which could be as much as 12 to 18 months. This disruption could require us to find alternative foundries for existing or new products; the reduction or elimination of deliveries to us by these outside foundries caused by a sudden increase in demand for semiconductor devices or a sudden reduction or elimination of manufacturing capacity by any existing manufacturers of semiconductor devices; the unavailability of, or delays in obtaining access to, key process technologies used by these foundries; and the susceptibility of our outside foundries to production interruptions resulting from natural disasters. Any of these events could cause these foundries to reduce or eliminate deliveries to us and cause disruption in our ability to ship products to our customers, which could negatively affect our business and results of operations.

We also rely on independent subcontractors to assemble and test most of our integrated circuit products. We do not have long-term agreements with some of these subcontractors but obtain services from them primarily on a purchase order basis. Our reliance on these subcontractors involves risks such as reduced control over delivery schedules, quality assurance and costs. These risks could result in product shortages or increase our costs of manufacturing, assembling or testing our products. If these subcontractors were unable or unwilling to continue to provide assembly and test services and deliver products at acceptable quality, yields and costs or in a timely manner, our business would be seriously harmed. We would also have to identify and qualify substitute subcontractors, which would be time consuming and costly and could result in unforeseen operational difficulties.

If we cannot compete effectively against new and existing competitors, our net sales and gross margins could be harmed.

Our ability to compete successfully in the market for integrated circuit products depends on factors both within and outside our control, including, but not limited to, any one or a combination of the following: i) our success in designing and subcontracting the manufacture of new products that implement new technologies and satisfy our customers' needs; ii) the performance of our products across a variety of parameters, such as reliability and cost efficiency; iii) the price of our products and those of our competitors; iv) our ability to control production costs; and v) the features of our competitors' products.

We believe our principal competitors include Renesas Electronics Corporation, Analog Devices, Inc., Maxim Integrated Products, Inc., Monolithic Power Systems, Inc., Ricoh Company, Ltd., Richtek Technology Corporation, Rohm Co., Ltd, Silergy Corporation and Texas Instruments Incorporated. There is also competition from the internal integrated circuit design and manufacturing capabilities of some of our existing and potential customers, such as Panasonic and Samsung. In addition to these competitors, other integrated circuit companies may decide to enter the market with analog and mixed-signal integrated circuit products that compete with our products or incorporate functions similar to those provided by our products.

Some of our competitors, such as Texas Instruments, have greater name recognition, their own manufacturing capabilities, significantly greater financial and technical resources, and the sales, marketing and distribution strengths that are normally associated with large multinational companies. These competitors may also have pre-existing relationships with our customers or potential customers. These competitors may be able to introduce new technologies more quickly, address customer requirements more rapidly, and devote greater resources to the promotion and sale of their products that are beyond our capability. Further, in the event of a manufacturing capacity shortage, these competitors may be able to manufacture products themselves or obtain third-party manufacturing capability when we are unable to do so.

We have substantial operations outside of the United States that expose us to risks specific to our international operations that could harm our net sales and net income.



As of December 31, 2018, a substantial portion of our operations, most of our employees, and most of the third parties we use to manufacture, assemble and test our products were located in China and Taiwan. In addition, sales outside the United States as a percentage of net sales accounted for almost all of our sales in the years ended December 31, 2018, 2017, 2016, 2015, and 2014. We expect our non-U.S. operations to grow and non-U.S. sales to continue to account for a substantial percentage of our net sales.

We are subject to risks specific to our international business operations, including: the risk of supply disruption, production disruption or other disruption arising from natural disasters; the outbreak of any severe communicable disease or other widespread health problems; the risk of potential conflict and political instability in the relationship between Taiwan and China, China and Japan, or North and South Korea; risks related to international political instability; risks associated with the European financial crises, the political uncertainty in Eastern European and their effects on the global financial markets; unpredictable consequences on the economic conditions in the U.S. and the rest of the world arising from terrorist attacks and other military or security operations; unexpected changes in regulatory requirements or legal uncertainties regarding tax regimes, that could result in tariffs and other trade barriers (including current and future import and export restrictions); difficulties in staffing and managing international operations; adverse effects of changes in foreign currency exchange rates on our results of operations; limited ability to enforce agreements, intellectual property and other rights in foreign countries; changes in labor conditions and requirements; longer payment cycles and greater difficulty in collecting accounts receivables; burdens and costs of compliance with a variety of foreign laws; expropriation of private enterprises; and reversal of the current policies (including favorable tax and lending policies) encouraging foreign investment or foreign trade by our host countries. In addition, the geographical distances between Asia, the U.S., the Cayman Islands and Europe also create a number of logistical and communication challenges. Although we have not experienced any serious harm in connection with our international operations, we cannot assure you that such problems will not arise in the future.

In addition, our reporting currency is the U.S. dollar, but our functional currency is the local currency of the respective entities. Therefore, a significant portion of our operating expenses is denominated in currencies other than the U.S. dollar, primarily the Renminbi and the New Taiwan dollar. As a result, appreciation or depreciation of other currencies in relation to the U.S. dollar could result in material transaction or translation gains or losses that could adversely affect, or cause fluctuations in, our results of operations. We do not currently engage in currency hedging activities.

If we cannot adapt our product offerings to respond to rapid technological changes, our net sales will be harmed.

The markets for consumer electronics, computer, industrial, communications, and automotive products, and the components used in these products, are characterized by rapidly changing technology and very frequent new product introductions by our direct customers and our competitors. For example, the microprocessor, display and battery technologies with which our products inter-operate change very rapidly. Although our products integrate analog and mixed-signal circuits and therefore may have substantially longer life-cycles than digital integrated circuits, we must still update our products or introduce new ones on a regular basis. If we do not respond in a timely manner to technological changes and new product introductions by our direct customers and competitors, we will be unable to maintain and grow our product sales. In addition, the emergence of significantly more efficient or cost-effective microprocessor, display and battery technologies could lessen the need for the power management functionality of our products, which would harm our net sales.

Any impairment charges may have a material adverse effect on our net income.

In accordance with accounting principles generally accepted in the United States, we are required to evaluate our investments, long-lived assets and intangible assets for impairment whenever triggering events or changes in circumstances indicate that the asset may be impaired. If certain criteria are met, we are required to record an impairment charge. For example, we hold equity securities without determinable fair value and long-lived assets, some of which have incurred certain impairment charges as discussed further in our financial statements. We currently are not able to estimate the extent or timing of any impairment charge for future years. Any impairment charge required may have a material adverse effect on our net income. The determination of an impairment charge at any given time is based significantly on our expected results of operations over a number of years subsequent to that time. As a result, an impairment charge is more likely to occur during a period when our operating results are otherwise already depressed. See “Item 5. Operating and Financial Review and Prospects — Critical Accounting Policies” for a discussion of how we assess if an impairment charge is required and, if so, how the amount is determined.

We will need to recruit and retain qualified personnel to grow our business successfully.

Our future success will depend on our ability to attract and retain experienced sales, research and development, marketing, customer support and management personnel. If we do not attract and retain these personnel, our ability to grow our business, sell our products, enter new markets and increase our share of existing markets could be harmed. There can be no assurance that we will be successful in hiring for these positions in the near future. Our sales strategy requires that we hire additional direct sales persons and independent sales representatives in our major markets. Moreover, our independent sales representatives and direct sales personnel must market our products effectively and be qualified to provide timely and cost-effective customer support and service. If they are unable to do so, or if we are unable to expand these organizations, this could harm our ability to increase our net sales and limit our ability to sell our products and/or expand our market share. Competition for qualified personnel in digital, analog and mixed-signal integrated circuit design is intense. In the past, we have experienced difficulty in recruiting and retaining qualified personnel, especially technical and sales personnel. As we intend to expand the scope of our international operations, this will require us to attract experienced management, research and development, marketing, sales and customer support personnel for our international offices. We expect competition for qualified personnel to remain intense, and

we may not succeed in attracting or retaining such personnel. In addition, new employees generally require substantial training in our design methodology, design flow and technology, which in turn requires significant resources and management attention. There is a risk that even if we invest significant resources in attempting to attract, train and retain qualified personnel, we will not be successful in our efforts. In that event, our costs of doing business would increase without a corresponding increase in net sales.

Our success will depend on a significant extent on the continued service of our executive officers, including Sterling Du, our chief executive officer and chairman of our board, and other key employees, including key sales, consulting, technical, marketing and legal personnel. If we lose the services of one or more of our executives or key employees, our business and ability to implement our business objectives successfully could be harmed, particularly if one or more of our executives or key employees decide to join a competitor or otherwise compete directly or indirectly with us.

Defects in our products could result in significant costs and could impair our ability to sell our products.

Detection of any significant defects in our products may result in, among other things, loss of or delay in market acceptance and sales of our products, diversion of development resources, injury to our reputation and increased service and warranty costs. Because our products are complex, they may contain defects that can be present at any point in a product's life cycle. These defects could harm our reputation, which could result in significant costs to us and could impair our ability to sell our products. The costs we may incur in correcting any product defects may be substantial and could materially adversely affect our results of operations. While we continually test our products for defects and work with customers through our customer support services to identify and correct problems, defects in our products may be found in the future. Testing for defects is complicated in part because it is difficult to simulate the highly complex environments in which our customers may use our products. In the past, when we have discovered defects in our products, we also experienced delays in the shipment of our products. These delays have principally related to new product update releases. To date, none of these delays has materially affected our business; however, product defects or delays in the future could be material, and adversely affect our reputation and our ability to sell our products.

A substantial portion of our net sales is generated by a small number of customers. If any of these customers delays or reduces its orders, our net sales and earnings may be harmed.

Historically, a relatively small number of customers has accounted for a significant portion of our net sales in any particular period. We have no long-term volume purchase commitments from any of our significant customers. We cannot be certain that our current customers will continue to place orders with us and/or at the levels of previous periods, in addition to obtaining orders from new customers. In addition, some of our customers, acting as intermediary manufacturers, supply products to end-market purchasers, and any of these end-market purchasers could choose to reduce or eliminate orders for our customers' products. This would in turn lower our customers' orders for our products.

For the year ended December 31, 2018, two customers accounted for 24% of our net sales. For the year ended December 31, 2017, one customer accounted for 15% of our net sales. For the year ended December 31, 2016, one customer accounted for 10% of our net sales. The changes in sales to these customers as a percentage of our total net sales have been caused by a number of factors, including, without limitation, the reduction, delay or cancellation of orders from one or more of our significant customers, some of which were outside our control. We anticipate that sales of our products to a relatively small number of customers will continue to account for a significant portion of our net sales.

Our ability to manage growth will affect our ability to achieve and maintain profitability.

Our ability to achieve and maintain profitability will depend in part on our ability to implement and expand operational, customer support and financial control systems and to train and manage our employees. We may not be able to augment or improve existing systems and controls or implement new systems and controls in response to future growth, if any. In addition, we will need to expand our facilities to accommodate the growth in our personnel. Any failure to manage growth could divert our attention from successfully executing our business plan and adversely affect our ability to expand our business successfully. Our historical growth has placed, and any further growth is likely to continue to place, a significant strain on our resources. In order to grow successfully, we will need to maintain close coordination among our executive, engineering, accounting, finance, legal, marketing, sales, operations and customer support organizations, particularly in light of the internationally dispersed nature of our operations.

Third parties have asserted, and in the future could assert, that our products infringe their intellectual property rights. These claims could harm our ability to sell our products and expose us to litigation.

As is typical in the semiconductor industry, we have periodically received communications from third parties asserting patents that cover certain of our technologies or products, and alleging infringement of certain of their intellectual property rights. We may receive similar communications in the future. In the event any third party were to make a valid claim against us or our customers, we could be enjoined from selling selected products such (including our lighting or power products), or we could be required to pay royalties to third parties, which would increase the cost of our products. Third-party infringement claims, with or without merit, have been, and could potentially be, time consuming, result in substantial diversion of our resources, incur significant litigation costs (including costs related to any fines and/or damages we may owe), cause product shipment delays, prevent us and/or our customers from selling some or all of our products, cause our customers or end-users not to use our products, or require us to enter into license agreements that could adversely affect our cost structure (and, in turn, our competitiveness), which may not be available on acceptable terms, or at all. Any such event could seriously harm our business and our results of operations. We expect that semiconductor companies will increasingly be subject to infringement claims as the number of products, non-practicing patent entities and competitors in the semiconductor industry grows. See the section headed "Business Overview—Intellectual Property."

From time to time, in the normal course of business, we agree to indemnify third parties with whom we enter into contractual relationships, including customers and parties to other transactions with us, with respect to certain matters. We have agreed, under certain conditions, to hold these third parties harmless against specified losses, such as those arising from a breach of representations or covenants, other third-party claims that our products when used for their intended purposes infringe the intellectual property rights of such other third parties or other claims made against certain parties. It is not possible to determine the maximum potential amount of liability under these indemnification obligations due to our limited history of prior indemnification claims and the unique facts and circumstances that are likely to be involved in each particular claim. To date, we have not made any payments under these obligations.

While we are not currently involved in any significant litigation matters, this low level of activity is not entirely within our control, especially if we need to respond to legal actions directly or on behalf of our customers or any third party. Consequently, we may find it difficult to predict the legal expenses for any given period, which will impair our ability to forecast our results of operations for that period. For example, the level of legal expenses is not entirely within our control as we may need to respond to legal actions by opposing parties or scheduling decisions by the judges which could occur with relatively short notice. It is difficult for us to forecast our legal expenses for any given quarter, which adversely affects our ability to forecast our expected results of operations in general.

Given the inherent uncertainties in litigation, there cannot be any assurance that we will prevail in any particular litigation matter, nor can we cannot predict the outcome of any such litigation. If any party were to prevail in its claims against us, our rights to certain patents and results of operations could be materially adversely affected. In any litigation arising from claims that we infringe on the intellectual property rights of others, an adverse result could involve an injunction that could prevent the sales of a material portion of our products, and a reduction or the elimination of the value of related inventories, any of which could have a material adverse effect on our net sales, results of operations and financial condition. See the section headed “Business Overview—Intellectual Property.”

**We may be subject to lawsuits from third parties, which could harm our earnings and expose us to additional uncertainties.**

We are a defendant or plaintiff in actions that arise in the normal course of business as well as actions that arose as counterclaims in response to our patent infringement actions, including actions for antitrust, unfair competition and interference. We do not believe that the amount of ultimate liability of other unresolved proceedings will materially affect our financial position, overall trends in results of operations, or liquidity. However, the ultimate outcome of any litigation or claim is uncertain, and the impact of an unfavorable outcome could be material to us.

**We face risks associated with security breaches or cyber attacks.**

We face risks associated with security breaches or cyber attacks of our computer systems or those of our third-party representatives, vendors, and service providers. Although we have implemented security procedures and controls to address these threats, our systems may still be vulnerable to data theft, computer viruses, programming errors, attacks by third parties, or similar disruptive problems. If our systems, or systems owned by third parties affiliated with our company, were breached or attacked, the proprietary and confidential information of our company and our customers could be disclosed and we may be required to incur substantial costs and liabilities, including the following: expenses to rectify the consequences of the security breach or cyber attack; liability for stolen assets or information; costs of repairing damage to our systems; lost revenue and income resulting from any system downtime caused by such breach or attack; loss of competitive advantage if our proprietary information is obtained by competitors as a result of such breach or attack; increased costs of cyber security protection; costs of incentives we may be required to offer to our customers or business partners to retain their business; and damage to our reputation. In addition, any compromise of security from a security breach or cyber attack could deter customers or business partners from entering into transactions that involve providing confidential information to us. As a result, any compromise to the security of our systems could have a material adverse effect on our business, reputation, financial condition, and operating results.

**Changes in local laws, rules and regulations could have an adverse effect on our ability to protect our intellectual property or other aspects of our business.**

Our business activities and intellectual property is dependent on various regulations in countries where we operate, including, but not limited to, business and investment approval, export regulations, tariffs, accounting standards and taxation. We must also adhere to various laws and regulations concerning trading, antitrust practices, product liability, consumer protection, intellectual property rights, product safety, the environment and recycling, and internal control. Changes in such laws and regulations, and additional expenses to comply with any such amendments, may affect our business results and financial position. Further, changes in intellectual property laws could negatively affect our ability to protect our patents and other intellectual property in one or several jurisdictions.

**If we fail to maintain an effective system of internal controls, we may not be able to report our financial results adequately. As a result, we may fail to meet our reporting obligations and current and potential holders of ADSs and/or ordinary shares could lose confidence in our financial reporting, which could adversely affect the trading price of our ADSs.**

Effective internal controls are necessary for us to provide reliable financial reports. If we cannot provide reliable financial reports or prevent fraud, our results of operations could be misstated, our reputation may be harmed and the trading price of our ADSs could be adversely affected. We cannot be certain that our controls over our financial processes and reporting will continue to be adequate in the future. Any failure of our internal controls over financial reporting could result in a material misstatement in financial statements.

In addition, under Section 404 of the Sarbanes-Oxley Act, we are required to furnish a report by our management on our internal control over financial reporting. This report contains, among other matters, an assessment of the effectiveness of our internal control over financial reporting as of the end of our fiscal year, including a statement as to whether or not our internal control over financial reporting is effective. This assessment must include disclosure of any material weaknesses in our internal control over financial reporting identified by management.

The effectiveness of our internal control over financial reporting has been audited by Deloitte & Touche, an independent registered public accounting firm, which has also audited our consolidated financial statements for the year ended December 31, 2018. Deloitte & Touche has issued an attestation report on the effectiveness of our internal control over financial reporting in accordance with the standards of the Public Company Accounting Oversight Board (United States). See “Item 15. Controls and Procedures—Attestation Report of the Independent Registered Public Accounting Firm”.

While the management report included in this annual report concluded that our internal control over financial reporting was effective, we cannot assure you that our management will be able to conclude that our internal control over financial reporting is effective in future years. If in future years we fail to maintain effective internal control over financial reporting in accordance with the Sarbanes-Oxley Act, we could suffer a loss of investor confidence in the reliability of our consolidated financial statements, which in turn could negatively impact the trading price of our ADSs, and could result in lawsuits being filed against us by our stockholders or otherwise harm our reputation.

Our transfer pricing procedures may be challenged by tax or regulatory authorities or “taxing authorities”, which may subject us to higher taxes and adversely affect our earnings.

Transfer pricing refers to the prices that one member of a group of affiliated corporation charges to another member of the group for goods, services or the use of intellectual property. If two or more affiliated corporations are located in different countries, the laws or regulations of each country generally will require that transfer prices be the same as those charged by unrelated corporations dealing with each other at arm’s length. If one or more of the countries in which our affiliated corporations are located believe that transfer prices were manipulated by our affiliated corporations in a way that distorts the true taxable income of the corporations, the laws of such countries could require us to redetermine transfer prices and thereby reallocate the income of our affiliate corporations in order to reflect such income clearly. Any reallocation of income from one of our corporations in a lower tax jurisdiction to an affiliated corporation in a higher tax jurisdiction would result in a higher overall tax liability to us. Moreover, if the country from which the income is being reallocated does not agree to the reallocation, the same income could be subject to taxation by both countries.

We have adopted transfer pricing agreements with our subsidiaries located in the United States, China, and Taiwan to regulate inter-company transfers. A transfer pricing agreement is a contract for the transfer of goods, services or intellectual property from one corporation to a related corporation that sets forth the prices that the related parties believe are those charged by unrelated corporations dealing with each other at arm’s length. In this regard, we are subject to risks not faced by other companies with international operations that do not create inter-company transfers. If the taxing authorities of any jurisdiction, including Taiwan, China, and the United States, were to challenge these agreements successfully or require changes in our transfer pricing practices, we could become subject to higher taxes and our earnings would be adversely affected. There can be no assurance that we will continue to be found to be operating in compliance with transfer pricing laws, or that such laws will not be modified, which, as a result, may require changes to our transfer pricing practices or operating procedures. Any determination of income reallocation or modification of transfer pricing laws could result in an income tax assessment of the portion of income deemed to be derived from the taxing jurisdiction that so reallocates the income or modifies its transfer pricing laws.

Sales of our products could decline if our products fail to support evolving industry standards or environmental requirements.

Our net sales are mainly derived from sales of integrated circuit products that are components of electronic devices built to industry standards, individual country specifications and other widely accepted specifications. Our products must be designed to conform to these standards and specifications in order to achieve market acceptance. Technology standards and specifications continually evolve, and we may not be able to successfully design and manufacture new products that conform to these new standards or specifications in a timely manner. Additionally, new products we develop to conform to new specifications in some markets may not be accepted in other markets.

**Climate change, use of Conflict Minerals, other environmental concerns and green initiatives also presents other commercial challenges, economic risks and physical risks that could harm our results of operations or affect the manner in which we conduct our business.**

Increasing climate change and environmental concerns could affect the results of our operations if any of our customers would request us to exceed any standard(s) set for environmentally compliant products and services. For example, we have been working with our suppliers, customers, and several industry consortia to develop and provide EU “RoHS” (European Union Restriction of Hazardous Substances) compliant products. We have also implemented procedures to comply with the requirements of the Securities Exchange Act to comply with Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank Act”) regarding the reporting of Conflict Minerals in use, as defined by the Dodd-Frank Act. If we or our suppliers, vendors and manufacturers are able to offer



such products or offer products that are compliant with these standards, but said products are not as reliable due to the lack of reasonably available alternative technologies or materials, we may lose market share to our competitors. Furthermore, while we have implemented procedures to comply with these requirements, our suppliers, vendors and/or manufacturers could fall out of compliance with said requirements without our knowledge.

**Provisions in our Memorandum and Articles of Association may discourage potential acquisition bids for us and prevent changes in our management that our shareholders may favor.**

Provisions in our Memorandum and Articles of Association could discourage potential acquisition proposals and could delay or prevent a change in control transaction that our shareholders favor. These provisions could have the effect of discouraging others from making offers for our ordinary shares or ADSs. As a result, these provisions may prevent the trading price of our ADSs from reflecting the effects of actual or rumored takeover attempts and may prevent shareholders from reselling their ordinary shares or ADSs at or above the price at which they purchased their ordinary shares or ADSs. These provisions may also prevent changes in our management that our shareholders may favor. Our Memorandum and Articles do not permit shareholders to act by written consent, do not permit shareholders to call a general meeting and provide for a classified board of directors, which means shareholders can only elect a limited number of our directors in any given year. Furthermore, our board has the authority to issue up to 250,000,000 preference shares in one or more series. Our board can fix the price, rights, preferences, privileges and restrictions of such preference shares without any further vote or action by our shareholders but subject to any direction that may be given by the shareholders in a general meeting. The issuance of preference shares may delay or prevent a change in control transaction without further action by our shareholders or make removal of management more difficult.

**As we are a Cayman Islands company, it could be difficult for investors to effect service of process on and recover against us or our directors and officers and our shareholders may face difficulties in protecting their interest.**

We are a Cayman Islands company, and many of our officers and directors are residents of various jurisdictions outside the United States. A substantial portion of our assets and the assets of our officers and directors, at any one time, are and may be located in jurisdictions outside the United States. Although we have irrevocably agreed that we may be served with process in Santa Clara, California with respect to actions arising out of or in connection with United States federal securities laws relating to offers and sales of our ordinary shares and/or our ADSs, it could be difficult for investors to effect service of process within the United States on our directors and officers who reside outside the United States, or to recover against us or our directors and officers on judgments of the United States courts predicated upon the civil liability provisions of the United States federal securities laws.

Our corporate affairs are governed by our charter documents, consisting of our Memorandum and Articles of Association, and by the Companies Law and common law of the Cayman Islands. The rights of our shareholders and the fiduciary responsibilities of our directors are governed by Cayman Islands law, which are not as clearly established as under statutes or judicial precedent in jurisdictions such as the United States. While there is some case law in the Cayman Islands on these matters, it is not as developed as, for example, in the United States. In addition, the laws of the Cayman Islands relating to the protection of the interests of minority shareholders differ in some respects from those established under statutes or judicial precedent in existence in the United States. Such differences may mean that our minority shareholders may have less protection than they would have under the laws of the United States. Due to the less protective nature of such laws in the Cayman Islands, our shareholders may have more difficulty in protecting their interests in the face of actions by our management or directors than would shareholders of a corporation incorporated in some other jurisdictions.

**We may become a passive foreign investment company, which could result in adverse U.S. tax consequences to U.S. investors.**

We may be classified as a passive foreign investment company by the U.S. Internal Revenue Service for U.S. federal income tax purposes. Such characterization could result in adverse U.S. tax consequences to you if you are a U.S. investor. For example, if we are a passive foreign investment company, our U.S. investors will become subject to increased tax liabilities under U.S. tax laws and regulations and will become subject to burdensome reporting requirements. The determination of whether or not we are a passive foreign investment company is made on an annual basis and depends on the composition of our income and assets, including goodwill, from time to time. Specifically, we will be classified as a passive foreign investment company for U.S. tax purposes if, after the application of look-through rules, either (a) 75% or more of our gross income in a taxable year is passive income, or (b) the average percentage of our assets (by value) in a taxable year that produce or are held for production of passive income is at least 50%. Our judgment is not binding on the Internal Revenue Service. We cannot assure you that we will not be a passive foreign investment company for the current or any future taxable year. See “Taxation—United States Federal Income Taxation—Passive Foreign Investment Company.”

**Holders of ADSs may not be able to exercise their right to vote.**

Holders of our ADSs may instruct the depositary of our ADSs to vote the ordinary shares underlying their ADSs but only if we ask the depositary to ask for instructions. Otherwise, they will not be able to exercise their right to vote unless they withdraw the ordinary shares underlying the ADSs they hold. However, they may not know about the meeting sufficiently enough in advance to withdraw those ordinary shares. If we ask for instructions, the depositary will notify the holders of the upcoming vote and arrange to deliver our voting materials to them. We cannot assure you that holders will receive the voting materials in time to ensure that they can instruct the depositary to vote their

ordinary shares. In addition, the depositary and its agents are not responsible for failing to carry out voting instructions or for the manner of carrying out voting instructions. This means that holders may not be able to exercise their right to vote, and there is no guarantee that the ordinary shares underlying your ADSs would be voted as requested.

**The depositary for our ADSs may give us a discretionary proxy to vote the ordinary shares underlying your ADSs if holders of ADSs do not vote at shareholders' meetings which could adversely affect their interests.**

Under the deposit agreement for the ADSs, the depositary will give us a discretionary proxy to vote the ordinary shares on behalf of the underlying ADSs at shareholders' meetings if the holder of the ADSs did not vote, unless we notify the depositary that we do not wish to receive said discretionary proxy. Examples where we would not want to receive or exercise a discretionary proxy include, without limitation, instances where we think there is substantial shareholder opposition to the particular question, or we think the particular question would have a material adverse impact on our shareholders.

The effect of this discretionary proxy is that holders of ADSs cannot prevent the ordinary shares underlying their ADSs from being voted, absent the situation described above, and it may make it more difficult for shareholders to influence the management of our company. Holders of our ordinary shares are not subject to a discretionary proxy.

**Holders of ADSs may not receive distributions on ordinary shares or any value for them if it is illegal or impractical to make them available.**

The depositary of our ADSs has agreed to pay to ADS holders the cash dividends or other distributions it or the custodian for our ADSs receives on ordinary shares or other deposited securities after deducting its fees and expenses. Holders of our ADSs will receive these distributions in proportion to the number of ordinary shares the ADSs represent. However, the depositary is not responsible if it decides that it is unlawful or impractical to make a distribution available to any holders of ADSs. We have no obligation to take any other action to permit the distribution of our ADSs, ordinary shares, rights or anything else to holders of our ADSs. This means that ADS holders may not receive the distributions we make on ordinary shares or any value for them if it is illegal or impractical for us to make them available. These restrictions may have a material adverse effect on the value of the ADSs.

**Holders of ADSs may be subject to limitations on transfer of ADSs.**

ADSs represented by American Depositary Receipts (“ADRs”) are transferable on the books of the depository. However, the depository may close its books at any time or from time to time when it deems expedient in connection with the performance of its duties. The depository may refuse to deliver, transfer or register transfers of our ADSs generally when our books or the books of the depository are closed, or at any time if we or the depository thinks it is advisable to do so because of any requirement of law or any government or governmental body, or under any provision of the deposit agreement, or for any other reason.

ITEM 4.

INFORMATION ON THE COMPANY

**HISTORY AND DEVELOPMENT OF THE COMPANY**

Our legal name is O<sub>2</sub>Micro International Limited. We are incorporated in the Cayman Islands. Our registered office is located at Maples Corporate Services Limited, Ugland House, P.O. Box 309, South Church Street, Grand Cayman KY1-1104, Cayman Islands. Our principal executive offices are located at Grand Pavilion Commercial Centre, West Bay Road, P.O. Box 32331 Grand Cayman KY1-1209, Cayman Islands. Our telephone number is (345) 945-1110. We have a subsidiary, O<sub>2</sub>Micro, Inc., which was incorporated as a California corporation in March 1995. In March 1997, O<sub>2</sub>Micro International Limited was incorporated as a Cayman Islands company. In March 1997, we exchanged our ordinary shares and preference shares for common stock and preferred stock of O<sub>2</sub>Micro, Inc. After the exchange, we held all of the outstanding capital stock of O<sub>2</sub> Micro, Inc., our wholly owned subsidiary in the United States. Our shares were initially listed on NASDAQ on August 23, 2000 and on the Cayman Islands Stock Exchange on February 1, 2001. On November 25, 2005, we effected a 50-for-1 share split of our ordinary shares and created an ADS program for our ADSs to be quoted on NASDAQ, with each ADS representing 50 ordinary shares. We delisted our ordinary shares from NASDAQ on November 25, 2005 and listed our ADSs on NASDAQ on November 28, 2005, the next trading day. We subsequently listed our ordinary shares on the SEHK in Hong Kong on March 2, 2006, by way of introduction. On February 27, 2009, we submitted an application for the voluntary withdrawal of the listing of ordinary shares (“Shares”) on the Main Board of the SEHK (collectively referred to as the “Proposed Withdrawal”) for reasons of cost and utility. We have retained our existing primary listing of ADSs on NASDAQ following the Proposed Withdrawal and for the foreseeable future. The Proposed Withdrawal was approved at the Extraordinary General Meeting of Shareholders held on May 30, 2009, and the listing of the Shares on the SEHK was withdrawn on September 9, 2009.

Our agent for service of process in the U.S. for the purpose of our securities filings is our chief executive officer, Sterling Du, c/o O<sub>2</sub>Micro, Inc., 3118 Patrick Henry Drive, Santa Clara, CA 95054.

We have incorporated various wholly-owned subsidiaries, including (among others) O<sub>2</sub>Micro Electronics, Inc. (“Q<sub>2</sub>Micro-Taiwan”), Q<sub>2</sub>Micro International Japan Ltd. (“Q<sub>2</sub>Micro-Japan”), and Q<sub>2</sub>Micro (China) Co., Ltd. (“Q<sub>2</sub>Micro-China”). Q<sub>2</sub>Micro-Taiwan is engaged in operations and sales support services. O<sub>2</sub>Micro-Japan is engaged in sales support services. O<sub>2</sub>Micro-China and other subsidiaries are mostly engaged in research and development services.

For the three years ended December 31, 2018, our principal capital expenditures were approximately \$2.6 million in the purchase of property and equipment.

**BUSINESS OVERVIEW**

Our business focuses on designing, developing and marketing high performance integrated circuits and solutions for manufacturers of products in the consumer electronics, computer, industrial, communications, and automotive

markets. We have targeted, and are designing products for, applications such as LCD and LED monitors, LCD and LED televisions, notebook computers, tablet computers, low/zero emission vehicles, mobile phones, power tools, energy efficient technology relating to sophisticated batteries, LED lighting including general lighting, and portable electronics devices. Some of the features of our integrated circuit products include the following: managing and providing power for LCD and LED lighting; controlling and monitoring battery charging and discharging in portable electronic devices and vehicles; performing DC/DC and AC/DC conversion; and providing select and switch functionality between power sources.

We believe that our focus on these products provides us with an opportunity to participate in large and growing markets. Potential future growth in the LED television, mobile computing, communications, electric vehicles, power tools, uninterrupted power supplies and general lighting represents attractive growth opportunities.

Our integrated circuit products use analog and mixed-signal designs that combine analog and digital circuits on a single chip, reducing the number of components needed for function performance, thereby allowing our customers to reduce the size, weight, power requirements and/or cost of their products. We offer a wide range of proprietary application specific standard products as well as customized products. We work closely with our customers to identify their product needs and establish engineering priorities for new product designs and development. We believe that our system-level expertise and extensive experience with power management systems allow us to more effectively develop proprietary solutions and foster long-term relationships with our customers.

We sell our products to OEMs, ODMs and module makers. Our integrated circuits have been incorporated into products sold by Acer, Black & Decker, Dell, Dyson, General Electric, Hewlett-Packard, Lenovo, LG Electronics, Makita, NEC, Panasonic, Samsung Electronics, Sharp, Skyworth, Sony, TCL, TPV, TTI and Toshiba, among others. We sell our products through our direct sales force, independent sales representatives and/or distributors in Asia and North America. We also have design centers in many of our key markets to provide design and engineering support to our customers. We outsource the fabrication of our products to standard high volume semiconductor foundries. This “fabless” approach allows us to focus on product development, minimize fixed costs and capital expenditures, and access diverse manufacturing technologies.

## Industry Background

The markets for consumer electronics, mobile computing, communications, automotive, and industrial products, such as LCD monitors, LCD and LED televisions, tablets, mobile handsets and portable entertainment devices, power tools, vacuum cleaners, and eVehicles are large and growing as functionality increases and prices decrease. One of the most significant challenges in these markets remains the efficient management of power. As the number of applications and features available for these products has increased, the number and variety of power loads, or individual subsystems requiring voltage or current regulation, has also grown. Each additional application or feature can require multiple functions and circuits that, in turn, require more individually-regulated and managed power sources. Increasingly, manufacturers are turning to innovative new semiconductor technologies to manage the available power source capacity more efficiently.

Power management integrated circuits deliver power and regulate voltage, controlling the flow of electrical energy among the various power loads and energy sources in a product or system. Power management requires a combination of two distinct technological disciplines: digital integrated circuit design and analog integrated circuit design. Digital circuits, such as microprocessor and memory semiconductors, provide most of the functionality of computer processing. However, digital circuits generally cannot handle significant amounts of current or multiple voltage levels. In contrast, analog circuits use and manipulate continuously varying voltage and current levels. Battery power systems, which have relatively high and continuously varying power levels, are inherently analog systems.

Digital integrated circuit technology can be used to manage power systems more intelligently and efficiently and help to prolong battery life in mobile applications. However, since battery power systems are analog by nature, mixed-signal integrated circuits, or circuits that incorporate both digital and analog technologies, are necessary in order to harness the intelligence provided by digital technology. Designing mixed-signal integrated circuits poses a number of difficulties: analog circuits are more sensitive than digital circuits to the physical layout and electrical characteristics of the circuit; analog circuit designers must have a very high level of circuit design experience; and basic differences in the technologies used in digital and analog circuit design make combining the technologies problematic.

In addition, mixed-signal integrated circuits comprise both digital and analog components, and the trend toward more complex devices has increased the number of components substantially. Integrating the functions of those components on a single chip, known as a system-on-a-chip, can enable manufacturers to make products smaller, lighter, and more reliable. Thus, as mobile computing and communications devices grow in complexity and functionality, there is an increasing need for higher levels of systems integration. In addition, variances in battery designs among manufacturers make it more difficult to design intelligent systems that are optimized for particular power systems.

Most consumer electronics, mobile computing, communications, automotive, and industrial product manufacturers need mixed-signal and analog integrated circuits specifically designed to optimize the power system usage in their devices to enable them to offer new devices with richer functionality and longer battery lives. These semiconductors should also be highly integrated and standards-based to help manufacturers create products that are smaller, lighter,

easier to use, more reliable and more cost-efficient to design and produce. In addition, in mobile device markets where product life cycles can be less than one year, these solutions typically need to be developed using advanced design methodologies to allow manufacturers to achieve rapid time-to-market with their new products.

Several different process technologies are available for designing and fabricating analog and digital integrated circuits. Of these, complementary metal oxide semiconductor, or CMOS, is the most widely used process technology, especially for purely digital integrated circuits. CMOS processes are described in terms of feature size, or geometry, and are measured in microns. One micron equals one millionth of a meter. Currently, advanced process technologies achieve feature sizes of 0.09 micron, 0.065 micron, 0.04 micron and smaller. However, small feature size circuits can become damaged when exposed to high voltages and therefore power management integrated circuits are typically fabricated using larger feature sizes. For this reason, older manufacturing facilities, or fabs, having feature sizes of 0.18 micron and 0.5 micron or greater, have traditionally been used in fabricating power management integrated circuits, while the most advanced, and most expensive fabs are used for digital and non-power management analog integrated circuits.

### **Products**

We market power management components and solutions for the communications, computer, consumer, industrial, and automotive markets. Our power management products include ICs to i) provide power for LCD and LED lighting, ii) control and monitoring of battery charging and discharging, iii) DC/DC and AC/DC conversion, iv) provide select and switch functionality between power sources. In particular, our core technologies in the Application Specific Integrated Circuit (“ASIC”) chips are our exclusive, proprietary technology, which allows us to deliver enhanced performance and service to our customers. The majority of our products are sold into the following four end-markets:

**Consumer electronics market**, including LCD and LED televisions, desktop and notebook monitors, portable media players, digital cameras, GPS/PND solutions for directional assistance, PDAs, games, and general lighting products (including LED light bulbs);

**Computer market**, including desktop computers, LCD and LED monitors, tablet computers, notebooks, netbooks, and mobile communication applications, including smart phones; and

**Industrial market and Automotive**, including any product that is specified to operate over an extended temperature range, i.e., beyond the standard commercial operating temperature range of standard semiconductor products (zero degrees to 70 degrees centigrade). These products include battery management systems for power tools, electric bikes, vacuum cleaners, LEV applications, LCD and LED monitors, notebooks, netbooks, industrial PCs, and general lighting products, as well as GPS units for navigational assistance in vehicles, Electric and Hybrid Vehicle (EV/HEV) battery management, and in-vehicle passenger entertainment and communication systems.;

The majority of our revenue is derived from the sale of our products in the consumer, industrial, and computer markets. Additionally, we have increased our efforts to expand our product portfolio addressing opportunities in the automotive and communications markets.

### **Marketing, Sales, and Customer Support**

Our marketing strategy is focused on the sale of proprietary analog and mixed-signal integrated circuits to customers in the consumer electronics, computer, industrial, communications, and automotive markets. These markets tend to be dominated by a small number of major brand name companies. As a result, we focus our resources on the major vendors in each market.

We primarily sell proprietary application specific products to our customers and work with them on new product development. We also design customized products for our customers. We work directly with our customers to create demand for our products by providing them with application specific product information for their system design, engineering and procurement groups. We actively participate in their design processes to introduce them to our products and the target applications our products address. We endeavor to design products that will meet increasingly complex and specific design requirements, but which will also support widespread demand for these future products. We typically undertake a four-to-eight month development process with our customers. If successful, this process culminates in a customer deciding to use our product in its system and/or products, which we refer to as a design win. Volume production generally takes an additional three-to-six months after the initial design win confirmation. Once our products are accepted and designed into an application, the customer is likely to continue to use the same power architecture and derivative products in a number of its models, which tends to extend our product life cycles.

We sell our products to OEMs, ODMs and module makers. We market and sell these products through a combination of our direct sales force, independent sales representatives and distributors. We maintain direct sales offices in most of our major markets which include China, Taiwan, Korea, and Japan.

We pay our direct sales force on a salary and performance bonus basis only. Our independent sales representatives are paid on a commission basis, based on a percentage of the actual sales referred by them. For sales through sales representatives, we invoice and deliver our products directly to the customers. We have also entered into distributorship arrangements with distributors for the sale of our products at the request of several of our major end-customers. For our other customers, sales are made through our direct sales offices in Japan, Taiwan, Korea and China. It is customary practice for OEMs, ODMs and module makers to purchase products like ours through distributors because of the ancillary services provided by them such as inventory storage, payment terms and conditions and just-in-time delivery. We may provide a discount on the prices of the products we sell to our



distributors (as compared to the prices we offer to end customers), depending on the terms and conditions of the individual purchases. We evaluate our inventory on a quarterly basis and full provision is made for inventory which is over six months old and without end customer demand based on forecasted product demand and market conditions.

Our marketing efforts include market analysis, participation in industry trade shows and technical conferences, sales training, publication of technical articles, maintenance of our web site and advertising. We maintain customer support staff in China, Japan, Korea, Taiwan, and the United States for post order servicing and applications support.

### **Seasonality**

The consumer electronics and computer markets are characterized by seasonal volume increases primarily driven by increased consumer spending during the holiday season. We normally experience the higher sales volume to our customers in these markets, when such customers increase their inventories in anticipation of increased seasonal demand. Our customers in the industrial and communications markets are to a lesser extent subject to seasonal consumer demand. As a result, our sales volume to those customers has been largely consistent from quarter-to-quarter.

## Customers

We focus on the major OEMs (or brand owners) in the consumer electronics, computer, industrial and communications markets. Many of these major OEMs use third-party providers, such as ODMs, module makers or other intermediaries, to produce their products or portions of their products containing our components. Hence, the majority of our direct sales are to these third-party providers.

We have no long-term volume sales contracts with any of our major customers. The majority of our sales to customers are conducted on the basis of purchase orders, which set out the specific terms for a particular sale. We price our products primarily with reference to the prevailing market conditions, taking into consideration the complexity, technology and features of the product, the order size and the relationship with the customer.

The table below sets forth, for the periods indicated, the dollar amount of our net sales to unaffiliated customers by geographic region:

	Years Ended December 31		
	2018	2017	2016
	(in thousands)		
China	\$55,303	\$51,962	\$46,784
Taiwan	1,987	2,305	3,009
Japan	1,485	3,148	2,535
Malaysia	1,396	94	7
Korea	1,201	1,435	2,257
Singapore	959	905	1,539
Other	383	356	430
	\$62,714	\$60,205	\$56,561

We generally extend to our customers credit terms varying from 30 to 60 days. We may adjust our usual credit terms according to each customer's credit history as well as local market practice. Our customers generally pay us either by direct wire transfer or under letter of credit arrangement. To date, we have not experienced any material problems relating to customer payments or material write-offs of accounts receivable due to uncollectability.

## Manufacturing

We subcontract the manufacture of our products and most of the testing for our products to semiconductor foundries, assembly and testing service providers. This "fabless" approach allows us to focus on product development, reduce fixed costs and capital expenditures, and access diverse manufacturing technologies.

We use established mainstream processes for the manufacture of our products. This approach reduces our technical risks and minimizes the risks related to production capacity constraints.

### *Wafer Manufacturing*

Wafer manufacturing is a capital intensive and complex operation which takes place at dedicated facilities of semiconductor foundries. After we have designed our integrated circuits, we place orders with a semiconductor

foundry to fabricate wafers with our integrated circuits embedded in them. The semiconductor foundry purchases raw unprocessed wafers, or silicon substrates, and processes them according to mutually agreed manufacturing specifications to fabricate the wafers used in our products. Currently, the majority of our wafers are fabricated using 0.15 to 0.4 micron BCD semiconductor processes. The wafer fabrication process generally takes 6 to 10 weeks. Fabricated wafers are then shipped by the semiconductor foundry, according to our instructions, to either an assembly service provider or to an electrical wafer sort service provider.

Our major semiconductor foundry providers are CR Micro, VIS, and TPSC. We do not enter into long-term contracts with our semiconductor foundry providers. They manufacture our products on a purchase-order basis in accordance with our specifications and requirements. In general, the cost charged to us for the foundry services depends on the manufacturing process technologies, as well as order size and foundry capacity utilization.

#### *Assembly and Testing*

The fabricated wafers may or may not require electrical wafer sort prior to assembly. The completed wafers are either sent to an assembly service provider for assembly or held at our warehouse facilities, or an “inventory hub,” for assembly at a later date. An inventory hub is a provider of warehousing services. We often hold inventory of our semi-finished products in wafer form because it is at this manufacturing stage that most time has been invested, with much of the cost not yet incurred, and we then have the flexibility of choosing the type of packaging into which they are to be assembled. The wafer sort and assembly process generally takes three to six weeks.

Once our integrated circuits are assembled and packaged, they are ready for final electrical testing. We instruct the assembly service provider to send our packaged integrated circuits to a testing service provider for final testing or our warehouse facilities (or an inventory hub) for testing at a later date. The electrical testing process generally takes a few days. Once our products have been tested, they are ready for use by our customers.

Finished products may be sent to our customers or their designees such as third party service providers that manufacture their products or a portion of their products containing our integrated circuits. Our customers may request for our integrated circuits to be shipped in plastic tubes or trays, several to a tube or tray, or use a form of packaging called “tape and reel” that more readily provides for automated assembly of our integrated circuits into their products. If a customer orders “tape and reel” packaging, this is done either at a testing service provider or a “tape and reel” service provider prior to shipment of our products to the customer.

We utilize several assembly and testing service providers in Taiwan, China and other areas of Asia on a purchase order basis. They assemble and test our products based on our specifications and requirements. In general, the cost charged to us for these assembly and testing services depends on prevailing market rates for these services and our relationship with the service provider. Typically analog and mixed-signal products have a greater portion of their product cost associated with product testing than digital products.

Our current credit terms with our foundry, assembly and testing service providers vary from 30 to 60 days, depending on our relationships with each of them. We generally pay our service providers by direct wire transfer.

We also have made investments in certain of our current suppliers and potential future suppliers, including software developers, foundries and testing service providers. These investments enable us to enhance our business relationships with these suppliers to ensure the adequacy of foundry capacity allocation and quality of services provided to us. We plan to continue to evaluate additional investment opportunities in our supply chain.

## **Competition**

We compete in the market for analog and mixed-signal integrated circuits based on such factors as product performance, power efficiency, new technologies, functional innovation, reliability, price and availability. We believe our principal competitors include Renesas Electronics Corporation, Analog Devices, Inc., Maxim Integrated Products, Inc., Monolithic Power Systems, Inc., Ricoh Company, Ltd., Richtek Technology Corporation, Rohm Co., Ltd, Silergy Corporation and Texas Instruments Incorporated. In addition to these competitors, other integrated circuit companies may decide to enter the market with analog and mixed-signal integrated circuit products that compete with our products or incorporate functions similar to those provided by our products.

## **Intellectual Property**

Our intellectual property is primarily developed in-house. We do, from time to time, acquire intellectual property from third parties which we believe is instrumental or complementary to our business. We also license and sell our intellectual property to third parties in exchange for royalties or other consideration. From time to time, we may seek acquisitions to acquire businesses or technologies where synergies exist. Our success depends significantly upon our ability to protect our intellectual property. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our products or obtain and use information that we regard as proprietary. Competitors may recruit our employees who have access to our proprietary technologies, processes and operations.

We rely in part on patents to protect our intellectual property. As of December 31, 2018, we had approximately 542 patents issued in the United States and approximately 1,217 patents issued in other countries. In addition, we had approximately 25 patent applications pending in the United States Patent and Trademark Office, and approximately 192 patent applications pending in various countries other than the United States which may or may not be issued. Even if these patents are issued, taken together with our existing patents, they may not be sufficiently broad to protect all of our proprietary rights, or they may prove to be unenforceable. To protect our proprietary rights, we also rely on a combination of copyrights, trademarks, trade secret laws, contractual provisions, licenses and mask work protection under the Federal Semiconductor Chip Protection Act of 1984, and similar laws in other jurisdictions. We also enter

into confidentiality agreements with our employees, consultants and customers, and we seek to control access to, and distribution of, our proprietary information. We may from time to time grant rights to third parties for our patents and other intellectual property.

The laws of some foreign countries do not protect our proprietary rights to the same extent as do the laws of the United States, and many companies have encountered substantial infringement problems in these countries, including countries in which we have sold and continue to sell a significant portion of our products. There is a risk that our means of protecting our proprietary rights may not be adequate. For example, our competitors may independently develop similar technology, duplicate our products, or design around our patents and our other intellectual property rights. If we fail to protect our intellectual property adequately, it would make it easier for our competitors to sell competing products.

Given the inherent uncertainties in litigation, there cannot be any assurance that we will prevail in any of the pending litigation matters, and we cannot predict the outcome of any such litigation. Litigation is costly, time consuming, and may distract management from other important tasks and, in patent litigation where we are the plaintiff, there is a risk that our patents may be held invalid or unenforceable. In addition, in any litigation arising from claims that we infringe on the intellectual property rights of others, an adverse result could involve an injunction to prevent the sales of a material portion of our products, a reduction or the elimination of the value of related inventories, and the assessment of a substantial monetary award for damages related to past sales, any of which could have a material adverse effect on our result of operations and financial condition.

## ORGANIZATIONAL STRUCTURE

We are incorporated under the laws of the Cayman Islands and we are the parent company for the various subsidiaries that conduct our business on a worldwide basis. As of December 31, 2018, our significant subsidiaries, all of which are wholly-owned, are:

<i>Significant Subsidiary</i>	<i>Country of Incorporation</i>	<i>Date of Incorporation</i>
O <sub>2</sub> Micro, Inc.	U.S.A.	March 1995
O <sub>2</sub> Micro Electronics, Inc.	Taiwan	March 1999
O <sub>2</sub> Micro International Japan Limited	Japan	August 1999
O <sub>2</sub> Micro (Wuhan) Co., Ltd.	China	January 2001
O <sub>2</sub> Micro (Beijing) Co., Ltd.	China	February 2001
O <sub>2</sub> Micro (China) Co., Ltd.	China	April 2001
O <sub>2</sub> Micro Korea Ltd.	Korea	March 2003
O <sub>2</sub> Micro (Chengdu) Co., Ltd.	China	July 2004
O <sub>2</sub> Micro (Shenzhen) Co., Ltd.	China	August 2018

## PROPERTY, PLANT AND EQUIPMENT

The table below describes our headquarters and the facilities where the above subsidiaries are located as of December 31, 2018:

<b>Location</b>	<b>Approx. Available Square Feet</b>	<b>Lease Expiration</b>
California, USA	37,180	not applicable
Taipei, Taiwan	10,828	2019
Hsinchu, Taiwan	19,632	2019
Tokyo, Japan	1,420	2021
Wuhan, China	14,982	2021
Beijing, China	5,251	2020
Shanghai, China	20,179	not applicable
Seoul, Korea	434	2020
Chengdu, China	23,585	2019
Shengzhen, China	11,287	2020
Grand Cayman, Cayman Islands	600	2020

We maintain our Cayman Islands office to handle corporate affairs, process invoices and receive payments. Research and development, marketing, sales, applications and administrative staff are located in California, USA and China. Marketing, sales, applications, design, worldwide production support, final inspection and shipping, and general and administrative staff are located in Taiwan. We have offices in Japan and Korea for marketing, sales, design, and applications. We believe our current facilities are adequate for our needs for the foreseeable future, and that any additional space required will be available to us on commercially reasonable terms.

In May 2004, we purchased a 37,180 square foot building in California, housing our USA operations. The purchase price was approximately \$4.6 million. In October 2005, we purchased a 30,448 square foot facility in Shanghai, China for approximately \$7.1 million. In April 2006, we purchased 29,935 square foot of undeveloped land in Hsinchu, Taiwan for approximately \$8.8 million. In August 2009, we sold the land in Hsinchu, Taiwan, to a developer in exchange for a pre-sale of a portion of the real estate after it is developed, which will include a portion of an office building and a portion of a parking lot, with a carrying value of approximately \$8.9 million.

In the fourth quarter of 2014, a portion of the building units in Taiwan were completed. Considering our current operating scale and capital requirements, we determined to lease out three units in Taiwan to a third party in December 2014. We also sold five building units in Taiwan to third parties since the fourth quarter of 2014. As a result of the sale of building units in Taiwan, net gains of \$767,000 and \$458,000 were recorded for the years ended December 31, 2015 and 2014, respectively. In the third quarter of 2016, we sold one of the three units of our office building in China and a net gain of \$1,725,000 was recorded for the year ended December 31, 2016. There were no building transactions occurred for the year ended December 31, 2018 and 2017.

ITEM 4A. UNRESOLVED STAFF COMMENTS

None.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

Overview

We design, develop and market high performance integrated circuits for power management components and systems. We also license a limited portion of our proprietary intellectual property to third parties. Our net sales have been derived primarily from the sale of analog and mixed-signal integrated circuit products to customers in the consumer electronics, computer, industrial, communications, and automotive markets.

Our net sales from operations were \$62.7 million in 2018, \$60.2 million in 2017, and \$56.6 million in 2016, respectively. The increase in net sales in 2018 was primarily due to the increase in demand of our battery management products. Although we cannot estimate the extent to which our business will be affected in the future, we anticipate continuing to diversify our customer base and market focus by providing new products that are used in consumer electronics, computer, industrial, communications and automotive markets. Our overall gross margin has fluctuated in the past and is likely to fluctuate in the future due to the stages of our products in their life cycles, variations in our product mix, the timing of our product introductions and specific product manufacturing costs. New products typically have higher gross margins than products that are more mature. Gross margins on the products we sell will typically decline over the life of these products due to competitive pressures and volume pricing agreements.

Operating expenses from operations were \$40.1 million in 2018, \$37.0 million in 2017, and \$35.1 million in 2016. Our operating expenses increased in 2018 primarily due to increased personnel and engineering expenses in 2018.

Our net income was \$2.1 million in 2018. Our net loss was \$6.1 million in 2017 and \$3.0 million in 2016. The increase in net income in 2018 was primarily due to the net gain recognized on long-term investments.

We utilize a fabless semiconductor business model, which means we focus on designing, developing and marketing products, while having these products manufactured by large independent semiconductor foundries. As a fabless semiconductor company, we do not need to invest significant capital to manufacture semiconductor devices, and can take advantage of some of the cost-efficiencies of third-party foundries. We place purchase orders for specific quantities of packaged semiconductor devices or wafers at set prices. We currently use third parties to test and assemble most of our products, which reduces the capital we need to invest in these activities. We also use independent assembly suppliers for the production of our systems security solutions products.

We sell our products through a combination of direct sales offices, sales representatives and distributors. Revenue from product sales to customers and distributors is generally recognized at the time of shipment, including revenue that has been realized and earned. Under certain conditions, customers may return defective products and we will provide replacements at no charge to the customers for defective products.

#### Exit activities

In December 2014, we determined to dissolve our Intelligent Power Group, one of the product lines of our Integrated Circuit Group, which comprised of the IC products such as DC/DC controller ICs, battery charger controllers ICs, charger ICs, and LDO Regulator ICs. The actions taken to dissolve the Intelligent Power Group resulted in significantly reducing the operating activities of the Intelligent Power products and terminating the related workforce. For the year ended December 31, 2014, we recorded costs associated with exit activities of \$3,027,000, of which \$82,000 and \$2,945,000 were related to a loss on asset write-off and one-time employee termination benefits, respectively. We determined that those assets directly held/carried by the Intelligent Power Group provided no future benefit and recognized a loss on asset write-off, including property and equipment of \$24,000 and deferred charges of \$58,000. One-time employee termination benefits of \$2,945,000 were accrued and included in accrued expenses and other current liabilities on the balance sheet as of December 31, 2014 and were settled in 2015. No further transactions were occurred for the years ended December 31, 2018, 2017 and 2016.



## Critical Accounting Policies

Our discussion and analysis of our financial condition and results of operations are based upon our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States.

The preparation of our consolidated financial statements requires us to make estimates and judgments that affect the reported amount of assets, liabilities, net sales and expenses, and related disclosure of contingent assets and liabilities. We evaluate our estimates on an ongoing basis, including those related to valuation allowance for deferred tax assets, allowance for doubtful accounts, inventory valuation, useful lives for property and equipment, impairment of long-lived assets, contingencies, fair value, impairment of securities, allowance for sales returns, and uncertain tax liabilities. We base our estimates and judgments on our historical experience, knowledge of current conditions and our beliefs of what could occur in the future considering available information. Because our estimates may vary in each situation, our actual results may differ from our estimates under different assumptions and conditions.

Our management considers the following factors in reviewing our financial statements:

- the selection of critical accounting policies; and
- the judgments and other uncertainties affecting the application of those critical accounting policies.

The selection of critical accounting policies, the judgments and other uncertainties affecting the application of those policies and the sensitivity of reported results to changes in conditions and assumptions are factors to be considered when reviewing our financial statements. Our principal accounting policies are set forth in detail in Note 2 to our consolidated financial statements included elsewhere in this Annual Report.

We believe the following critical accounting policies affect our more significant judgments used in the preparation of our financial statements.

### Revenue Recognition and Accounts Receivable Allowances

We generate revenue primarily from product sales, either directly to a customer or through a distributor. In determining whether a contract exists, we evaluate the terms of the arrangement including rights, obligations and payment term, the relationship with the customer or distributor and their ability to pay.

At contract inception, we assess the goods and shipping services promised in its contracts with customers and identify a single performance obligation that we satisfy at a point in time. We recognize product revenue from direct end customers and distributors and when the following events have occurred: (a) we have transferred physical possession of the products, (b) we have a present right to payment, (c) the customer has legal title to the products, and (d) the customer bears significant risks and rewards of ownership of the products. In accordance with the shipping terms specified in the contracts, these criteria are generally met when the products are shipped from our vendors (such as the “Ex Works” shipping term) or delivered to the customers’ locations (such as the “Delivered Duty Paid” shipping term). Payment for sales to customers is generally due on standard commercial terms. The revenue recognized is adjusted based on an analysis of historical data and contractual terms. These adjustments, which are not material, generally include adjustments for pricing arrangements, product returns and incentives.

In addition, we record allowances for accounts receivable that we estimate may not be collected. We monitor collectability of accounts receivable primarily through review of accounts receivable aging. When collection is at risk, we assess the impact on amounts recorded for bad debts and, if necessary, record a charge in the period such evaluation is made.

## **Inventories**

Our inventories are stated at the lower of standard cost or net realizable value. Cost is determined on a currently adjusted standard basis, which approximates actual cost on a first-in first-out basis. Because of the cyclicity of the market, inventory levels, obsolescence of technology and product life cycles, we write down inventories to net realizable value based on backlog, forecasted product demand and historical sales levels. Backlog is subject to revisions, cancellations and rescheduling. Actual demand and market conditions may be lower than those projected by us. This difference could have a material adverse effect on our gross margin should additional inventory write downs become necessary. For the years ended December 31, 2018, 2017, and 2016, inventory write-downs were \$1.3 million, \$642,000, and \$1.5 million, respectively.

## **Long-term Investments**

Long-term investments in listed companies over which we do not exercise significant influence are recorded at fair value, and any changes in fair value are recognized in net income. Prior to the adoption of Accounting Standards Update (“ASU”) 2016-01 and 2018-03 in 2018, these investments in listed companies are classified as available-for-sale securities and are recorded at fair value. Unrealized gains and losses on these investments are included in accumulated other comprehensive income and loss as a separate component of shareholders’ equity, net of any related tax effect, unless unrealized losses are deemed other-than-temporary. Unrealized losses are recorded as a charge to income when deemed other-than-temporary.

Long-term investments, including non-marketable equity investments and interests in venture capital funds, are measured at cost with adjustments for observable changes in price or impairments since those investments in equity securities do not have readily determinable fair value. Prior to the adoption of ASU 2016-01 in 2018, these securities were accounted for using the cost method of accounting, measured at cost less other-than-temporary impairment.

For the year ended December 31, 2018, we recognized \$9.9 million net gain on long-term investments. For the years ended December 31, 2017 and 2016, no impairment charges were recorded.

### **Long-Lived Assets**

We perform periodic reviews to determine whether facts and circumstances exist that would indicate that the carrying amounts of long-lived assets might not be fully recoverable. If facts and circumstances indicate that the carrying amount of long-lived assets might not be fully recoverable, we compare projected undiscounted net cash flows associated with the related assets over their estimated remaining useful life against their respective carrying amounts. In the event that the projected undiscounted cash flows are not sufficient to recover the carrying value of the assets, the assets are written down to their estimated fair values based on the expected discounted future cash flows attributable to the assets. Evaluation of impairment of long-lived assets requires estimates in the forecast of future operating results that are used in the preparation of the expected future undiscounted cash flows. For the years ended December 31, 2018, 2017 and 2016, no impairment charges were recorded.

### **Income Taxes**

The provision for income tax represents income tax paid and payable for the current year plus the changes in the deferred income tax assets and liabilities during the year. Deferred income tax assets are primarily the tax effects of the operating loss carry-forwards, research and development credit carry-forwards and temporary differences. On a periodic basis we evaluate the deferred tax assets balance for realizability. To the extent we believe it is more likely than not that some portion of deferred tax assets will not be recognized, we will increase the valuation allowance against the deferred tax assets. Realization of the deferred tax assets is dependent primarily upon future taxable income, changes in tax laws and other factors. These changes, if any, may require possible material adjustment to the deferred tax assets, resulting in a reduction in net income in the period when such determinations are made. The valuation allowance as of December 31, 2018 and 2017 was 6.9 million and \$6.8 million, respectively. We adopt a two-step approach to recognizing and measuring uncertain tax positions. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount which is more than 50% likely of being realized upon ultimate settlement.

We evaluate our future growth phase and working capital requirements of each entity in the group in the foreseeable future to consider the repatriation of earnings from subsidiaries of reinvestment of undistributed earnings. No incomes taxes expense and deferred taxes liabilities will be accrued by us if we plan to reinvest undistributed earnings of subsidiaries. However, on the other hand, if we plan to remit the undistributed earnings of subsidiaries, the accrual will be made based on our intention. Before the year of 2015, we planned to reinvest the undistributed earnings of all subsidiaries and did not accrue any income tax expense and deferred taxes liabilities. Beginning in the year of 2015, to better position ourselves for the future growth phase, we considered to remit the undistributed earnings of subsidiaries in Taiwan and China. As a result, deferred tax liabilities from withholding tax for the unremitted earnings in Taiwanese and Chinese subsidiaries have been recorded for \$681,000 and \$906,000 as of December 31, 2018 and 2017, respectively.

On December 22, 2017, the President of the United States signed into law the Tax Cuts and Jobs Act (the “Tax Act”). The Tax Act affects the Company by (i) reducing the U.S. tax rate from 35% to 21% effective January 1, 2018, and (ii) impacting the values of the deferred assets and liabilities. Pursuant to U.S. GAAP, changes in tax rates and tax laws are accounted for in the period of enactment, and the resulting effects are included as components of the income tax provision related to continuing operations within the same period. Therefore, the following changes in the tax laws have been accounted for in 2017. Our deferred tax assets and liabilities and offsetting valuation allowance have been remeasured at the new enacted tax rate as of December 31, 2017. The amount of U.S. net operating losses that we have is available and our ability to utilize them to reduce future taxable income is not impacted by the Tax Act. In December 2017, the SEC staff issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act (“SAB 118”) which allows companies to record provisional amounts during a measurement period not to extend beyond one year of the enactment date. Since the Act was passed late in the fourth quarter of 2017, and ongoing guidance and accounting interpretation was yet to be issued, our accounting of the transition tax and deferred tax re-measurements were incomplete as of December 31, 2017. We filed its 2017 Federal corporate income tax return in the first quarter of 2018. The final analysis and impact of the Act is reflected in the tax provision and related tax disclosures for the year ended December 31, 2018. There was a no material change in estimate which would have been reflected within the measurement period in accordance with SAB 118.

### **Legal Contingencies**

We periodically assess each matter in order to determine if a contingent liability should be recorded. In making the determination, we may, depending on the nature of the matter, consult with external counsel and technical experts. Based on the information obtained combined with our judgment regarding all the facts and circumstances of each matter, we reserve the right to determine whether it is probable that a contingent loss may be incurred and whether the amount of such loss can be estimated. Should a loss be probable and estimable, we will record a contingent loss by taking into consideration the advice received from experts in the specific matter, current status of legal proceedings, prior case history and other factors. Should the judgments and estimates be incorrect, we may need to record additional contingent losses that could materially adversely impact our results of operations.

## Stock-Based Compensation

We grant stock options to our employees and certain non-employees, and we 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 expense ratably over the requisite service periods. We have elected to use the Black-Scholes option pricing model to determine the fair value of stock options on the date of grant. The option pricing module requires the input of highly subjective assumptions, including the expected stock price volatility, risk-free interest rate and expected option life, and by estimated option shares to be vested at the end of the vesting schedule. We also grant restricted stock units (“RSU”) to our employees and the RSU are measured based on the fair market value of the underlying stock on the dates of grant.

## Fair Value Measurements

We measure our cash equivalents and marketable securities at fair value. We also determine the fair value of long-term investments and long-lived assets whenever events or changes in circumstances indicate the carrying value may not be recoverable. 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 liability. A three-tier fair value hierarchy is established as a basis for considering such assumptions and for inputs used in the valuation methodologies in measuring fair value:

Level 1 – Observable inputs such as quoted prices for identical instruments in active markets;

Level 2 – Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly;

Level 3 – Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

## Recent Accounting Pronouncements

Please refer to the discussions in note 2 to the consolidated financial statements.

## Operating Results

The following table summarizes historical results of operations as a percentage of net sales for the periods shown.

	Years Ended December 31		
	2018	2017	2016
Consolidated Statement of Operations Data:			
Net sales	100.0%	100.0%	100.0%
Cost of sales	49.0	48.9	48.3
Gross margin	51.0	51.1	51.7
Operating expenses:			
Research and development	31.5	29.9	27.7
Selling, general and administrative	32.5	31.6	34.4
Litigation income	-	-	-
Total operating expenses	64.0	61.5	62.1
Loss from operations	(13.0)	(10.4)	(10.4)
Non-operating income–net	18.1	1.8	7.0

Income tax expense	1.8	1.6	1.9
Net income (loss)	3.3	% (10.2)%	(5.3)%

The following table sets forth the breakdown of our net sales by product category for the periods shown:

	Years Ended December 31		
	2018	2017	2016
	<i>(in thousands)</i>		
Integrated Circuits:			
Mixed-signal	\$39,603	\$40,334	\$40,866
Analog	23,063	19,801	15,623
Digital	48	50	65
Licensed Intellectual Property	-	20	7
Total	\$62,714	\$60,205	\$56,561

Years Ended December 31, 2018 and 2017.

*Net Sales.* Net sales consisted of product revenues generated principally by sales of our integrated circuit products. Net sales for the year ended December 31, 2018 were \$62.7 million, an increase of \$2.5 million or 4.2% from \$60.2 million for the year ended December 31, 2017, which primarily resulted from the increase in demand of our battery management products. In 2018, net sales from our mixed-signal integrated circuit products were \$39.6 million, a decrease of \$731,000 or 1.8% from \$40.3 million in 2017, which primarily resulted from slight decrease in demand of our LED lighting products. In 2018, net sales from analog integrated circuit products were \$23.1 million, an increase of \$3.3 million or 16.5% from \$19.8 million in 2017, which resulted primarily from increased sales of our battery management products. Net sales from our digital integrated circuit products were \$48,000 in 2018, a decrease of \$2,000 or 4.0% from \$50,000 in 2017. Net sales from our licensed intellectual property were \$0 in 2018, a decrease of \$20,000 or 100.0% from \$20,000 in 2017.

*Gross Profit.* Gross profit represents net sales less cost of sales. Cost of sales primarily consists of the costs of purchasing packaged integrated circuit products manufactured and assembled for us by independent foundries and packaging vendors and other costs associated with the procurement, storage and shipment of these products. Gross profit from continuing operations for the year ended December 31, 2018, was \$32.0 million, an increase of \$1.2 million or 3.9% from \$30.8 million for the year ended December 31, 2017. This increase was primarily due to the increased sales in our battery management products that have higher margin in 2018. Gross profit as a percentage of net sales for the year ended December 31, 2018, decreased to 51.0% from 51.1% for the year ended December 31, 2017, primarily due to the product mix of sales of new products with lower gross margins. We expect that our gross profit as a percentage of net sales will continue to fluctuate in the future as a result of the stages of our products in their life cycles, variations in our product mix, the timing of our product introductions and specific product manufacturing costs.

*Research and Development Expenses.* Research and development expenses consist primarily of salaries and related costs of employees engaged in research, design and development activities and, to a lesser extent, expenses for engineering expenses (e.g. one-time pilot run, engineering sample, tooling, and testing expenses). Research and development expenses for the year ended December 31, 2018, were \$19.8 million, an increase of \$1.8 million or 9.9% from \$18.0 million for the year ended December 31, 2017. The increase primarily resulted from increased number of employees engaged in research and design activities. As a percentage of net sales, research and development expenses were 31.5% for the year ended December 31, 2018, an increase from 29.9% for the year ended December 31, 2017. Research and development expenses as a percentage of net sales will fluctuate from quarter to quarter depending on the amount of net sales and the success of new product development efforts, which we view as critical to our future growth. At any point in time, we may also have internal research and development projects underway, which may or may not lead to new product designs. We expect to continue the development of innovative technologies and processes for new products and we believe that a continued commitment to research and development is essential in order to maintain the competitiveness of our existing products and to provide innovative new product offerings. Therefore, we expect to continue to invest significant resources in research and development in the future.

*Selling, General and Administrative Expenses.* Selling, general and administrative expenses consist primarily of employee-related expenses, office facilities costs, promotional expenses, and travel expenses. Selling, general and administrative expenses for the year ended December 31, 2018, were \$20.3 million, an increase of \$1.3 million or 6.7% from \$19.0 million for the year ended December 31, 2017. This increase was primarily due to increased office facilities costs, promotional expenses, and travel expenses. As a percentage of net sales, selling, general and administrative expenses were 32.5% for the year ended December 31, 2018, an increase from 31.6% for the year ended December 31, 2017.

*Litigation Income.* Litigation income consists primarily of amounts received from settlement, damage awards, and award of costs or related interest. Litigation income for the year ended December 31, 2018 was \$0, a decrease of \$19,000 or 100.0% from \$19,000 for the year ended December 31, 2017.

*Non-operating Income (losses)-net.* Non-operating income (loss)-net reflects primarily interest earned on cash and cash equivalents and short-term investments, foreign exchange transaction gains or losses, net gain recognized on long-term investments. Non-operating income-net was \$11.4 million for the year ended December 31, 2018, an increase of \$10.3 million from non-operating income-net of \$1.1 million for the year ended December 31, 2017, primarily due to increased net gain recognized on long-term investments as a result of our adoption of ASU 2016-01.

*Income Tax Expense.* Income tax expense was \$1.1 million for the year ended December 31, 2018, a slight increase of \$131,000 from \$1.0 million for the year ended December 31, 2017.

Years Ended December 31, 2017 and 2016.

*Net Sales.* Net sales consisted of product revenues generated principally by sales of our integrated circuit products. Net sales for the year ended December 31, 2017 were \$60.2 million, an increase of \$3.6 million or 6.4% from \$56.6 million for the year ended December 31, 2016, which primarily resulted from the increase in demand of our battery management products. In 2017, net sales from our mixed-signal integrated circuit products were \$40.3 million, a decrease of \$532,000 or 1.3% from \$40.9 million in 2016, which primarily resulted from slight decrease in demand of our LED driver products. In 2017, net sales from analog integrated circuit products were \$19.8 million, an increase of \$4.2 million or 26.7% from \$15.6 million in 2016, which resulted primarily from increased sales of our battery management products. Net sales from our digital integrated circuit products were \$50,000 in 2017, a decrease of \$15,000 or 23.1% from \$65,000 in 2016. Net sales from our licensed intellectual property were \$20,000 in 2017, an increase of \$13,000 or 185.7% from \$7,000 in 2016.



*Gross Profit.* Gross profit represents net sales less cost of sales. Cost of sales primarily consists of the costs of purchasing packaged integrated circuit products manufactured and assembled for us by independent foundries and packaging vendors and other costs associated with the procurement, storage and shipment of these products. Gross profit from continuing operations for the year ended December 31, 2017, was \$30.8 million, an increase of \$1.5 million or 5.2% from \$29.2 million for the year ended December 31, 2016. This increase was primarily due to the increased sales in our battery management products that have higher margin in 2017. Gross profit as a percentage of net sales for the year ended December 31, 2017, decreased to 51.1% from 51.7% for the year ended December 31, 2016, primarily due to the product mix of sales of new products with lower gross margins. We expect that our gross profit as a percentage of net sales will continue to fluctuate in the future as a result of the stages of our products in their life cycles, variations in our product mix, the timing of our product introductions and specific product manufacturing costs.

*Research and Development Expenses.* Research and development expenses consist primarily of salaries and related costs of employees engaged in research, design and development activities and, to a lesser extent, expenses for engineering expenses (e.g. one-time pilot run, engineering sample, tooling, and testing expenses). Research and development expenses for the year ended December 31, 2017, were \$18.0 million, an increase of \$2.3 million or 15.0% from \$15.6 million for the year ended December 31, 2016. The increase primarily resulted from increased number of employees engaged in research and design activities, and increased engineering expenses associated with design and development of new products. As a percentage of net sales, research and development expenses were 29.9% for the year ended December 31, 2017, an increase from 27.7% for the year ended December 31, 2016. Research and development expenses as a percentage of net sales will fluctuate from quarter to quarter depending on the amount of net sales and the success of new product development efforts, which we view as critical to our future growth. At any point in time, we may also have internal research and development projects underway, which may or may not lead to new product designs. We expect to continue the development of innovative technologies and processes for new products and we believe that a continued commitment to research and development is essential in order to maintain the competitiveness of our existing products and to provide innovative new product offerings. Therefore, we expect to continue to invest significant resources in research and development in the future.

*Selling, General and Administrative Expenses.* Selling, general and administrative expenses consist primarily of employee-related expenses, office facilities costs, promotional expenses, and travel expenses. Selling, general and administrative expenses for the year ended December 31, 2017, were \$19.0 million, a decrease of \$434,000 or 2.2% from \$19.5 million for the year ended December 31, 2016. This decrease was primarily due to decreased office facilities costs. As a percentage of net sales, selling, general and administrative expenses were 31.6% for the year ended December 31, 2017, a decrease from 34.4% for the year ended December 31, 2016.

*Litigation Income.* Litigation income consists primarily of amounts received from settlement, damage awards, and award of costs or related interest. Litigation income for the year ended December 31, 2017 was \$19,000, a decrease of \$4,000 or 17.4% from \$23,000 for the year ended December 31, 2016.

*Non-operating Income (losses)-net.* Non-operating income (loss)-net reflects primarily interest earned on cash and cash equivalents and short-term investments, foreign exchange transaction gains or losses, impairment loss on long-term investments, and disposal gain on sale of long-term investments and real estate. Non-operating income-net was \$1.1 million for the year ended December 31, 2017, a decrease of \$2.8 million from non-operating loss-net of \$3.9 million for the year ended December 31, 2016, primarily due to no occurrence of gain on sale of real estates and decreased gain on sale of long-term investments.

*Income Tax Expense.* Income tax expense was \$1.0 million for the year ended December 31, 2017, a slight decrease of \$48,000 from \$1.1 million for the year ended December 31, 2016.

## Liquidity and Capital Resources

Since our inception, we have financed our operations primarily through private sales of securities and through our initial public offering in August 2000, and our public offering in November 2001, as well as cash provided by operating activities prior to 2012. Cash, cash equivalents, and short-term investments were in a total of \$38.6 million at December 31, 2018, as compared to \$46.1 million at December 31, 2017. Our operating activities generated cash outflows in the amount of \$8.0 million, \$7.2 million and \$7.8 million in the years ended December 31, 2018, 2017, and 2016, respectively.

Non-cash charges primarily consist of depreciation of property and equipment, amortization of stock-based compensation, net gain recognized on long-term investments, gain on sale of long-term investments, loss on asset write-off, gain on disposal of property and equipment, inventory write-downs, and changes of deferred income tax assets and liabilities. The working capital components that have a significant impact on our cash flows are accounts receivable, inventories, notes and accounts payable, prepaid expenses and other current assets, deferred charges, and accrued expense and other current liabilities.

Net cash inflows/outflows from operations resulted from net income/loss adjusted by non-cash changes and changes in inventories, accounts receivable, notes and accounts payable, accrued expenses and other current liabilities, income tax payable, and other liabilities. For the year ended December 31, 2018, net cash used in operating activities was \$8.0 million, primarily from our operating results during the year, an increase in accounts receivables, an increase in inventories, , an increase in prepaid expense and other current assets, and an increase in deferred charges, partially offset by an increase in notes and accounts payable. For the year ended December 31, 2017, net cash used in operating activities was \$7.2 million, primarily from our operating results during the year, an increase in accounts receivables, an increase in inventories, an increase in deferred charges, a decrease in notes and accounts payable. For the year ended December 31, 2016, net cash used in operating activities was \$7.8 million, primarily from our operating results during the year, an increase in accounts receivables, an increase in inventories, an increase in deferred charges, a decrease in income tax payable, and a decrease in accrued expenses and other current liabilities, partially offset by an increase in notes and accounts payable. In 2018, we had a net cash inflow from investing activities of \$12.7 million as compared to a net cash inflow of \$4.8 million in 2017. In 2017, we had a net cash inflow from investing activities of \$4.8 million as compared to a net cash outflow of \$1.3 million in 2016. This net cash provided in investing activities in 2018 was principally due to the net sale of short-term investments of \$11.3 million and the disposal of long-term investments of \$2.6 million, offset by the acquisition of property and equipment of \$1.3 million. This net cash provided in investing activities in 2017 was principally due to the net sale of short-term investments of \$4.1 million, the return of capital from long-term investments of \$1.2 million, and the disposal of property and equipment of \$145,000, offset by the acquisition of property and equipment of \$704,000. In 2016, we had a net cash outflow from investing activities of \$1.3 million as compared to a net cash inflow of \$12.9 million in 2015. This net cash used in investing activities in 2016 was principally due to the sale of long-term investments of \$6.0 million, and the disposal of property and equipment of \$3.8 million, offset by the acquisition of property and equipment of \$673,000 and the net acquisition of short-term investments of \$10.5 million.

Net cash outflow from our financing activities in 2018 was \$355,000 which was primarily due to the repurchase of \$451,000 of our shares under a share repurchase program, partially offset by proceeds of \$96,000 from the exercise of stock options and issuance of shares under our existing employee stock purchase plan for the year. Net cash outflow from our financing activities in 2017 was \$595,000 which was primarily due to the repurchase of \$708,000 of our shares under a share repurchase program, partially offset by proceeds of \$113,000 from the exercise of stock options and issuance of shares under our existing employee stock purchase plan for the year. Net cash outflow from our financing activities in 2016 was \$544,000 which was primarily due to the repurchase of \$619,000 of our shares under a share repurchase program, partially offset by proceeds of \$75,000 from the exercise of stock options and issuance of shares under our existing employee stock purchase plan for the year.

We believe our liquidity provided by existing cash, cash equivalents balances and short-term investments will be sufficient to meet our capital requirements for at least the next 12 months. We are also in the process of monetizing some of our real-estate assets and long-term investments to enhance our capital resources and continue to monitor and reduce our operating spending seriously. We incurred capital expenditures of \$1.3 million, \$704,000, and \$673,000 in 2018, 2017, and 2016, respectively. Our future capital expenditure requirements will depend on many factors, including the inventory levels we maintain, the level of investments we make in new technology and improvements to existing technology, the levels of promotion and advertising required to launch new products and attain a competitive position in the marketplace, and the market acceptance of our products. Thereafter, we may need to raise additional funds through public or private financing. No assurance can be given that additional funds will be available or that we can obtain additional funds on terms favorable to us.

Research and Development, Patents and Licenses, etc.

We believe that the continued introduction of new products in our target markets is essential to our growth. As of December 31, 2018, we had approximately 256 full-time employees world-wide engaged in research and development

efforts. Our total expenditures for research and development were \$19.8 million, \$18.0 million, and \$15.6 million for the years ended December 31, 2018, 2017, and 2016, respectively.

We employ designers who are experienced in system architecture, analog, mixed signal and software design and development. We also utilize independent contractors from time-to-time for specific research and development projects. Our internal research and development personnel thoroughly review the external development processes and the design of these products as part of our quality assurance process. All development is carried out using ISO 9001 and ISO 14001 certified design processes, and our design tools are continuously enhanced to improve design, fabrication and verification of our products.

Our research and development activities are a constantly evolving process which reflects the results of our ongoing projects, our expectations regarding market developments and changes in customer demand and industry specifications. We commence new projects or alter the scope or direction of existing projects on a regular basis under the guidance of our management and senior research personnel.

We work with our customers to monitor the performance of our product designs and to provide support at each stage of customer product development. Due to the complexity of our products, we maintain a significant direct applications support staff for customer technical support in our key markets including in Taiwan and China. These direct applications engineering personnel assist with supporting existing products at key customers. Additionally, we work closely with our customers to develop highly efficient power management products for specific applications.

Trend Information

See “Risk Factors” and “Operating and Financial Review and Prospects” above.

Off-Balance Sheet Arrangements

There are no off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

## Tabular Disclosure of Contractual Obligations

The table below describes our contractual obligations as of December 31, 2018:

Contractual Obligations	Total	Payments due by period			More than 5 years
		Less than 1 year	1-3 years	3-5 years	
		(in thousands)			
Operating lease obligations	\$1,841	\$1,304	\$537	\$-	\$-
Licenses, maintenance and support	907	488	419	-	-
Pension	614	16	60	190	348
Total	\$3,362	\$1,808	\$1,016	\$190	\$348

We have also entered into an agreement with a foundry provider to guarantee a specified portion of production capacity in September 2018. Please see note 16 to the consolidated financial statements.

## ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

## Directors and Senior Management

Our executive officers and directors and their ages as of December 31, 2018, were as follows:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Sterling Du	59	Chief Executive Officer, Class I Director and Chairman of the Board
Chuan Chiung “Perry” Kuo	59	Chief Financial Officer, Joint Secretary and Class I Director
James Keim	74	Class II Director and Head of Marketing and Sales
Michael Austin	83	Independent Non-executive Director, Class III Director, Chairman of the Nominating committee and member of Compensation Committee
Lawrence Lin	68	Independent Non-executive Director, Class II Director, Chairman of the Compensation Committee and member of Audit Committee
Ji Liu	83	Independent Non-executive Director, Class II Director
Teik Seng Tan	64	Independent Non-executive Director, Class I Director and Chairman of Audit Committee
Daniel Lenehan	63	Independent Non-executive Director, Class III Director and member of the Audit Committee
Vijay Kumar	56	Independent Non-executive Director and Class III Director and member of the Nominating Committee

Our Class I Directors have held office from the date of the annual general meeting in 2017 for a three year term until 2020; our Class II Directors have held office from the date of the annual general meeting in 2018 for a three year term until 2021; and our Class III Directors have held office from the date of the annual general meeting in 2016 for a three year term until 2019.

*Executive Directors*

*Sterling Du* has served as our chief executive officer and chairman of our board of directors since March 1997 and as a Class I Director since June 2001. He also served as our chief financial officer from March 1997 to March 1999. From May 1995 to March 1997, Mr. Du was president and chief executive officer of O<sub>2</sub>Micro, Inc., our predecessor entity. From October 1993 to April 1995, Mr. Du was vice president of engineering at GreenLogic, Inc., a semiconductor design company, which he co-founded. Mr. Du received a B.S. in chemical engineering from National Taiwan University and an M.S. in electrical engineering from the University of California, Santa Barbara.

*Chuan Chiung "Perry" Kuo* has served as our general manager of Taiwan operations since January 1997, as chief financial officer and a director since March 1999, as secretary since October 1999 and as a Class I director since June 2001. From February 1992 to December 1996, he was executive vice president of Pac Net Group, a holding company with investments in chemicals, electronics and real estate. From July 1983 to February 1992, he held various positions at Formosan Rubber Group, a rubber manufacturer, including product design engineer, plant manager, research and development director, and vice president. Mr. Kuo received a B.S. in chemical engineering from National Taiwan University and an M.B.A. from the Rotterdam School of Management, Erasmus University in The Netherlands.

*James Keim* has served as a director since March 1999 and as Head of Marketing and Sales since December 2001 and a Class II director since June 2001. He also served as our chief operating officer from June 1998 to June 2001. From March 1995 to June 1998, Mr. Keim was a principal in Global Marketing Associates, an international consulting firm. Prior to March 1995, he had been vice president of sales at Alliance Semiconductor Corporation, vice president of marketing at Performance Semiconductor Corporation and worldwide linear marketing manager at Fairchild Semiconductor Corporation. Mr. Keim received a B.S. in engineering from Iowa State University, an M.S. in electrical engineering and an M.B.A. from the University of Illinois.

*Independent Non-Executive Directors*

*Michael Austin* has served as a director since October 1997 and as a Class III director since June 2001. He currently serves as chairman of the nominating committee and member of the compensation committee. Mr. Austin is a resident of the Cayman Islands and is a Chartered Accountant. He was admitted as a Fellow of The Institute of Chartered Accountants in England and Wales in 1974. He is an Associate Member of The Chartered Institute of Taxation, a Member of the Society of Trust and Estate Practitioners, a Member of the Cayman Islands Society of Professional Accountants, a Member of the Cayman Islands Institute of Directors, and a Notary Public of the Cayman Islands. Mr. Austin served as the managing partner of the Cayman Islands office of KPMG Peat Marwick, an international accounting firm, for 23 years. Since retiring in July, 1992 Mr. Austin has been a consultant and currently serves as non-executive director on several company boards, including those of a number of mutual funds, hedge funds, structured investment vehicles, trust and insurance companies. Mr. Austin served as a director of the Cayman Islands Monetary Authority from January 1997 and was appointed Chairman of the Monetary Authority in January 2003, a position he held until his retirement on July 31, 2004. He has also served on a variety of other government committees and government related boards, and is currently Chairman of the Auditors Oversight Authority, a Cayman Islands Statutory Board. In 1990 Mr. Austin was awarded an M.B.E. by Her Majesty the Queen in recognition of services to the public and business community.

*Lawrence Lin* has served as a Class II Director, member of the audit committee and chairman of the compensation committee since June 2003. He is a Certified Public Accountant in Taiwan. Since 1990, Mr. Lin has been a partner of UHY L&C Company, Certified Public Accountants, which is an independent member firm of Urbach Hacker Young International. Mr. Lin was a director of Urbach Hacker Young International from October 1994 to October 1998. Prior to UHY L&C Company, he was a partner at T N Soong & Co. Mr. Lin serves as a board director of Yageo Corporation, which is a Taiwan listed public company. He graduated from Taipei Vocational Commercial School in 1969.

*Ji Liu* has served as a Class II Director since June 2007. Mr. Liu has been an Honorary President of the China Europe International Business School since 2005. He has been the Chairman of China Europe International Business School Education Development Foundation since 2005. From 1999 to 2004, Mr. Liu was Executive President and President of the China Europe International Business School. From 1993 to 1999, Mr. Liu was a Research Fellow, Member of the Academic Board, Graduate Supervisor and Deputy Chairman of the Chinese Academy of Social Sciences. He received a B.S. in power mechanical engineering from Tsinghua University in China.

*Teik Seng Tan* has served as a Class I Director and a member of audit committee since June 2008. Mr. Tan has served as Chairman of the audit committee since 2010. Mr. Tan was previously employed by AMD Singapore Pte Ltd. from 1984 to 2007 where he held various positions, the last position being Senior Executive Managing Director. He is currently the Managing Director of Teleios SC Pte Ltd and non-executive director of Aztech Group Ltd. Mr. Tan is also a member of the Advisory Council of the School of Engineering at Temasek Polytechnic and a Board member of The Helping Hand, a Halfway house for people with substance abuse. Mr. Tan received a B.E. in Electrical Engineering and a M.Sc. in Industrial Engineering from the National University of Singapore. He is also a Fellow of the Singapore Human Resource Institute.



*Daniel Lenehan* has served as a Class III Director and a member of the audit committee since June, 2016. Mr. Lenehan brings to O2Micro's Board of Directors more than thirty years of experience in semiconductor product development, technical marketing, foundry management and engineering experience at a wide variety of technology companies in various Director and VP level positions. Mr. Lenehan was one of the key contributors to Intel's expansion of the notebook market by assuming a number of Director roles including leadership positions in the areas of systems development, industry initiatives, mobile architecture, chipset design and R&D labs. As VP of Engineering at Xilinx Corp, Mr. Lenehan led the Spartan Field Programmable Gate Array development team responsible for architecture, design, layout, product and test engineering across North America, Ireland, and Asia. Mr. Lenehan has a BSEE from the New Jersey Institute of Technology.

*Vijay Kumar* has served as a Class III Director and a member of the nominating committee since December 2016. Mr. Kumar is currently the Nemirovsky Family Dean of Penn Engineering and been a faculty member at the University of Pennsylvania since 1987. Mr. Kumar has held many administrative positions in the School of Engineering and Applied Science, including director of the GRASP Laboratory, chair of Mechanical Engineering and Applied Mechanics, and the position of the Deputy Dean. Mr. Kumar is a fellow of ASME and IEEE and a member of the National Academy of Engineering and Mr. Kumar has also served as the assistant director of robotics and cyber physical systems at the White House Office of Science and Technology Policy. Mr. Kumar received his Bachelor of Technology degree from the Indian Institute of Technology, Kanpur and his Ph.D. from Ohio State University in 1987.

There are no family relationships among any of our directors or executive officers. There are no arrangements or understandings with major shareholders, customers, suppliers or others, pursuant to which any person referred to above was selected as a director or member of senior management.

### Compensation

We paid an aggregate amount of compensation during 2018 to our directors and members of our administrative, supervisory or management bodies as a group equal to approximately \$2.6 million. All of our officers and directors are eligible to participate in our employee benefit plans except non-employee directors are not eligible to participate in our employee stock purchase plan.

### Share Ownership of Directors and Senior Management

As of December 31, 2018, the aggregate number of ordinary shares beneficially owned by our directors and members of our administrative, supervisory or management bodies was 253,669,650. This number includes options to purchase an aggregate of 110,091,000 ordinary shares under our 2005 Share Option Plan and 2015 Share Incentive Plan exercisable within 60 days of December 31, 2018.

### Employee Benefit Plans

*1999 Employee Stock Purchase Plan.* Our 1999 employee stock purchase plan (“1999 Purchase Plan”) was approved by our board of directors in October 1999, was approved by our shareholders prior to the consummation of our initial public offering in August 2000 and is intended to qualify as an “employee stock purchase plan” under Section 423 of the Internal Revenue Code and to provide our employees with an opportunity to purchase ordinary shares or ADSs through payroll deductions. In May 2005, our board of directors adopted certain amendments to the 1999 Purchase Plan and in October 2005 our board of directors adopted and approved an amendment and restatement of 1999 Purchase Plan to amend various administrative terms in anticipation of our listing on the SEHK in Hong Kong. We have reserved 50,000,000 ordinary shares for issuance under our 1999 Purchase Plan, subject to adjustment upon certain changes in our capitalization. The number of ordinary shares which shall be made available for sale under the 1999 Purchase Plan, any share options granted pursuant to our 2005 Share Option Plan and any other plan (but not including our 2005 Share Incentive Plan) will not exceed 10% of the number of ordinary shares to be issued and outstanding immediately following the listing of our ordinary shares on the SEHK. In no event may an option be granted under our 1999 Purchase Plan if such grant would result in the total aggregate number of ordinary shares subject to all then outstanding purchase rights granted by us pursuant to our 1999 Purchase Plan, any share option granted pursuant to our 2005 Share Option Plan or any other plan (but not including our 2005 Share Incentive Plan) to exceed 30% of the issued and outstanding ordinary shares from time to time. At the annual general meeting in June 2008, the shareholders approved, adopted and ratified an amendment to the 1999 Purchase Plan to increase the number of shares issuable pursuant to the 1999 Purchase Plan from 50,000,000 to 70,000,000 ordinary shares.

Our board of directors or a committee designated by our board of directors, referred to as the “plan administrator”, administers our 1999 Purchase Plan. All of our employees who are regularly employed for more than five months in any calendar year and work more than 20 hours per week are eligible to participate in our 1999 Purchase Plan, subject to a 10 day waiting period after hiring. Non-employee directors, consultants and employees subject to the rules or laws of a non-U.S. jurisdiction that prohibit or make impractical their participation in the plan will not be eligible to participate. Our 1999 Purchase Plan designates offer periods, purchase periods and exercise dates. Offer periods are periods of three months commencing in February, May, August and November. Purchase periods will generally be three month periods. Exercise dates are the last day of each purchase period. In the event of a corporate transaction, the plan administrator may elect to shorten the offer periods then in progress and set a new exercise date for the purchase of ordinary shares or ADSs.

On the first day of each offer period, a participating employee will be granted a purchase right. A purchase right is a form of option to be automatically exercised on the forthcoming exercise dates within the offer period during which authorized deductions are to be made from the pay of participants and credited to their accounts under our 1999 Purchase Plan. When the purchase right is exercised, the participant's withheld salary is used to purchase the ordinary shares or ADSs. The price per share at which the ordinary shares or ADSs are to be purchased under our 1999 Purchase Plan during any purchase period will be expressed as a percentage not less than the lower of (a) 90% of the fair market value of the ordinary shares or ADSs on the date of grant of the purchase right (which is the commencement of the offer period) or (b) 90% of the fair market value of the ordinary shares or ADSs on the date the purchase right is exercised. Purchase rights may not be assigned, transferred, pledged or otherwise disposed of in any way by the participant, other than by will or the laws of descent and distribution.

Payroll deductions may range from 1% to 10% in whole percentage increments of a participant's regular base pay. The maximum number of ordinary shares or ADSs that any employee may purchase under our 1999 Purchase Plan during a purchase period is 100,000 ordinary shares or 2,000 ADSs. In addition, Section 423 of the U.S. Internal Revenue Code imposes a \$25,000 limit on the maximum amount of ordinary shares or ADSs that may be purchased under a tax-qualified employee stock purchase plan during any calendar year. The \$25,000 limit is determined at the fair market value of the ordinary shares or ADSs at the time such option is granted for each calendar year in which such option is outstanding.

The plan administrator has the authority to amend or terminate our 1999 Purchase Plan. The plan administrator may terminate any offer period on any exercise date if the plan administrator determines that the termination of the offer period is in the best interests of our company and its shareholders.

*2009 Employee Stock Purchase Plan.* As approved at the Extraordinary General Meeting held on May 30, 2009, we adopted the 2009 Employee Stock Purchase Plan (“2009 Purchase Plan”) along with our delisting from SEHK in September 2009. The terms and provisions of 2009 Purchase Plan are generally the same as the 1999 Purchase Plan. The 2009 Purchase Plan will also have a term of 10 years, if not terminated earlier. A total of 25,000,000 ordinary shares were reserved for issuance under the 2009 Purchase Plan starting November 2009. As approved by the annual general meeting held on June 22, 2012 and June 2016, additional 15,000,000 and 25,000,000 ordinary shares were reserved for issuance under the 2009 Purchase Plan, respectively. From 2016 to 2018, 8,564,500 shares had been issued under the 2009 Purchase Plan.

*2005 Share Option Plan.* Our 2005 share option plan was adopted by our board of directors in August 2005, was approved by our shareholders in November 2005 and took effect on March 2, 2006 (“2005 Share Option Plan”). The 2005 Share Option Plan provides for the granting to employees of incentive stock options within the meaning of Section 422 of the Internal Revenue Code and the granting of non-statutory stock options to our employees, directors and consultants. Initially, the maximum aggregate number of shares reserved for issuance pursuant to all options (including incentive stock options) under the 2005 Share Option Plan is 100,000,000 ordinary shares, or 2,000,000 ADSs after taking into account the 50-to-1 stock split on November 25, 2005 and such number of shares shall not, when added to the remaining number of ordinary shares available for the grant of options under any other plan or employee share purchase plan, be greater than 10% of the number of ordinary shares outstanding as of the date of adoption of the 2005 Share Option Plan. The maximum number of shares that may be issued upon exercise of all outstanding (and unexercised) options under the 2005 Share Option Plan and any other plan of ours and any purchase rights granted by us pursuant to any employee share repurchase plan must not, in aggregate, exceed 30% of the number of ordinary shares outstanding from time to time. Where an award agreement permits the exercise or purchase of the award for a specified period of time following the recipient’s termination of service with us, or the recipient’s disability or death, the award will terminate to the extent not exercised or purchased on the last day of the specified period or the last day of the original term of the award, whichever occurs first. As of December 31, 2018, 115,327,350 stock options were outstanding, of which 111,592,100 were exercisable under the 2005 Share Option Plan.

*2005 Share Incentive Plan.* Our 2005 share incentive plan was adopted by our board of directors in August 2005, was approved by our shareholders in November 2005 and took effect on March 2, 2006 (“2005 Share Incentive Plan”). The 2005 Share Incentive Plan provides for the granting to our employees, directors and consultants of restricted shares, cash dividend equivalent rights, restricted share units or stock appreciation rights or similar right with a fixed or variable price related to the fair market value of our ordinary shares and with an exercise or conversion privilege related to the passage of time, the occurrence of one or more events, or the satisfaction of performance criteria or other conditions. Initially, the maximum aggregate number of shares which may be issued pursuant the 2005 Share Incentive Plan is 75,000,000 ordinary shares or 1,500,000 ADSs after taking into account the 50-to-1 stock split on November 25, 2005. In addition, a right entitling a grantee to compensation measured by dividends paid with respect to ordinary shares shall be payable solely in cash and shall not be deemed to reduce the maximum aggregate number of shares which may be issued under our 2005 Share Incentive Plan. Where an award agreement permits the exercise or purchase of the award for a specified period of time following the recipient’s termination of service with us, or the recipient’s disability or death, the award will terminate to the extent not exercised or purchased on the last day of the specified period or the last day of the original term of the award, whichever occurs first. As of December 31, 2018, 9,300,450 shares of RSUs were outstanding under the 2005 Share Incentive Plan.

*2015 Share Incentive Plan* Our 2015 Share Incentive Plan was adopted by our board of directors in May 2015, was approved by our shareholders in July 2015 and took effect on March 3, 2016 (“2015 Share Incentive Plan”). The 2015 Share Incentive Plan succeeded our 2005 Share Option Plan and our 2005 Share Incentive Plan. The 2015 Share Incentive Plan provides for the granting to employees of incentive stock options within the meaning of Section 422 of the Internal Revenue Code and the granting of non-statutory stock options to our employees, directors and consultants. The 2015 Share Incentive Plan also provides for the granting to our employees, directors and consultants of restricted

shares, cash dividend equivalent rights, restricted share units or stock appreciation rights or similar right with a fixed or variable price related to the fair market value of our ordinary shares and with an exercise or conversion privilege related to the passage of time, the occurrence of one or more events, or the satisfaction of performance criteria or other conditions. As of December 31, 2018, 131,729,950 shares of stock options and RSUs were outstanding, of which 33,900,800 were exercisable under the 2015 Share Incentive Plan.

Initially, the maximum aggregate number of new shares reserved for issuance pursuant to all options and grants (including incentive stock options and restrictive stock units) under the 2015 Share Incentive Plan is 100,000,000 ordinary shares, or 2,000,000 ADSs, plus the remaining balance rolled into the 2015 Share Incentive plan from the 2005 Share Option Plan and 2005 Share Incentive Plan, respectively. The maximum number of stock options and restrictive stock units granted under the 2015 Share Incentive Plan for stock options and restrictive stock units shall not each exceed 125,000,000 ordinary shares (2,500,000 ADSs). In addition, a right entitling a grantee to compensation measured by dividends paid with respect to ordinary shares shall be payable solely in cash and shall not be deemed to reduce the maximum aggregate number of shares which may be issued under our 2005 Share Incentive Plan. Where an award agreement permits the exercise or purchase of the award for a specified period of time following the recipient's termination of service with us, or the recipient's disability or death, the award will terminate to the extent not exercised or purchased on the last day of the specified period or the last day of the original term of the award, whichever occurs first.

## Board Practices

### *Duties of Directors*

Under Cayman Islands law, our directors have a duty of loyalty to act honestly in good faith with a view to promoting our best interests. Our directors also have a duty of care to exercise the care, diligence and skills that a reasonably prudent person would exercise in comparable circumstances. In fulfilling their duty of care to us, our directors must ensure compliance with our memorandum and articles of association and the class rights vested under our memorandum and articles of association in the holders of the shares.

### *Terms of Directors and Officers*

Our articles of association provide for not less than five, nor more than nine, directors, although the holders of a majority of our shares may increase or reduce such limits. Our articles of association provide for our board of directors to be divided into three classes, designated Class I, Class II and Class III, with each class consisting of an equal number of directors or as nearly equal in number as the then total number of directors permits. The directors of each class have been elected for terms of three years ending in consecutive years. At each annual general meeting, successors to the class of directors whose terms expire at that annual general meeting are elected for new three year terms. If the number of directors is changed, any increase or decrease is apportioned among the classes so as to maintain the number of directors in each class as nearly equal as possible and any additional directors of any class elected to fill a vacancy resulting from an increase in such class shall hold office for a term that shall coincide with the remaining term of that class, but in no case will a decrease in the number of directors shorten the term of any incumbent directors. The term of executive officers is determined by our board of directors. There are no provisions of Cayman Islands law which require the term of executive officers to be for a particular period.

Our board of directors has the power at any time and from time to time to appoint any person to be a director, either to fill a casual vacancy or as an additional to the existing directors provided that the appointment does not cause the number of directors to exceed any number fixed by or in accordance with the articles of association as a maximum number of directors. Any director so appointed shall hold office only until one next annual general meeting and is then eligible for re-election at that meeting.

Our shareholders may by ordinary resolution remove any directors before the expiration of his period of office notwithstanding anything in the articles of association or in any agreement we have entered into with such director (but without prejudice to any claim for damages under any such agreement).

There are currently no shareholding qualifications or age restrictions for directors.

### *Committees of the Board of Directors*

We have an audit committee, a compensation committee and a nominating committee. Each of our audit committee members qualifies as an “independent” director for purposes of the rules and regulations of NASDAQ. The audit committee is established by the Board primarily for the purpose of overseeing our accounting and financial reporting processes and audits of our financial statements. The Committee’s responsibilities include (1) the appointment, retention, compensation and oversight of the work of our independent auditors, and for review of its qualifications, and (2) review of our system of internal controls. The Committee also maintains procedures for the receipt, retention and treatment of complaints received by us regarding accounting, internal controls, or auditing matters and for the confidential, anonymous submission by our employees of concerns regarding accounting or auditing matters. The audit committee meets at least four times per year, and also meets separately with the representatives of management at least annually. The audit committee held five meetings in 2018. Currently, Messrs. Tan, Lin and Lenehan serve on

the audit committee.

The compensation committee establishes remuneration levels for our officers, performs the functions that are provided under our employee benefit programs and administers our long-term incentive, compensation and equity plans including our 2005 Share Incentive Plan, 2005 Share Option Plan, 2009 Employee Stock Purchase Plan, and 2015 Share Incentive Plan. Currently, Messrs. Lin and Austin serve on the compensation committee, each of whom qualify as “independent” directors for purposes of the rules and regulations of NASDAQ.

The nominating committee assists our board of directors in selecting nominees for election to our board of directors and makes recommendations to our board of directors from time to time, or whenever it shall be called upon to do so, regarding nominees for our board of directors. Currently, Messrs. Austin and Kumar serve on the nominating committee.

#### *Compensation Committee Interlocks and Insider Participation*

No member of our compensation committee serves as a member of the board of directors or the compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or our compensation committee.

#### *Employees*

As of December 31, 2018, we had 400 full-time employees, of which 256 are engineers. 25 of our employees were based in the United States, 372 in Asia, and 3 in Cayman Islands. Our employees are not represented by any collective bargaining agreements, and we have never experienced a work stoppage. We believe our employee relations are good and well-maintained.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY  
TRANSACTIONS

MAJOR SHAREHOLDERS

The following table sets forth information known to us with respect to the beneficial ownership of our ordinary shares, as of March 31, 2019, by each shareholder known by us to own beneficially more than 5% of our ordinary shares based on SEC filings as of March 31, 2019.

Name of Beneficial Owner	Shares Beneficially Owned	
	Number	Percent
Grandeur Peak Global Advisors, LLC	163,424,600	12.37 %
Directors and members of our administrative, supervisory or management bodies	144,528,650	10.94 %
DNB Asset Management AS	131,220,450	9.93 %
Renaissance Technologies LLC	101,503,100	7.68 %
DNB Nordic Technology	86,663,700	6.56 %

Based on SEC filings as of February 28, 2018, Grandeur Peak Global Advisors, LLC beneficially owned 156,108,350 of our ordinary shares or 11.99%, DNB Asset Management AS beneficially owned 131,220,450 of our ordinary shares or 10.08%, Directors and members of our administrative, supervisory or management bodies beneficially owned 138,314,850 of our ordinary shares or 10.62%, Renaissance Technologies LLC beneficially owned 101,145,000 of our ordinary shares or 7.77%, and Lloyd I. Miller, III beneficially owned 75,735,550 of our ordinary shares or 5.82%.

Based on SEC filings as of February 28, 2017, Grandeur Peak Global Advisors, LLC beneficially owned 159,212,000 of our ordinary shares or 12.31%, DNB Asset Management AS beneficially owned 131,220,450 of our ordinary shares or 10.15%, Directors and members of our administrative, supervisory or management bodies beneficially owned 119,744,200 of our ordinary shares or 9.26%, Renaissance Technologies LLC beneficially owned 101,665,000 of our ordinary shares or 7.86%, and Lloyd I. Miller, III beneficially owned 75,735,550 of our ordinary shares or 5.86%.

None of the major shareholders listed above have differing voting rights with respect to our ordinary shares. We do not know of any arrangements the operation of which may at a subsequent date result in a change in control of us. To our knowledge, we are not directly or indirectly owned or controlled by another corporation, by a foreign government or any other natural or legal person.

**Related Party Transactions**

There were no related party transactions for the financial periods covered in this Annual Report.

ITEM 8. FINANCIAL INFORMATION

**CONSOLIDATED STATEMENTS AND OTHER FINANCIAL INFORMATION**

**Consolidated Financial Statements**



Our financial statements set forth in the accompanying index to Consolidated Financial Statements included in this Annual Report following Part IV beginning on page F-1 are hereby incorporated in this Annual Report. Our Consolidated Financial Statements are filed as part of this Annual Report.

## **DIVIDEND POLICY**

We have never declared or paid any cash dividends on our ordinary shares or other securities and do not anticipate paying cash dividends in the foreseeable future.

## **ITEM 9. THE OFFER AND LISTING**

### **ADS SHARE PRICES AND RELATED MATTERS**

Our ADSs are quoted and traded on the NASDAQ Global Select Market and the Cayman Islands Stock Exchange. Our ordinary shares are listed, but not traded, on the Cayman Islands Stock Exchange.

#### **(a) Annual high and low market prices**

	High	Low
January 1, 2014 through December 31, 2014	\$3.89	\$1.90
January 1, 2015 through December 31, 2015	\$2.80	\$1.41
January 1, 2016 through December 31, 2016	\$2.07	\$1.27
January 1, 2017 through December 31, 2017	\$2.74	\$1.48
January 1, 2018 through December 31, 2018	\$2.37	\$1.33

**(b) Quarterly high and low market prices**

First Quarter 2016	\$1.57	\$1.27
Second Quarter 2016	\$1.58	\$1.37
Third Quarter 2016	\$1.92	\$1.53
Fourth Quarter 2016	\$2.07	\$1.66
First Quarter 2017	\$2.74	\$1.89
Second Quarter 2017	\$2.50	\$1.85
Third Quarter 2017	\$1.96	\$1.48
Fourth Quarter 2017	\$2.01	\$1.61
First Quarter 2018	\$1.77	\$1.36
Second Quarter 2018	\$1.84	\$1.33
Third Quarter 2018	\$2.32	\$1.70
Fourth Quarter 2018	\$2.37	\$1.44
First Quarter 2019	\$1.80	\$1.51

**(c) Monthly high and low market prices**

October 2018	\$2.37	\$1.60
November 2018	\$1.80	\$1.58
December 2018	\$1.72	\$1.44
January 2019	\$1.66	\$1.51
February 2019	\$1.80	\$1.55
March 2019	\$1.75	\$1.63

**ITEM 10. ADDITIONAL INFORMATION**

The following are summaries of material provisions of our memorandum and articles of association and the Companies Law (2018 Revision of the Cayman Islands (as amended, the “Companies Law”). The summary is qualified in its entirety by reference to our memorandum and articles of association (see Item 19-Exhibit 1).

**Registered Office**

The Company has been assigned registration number MC-72204 by the registrar of companies in the Cayman Islands. The registered office is located at the offices of Maples Corporate Services Limited, Ugland House, P.O. Box 309, South Church Street, Grand Cayman KY1-1104, Cayman Islands. The telephone number at that location is (345) 949-8066.

**Objects and Purposes**

Paragraph 3 of the memorandum of association provides that the objects and purposes of the Company are unrestricted and the Company may perform all corporate activities not prohibited by any law as provided by the Companies Law.

## Directors

Article 122 of the articles of association of the Company provides that a director will not be disqualified by his office from contracting with the Company notwithstanding such director's interest and that such an interested director will not be liable to the Company for any profit realized through such contract or arrangement, provided, the interested director declares such interest at or prior to consideration of such contract or arrangement by the board. Article 129 provides that directors' compensation shall from time to time be determined by the Company in general meeting or by the board in accordance with the articles of association. Article 138 provides that the directors may exercise all the powers of the Company to borrow money and to mortgage or charge its undertaking, property and uncalled capital or any part thereof and to issue debentures, debenture stock and other securities whether outright or as security for any debt, liability or obligation of the Company or of any third party.

## Ordinary Shares

*General.* The Company's articles of association authorize the issuance of 4,750,000,000 ordinary shares with a par value of US \$0.00002. All the outstanding ordinary shares are fully paid and nonassessable and accordingly no further capital may be called for by the Company from any holder of the ordinary shares outstanding. The outstanding ordinary shares are not entitled to any sinking fund or pre-emptive or redemption rights. Under Cayman Islands Law, non-residents may freely hold, vote and transfer ordinary shares in the same manner as Cayman Islands residents, subject to the provisions of the Companies Law and the articles of association. There is no exchange control legislation in the Cayman Islands or any laws or regulations which affect the payment of dividends to non-residents holders of the ordinary shares.

*Dividends.* The holders of our ordinary shares are entitled to receive the dividends that are declared and approved by the board of directors. Dividends may be paid only out of profits, which include net earnings and retained earnings undistributed in prior years, and out of share premium, a concept analogous to paid-in-surplus in the United States, subject to a statutory solvency test.

*Voting Rights.* Each ordinary share entitles the holder thereof to one vote on a show of hands and one vote in respect to each ordinary share held by that shareholder on a poll, on all matters upon which the ordinary shares are entitled to vote, including the election of directors. Voting at any meeting of shareholders is by show of hands unless a poll is demanded. A poll may be demanded by the chairman of the meeting or any shareholder present in person or by proxy, before or on the declaration of the result of the show of hands.

A quorum required for a meeting of shareholders consists of at least a number of shareholders present in person or by proxy and entitled to vote representing the holders of not less than a majority of our issued voting share capital. Shareholders' meetings are held annually and may be convened by the board of directors on its own initiative. Subject to the articles of association, advanced notice of at least ten days (but not more than sixty days) is required for the convening of shareholders' meetings.

Any ordinary resolution to be made by the shareholders requires the affirmative vote of a simple majority of the votes attaching to the ordinary shares and preference shares, if any, cast in a general meeting, while a special resolution requires the affirmative vote of two-thirds of the votes cast attaching to the ordinary shares and preference shares, if any. Holders of ordinary shares, which are currently the only shares carrying the right to vote at our general meetings, have the power, among other things, to elect directors, appoint auditors and make changes in the amount of our authorized share capital.

Material issues that require a special resolution of the shareholders under the Companies Law include resolutions to alter the memorandum of association with respect to any objects, powers or other matters specified therein, any alteration of the articles of association, any reduction of capital, any change of name, the appointment of an inspector for examining into the affairs of the company, requiring the company to be wound up by a court, any voluntary winding up, delegating to creditors the power of appointing liquidators, making binding arrangements between the company and its creditors, and sanctioning the transfer of the business or property of the company being wound up to another company whether established in the Cayman Islands or in any other jurisdiction.

*Liquidation.* If we are to be liquidated, the liquidator may divide among the shareholders in cash or in kind the whole or any part of our assets, in a manner proportionate to their shareholdings.

#### Preference Shares

The articles of association authorize the issuance of 250,000,000 preference shares with a par value of \$0.00002 per share. Pursuant to our articles of association, the board of directors has the authority, without further action by the shareholders, to issue preference shares in one or more series. It also has the authority to allot, issue, grant options over, or otherwise dispose of, shares of the Company with or without preferred, deferred or other special rights or restrictions, whether in regard to dividend rights voting, return of capital or otherwise, any or all of which may be greater than the rights of the ordinary shares. The board of directors, without shareholder approval, can issue preference shares with voting, conversion or other rights that could harm the voting power and other rights of the holders of ordinary shares. Subject to the directors' duty of acting in our best interest, preference shares can be issued quickly with terms calculated to delay or prevent a change in control or make removal of management more difficult. Additionally, the issuance of preference shares may have the effect of decreasing the market price of the ordinary shares, and may harm the voting and other rights of the holders of ordinary shares.

Anti-takeover Effects of Provisions in Our Charter Documents

Provisions in our charter documents could discourage potential acquisition proposals and could delay or prevent a change in control transaction that our shareholders favor. These provisions could have the effect of discouraging others from making tender offers for our shares. As a result, these provisions may prevent the market price of our ordinary shares from reflecting the effects of actual or rumored takeover attempts and may prevent shareholders from reselling their shares at or above the price at which they purchased their shares. These provisions may also prevent changes in our management that our shareholders may favor. Our charter documents do not permit shareholders to act by written consent, do not permit shareholders to call a general meeting and provide for a classified board of directors, which means shareholders can only elect, or remove, a limited number of our directors in any given year.

Furthermore, as discussed above, our board of directors has the authority to issue up to 250,000,000 preference shares in one or more series. Our board of directors can fix the price, rights, preferences, privileges and restrictions of such preference shares without any further vote or action by our shareholders. The issuance of preference shares may delay or prevent a change in control transaction without further action by our shareholders or make removal of management more difficult.

## Differences in Corporate Law

The Companies Law of the Cayman Islands is modeled after that of England but does not follow recent United Kingdom statutory enactments and differs from laws applicable to United States corporations and their shareholders. The following paragraphs are a summary of the significant differences between the provisions of the Companies Law applicable to us and the laws applicable to companies incorporated in the United States and to their shareholders.

*Mergers and Similar Arrangements.* The Companies Law provides that a merger or consolidation may occur between any of the following: (a) one or more companies incorporated under the Companies Law and one or more companies incorporated under the laws of a jurisdiction outside the Cayman Islands, provided that the Cayman Islands company is the surviving entity; or (b) two or more companies incorporated under the Companies Law. For these purposes, (i) “merger” means the merging of two or more constituent companies and the vesting of their undertaking, property and liabilities in one of such companies as the surviving company and (ii) “consolidation” means the combination of two or more constituent companies into a consolidated company and the vesting of the undertaking, property and liabilities of such companies to the consolidated company. Such a merger or consolidation does not need court approval for a company limited by shares (but not segregated portfolio companies).

A merger or consolidation will involve, amongst other things, the directors of each company participating in a merger or consolidation approving a written plan of merger or consolidation on behalf of that company which complies with the requirements of the Companies Law. The written plan of merger or consolidation approved by the directors must generally be authorised by resolution of the shareholders of each company participating in the merger or consolidation, subject to and in accordance with the Companies Law. The consent of each holder of a fixed or floating security interest of a company participating in a proposed merger or consolidation should also be obtained, although the courts of the Cayman Islands have a discretion to waive such requirement upon such terms as to the security to be issued by the consolidated or surviving company as the court considers reasonable.

A dissenting member of a Cayman Islands company proposing to participate in a merger or consolidation has a limited entitlement provide written objection to the proposed action and to receive payment of the fair value of his shares in accordance with the provisions of the Companies Law.

If a merger or consolidation is effected in accordance with the Companies Law:

the rights, the property of every description and the business, undertaking, goodwill, benefits, immunities and privileges of each of the constituent companies, shall immediately vest in the surviving or consolidated company; subject to any specific arrangements entered into by the relevant parties, the surviving or consolidated company shall be liable for and subject, in the same manner as the constituent companies, to all mortgages, charges or security interests, and all contracts, obligations, claims, debts, and liabilities of each of the constituent companies; an existing claim, cause or proceeding, whether civil (including arbitration) or criminal pending at the time of the merger or consolidation by or against a constituent company, shall not be abated or discontinued by the merger or consolidation but shall be continued by or against the surviving or consolidated company; and a conviction, judgment, ruling, order or claim, due or to become due, against a constituent company, shall not be released or impaired by the merger or consolidation, but shall apply to the surviving or consolidated company instead of to the constituent company.

Cayman Islands law also provides statutory provisions which facilitate the reconstruction and amalgamation of companies, provided that the arrangement in question is approved by a majority in number of each class of shareholders and creditors with whom the arrangement is to be made, and who must in addition represent three-fourths in value of each class of shareholders or creditors, as the case may be, that are present and voting either in person or by proxy at a meeting or meetings convened for that purpose. The convening of the meetings and subsequently the arrangement must be sanctioned by the Grand Court of the Cayman Islands. While a dissenting

shareholder would have the right to express to the court the view that the transaction ought not to be approved, the court can be expected to approve the arrangement if it satisfies itself that:

- the parties have complied with the statutory provisions regarding majority vote;
- the shareholders have been fairly represented at the meeting in question; and
- the arrangement is one that a businessman would reasonably approve.

When a take-over offer is made and accepted by holders of 90% in value of the shares within four months, the offer or may, within a two-month period require the holders of the remaining shares to transfer these shares on the terms of the offer. An objection can be made to the Grand Court of the Cayman Islands but this is unlikely to succeed unless there is evidence of fraud, bad faith or collusion.

If the arrangement and reconstruction is approved, the dissenting shareholder would have no rights comparable to appraisal rights, which would otherwise ordinarily be available to dissenting shareholders of United States corporations, providing rights to receive payment in cash for the judicially determined value of the shares.

*Shareholders' Suits.* In principle, we will normally be the proper plaintiff in respect of wrongs done to the Company and a derivative action may not be brought by a minority shareholder. However, exceptions to the foregoing principle may apply in circumstances in which:

- a company is acting or proposing to act illegally or outside of its powers; the act complained of, although not outside of its powers, could be affected only if authorized by more than a simple majority vote;
- the individual rights of the plaintiff shareholders have been infringed or are about to be infringed; or
- those who control the company are perpetrating a "fraud on the minority."

## Indemnification

Cayman Islands law does not limit the extent to which a company's articles of association may provide for indemnification of officers and directors, except to the extent that a provision may be held by the Cayman Islands courts to be contrary to public policy, such as to provide indemnification against civil fraud or the consequences of committing a crime. Our articles of association provide for indemnification of officers and directors for losses, damages, costs and expenses incurred in their capacities as such, except if they acted in a willfully negligent manner or defaulted in any action against them.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers or persons controlling us pursuant to these provisions, we have been informed that, in the opinion of the Securities and Exchange Commission, this indemnification is against public policy as expressed in the Securities Act and therefore is unenforceable.

## Enforceability of Civil Liabilities

We are a Cayman Islands company. We incorporated in the Cayman Islands because of the following benefits associated with being a Cayman Islands company:

- political and economic stability;
- an effective judicial system;
- unlike some jurisdictions which impose taxes on worldwide income, no taxation of companies based upon profits, income, gains or appreciation;
- the absence of exchange control or currency restrictions; and
- the availability of professional and support services.

However, the Cayman Islands has a less developed body of securities laws than the United States and provides less protection for investors. Under Cayman Islands law, our directors have a duty of loyalty to act honestly and in good faith with a view to promoting our best interests. Our directors also have a duty of care to exercise the care, diligence and skills that a reasonably prudent person would exercise in comparable circumstances. In fulfilling their duty of care to us, our directors must ensure compliance with our memorandum and articles of association and the class rights vested under our memorandum and articles of association in the holders of the shares. The remedies which may be pursued if our directors do not comply with their duties to us are well settled matters of Cayman Islands law.

A substantial majority of our assets are located outside the United States. In addition, a majority of our directors and officers are nationals and/or residents of countries other than the United States, and all or a substantial portion of our assets and the assets of our directors and officers are located outside the United States. As a result, it may be difficult to effect service of process within the United States upon us or our directors and officers or to enforce against us or against them judgments obtained in United States courts, including judgments predicated upon the civil liability provisions of the securities laws of the United States or any state thereof. Nevertheless, the courts of the Cayman Islands would be competent to hear original actions brought by us against our officers and directors predicated upon alleged breaches of duties to us.

Maples and Calder, our counsel as to Cayman Islands law, has advised us that there is uncertainty regarding whether the courts of the Cayman Islands would (1) recognize or enforce judgments of United States courts obtained against us or our officers and directors predicated upon the civil liability provisions of the securities laws of the United States or any state thereof or (2) be competent to hear original actions brought in their jurisdiction against us or our officers and directors predicated upon the securities laws of the United States or any state thereof.



There is no statutory enforcement in the Cayman Islands of judgments obtained in the United States. Instead, such a judgment must be enforced by action at common law. Maples and Calder have advised us that a final and conclusive judgment in a federal or state court of the United States under which a sum of money is payable, other than a sum payable in respect of taxes, fines, penalties or similar charges, may be subject to enforcement proceedings as a debt in the Courts of the Cayman Islands under the common law doctrine of obligation.

## Material Contracts

We have not entered into any material contracts other than contracts entered into in the ordinary course of business.

## Exchange Control

Our articles of association authorize us to issue an aggregate of 4,750,000,000 ordinary shares with a par value of \$0.00002 per share. Of those 4,750,000,000 authorized ordinary shares, 1,669,036,600 shares were issued and 1,298,808,750 shares were outstanding as of December 31, 2018, all of which are fully paid or credited as fully paid. We may not call for any further capital from any holder of ordinary shares outstanding. Under Cayman Islands law, non-residents of the Cayman Islands may freely hold, vote and transfer ordinary shares in the same manner as Cayman Islands residents, subject to the provisions of the Companies Law and our articles of association. There is no exchange control legislation in the Cayman Islands or any laws or regulations which affect the payment of dividends to non-resident holders of ordinary shares.

## Taxation

### Cayman Islands Taxation

The Cayman Islands currently levy no taxes on individuals or corporations based upon profits, income, gains or appreciation and there is no taxation in the nature of inheritance tax or estate duty. There are no other taxes likely to be material to us levied by the Government of the Cayman Islands except for stamp duties that may be applicable on instruments executed in, or after execution brought within, the jurisdiction of the Cayman Islands. There are no exchange control regulations or currency restrictions in the Cayman Islands.

No stamp duties are payable on the issue or transfer of shares. An agreement to transfer shares may be subject to stamp duty if the agreement is executed in the Cayman Islands or, if executed outside the Cayman Islands, subsequently brought into the Cayman Islands. The Stamp Duty Law (2007 Revision) does not provide who is liable to pay stamp duty on any document but, in practice, the person who seeks to rely on the document in any civil court proceedings will be required to pay stamp duty in order to have the document admitted in evidence.

### United States Federal Income Taxation

The following discussion addresses the material United States federal income tax consequences of the ownership and disposition of ordinary shares or ADSs held as a capital asset by a “U.S. Investor” (as defined below). This summary does not provide a complete analysis of all potential tax consequences. This summary is based on the Internal Revenue Code of 1986, as amended (the “Code”), final, temporary and proposed Treasury Regulations thereunder, and administrative and judicial interpretations thereof, all as in effect as of the date hereof, and all of which are subject to change at any time (possibly on a retroactive basis) by legislative, judicial or administrative action, and to differing interpretations. There can be no assurance that the Internal Revenue Service (the “IRS”) will not take a contrary view. This summary does not discuss state, local or foreign tax consequences of the ownership and disposition of ordinary shares or ADSs.

This summary is directed solely to U.S. Investors that hold ordinary shares or ADSs as capital assets within the meaning of Section 1221 of the Code, which generally means as property held for investment. For purposes of this discussion, a “U.S. Investor” means a beneficial owner of ordinary shares or ADSs who is any of the following:

• a citizen or resident of the United States or someone treated as a U.S. citizen or resident 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, including the District of Columbia;

- an estate the income of which is subject to U.S. federal income taxation regardless of its source;

a trust that is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all of its substantial decisions;

a trust in existence on August 20, 1996, that has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person; or

- a person that is otherwise subject to U.S. federal income taxation on its net income.

If a partnership (including for this purpose any entity treated as a partnership for U.S. federal income tax purposes) is a beneficial owner of ordinary shares or ADSs, the U.S. federal income tax consequences to a partner in the partnership will generally depend on the status of the partner and the activities of the partnership. A holder of ordinary shares or ADSs that is a partnership and partners in such partnership should consult their individual tax advisors about the U.S. federal income tax consequences of holding or disposing of the ordinary shares or ADSs.

This summary does not address the United States federal income tax treatment of investors having a special legal status, including without limitation the following types of investors, who may be subject to tax rules that differ significantly from those summarized below:

- life insurance companies;
- tax-exempt investors;
- banks and financial institutions;
- dealers in securities or foreign currencies;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons liable for alternative minimum tax;
- U.S. investors who actually or constructively hold 10% or more of our voting shares or ADSs;
- investors who hold our ordinary shares or ADSs as part of straddles, hedging or integrated or conversion transactions; or
- persons whose “functional currency” is not the U.S. dollar.

This summary is not a comprehensive description of all of the tax considerations that may be relevant with respect to your ownership of ordinary shares or ADSs. You are advised to consult your own tax adviser with respect to your particular circumstances and with respect to the effects of federal, state, local or foreign tax laws to which you may be subject. The United States does not have an income tax treaty with the Cayman Islands.

As relates to the ADSs, this discussion is based in part upon the representations of the depositary and the assumption that each obligation in the deposit agreement and any related agreement will be performed in accordance to its terms.

Generally, a holder of ADSs will be treated as the owner of the underlying ordinary shares represented by those ADSs for U.S. federal income tax purposes. Accordingly, no gain or loss will be recognized if the holder exchanges ADSs for the underlying ordinary shares represented by those ADSs. The holder’s adjusted tax basis in the ordinary shares will be the same as the adjusted tax basis of the ADSs surrendered in exchange therefore, and the holding period for the ordinary shares will include the holding period for the surrendered ADSs.

*Dividends and Other Distribution on Ordinary Shares or ADSs.* Subject to the discussion in “Passive Foreign Investment Company Status” below, in the event that a U.S. Investor receives a distribution on the ordinary shares or ADSs, the U.S. Investor will be required to include the distribution in gross income as a taxable dividend on the date of receipt by the depositary, in the case of ADSs, or by the U.S. Investor, in the case of ordinary shares, but only to the extent that a distribution is paid from our current or accumulated earnings and profits as determined under United States federal income tax principles. Dividends paid by us will not be eligible for the corporate dividends received deduction. For taxable years beginning before January 1, 2011, “qualified dividend income” paid to a non-corporate U.S. Investor will be subject to tax at the rates applicable to long-term capital gains (which are currently taxed at the maximum rate of 20%) if (1) our ordinary shares or ADSs are readily tradable on an established securities market in the United States, (2) we are not a passive foreign investment company (as discussed below) for either our taxable year in which the dividend was paid or the preceding taxable year and (3) certain holding period requirements must be met. It is expected that our ADSs will satisfy the “readily tradable” requirement as a result of being traded on the NASDAQ Global Select Market. However, any U.S. Investor that exchanges its ADSs for ordinary shares, or that holds only ordinary shares, may not be eligible for the reduced rate of taxation on dividends if the ordinary shares are not readily tradable on an established securities market in the United States. In order for dividends to constitute “qualified dividend income,” a U.S. Investor generally must have held the ADSs for more than 60 days during the 121-day period beginning 60 days before the ex-dividend date; however, because the holding period rules are intricate and because an owner’s holding period is reduced for periods during which the risk of loss is diminished, U.S. Investors should consult their own advisors concerning the calculation of their holding periods. Moreover, a dividend will not be treated as a qualified dividend income to the extent that the taxpayer is under an obligation (whether pursuant to a short sale or otherwise) to make related payments with respect to positions in substantially similar or

related property. U.S. Investors should consult their own tax advisers regarding the availability of the lower rate for dividends paid with respect to our ADSs or ordinary shares.

The Company has the right to pay dividends in any currency. If dividends are paid in a currency other than the U.S. dollar, the dividends will be included in a U.S. Investor's income as a U.S. dollar amount based on the exchange rate in effect on the date that the U.S. Investor receives the dividend, regardless of whether the payment is in fact converted into U.S. dollars. If the U.S. Investor does not receive U.S. dollars on the date the dividend is distributed, the U.S. Investor will be required to include either gain or loss in income when the U.S. Investor later exchanges the foreign currency for U.S. dollars. The gain or loss will be equal to the difference between the U.S. dollar value of the amount that the U.S. Investor includes in income when the dividend is received and the amount that the U.S. Investor receives on the exchange of the foreign currency for U.S. dollars. The gain or loss generally will be ordinary income or loss from U.S. sources. If we distribute as a dividend non-cash property, the U.S. Investor will generally include in income an amount equal to the U.S. dollar equivalent of the fair market value of the property on the date that it is distributed.

Dividends will constitute foreign source income for foreign tax credit limitation purposes. The limitation on foreign taxes eligible for credit is calculated separately with respect to specific classes of income. Under current law, for taxable years beginning after December 31, 2006, dividends distributed by us with respect to ordinary shares or ADSs would generally constitute "passive category income" but could, in the case of certain U.S. Investors, constitute "general category income." Special rules apply to individuals whose foreign source income during the taxable year consists entirely of "qualified passive income" and whose creditable foreign taxes paid or accrued during the taxable year do not exceed \$300 (\$600 in the case of a joint return). Further, in particular circumstances, a U.S. Investor that (i) has held the ordinary shares or ADSs for less than a specified minimum period during which it is not protected from risk of loss, (ii) is obligated to make payments related to the dividends, or (iii) holds the ordinary shares or ADSs in arrangements in which the U.S. Investor's expected economic profit, after non-U.S. taxes, is insubstantial, will not be allowed a foreign tax credit for foreign taxes imposed on dividends paid on the ordinary shares or ADSs.

The U.S. Treasury has expressed concerns that parties to whom ADSs are pre-released may be taking actions that are inconsistent with the claiming of foreign tax credits by U.S. Investors of ADSs. Such actions would also be inconsistent with the claiming of the preferential tax rates applicable to qualified dividend income, as defined above. Accordingly, the creditability of foreign withholding taxes and the availability of such preferential tax rates could be affected by future actions that may be taken by the U.S. Treasury or parties to whom ADSs are pre-released.

Distributions in excess of our current and accumulated earnings and profits will be treated as a nontaxable return of capital to the extent of the U.S. Investor's basis in the ordinary shares or ADSs and thereafter as gain from the sale or exchange of a capital asset. We do not generally intend to calculate our earnings and profits under U.S. federal income tax principles. Therefore a U.S. Investor should expect that a distribution will generally be treated as a dividend even if that distribution would otherwise be treated as a nontaxable return of capital or as capital gain under the rules described above.

Distributions to a U.S. Investor of new ordinary shares or ADSs or rights to subscribe for new ordinary shares or ADSs that are received as part of a pro rata distribution to all our shareholders will not be subject to U.S. federal income tax. The adjusted tax basis of the new ordinary shares or ADSs or rights so received will be determined by allocating the U.S. investor's adjusted tax basis in the old ordinary shares or ADSs between the old ordinary shares or ADSs and the new ordinary shares or ADSs or rights received, based on their relative fair market values on the date of distribution. However, the adjusted tax basis of the new ordinary shares or ADSs or rights will be zero if the fair market value of the new rights is less than 15% of the fair market value of the old ordinary shares or ADSs at the time of distribution and the U.S. Investor does not make an election to determine the adjusted tax basis of the rights by allocation as described above. A U.S. Investor's holding period in the new ordinary shares or ADSs or rights will generally include the holding period of the old ordinary shares or ADSs on which the distribution was made.

*Dispositions of ordinary shares or ADSs.* Subject to the discussion in "Passive Foreign Investment Company Status" below, gain or loss realized by a U.S. Investor on the sale or other disposition of the ordinary shares or ADSs will be subject to United States federal income tax as capital gain or loss in an amount equal to the difference between the amount realized on the disposition and that U.S. Investor's basis in the ordinary shares or ADSs. The capital gain or loss will be long-term capital gain or loss if the U.S. Investor has held the ordinary shares or ADSs for more than one year at the time of the sale or exchange. A non-corporate U.S. investor will be eligible for reduced rates of taxation (currently, at a maximum rate of 20% for sales occurring in taxable years beginning before January 1, 2011,) on long-term capital gain. The deductibility of capital losses is subject to limitations. Any gain or loss recognized by a U.S. Investor will generally be treated as U.S. source income or loss for U.S. foreign tax credit purposes.

U.S. Investors should consult their own tax advisor regarding the U.S. federal income tax consequences if the U.S. Investor receives currency other than U.S. dollars upon the disposition of ordinary shares or ADSs.

*Passive Foreign Investment Company Status.* We believe that we are not a passive foreign investment company and do not expect to become a passive foreign investment company in the future. We will be classified as a passive foreign investment company if for a taxable year, after the application of "look through" rules, either (a) 75% or more of the gross income of the company in a taxable year is passive income, or (b) the average percentage of assets by value of the company in a taxable year that produce or are held for the production of passive income (which includes cash) is at least 50%, the income or assets test. Whether or not we are a passive foreign investment company will be determined annually based upon the composition of our income and assets including goodwill, from time to time. In determining that we are not a passive foreign investment company, we are relying on the current valuation of our assets, including goodwill. In calculating goodwill, we have valued our total assets based on our total market value determined using the then market price of our ordinary shares and ADSs and have made a number of assumptions regarding the amount of this value allocable to goodwill. Because the determination of goodwill will be based on the price of our ordinary shares and ADSs, it is subject to change. We believe our valuation approach is reasonable. However, it is possible that

the Internal Revenue Service will challenge the valuation of our goodwill, which may result in our being classified as a passive foreign investment company. In addition, the composition of our income and assets will be affected by how we spend the cash we have raised, which is a passive asset for purposes of the passive foreign investment company asset test discussed above. We intend to use the cash we have raised in the past and conduct our business activities in an effort to reduce the risk of our classification as a passive foreign investment company. Because the passive foreign investment company determination is made at the end of each taxable year, we cannot determine in advance whether we will be considered a passive foreign investment company for any future taxable year. If we determine that we have become a passive foreign investment company, we will notify the Bank of New York and all U.S. investors who have been record holders of our ordinary shares or ADSs during any period in which we determine that we are a passive foreign investment company, within 60 days of the end of our taxable year for which we make such determination. If we are a passive foreign investment company for any year during which a U.S. Investor holds ordinary shares or ADSs, we generally will continue to be treated as a passive foreign investment company for all succeeding years during which the U.S. Investor holds ordinary shares or ADSs.

Special U.S. tax rules apply to U.S. Investors of interests in a passive foreign investment company. Subject to the discussion of the market-to-market election and qualified electing fund election below, if we were a passive foreign investment company for any taxable year during which a U.S. Investor held ordinary shares or ADSs, the U.S. Investor would be subject to special tax rules regardless of whether we meet the income or assets test for any other year with respect to:

any “excess distribution” by us to the U.S. Investor, which means any distributions received by the U.S. Investor on the ordinary shares or ADSs in a taxable year that are greater than 125% of the average annual distributions received by the U.S. Investor in the three preceding taxable years, or, if shorter, the U.S. Investor’s holding period for the ordinary shares or ADSs; and

- any gain realized on the sale or other disposition, including a pledge, of ordinary shares or ADSs.

Under these special tax rules:

the excess distribution or gain would be allocated ratably over the U.S. Investor’s holding period for the ordinary shares or ADSs;

the amount allocated to the current taxable year and any taxable year prior to the first taxable year in which we are a passive foreign investment company would be treated as ordinary income in the current year;

the amount allocated to each of the other years would be taxed as ordinary income at the highest tax rate in effect for that year; and

the interest charge applicable to underpayments of tax would be imposed with respect to the resulting tax attributable to each prior year in which we were a passive foreign investment company to recover the deemed benefit from the deferred payment of the tax attributable to each prior year.

In addition, dividends that a U.S. Investor receives from us will not be eligible for the special tax rates applicable to “qualified dividend income” (see “-- United States Federal Income Taxation --- Dividends”) if we are a passive foreign investment company either in the taxable year of the distribution or the preceding taxable year, but will instead be taxable at rates applicable to ordinary income.

If we are a passive foreign investment company in any year, a U.S. Investor would be required to file an annual return on Internal Revenue Service Form 8621 regarding distributions received with respect to the ordinary shares or ADSs and any gain realized on the disposition of the ordinary shares or ADSs.

A U.S. Investor in a passive foreign investment company is allowed to make a mark-to-market election with respect to the stock of the passive foreign investment company, provided that the stock of the passive foreign investment company is “marketable” within the meaning of the Code. The ordinary shares or ADSs will be “marketable” as long as they remain listed on the NASDAQ Global Select Market and are “regularly traded.” The ordinary shares or ADSs will be considered “regularly traded” for any calendar year during which the ordinary shares or ADSs are traded, other than in de minimis quantities, on at least fifteen days during each calendar quarter. If the election is made, a U.S. Investor would be required to mark the ordinary shares or ADSs to market each taxable year and recognize ordinary income for any increase in market value for that taxable year and would be allowed to recognize an ordinary loss for any decrease in that market value to the extent that prior gains exceed prior losses. The adjusted basis in the ordinary shares or ADSs would be adjusted to reflect that gain or loss. The mark-to-market election will be effective for the taxable year for which the election is made and all subsequent taxable years, unless the ordinary shares cease to be marketable or the Internal Revenue Service consents to the revocation of the election.

Alternatively, for each year we meet the income or assets test, a U.S. Investor can make an election to include in income annually its pro rata share of our earnings and net capital gains. This election is referred to as a qualified electing fund election. To make a qualified electing fund election, a U.S. Investor will need to have an annual information statement from us documenting the earnings and capital gain for the year. If we were to become a passive foreign investment company, we would furnish the passive foreign investment company annual information statement



to any shareholder or former shareholder who requested it. In general, a U.S. Investor must make a qualified electing fund election on or before the due date for filing its income tax return for the first year to which the qualified electing fund election will apply. U.S. Investors are permitted to make retroactive elections in particular circumstances, including if the U.S. Investor had a reasonable belief that the foreign corporation was not a passive foreign investment company and filed a protective election. As discussed above, we will notify investors if we determine that we have become a passive foreign investment company. This notice will provide U.S. Investors on a calendar tax year with sufficient time to make the qualified electing fund election. U.S. Investors (in particular those with a tax year other than the calendar year) should consult their own tax advisors as to the consequences of making a protective qualified electing fund election or other consequences of the qualified electing fund election.

If we are a passive foreign investment company in any year, U.S. Investors should consult with their tax advisers regarding whether to make a mark-to-market or qualified electing fund election.

*Information Reporting and Backup Withholding.* In general, information reporting requirements will apply to dividends in respect of our ordinary shares or ADSs or the proceeds received on the sale, exchange or redemption of our ordinary shares or ADSs paid within the United States (and, in certain cases, outside the United States) to U.S. Investors other than certain exempt recipients, such as corporations, and a backup withholding tax (currently at a rate of 28% but switching to 24% for tax years 2018-2025) may apply to such amounts if the U.S. Investor fails to provide an accurate taxpayer identification number or to report interest and dividends required to be shown on its U.S. federal income tax returns. U.S. Investors who are required to establish their exempt status generally must provide such certification on IRS Form W-9.

Backup withholding is not an additional tax. Amounts withheld as backup withholding from a payment to a U.S. Investor may be allowed as a credit against the U.S. Investor's U.S. federal income tax liability and the U.S. Investor may obtain a refund of any excess amounts withheld by filing the appropriate claim for refund with the IRS and furnishing any required information in a timely manner.

## DOCUMENTS ON DISPLAY

We file annual reports on Form 20-F and furnish current reports on Form 6-K with the SEC. You may read and copy this information at the SEC's Public Reference Room at Judiciary Plaza, 100 F Street N.E., Washington, D.C. 20549, and at the regional offices of the SEC located at 3 World Financial Center, Suite 400, New York, New York 10281 and 175 W. Jackson Boulevard, Suite 900, Chicago, Illinois 60604. You can also request copies of the documents, upon payment of a duplicating fee, by writing to the Public Reference Section of the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room. Certain of our SEC filings are also available to the public from the SEC's website at <http://www.sec.gov>.

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

Market risk is the risk of loss related to adverse changes in market prices, including interest rates and foreign exchange rates, as well as the marketable equity security of financial instruments. In the normal course of business, our financial position is routinely subject to a variety of risks, including market risk associated with interest rate movements and currency rate movements on non-U.S. dollar denominated assets and liabilities, as well as collectability of accounts receivable.

We regularly assess these financial instruments and their ability to address market risk and have established policies and business practices to protect against the adverse effects of these and other potential exposures.

### *Interest Rate Risk*

Our major market risk exposure is changing interest rates. Our exposure to market risk for changes in interest rates relates primarily to our investments in time deposits.

We generally maintain an investment portfolio consisting mainly of fixed income securities, including time deposits. These securities are subject to interest rate risk and will fall in value if market interest rates increase. We do not believe that a 10.0% change in interest rates would have a significant impact on the fair value of our investment portfolio. There was no exposure to market risk at December 31, 2018. We have not purchased and do not currently hold any derivative financial instruments for hedging or trading purposes.

The table below provides information about our financial instruments whose maturity dates are greater than three months as of December 31, 2018.

	2019	2020	2021	2022	2023	Thereafter	Total
	<i>(in thousands)</i>						
Time Deposit:							
Fixed rate (US\$)	\$3,335	\$-	\$31	\$-	\$-	\$-	\$3,366

### *Foreign currency risk*

Fluctuations in exchange rates may adversely affect our financial results. The functional currency for each of our foreign subsidiaries is the local currency. As a result, certain of our assets and liabilities, including certain bank accounts, accounts receivable, restricted assets, short-term investments and accounts payable, exist in non-US dollar-denominated currencies, which are sensitive to foreign currency exchange rate fluctuations. If exchange rates were to change immediately and uniformly from the levels at December 31, 2018, the fair value of such assets and liabilities would change by an immaterial amount beyond the change reflected by the exchange rates. As of December 31, 2018, we held approximately \$7.4 million in certificates of deposits and bank demand accounts denominated in foreign currencies.

We have not engaged in hedging techniques to mitigate foreign currency exposures and may experience economic losses as a result of foreign currency exchange rate fluctuations. We will monitor currency exchange fluctuations periodically. For the year ended December 31, 2018, we experienced a net foreign exchange gain of approximately \$108,000 due to foreign currency exchange fluctuations, which are reflected in our results of operations.

*Equity price risk*

We are exposed to equity price risk primarily through our investment in Excelliance MOS Co., Ltd. (“EMC”). EMC is a listing company operating in technology industry sector of Taipei Exchange. We typically do not attempt to reduce or eliminate our equity market exposure through hedging activities at the inception of our investment. In the event we do decide to enter into hedge arrangements, before doing so we evaluate legal, market, and economic factors, as well as the expected timing of disposal, to determine whether hedging is appropriate. For the year ended December 1, 2018, we recognized a net fair value gain of \$10.2 million in relation to our investment in EMC.

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

A. Debt Securities

Not applicable.

B. Warrants and Rights

Not applicable.

C. Other Securities

Not applicable.

D. American Depositary Shares

Our American Depositary Receipt (“ADR”) facility is maintained by the Bank of New York Mellon (the “Depositary”). A copy of the form of Deposit Agreement (the “Deposit Agreement”) between us, the Depositary, and the owners and beneficial owners of ADSs was filed as Exhibit 1 to our Registration Statement on Form S-6 filed with the SEC on November 7, 2005. The Hong Kong and Shanghai Banking Corporation (the “Custodian”) acts as an agent of the Depositary for the purposes of the Deposit Agreement.

**Fees and charges payable by our ADS holders**

Under the Deposit Agreement, the Depositary collects fees for the delivery and surrender of ADSs directly from investors depositing ordinary shares or surrendering ADSs for the purpose of withdrawal or from intermediaries acting for them. The depositary collects fees for making distributions to investors by deducting those fees from the amounts distributed or by selling a portion of distributable property to pay the fees. The depositary may collect its annual fee for depositary services by deductions from cash distributions, directly billing investors or charging the book-entry system accounts of participants acting for them. The charges of our Depositary payable by our ADS holders are as follows, pursuant to the Deposit Agreement:

**ADS holders must pay:**

-

\$5.00 or less per 100 ADSs

\$5.00 or less per 100 ADSs

\$0.02 or less per ADS

A fee equivalent to the fee for the execution and delivery of ADSs referred to above which would have been charged as a result of the deposit of such securities but which securities are instead distributed by the Depositary to registered ADS holders

\$0.02 or less per ADS per calendar year (to the extent that the depositary has not collected a cash distribution fee of US\$0.02 per ADS during that year)

Registration or transfer fees, if applicable

Expenses of the depositary, if applicable

Taxes and other governmental charges the Depositary or the Custodian have to pay on any ADS or ordinary share underlying an ADS, for example, stock transfer taxes, stamp duty or withholding taxes

Any charges incurred by the Depositary or its agents for servicing the deposited securities

**For:**

§ Each delivery or issuance of ADSs, including deliveries or issuances resulting from a distribution of shares or rights or other property

§ Each surrender or cancellation of ADSs for the purpose of withdrawal, including if the deposit agreement terminates

§ Any cash distribution to ADS registered holders

§ Each distribution of securities, other than ordinary shares or ADSs, to holders of deposited securities which are distributed by the Depositary to ADS registered

§ Depositary services

§ Transfer and registration of shares on the share register of our transfer agent to or from the name of the Depositary or its agent when an ADS holder deposits or withdraws shares

§ Cable, telex and facsimile transmissions as are expressly provided in the deposit agreement

§ Converting foreign currency to U.S. dollars

§ As necessary

§ As necessary

**Fees and payments made by the Depositary to us**

The Depositary has waived certain of its standard out-of-pocket administrative, maintenance, shareholder services and secondary market support services fees and expenses for providing services to registered ADS holders and us (excluding those fees and expenses set forth in the table above). These waived fees and expenses include, without limitation, the Depositary's annual administration charges and fees, custody fees, issuance of dividend checks and replacements, if necessary, preparation and filing of U.S. tax information returns, stationery, postage, notification mailing, photocopying, facsimile and telephone calls, and certain investor relationship programs and investor relations promotional activities. We are responsible for paying for postage and envelopes for mailing annual and interim financial reports and all non-standard out-of-pocket administration and maintenance expenses of the Depositary, including any and all reasonable legal fees and disbursements.

## **PART II**

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

There are no defaults, dividend arrearages or delinquencies that are required to be disclosed.

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

#### **RIGHTS OF SECURITY HOLDERS**

Effective March 2, 2006, upon the listing of our ordinary shares on the Stock Exchange of Hong Kong (“SEHK”), certain amendments to our Memorandum and Articles of Association became effective, as is described in the report on Form 6-K filed on March 1, 2006. A summary of material provisions of our Memorandum and Articles of Association is included in Item 10 above.

#### **USE OF PROCEEDS**

As of December 31, 2018, the net proceeds from our initial public offering in August 2000, and our public offering in November 2001, were primarily used for general working capital and investment in interest income producing financial instruments. None of the net proceeds from our initial public offering were paid, directly or indirectly, to any of our directors, officers or general partners or any of their associates, or to any person owning ten percent or more of any class of our equity securities, or any of our affiliates.

### **ITEM 15. CONTROLS AND PROCEDURES**

#### Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports filed pursuant to the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to the management, including the Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of any control system is based in part upon certain assumptions about the likelihood of future events. Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their objectives.

As of December 31, 2018, we carried out an evaluation, under the supervision and with the participation of the management, including the Chief Executive Officer and the Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures. Based on the foregoing, the Chief Executive Officer and the Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective.

#### Management's Annual Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the company. 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 accounting principles generally accepted in the United States of America. Our company's internal control over



financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of our company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America, and that receipts and expenditures of our company are being made only in accordance with authorizations of management and directors of our company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our 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. Management conducted an evaluation of the effectiveness of internal control over financial reporting based on the framework in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, management concluded that our company's internal control over financial reporting was effective as of December 31, 2018. This Annual Report includes an attestation report of our independent registered public accounting firm regarding internal control over financial reporting.

#### Changes in Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting that occurred during our fiscal year 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

#### Attestation Report of The Independent Registered Public Accounting Firm

## **REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Shareholders and the Board of Directors of O<sub>2</sub>Micro International Limited:

### **Opinion on Internal Control over Financial Reporting**

We have audited the internal control over financial reporting of O<sub>2</sub>Micro International Limited and subsidiaries (the “Company”) as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2018, of the Company and our report dated April 29, 2019 expressed an unqualified opinion on those financial statements.

### **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 Annual 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/ Deloitte & Touche

Taipei, Taiwan

Republic of China

April 29, 2019

## ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

We have at least one audit committee financial expert serving on the audit committee. The Board of Directors has determined that Mr. Lawrence Lin is the "audit committee financial expert" as defined in Item 16A of Form 20-F. We believe Mr. Lin is "independent" as defined in Rule 4200(a)(15) of the Marketplace Rules of the NASDAQ Stock Market.

## ITEM 16B. CODE OF ETHICS

We have adopted the O<sub>2</sub>Micro International Limited Code of Business Conduct and Ethics ("Code of Conduct"), a code of business conduct and ethics that applies to our employees, officers and non-employee directors (including our principal executive officer, principal financial officer, principal accounting officer or controller), and persons performing similar functions. It is publicly available on our website at [www.o2micro.com](http://www.o2micro.com). If we make any substantive amendments or grant any waiver from a provision of the Code of Conduct to our directors or executive officers, we will disclose the nature of such amendment or waiver on that website or in a report on Form 6-K or in the next Annual Report on Form 20-F.

## ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Deloitte & Touche has served as the Company's independent registered public accounting firm for each of the fiscal years in the two-year period ended December 31, 2018. The appointment of the independent registered public accounting firm is subject to approval and ratification by the Company's shareholders at the annual general meeting of shareholders. The following table presents the aggregate fees for professional services and other services rendered by Deloitte & Touche in each of the years ended December 31, 2018 and 2017.

	Year Ended December 31, 2018 <i>(in thousands)</i>	Year Ended December 31, 2017
Audit Fees	\$403	\$383
Audit-related Fees	12	7
Tax Fees	37	37
Total	\$452	\$427

*Audit Fees.* This category includes the audit of our annual financial statements, review of quarterly financial statements, audit of our internal control over financial reporting and services that are normally provided by Deloitte & Touche in connection with statutory and regulatory filings or engagements for those fiscal years.

*Audit-related Fees.* This category consists of assurance and related services by Deloitte & Touche that are related to the performance of audit or review of our financial statements and are reported above under "Audit Fees."

*Tax Fees.* This category consists of professional services rendered by Deloitte & Touche for tax compliance and tax consultation. The services for fees disclosed under this category include tax return preparation advice and technical tax consultation.

The audit committee pre-approves all audit and permissible non-audit services provided by the independent registered public accounting firm. These services may include audit services, audit-related services, tax services and other services. During the year ended December 31, 2018, the audit committee pre-approved all audit and non-audit-fees of Deloitte & Touche.

## ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEE

Not applicable.

## ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PERSONS



Period	Total Number of Shares Purchased (2)	Average Price Paid per Share (2)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1) (2) (3)	Maximum Number of Shares or Dollar of Value that May Yet Be Purchased Under the Plans or Programs (1) (2) (3)
January 1, 2018 to January 31, 2018	1,714,800	\$0.0330	1,714,800	\$8,665,594
February 1, 2018 to February 28, 2018	2,150,000	\$0.0292	2,150,000	\$8,602,781
March 1, 2018 to March 31, 2018	3,492,250	\$0.0286	3,492,250	\$8,502,830
April 1, 2018 to April 30, 2018	855,000	\$0.0277	855,000	\$8,479,137
May 1, 2018 to May 31, 2018	115,150	\$0.0333	115,150	\$8,475,303
June 1, 2018 to June 30, 2018	1,021,450	\$0.0338	1,021,450	\$8,440,762
July 1, 2018 to July 31, 2018	322,750	\$0.0343	322,750	\$8,429,694
August 1, 2018 to August 31, 2018	-	\$-	-	\$8,429,694
September 1, 2018 to September 30, 2018	-	\$-	-	\$8,429,694
October 1, 2018 to October 31, 2018	-	\$-	-	\$8,429,694
November 1, 2018 to November 30, 2018	1,273,050	\$0.0335	1,273,050	\$8,387,026
December 1, 2018 to December 31, 2018	3,636,350	\$0.0317	3,636,350	\$8,271,641

(1) In May 2002, we announced a share repurchase program to repurchase up to 3,000,000 shares of our ADSs or 150,000,000 in ordinary shares after taking into account the 50-to-1 stock split on November 25, 2005. There is no expiration date for the share repurchase program.

(2) All share and price per share numbers reflect the 50-for-1 stock split which occurred on November 25, 2005.

(3) On November 14, 2005, our shareholders adopted a general mandate (the “Repurchase Mandate”) to exercise all the powers of our company to repurchase such number of ordinary shares not exceeding 10% of the total nominal amount of the share capital of our company in issue and to be issued. The Repurchase Mandate was to only become effective if and when our ordinary shares were listed for trading on the SEHK, which occurred on March 2, 2006.

(4) On June 30, 2010, our shareholders passed a resolution authorizing the purchase by the Company, in accordance with the provision of the Companies Law (2010 Revision) of the Cayman Islands of such of its own shares. No further Shareholder approval will be required in the future for the Company to repurchase its ordinary shares and the Board will have the authority to fix the number of share to be repurchased, as well as the price and other terms of any repurchase, as determined by the Board in its discretion from time to time. In July 2010, the Board approved that the Company adopt a plan to repurchase up to an aggregate of \$20 million of value of the Company’s issued and outstanding ordinary shares.

(5) In December 2011, our Board approved an additional \$30 million under our current program to repurchase the Company's ordinary shares. No date was established for the completion of the share repurchase program.

#### ITEM 16F. CHANGE IN REGISTRANT’S CERTIFYING ACCOUNTANT

Not applicable.

#### ITEM 16G. CORPORATE GOVERNANCE

We are a foreign private issuer whose ADSs are listed on the NASDAQ Global Market. As such, we are required to comply with U.S. federal securities laws, including the Sarbanes-Oxley Act, and the NASDAQ rules, including the NASDAQ corporate governance requirements. While we are generally in compliance with all of the NASDAQ corporate governance requirements, NASDAQ rules provide that foreign private issuers may follow home country practice in lieu of certain qualitative listing requirements subject to certain exceptions and except to the extent that such exemptions would be contrary to U.S. federal securities laws, so long as the foreign issuer discloses that it does not follow such listing requirement and describes the home country practice followed in its reports filed with the SEC. Below is a concise summary of the significant ways in which our corporate governance practices differ from the corporate governance requirements of NASDAQ applicable to domestic U.S. listed companies:

- We are not required under Cayman Islands law to, and do not, distribute interim reports directly to shareholders. In addition, please also see Item 6 “Directors, Senior Management and Employees” and Item 10 “Additional Information” for further discussion on our corporate governance practices.





### **PART III**

#### **ITEM 17. FINANCIAL STATEMENTS**

The Company's Consolidated Financial Statements have been prepared in accordance with Item 18 hereof.

#### **ITEM 18. FINANCIAL STATEMENTS**

The Company's financial statements set forth in the accompanying Index to Consolidated Financial Statements included in this Annual Report on Form 20-F following Part IV beginning on page F-1 are hereby incorporated herein by this reference. Such consolidated financial statements are filed as part of this Annual Report on Form 20-F.

Report of Independent Registered Public Accounting Firm

Consolidated Balance Sheets as of December 31, 2018 and 2017

Consolidated Statements of Operations and Comprehensive Income for the years ended December 31, 2018, 2017 and 2016

Consolidated Statements of Shareholders' Equity for the years ended December 31, 2018, 2017 and 2016

Consolidated Statements of Cash Flows for the years ended December 31, 2018, 2017 and 2016

Notes to Consolidated Financial Statements

#### **ITEM 19. EXHIBITS**

Amended and Restated Memorandum and Articles of Association of the registrant adopted pursuant to a special 1. resolution passed on May 29, 2009, which took effect upon the withdrawal of the listing of the ordinary shares of the registrant on the Main Board of The Stock Exchange of Hong Kong Limited on September 9, 2009.

8.1 List of registrant's subsidiaries

12.1 Certification of Chief Executive Officer of the Company, pursuant to Section 302 of the Sarbanes-Oxley Act

12.2 Certification of Chief Financial Officer of the Company, pursuant to Section 302 of the Sarbanes-Oxley Act

13. Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act

15.1 Consent of Deloitte & Touche, independent registered public accounting firm

### **SIGNATURES**

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, 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 its behalf.

O<sub>2</sub>MICRO  
INTERNATIONAL LIMITED

Date: April 26, 2019 By: /s/ sterling du  
Name: Sterling Du  
Title: Chief Executive Officer

O<sub>2</sub>MICRO INTERNATIONAL LIMITED

**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

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**Exhibit 1**

**O<sub>2</sub>Micro International Limited and Subsidiaries**

**Consolidated Financial Statements as of**

**December 31, 2018 and 2017 and for the Three Years Ended December 31, 2018, 2017 and 2016, and**

**Report of Independent Registered Public**

**Accounting Firm**

## **REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Shareholders and the Board of Directors of O<sub>2</sub>Micro International Limited:

### **Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheets of O<sub>2</sub>Micro International Limited and subsidiaries (the “Company”) as of December 31, 2018 and 2017, the related consolidated statements of operations and comprehensive income (loss), shareholders’ equity, and cash flows for each of the three years in the period ended December 31, 2018, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the result of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

We have also 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 the criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated April 29, 2019 expressed an unqualified opinion on the Company’s internal control over financial reporting.

### **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 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/ Deloitte & Touche

Taipei, Taiwan

Republic of China

April 29, 2019

We have served as the Company's auditor since 1998.

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**O<sub>2</sub>MICRO INTERNATIONAL LIMITED AND SUBSIDIARIES****CONSOLIDATED BALANCE SHEETS****(In Thousand US Dollars, Except Per Share Amounts and Share Data)**

	December 31	
	2018	2017
<b>ASSETS</b>		
<b>CURRENT ASSETS</b>		
Cash and cash equivalents (notes 3 and 4)	\$32,414	\$28,520
Restricted cash	34	35
Short-term investments (notes 3 and 5)	6,172	17,601
Accounts receivable, net	11,388	9,184
Inventories (note 6)	10,288	9,330
Prepaid expenses and other current assets (notes 7 and 16)	2,276	1,245
Total current assets	62,572	65,915
LONG-TERM INVESTMENTS (notes 3 and 8)	10,445	3,112
PROPERTY AND EQUIPMENT, NET (note 9)	13,714	13,755
OTHER ASSETS (note 10)	2,578	2,300
<b>TOTAL ASSETS</b>	<b>\$89,309</b>	<b>\$85,082</b>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES</b>		
Notes and accounts payable	\$4,582	\$2,460
Income tax payable	413	341
Accrued expenses and other current liabilities (note 11)	4,181	4,379
Total current liabilities	9,176	7,180
<b>LONG-TERM LIABILITIES</b>		
Accrued pension liabilities (note 13)	321	355
Deferred income tax liabilities (note 12)	681	906
Other liabilities	85	86
Total long-term liabilities	1,087	1,347
Total liabilities	10,263	8,527
COMMITMENTS AND CONTINGENCIES (notes 16 and 17)		
SHAREHOLDERS' EQUITY		

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Preference shares at \$0.00002 par value per share; Authorized – 250,000,000 shares;	-	-
Ordinary shares at \$0.00002 par value per share; Authorized – 4,750,000,000 shares;		
Issued – 1,669,036,600 shares as of December 31, 2018 and 2017 Outstanding – 1,298,808,750 and 1,284,146,100 shares as of December 31, 2018 and 2017, respectively	33	33
Additional paid-in capital	143,115	142,946
Accumulated deficits	(45,912 )	(47,517 )
Accumulated other comprehensive income	4,674	5,337
Treasury stock – 370,227,850 and 384,890,500 shares as of December 31, 2018 and 2017, respectively	(22,864 )	(24,244 )
Total shareholders' equity	79,046	76,555
<b>TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY</b>	<b>\$89,309</b>	<b>\$85,082</b>

The accompanying notes are an integral part of the consolidated financial statements.

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**O<sub>2</sub>MICRO INTERNATIONAL LIMITED AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME****(In Thousand US Dollars, Except Per Share Amounts and Share Data)**

	Years Ended December 31		
	2018	2017	2016
NET SALES	\$62,714	\$60,205	\$56,561
COST OF SALES	30,741	29,426	27,317
GROSS PROFIT	31,973	30,779	29,244
OPERATING EXPENSES			
Research and development (a)	19,766	17,989	15,645
Selling, general and administrative (a)	20,332	19,047	19,481
Litigation income	-	(19 )	(23 )
Total operating expenses	40,098	37,017	35,103
LOSS FROM OPERATIONS	(8,125 )	(6,238 )	(5,859 )
NON-OPERATING INCOME			
Interest income	369	344	301
Foreign exchange gain, net	108	53	63
Net gain recognized on long-term investments (note 8)	9,916	-	-
Gain on sale of long-term investments (note 8)	-	20	948
Gain on sale of real estate (note 9)	-	-	1,725
Other, net	961	686	894
Total non-operating income	11,354	1,103	3,931
INCOME (LOSS) BEFORE INCOME TAX	3,229	(5,135 )	(1,928 )
INCOME TAX EXPENSE (note 12)	1,141	1,010	1,058
NET INCOME (LOSS)	2,088	(6,145 )	(2,986 )
OTHER COMPREHENSIVE INCOME (LOSS), NET OF TAX EFFECT OF NIL			
Foreign currency translation adjustments	(677 )	984	(397 )
Unrealized (loss)gain on available-for-sale investments (note 8)	-	(1 )	1
Unrealized pension gain (loss)	14	(61 )	(13 )

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Total other comprehensive (loss) income	(663 )	922	(409 )
COMPREHENSIVE INCOME (LOSS)	\$1,425	\$(5,223 )	\$(3,395 )
(Continued)			

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**O<sub>2</sub>MICRO INTERNATIONAL LIMITED AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME****(In Thousand US Dollars, Except Per Share Amounts and Share Data)**

	Years Ended December 31		
	2018	2017	2016
<b>EARNINGS (LOSS) PER SHARE (note 15)</b>			
Basic	\$-	\$-	\$-
Diluted	\$-	\$-	\$-
<b>NUMBER OF SHARES USED IN EARNINGS (LOSS) PER SHARE CALCULATION:</b>			
Basic (in thousands)	1,300,795	1,288,977	1,282,141
Diluted (in thousands)	1,330,822	1,288,977	1,282,141
<b>(a) INCLUDES STOCK-BASED COMPENSATION CHARGE AS FOLLOWS:</b>			
Research and development	\$241	\$221	\$231
Selling, general and administrative	\$1,180	\$1,368	\$1,375

The accompanying notes are an integral part of the consolidated financial statements. (Concluded)

O<sub>2</sub>MICRO INTERNATIONAL LIMITED AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(In Thousand US Dollars, Except Share Data)

	Ordinary Shares	Additional Paid – in Capital	Accumulated Deficits	Accumulated Investment Gain (Loss)	Other Comprehensive Unrealized Gain (Loss)	Cumulative Translation Adjustment	Unrealized Pension Gain (Loss)	Total	Treasury Stock	Shareholders' Equity
BALANCE, JANUARY 1, 2016	1,660,786,600	\$33	\$141,886	\$(38,386)	\$-	\$4,941	\$(117)	\$4,824	\$(25,240)	\$83,117
Issuance of:										
Shares for exercise of stock options	84,750	-	2	-	-	-	-	-	-	2
Shares for Employee Stock Purchase Plan	2,881,350	-	73	-	-	-	-	-	-	73
Shares vested under restricted share units	18,056,150	-	-	-	-	-	-	-	-	-
Acquisition of treasury stock – 20,558,750 shares	-	-	-	-	-	-	-	-	(619 )	(619 )
Treasury stock reissued for :										
Exercise of stock options	(84,750 )	-	(5 )	-	-	-	-	-	5	-
Employee Stock Purchase Plan	(2,881,350 )	-	(187 )	-	-	-	-	-	187	-
Restricted share units	(9,806,150 )	-	(637 )	-	-	-	-	-	637	-
Stock-based compensation	-	-	1,606	-	-	-	-	-	-	1,606
Net loss for 2016	-	-	-	(2,986 )	-	-	-	-	-	(2,986 )
Pension loss	-	-	-	-	-	-	(13 )	(13 )	-	(13 )
Foreign currency translation	-	-	-	-	-	(397 )	-	(397 )	-	(397 )

adjustments										
Unrealized gain on available-for-sale investments	-	-	-	-	524	-	-	524	-	524
Reclassification adjustments for gain on available-for-sale securities included in net loss	-	-	-	-	(523)	-	-	(523)	-	(523)
BALANCE, DECEMBER 31, 2016	1,669,036,600	33	142,738	(41,372)	1	4,544	(130)	4,415	(25,030)	80,784
Issuance of:										
Shares for exercise of stock options	687,350	-	29	-	-	-	-	-	-	29
Shares for Employee Stock Purchase Plan	2,375,200	-	84	-	-	-	-	-	-	84
Shares vested under restricted share units	20,281,800	1	(1)	-	-	-	-	-	-	-
Acquisition of treasury stock – 18,323,150 shares	-	-	-	-	-	-	-	-	(708)	(708)
Treasury stock reissued for :										
Exercise of stock options	(687,350)	-	(44)	-	-	-	-	-	44	-
Employee Stock Purchase Plan	(2,375,200)	-	(151)	-	-	-	-	-	151	-
Restricted share units	(20,281,800)	(1)	(1,298)	-	-	-	-	-	1,299	-
Stock-based compensation	-	-	1,589	-	-	-	-	-	-	1,589
Net loss for 2017	-	-	-	(6,145)	-	-	-	-	-	(6,145)
Pension loss	-	-	-	-	-	-	(61)	(61)	-	(61)
Foreign currency translation adjustments	-	-	-	-	-	984	-	984	-	984
Unrealized loss on available-for-sale investments	-	-	-	-	(1)	-	-	(1)	-	(1)
	1,669,036,600	33	142,946	(47,517)	-	5,528	(191)	5,337	(24,244)	76,555

BALANCE,  
DECEMBER 31,  
2017

Issuance of:

Shares for exercise of stock options	346,550	-	10	-	-	-	-	-	-	10
Shares for Employee Stock Purchase Plan	3,307,950	-	86	-	-	-	-	-	-	86
Shares vested under restricted share units	25,588,950	1	(1 )	-	-	-	-	-	-	-
Acquisition of treasury stock – 14,580,800 shares	-	-	-	-	-	-	-	-	(451 )	(451 )
Treasury stock reissued for :										
Exercise of stock options	(346,550 )	-	(19 )	(2 )	-	-	-	-	21	-
Employee Stock Purchase Plan	(3,307,950 )	-	(88 )	(118 )	-	-	-	-	206	-
Restricted share units	(25,588,950 )	(1 )	(1,240 )	(363 )	-	-	-	-	1,604	-
Stock-based compensation	-	-	1,421	-	-	-	-	-	-	1,421
Net income for 2018	-	-	-	2,088	-	-	-	-	-	2,088
Pension gain	-	-	-	-	-	-	14	14	-	14
Foreign currency translation adjustments	-	-	-	-	-	(677 )	-	(677 )	-	(677 )

BALANCE,

DECEMBER 31, 2018 1,669,036,600 \$33 \$143,115 \$(45,912) \$- \$4,851 \$(177) \$4,674 \$(22,864) \$79,046

The accompanying notes are an integral part of the consolidated financial statements.

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**O<sub>2</sub>MICRO INTERNATIONAL LIMITED AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF CASH FLOWS****(In Thousand US Dollars)**

	Years Ended December 31		
	2018	2017	2016
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>			
Net income (loss)	\$2,088	\$(6,145 )	\$(2,986 )
Adjustments to reconcile net income (loss) to net cash used in operating activities:			
Depreciation and amortization	1,641	1,667	1,682
Stock-based compensation	1,421	1,589	1,606
Provisions for obsolete inventories	1,328	642	1,527
Net gain recognized on long-term investments	(9,916 )	-	-
Gain on sale of long-term investments	-	(20 )	(948 )
Gain on disposal of property and equipment, net	(6 )	(137 )	(1,726 )
Deferred income taxes	(155 )	40	(1,231 )
Changes in operating assets and liabilities:			
Accounts receivable, net	(2,204 )	(1,979 )	(2,008 )
Inventories	(2,286 )	(697 )	(1,140 )
Prepaid expenses and other current assets	(1,031 )	(139 )	(6 )
Deferred charges	(983 )	(553 )	(375 )
Notes and accounts payable	2,122	(1,869 )	996
Income tax payable	72	161	(2,065 )
Accrued expenses and other current liabilities	(105 )	186	(1,064 )
Accrued pension liabilities	(20 )	13	(4 )
Other liabilities	(1 )	3	(56 )
Net cash used in operating activities	(8,035 )	(7,238 )	(7,798 )
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>			
Acquisition of:			
Short-term investments	(11,197)	(8,505 )	(28,797)
Property and equipment	(1,272 )	(704 )	(673 )
(Increase) decrease in other assets	(12 )	22	40
Proceeds from:			
Sale of short-term investments	22,540	12,635	18,331
Disposal of long-term investments	2,582	-	5,982
Return of capital from long-term investments	-	1,163	17
Disposal of property and equipment	16	145	3,837
Net cash provided by (used in) investing activities	12,657	4,756	(1,263 )

CASH FLOWS FROM FINANCING ACTIVITIES

Acquisition of treasury stock	(451 )	(708 )	(619 )
Proceeds from:			
Exercise of stock options	10	29	2
Issuance of ordinary shares under the Employee Stock Purchase Plan	86	84	73
Net cash used in financing activities	(355 )	(595 )	(544 )

(Continued)

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**O<sub>2</sub>MICRO INTERNATIONAL LIMITED AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF CASH FLOWS****(In Thousand US Dollars)**

	Years Ended December 31		
	2018	2017	2016
EFFECTS OF CHANGES IN FOREIGN EXCHANGE RATE	\$(374 )	\$268	\$(261 )
NET INCREASE (DECREASE) IN CASH, CASH EQUIVALENTS AND RESTRICTED CASH	3,893	(2,809 )	(9,866 )
CASH, CASH EQUIVALENTS AND RESTRICTED CASH AT BEGINNING OF THE YEAR	28,555	31,364	41,230
CASH, CASH EQUIVALENTS AND RESTRICTED CASH AT END OF THE YEAR	\$32,448	\$28,555	\$31,364
<b>SUPPLEMENTAL DISCLOSURES OF CASH FLOWS</b>			
Cash paid for tax	\$1,218	\$818	\$4,349

The accompanying notes are an integral part of the consolidated financial statements. (Concluded)



## **O<sub>2</sub>MICRO INTERNATIONAL LIMITED AND SUBSIDIARIES**

### **NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(Expressed in United States Dollars Unless Otherwise Noted)**

#### **1. GENERAL**

##### **Business**

O<sub>2</sub>Micro, Inc. was incorporated in the state of California in the United States of America on March 29, 1995. In March 1997, O<sub>2</sub>Micro International Limited (the “Company”) was incorporated in the Cayman Islands and all authorized and outstanding common stock, preferred stock, and stock options of O<sub>2</sub>Micro, Inc. were exchanged for the Company’s ordinary shares, preference shares, and stock options with identical rights and preferences. Q<sub>2</sub>Micro, Inc. became the Company’s subsidiary after the share exchange. The Company designs, develops and markets innovative power management components for the computer, consumer, industrial, automotive and communications markets.

The Company’s ordinary shares (“Shares”) were initially listed on The NASDAQ National Market (“NASDAQ”) on August 23, 2000, and on the Cayman Islands Stock Exchange on February 1, 2001. At the Extraordinary General Meeting of Shareholders (“EGM”) held on November 14, 2005, the shareholders approved a public global offering of the Company’s Shares and the proposed listing of the Company’s Shares on the Main Board of The Stock Exchange of Hong Kong Limited (“SEHK”) and various matters related to the proposed listing and offering. Following the approval of these matters, the Company ceased trading its Shares on the NASDAQ, effected a 50-for-1 share split of Shares, created an American depositary share (“ADS”) program for the ADSs to be quoted on the NASDAQ, and delisted the Shares from the NASDAQ on November 25, 2005. The Company commenced trading of ADSs on the NASDAQ on November 28, 2005, and subsequently listed the Shares on the SEHK on March 2, 2006, by way of introduction. On February 27, 2009, the Company submitted an application for the voluntary withdrawal of the listing of Shares on the Main Board of SEHK (collectively referred to as “Proposed Withdrawal”) for reasons of cost and utility. The Company retained its existing primary listing of ADSs on the NASDAQ following the Proposed Withdrawal and for the foreseeable future. The Proposed Withdrawal was approved at the EGM held on May 30, 2009, and the listing of the Shares on SEHK was withdrawn on September 9, 2009.

The Company has incorporated various wholly-owned subsidiaries in the past, including, among others, O<sub>2</sub>Micro Electronics, Inc. (“Q<sub>2</sub>Micro-Taiwan”), Q<sub>2</sub>Micro International Japan Ltd. (“Q<sub>2</sub>Micro-Japan”), and Q<sub>2</sub>Micro (China) Co., Ltd. (“Q<sub>2</sub>Micro-China”). Q<sub>2</sub>Micro-Taiwan is engaged in operations and sales support services. O<sub>2</sub>Micro-Japan is engaged in sales support services. O<sub>2</sub>Micro-China and other subsidiaries are mostly engaged in research and development services.

**2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**Basis of Presentation**

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America. The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated on consolidation.

**Use of Estimates**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

Significant accounting estimates reflected in the Company's consolidated financial statements include valuation allowance for deferred income tax assets, allowance for doubtful accounts, impairment of long-term investments, inventory valuation, useful lives for property and equipment, impairment of long-lived assets and identified intangible assets, pension and uncertain tax liabilities, and contingencies.

### **Concentration of Credit Risk**

Financial instruments that potentially subject the Company to a concentration of credit risk consist of cash, cash equivalents, restricted cash, short-term investments and accounts receivable. Cash is deposited with high credit quality financial institutions. For cash equivalents, restricted cash and short-term investments, the Company invests primarily in time deposits at the banks with good credit rating. For accounts receivable, the Company performs ongoing credit evaluations of its customers' financial condition and the Company maintains an allowance for doubtful accounts based upon a review of the expected collectability of individual accounts.

### **Fair Value of Financial Instruments**

The Company's financial instruments include cash and cash equivalents, restricted cash, short-term investments, long-term investments, accounts receivable and notes and accounts payable. The carrying amounts approximate the fair value due to the short-term maturity of those instruments. Long-term investments in public company equity securities are measured using the quoted market prices. Long-term investments in private company equity securities are measured at cost with adjustments for observable changes in price or impairments.

### **Cash and Cash Equivalents**

The Company considers all highly liquid investments with maturities of not more than three months when purchased to be cash equivalents. Investments with maturities of more than three months are classified as short-term investments.

### **Restricted Cash**

The Company classifies deposits made for customs and cash pledged to a bank for the issuance of letters of credit as restricted cash. The deposits are classified as current assets when restricted cash is within a twelve-month period from the balance sheet date.

### **Short-term investments**

Short-term investment primarily comprises of the time deposits with original maturities between three months and one year. The carrying amounts approximate the fair value due to the short-term maturity of these time deposits.

## **Inventories**

Inventories are stated at the lower of standard cost or net realizable value. The cost of inventories comprises cost of purchasing raw materials and where applicable, those overheads that have been incurred in bringing the inventories to their present location and condition. Cost is determined on a currently adjusted standard basis, which approximates actual cost on a first-in, first-out basis. The Company assesses its inventory for estimated obsolescence or unmarketable inventory based upon management's assumptions about future demand and market conditions and writes down inventory as needed.

## **Long-term Investments**

After the adoption of Accounting Standards Update ("ASU") 2016-01 and ASU 2018-03 on January 1, 2018, long-term investments in listed companies over which the Company does not exercise significant influence are recorded at fair value, and any changes in fair value are recognized in net income. Prior to the adoption of ASU 2016-01 and ASU 2018-03, these investments in listed companies are classified as available-for-sale securities and are recorded at fair value. Unrealized gains and losses on these investments are included in accumulated other comprehensive income and loss as a separate component of shareholders' equity, net of any related tax effect, unless unrealized losses are deemed other-than-temporary. Unrealized losses are recorded as a charge to income when deemed other-than-temporary.

Long-term investments, including non-marketable equity investments and interests in venture capital funds, are measured at cost with adjustments for observable changes in price or impairments because those investments in equity securities do not have readily determinable fair value. Prior to the adoption of ASU 2016-01 and ASU 2018-03 in 2018, these securities were accounted for using the cost method of accounting, measured at cost less other-than-temporary impairment. There were no indicators noted a need to subsequently account for transition adjustments related to investments in equity securities without a readily determinable fair value when the Company adopts ASU 2016-01 and ASU 2018-03 in January 2018.

## **Property and Equipment**

Property and equipment are stated at cost less accumulated depreciation. Major additions and betterments are capitalized, while maintenance and repairs are expensed as incurred.

Depreciation is computed on a straight-line basis over estimated service lives that range as follows: buildings - 35 to 50 years, equipment - 3 to 7 years, furniture and fixtures - 3 to 7 years, leasehold improvements - the shorter of the estimated useful life or the lease term, which is 2 to 5 years, and transportation equipment - 5 years.

## **Long-lived Asset Impairment**

The Company evaluates the recoverability of long-lived assets whenever events or changes in circumstances indicate the carrying value may not be recoverable. The carrying value of a long-lived asset is considered impaired when the anticipated undiscounted cash flows from the asset is separately identifiable and is less than the carrying value. If impairment occurs, a loss based on the excess of the carrying value over the fair value of the long-lived asset is recognized. Fair value is determined by reference to quoted market prices, if available, or discounted cash flows, as appropriate.

## **Treasury Stock**

The Company may retire ordinary shares repurchased under a share repurchase plan. Accordingly, upon retirement the excess of the purchase price over par value is allocated between additional paid-in capital and retained earnings based on the average issuance price of the shares repurchased. The Company may also determine not to retire ordinary shares repurchased for the purpose of reissuing them upon exercise of stock option, Employee Stock Purchase Plan, and release of restricted stock units (“RSUs”). The reissue cost of shares repurchased is determined by the moving average method. A repurchase of ADS is recorded as treasury stock when the Company completes the withdrawal of the underlying ordinary shares from the ADS program.

## **Revenue Recognition**

The Company generates revenue primarily from product sales, either directly to a customer or through a distributor. In determining whether a contract exists, the Company evaluates the terms of the arrangement including rights, obligations and payment term, the relationship with the customer or distributor and their ability to pay.

At contract inception, the Company assesses the goods and shipping services promised in its contracts with customers and identifies a single performance obligation that the Company satisfies at a point in time. The Company recognizes product revenue from direct end customers and distributors and when the following events have occurred: (a) the Company has transferred physical possession of the products, (b) the Company has a present right to payment, (c) the customer has legal title to the products, and (d) the customer bears significant risks and rewards of ownership of the products. In accordance with the shipping terms specified in the contracts, these criteria are generally met when the products are shipped from the Company's vendors (such as the "Ex Works" shipping term) or delivered to the customers' locations (such as the "Delivered Duty Paid" shipping term). Payment for sales to customers is generally due on standard commercial terms.

The revenue recognized is adjusted based on an analysis of historical data and contractual terms. These adjustments, which are not material, generally include adjustments for pricing arrangements, product returns and incentives.

In addition, the Company records allowances for accounts receivable that it estimates may not be collected. The Company monitors collectability of accounts receivable primarily through review of accounts receivable aging. When collection is at risk, the Company assesses the impact on amounts recorded for bad debts and, if necessary, records a charge in the period such evaluation is made.



### **Freight Costs**

Costs of shipping and handling for delivery of the Company's products that are reimbursed by customers are included as revenue in the consolidated statements of operations and comprehensive income. Shipping and handling costs are charged to cost of sales as incurred.

### **Research and Development**

Research and development costs consist of expenditures incurred during the course of planned research and investigation aimed at the discovery of new knowledge and intellectual property that will be useful in developing new products or processes, or at significantly enhancing existing products or production processes as well as expenditures incurred for the design and testing of product alternatives or construction of prototypes. All expenditures related to research and development activities of the Company are charged to operating expenses when incurred.

### **Advertising Expenses**

The Company expenses all advertising and promotional costs as incurred. These costs were approximately \$922,000, \$779,000, and \$734,000 in 2018, 2017, and 2016, respectively. A portion of these costs was for advertising, which approximately amounted to \$287,000, \$158,000, and \$236,000 in 2018, 2017 and 2016, respectively.

### **Pension Costs**

For employees under defined contribution pension plans, pension costs are recorded based on the actual contributions made to employees' pension accounts. For employees under defined benefit pension plans, pension costs are recorded based on the actuarial calculation.

### **Government Grants**

Government grants received by the Company to assist with specific research and development activities are recognized as non-operating income. If the Company has an obligation to repay any of the funds provided by government grants regardless of the outcome of the research and development, the Company estimates that obligation

and recognizes the amount as a liability.

## **Income Tax**

The provision for income tax represents income tax paid and payable for the current year plus the changes in the deferred income tax assets and liabilities during the relevant years. Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amount of existing assets and liabilities and their respective tax bases, and operating loss and tax credit carryforwards. The Company believes that uncertainty exists regarding the realizability of certain deferred income tax assets and, accordingly, has established a valuation allowance for those deferred income tax assets to the extent the realizability is not deemed to be more likely than not. Deferred income tax assets and liabilities are measured using enacted tax rates.

The Company utilizes a two-step approach to recognizing and measuring uncertain tax positions. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates it is more likely than not that the position will be sustained in a dispute with taxing authorities, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount which is more than 50% likely of being realized upon ultimate settlement.

## **Stock-based Compensation**

The Company grants stock options to its employees and certain non-employees and estimates 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 expense ratably over the requisite service periods. The Company has elected to use the Black-Scholes option pricing model to determine the fair value of stock options on the date of grant. The Company also grants RSUs to its employees and the RSUs are measured based on the fair market value of the underlying stock on the date of grant.

## **Foreign Currency Transactions**

The functional currency is the local currency of the respective entities. Foreign currency transactions are recorded at the rate of exchange in effect when the transaction occurs. Gains or losses, resulting from the application of different foreign exchange rates when cash in foreign currency is converted into the entities' functional currency, or when foreign currency receivable and payable are settled, are credited or charged to income in the period of conversion or settlement. At year-end, the balances of foreign currency monetary assets and liabilities are recorded based on prevailing exchange rates and any resulting gains or losses are credited or charged to income.

## **Translation of Foreign Currency Financial Statements**

The reporting currency of the Company is the US dollar. Accordingly, the financial statements of the foreign subsidiaries are translated into US dollars at the following exchange rates: assets and liabilities - current rate on balance sheet date; shareholders' equity - historical rate; income and expenses - weighted average rate during the year. The resulting translation adjustment is recorded as a separate component of shareholders' equity.

## **Comprehensive Income (Loss)**

Comprehensive income (loss) represents net income (loss) plus the results of certain changes in shareholders' equity during a period from non-owner sources.

## **Recent Accounting Pronouncements**

In May 2014, the Financial Accounting Standard Board ("FASB") issued a new standard related to revenue recognition. Under the new standard, recognition of revenue occurs when a customer obtains control of promised goods or services in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In addition, the new standard requires disclosure of the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. In August 2015, the FASB issued an amendment to defer the effective date. The new standard is effective for fiscal years beginning after December 15, 2017 and early adoption is permitted for annual reporting periods beginning after December 15, 2016. In March and April 2016, the FASB issued two accounting updates to clarify the implementation guidance on principal versus agent considerations, performance obligations and the licensing. In addition, the FASB issued another accounting update in May 2016 to address narrow-scope improvements to the guidance on collectability, noncash consideration, and completed contracts at transition and provides a practical expedient for contract modifications at transition. The new guidance is required to be applied retrospectively to each prior reporting period presented or retrospectively with the

cumulative effect of initially applying it recognized at the date of initial application.

The Company adopted the new guidance using the modified retrospective method, as allowed, which would result in recognizing the cumulative effect of initially applying the new guidance to arrangements with customers existing as of January 1, 2018 as an adjustment to retained earnings at the date of initial application. Under this approach, prior financial information will not be restated. In the scope of work to implement the recognition and disclosure requirements of the new guidance, the Company included the following main areas: (i) assessment of changes in the timing of revenue recognition, if any; and (ii) inclusion of variable consideration in the transaction price. The Company assessed the impact of the amended standard on existing revenue streams, contracts, transactions, and business practices. Based on procedures performed, the adoption of this new guidance did not have a material impact on the Company's revenue recognition practices, on its consolidated financial position and results of operations.

In January 2016, the FASB issued an accounting update regarding the subsequent measurement of equity investment. The amendment requires all equity investment to be measured at fair value with changes in the fair value recognized through net income other than those accounted for under equity method of accounting or those that result in consolidation of the investee. The amendment also simplifies the impairment assessment of equity investments without readily determinable fair value by requiring assessment for impairment qualitatively and eliminating the complexity of the other-than-temporary impairment guidance. For financial reporting, the amendment requires an entity to present separately in other comprehensive income the portion of the total change in the fair value of a liability resulting from a change in the instrument-specific credit risk when the entity has elected to measure the liability at fair value in accordance with the fair value option for financial instruments. In addition, for public company, the amendment eliminates the requirement to disclose the methods and significant assumptions used to estimate the fair value that is required to be disclosed for financial instruments measured at amortized cost on the balance sheet. This amendment is effective for fiscal years beginning after December 15, 2017 and early application is prohibited. The most significant impact on the Company's consolidated financial statements relates to the measurement of equity investments at fair value in its consolidated statements of income. The Company has elected to use the measurement alternative defined as cost, less impairments, adjusted by observable price changes. The Company adopted the amendment beginning on January 1, 2018. See Notes 3 and 8 for further discussions.

In February 2016, the FASB issued a new standard regarding leases (Topic 842). The new standard requires an entity to recognize assets and liabilities arising from a lease for both financing and operating leases other than that the entity elects the short-term lease recognition and measurement exemption. Qualitative and quantitative disclosures will be enhanced to better understand the amount, timing and uncertainty of cash flows arising from leases. In January 2018, the FASB issued an amendment permits an entity to elect an optional transition practical expedient to not evaluate under Topic 842 land easements that exist or expired before the entity's adoption of Topic 842 and that were not previously accounted for as leases under Topic 840, the current standard regarding leases. The guidance is effective for fiscal years beginning after December 15, 2018, and early adoption is permitted. The Company adopted the new lease guidance on January 1, 2019 and the Company recorded ROU assets and lease liabilities of approximately \$1.2 million, which represent the present value of the remaining minimum rental payments for its outstanding leases as of January 1, 2019. The adoption of this guidance did not have a material impact on its consolidated statements of operations as the Company meets the requirements to account for these leases as operating leases and will continue to recognize lease expenses on a straight-line basis over the lease terms.

In March 2016, the FASB issued an accounting update to simplify several aspects of the accounting for share-based payment award transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The amendment is effective for fiscal years beginning after December 15, 2016, and earlier adoption is permitted. The adoption of this amendment did not have a material impact on the Company's financial position, results of operations, cash flow and financial statement disclosures.

In June 2016, the FASB issued an accounting update to amend the guidance on the impairment of financial instruments that are not measured at fair value through profit and loss. The amendment introduces a current expected credit loss ("CECL") model based on expected losses rather than incurred losses to estimate credit losses on financial instruments measured at amortized cost and requires a broader range of reasonable and supportable information to estimate expected credit loss. In addition, under the amendment, an entity recognizes an allowance for expected credit losses on financial instruments measured at amortized cost and available-for-sale debt securities rather than the current methodology of delaying recognition of credit losses until it is probable a loss has been incurred. The amendment is effective for fiscal years beginning after December 15, 2019, and earlier adoption is permitted as of the fiscal years beginning after December 15, 2018. The adoption of the amendments is not expected to have a material impact on the Company's financial position, results of operations, cash flow and financial statement disclosures. .

In August 2016, the FASB issued an accounting update to clarify the following eight cash flow classification issues: (1) debt prepayment or debt extinguishment costs, (2) settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing, (3) contingent consideration payments made after the acquisition date of a business combination, (4) proceeds received from the settlement of insurance claims, (5) proceeds received from the settlement of corporate-owned life insurance policies, including bank-owned life insurance policies, (6) distributions received from equity method investees, (7) beneficial interests in securitization transactions, and (8) separately identifiable cash flows and application of the predominance principle. The amendment is an improvement to reduce the current and potential future diversity in practice. The amendment is effective for fiscal years beginning after December 15, 2017, and earlier adoption is permitted. In addition, the amendment should be applied using a retrospective transition method to each period presented. The adoption of the amendments did not have a material impact on the Company's statement of cash flows.

In November 2016, the FASB issued an accounting update related to the classification and presentation of changes in restricted cash on the statement of cash flows. The amendment requires restricted cash or restricted cash equivalents should be included with cash and cash equivalent when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The amendment is effective for fiscal years beginning after December 15, 2017, and early adoption is permitted. The Company adopted the standard on January 1, 2018 and applied the guidance retrospectively to all periods presented. The adoption of the amendments did not have a material impact on the Company's statement of cash flows.

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In March 2017, the FASB issued an accounting update to improve the presentation of net periodic pension cost and net periodic postretirement benefit cost. The amendment requires that an entity disaggregates the service cost component from the other components of net benefit cost and present the service cost component with other current compensation costs for related employees in the income statement. The amendment also requires an entity presents the other components elsewhere in the income statement and outside of income from operation if such subtotal is presented and allow only the service cost component of net benefit cost to be eligible for capitalization. The amendment is effective for fiscal years beginning after December 15, 2017 and early adoption is permitted. The amendment should be applied retrospectively for the presentation of the service cost component and the other components of net periodic pension cost and net periodic postretirement benefit cost in the income statement and prospectively, on and after the effective date, for the capitalization of the service cost component of net periodic pension cost and net periodic postretirement benefit in assets. The amendment allows for a practical expedient that permits an entity to use the amounts disclosed in its pension and other postretirement benefit plan note for the prior comparative periods as the estimation basis for applying the retrospective presentation requirements. The Company intends not to apply the practical expedient for apply the retrospective presentation requirements. The adoption of this amendment did not have a material impact on the Company's financial position, results of operations, cash flow and financial statement disclosures.

In May 2017, the FASB issued an accounting update to provide clarity and reduce both (1) diversity in practice and (2) cost and complexity when applying the guidance in Topic 718, Compensation - Stock Compensation, to a change in the terms or conditions of a share-based payment award. Under the amendment, modification accounting is required to be applied unless all of the following are the same immediately before and after the change: (1) the award's fair value (or calculated value or intrinsic value, if those measurement methods are used); (2) the award's vesting conditions; and (3) the award's classification as an equity or liability instrument. The amendment is effective for fiscal years beginning after December 15, 2017 and early adoption is permitted. The amendment should be applied prospectively to an award modified on or after the adoption date. The adoption of this amendment did not have a material impact on the Company's financial position, results of operations, cash flow and financial statement disclosures.

In February 2018, the FASB issued an accounting update allows a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. Consequently, the amendment eliminates the stranded tax effects resulting from the Tax Cuts and Jobs Act and will improve the usefulness of information reported to financial statement users. However, because the amendment only relates to the reclassification of the income tax effects of the Tax Cuts and Jobs Act, the underlying guidance that requires that the effect of a change in tax laws or rates be included in income from continuing operations is not affected. The amendment is effective for fiscal years beginning after December 15, 2018 and early adoption is permitted. The amendment should be applied either in the period of adoption or retrospectively to each period (or periods) in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Cuts and Jobs Act is recognized. The adoption of this amendment is not expected to have a material impact on the Company's financial position, results of operations and financial statement disclosures.

In February 2018, the FASB issued an accounting update to clarify certain aspects of the guidance issued in ASU 2016-01. (1) An entity measuring an equity security using the measurement alternative may change its measurement approach to a fair value method in accordance with Topic 820, Fair Value Measurement, through an irrevocable

election that would apply to that security and all identical or similar investments of the same issuer. Once an entity makes this election, the entity should measure all future purchases of identical or similar investments of the same issuer using a fair value method in accordance with Topic 820. (2) Adjustments made under the measurement alternative are intended to reflect the fair value of the security as of the date that the observable transaction for a similar security took place. (3) Remeasuring the entire value of forward contracts and purchased options is required when observable transactions occur on the underlying equity securities. (4) When the fair value option is elected for a financial liability, the guidance in paragraph 825-10-45-5 should be applied, regardless of whether the fair value option was elected under either Subtopic 815-15, Derivatives and Hedging—Embedded Derivatives, or 825-10, Financial Instruments—Overall. (5) Financial liabilities for which the fair value option is elected, the amount of change in fair value that relates to the instrument specific credit risk should first be measured in the currency of denomination when presented separately from the total change in fair value of the financial liability. Then, both components of the change in the fair value of the liability should be remeasured into the functional currency of the reporting entity using end-of-period spot rates. (6) The prospective transition approach for equity securities without a readily determinable fair value in the amendments in Update 2016-01 is meant only for instances in which the measurement alternative is applied. The amendments are effective for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years beginning after June 15, 2018. All entities may early adopt these amendments for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years, as long as they have adopted Update 2016-01. The adoption of this amendment did not have a material impact on the Company's financial position, results of operations, cash flow and financial statement disclosures



In June 2018, the FASB issued an accounting update to simplify the accounting for nonemployee share-based payments by clarifying and improving the areas of the overall measurement objective, measurement date, and awards with performance conditions. This amendment is effective for fiscal years beginning after December 15, 2018. Early adoption is permitted, but no earlier than an entity's adoption date of Topic 606. The adoption of this amendment is not expected to have a material impact on the Company's financial position, results of operations, cash flow and financial statement disclosures.

In August 2018, the FASB issued an accounting update to amend fair value measurement disclosure requirements to eliminate, add and modify certain disclosures to improve the effectiveness of such disclosure in the notes to financial statements by facilitating clear communication of the information required by GAAP that is most important to users of each entity's financial statements. The amendments removed the disclosure requirements for transfers between Levels 1 and 2 of the fair value hierarchy, the policy for timing of transfers between levels of the fair value hierarchy and the valuation processes for Level 3 fair value measurements. Additionally, the amendments modified the disclosure requirements for investments in certain entities that calculate net asset value and measurement uncertainty. Finally, the amendments added disclosure requirements for the changes in unrealized gains and losses included in other comprehensive income for recurring Level 3 fair value measurements and the range and weighted average of significant unobservable inputs used to develop Level 3 measurements. The amendments on changes in unrealized gains and losses, the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements and the narrative description of measurement uncertainty should be applied prospectively for only the most recent interim or annual period presented in the initial fiscal year of adoption. All other amendments should be applied retrospectively to all periods presented upon their effective date. This amendment is effective for annual periods beginning after December 15, 2019. Early adoption is permitted. The adoption of this amendment is not expected to have a material impact on the Company's financial position, results of operations, cash flow and financial statement disclosures.

In August 2018, the FASB issued an accounting update to modify the disclosure requirements by removing, modifying and clarifying disclosures related to defined benefit plans. This amendment modified the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans. Certain disclosure requirements have been removed while the following disclosure requirements have been added: the weighted-average interest crediting rates for cash balance plans and other plans with promised interest crediting rates and an explanation of the reasons for significant gains and losses related to changes in the benefit obligation for the period. The amendment also clarified the disclosure requirements in paragraph 715-20-50-3, which stated that the following information for defined benefit pension plans should be disclosed: The projected benefit obligation ("PBO") and fair value of plan assets for plans with PBOs in excess of plan assets and the accumulated benefit obligation ("ABO") and fair value of plan assets for plans with ABOs in excess of plan assets. The amendment is effective for fiscal years ending after December 15, 2020. Early adoption is permitted. The amendments should be applied on a retrospective basis to all periods presented. The adoption of this amendment is not expected to have a material impact on the Company's financial position, results of operations, cash flow and financial statement disclosures.

In August 2018, the FASB issued an accounting update to align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal-use software license). The amendment also requires the entity to present capitalized implementation costs and the related

amortization in the same line item in the balance sheet, income statement, and statement of cash flows presentation of capitalized implementation costs and the related amortization should align with the presentation of the hosting (service) element of the arrangement. The amendment is effective for fiscal years beginning after December 15, 2019. Early adoption is permitted. The amendment should be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. The adoption of this amendment is not expected to have a material impact on the Company's financial position, results of operations, cash flow and financial statement disclosures

In November 2018, the FASB issued an accounting update to clarify that certain transactions between participants in a collaborative arrangement should be accounted for under ASC Topic 606 when the counterparty is a customer. In addition, this amendment precludes an entity from presenting consideration from a transaction in a collaborative arrangement as revenue from contracts with customers if the counterparty is not a customer for that transaction. This amendment is effective for fiscal years beginning after December 15, 2019. Early adoption is permitted. This amendment is required to be applied retrospectively to the date when ASC Topic 606 initially adopted. The adoption of this amendment is not expected to have a material impact on the Company's financial position, results of operations, cash flow and financial statement disclosures.

### 3. FAIR VALUE MEASUREMENTS

The Company measures its cash equivalents and marketable securities at fair value. 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 liability. The Company measures its cash equivalents and marketable securities at fair value. The Company also determines the fair value of long-term investments and long-lived assets whenever events or changes in circumstances indicate the carrying value may not be recoverable. A three-tier fair value hierarchy is established as a basis for considering such assumptions and for inputs used in the valuation methodologies in measuring fair value:

Level 1 – Observable inputs such as quoted prices for identical instruments in active markets;

Level 2 – Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly;

Level 3 – Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

Assets and liabilities measured at fair value on recurring and nonrecurring bases were as follows:

**(In Thousands)**

	Fair Value Measurements at the End of the Reporting Period			Total
	Level 1	Level 2	Level 3	
Items measured at fair value on a recurring basis at December 31, 2018				
Cash and cash equivalents				
Money market funds	\$-	\$165	\$-	\$165
Long-term investments				
Excelliance MOS Co., Ltd (“EMC”)	\$9,417	\$-	\$-	\$9,417

Items measured at fair value on a recurring basis at December 31, 2017

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Cash and cash equivalents					
Money market funds	\$-	\$163	\$-	\$163	

	Level 1	Level 2	Level 3	Total	Total Losses
Items measured at fair value on a nonrecurring basis at December 31, 2018 (nil at December 31, 2017)					
Long-term investments					
Philip Ventures Enterprise Fund ("PVEF")	\$ -	\$ -	\$36	\$36	\$-
Sigurd Microelectronics (Cayman) Co., Ltd. ("Sigurd Cayman")	-	-	992	992	(240)
	\$ -	\$ -	\$1,028	\$1,028	\$(240)

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The fair value estimates in the money market funds are based on observable market information rather than market quotes. Accordingly, the estimates of fair value for short-term investments were determined based on Level 2 inputs at December 31, 2018 and 2017, respectively.

**4. CASH AND CASH EQUIVALENTS**  
(In Thousands)

	December 31	
	2018	2017
Time deposits	\$2,437	\$1,913
Savings and checking accounts	29,803	26,436
Money market funds	165	163
Petty cash	9	8
Total	\$32,414	\$28,520

**5. SHORT-TERM INVESTMENTS**

(In Thousands)

December 31, 2018				
	Gross	Gross		
	Unrealized	Unrealized	<b>Fair</b>	
<b>Cost</b>	Gains	Losses	<b>Value</b>	
Time deposits	\$6,172	\$ -	\$ -	\$6,172

December 31, 2017				
	Gross	Gross		
	Unrealized	Unrealized	<b>Fair</b>	
<b>Cost</b>	Gains	Losses	<b>Value</b>	

Time deposits \$17,601 \$ - \$ - \$17,601

Short-term investments by contractual maturity were as follows:

**(In Thousands)**

	December 31, 2018	
	Cost	Fair Value
Time deposits		
Due within one year	\$6,172	\$6,172

**(In Thousands)**

	December 31, 2017	
	Cost	Fair Value
Time deposits		
Due within one year	\$17,601	\$17,601

(In Thousands)	6.	INVENTORIES	
		December 31	
		2018	2017
	Finished goods	\$5,677	\$4,415
	Work-in-process	3,105	2,501
	Raw materials	8,103	8,078
	Provisions for obsolete inventories	(6,597 )	(5,664)
	Total	\$10,288	\$9,330

The Company periodically evaluates inventory and establishes provisions for obsolescence, excess quantities, slow-moving goods, and for other impairment of value. The following table shows the movement of provisions for obsolete inventories.

(In Thousands)

	Years Ended December 31		
	2018	2017	2016
Balance at beginning of year	\$5,664	\$5,041	\$3,664
Charge to cost and expenses	1,328	642	1,527
Other deductions	(395 )	(19 )	(150 )
Balance at end of year	\$6,597	\$5,664	\$5,041

7. **PREPAID EXPENSES AND OTHER CURRENT ASSETS**  
(In Thousands)

	December 31	
	2018	2017
Prepayment to foundry vendors	\$920	\$16
Prepaid expenses	720	563
Payment in advance	300	321

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Other receivable	163	171
VAT refunds receivable	85	27
Interest receivable	44	89
Other	44	58
Total	\$2,276	\$1,245

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## 8. LONG-TERM INVESTMENTS

(In Thousands)

	December 31	
	2018	2017
Sigurd Cayman	\$992	\$1,232
PVEF	36	36
EMC	9,417	1,844
Total	\$10,445	\$3,112

The following table shows the movement of gross unrealized gains and losses of the Company's available-for-sale securities.

(In Thousands)

	Years Ended December 31		
	2018	2017	2016
Balance at beginning of year	\$-	\$ -	\$-
Other comprehensive income before reclassification adjustment	-	-	523
Reclassification adjustment	-	-	(523)
Balance at end of year	\$-	\$ -	\$-

In July 2008, the Company invested in preferred shares of Sigurd Cayman for \$5,700,000 to become a strategic partner of Sigurd Microelectronics Corporation ("Sigurd"). Upon completion of the transaction, the Company obtained a 19.54% ownership of Sigurd Cayman. Prior to 2018, the Company accounts for the investment under the cost method as the Company does not exercise significant influence over operating and financial policies of Sigurd Cayman and management of Sigurd holds the controlling interests. In April 2010, the Company participated in another round of preferred shares issued by Sigurd Cayman amounting to \$1,500,000. In September 2015, Sigurd Cayman announced the liquidation of its wholly owned subsidiary, Sigurd Microelectronics (Wuxi) Co., Ltd. ("Sigurd Wuxi"), whose sales and operations account for the majority business of Sigurd Cayman. In view of Sigurd Cayman's recurring financial losses and its decision to cease operations of Sigurd Wuxi, the Company determined that the decline in fair value of the investment in Sigurd Cayman was other-than-temporary and recognized an impairment charge of \$4,835,000 in 2015. In December 2017, Sigurd Cayman completed a share buyback program. Accordingly, a portion of Company's shares in Sigurd Cayman were returned in exchange for cash of \$1,133,000. Under ASU No. 2016-01, the Company utilizes the measurement alternative to account for equity investments in privately-held companies without readily determinable fair values, and the Company revalued and recorded an impairment adjustment of \$240,000 at December 31, 2018. As of December 31, 2018, the Company held 8,557,577 shares, which represented an 18.88% ownership of Sigurd Cayman.

In November 2005, the Company invested in PVEF, a fund management company in Singapore, with an investment amount of \$585,000 (SG\$1,000,000) for 20 units in the placement at SG\$50,000 per unit. The Company further invested \$357,000 (SG\$500,000) in June 2010 to obtain 30 units. A portion of the shares were redeemed by PVEF in November 2012, and May 2015 at a cost of \$445,000 and \$330,000, respectively, and the carrying cost of the Company is reduced to \$167,000 accordingly. In December 2015, in view of the fund's liquidation and continuous lower net asset value than the cost, the Company determined that the decline in fair value of the investment in PVEF was other-than-temporary and recognized an impairment charge of \$118,000. A portion of the shares were further redeemed by PVEF, gains of 20,000 and 12,000 were recognized for 2017 and 2016, respectively. Accordingly, the carrying cost of the investment was reduced to \$36,000 as of December 31, 2017. The Company held a 5% interest in the fund as of December 31, 2018. No further impairment was recognized given the qualitative assessment made by the Company in 2018.

The Company invested \$1,960,000 (NT\$62,900,000) in EMC's 3,468,000 ordinary shares in June 2010. EMC is a fabless power device design company in Taiwan, specialized in power semiconductor process development, and the design of high efficiency power device and system. In December 2012, the Company sold 200,000 shares in the amount of \$138,000. In January 2018, EMC successfully listed on Taipei Exchange. The Company recognized gains on its quoted market price to record the changes in fair value. A total gain of \$10,156,000 net fair value changes including a portion of disposal were recorded for the year ended December 31, 2018. As of December 31, 2018, the Company held 2,754,854 shares at the cost of \$1,459,000, which represented a 7.80% ownership of EMC.

The Company invested in ordinary shares of X-FAB Silicon Foundries SE (“X-FAB”) in July 2002. X-FAB (formerly known as X-FAB Semiconductor Foundries AG) is a European-American foundry group that specializes in analog/mixed-signal application. As of December 31, 2015, the Company held 530,000 shares at the cost of \$4,968,000 (4,982,000 EURO), which represented a 1.60% ownership of X-FAB. In April 2016, the Company sold the entire X-FAB’s ordinary shares to a third party company and a gain of \$413,000 was recorded for the year ended December 31, 2016.

The Company invested in the preference shares of GEM Services, Inc. (“GEM”) in August 2002. GEM is a multinational semiconductor assembly and test company. In April 2016, GEM was successfully listed on the Taiwan Stock Exchange and as such investment was classified as available-for-sale. In the third quarter of 2016, the Company sold the entire GEM’s shares in the stock exchange market and a gain of \$523,000 was recorded for the year ended December 31, 2016.

**9. PROPERTY AND EQUIPMENT, NET**  
(In Thousands)

	December 31	
	2018	2017
Cost		
Land	\$2,510	\$2,510
Buildings	6,066	6,066
Equipment	19,186	19,999
Furniture and fixtures	751	800
Leasehold improvements	2,182	2,247
Transportation equipment	664	622
Property leased to others	4,141	4,274
	35,500	36,518
Accumulated depreciation		
Buildings	1,947	1,807
Equipment	18,014	19,261
Furniture and fixtures	735	769
Leasehold improvements	2,064	1,898
Transportation equipment	537	544
Property leased to others	415	323
	23,712	24,602
Property and equipment pending for inspection	1,926	1,839
Total	\$13,714	\$13,755

Depreciation expense recognized during the years ended December 31, 2018, 2017, and 2016, was approximately \$993,000, \$1,016,000, and \$1,103,000, respectively.

In August 2009, the Company sold its land, located in Hsinchu, Taiwan, with a carrying value of approximately \$8,918,000 to a real estate developer in exchange for a portion of the real estate after it is developed, which includes a portion of an office building and a portion of a parking lot. The Company consummated this transaction to acquire office building space and parking lot space for the purpose of future operations and business growth. Considering the Company's current operating scale and capital requirements, the Company leased out three units to a third party in December 2014. The Company has also sold 5 building units to third parties during the years ended December 31, 2015 and 2014. There were no transactions made in relation to building for the year ended December 31, 2018 and 2017.

In the third quarter of 2016, the Company disposed one of the three units of the Company's office building in China, and a net gain of \$1,725,000 was recorded for the year ended December 31, 2016. There were no transactions made in relation to buildings in China for the years ended December 31, 2018 and 2017.

**10. OTHER ASSETS**

**(In Thousands)**

	December 31	
	2018	2017
Deferred charges	\$1,408	\$1,053
Land use rights	687	706
Refundable deposits	433	421
Deferred income tax assets – noncurrent	50	120
Total	\$2,578	\$2,300

Deferred charges are advanced payments for consulting, maintenance, and engineering license contracts and are amortized over the terms of the contracts from 2 to 5 years. Amortization expense of the deferred charges for the years ended December 31, 2018, 2017, and 2016, was approximately \$629,000, \$633,000, and \$560,000, respectively.

Land use rights are recorded at cost less accumulated amortization. Amortization is provided on a straight-line basis over the term of the land use rights agreement which is 49.7 years. Amortization expense of the land use rights for the years ended December 31, 2018, 2017, and 2016, was approximately \$19,000, \$18,000, and \$19,000, respectively.

**11. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES**

**(In Thousands)**

	December 31	
	2018	2017
Salaries, bonus and benefits	\$2,451	\$2,768
Engineering related expenses	572	386
Legal and audit fees	332	310
Shipping expenses	102	101
Withholding tax payable	96	108
Value-added tax payable	77	46
Promotional expenses	50	41

Payable for acquisition of equipment	3	96
Other accrued expenses	498	523
Total	\$4,181	\$4,379

**12. INCOME TAX**

The Company is not subject to income or other taxes in the Cayman Islands. However, subsidiaries are subject to taxes of the jurisdiction where they are located.

Income (loss) before income taxes consisted of:

**(In Thousands)**

	Years Ended December 31		
	2018	2017	2016
Cayman Islands	\$277	\$(7,371)	\$(4,156)
Foreign	2,952	2,236	2,228
Total	\$3,229	\$(5,135)	\$(1,928)

Income tax expense consisted of:

**(In Thousands)**

	Years Ended December 31		
	2018	2017	2016
Current	\$1,296	\$970	\$2,289
Deferred	(155 )	40	(1,231)
Total	\$1,141	\$1,010	\$1,058

The Company and its subsidiaries file separate income tax returns. The applicable statutory income tax rate in the Cayman Islands was zero for the Company for the years being reported. The reconciliation between the provision for income taxes at the statutory rate and the provision for income taxes at the effective tax rate is as follows:

**(In Thousands)**

	Years Ended December 31		
	2018	2017	2016
Tax expense at statutory rate	\$-	\$-	\$-
Increase (decrease) in tax resulting from:			
Differences between Cayman and foreign tax rates	401	414	449
Changes in deferred income tax assets and liabilities	(247 )	(546 )	(1,249)
Adjustments to prior years' taxes	60	12	33
Changes in valuation allowances for deferred income tax assets	92	586	18
Withholding taxes on repatriation of subsidiary profits	521	298	1,669
Alternative Minimum Tax on EMC stock sales	105	-	-
Other	209	246	138
Total	\$1,141	\$1,010	\$1,058

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The deferred income tax assets and liabilities as of December 31, 2018 and 2017 consisted of the following:

**(In Thousands)**

	December 31	
	2018	2017
Deferred income tax assets		
Research and development credits	\$6,756	\$6,637
Net operating loss carryforwards	44	82
Depreciation and amortization	149	169
Accrued vacation and other expenses	29	68
	6,978	6,956
Valuation allowance	(6,928)	(6,836)
Total net deferred income tax assets	\$50	\$120
Deferred income tax liabilities		
Withholding taxes on repatriation of subsidiary profits	\$681	\$906

The valuation allowance shown in the table above relates to net operating losses, credit carryforwards and temporary differences for which the Company believes that realization is not more than likely. The valuation allowance increased by \$92,000, \$586,000, and \$18,000 for the years ended December 31, 2018, 2017, and 2016, respectively. The changes in the valuation allowance in 2018, 2017, and 2016, were primary due to the fluctuations in R&D credits from O<sub>2</sub>Micro Inc. that could not be utilized.

As of December 31, 2018, O<sub>2</sub>Micro, Inc. had U.S. federal and state research and development credit carryforwards of approximately \$5,355,000 and \$7,123,000, respectively. The U.S. federal research and development credit will expire from 2022 through 2038 if not utilized, while the state research and development credit will never expire. Utilization of the research and development credits may be subject to significant annual limitation due to the ownership change limitations provided by the U.S. Internal Revenue Code of 1986 and similar provisions in the State of California's tax regulations. The annual limitation may result in the expiration of federal research and development credits before utilization.

As of December 31, 2018, the Company's subsidiary had U.S. net operating loss carryforwards for federal and state tax purpose of \$50,000 and \$449,000, respectively, which will expire, if not utilized beginning in 2035 and 2028.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the "Tax Act") was enacted into law and the new legislation contains certain key tax provisions that affected the Company. The Tax Act affects the Company by (i) reducing the U.S. tax rate from 35% to 21% effective January 1, 2018, and (ii) impacting the values of the deferred assets and liabilities.

Pursuant to U.S. GAAP, changes in tax rates and tax laws are accounted for in the period of enactment, and the resulting effects are included as components of the income tax provision related to continuing operations within the same period. Therefore, the following changes in the tax laws have been accounted for in 2017. The Company's deferred tax assets and liabilities and offsetting valuation allowance have been remeasured at the new enacted tax rate as of December 31, 2017. The amount of U.S. net operating losses that the Company has is available and the Company's ability to utilize them to reduce future taxable income is not impacted by the Tax Act.

In December 2017, the SEC staff issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act ("SAB 118") which allows companies to record provisional amounts during a measurement period not to extend beyond one year of the enactment date. Since the Act was passed late in the fourth quarter of 2017, and ongoing guidance and accounting interpretation was yet to be issued, the Company's accounting of the transition tax and deferred tax re-measurements were incomplete as of December 31, 2017. The Company filed its 2017 Federal corporate income tax return in the first quarter of 2018. The final analysis and impact of the Act is reflected in the tax provision and related tax disclosures for the year ended December 31, 2018. There was a no material change in estimate which would have been reflected within the measurement period in accordance with SAB 118.

To better position itself for the future growth phase, the Company considered the repatriation of the earnings from subsidiaries in Taiwan and China beginning in the second quarter of 2015. As a result, deferred tax liabilities from withholding tax for the unremitted earnings in Taiwanese and Chinese subsidiaries have been recorded for \$681,000 and \$906,000 as of December 31, 2018 and 2017, respectively.

The Company files income tax returns in various foreign jurisdictions. The Company is generally no longer subject to income tax examinations by tax authorities for years prior to 2013 because of the statute of limitations.

### **13. RETIREMENT AND PENSION PLANS**

The Company has a savings plan that qualifies under Section 401(k) of the US Internal Revenue Code. Participating employees may defer up to the US Internal Revenue Service statutory limit amounts of pretax salary. The Company may make voluntary contributions to the savings plan but has made no contributions since the inception of the savings plan in 1997.

The Company also participates in mandatory pension funds and social insurance schemes, if applicable, for employees in jurisdictions in which other subsidiaries or offices are located to comply with local statutes and practices. For the years ended December 31, 2018, 2017, and 2016, pension costs charged to income in relation to the contributions to these schemes were \$1,236,000, \$1,053,000, and \$984,000, respectively. The Company adopted a defined benefit pension plan and established an employee pension fund committee for certain employees of O<sub>2</sub>Micro-Taiwan who are subject to the Taiwan Labor Standards Law (“Labor Law”) to comply with local requirements. This benefit pension plan provides benefits based on years of service and average salary computed based on the final six months of employment. The Labor Law requires the Company to contribute between 2% to 15% of employee salaries to a government specified plan, which the Company currently makes monthly contributions equal to 2% of employee salaries. Contributions are required to be deposited in the name of the employee pension fund committee with the Bank of Taiwan.

The government is responsible for the administration of all the defined benefit plans for the companies in Taiwan under the Labor Standards Law. The government also sets investment policies and strategies, determines investment allocation and selects investment managers. As of December 31, 2018 and 2017, the asset allocation was primarily in cash, equity securities and debt securities. Furthermore, under the Labor Standards Law, the rate of return on assets shall not be less than the average interest rate on a two-year time deposit published by the local banks and the government is responsible for any shortfall in the event that the rate of return is less than the required rate of return. However, information on how investment allocation decisions are made, inputs and valuation techniques used to measure the fair value of plan assets, the effect of fair value measurements using significant unobservable inputs on changes in plan assets for the period and significant concentrations of risk within plan assets is not fully made available to the companies by the government. Therefore, the Company is unable to provide the required fair value disclosures related to pension plan assets.

The percentage of major category of plan assets as of December 31, 2018 and 2017 were as follows:

	December 31	
	2018	2017
Cash	14%	20%
Debt securities	28%	30%
Equity securities	51%	43%

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Changes in projected benefit obligation and plan assets for the years ended December 31, 2018, 2017 and 2016 were as follows:

**(In Thousands)**

	Years Ended December		
	2018	2017	2016
Projected benefit obligation, beginning of the year	\$1,026	\$877	\$838
Service cost	4	3	3
Interest cost	10	14	13
Benefits paid	-	-	-
Actuarial loss	10	58	8
Effect of changes in foreign exchange rate	(32 )	74	15
Projected benefit obligation, end of the year	\$1,018	\$1,026	\$877
Fair value of plan assets, beginning of the year	\$671	\$596	\$566
Employer contributions	20	19	16
Actual return on plan assets	27	6	4
Effect of changes in foreign exchange rate	(21 )	50	10
Fair value of plan assets, end of the year	\$697	\$671	\$596

The component of net periodic benefit cost was as follows:

**(In Thousands)**

	Years Ended		
	December 31		
	2018	2017	2016
Service cost	\$4	\$3	\$3
Interest cost	10	14	13
Expected return on plan assets	(10)	(11)	(10)
Amortization of net pension loss	6	3	1
Net periodic benefit cost	\$10	\$9	\$7

The funded status of the plan was as follows:

**(In Thousands)**

	December 31	
	2018	2017
Accumulated benefit obligation	\$(852 )	\$(846 )
Project benefit obligation	(1,018)	(1,026)
Plan assets at fair value	697	671
Funded status of the plan	\$(321 )	\$(355 )

The actuarial assumptions to determine the benefit obligations were as follows:

	December 31	
	2018	2017
Discount rate	0.8%	1.0%
Rate of compensation increases	2.0%	2.0%

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The actuarial assumptions to determine the net periodic benefit cost were as follows:

	Years Ended		
	December 31		
	2018	2017	2016
Discount rate	1.0%	1.0%	1.5%
Rate of compensation increases	2.0%	2.0%	2.0%
Expected long-term rate of return on plan assets	1.5%	1.5%	1.8%

The expected long-term rate of return shown for the plan assets was weighted to reflect a two-year deposit interest rate of local banking institutions.

Estimated future benefit payments are as follows:

**(In Thousands)**

Year	
2019	\$ 16
2020	39
2021	21
2022	156
2023 and thereafter	382

## **14. STOCK-BASED COMPENSATION**

### **Employee Stock Purchase Plan**

In October 1999, the Board adopted the 1999 Employee Stock Purchase Plan (“1999 Purchase Plan”), which was approved by the shareholders prior to the consummation of its initial public offering in August 2000. A total of 50,000,000 ordinary shares were reserved for issuance under the 1999 Purchase Plan, plus annual increases on January 1 of each year, commencing in 2001, up to 40,000,000 shares as approved by the Board. In June 2008, an additional 20,000,000 shares were reserved for issuance as also approved by the Board. The 1999 Purchase Plan was subject to adjustment in the event of a stock split, stock dividend or other similar changes in ordinary shares or capital structure.

The 1999 Purchase Plan permitted eligible employees to purchase ordinary shares through payroll deductions, which may range from 1% to 10% of an employee's regular base pay. Beginning November 1, 2005, the 1999 Purchase Plan was implemented through consecutive offer periods of 3 months' duration commencing on the first day of February, May, August and November. Under the 1999 Purchase Plan, ordinary shares may be purchased at a price equal to the lesser of 90% of the fair market value of the Company's ordinary shares on the date of grant of the option to purchase (which is the first day of the offer period) or 90% of the fair market value of the Company's ordinary shares on the applicable exercise date (which is the last day of the offer period). Employees may have elected to discontinue their participation in the purchase plan at any time; however, all of the employee's payroll deductions previously credited to the employee's account will be applied to the exercise of the employee's option on the next exercise date. Participation ends automatically on termination of employment with the Company. If not terminated earlier, the 1999 Purchase Plan had a term of 10 years.

As approved by the EGM held on May 30, 2009, the Company adopted the 2009 Employee Stock Purchase Plan ("2009 Purchase Plan") along with the Company delisting from SEHK in September 2009. The 2009 Purchase Plan succeeded the 1999 Purchase Plan, and the terms and provisions of 2009 Purchase Plan are generally the same as the 1999 Purchase Plan. The 2009 Purchase Plan has a term of 10 years, if not terminated earlier. A total of 25,000,000 ordinary shares were reserved for issuance under the 2009 Purchase Plan starting November 2009. As approved by the Annual General Meeting of Shareholders ("AGM") held in June 2012 and June 2016, additional 15,000,000 and 25,000,000 ordinary shares were reserved for issuance under the 2009 Purchase Plan, respectively. From 2016 to 2018, 8,564,500 ordinary shares had been purchased under the 2009 Purchase Plan.



## Stock Option Plans

The Board adopted the 2005 Share Option Plan (“2005 SOP”), which was effective on March 2, 2006, the date the Company completed the listing on the SEHK. The adoption of the 2005 SOP also resulted in the Board terminating the 1997 Stock Plan and 1999 Stock Incentive Plan. The Company began issuing stock options solely under the 2005 SOP for up to 100,000,000 ordinary shares. As approved by the EGM held on May 30, 2009, the number of shares available for issue was increased from 100,000,000 to 175,000,000 shares. The references to Hong Kong and Hong Kong related rules and regulations were also removed along with the completion of the Company’s delisting from the SEHK in 2009. As approved by the AGM held on June 22, 2012, additional 50,000,000 ordinary shares were reserved for issuance under the 2005 SOP. Under the terms of the 2005 SOP, stock options are generally granted at fair market value of the Company’s ordinary shares. The stock options have a contractual term of 8 years from the date of grant and vest over a requisite service period of 4 years. As of December 31, 2018, the number of stock options outstanding and exercisable was 115,327,350 and 111,592,100, respectively, under the 2005 SOP.

In 2015, the Board adopted the 2015 Stock Incentive Plan (“2015 SIP”), which was approved by the Shareholders in July 2015, and replaced the 2005 SOP after it expired on March 2, 2016. The 2015 SIP succeeded the 2005 SOP and the 2005 Share Incentive Plan (“2005 SIP”). The 2015 SIP provides for the granting to employees of incentive stock options, restricted shares, cash dividend equivalent rights, RSUs or stock appreciation rights or similar right (collectively referred to as “Awards”) to the employees, directors and consultants of the Company. The maximum aggregate number of new shares reserved for issuance pursuant to all Awards under the 2015 SIP is 100,000,000 ordinary shares, plus the remaining balance rolled into the 2015 SIP from the 2005 SOP and 2005 SIP, respectively. The maximum number of and kind of Awards granted under the 2015 SIP shall not each exceed 125,000,000 ordinary shares. The Awards granted are generally vested over a requisite service period of 4 years. As of December 31, 2018, the number of stock options outstanding and exercisable was 60,266,600 and 33,900,800, respectively, under the 2015 SIP.

A summary of the Company’s stock option activity under the plans as of December 31, 2018, and changes during the year then ended is presented as follows:

	<b>Number of Options Shares</b>	<b>Weighted Average Exercise Price</b>	<b>Weighted Average Remaining Contract Life</b>	<b>Aggregate Intrinsic Value</b>
Outstanding Options, January 1, 2018	185,500,550	\$ 0.0714		
Granted	10,915,000	\$ 0.0302		
Exercised	(346,550 )	\$ 0.0280		
Forfeited or expired	(20,475,050 )	\$ 0.1086		
Outstanding Options, December 31, 2018	175,593,950	\$ 0.0646	3.84	\$ 22,000

Vested and Expected to Vest Options at December 31, 2018	172,238,777	\$ 0.0652	3.79	\$ 21,000
Exercisable Options at December 31, 2018	145,492,900	\$ 0.0706	3.43	\$ 16,000

The total intrinsic value of options exercised during the years ended December 31, 2018, 2017, and 2016 was \$1,800, \$5,000, and \$1,000, respectively.

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The following table summarizes information about outstanding and vested stock options:

Range of Exercise Prices	Options Outstanding		Options Exercisable		
	Number Outstanding	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number Exercisable and Vested	Weighted Average Exercise Price
\$0.0270 - \$0.0314	50,133,550	5.59	\$ 0.0305	30,157,100	\$ 0.0306
\$0.0338 - \$0.0472	22,499,250	5.56	\$ 0.0420	13,895,550	\$ 0.0425
\$0.0506 - \$0.0640	36,109,100	3.03	\$ 0.0580	35,564,400	\$ 0.0581
\$0.0644 - \$0.0800	35,697,550	3.81	\$ 0.0782	34,721,350	\$ 0.0782
\$0.0834 - \$0.1636	31,154,500	0.78	\$ 0.1276	31,154,500	\$ 0.1276
Balance, December 31, 2018	175,593,950	3.84	\$ 0.0646	145,492,900	\$ 0.0706

The Company calculated the fair value of each option grant on the date of grant using the Black-Scholes option pricing model that use the assumptions in the following table. Risk-free interest rate is based on the US Treasury yield curve in effect at the time of grant. The Company uses the simplified method to estimate the expected life because the options are considered as plain vanilla share-based payment awards. Expected volatilities are based on historical volatility of stock prices for a period equal to the options' expected term. The dividend yield is zero as the Company has never declared or paid dividends on the ordinary shares or other securities and does not anticipate paying dividends in the foreseeable future.

	Stock Options			Employee Stock Purchase Plan		
	Years Ended December 31		2016	Years Ended December 31		2016
	2018	2017		2018	2017	
Risk-free interest rate	2.51% - 2.85%	1.84% - 1.93%	1.14% - 1.33%	1.48% - 2.32%	0.51% - 1.18%	0.22% - 0.35%
Expected life (Years)	5	5	5	0.25 - 0.26	0.25 - 0.26	0.25 - 0.26
Volatility	39% - 42%	37% - 38%	34%	29% - 59%	40% - 79%	34% - 48%
Dividend	-	-	-	-	-	-

The weighted-average grant-date fair value of options granted during the years ended December 31, 2018, 2017, and 2016 was \$0.0114, \$0.0168, and \$0.0097, respectively. The weighted-average fair value of options granted under the 2009 Purchase Plan during the years ended December 31, 2018, 2017, and 2016 was \$0.0062, \$0.0092, and \$0.0054, respectively.

## **Share Incentive Plan**

The Board adopted the 2005 SIP, which was effective on March 2, 2006, the date the Company completed the SEHK listing. The 2005 SIP provides for the grant of restricted shares, RSU, share appreciation rights and dividend equivalent rights up to 75,000,000 ordinary shares. As approved by the EGM held on May 30, 2009, the number of shares available for issue was increased from 75,000,000 to 125,000,000 shares. The references to Hong Kong and Hong Kong related rules and regulations were also removed along with the completion of the Company's delisting from the SEHK. As approved by the AGM held on June 22, 2012, an additional 62,500,000 ordinary shares were reserved for issuance under the 2005 SIP. These awards under 2005 SIP may be granted to employees, directors and consultants of the Company. The granted RSUs are generally vested over a requisite service period of 4 years. In 2015, the Board adopted the 2015 SIP, which was approved by the Shareholders in July 2015, and replaced the 2005 SIP after it expired on March 2, 2016. Please refer to above discussions for 2015 SIP.

A summary of the status of the Company's RSUs as of December 31, 2018, and changes during the year ended December 31, 2018, is presented as follows:

	<b>Number of Outstanding RSUs</b>	Weighted Average Grant-Date Fair Value
Nonvested at January 1, 2018	72,117,700	\$ 0.0429
Granted	38,308,750	\$ 0.0291
Vested	(25,588,950)	\$ 0.0467
Forfeited and expired	(4,073,700 )	\$ 0.0407
Nonvested at December 31, 2018	80,763,800	\$ 0.0353

As of December 31, 2018, there was \$1,956,000 of total unrecognized compensation cost related to nonvested share-based compensation arrangements granted under the plans including stock options and RSUs. The cost is expected to be recognized over a weighted-average period of 2.28 years. The total fair value of RSUs vested during the years ended December 31, 2018, 2017, and 2016 was \$1,196,000, \$998,000, and \$1,169,000, respectively.

Cash received from option exercise under all share-based payment arrangements for the years ended December 31, 2018, 2017, and 2016, was \$96,000, \$113,000, and \$75,000, respectively.

### Ordinary Shares Reserved

As of December 31, 2018, ordinary shares reserved for future issuance were as follows:

Outstanding stock options	175,593,950
Outstanding RSUs	80,763,800
Shares reserved for future Awards grants	164,925,000
Shares reserved for Employee Stock Purchase Plan	20,261,000
Total	441,543,750

Shares issued for the exercise of stock options, Employee Stock Purchase Plan and shares vested under restricted stock units are mainly from the treasury shares.

**15. EARNINGS (LOSS) PER SHARE**

Basic earnings (loss) per share is calculated by dividing net income (loss) by the weighted average number of ordinary shares outstanding during the period. Diluted earnings (loss) per share is calculated by dividing net income (loss) by the weighted average number of ordinary and dilutive ordinary equivalent shares outstanding during the period, using the treasury stock method for options.

A reconciliation of the numerator and denominator of basic and diluted earnings (loss) per share calculations was as follows:

	Years Ended December 31		
	2018	2017	2016
Net income (loss) (in thousands)	\$2,088	\$(6,145)	\$(2,986)
Weighted average shares outstanding (in thousands) – basic	1,300,795	1,288,977	1,282,141
Effect of dilutive securities:			
Options and RSUs (in thousands)	30,027	-	-
Weighted average shares outstanding (in thousands) – diluted	1,330,822	1,288,977	1,282,141
Earnings (loss) per share – basic			
Basic	\$-	\$-	\$-
Diluted	\$-	\$-	\$-

Certain outstanding options and RSUs were excluded from the computation of diluted EPS since their effect would have been anti-dilutive. The anti-dilutive stock options excluded and their associated exercise prices per share were 160,388,575 shares at \$0.0270 to \$0.1636 as of December 31, 2018, 185,500,550 shares at \$0.0274 to \$0.1636 as of December 31, 2017, and 207,837,900 shares at \$0.0274 to \$0.1636 as of December 31, 2016. The anti-dilutive RSUs excluded were 6,214,513, 72,117,700 shares, and 57,937,850 shares as of December 31, 2018, 2017, and 2016, respectively.

## 16.

## COMMITMENTS

### Lease Commitments

The Company leases office space and certain equipment under non-cancelable operating lease agreements that expire at various dates through December 2021. For the years ended December 31, 2018, 2017, and 2016, leasing costs charged to income in relation to these agreements were \$1,711,000, \$1,601,000, and \$1,899,000, respectively. The Company's office lease provides for periodic rental increases based on the general inflation rate.

As of December 31, 2018, future minimum lease payments under all non-cancelable operating lease agreements were as follows:

**(In Thousands)**

Year	Operating Leases
2019	\$ 1,304
2020	471
2021	66
Total minimum lease payments	\$ 1,841

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Purchase obligations and commitments include payments due under various types of license, maintenance and support agreements with contractual terms from one to three years. As of December 31, 2018, those purchase commitments were as follows:

**(In Thousands)**

Year

2019	\$488
2020	268
2021	151

Total \$907

**Prepayment for foundry capacity**

In order to accommodate the anticipated product demand, the Company has entered into an agreement with a foundry provider to guarantee a specified portion of production capacity that shall be purchased within a year from September 2018. Under the agreement, the Company is required to make a payment in advance to undertake the purchase of this specified capacity, such payment is non-refundable but entitles the Company to fully offset the actual purchase payable once the arranged conditions are met. The prepayment is amounted to \$898,000 and was included in the balance of prepayment to foundry vendors as of December 31, 2018. The Company believes that the guaranteed purchase will be fulfilled.

**17.**

**CONTINGENCIES**

The Company, as a normal course of business, is a party to litigation matters, legal proceedings, and claims. These actions may be in various jurisdictions and may involve patent protection and/or infringement. While the results of such litigations and claims cannot be predicted with certainty, the final outcome of such matters is not expected to have a material adverse effect on its consolidated financial position or results of operations. No assurance can be given, however, that these matters will be resolved without the Company becoming obligated to make payments or to pay other costs to the opposing parties, with the potential for having an adverse effect on the Company's financial position or its results of operations. No provision for any litigation has been provided as of December 31, 2018 and 2017.

## 18. FINANCIAL INSTRUMENTS

Information on the Company's financial instruments was as follows:

**(In Thousands)**

	December 31			
	2018		2017	
	Carrying	Fair	Carrying	Fair
	Amount	Value	Amount	Value
Assets				
Cash and cash equivalents	\$32,414	\$32,414	\$28,520	\$28,520
Restricted cash	34	34	35	35
Short-term investments	6,172	6,172	17,601	17,601
Long-term investments	10,445	10,445	3,112	3,112

The carrying amounts of cash and cash equivalents, restricted cash and short-term investments reported in the consolidated balance sheets approximate their estimated fair values.

Long-term investments in equity securities are reported at fair value for the year ended December 31, 2018. The Company utilizes the measurement alternative for equity investments in privately-held companies without readily determinable fair values and revalues these investments at cost less impairment, plus or minus observable price changes (in orderly transactions) of an identical or similar investment of the same issuer. Prior to the adoption of ASU 2016-01 in 2018, these securities were accounted for using the cost method of accounting, and were measured at cost less other-than-temporary impairment.

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## 19. SEGMENT INFORMATION

The Company does not identify or allocate assets by operating segment, nor does the chief operating decision maker (“CODM”) evaluate operating segments using discrete asset information. The Company does not have inter-segment revenue, and, accordingly, there is none to be reported. The Company does not allocate gains and losses from interest and other income, or income taxes to operating segments. The accounting policies for segment reporting are the same as for the Company as a whole.

Net sales to unaffiliated customers by geographic region are based on the customer’s ship-to location and were as follows:

### (In Thousands)

	Years Ended December 31		
	2018	2017	2016
China	\$55,303	\$51,962	\$46,784
Taiwan	1,987	2,305	3,009
Japan	1,485	3,148	2,535
Malaysia	1,396	94	7
Korea	1,201	1,435	2,257
Singapore	959	905	1,539
Other	383	356	430
Total	\$62,714	\$60,205	\$56,561

Net sales to unaffiliated customers by product category were as follows:

### (In Thousands)

	Years Ended December 31		
	2018	2017	2016
Integrated Circuits			
Mixed-signal	\$39,603	\$40,334	\$40,866

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Analog	23,063	19,801	15,623
Digital	48	50	65
Licensed intellectual property	-	20	7
Total	\$62,714	\$60,205	\$56,561

For the year ended December 31, 2018, two customers accounted for 10% or more of net sales. For the years ended December 31, 2017 and 2016, only one customer accounted for 10% or more of net sales. The percentage of net sales to these customers was as follows:

	Years Ended		
	December 31		
	2018	2017	2016
Customer A	13%	15%	8%
Customer B	11%	9%	10%

Long-lived assets consisted of property and equipment and were as follows based on the physical location of the assets at the end of each year:

**(In Thousands)**

	December 31		
	2018	2017	2016
Taiwan	\$6,037	\$6,145	\$5,607
U.S.A.	4,029	4,015	4,176
China	3,620	3,565	3,920
Other	28	30	33
Total	\$13,714	\$13,755	\$13,736

