



# Annual Report 2019

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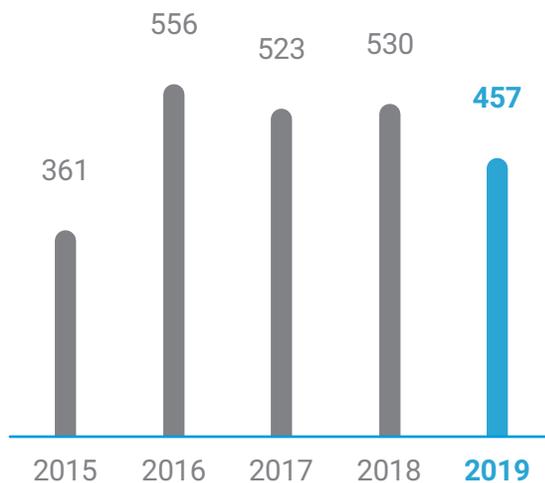
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# Financial Highlights

## Market Segments (% of Net Sales)

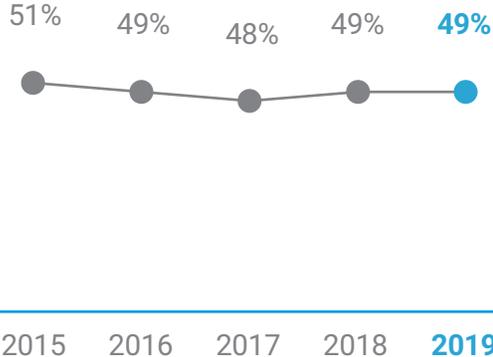


## Net Sales (US\$ millions)



### Gross Margin (% of Net Sales)

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### Diluted Earnings per ADS (US\$)

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# Letter to Shareholders

Dear Shareholders,

In 2019, we delivered \$457 million of sales, a decrease of 14% from \$530 million in the previous year. Continued growth of SSD controller sales was offset by declining sales of both eMMC+UFS controllers and SSD solutions. Earnings per ADS were \$1.82, compared to \$2.71 the prior year.

Key 2019 business milestones include:

- SSD controller sales increased about 20% year-over-year
- eMMC+UFS controller sales decreased about 30% year-over-year
- SSD solutions sales decreased about 50% year-over-year
- Introduced SM2271, industry's highest capacity and performance enterprise SATA SSD controller
- Introduced SM3282, industry's first single chip flash controller for cost effective USB portable SSDs
- Divested FCI, specialty RF ICs for the mobile communications market
- Repurchased \$25.0 million of shares
- Announced on October 25 annual cash dividend of \$1.40 per ADS, an increase from \$1.20 the prior year

Sales of SSD controllers reached a new corporate record high. 50 to 60% of our total sales are now generated by SSD controllers, primarily for PCs and other client devices, but also from initial sales for enterprise applications and hyperscale data centers. We supply our SSD controllers directly to 5 out of 7 global NAND flash manufacturers and supply to all the leading module makers. Our controllers can be found in PCs marketed by all of the world's leading PC OEMs and are widely used in SSDs sold in various channel markets, from e-tailers to systems integrators.

We began 2019 with limited sales visibility because NAND prices were falling rapidly and our customers were themselves facing limited visibility. Sales visibility improved meaningfully by mid-2019 when NAND prices stabilized and we started seeing more confident and higher quality sales forecasts from customers. With lower NAND prices, we also started seeing stronger demand for NAND controllers, especially from PC OEMs. We believe we are well positioned to benefit from increasing SSD adoption in PCs and other client devices and from further market share gains in the next few years.

Sales of our eMMC+UFS controllers fell further this year as our Korean customer continued to reduce exposure to the smartphone market and transition to its own UFS controller. We were able to partially offset this risk with sales to a new US customer and growth from Chinese customers. Our sales fell sharply in the first quarter because of our Korean customer risk and grew strongly sequentially in the following three quarters of the year as sales of UFS controllers to our US NAND flash customer scaled rapidly and sales of eMMC controllers to Chinese module maker customers expanded further. We believe this positive trend will continue in 2020.

SSD solutions sales declined in 2019 due to reduced sales of our Shannon data center SSDs and Ferri industrial SSDs. Sales of Shannon SSDs were affected by a one-year delay in the launch of our new Open Channel technology with commercial sales beginning in the third quarter of this year. Our first-generation Open Channel SSDs were well received by Alibaba and we are working on our second-generation technology for 2020 and expect Shannon sales to recover next year. Sales of our Ferri SSDs were affected by low NAND ASPs, despite strong bit growth. In 2020, we expect Ferri bit growth to continue and sales to recover with more stable ASP per bit.

For the upcoming year, while our business will be impacted by the Covid-19 pandemic and related economic issues, we are excited that all three of our engines of growth—SSD controllers, eMMC+UFS controllers and SSD solutions—will all contribute to full-year 2020 growth, the first time in many years. With our three growth drivers back on-line, we are positioned for more balanced growth going forward.

As always, we would like to thank our customers and suppliers, our employees and our shareholders for their support over the years.

Sincerely,



James Chow  
Chairman of the Board



Wallace C. Kou  
President and Chief Executive Officer

## About Silicon Motion

Silicon Motion Technology Corporation is the global leader in developing NAND flash controllers for SSDs and other solid state storage devices. We have over 20 years of experience developing specialized processor ICs that manage NAND components and deliver market leading, high-performance storage solutions widely used in data centers, PCs, smartphones and commercial and industrial applications. We have one of the broadest portfolios of controller intellectual properties developed from our deep understanding of NAND characteristics, which enables us to design both unique, highly optimized configurable IC plus related firmware controller platforms and complete turnkey controller solutions. In the last ten years, we have shipped over six billion controllers, more than any other company in the world. More NAND flash components, including current and upcoming generations of 3D flash produced by Intel, Kioxia, Micron, Samsung, SK Hynix and Western Digital, are supported by Silicon Motion controllers than any other company. Our customers include NAND flash makers, module makers, hyperscalers and OEMs.

We are the world's leading merchant supplier of SSD controllers used in PCs and other client devices and leading merchant supplier of eMMC+UFS controllers used in smartphones and IoT devices.

We also leverage our controller expertise to supply custom-designed high-performance Open Channel data center SSDs to China's leading hyperscalers and customized small single-chip form factor SSDs for industrial, commercial and automotive applications.

We market our controllers under the "SMI" brand, enterprise-grade SSDs under the "Shannon Systems" brand and single-chip industrial-grade SSDs under the "Ferri SSD" and "Ferri-eMMC" brands. We were founded in 1995 in San Jose, California and now operate from corporate offices in Hong Kong, Taiwan and the US.

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

**FORM 20-F**

- REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934  
OR  
 ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2019  
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: N/A  
For the transition period from \_\_\_\_\_ to \_\_\_\_\_  
Commission file number: 000-51380

**Silicon Motion Technology Corporation**

(Exact name of Registrant as specified in its charter)

Cayman Islands  
(Jurisdiction of incorporation or organization)  
Unit B, 16/F, Centre 600, 82 King Lam St,  
Cheung Sha Wan, Kowloon,  
Hong Kong  
Tel: +852 2307 4768  
(Address of principal executive offices)

Riyadh Lai, Chief Financial Officer  
Tel: +1 408 519 7200 / Fax: +1 408 519 7101  
690 N. McCarthy Blvd. Suite 200,  
Milpitas, CA 95035, USA

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Ordinary shares, par value US\$0.01 per share*	SIMO	Nasdaq Global Select Market
American Depositary Shares, each representing four ordinary shares		

\* Not for trading, but only in connection with the listing on the Nasdaq Global Select Market of American Depositary Shares, or ADSs, each representing four ordinary shares.

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

None

Securities registered or to be registered pursuant to Section 15(d) of the Act:

None

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: 139,109,484 ordinary shares as of December 31, 2019, US\$0.01 par value per share.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Sections 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes  No

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Emerging growth company	<input type="checkbox"/>

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.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

<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	<input checked="" type="checkbox"/>	International Financial Reporting Standards as issued by the International Accounting Standards Board	<input type="checkbox"/>	Other	<input type="checkbox"/>
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If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.  Item 17  Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act): Yes  No

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## EXPLANATORY NOTE

As previously disclosed on Silicon Motion Technology Corporation's (the "Company") Form 6-K furnished on April 29, 2020, the filing of this annual report on Form 20-F for the period ended December 31, 2019 was delayed due to circumstances related to COVID-19 and its impact on the Company's operations. On January 23, 2020, the Chinese government started the lockdown of Wuhan and the rest of the country in an effort to contain the COVID-19 outbreak. Following this action, most airlines suspended or cancelled flights to and from China and governments around the world implemented significant travel restrictions, including extensive quarantine procedures and bans on the entry of foreign nationals. As a result, the Company has been unable to conduct in-person site evaluations of the Company's facilities, books and records in China, which without undue hardship and expense to the Company delayed the preparation of the Company's annual report on Form 20-F and filing until after April 30, 2020. The Company relied on the SEC's Order Under Section 36 of the Securities Exchange Act of 1934 Modifying Exemptions from the Reporting and Proxy Delivery Requirements for Public Companies, dated March 25, 2020 (Release No. 34-88465), to delay the filing of this annual report.

## CONVENTIONS THAT APPLY TO THIS ANNUAL REPORT

Unless otherwise indicated, references in this annual report to:

- “ADRs” are to the American depositary receipts that evidence our ADSs;
- “ADSs” are to our American depositary shares, each of which represents four of our ordinary shares;
- “CAGR” are to compound annual growth rate;
- “China” or “PRC” are to the People’s Republic of China, excluding the special administrative regions of Hong Kong and Macau;
- “Korea” are to the Republic of Korea, or South Korea;
- “Korea Won” are to the legal currency of South Korea;
- “Nasdaq” are to the Nasdaq Stock Market;
- “NT dollar,” “NT dollars” or “NT\$” are to New Taiwan dollars, the legal currency of Taiwan;
- “ROC” or “Taiwan” are to the Republic of China, the official name of Taiwan;
- “shares” or “ordinary shares” are to our ordinary shares, with a par value US\$0.01 per share;
- “U.S. GAAP” are to generally accepted accounting principles in the United States;
- “U.S. dollar,” “U.S. dollars” or “US\$” are to United States dollars, the legal currency of the United States; and
- “we,” “us,” “our company,” “our,” “SMTC” and “Silicon Motion” are to Silicon Motion Technology Corporation, its predecessor entities and subsidiaries including but not limited to (i) Silicon Motion Technology (HK) Ltd., incorporated in Hong Kong, (ii) Silicon Motion, Inc., incorporated in Taiwan, or SMI Taiwan, and formerly known as Feiya Technology Corporation, (iii) Silicon Motion, Inc., a California, USA, corporation, or SMI USA, and (iv) Shanghai Baocun Information Technology Co., Ltd., incorporated in the PRC, or Shannon Systems.

Silicon Motion, the Silicon Motion logo, NANDSustain, NANDXtend, SSDLifeGuard, SSDLifeSaver, TurboMLC, FerriSSD, Ferri-eMMC, the powered by SiliconMotion logo, InstantView, the Shannon Systems logo, PCIe-RAID, DIRECT-IO, Hyper-IO, Bigtera, the Bigtera logo, VirtualStor, CloudStor, and StorVisor are our trademarks or registered trademarks. We may also refer to trademarks of other corporations and organizations in this document.

Unless otherwise indicated, our financial information presented in this annual report has been prepared in accordance with U.S. GAAP.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This annual report on Form 20-F contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), which are subject to the “safe harbor” created by those sections. These forward-looking statements include statements regarding our financial position; our expectations concerning future operations, margins, profitability, liquidity and capital resources; our business strategy and other plans and objectives for future operations; and all other statements that are not historical facts. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “expects,” “intends,” “plans,” “anticipates,” “believes,” “thinks,” “estimates,” “seeks,” “predicts,” “potential,” and similar expressions. Although we believe that these statements are based on reasonable assumptions, they are subject to numerous factors, risks and uncertainties that could cause actual outcomes and results to be materially different from those projected. These factors, risks and uncertainties include those listed under “Risk Factors” and elsewhere in this annual report. Those factors, among others, that could cause our actual results and performance to differ materially from the results and performance projected in, or implied by, the forward-looking statements include:

- the extent of the impact of the novel coronavirus (COVID-19) pandemic;
- unpredictable volume and timing of customer orders, which are not fixed by contract but vary on a purchase order basis;
- the loss of one or more key customers or the significant reduction, postponement, rescheduling or cancellation of orders from these customers;
- general economic conditions or conditions in the semiconductor or consumer electronics market;
- decreases in the overall average selling prices of our products;
- changes in the relative sales mix of our products;
- the payment, or non-payment, of cash dividends in the future at the discretion of our board of directors;
- changes in our cost of finished goods;
- the effects on our business and our customer’s business taking into account the ongoing US-China tariffs and trade disputes;
- the effects, if any, on the price of our ADSs as a result of the announcement and implementation of our previously announced share repurchase program;
- the availability, pricing and timeliness of delivery of other components and raw materials used in our and our customers’ products;
- our customers’ financial health, sales outlook, purchasing patterns and inventory adjustments based on consumer demand, market adoption of new technologies and general economic conditions;
- our ability to successfully develop, introduce and sell innovative, new or enhanced products in a timely manner; and
- the timing of new product announcements or introductions by us or by our competitors.

One or more of these factors could materially and adversely affect our operating results and financial condition in future periods. We cannot assure you that we will attain any meaningful estimates or maintain profitability or that the assumptions on which they are based are reliable.

Except as required by law, we undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise after the date of this annual report. All forward-looking statements contained in this annual report are qualified by reference to this cautionary statement. As you read and consider this annual report, you should carefully understand that the forward-looking statements are not guarantees of performance or results.

## PART I

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

Not applicable.

### ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

### ITEM 3. KEY INFORMATION

#### Selected Consolidated Financial Data

You should read the following information with our consolidated financial statements and related notes and “Item 5. Operating and Financial Review and Prospects” included elsewhere in this annual report.

The selected consolidated statements of income and cash flow data for the years ended December 31, 2017, 2018 and 2019 and the selected consolidated balance sheet data as of December 31, 2018 and 2019 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 and related notes. The selected consolidated statements of income for the years ended December 31, 2015 and 2016 and the selected consolidated balance sheet data as of December 31, 2015, 2016 and 2017 are derived from our audited consolidated financial statements which are not included in this annual report. To reflect our early adoption of the new accounting update on the statement of cash flows, we retrospectively adjusted the selected consolidated statements of cash flow data for the year ended December 31, 2015, which are not derived from our audited consolidated financial statements included in our prior annual reports. These consolidated financial statements are prepared in accordance with U.S. GAAP.

	Year Ended December 31,				
	2015	2016	2017	2018	2019
	US\$	US\$	US\$	US\$	US\$
	(in thousands, except for per share data)				
<b>Consolidated Statements of Income Data:</b>					
Net sales	361,297	556,146	523,404	530,348	457,253
Cost of sales	176,765	281,541	272,210	269,541	235,081
Gross profit	184,532	274,605	251,194	260,807	222,172
Operating expenses:					
Research and development	71,161	92,405	102,053	102,028	110,305
Sales and marketing	20,173	25,765	25,868	29,279	25,108
General and administrative	15,714	17,072	16,933	17,633	17,878
Impairment of goodwill and intangible assets	—	—	10,337	4,069	15,970
Amortization of intangible assets	1,051	2,103	2,534	2,964	766
Gain from disposal of noncurrent assets held for sale	—	—	(1,880)	—	—
Total operating expenses	108,099	137,345	155,845	155,973	170,027
Operating income	76,433	137,260	95,349	104,834	52,145
Total non-operating income	2,067	1,370	3,652	5,027	19,929
Income before income taxes	78,500	138,630	99,001	109,861	72,074
Income tax expense	18,249	27,690	24,046	11,791	7,676
Net income	60,251	110,940	74,955	98,070	64,398
Weighted average shares outstanding:					
Basic	138,100	140,919	142,738	144,123	140,708
Diluted	139,634	142,050	143,606	144,512	141,183
Earnings per share:					
Basic	0.44	0.79	0.53	0.68	0.46
Diluted	0.43	0.78	0.52	0.68	0.46
Earnings per ADS <sup>(1)</sup> :					
Basic	1.75	3.15	2.10	2.72	1.83
Diluted	1.73	3.12	2.09	2.71	1.82

(1) Each ADS represents four ordinary shares.

	As of December 31,				
	2015	2016	2017	2018	2019
	US\$	US\$	US\$	US\$	US\$
	(in thousands)				
<b>Consolidated Balance Sheet Data:</b>					
Cash and cash equivalents . . . . .	180,519	274,483	359,453	284,989	323,166
Other current assets . . . . .	134,657	202,417	209,344	213,501	242,033
Working capital . . . . .	226,889	330,914	391,553	384,839	433,711
Long-term investments . . . . .	133	120	—	4,242	3,000
Property and equipment, net . . . . .	50,469	47,892	51,370	101,410	98,488
Goodwill and intangible assets, net . . . . .	75,990	73,883	66,393	59,352	17,489
Other non-current assets . . . . .	3,860	7,231	7,172	9,120	13,553
Total assets . . . . .	445,628	606,026	693,732	672,614	697,729
Total liabilities . . . . .	101,130	163,263	199,681	140,337	160,945
Total shareholders' equity . . . . .	344,498	442,763	494,051	532,277	536,784

	As of December 31,				
	2015	2016	2017	2018	2019
	As Adjusted US\$	US\$	US\$	US\$	US\$
	(in thousands)				
<b>Consolidated Cash Flow Data:</b>					
Net cash provided by operating activities . . . . .	65,946	125,568	103,881	108,242	77,695
Net cash provided by (used in) investing activities <sup>(1)</sup> . . . . .	(58,458)	(8,220)	(14,548)	(79,568)	34,668
Net cash provided by (used in) financing activities . . . . .	(20,271)	2,194	(31,740)	(101,820)	(70,260)
Depreciation and amortization . . . . .	8,987	11,585	13,133	14,796	13,213
Capital expenditures . . . . .	(23,664)	(12,220)	(11,683)	(74,853)	(11,015)

(1) The selected consolidated statements of cash flow data for the year ended December 31, 2015 was retrospectively adjusted to reflect the Company's election to early adopt the ASU 2016-18 of the classification and presentation of changes in restricted cash on the statement of cash flows.

## Risk Factors

Our business, operations and financial results are subject to various risks and uncertainties, including those described below, that could adversely affect our business, financial condition, results of operations, cash flows, and the trading price of our ADSs. Many of the following risks and uncertainties are, and will be, exacerbated by the COVID-19 pandemic and any worsening of the global business and economic environment as a result. The following important factors, among others, could cause our actual results to differ materially from historical results and those expressed in forward-looking statements made by us in filings with the SEC, press releases, communications with investors and oral statements.

*Our financial conditions and results of operations may vary from quarter to quarter, which may cause the price of our ADSs to decline.*

Our operating results have fluctuated in the past and could do so in the future. Fluctuations in our operating results may be due to a number of factors, including, but not limited to, those listed below and those identified throughout this "Risk Factors" section:

- the impact of epidemics and pandemics, such as COVID-19, and other natural, or man-made disasters;
- competitive pressures and other factors such as the qualification, availability and pricing of competing products and technologies and the resulting effects on sales and pricing of our products;

- changes in demand for electronic devices into which our semiconductor solutions are directly or indirectly incorporated;
- our customers' sales outlook, purchasing patterns and inventory adjustments based on market demand, adoption of new technologies and general economic conditions;
- the loss of one or more key customers or the significant reduction, timing or cancellation of orders from these customers;
- seasonality or cyclical fluctuations in our markets;
- our ability to develop or acquire, introduce, market and transition to volume production new or enhanced products and technologies in a cost-effective and timely manner;
- changes in supply and availability of flash memory components used in our and our customer's products;
- changes in our product mix or customer mix and their effect on our gross margin;
- changes in foreign currency exchange rates;
- the availability and pricing of third party semiconductor foundry services;
- unpredictable volume and timing of customer orders, which are not fixed by contract but vary on an order-to-order basis;
- deferrals or reductions of customer orders in anticipation of new products or product enhancements from us or our competitors or other providers of integrated circuits;
- our ability to timely and accurately predict market requirements and evolving industry trends and to identify and capitalize upon opportunities in new markets; and
- the overall cyclical nature of, and changing economic and market conditions in, the semiconductor industry.

These and other factors make it difficult for us to assess our future performance. Our sales and operating results are difficult to predict and have in the past, and will likely in the future, fluctuate from period to period. We could fail to achieve the operating targets that we have announced, such as revenue growth, gross margin, and operating margin. In addition, our operating results in the future may be below the expectations of securities analysts or investors, which would likely cause the market price of our ADSs to decline. Any variations in our period-to-period performance may also cause the market price of our ADSs to fluctuate. Accordingly, you should not rely on the results of any prior periods as a reliable indicator of our future operating performance.

***The COVID-19 pandemic could materially adversely affect our business, financial conditions and results of operation.***

The recent outbreak of the novel coronavirus ("COVID-19"), which has been identified as a "pandemic" by the World Health Organization, has resulted in widespread decreased global economic activity and ongoing health concerns and has adversely affected our business and results of operation.

As a result of the pandemic, government authorities have imposed, and businesses and individuals have implemented, numerous unprecedented measures to try to contain the virus, such as travel bans and restrictions, quarantines, shelter-in-place/stay-at-home and social distancing orders, and shutdowns. These measures have impacted and may further impact our workforce and operations, the operations of our customers, suppliers and other partners. The ultimate impact and efficacy of government measures and potential future measures is currently unknown. We have experienced and will experience disruptions to our business operations resulting from quarantines, self-isolations, or other restrictions on the ability of our employees to perform their jobs that may impact our ability to develop and design our products in a timely manner or meet required milestones or

customer commitments. Our third-party manufacturers, suppliers, distributors, sub-contractors and customers have been and will be disrupted by worker absenteeism, quarantines and social distancing measures, office and factory closures, disruptions to ports and other shipping infrastructure, border closures, or other travel or health-related restrictions. Depending on the magnitude of such effects on our suppliers' manufacturing, assembling, and testing operations, our supply chain, manufacturing and product shipments will be delayed, which could adversely affect our business, operations and customer relationships. Also, the pandemic could continue to hamper our efforts to comply with our filing obligations with the Securities and Exchange Commission.

The pandemic has significantly increased economic and demand uncertainty. It is likely that the current outbreak and continued spread of COVID-19 will cause an economic slowdown, and possibly a global recession. There is a significant degree of uncertainty and lack of visibility as to the extent and duration of any such slowdown or recession. Risks related to a slowdown or recession include the risk that demand for our products will be significantly harmed. We are currently seeing negative impacts on demand and are expecting slowing economic conditions to further adversely affect demand for our products, but given the significant economic uncertainty and volatility created by the pandemic, we have difficulty predicting the extent of impacts on demand for our products.

The extent to which COVID-19 impacts our business and financial results will depend on future developments, which are unpredictable and highly uncertain, including the continued spread, duration and severity of the outbreak, the breadth and duration of business disruptions related to COVID-19, and public health measures and actions taken throughout the world to contain COVID-19. The prolonged effect of COVID-19 could materially adversely impact our business, financial condition and results of operations over an extended period of time.

***Our operating results and stock price may be adversely affected by worldwide economic uncertainties including political and social instability and industry-specific conditions in the markets we operate.***

Disruptions or uncertainties in the economy, including any political and social instability may lead consumers and business to postpone spending. This in turn may cause our customers to cancel, decrease or delay their existing and future orders with us. Furthermore, we operate primarily in the semiconductor industry, which is cyclical in nature and subject to evolving industry standards. In the past, the semiconductor industry had experienced significant downturns characterized by decreases in product demand, excess customer inventories and accelerated erosion of prices. The semiconductor industry also periodically experiences increased demand and production capacity constraints, which may affect our ability to deliver products to our customers. Economic volatility can cause extreme difficulties for our customers and vendors in accurately forecasting and planning future business activities. The uncertain effects and resolution of the escalating geopolitical tensions and related tariff dispute between the US and China are examples of political uncertainty. This unpredictability could cause our customers to reduce spending on our products and services, which would delay and lengthen sales cycles. The accurate forecasting and planning for our operations heavily rely on these worldwide economic and industry-specific conditions, and the volatility and uncertainties associated with these factors may adversely affect our results of operation in a material manner.

***We are subject to order and shipment uncertainties and our results of operation could be materially adversely affected if we are unable to accurately forecast customer demand.***

We have limited sales visibility as our customers typically do not provide us with firm, long-term purchase commitments. Additionally, our customers may also have limited sales visibility because of the rapidly changing nature of the global economy, NAND supply and demand dynamics and the markets in which devices using our products are sold.

Substantially all of our sales are made on a purchase order basis, which permits our customers to cancel, change or delay their product purchase commitments with little or no notice to us and often without penalty to

them, which limits our ability to accurately forecast sales and maintain adequate inventory levels, manufacturing capacity and operating infrastructure requirements. Our customers, most of whom are NAND flash makers and module makers, face difficulties in predicting demand for their storage devices using our products, which could result in the procurement forecast provided to us changing at short notice. The majority of our customers are building storage devices such as SSDs used in PCs and other client devices and eMMC and UFS mobile embedded storage used primarily in smartphones and are dependent on OEMs of smartphones, PCs and other client devices accurately anticipating end-consumer demand, which has historically been difficult and subject to unpredictable deviations from past sales patterns. Also, since a significant portion of our quarterly sales, especially from module maker customers targeting channel markets, are from orders received and fulfilled in that quarter, our visibility as to expected orders from these customers in subsequent periods and for any extended period of time is limited. The multiple layers of forecasts from other customers and from their customers may introduce other errors into our estimates of anticipated sales.

To ensure the availability of our products for our customers, we generally instruct our foundries to begin manufacturing our products based on forecasts provided by these customers in advance of receiving purchase orders. However, these forecasts do not represent binding purchase commitments, and sales of our products are only recognized when they are shipped with ownership transferred to the customer. As a result, we incur inventory and manufacturing costs in advance of anticipated revenue. Because demand for our products may not materialize, manufacturing based on forecasts subjects us to risks of high inventory carrying costs and increased obsolescence and may increase our costs. If we overestimate customer demand for our products or if purchase orders are cancelled or shipments delayed, we may end up with excess or obsolete inventory, which could have a material and adverse effect on our financial results. The risk of obsolescence and/or excess inventory is heightened for devices designed for consumer electronics due to short product lifecycles for these types of products. Conversely, if we underestimate demand or if insufficient manufacturing capacity is available, we may not have sufficient product inventory, which could lead to missed revenue opportunities, loss of market share, damages to our customer relationships and other harm to our business. In addition, any future significant cancellations or deferrals of product orders or the return of previously sold products could materially and adversely affect our profit margins, increase product obsolescence and restrict our ability to fund our operations.

Because many of our expenses are fixed in the short term or are incurred in advance of anticipated sales, we may not be able to decrease our expenses in a timely manner to offset any shortfall of sales, or expand our R&D and other operating infrastructure in a timely manner to capture anticipated business opportunities. If we expand our business operations and demand for our products does not increase as we may have projected, our operating results could be affected by our higher operating expense levels. Conversely, if we maintain or reduce our business operations and related expenses in accordance with our projections and demand for our products increases more than expected, our operating results could be affected by lost business opportunities, less competitive economies of scale, and damaged relationships with our customers.

***The demand for our products depends in part on the market conditions in the industries into which they are sold. Fluctuations in demand for our products or a market decline in any of these industries could have a material adverse effect on our results of operations.***

Industry-wide fluctuations in the PC and smartphone markets could have a materially adversely affected on our results of operation. A large portion of our controller sales are focused on the PC and smartphone markets, which have both in recent years experienced declining sales trends because of market saturation and longer replacement cycles. Furthermore, as a result of the COVID-19 pandemic, global PC and smartphone sales have been negatively affected by both supply-side and demand-side issues. Lockdown measures in China and other countries have caused supply-side problems that include factories closures and component and labor shortages. Demand has been affected by consumers sheltering-at-home, retail closures, economic concerns and other issues. We have no assurance that any decrease in PC and smartphone sales resulting from the COVID-19 pandemic will be offset by increased sales in subsequent periods.

In recent years, we have benefitted from technological changes in the PC and smartphone markets, such as the replacement of HDDs with SSDs in PCs and the replacement of eMMC with UFS mobile embedded storage in smartphones. In the near future, we expect growth in demand for client SSDs and UFS, and corresponding growth in demand for controllers used in these types of storage devices, will decelerate and stop and could decline when a majority of PCs use SSDs and a majority of smartphones use UFS. Smartphones and tablets have in recent years cannibalized the sale of PCs and it is possible smartphones and tablets could be replaced by other types of mobile computing and communications devices, and this change could lead to unfavorable demand for our products.

The market for storage devices using NAND flash components have experienced rapid technological changes, could be subject to industry consolidation and could face competition from new technology. NAND flash technology will continue to evolve rapidly with continued cost reductions, which could lead to new types of solid state storage devices, new applications and new categories of customers, market segments where we could be comparatively disadvantaged. The market for solid state storage devices is relatively fragmented with many suppliers that include NAND flash makers, module makers and OEMs, and if the market were to consolidate, a trend experienced by other parts of the semiconductor and storage industries, we could face changing demand for our products, replacement of our products by those of our competitors or internal sources and reduced market opportunities. If solid state storage devices were to use other types of non-volatile memory technologies other than NAND flash and we do not have relevant and competitive controller technology, our addressable market for controllers could shrink.

The market for controllers is comprise of the merchant market and captive market. We are an independent merchant supplier of controllers to NAND flash maker, module maker and OEM customers. All of the major NAND flash makers also have internal captive sources of controllers. The merchant market for controllers could shrink if the NAND flash makers were to expand their usage of captive sources of controllers. In the past, our results of operation were negatively affected when NAND flash customers chose to insource controllers.

***We may pursue acquisitions, investments and dispositions, which could adversely affect our results of operations.***

Our growth strategy includes the acquisition of, and investment in, businesses that offer complementary products, services and technologies, augment our market coverage, or enhance our technological capabilities. Our recent acquisitions include Shannon Systems in 2015 and Bigtera in 2017. Our investments include DeepVision in 2018. We may not be able to identify suitable acquisition or investment opportunities, or to consummate any such transactions. In addition, our original estimates and assumptions used in assessing any transaction may be inaccurate and we may not realize the expected financial or strategic benefits of any such transaction.

Any acquisitions we may undertake involve risks and uncertainties, such as unexpected delays, challenges and related expenses, and diversion of management's attention. We may become subject to legal proceedings relating to the acquisition and the integration of acquired businesses may not be successful. The integration of an acquired business involves significant challenges, including, among others: potential disruption of our business, diversion of management's attention from daily operations and the pursuit of other opportunities; incurring significant restructuring charges and amortization expense, assuming liabilities and ongoing lawsuits, potential impairment of acquired goodwill and other intangible assets, and increasing our expenses and working capital requirements; and implementing our management information systems, operating systems and internal controls for the acquired operations. In addition, our due diligence process may fail to identify significant issues with the acquired company's products, financial disclosures, accounting practices, legal, tax and other contingencies and compliance with local laws and regulations. These difficulties may be complicated by factors such as the size of the business or entity acquired, geographic and cultural differences, lack of experience operating in the industry or geographic markets of the acquired business, potential loss of key employees and customers, the potential for deficiencies in internal controls at the acquired or combined business, performance problems with the acquired

business' technology, exposure to unanticipated liabilities of the acquired business, insufficient revenue to offset increased expenses associated with the acquisition, adverse tax consequences and our potential inability to achieve the growth prospects or synergies expected from any such acquisition.

Failure to manage and successfully integrate the acquisitions we make, or to improve sales and margins of the acquired businesses, could materially harm our business, operating results and margins.

Any future acquisitions we make may require debt or equity financing, which, in the case of debt financing, would increase our leverage and interest expenses, and in the case of equity financing, would be dilutive to our existing stockholders. Acquisitions made in cash would reduce our cash reserves.

From time to time, we may also seek to divest or wind down portions of our business, either acquired or otherwise, or we may exit investments, each of which could materially affect our cash flows and results of operations. On May 31, 2019 we completed the sale of our FCI RF ICs product line to Dialog Semiconductor. Any future dispositions we may make could involve risks and uncertainties, including our ability to sell such businesses on terms acceptable to us, or at all. In addition, any such dispositions could result in disruption to other parts of our business, potential loss of employees or customers, or exposure to unanticipated liabilities or ongoing obligations to us following any such dispositions. For example, in connection with such dispositions, we may enter into transition services agreements or agree to provide certain indemnities to the purchaser, which may result in additional expenses and may adversely affect our financial condition and results of operations.

***We depend on a few large customers for a significant portion of our revenues and a loss of some of these customers would result in the loss of a significant portion of our revenues.***

We derived a substantial portion of our revenue from sales to a relatively small number of customers. As a result, the loss of any significant customer could materially and adversely affect our financial condition and results of operations. Sales to our five largest customers represented approximately 57%, 54% and 54% of our net revenue in 2017, 2018 and 2019, respectively. Sales to our two largest customers represented 39%, 34% and 31% of our net revenue in 2017, 2018 and 2019, respectively. In 2019, the significant customers were Intel and Micron and in 2017 and 2018, were SK Hynix and Intel. The identities of our largest customers and their respective contributions to our net revenue have varied and will likely continue to vary from period to period.

We expect that we will continue to depend on a relatively limited number of customers for a substantial portion of our net sales and our ability to maintain good relationships with these customers will be important to the ongoing success of our business. We cannot assure you that the revenue generated from these customers, individually or in the aggregate, will reach or exceed historical levels in any future period. Our failure to meet the demands of these customers could lead to a cancellation or reduction of business from these customers. In addition, loss, cancellation or reduction of business from, significant changes in scheduled deliveries to, or decreases in the prices of products sold to any of these customers could significantly reduce our revenues and adversely affect our financial condition and operating results. Moreover, any difficulty in collecting outstanding amounts due from our customers particularly customers who place large orders, would harm our financial performance. In addition, if our relationships with our largest customers are disrupted for any reason, it could have a significant impact on our business.

***NAND industry cyclicality could adversely affect our growth and profitability.***

The NAND industry is highly capital intensive and regularly experiences cycles of shortages and excess supply and related rapid increases and sharp decreases in NAND component prices. The price of solid state storage devices, such as SSDs and eMMC and UFS devices, in which NAND accounts for a significant portion of material cost, could also rise and fall with NAND component prices. Falling prices for solid state storage devices could trigger stronger market demand for these devices as well as controllers used in them, and conversely, rising prices for solid state storage devices could cause demand for these devices as well as controller used in them to fall, which could negatively affect our sales and profitability.

Additionally, during periods of NAND shortage, our sales and profitability could be negatively affected in many other ways, including: (i) our module maker and OEM storage customers may not be able to procure sufficient supplies of NAND components, which could lead to reduced demand for our controllers; (ii) we may not be able to procure sufficient supplies of NAND components for our Shannon data center SSDs and Ferri industrial SSDs, which could lead to reduced sales of our SSD solutions, and furthermore, to higher cost of procured NAND components and reduced SSD solutions profitability; (iii) NAND manufacturers may divert NAND supply away from module maker customers who are our controller customers or from their own storage products that use our controllers towards other customers or products that do not use our controllers, and our sales could be reduced.

During periods of NAND excess supply when NAND prices are falling sharply, our sales and profitability could also be negatively affected in additional ways, including: (i) NAND manufacturers facing reduced demand for NAND components and storage devices may temporarily build NAND inventory instead of selling at lower prices, and this may cause a reduction in controller demand; (ii) module maker customers that are exposed to volatile NAND pricing conditions may temporarily become more cautious in procuring NAND components, which could lead to reduced levels of controller procurement and storage device production; (iii) OEMs may temporarily limit procurement of storage devices in expectation of procuring more at a later date and at a lower price, which could restrain storage device and associated controller procurement; and (iv) NAND vendor and module maker customers that are under margin pressure because of falling NAND prices may seek price concessions from their controller suppliers.

***If we fail to accurately anticipate and respond to market trends or fail to develop and introduce new or enhanced products to address these trends on a timely basis, our ability to attract and retain customers could be impaired and our competitive position could be harmed.***

Our success depends to a significant extent on the development, qualification, implementation and acceptance of new product designs and improvements that provide value to our customers. Our ability to develop, qualify and distribute, and have manufactured, new products and related technologies to meet evolving industry requirements, at prices acceptable to our customers and on a timely basis are significant factors in determining our competitiveness in our target markets. For example, for our products addressing the SSD market, we must successfully identify customer requirements and design, develop and produce products on time that compete effectively as to price, functionality and performance. We sell products in markets that are characterized by rapid technological change, evolving industry standards, frequent new product introductions and smaller process geometries. We cannot assure you that our efforts to execute our product roadmap will result in innovative products and technologies that provide value to our customers. If we fail to or are delayed in developing, qualifying or shipping new products or technologies that provide value to our customers and address these new trends and adjust our business accordingly, we may lose competitive positioning, which could cause us to lose market share and require us to discount the selling prices of our products. Although we make substantial investments in research and development, we cannot be certain that we will be able to develop, obtain or successfully implement new products and technologies on a timely basis or that they will be well-received by our customers. Moreover, our investments in new products and technologies involve certain risks and uncertainties and could disrupt our ongoing business. New investments may not generate sufficient revenue, may incur unanticipated liabilities and may divert our limited resources and distract management from our current operations. We cannot be certain that our ongoing investments in new products and technologies will be successful, will meet our expectations and will not adversely affect our reputation, financial condition and operating results.

We believe that our future success depends on our ability to develop and introduce new technologies and products for new applications to generate new sources of revenue to replace, or build upon, existing product revenue for applications that are mature or in secular decline. If we are not able to repeatedly introduce, in successive years, new products for new applications that ship in volume, our revenue will likely not grow and may decline significantly and rapidly. In the past, we were able to successfully grow our revenue by adding over

time successive categories of new controller technologies for new applications, such as memory card and flash drive controllers for external storage, eMMC and UFS mobile embedded memory controllers for smartphones and SSD controllers for PCs and other client devices. If we are unable to successfully expand our sales of SSD controllers for data center and enterprise applications, our prospects for continued revenue growth could be adversely affected.

***Our gross margin and results of operations may be adversely affected in the future by a number of factors, including decreases in average selling prices of products over time and shifts in our product mix.***

Our gross margin is highly dependent on product mix, especially the mix of higher gross margin controller sales and lower gross margin SSD solutions sales. A shift in sales mix away from our higher margin products could adversely affect our gross profitability as a percentage of sales and could also adversely affect our operating profitability. The primary elements of our controller cost of sales are IC fabrication at our foundries, assembly and testing, and in contrast, the primary cost of sales of our SSD solutions, which are our Shannon data center SSDs and Ferri industrial SSDs, is NAND flash components. Our SSD solutions gross margin is lower than controller gross margin because these products are generally less differentiated and dependent on the capacity of the storage device, with higher capacity device gross margin lower than lower capacity devices because more NAND flash components are used.

The controllers we develop and sell are used for high volume applications and have historically decreased over time, and we believe that it is possible they may also fall in the future. We may experience period-to-period fluctuations in future operating results if our average selling prices decline. We may be forced to reduce the average unit price of our products in response to new product introductions by our competitors, competitive pricing pressures and other factors. The mobile and computing devices markets are extremely cost sensitive, which may result in rapidly declining average selling prices of electronic devices and components, such as those made by us, used in devices and create downward pressure on our average selling prices and operating results. To maintain acceptable operating results, we will need to develop and introduce new products and product enhancements on a timely basis and continue to reduce our costs. If we are unable to offset any reductions in our average selling prices by increasing our sales volumes or reducing corresponding production costs or if we fail to develop and introduce new products and enhancements on a timely basis, our sales and operating results will be materially and adversely affected.

We have changed our commercial arrangement with a few of our SSD solutions customers to a NAND consignment arrangement, where our customers procure and maintain ownership of the NAND flash components used in the SSD solutions that we design and build for them, and the gross margins of these types of sales are higher than the sales of products where we are responsible for procuring NAND flash components. We cannot assure you that in the future, we can increase the proportion of SSD solutions sales using a NAND consignment arrangement and if more sales are conducted using a NAND consignment arrangement, this will lead to improvements in our operating results.

***Our SSD solutions product performance could continue to adversely affect our results of operations***

We are primarily a fabless semiconductor company focused on NAND flash controllers and the sales of these controllers account for a significant majority of our overall sales. In addition, we also sell SSD solutions, mostly Ferri industrial SSDs and Shannon enterprise SSDs, but also Bigtera software-defined storage solutions and appliances. We introduced our Ferri products in 2011, acquired Shannon in 2015 for US\$45.6 million and acquired Bigtera in 2017 for US\$4.7 million. While sales of our Ferri products have grown steadily since they were first introduced, both our Shannon and Bigtera acquisitions have not met financial expectations, have been dilutive to our gross margins, operating margins and earnings per ADS, and had led to a US\$16.0 million write-down of Shannon goodwill and intangible assets in 2019 and US\$4.1 million write-down of Bigtera goodwill and intangible assets in 2018. We cannot provide assurance that in the future, we will be able to sell our Shannon and Bigtera products profitably, and if we are able to expand the sales of our SSD solutions, we cannot provide

assurance that expanded sales of these products will not negatively affect our gross margin and operating margin, which could negatively affect the market price of our ADSs. Furthermore, even if we are able to sell our SSD solutions to customers profitably, our return on invested capital for SSD solutions will likely be materially lower than corporate average primarily because of lower product margin and higher investments, mainly for working capital necessary for financing NAND and other inventory, and this could negatively affect our overall financial return and the market price of our ADSs.

Our SSD solutions are modules, software and appliance products, are different from our primary controller products and have different financial characteristics. Our SSD solutions gross margin is materially lower than our controller gross margin because these products are generally less differentiated and, in the case of our Ferri and Shannon SSDs, dependent on the capacity of the storage devices, with higher capacity device gross margin lower than lower capacity devices because more NAND flash components are used. Our Bigtera gross margin is also lower than our controller gross margin because most of our sales are of appliances, where the cost of servers and other hardware comprises a large portion of the cost of sales. We are also subject to NAND price volatility with our Ferri and Shannon SSDs; in 2019, because of rapidly falling NAND prices, we wrote-down US\$8.4 million of NAND components and SSDs in inventory. With our Bigtera products, we have had issues with sales returns, with US\$2.5 million in 2019. We cannot assure you that in the future our results of operations will not be negatively affected by further NAND component and SSD inventory write-downs and Bigtera sales returns.

***The loss of any of our key personnel or the failure to attract or retain specialized technical and management personnel could impair our ability to grow our business.***

We rely heavily on the services of our key employees, including Wallace C. Kou, our President and Chief Executive Officer. In addition, our engineers and other key technical personnel are a significant asset and are the source of our technological and product innovations. We believe our future success will depend upon our ability to retain these key employees and our ability to attract and retain other skilled managerial, engineering, technical and sales and marketing personnel. The competition for such personnel, particularly technical personnel, is intense in our industry. We may not be successful in attracting and retaining sufficient numbers of technical personnel to support our anticipated growth. These technical personnel are required to design and develop integrated circuits, including firmware, and to introduce product enhancements for use in future applications. Despite the incentives we provide, our current employees may not continue to work for us, and if additional personnel were required for our operations, we may not be able to obtain the services of additional personnel necessary for our growth. In addition, we do not maintain “key person” life insurance for any of our senior managers or other key employees. The loss of any of our key employees or our inability to attract or retain qualified personnel, including engineers, could delay the development and introduction of, and have an adverse effect on our ability to sell, our products as well as have an adverse effect on our overall growth. In addition, if any other members of our senior management or any of our other key personnel join a competitor or form a competing company, we may not be able to replace them easily and we may lose customers, business partners, key professionals and staff members. Substantially all of our senior executives and key personnel have entered into confidentiality and non-disclosure agreements. In the event of a dispute between any of our senior executives or key personnel and our operating companies in Taiwan or China, we cannot assure you the extent, if any, to which these provisions may be enforceable in Taiwan or China due to the constantly evolving nature of the Taiwanese and Chinese legal systems.

***We may not be able to deliver our products on a timely basis if our relationships with our suppliers, our semiconductor foundries or our assembly and test subcontractors are disrupted or terminated.***

We do not own or operate semiconductor fabrication facilities. Instead, we rely on third parties to manufacture our semiconductors. Two outside foundries, Taiwan Semiconductor Manufacturing Company (“TSMC”) and Semiconductor Manufacturing International Corporation (“SMIC”), with fabs in Taiwan, Singapore, and China currently manufacture the majority of our semiconductors. As a result, we face several significant risks, including higher wafer prices, availability of wafers and other raw materials, lack of

manufacturing capacity, quality assurance, manufacturing yields and production costs, limited control over delivery schedules and product quality, increased exposure to potential misappropriation of our intellectual property, labor shortages or strikes and actions taken by third party contractors that breach our agreements.

The ability of each foundry to provide us with semiconductors is limited by its available capacity and access to wafers. We do not have long-term agreements with any of these foundries and we place orders on a purchase order basis. We place our orders based on our customers' purchase orders and sales forecasts. However, the foundries can allocate capacity to the production of the products of their other customers and reduce deliveries to us on short notice or increase the price they charge us. It is possible that other foundry customers that are larger and better financed than we are, or have long-term agreements with these foundries, may induce these foundries to reallocate capacity to them. Any reallocation could impair our ability to secure manufacturing capacity that we need for our products. In addition, interruptions to the wafer manufacturing processes caused by a natural disaster or human error could result in partial or complete disruption in supply until manufacturing is re-started or we are able to shift manufacturing to another fabrication facility. It may not be possible to obtain sufficient capacity or comparable production costs at another foundry. Migrating our design methodology to a new third-party foundry could involve increased costs, resources and development time comparable to a new product development effort. Any reduction in the supply of semiconductors for our products could significantly delay our ability to ship our products and potentially have negative effects on our relationships with existing customers and our results of operations. In addition, if our subcontractors terminate their relationships with us, we would be required to qualify new subcontractors, which could take at least six months, resulting in unforeseen operating problems, and our operating results may be materially and adversely affected.

***If the foundries that provide us with the products for our operations do not achieve satisfactory yield or quality, or if the assembly and testing services fail us in the quality of their output, then our revenue, operating results and customer relationships will be affected.***

The manufacture of semiconductors is a highly complex process. Minor deviations in the manufacturing process can cause substantial decreases in yield. In some situations, such deviations may cause production to be suspended. The foundries that manufacture our semiconductors have from time to time experienced lower than anticipated manufacturing yields, including yields for our semiconductors, typically during the production of new products or architectures or during the installation and start-up and ramp-up of new process technologies or equipment. If the foundries that manufacture our semiconductors do not achieve planned yields, our product costs could increase and product availability would decrease.

After the wafer fabrication processes, our wafers are shipped to our assembly and testing subcontractors. We have a system to maximize consistent product quality, reliability and yield that involves our quality assurance team working closely with subcontractors in the various phases of the assembly and testing processes. Our supplier quality management includes procedures such as processes to pre-qualify our manufacturing suppliers and subcontractors. However, despite our efforts to strengthen supplier quality management, if our foundries fail to deliver fabricated silicon wafers of satisfactory quality in the volume and at the price we require, or if our assembly and testing subcontractors fail to efficiently and accurately assemble and test our products, we will be unable to meet our customers' demand for our products or to sell those products at an acceptable profit margin, which would have a material and adverse effect on our sales and margins and damage our customer relationships.

***Failure to protect our intellectual properties or maintain the right to certain other technologies may negatively affect our ability to compete.***

We believe that the protection of our intellectual property rights and continued access to certain third party technology are and will continue to be important to the success of our business. We rely on a combination of patent, copyright, trademark and trade secret laws and restrictions on disclosure to protect our intellectual property rights. We also enter into confidentiality or license agreements with our employees, business partners and other third parties, and have implemented procedures to control access to and distribution of our

documentation and other proprietary information. Despite these efforts, we cannot assure you that these measures will provide meaningful protection of our intellectual property rights. Further, these agreements do not prevent others from independently developing technologies that are equivalent to or superior to our technology. In addition, unauthorized parties may attempt to copy or otherwise obtain and use our proprietary technology. Monitoring unauthorized use of our technology is difficult and we cannot be certain that the steps we have taken will prevent unauthorized use of our technology, particularly in foreign countries such as Taiwan, Korea, and China where the laws may not protect our proprietary rights as fully as do the laws of the United States. In addition, if the foundries that manufacture our semiconductors lose control of our intellectual property, it could be more difficult for us to take remedial measures because our foundries are located in countries that do not have the same protection for intellectual property that is provided in the United States. Also, some of our contracts, including license agreements, are subject to termination upon certain types of change-of-control transactions.

As of April 30, 2020, we have 1,522 patents and 1,302 pending applications worldwide. We cannot be certain that patents will be issued as a result of our pending applications nor can we be certain that any issued patents would protect or benefit us or give us adequate protection from competing products. For example, issued patents may be circumvented or challenged and declared invalid or unenforceable or provide only limited protection for our technologies. We also cannot be certain that others will not design around our patented technology, independently develop our unpatented proprietary technology or develop effective competing technologies on their own.

***Failure to successfully defend against intellectual property lawsuits brought against us may adversely affect our business.***

Companies in and related to the semiconductor industry often aggressively protect and pursue their intellectual property rights. From time to time, we have received, and may continue to receive, notices that claim we have infringed upon, misappropriated or misused other parties' proprietary rights. Moreover, in the past we were in litigation with parties that claim that we infringed their patents or misappropriated or misused their trade secrets. In addition, we or our customers may be sued by other parties that claim that our products have infringed their patents or misappropriated or misused their trade secrets, or that may seek to invalidate one or more of our patents. An adverse determination in any of these types of disputes could prevent us from manufacturing or selling some of our products, increase our costs of revenue and expose us to significant liability. Any of these claims may materially and adversely affect our business, financial condition and results of operations. For example, in a patent or trade secret action, a court could issue a preliminary or permanent injunction that would require us or our customer(s) to withdraw or recall certain products from the market or redesign certain products offered for sales or under development. We may also be liable for damages for past infringement and royalties for future use of certain technologies. See "Legal Proceedings" below.

In addition, any litigation to defend ourselves against claims that we have infringed the intellectual property rights of others, could, regardless of the ultimate outcome, materially and adversely affect our operating results by requiring us to incur significant legal expenses and diverting the resources of the company and the attention of our management team.

***Because the markets in which we compete are highly competitive and many of our competitors have greater resources than we have, we cannot be certain that our products will compete favorably in the marketplace.***

We face competition from a number of competitors, including Marvell and our flash memory customers. We expect to face competition in the future from our current and potential competitors. In addition, some of our flash memory customers have developed products and technologies that could replace their need for our products or otherwise reduce their demand for our products.

Some of our current and potential competitors have longer operating histories, greater name recognition, access to larger customer bases and significantly greater financial, sales and marketing, manufacturing,

distribution, technical and other resources than we have. As a result, they may be able to respond more quickly to changing customer demands or to devote greater resources to the development, promotion and sales of their products than we can. Our current and potential competitors may develop and introduce new products that will be priced lower, provide superior performance or achieve greater market acceptance than our products. For our SSD solutions, if we are unable to procure sufficient supplies of flash memory, our customers may seek to purchase SSD solutions from other suppliers.

***Our products must meet exacting specifications and undetected defects and failures may occur, which may cause customers to return or stop buying our products and may expose us to product liability risk and risks of indemnification against defects in our products.***

Our products are complex and may contain undetected hardware or software defects or failures, especially when first introduced or when new versions are released. These errors could cause us to incur significant re-engineering costs, divert the attention of our engineering personnel from product development efforts and materially affect our customer relations and business reputation. If we deliver products with errors or defects, our credibility and the market acceptance and sales of our products could be harmed. Defects could also lead to liability for defective products as a result of lawsuits against us or against our customers. We have agreed to indemnify some of our customers in some circumstances against liability from defects in our products. A successful warranty or product liability claim could require us to make significant payments.

***Our intellectual property indemnification practices may adversely impact our business.***

We may be required to indemnify our customers and our third-party intellectual property providers for certain costs and damages of intellectual property infringement in circumstances where our products are a factor in creating infringement exposure. In the contracts under which we sell semiconductor products, we may have agreed to indemnify our customers against losses arising out of claims of unauthorized use of intellectual property. In some of our licensing agreements, we have agreed to indemnify the licensee against losses arising out of or related to our conduct or services. We cannot assure you that claims for indemnification will not be made or that these claims would not have a material and adverse effect on our business, operating results or financial condition.

***We are exposed to potential impairment charges on goodwill and acquired intangible assets relating to acquisitions and on investments.***

We had approximately US\$17.5 million of goodwill on our balance sheet as of December 31, 2019. We are required to perform testing for impairment losses annually or whenever events or changes in circumstances indicate that the carrying value of these assets may not be recoverable. If the fair value of the assets declines to below our carrying value, we could incur significant goodwill and intangible assets impairment charges, which could negatively impact our financial results. In 2017, we wrote down FCI goodwill by US\$10.3 million; in 2018, we wrote down Bigtera goodwill and intangible assets by US\$0.6 million and US\$3.4 million; and in 2019, we wrote down Shannon goodwill and intangible assets by US\$16.0 million.

In addition, from time to time, we have made investments in private companies and had approximately US\$3 million of investments as of December 31, 2019. If the companies that we invested in are unable to execute their plans and succeed in their respective markets, we may not benefit from such investments, and we could potentially lose the amounts we invested. We evaluate our investment portfolio on a regular basis to determine if impairments have occurred. If the operations of any businesses that we have invested decline significantly, we could incur impairment charges that could have a material impact on our results of operations. In 2017, we recognized total impairment charges of US\$0.1 million for our Cashido and Vastview investments.

***Any failure to achieve and maintain effective internal controls could have a material adverse effect on our business, results of operations and the market price of our ADSs.***

We are subject to reporting obligations under securities laws of the United States. The Securities and Exchange Commission, or the SEC, as required by Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, adopted rules requiring every public company to include in its annual report management's assessment of the effectiveness of the company's internal controls over financial reporting. In addition, an independent registered public accounting firm must attest to and report on the effectiveness of the company's internal controls over financial reporting.

Our management and independent registered public accounting firm have concluded that our internal controls as of December 31, 2019 are effective. However, we cannot assure you that in the future we or our independent registered public accounting firm will not identify material weakness during the audit process or for other reasons. In addition, because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. As a result, if we fail to maintain effective internal controls over financial reporting or should we be unable to prevent or detect material misstatements due to error or fraud on a timely basis, investors could lose confidence in the reliability of our financial statements, which in turn could harm our business and results of operations, negatively impact the market price of our ADSs and harm our reputation.

***We are subject to cybersecurity risk.***

We experience cyberattacks of varying degrees on our technology infrastructure and systems and, as a result, unauthorized parties have obtained in the past, and may in the future obtain, access to our computer systems and networks. The technology infrastructure and systems of our suppliers, vendors and partners may also experience such attacks. Cyberattacks are external and internal threats that include, but are not limited to, malware, phishing, advanced persistent threats, denial of service attacks, malicious software downloads, insider security breaches, and hardware and software vulnerabilities. We believe cyberattack attempts are increasing in number and that cyberattackers are developing increasingly sophisticated systems and means to not only attack systems, but also to evade detection or to obscure their activities.

We have controls and policies in place, will continue to enhance our capabilities and upgrade our protective solutions to guard against known and emerging threats, detect malicious or unauthorized activities, and have recovery systems to minimize business disruptions. If efforts to breach our infrastructure and systems are successful or we are unable to protect against these risks, we could suffer interruptions, delays, or cessation of operations of our systems, and loss or misuse of proprietary or confidential information, intellectual property, or sensitive or personal information. Breaches of our infrastructure and systems could also cause our customers and other affected third parties to suffer loss or misuse of proprietary or confidential information, intellectual property, or sensitive or personal information, and could harm our relationships with customers and other third parties. As a result, we could experience additional costs, indemnification claims, litigation, and damage to our brand and reputation. All of these consequences could harm our reputation and our business and materially and adversely affect our operating results and financial condition.

***Our business is subject to various governmental regulations, and compliance with these regulations may cause us to incur significant expense.***

We are subject to various state, federal and international laws and regulations governing the environment, including restricting the presence of certain substances in electronic products. In addition, we are also subject to various industry requirements restricting the presence of certain substances in electronic products. Although our management systems are designed to maintain compliance, we cannot assure you that we have been or will be at all times in complete compliance with such laws and regulations. If we violate or fail to comply with any of them, a range of consequences could result, including fines, import/export restrictions, sales limitations, criminal and civil liabilities or other sanctions.

Recently there has been increased focus on environmental protection and social responsibility initiatives, which are subject to change, can be unpredictable, and may be difficult for us to comply with, given the complexity of our supply chain and our significant outsourced manufacturing. We are required to implement various standards or processes due to the adoption of rules or regulations that result from these initiatives, such as the SEC rules on the disclosure of the use of “conflict minerals.” If we are unable to comply, or ensure that our suppliers or contract manufacturers comply, with such standards or processes, customers may stop purchasing from us, which could adversely affect our sales and results of operations.

Our business is subject to various other international laws and other legal requirements, including packaging, product content, labor and import/export regulations, such as the U.S. Export Administration Regulations and sanctions against Huawei, and applicable executive orders. These laws, regulations and orders are complex, may change frequently and with limited notice, have generally become more stringent over time and have intensified under the current U.S. administration, especially in light of recent geopolitical tensions with China. We may be required to incur significant expense to comply with, or to remedy violations of, these regulations. In addition, if our customers fail to comply with these regulations, we may be required to suspend sales to these customers, which could damage our reputation and negatively impact our results of operations.

***Our stock price has been, and may continue to be, volatile, which could result in investors losing all or part of their investments.***

Since we completed our initial public offering in June 2005, the market price of our ADSs has been and likely will continue to be highly volatile and could be subject to wide fluctuations in response to numerous factors, including the following:

- actual or anticipated variations in our quarterly operating results or those of our competitors, customers, or NAND flash vendors;
- actual or anticipated changes in NAND flash supply and demand dynamics;
- actual or anticipated changes in our market share or the market share of our competitors;
- the commencement or results of litigation;
- announcements by us, our competitors, our customers, or their other suppliers of new products or technological innovations;
- changes in financial estimates or recommendations by securities analysts;
- the payment or non-payment of cash dividends at the discretion of our board of directors;
- the announcement and implementation of share repurchase programs;
- announcements by us or our competitors of significant acquisitions, divestitures or partnerships; and
- actual or anticipated changes in the global economic or industry outlook.

Many of these factors are beyond our control and may negatively impact the market price of our ADSs, regardless of our performance. In addition, the stock market in general, and the market for technology and semiconductor companies in particular, have been highly volatile. Our ADSs may not trade at the same price levels as that of other semiconductor and technology companies, and shares of semiconductor and technology companies, in general, may not sustain their current market prices. These fluctuations as well as general economic, political, and market conditions may have an adverse effect on the market price of our ADSs.

***There can be no assurance that we will continue to declare cash dividends, if at all, or in any particular amounts.***

In January 2013, our Board of Directors declared our first quarterly cash dividend and has subsequently declared and paid dividends in each successive quarter. In November 2015, our Board changed the dividend declaration from quarterly to annually, with payments made in four quarterly installments. The decision to

continue declaring dividends, if any, and their timing and amount, depends on, among other things, that the dividend payment is in the best interests of our shareholders, business visibility, our results of operations, capital availability and future capital requirements, financial condition, statutory requirements, and other factors that the Board may deem relevant and any dividend declaration is at the discretion of our Board. Our dividend payments may change from time to time, and we cannot provide assurance that we will continue to declare dividends, if at all or in any particular amounts. A reduction in or elimination of our dividend payments could have a negative effect on our share price.

***If we are characterized as a passive foreign investment company, U.S. Holders may experience adverse tax consequences.***

Based on the present and projected composition of our income and valuation of our assets, we believe we are not currently classified as a passive foreign investment company (“PFIC”) for U.S. federal income tax purposes. We will generally be classified as a PFIC for any taxable year in which either (a) at least 75% of our gross income is passive income or (b) at least 50% of the value (determined on the basis of a quarterly average) of our assets is attributable to assets that produce or are held for the production of passive income. If we are characterized as a PFIC, U.S. Holders may experience adverse tax consequences. See “ITEM 10. ADDITIONAL INFORMATION — Taxation — United States Federal Income Taxation.”

***Our business, financial condition and results of operations could be adversely affected by the political and economic conditions of the countries in which we conduct business and other factors related to our international operations.***

A substantial portion of our business is conducted outside of the United States and, as a result, we are subject to foreign business, political and economic risks. Most of our integrated circuits are manufactured, assembled, tested and packaged by third-parties located in China and Taiwan. We generated 92%, 90% and 86% of our revenue in 2017, 2018 and 2019, respectively, from sales to customers outside the United States, and for the year ended December 31, 2019, 55% of our revenue was from sales in three jurisdictions, Taiwan, Korea and China. Our controller research and development is conducted primarily in Taiwan and our SSD solutions research and development is conducted in both China and Taiwan. Most of our corporate functions are located in Taiwan. These operations are directly influenced by the political and economic conditions of the country in which they are located. We do not expect the portion of our business located outside of the United States to change in the future.

Accordingly, we are subject to risks associated with international operations, including but not limited to:

- international economic and political conditions, such as political tensions between countries in which we do business (please also refer to Risk Factors relating to China and Taiwan);
- unexpected changes in, or impositions of, legislative or regulatory requirements;
- complying with a variety of foreign laws;
- differing legal standards with respect to protection of intellectual property and employment practices;
- cultural differences in the conduct of business;
- inadequate local infrastructure that could result in business disruptions;
- exporting or importing issues related to export or import restrictions, tariffs, quotas and other trade barriers and restrictions, recently increased as a result of the ongoing trade disputes and tariffs between China and the U.S.;
- financial risks such as longer payment cycles and difficulty in collecting accounts receivable;
- adverse taxes rules, regulations and penalties; and
- other factors beyond our control such as nature disasters, terrorism, civil unrest, war and health emergencies, such as COVID-19.

As a result of having global operations, the sudden disruption of the supply chain and/or disruption of the manufacture of our customer's products caused by events outside of our control could impact our results of operations by impairing our ability to timely and efficiently deliver our products.

Although our reporting currency is the U.S. dollar, and the majority of our sales and cost of sales in the last three years are denominated in the U.S. dollar, the majority of our operating expenses are denominated in the NT dollar, and to a lesser extent Korean won, Chinese yuan and U.S. dollar. Any unfavorable changes in foreign exchange rates could adversely affect, or cause fluctuations in, our results of operations. We do not currently engage in currency hedging activities.

***We operate primarily in regions that are susceptible to natural disasters.***

We operate primarily in regions of the world, including Taiwan, China and California, that are susceptible to earthquakes. In the past, these regions had experienced severe earthquakes that caused significant property damage and loss of life, although we did not suffer any material impact on our business. The occurrence of earthquakes is unpredictable, and a major earthquake and consequent disruptive events could severely disrupt the normal operations of our business and have a material and adverse effect on our financial condition and operating results.

***We face substantial risks associated with doing business in Taiwan because of tense regional geopolitical risk***

Most of our business operations are in Taiwan, a self-governing democracy, with an unique international political status, that is claimed by China and receives security from the United States under the Taiwan Relations Act. China asserts that Taiwan is part of China, seeks the unification of Taiwan and has not ruled out the use of force to achieve this. China is also increasingly assertive in the region and claims sovereignty over much of the South China Sea south of Taiwan and has unilaterally established an Air Defense Identification Zone in the East China Sea north of Taiwan. The United States does not recognize China's ADIZ and conducts regular freedom of navigation operations in the areas of the South China Sea claimed by China. In 2016, China dismissed the United Nation's Permanent Court of Arbitration ruling against it in its claims to the South China Sea. Tensions between Taiwan and China and between the United States and China have increased in recent years.

A majority of our employees and a significant portion of our research and development and corporate functions are based in Taiwan. We also operate a research and development center in Shanghai and China is one of the largest markets for our products. In addition, most of our foundries and assembly and testing suppliers are located in either Taiwan or China. Accordingly, our business and results of operations and the market price of our ADSs may be affected by any deterioration in the relationship between Taiwan and China. Although there are significant economic ties between Taiwan and China, in recent years China has taken a more aggressive posture towards Taiwan, including the suspension of cross-strait communications channels in 1996, regular intrusion by Chinese military aircrafts into Taiwan airspace, the sailing of naval ships around Taiwan waters, the conduct of military exercises close to Taiwan, and exclusion of Taiwan from international organizations such as the World Health Organization.

Furthermore, our principle executive offices are in Hong Kong. Recent pro-democracy protests and COVID-19 containment activities have affected our Hong Kong operations and there is no assurance that China's new national security law for Hong Kong will not reduce its autonomy and lead to repercussions from the United States and Taiwan that adversely affect our operating arrangements, whether commercial or regulatory in nature.

Past and recent developments in relations between Taiwan and China have on occasion depressed the market prices of the securities of Taiwanese companies or companies with significant business activities in Taiwan. We cannot assure you any contentious situations between Taiwan and China will always resolve in maintaining the current status quo or remain peaceful. Relations between Taiwan and China, potential

confrontations between the United States and China and other factors affecting military, political, social or economic conditions in Taiwan and Hong Kong could have a material adverse effect on our financial condition and results of operations, as well as the market price and the liquidity of our ADSs.

***The enactment of legislation implementing changes in taxation of international business activities, the adoption of other tax reform policies or changes in tax legislation or policies could materially impact our financial position and results of operations.***

Tax bills are introduced from time to time to reform taxation of international business activities. The Organisation for Economic Co-operation and Development, or OECD, has released guidance covering various topics, including country-by-country reporting, definitional changes to permanent establishment and guidelines in determining arm's length transfer pricing. This guidance is collectively referred to as Base Erosion and Profit Shifting, or BEPS, an initiative that aims to standardize and modernize global tax policy. Depending on legislation ultimately enacted in connection with this guidance by jurisdictions in which we operate, there may be significant consequences for us due to our significant international business activities. For example, adoption of BEPS by foreign jurisdictions in which we operate could result in changes to tax policies, including transfer-pricing policies that could ultimately impact our tax liabilities to foreign jurisdictions. If any of these proposals are enacted into law, or if other international, consensus-based tax policies and principles are amended or implemented, they could have material adverse consequences on the amount of tax we pay and thereby on our financial position and results of operations. It is likely that new legislations enacted by several governments of countries in which we operate could lead to higher operating and tax expenses for our business in the near future.

In addition, policies regarding corporate income taxes in numerous jurisdictions in which we operate are under heightened scrutiny. As a result, decisions by tax authorities regarding treatments and positions of corporate income taxes could be subject to legislative investigation and inquiry, which could result in changes in tax policies or prior tax rulings. As such, the taxes we previously paid may be subject to change and our taxes may increase in the future, which could have an adverse effect on our results of operations, financial condition and our corporate reputation.

***A substantial amount of our stock is held by a small number of large investors and significant sales of our common stock in the public market by one or more of these holders could cause our stock price to fall.***

As of December 31, 2019, we believe 10 of our 20 largest holders of common stock were active institutional investors who held approximately 52% of our outstanding shares of common stock in the aggregate, with Massachusetts Financial Services Company being our largest stockholder with approximately 11% of our outstanding shares of common stock. These investors may sell their shares at any time for a variety of reasons and such sales could depress the market price of our common stock. In addition, any such sales of our common stock by these entities could also impair our ability to raise capital through the sale of additional equity securities.

***We are subject to risks associated with development and construction of our Taiwan headquarters building.***

In September 2018, we purchased 65,700 square feet of land in Hsinchu, Taiwan for a total cost of US\$58.9 million and expect to spend an estimated US\$75 million for the development and construction of our future Taiwan headquarters building, which is currently targeted for completion in 2024. We have no experience developing and constructing office buildings and managing real property of this scale. We may encounter unanticipated occurrences or conditions during construction that may increase the expense of the project. We may also encounter unanticipated delays in the construction of the new building and local government approvals for the project may be delayed. We are financing this construction from our cash balance, which could limit alternative deployments of capital. The purchase of the land and construction of the building will increase our fixed assets significantly and could reduce our return on invested capital. After the office building has been constructed, we may consider sale and leaseback arrangements if favorable terms can be obtained.

## ITEM 4. INFORMATION ON THE COMPANY

### Introduction

Silicon Motion Technology Corporation (“Silicon Motion”) is a corporation which was incorporated in the Cayman Islands in January 2005 and acquired Silicon Motion, Inc., a Taiwan corporation (“SMI Taiwan”), in April 2005. Originally SMI Taiwan was known as Feiya Technology Corporation (“Feiya”), a Taiwan corporation which was incorporated in April 1997 but had changed its name to SMI Taiwan after acquiring in August 2002 Silicon Motion, Inc., a California corporation (“SMI USA”), which was incorporated in November 1995. Feiya was originally a flash memory products company and SMI USA a graphics processor company.

On March 7, 2019, we entered into an agreement to sell FCI, our specialty RF ICs product line for the Mobile Communications market, to Dialog Semiconductor, and this transaction closed on May 31, 2019.

We are a global leader in developing NAND flash controllers for SSDs and other solid state storage devices. We have over 20 years of experience developing specialized processor ICs that manage NAND components and deliver market leading, high- performance storage solutions widely used in data centers, PCs, smartphones and commercial and industrial applications. We have one of the broadest portfolios of controller intellectual properties developed from our deep understanding of NAND characteristics, which enables us to design both unique, highly optimized configurable IC plus related firmware controller platforms and complete turnkey controller solutions. In the last ten years, we have shipped over six billion controllers, more than any other company in the world. More NAND flash components, including current and up-coming generations of 3D flash produced by Intel, Kioxia, Micron, Samsung, SK Hynix and Western Digital, are supported by Silicon Motion controllers than any other company. Our customers include NAND flash makers, module makers, hyperscalers and OEMs.

We are the world’s leading merchant supplier of SSD controllers used in PCs and other client devices and leading merchant supplier of eMMC/UFS controllers used in smartphones and IoT devices. We also leverage our controller expertise to supply custom-designed high-performance Open-Channel data center SSDs to China’s leading hyperscalers and customized small single-chip form factor SSDs for industrial, commercial and automotive applications. We market our controllers under the “SMI” brand, enterprise-grade SSDs under the “Shannon Systems” brand and single-chip industrial-grade SSDs under the “Ferri SSD” and “Ferri-eMMC” brands.

Our principal executive offices are located at Unit B, 16/F, Centre 600, 82 King Lam St, Cheung Sha Wan, Kowloon, Hong Kong. The address of our United States operating subsidiary, Silicon Motion, Inc., is 690 N. McCarthy Blvd. Suite 200, Milpitas, CA 95035. The address of our Taiwan operating subsidiary, Silicon Motion, Inc., is 8/F, #36 Taiyuan St., Jhubei, Hsinchu 30265, Taiwan. Our ADSs, each representing four of our ordinary shares, have been listed and traded on Nasdaq since June 2005.

### Subsidiaries of the Company

Below is a list of subsidiaries of the Company. All subsidiaries are wholly owned.

<u>Name of Entity</u>	<u>Jurisdiction of Incorporation</u>
Bigtera (Beijing)	China
Shannon Systems	China
Silicon Motion, Inc.	California
Silicon Motion, Inc.	Taiwan
Silicon Motion, Inc. (Shanghai)	China
Silicon Motion, Inc. (Shenzhen)	China
Silicon Motion (MCO) Ltd.	Macau
Silicon Motion Technology (HK) Ltd.	Hong Kong
FCI Inc.*	Korea

\* In May 2019, we sold FCI to Dialog Semiconductor.

## **Our Market and Products**

We focus primarily on designing, developing and marketing: (i) NAND flash controllers for solid state storage devices, primarily SSDs used in PCs and other client devices and eMMC and UFS mobile embedded storage used in smartphones and (ii) SSD solutions, primarily enterprise-grade SSDs used in data centers and small form-factor specialized SSDs used in industrial, commercial and automotive applications. NAND flash controllers for the PC and smartphone markets account for a significant majority of our sales. In May 2019, we divested our specialty RF ICs for the mobile communications market.

### ***NAND Flash Controllers***

We offer a broad range of controllers for customers to choose from in developing different categories of solid state storage devices that are used in a wide variety of applications. We provide controllers for computing-grade SSDs used in PCs and other client devices, enterprise-grade SSDs used in data centers, eMMC and UFS mobile embedded storage used in smartphones and IoT devices, flash memory cards and flash drives used as expandable storage, and specialized SSDs used in industrial, commercial and automotive applications. For most of these applications we offer customers controllers which are designed for a range of different price-performance trade-offs that enable the targeting of different market segments, such as value-line, mainstream and premium. Our controllers are a combination of integrated circuits and firmware and are offered as configurable platforms or turnkey solutions, which provides customers with options to customize products to achieve desired differentiation or focus on fast time-to-market. Since SSDs and mobile embedded storage are defined by continuously evolving industry standards such those relating to the PCIe host interface, NVMe data transfer protocol and UFS storage specification, we provide controllers for the latest versions of these industry standards and design our solutions for customers to build storage devices with competitive product performance and compatibility with host devices. Our controllers are also designed to support the majority of the latest next generations of NAND flash components manufactured by vendors such as Intel, Kioxia, Micron, Samsung, SK Hynix and Western Digital, which enables customers to have choices of components for use in storage devices. Controller technologies critical for the functioning of our controllers that we integrate include advanced error correction codecs (ECC) and digital signal processing (DSP) engines for ensuring data reliability and sophisticated wear-leveling algorithms for maximizing the usable life of NAND flash components. We may also incorporate other technologies in our controllers such as encryption, power-loss protection, multimedia digital rights management and active temperature monitoring.

### ***SSD Solutions***

We use our our unique controller technology to develop Ferri and Shannon SSD solutions. Our FerriSSDs, Ferri-eMMCs and Ferri-UFS are highly reliable industrial-, commercial- and automotive-grade single-chip SSDs, which are developed for a wide-range of embedded applications that require high data rate, small form factor and compliance with industry standards. We offer customers firmware customization for performance tuning as a value-added service. Our Shannon SSDs include both standard enterprise-grade PCIe NVMe SSDs used in data centers and proprietary enterprise-grade Open-Channel SSDs developed for China's leading hyperscale data center operators. Our Bigtera software-defined storage solutions are enterprise-grade software defined storage and storage appliances targeted at China and Taiwan markets.

## **Our Customers**

We sell our products to NAND flash makers, module makers, hyperscalers and OEMs worldwide. Most of our high performance flash memory storage controllers are supplied to NAND flash manufacturers. We are a leading merchant supplier of controllers for SSDs used in PCs and other client devices, and eMMC and UFS used in smartphones. Sales to our five largest customers represented approximately 57%, 54% and 54% of our net revenue in 2017, 2018 and 2019, respectively. Sales to our two largest customers representing 39%, 34% and 31% of our net revenue in 2017, 2018 and 2019, respectively. In 2019, the significant customers were Intel and Micron and in 2017 and 2018, were SK Hynix and Intel. The identities of our largest customers and their respective contributions to our net revenue have varied and will likely continue to vary from period to period.

The majority of our customers purchase our products through purchase orders, as opposed to entering into long-term contracts with us. The price for our products is typically agreed upon at the time a purchase order is placed.

## **Sales and Marketing**

We market and sell our products worldwide through a combination of direct sales personnel and independent electronics distributors. Our direct sales personnel are strategically located near our NAND flash manufacturer, leading technology OEM and modular maker customers in Taiwan, Korea, China, the United States, and Japan. Approximately 68% of our sales in 2017, 68% of our sales in 2018, and 69% of our sales in 2019 were attributable to our direct sales force while the remainder was attributable to distributors.

To supplement our direct sales, we have independent electronics distributors and sales reps located throughout the world. We selected these distributors and reps based on their ability to provide effective field sales, marketing communications and technical support for our products to our customers.

Our marketing group focuses on our product strategy, product development road maps, new product introduction process, demand assessment, competitive analysis, and product marketing. We seek to work with potential and existing customers early in their design process to best match our products to their needs, and more broadly, to ensure that product development activities, product launches, and on-going demand and supply planning occur in a well-managed, timely basis in coordination with our research and development, operations, and sales groups, as well as our customers and distributors. We also attend industry tradeshows and technical conferences to promote our products and solutions, maintain close contact with our existing customers to assess demand, and keep current with industry trends. Our participation in industry standards associations, such as IEEE, JEDEC and NVM Express, helps us monitor the latest industry developments and promote our corporate profile. Our marketing group also works with our sales teams to identify new business opportunities.

We also have field application engineers (FAEs), who provide technical support and assistance to existing and potential customers in designing, testing and qualifying systems that incorporate our products. Our FAE organization is segmented by product and market to support our customers.

## **Research and Development**

We devote a significant amount of resources to research and development for broadening and strengthening our portfolio of technology, products and solutions. Our engineering team has expertise in NAND flash management algorithms, system architecture, digital, mixed-signal, and software engineering. As of April 30, 2020, we have 1,522 patents and 1,302 pending applications worldwide. We will continue to actively pursue the filing of additional patent applications in important jurisdictions.

We believe technology research and product development is essential to our growth. Our primary research and development centers are located in Hsinchu and Taipei, Taiwan, and Shanghai, China. Our facilities in Hsinchu and Taipei focus primarily on our NAND flash controller products, and our facilities in Shanghai focus primarily on SSD solutions and specific product requirements of our customers in China.

Our research and development expenses were approximately US\$102.1 million, US\$102.0 million, and US\$110.3 million for the years ended December 31, 2017, 2018 and 2019, respectively.

## **Manufacturing**

We design and develop our products and electronically transfer our proprietary designs to independent foundries for the manufacturing and processing of silicon wafers. Once the wafers are manufactured, they are then shipped to third-party assembly and testing subcontractors. Individual dies on each wafer are assembled into

finished chips and undergo several stages of testing before delivery to our customers. We also ship bare dies to our customers. We believe that our strategy of outsourcing wafer fabrication, packaging and testing enables us to benefit from the research and development efforts of leading manufacturers without the requirement to commit our own substantial capital investments. Our fabless business model also provides us with the flexibility to engage vendors who offer services that best complement our products and technologies.

*Wafer fabrication.* TSMC and SMIC are currently our primary foundries that manufacture most of our semiconductors. We use their fabs in Taiwan, Singapore, and China to fabricate our devices using CMOS process technology, primarily with process node from 12/16 to 55 nanometers. We regularly evaluate the benefits and feasibility, on a product-by-product basis, of migrating to more cost efficient manufacturing process technologies.

*Assembly and testing.* Following wafer fabrication, our wafers are shipped to our assembly and test subcontractors where they are probed, singulated into individual dies, assembled into packaged chips, and undergo the process of electronic final testing. In order to minimize cost and reduce turn-around time, our products are designed to use low cost, industry standard packages and can be tested with widely available automatic testing equipment. We currently engage companies such as ASE, SPIL, and KYEC as our primary subcontractors for the assembly and testing of our products. We have dedicated teams of manufacturing engineers who maintain control over the process from the early stages of manufacturing. Our engineers work closely with our subcontractors to develop product testing and packaging programs to ensure these programs meet our product specifications, thereby maintaining our ownership of the functional and parametric performance of our semiconductors.

*Quality and reliability assurance.* We have designed and implemented a quality assurance system that provides the framework for continual improvement of products, processes and customer service. To ensure consistent product quality, reliability and yield, our quality assurance teams perform reliability engineering, quality control, international organization for standardization (ISO) system development, document control, subcontractor quality management and customer engineering services to closely monitor the overall process from IC design to after-sale customer support. In particular, we rely on in-depth simulation studies, testing and practical application testing to validate and verify our products. We emphasize a strong supplier quality management practice in which our manufacturing suppliers and subcontractors are pre-qualified by our quality assurance teams. Our suppliers are required to have a quality management system, certified to ISO 9000 standard. Our operations have been ISO 9001 certified since 1999.

## **Competition**

We face competition from a number of competitors, including Marvell and our flash memory customers.

The markets for our products are intensely competitive, and are characterized by rapid technological change, evolving industry standards, frequent new product introductions and pricing pressures. Competition has intensified as a result of the increasing demand for higher levels of performance at competitive prices. We expect competition to intensify as current competitors continue to strengthen the depth and breadth of their product offerings. We believe that our ability to compete successfully in the rapidly evolving markets for our products depends on a number of factors, including, but not limited to:

- the performance, features, quality and price of our products;
- the timing and success of new product introductions by us, our customers and our competitors;
- emergence, rate of adoption and acceptance of new industry standards;
- our ability to obtain adequate foundry capacity at competitive prices; and
- the number and nature of our competitors in a given market.

We expect increased competition in the future from emerging or established companies, customers or other third parties, any of which could acquire significant market share. See “Risk Factors — Because the markets in which we compete are highly competitive and many of our competitors have greater resources than we have, we cannot be certain that our products will compete favorably in the marketplace,” in Item 3 above.

### **Seasonality**

See “Risk Factors — Our financial conditions and results of operations may vary from quarter to quarter, which may cause the price of our ADSs to decline.” in Item 3 above and “Operating and Financial Review and Prospects — Principal Factors Affecting Our Results of Operations” in Item 5 below.

### **Intellectual Property**

Our success and future revenue growth depends, in part, on our ability to protect our intellectual property. We rely on a portfolio of intellectual property rights, registered in the United States, Taiwan, and other countries, including patents, copyrights, trademark registrations, trade secret laws, contractual provisions, licenses, and other methods to protect our intellectual property.

As of April 30, 2020, we have 1,522 patents and 1,302 pending applications worldwide. There can be no assurance that patents will ever be issued with respect to these pending applications. Furthermore, it is possible that any patents held by us may be invalidated, circumvented, challenged or licensed to others. In addition, there can be no assurance that such patents will provide us with competitive advantages or adequately safeguard our proprietary rights. While we continue to file new patent applications with respect to our recent developments, existing patents are granted for prescribed time periods and will expire at various times in the future. We expect to continue to file patent applications where appropriate to protect our proprietary technologies.

Companies in the semiconductor industry have frequently demonstrated a readiness to commence litigation based on allegations of patent and other intellectual property infringement. From time to time, third parties may assert infringement claims against us. We may not prevail in any such litigation or may not be able to license patents from third parties on commercially reasonable terms, if at all. Litigation, regardless of the outcome, is likely to result in substantial cost and diversion of our resources, including our management’s time. Any such litigation could materially adversely affect us. In addition, in the contracts under which we sell semiconductor products, we may have agreed to indemnify our customers against losses arising out of claims of unauthorized use of intellectual property.

We intend to protect our intellectual property rights vigorously, but there can be no assurance that our efforts will be successful. In addition, the laws of other countries in which our products are sold may not protect our products and intellectual property rights to the same extent as the laws of the United States.

While our ability to effectively compete depends in large part on our ability to protect our intellectual property, we believe that our technical expertise, customer support capabilities, and ability to introduce new products in a timely and cost effective manner will be important factors in maintaining our competitive position.

We claim copyright and trademark protection for proprietary documentation for our products and a variety of branding marks. We have registered “Silicon Motion” and its logo (a three-dimensional cube depiction of the letters “SM”), “NANDSustain,” “NANDXtend,” “SSDLifeGuard,” “SSDLifeSaver,” “TurboMLC,” “FerriSSD,” “Ferri-eMMC,” “the powered by SiliconMotion logo,” “InstantView,” the Shannon Systems logo, “PCIe-RAID,” “DIRECT-IO,” “Hyper-IO,” “Bigtera,” the Bigtera logo, and “VirtualStor,” “CloudStor,” and “StorVisor” as trademarks in the United States, Taiwan, and other countries.

We also attempt to protect our trade secrets and other proprietary information through agreements with our customers, suppliers, employees and consultants, and through other customary security measures.

We have entered into license agreements with third party intellectual property vendors for wafer fabrication tool libraries, semiconductor IP core, computer aided design tools, and software.

## Facilities

As of the date of this annual report, we occupy facilities totaling approximately 373,800 square feet, which house our management and administration, operations, research and development and sales and marketing departments. Of our facilities, approximately 182,400 square feet are owned and approximately 191,400 square feet are occupied under leases. We consider our facilities insufficient to meet our future operational requirements and in 2018, purchased 65,700 square feet of land in Hsinchu, Taiwan for the construction of a future office building. See “Risk Factor — We are subject to risks associated with development and construction of our Taiwan headquarters building.” The table below lists the location of our operating facilities.

<u>Location</u>	<u>Primary Use</u>	<u>Approximate Square Footage</u>
Hsinchu, Taiwan . . . . .	Research & development, management & administration	200,800
Taipei, Taiwan . . . . .	Research & development, sales & marketing	74,600
Shanghai, China . . . . .	Research & development, sales & marketing	43,400
Shenzhen, China . . . . .	Sales & marketing	20,200
Milpitas, California . . . . .	Sales & marketing, management	13,300
Others <sup>(1)</sup> . . . . .	Sales & marketing, management	21,500

(1) Korea, Macau, Hong Kong, Yokohama, Japan, Beijing, Nanjing, Hangzhou and Suzhou, China

Leases covering our current facilities expire at varying dates, generally within the next five years. We anticipate no difficulty in retaining occupancy through lease renewals, month-to-month occupancy or replacing the leased facilities with equivalent facilities.

We currently own commercial property in Taipei of approximately 6,200 square feet and commercial property in Shanghai of approximately 20,000 square feet, which we have no plans to use for our operations. We are in the process of selling the Shanghai property.

## Government Regulation

See Risk Factors — “Our business is subject to various governmental regulations, and compliance with these regulations may cause us to incur significant expense.” in Item 3 above.

### ITEM 4A. UNRESOLVED STAFF COMMENTS

None.

### ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

*The following discussion of our financial condition and results of operations is based upon and should be read in conjunction with our consolidated financial statements and their related notes included in this annual report. This discussion contains forward-looking statements that involve risks and uncertainties. We caution you that our business and financial performance are subject to substantial risks and uncertainties. Actual results could differ materially from those projected in the forward-looking statements. See “Special Note Regarding Forward-Looking Statements.” In evaluating our business, you should also carefully consider the information provided under the caption “Risk Factors” included in Item 3 of this annual report.*

#### Overview

We are a global leader in developing NAND flash controllers for SSDs and other solid state storage devices. We have over 20 years of experience developing specialized processor ICs that manage NAND components and

deliver market leading, high- performance storage solutions widely used in data centers, PCs, smartphones and commercial and industrial applications. We have one of the broadest portfolios of controller intellectual properties developed from our deep understanding of NAND characteristics, which enables us to design both unique, highly optimized configurable IC plus related firmware controller platforms and complete turnkey controller solutions. In the last ten years, we have shipped over six billion controllers, more than any other company in the world. More NAND flash components, including current and up-coming generations of 3D flash produced by Intel, Kioxia, Micron, Samsung, SK Hynix and Western Digital, are supported by Silicon Motion controllers than any other company. Our customers include NAND flash makers, module makers, hyperscalers and OEMs.

We are the world’s leading merchant supplier of SSD controllers used in PCs and other client devices and leading merchant supplier of eMMC/UFS controllers used in smartphones and IoT devices. We also leverage our controller expertise to supply custom-designed high-performance Open-Channel data center SSDs to China’s leading hyperscalers and customized small single-chip form factor SSDs for industrial, commercial and automotive applications. We market our controllers under the “SMI” brand, enterprise-grade SSDs under the “Shannon Systems” brand and single-chip industrial-grade SSDs under the “Ferri SSD” and “Ferri-eMMC” brands.

**Summary of Consolidated Financial Results**

Summary of the year ended December 31, 2019 include the following:

- Total revenue decreased by 14% to US\$457.3 million.
- Gross profit as a percentage of revenue decreased by 0.6% points to 48.6%.
- Total operating expenses increased by 9% to US\$170.0 million.
- Operating profit decreased by 50% to US\$52.1 million.
- Income tax expense as a percentage of income before income tax unchanged at 11%.
- Diluted earnings per ADS decreased by 33% to US\$1.82.

**Principal Factors Affecting Our Results of Operations**

*Net sales.* Our net sales consist primarily of sales of our products, after deducting sales discounts and allowances for returns.

Our net sales are denominated primarily in U.S. dollars. The percentages of our net sales by currency for the periods indicated are set forth in the following table:

	<b>Year Ended December 31,</b>		
	<b><u>2017</u></b>	<b><u>2018</u></b>	<b><u>2019</u></b>
<b>Currency</b>			
U.S. dollars .....	87%	88%	95%
Korean won .....	3%	3%	1%
Chinese yuan .....	10%	9%	4%

The length of our sales cycle, from the day purchase orders are received until products are shipped to customers, is dependent on the availability of our product inventories. If we do not have sufficient inventories on hand to meet customer demands, approximately three months are generally required from the day purchase orders are received until finished goods are manufactured and shipped to customers. This cycle can take up to six months during times when capacity at independent foundries is being fully utilized. The potential delays inherent in the manufacturing process increase the risk that we may not be able to fulfill a customer’s order on time. All of

our sales are made by purchase orders. Because our practice, which is consistent with industry practice, allows customers to reschedule orders on relatively short notice, order backlog may not be a good indicator of our future sales.

Because many of our semiconductor solutions are designed for the mobile and computing devices markets, we expect our business to be subject to seasonality, with higher net sales generally in the second half of each year, when customers place orders to meet increased demand during year-end holiday seasons. However, changing market and business conditions, as well as changing product mix in recent years could make assessment of the impact of seasonal factors on our business difficult.

*Cost of sales.* Our cost of sales consists primarily of the following costs:

- cost of wafer fabrication;
- assembly, testing and shipping costs of our semiconductors;
- personnel and equipment costs associated with manufacturing support;
- quality assurance;
- cost of raw materials; and
- write-down of inventory.

We engage independent foundries for the manufacturing and processing of our semiconductors. Our manufacturing cost is subject to the cyclical supply and demand conditions typical of the semiconductor industry. Our cost per wafer generally fluctuates with the availability of capacity at independent foundries. We believe that our cost of sales is substantially variable in nature.

*Research and development expenses.* Our research and development expenses consist primarily of employee salaries and related costs, stock-based compensation expense, fees paid for the use of intellectual properties and design tools developed by third parties, development cost of software, expenses for the design, development and testing of system architecture, new product or product alternatives, costs for the construction of prototypes, occupancy costs and depreciation on research and development related equipment. We expense research and development expenditures as they are incurred.

*Sales and marketing expenses.* Our sales and marketing expenses consist primarily of employee salaries and related costs, stock-based compensation expense, commissions paid to independent distributors and costs for our advertising and promotional activities.

*General and administrative expenses.* Our general and administrative expenses consist primarily of employee salaries and related costs, stock-based compensation expense, insurance premiums, professional fees and allowance for doubtful accounts.

*Impairment of goodwill and intangible assets.* We evaluate the recoverability of goodwill and intangible assets annually, or sooner if events or changes in circumstances indicate that the carrying amount may not be recoverable.

*Amortization of acquired intangible assets.* Amortization of acquired intangible assets relates to intangible assets, such as development technology, but excluding goodwill.

*Gain from disposal of noncurrent assets held for sale.* In 2017, we sold an office building which was classified as noncurrent assets held for sale and recognized the gain from disposal.

*Accounting for stock-based compensation.* We grant restricted stock units to our employees and members of the Board of Directors. The value of our restricted stock units is expensed over the vesting period and based on the grant date share price, less the present value of expected dividends during the vesting period, discounted at a risk-free interest rate.

*Non-operating income and expenses.* Our non-operating income and expenses include gains from disposal of subsidiary, gains or losses on the sales of investments, interest from deposited cash or short-term investments, gains or losses on foreign exchange rates, impairment of long-term investments, interest paid on loans and lease liabilities, gain or loss on equity-method investment and other non-operating income and expenses not categorized above. We conduct an assessment on the value of our long-term investments quarterly and make corresponding write-downs as required to the value of the long-term investments.

*Provision for income taxes.* We must make certain estimates and judgments in determining income tax expenses for financial statement purposes. These estimates and judgments occur in the calculation of tax credits, benefits, deductions and allowance, and in the calculation of certain tax assets and liabilities, which arise from differences in the timing of recognition of revenue and expense for tax and financial statement purposes, as well as the interest and penalties related to uncertain tax positions.

We have operations in several countries, which include Taiwan, China, Hong Kong, Macau and the US and determine income taxes for each of the jurisdictions where we operate. In May 2019, we divested our specialty RF ICs product line with operations primarily in South Korea.

### **Critical Accounting Policies and Estimates**

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 on-going basis, including those related to product returns and pricing allowances, allowances for doubtful accounts, inventories, business combinations, goodwill, long-lived assets, income taxes, litigation and contingencies. 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 consolidated statements.

*Revenue recognition.* As a result of the adoption of the new revenue standard (ASC 606) on January 1, 2018, The Company enters into contracts that may include products that are capable of being distinct and

accounted for as separate performance obligations. To date, the majority of the revenue has been generated by sales associated with products for the storage and mobile communication markets, where a single performance obligation is identified in general. Revenue from services has been insignificant. Performance obligations associated with product sales transactions are generally satisfied when control passes to customers upon shipment or the written acceptance of the customers. Accordingly, product revenue is recognized at a point in time when control of the asset is transferred to the customer. The Company recognizes revenue when it satisfies a performance obligation by transferring control of a product to a customer in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods. Some of the Company's sales are made to distributors. Control passes to the distributor upon shipment, and terms and payment by the Company's distributors is not contingent on resale of the product.

The Company grants certain distributors limited rights of return and price protection rights on unsold products. The return rights are generally limited to five percent of the monetary value of products purchased within the preceding six months, provided that the distributor places a corresponding restocking order of equal or greater value. An allowance for sales returns for distributors and all customers is recorded at the time of sale based on historical returns information available, management's judgment and any known factors at the time the financial statements are prepared that would significantly affect the allowance. Price protection rights are based on the inventory products the distributors have on hand at the date the price protection is offered. The actual price adjustments to distributors incurred by the Company are minimal.

*Allowance for doubtful accounts.* We record an allowance for doubtful accounts based on our evaluation of the collectability of our accounts receivable. Normal payment terms are provided to customers and applied upon transfer of title. On an ongoing basis, we analyze the payment history of customer accounts, including recent customer purchases. In circumstances where we are aware of a specific customer's inability to meet its financial obligations to us, we record a specific allowance against amounts due to reduce the net recognized receivable to the amount we reasonably believe will be collected. For all other accounts receivable due from customers, we categorize accounts receivable and make provisions based on a percentage of each category. We determine these percentages by examining our historical collection experience and current trends in the credit quality of our customers as well as our internal credit policies. If the financial condition of our customers or economic conditions in general were to deteriorate, additional allowances may be required in the future and such additional allowances would increase our operating expenses and therefore reduce our operating income and net income.

Our allowance for trade-related doubtful accounts were approximately US\$0.6 million, US\$0.6 million and US\$1.6 million as of December 31, 2017, 2018 and 2019, respectively, representing approximately 0.7%, 0.7% and 1.5% of our gross accounts receivables at the end of each respective periods.

*Inventory valuation.* We value inventories at the lower of cost or net realizable value for raw materials, work in process and finished goods, Inventories are recorded at standard cost and adjusted to the approximate weighted-average cost at the balance sheet date. We assesses its net realizable value of the inventory for estimated obsolescence or unmarketable inventory based upon management's assumptions about future demand and market conditions. In estimating reserves for obsolescence, we primarily evaluates estimates based on the timing of the introduction of new products and the quantities remaining of old products and provides reserves for inventory on hand in excess of the estimated demand. Estimated losses on slow-moving items are recognized and included in the allowance for losses. We wrote down US\$0.7 million, US\$2.1 million and US\$9.1 million in 2017, 2018 and 2019, respectively, for estimated obsolete or unmarketable inventory. In 2019, because of rapidly falling NAND prices, we wrote-down US\$9.1 million of NAND components and SSDs in inventory.

*Valuation of long-lived assets and intangible assets with finite useful life.* We evaluate the recoverability of long-lived assets and intangible 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 sum of the anticipated undiscounted cash flows from such asset is separately identifiable and is less than the carrying value. If impairment occurs, a loss based on the excess of carrying value over the fair market value of the long-lived asset is recognized. Fair market value is determined by reference to quoted market prices, if available, or

discounted cash flows, as appropriate. The impairment evaluations and the estimate of fair market value involve management estimates of assets' useful lives and future cash flows. Actual useful lives and cash flows could be different from those estimated by management. This could have a material effect on our operating results and financial condition. No impairment losses were recognized in 2017. In 2018 and 2019, we wrote down the value of intangible assets by US\$3.4 million and US\$0.3 million, respectively, See Note 10 goodwill and acquired intangible assets in our financial statements.

*Impairment of long-term investments.* We evaluate the recoverability of long-term investments whenever events or changes in circumstances indicate the carrying value may not be recoverable. Impairment charges are determined based on the difference between our carrying value and our proportionate ownership of the investee company's fair value at year end. In 2017, 2018 and 2019, we recognized long term investments impairment of US\$0.1 million, nil and nil, respectively, as a result of recurring operating losses and reduced forecasts of the investee companies which indicated that our investments were not recoverable within a reasonable period of time.

*Business combinations.* When we acquire businesses, we allocate the purchase price to tangible assets and liabilities and identifiable intangible assets acquired. Any residual purchase price is recorded as goodwill. The allocation of the purchase price requires management to make significant estimates in determining the fair values of assets acquired and liabilities assumed, especially with respect to intangible assets. These estimates are based on historical experience and information obtained from the management of the acquired companies. These estimates can include, but are not limited to, the cash flows that an asset is expected to generate in the future, the appropriate weighted-average cost of capital, and the synergistic benefits expected to be derived from the acquired business. These estimates are inherently uncertain and unpredictable. In addition, unanticipated events and circumstances may occur which may affect the accuracy or validity of such estimates.

*Goodwill.* We record goodwill when the consideration paid for an acquisition exceeds the fair value of net tangible and intangible assets acquired. We measure and test goodwill on an annual basis or more frequently if we believe indicators of impairment exist. Our impairment review process compares the fair value of the reporting unit in which the goodwill resides to its carrying value. We determined that our reporting units are equivalent to our operating segments or components of an operating segment for the purposes of completing our impairment test. Prior to fiscal 2017, we utilize a two-step approach to testing goodwill for impairment. The first step tests for possible impairment by applying a fair value-based test. In computing fair value of our reporting units, we use estimates of future revenues, costs and cash flows from such units. The second step, if necessary, measures the amount of such impairment by comparing the implied fair value of goodwill to its carrying value. If the carrying amount of goodwill exceeds its implied fair value, an impairment loss is recognized equal to that excess. In the fourth quarter of 2017, we elected to early adopt FASB Accounting Standard Update 2017-04, which removed step two from goodwill impairment test, in conjunction with our annual review for impairment. Estimating fair value is performed by utilizing various valuation approaches, such as income approach or market approach. The total of all reporting unit fair values was also compared to our market capitalization plus control premium for reasonableness.

In 2017, we recorded an impairment charge of US\$10.3 million related to our FCI acquisition, in 2018, we record an impairment charge of US\$0.6 million related to our Bigtera acquisition, and in 2019, we recorded an impairment charge of US\$15.7 million related to our Shannon acquisition. The worse than expected business outlook and lower cash flow projections of these reporting units led to reductions in their fair market value and the assessment of impairment charges for the difference of carrying value in excess of fair market value. The estimate of cash flow was based upon, among other things, certain assumptions about expected future operating performance such as revenue growth rates and operating margins used to calculate projected future cash flows, risk-adjusted discount rates, future economic and market conditions, and determination of appropriate market comparable. We based our fair value estimates on assumptions we believed to be reasonable but that are unpredictable and inherently uncertain. The long-term financial forecast represented the best estimate that we had at that time and we believed that its underlying assumptions were reasonable. However, actual performance in

the near-term and longer-term could be materially different from the forecast, which could impact future estimates of fair value of our reporting units and may result in a charge to earnings in future periods due to the potential for further write-down of goodwill in connection with future impairment tests.

*Noncurrent assets held for sale.* Noncurrent assets are presented separately as held for sale when we are committed to selling the asset, an active plan of sale has commenced, and the sale is expected to be completed within 12 months or under a specified market condition that meets an exception to one-year requirement. Assets held for sale are measured at the lower of their carrying amount and fair value less cost to sell. Assets held for sale are no longer amortized or depreciated.

*Accounting for income taxes.* In preparing our consolidated financial statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. We are tax resident in numerous taxing jurisdictions around the world and have identified our major tax jurisdictions as Taiwan, Hong Kong, Korea (FCI divested in 2019), Macau and China with statutory tax rate of 20%, 16.5%, 11%, 12% and 25%, respectively and estimate our actual current tax exposure together with assessed temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are included within our consolidated balance sheet. We must then assess the likelihood that our deferred tax assets will be recovered from future taxable income within the relevant jurisdiction and, to the extent we believe that recovery is not likely, we must establish a valuation allowance. The total amount of valuation allowance as of December 31, 2017, 2018 and 2019 was US\$19.1 million, US\$20.0 million and US\$18.1 million, respectively. We provide for a valuation allowance to the extent we believe that it is more likely than not that the deferred tax assets will not be recovered from future taxable income. Realization of future tax benefits related to the deferred tax assets is dependent on many factors, including our ability to generate taxable income within the period during which the temporary differences reverse, the outlook for the economic environment in which we operate, and the overall future industry outlook. Should we determine that we would not be able to realize all or part of our net deferred tax asset in the future, an additional allowance for the deferred tax asset would be charged to income in the period the determination was made.

We utilize 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. The total amount of unrecognized tax benefits as of December 31, 2017, 2018 and 2019 was US\$15.1 million, US\$18.7 million and US\$20.7 million, respectively. As of December 31, 2018 and 2019, US\$4.1 million and US\$4.5 million, respectively, of interest and penalties were accrued. Fiscal years 2014 through 2019 remain subject to examination by the US Internal Revenue Service and other foreign tax jurisdictions. The ultimate outcome of tax matters may differ from our estimates and assumptions. Unfavorable settlement of any particular issue would require the use of cash and could result in increased income tax expense. Favorable resolution could result in reduced income tax expense. Within the next 12 months, we do not expect that our unrecognized tax benefits would change significantly. See Note 15 to the Consolidated Financial Statements for further information regarding changes in unrecognized tax benefits during 2019.

*Legal Contingencies.* From time to time, we are involved in legal actions or other third-party assertions arising in the ordinary course of business. There can be no assurance these actions or other third-party assertions will be resolved without costly litigation, in a manner that does not adversely impact our financial position, results of operations or cash flows or without requiring royalty payments in the future, which may adversely impact gross margins. We record a liability when it is probable that a loss has been incurred and the amount can be reasonably estimated. In determining the probability of a loss and consequently, determining a reasonable estimate, management is required to use significant judgment. Given the uncertainties associated with any litigation, the actual outcome can be different than our estimates and could adversely affect our results of operations, financial position and cash flows. See Item 8: "Legal Proceedings".

*Segment Information.* The Company has one operating segment, NAND flash controllers and SSD solutions, consisting of numerous product areas. The Company's chief operating decision maker (CODM) is considered to be its Chief Executive Officer. The CODM allocates resources and assesses performance of the business and other activities at the operating segment level. Our numerous product areas include SSD controllers, eMMC and UFS controllers, memory card and flash drive controllers, Ferri industrial SSDs, Shannon data center SSDs, Bigtera software defined storage appliances, and prior to our divestiture of FCI in May 2019, specialty RF ICs.

## Results of Operations

The following table sets forth our statements of operations as a percentage of net sales for the periods indicated:

	<u>Year Ended December 31,</u>		
	<u>2017</u>	<u>2018</u>	<u>2019</u>
Net sales . . . . .	100.0%	100.0%	100.0%
Cost of sales . . . . .	<u>52.0</u>	<u>50.8</u>	<u>51.4</u>
Gross profit . . . . .	<u>48.0</u>	<u>49.2</u>	<u>48.6</u>
Operating expenses:			
Research and development . . . . .	19.5	19.2	24.1
Sales and marketing . . . . .	4.9	5.5	5.5
General and administrative . . . . .	3.2	3.3	3.9
Impairment of goodwill and intangible assets . . . . .	2.0	0.8	3.5
Amortization of intangible assets . . . . .	0.5	0.6	0.2
Gain from disposal of noncurrent assets held for sale . . . . .	<u>(0.4)</u>	<u>—</u>	<u>—</u>
Total operating expenses . . . . .	<u>29.7</u>	<u>29.4</u>	<u>37.2</u>
Operating income . . . . .	<u>18.3</u>	<u>19.8</u>	<u>11.4</u>
Non-operating income (expenses):			
Gain from disposal of subsidiary . . . . .	0.0	0.0	2.7
Gain from disposal of long-term investments . . . . .	0.0	0.0	0.1
Gain from disposal of short-term investments . . . . .	0.0	0.0	0.0
Interest income . . . . .	0.8	1.2	1.5
Foreign exchange gain (loss), net . . . . .	(0.0)	(0.1)	0.0
Impairment of long-term investments . . . . .	(0.0)	—	—
Interest expense . . . . .	(0.1)	(0.1)	0.0
Loss on equity-method investment . . . . .	—	(0.1)	—
Other income (loss), net . . . . .	<u>(0.0)</u>	<u>0.0</u>	<u>0.0</u>
Total non-operating income . . . . .	<u>0.7</u>	<u>0.9</u>	<u>4.3</u>
Income before income taxes . . . . .	19.0	20.7	15.7
Income tax expense . . . . .	<u>4.6</u>	<u>2.2</u>	<u>1.7</u>
Net income . . . . .	<u>14.4%</u>	<u>18.5%</u>	<u>14.0%</u>

**Comparison of Year Ended December 31, 2019 to Year Ended December 31, 2018**

*Net sales.*

	Years Ended December 31					
	2018		2019		\$ change	% change
	US\$	% of net sales	US\$	% of net sales		
	(in thousands, except percentage data)					
<b>Net sales</b>						
Mobile Storage . . . . .	494,012	93	441,700	97	(52,312)	(11)
Mobile Communications . . . . .	30,163	6	10,356	2	(19,807)	(66)
Others . . . . .	6,173	1	5,197	1	(976)	(16)
Net sales . . . . .	530,348	100	457,253	100	(73,095)	(14)

In 2019, our net sales decreased by 14% year-over-year to approximately US\$457.3 million. Our Mobile Storage revenue decreased by 11% year-over-year as declining eMMC plus UFS controller sales and SSD solutions sales more than offset growth of SSD controller sales. Our SSD controller sales, approximately 50 to 60% of revenue, increased by about 20% year-over-year, eMMC plus UFS controller sales, approximately 20 to 25% of revenue, decreased by about 30% year-over-year, and SSD solutions sales, approximately 10% of revenue, decreased by 50% year-over-year. Mobile Communications revenue decreased by 66%. We divested our Mobile Communications product line in May 2019.

*Gross profit.*

	Years Ended December 31					
	2018		2019		\$ change	% change
	US\$	% of net sales	US\$	% of net sales		
	(in thousands, except percentage data)					
Gross profit . . . . .	260,807	49	222,172	49	(38,635)	(15)

Gross profit was stable year-over-year at approximately 49% of net sales in 2019. Our gross profit excluding obsolete and unmarketable inventory write-downs as a percentage of revenue increased from 50% in 2018 to 51% in 2019.

*Research and development expenses.*

	Years Ended December 31					
	2018		2019		\$ change	% change
	US\$	% of net sales	US\$	% of net sales		
	(in thousands, except percentage data)					
Salary and benefits . . . . .	53,922	10	57,165	13	3,243	6
Stock-based compensation . . . . .	13,278	2	9,927	2	(3,351)	(25)
Other research and development . . . . .	34,828	7	43,213	9	8,385	24
Research and development . . . . .	102,028	19	110,305	24	8,277	8

Our research and development expenses increased by 8% year-over-year to approximately US\$110.3 million in 2019. Salary and benefits increased by 6% year-over-year to approximately US\$57.2 million in 2019. Stock-based compensation decreased by 25% year-over-year to approximately US\$9.9 million. Other research and development expenses increased by 24% year-over-year to approximately US\$43.2 million, primarily because of higher IC tape-outs and other project expenses in 2019.

*Sales and marketing expenses.*

	Years Ended December 31					
	2018		2019		\$ change	% change
	US\$	% of net sales	US\$	% of net sales		
	(in thousands, except percentage data)					
Salary and benefits . . . . .	15,546	3	14,586	3	(960)	(6)
Stock-based compensation . . . . .	3,407	1	1,789	1	(1,618)	(47)
Other sales and marketing . . . . .	10,326	2	8,733	2	(1,593)	(15)
Sales and marketing . . . . .	29,279	6	25,108	6	(4,171)	(14)

Our sales and marketing expenses decreased by 14% year-over-year to approximately US\$25.1 million in 2019. Salary and benefits decreased by 6% year-over-year to approximately US\$14.6 million. Stock-based compensation decreased by 47% year-over-year to approximately US\$1.8 million in 2019. Other sales and marketing expenses decreased by 15% year-over-year to approximately US\$8.7 million.

*General and administrative expenses.*

	Years Ended December 31					
	2018		2019		\$ change	% change
	US\$	% of net sales	US\$	% of net sales		
	(in thousands, except percentage data)					
Salary and benefits . . . . .	8,073	1	9,202	2	1,129	14
Stock-based compensation . . . . .	3,704	1	2,570	1	(1,134)	(31)
Other general and administrative . . . . .	5,856	1	6,106	1	250	4
General and administrative . . . . .	17,633	3	17,878	4	245	1

Our general and administrative expenses increased by 1% year-over-year to approximately US\$17.9 million in 2019. Salary and benefits increased by 14% year-over-year to approximately US\$9.2 million. Stock-based compensation decreased by 31% year-over-year to approximately US\$2.6 million in 2019. Other general and administrative expenses increased by 4% year-over-year to approximately US\$6.1 million.

*Stock-based compensation.*

The following table presents details of total stock-based compensation that is included in each functional line item in our consolidated statements of income:

	Years Ended December 31					
	2018		2019		\$ change	% change
	US\$	% of net sales	US\$	% of net sales		
	(in thousands, except percentage data)					
Cost of sales . . . . .	390	—	305	—	(85)	(22)
Research and development . . . . .	13,278	2	9,927	2	(3,351)	(25)
Sales and marketing . . . . .	3,407	1	1,789	—	(1,618)	(47)
General and administrative . . . . .	3,704	1	2,570	1	(1,134)	(31)
Total stock-based compensation . . . . .	20,779	4	14,591	3	(6,188)	(30)

Total stock-based compensation, all of which are RSU expenses, decreased by 30% in 2019.

See Note 17 to Consolidated Financial Statements for a discussion of activity related to share-based awards.

*Impairment of goodwill and intangible assets.* We performed impairment assessments of the carrying value of goodwill and intangible assets in November 2018, June 2019 and November 2019. During our 2018 assessment, we compared the carrying value of Bigtera to its estimate fair value and determined that goodwill was impaired and recognized approximately \$4.1 million for impairment of goodwill and intangible assets. In the June 2019 assessment, we compared the carrying value of Shannon to its estimated fair value and determined that goodwill and intangible assets were impaired and recognized approximately US\$16.0 million for impairment of goodwill and intangible assets.

*Amortization of intangible assets.* Our amortization of intangible asset decreased to approximately US\$0.8 million in the year ended December 31, 2019 from US\$3.0 million in the year ended December 31, 2018.

*Gain from disposal of subsidiary.* We realized a gain from disposal of FCI of US\$12,409 thousand for the year ended December 31, 2019.

*Gain from disposal of long-term investments.* We recognized a gain from disposal of ProGrade of US\$473 thousand for the year ended December 31, 2019.

*Gain from disposal of short-term investments.* We realized gains on sales of trading securities of US\$134 thousand and US\$48 thousand for the year ended December 31, 2018 and 2019, respectively.

*Interest income.* Our interest income increased to approximately US\$6.8 million for the year ended December 31, 2019 from approximately US\$6.3 million for the year ended December 31, 2018.

*Interest expense.* Interest expense decreased to approximately US\$3 thousand for the year ended December 31, 2019 from approximately US\$378 thousand for the year ended December 31, 2018.

*Foreign exchange gain (loss), net.* For the year ended December 31, 2019, we incurred foreign exchange gain of US\$148 thousand, compared with losses of US\$615 thousand for the year ended December 31, 2018. We do not engage in any hedging activities.

*Income tax expense (benefit).* Income tax expense was approximately US\$7.7 million for the year ended December 31, 2019 compared to an income tax expense of approximately US\$11.8 million for the year ended December 31, 2018.

*Net income (loss).* Net income was approximately US\$64.4 million for the year ended December 31, 2019 compared to a net income of approximately US\$98.1 million for the year ended December 31, 2018.

### ***Comparison of Year Ended December 31, 2018 to Year Ended December 31, 2017***

*Net sales.*

	Years Ended December 31					
	2017		2018		\$ change	% change
	US\$	% of net sales	US\$	% of net sales		
	(in thousands, except percentage data)					
<b>Net sales</b>						
Mobile Storage . . . . .	480,735	92	494,012	93	13,277	3
Mobile Communications . . . . .	37,447	7	30,163	6	(7,284)	(19)
Others . . . . .	5,222	1	6,173	1	951	18
Net sales . . . . .	523,404	100	530,348	100	6,944	1

In 2018, our net sales increased by 1% year-over-year to approximately US\$530.3 million, primarily the result of SSD controller sales increasing by about 30%, partially offset by eMMC plus UFS controller sales decreasing by about 10% and SSD solutions sales decreasing by about 5%.

Our Mobile Storage revenue increased by 3% year-over-year and Mobile Communications revenue decreased by 19%.

*Gross profit.*

	Years Ended December 31					
	2017		2018		\$ change	% change
	US\$	% of net sales	US\$	% of net sales		
(in thousands, except percentage data)						
Gross profit	251,194	48	260,807	49	9,613	4

Gross profit increased to 49% of net sales in 2018 as compared to 48% in 2017 primarily because of increasing sales of higher gross margin controllers and declining sales of lower gross margin SSD solutions. Our gross profit excluding obsolete and unmarketable inventory write-downs as a percentage of revenue increased from 48% in 2017 to 50% in 2018.

*Research and development expenses.*

	Years Ended December 31					
	2017		2018		\$ change	% change
	US\$	% of net sales	US\$	% of net sales		
(in thousands, except percentage data)						
Salary and benefits	54,019	10	53,922	10	(97)	0
Stock-based compensation	9,255	2	13,278	2	4,023	43
Other research and development	38,779	8	34,828	7	(3,951)	(10)
Research and development	102,053	20	102,028	19	(25)	0

Our research and development expenses were stable year-over-year at approximately US\$102.0 million in 2018. Salary and benefits were stable year-over-year at approximately US\$53.9 million in 2018. Stock-based compensation increased by 43% year-over-year to approximately US\$13.3 million. Other research and development expenses decreased by 10% year-over-year to approximately US\$34.8 million, primarily because of less IC tape-outs and other project expenses in 2018.

*Sales and marketing expenses.*

	Years Ended December 31					
	2017		2018		\$ change	% change
	US\$	% of net sales	US\$	% of net sales		
(in thousands, except percentage data)						
Salary and benefits	14,425	3	15,546	3	1,121	8
Stock-based compensation	3,167	1	3,407	1	240	8
Other sales and marketing	8,276	1	10,326	2	2,050	25
Sales and marketing	25,868	5	29,279	6	3,411	13

Our sales and marketing expenses increased by 13% year-over-year to approximately US\$29.3 million in 2018. Salary and benefits increased by 8% year-over-year to approximately US\$15.5 million, primarily because of more headcounts in 2018. Stock-based compensation increased by 8% year-over-year to approximately US\$3.4 million in 2018. Other sales and marketing expenses increased by 25% year-over-year to approximately US\$10.3 million primarily because of large expenditures for technical services and samples in 2018.

*General and administrative expenses.*

	Years Ended December 31					
	2017		2018		\$ change	% change
	US\$	% of net sales	US\$	% of net sales		
	(in thousands, except percentage data)					
Salary and benefits . . . . .	9,386	2	8,073	1	(1,313)	(14)
Stock-based compensation . . . . .	2,779	—	3,704	1	925	33
Other general and administrative . . . . .	4,768	1	5,856	1	1,088	23
General and administrative . . . . .	16,933	3	17,633	3	700	4

Our general and administrative expenses increased by 4% year-over-year to approximately US\$17.6 million in 2018. Salary and benefits decreased by 14% year-over-year to approximately US\$8.1 million, primarily because of lower bonus payments in 2018. Stock-based compensation increased by 33% year-over-year to approximately US\$3.7 million in 2018. Other general and administrative expenses increased by 23% year-over-year to approximately US\$5.9 million primarily because of more professional service fees and bad debt expense accruals in 2018.

*Stock-based compensation.*

The following table presents details of total stock-based compensation that is included in each functional line item in our consolidated statements of income:

	Years Ended December 31					
	2017		2018		\$ change	% change
	US\$	% of net sales	US\$	% of net sales		
	(in thousands, except percentage data)					
Cost of sales . . . . .	293	—	390	—	97	33
Research and development . . . . .	9,255	2	13,278	2	4,023	43
Sales and marketing . . . . .	3,167	1	3,407	1	240	8
General and administrative . . . . .	2,779	—	3,704	1	925	33
Total stock-based compensation . . . . .	15,494	3	20,779	4	5,285	34

Total stock-based compensation, all of which are RSU expenses, increased by 34% in 2018.

See Note 17 to Consolidated Financial Statements for a discussion of activity related to share-based awards.

*Impairment of goodwill and intangible assets.* We performed annual impairment assessments of the carrying value of goodwill and intangible assets in November 2017 and 2018. During our 2017 assessment, we compared the carrying value of FCI to its estimated fair value and determined that goodwill and intangible assets were impaired and recognized approximately US\$10.3 million for impairment of goodwill. During our 2018 assessment, we compared the carrying value of Bigtera to its estimate fair value and determined that goodwill was impaired and recognized approximately US\$4.1 million for impairment of goodwill and intangible assets.

*Amortization of intangible assets.* Our amortization of intangible asset increased to approximately US\$3.0 million in the year ended December 31, 2018 from approximately US\$2.5 million in the year ended December, 2017.

*Gain (loss) from disposal of noncurrent assets held for sale.* In 2017, we sold an office space located in Shanghai, China and recognized a gain from disposal of US\$1.9 million.

*Gain from disposal of short-term investments.* We realized gains on sales of trading securities of US\$103 thousand and US\$134 thousand for the years ended December 31, 2017 and 2018, respectively.

*Interest income.* Our interest income increased to approximately US\$6.3 million for the year ended December 31, 2018 from approximately US\$4.3 million for the year ended December 31, 2017.

*Impairment of long-term investment.* In 2017, we recognized impairment charges for our investments in Cashido and Vastview because a combination of recurring losses and reduced forecasts indicated that our investments were not recoverable within a reasonable period of time and the impairments were other than temporary and recorded a combined impairment charge of US\$0.1 million.

*Interest expense.* Interest expense decreased to approximately US\$378 thousand for the year ended December 31, 2018 from approximately US\$423 thousand for the year ended December 31, 2017 because we repaid a bank loan before the end of the year.

*Foreign exchange gain (loss), net.* For the year ended December 31, 2018, we incurred foreign exchange losses of US\$615 thousand, compared with losses of US\$157 thousand for the year ended December 31, 2017. We do not engage in any hedging activities.

*Income tax expense (benefit).* Income tax expense was approximately US\$11.8 million for the year ended December 31, 2018 compared to an income tax expense of approximately US\$24.0 million for the year ended December 31, 2017.

*Net income (loss).* Net income was approximately US\$98.1 million for the year ended December 31, 2018 compared to a net income of approximately US\$75.0 million for the year ended December 31, 2017.

Comparison of the Year Ended December 31, 2017 to the Year Ended December 31, 2016 may be found in the Form 20-F of the Company filed May 15, 2019, beginning at page 34.

## Liquidity and Capital Resources

	<b>Year Ended December 31</b>	
	<b>2018</b>	<b>2019</b>
	US\$	US\$
	(in thousands)	
Cash and cash equivalents . . . . .	284,989	323,166
Short-term investments . . . . .	3,609	2,010
Cash, cash equivalents and short-term investments . . . . .	288,598	325,176

As of December 31, 2019, we had approximately US\$325.2 million in cash, cash equivalents and short-term investments, an increase of US\$36.6 million from December 31, 2018. We maintain our cash balances in bank deposits and in money market instruments. We do not engage in any currency hedging activities. Our short-term investments consist primarily of principal protected notes that we trade.

We believe our existing cash balances and short-term investments, together with cash we expect to generate from operating activities, will be sufficient to meet our anticipated cash needs for at least the next 12 months. Our future capital requirements will depend on many factors, including the level of our net sales, the timing and extent of spending to support product development efforts, the expansion of sales and marketing activities, the timing of introductions of new products, the costs to ensure access to adequate manufacturing capacity, the continuing market acceptance of our products, availability of attractive acquisition and investment opportunities, dividend payments, share repurchases and construction of our office building. We could be required, or could elect, to seek additional funding through public or private equity or debt financing, and additional funds may not be available on terms acceptable to us or at all.

The following table sets forth a summary of our cash flows for the periods indicated:

	<b>Year Ended December 31,</b>		
	<b>2017</b>	<b>2018</b>	<b>2019</b>
	US\$	US\$ (in thousands)	US\$
<b>Consolidated Cash Flow Data:</b>			
Net cash provided by operating activities . . . . .	103,881	108,242	77,695
Net cash provided by (used in) investing activities . . . . .	(14,548)	(79,568)	34,668
Net cash used in financing activities . . . . .	(31,740)	(101,820)	(70,260)
Depreciation and amortization . . . . .	13,133	14,796	13,213
Capital expenditures . . . . .	(11,683)	(74,853)	(11,015)

***Operating activities***

Our net cash provided by operating activities was approximately US\$77.7 million for the year ended December 31, 2019, compared to net cash provided by operating activities of approximately US\$108.2 million and US\$103.9 million during 2018 and 2017, respectively.

For the year ended December 31, 2019, cash flow provided by operations of US\$77.7 million resulted primarily from our net income of US\$64.4 million and the following reasons:

- Our net income includes substantial non-cash charges, namely US\$13.2 million of depreciation and amortization, US\$14.6 million of stock-based compensation and US\$16.0 million of impairment of goodwill and intangible assets.
- Net working capital increased by US\$20.3 million. Inventory increased by US\$10.2 million, notes and accounts receivable increased by US\$18.8 million, notes and accounts payable increased by US\$4.4 million, income tax payable decreased by US\$1.7 million, and other assets net of other liabilities provided US\$5.9 million of cash.

For the year ended December 31, 2018, cash flow provided by operations of US\$108.2 million resulted primarily from our net income of US\$98.1 million and the following reasons:

- Our net income includes substantial non-cash charges, namely US\$14.8 million of depreciation and amortization, US\$20.8 million of stock-based compensation and US\$4.1 million of impairment of goodwill and intangible assets.
- Net working capital increased by US\$31.5 million. Inventory decreased by US\$12.7 million, notes and accounts receivable increased by US\$12.6 million, notes and accounts payable decreased by US\$28.8 million, income tax payable decreased by US\$7.3 million, and other assets net of other liabilities provided US\$4.6 million of cash.

***Investing activities***

Our net cash provided by investing activities was approximately US\$34.7 million for the year ended December 31, 2019, compared to net cash used in investing activities of approximately US\$79.6 million for the year ended December 31, 2018. In 2019, we paid US\$11.0 million for the routine purchase of software, design tools and other items, and received US\$44.0 million and US\$1.7 million for the disposal of FCI and ProGrade, respectively.

Our net cash used in investing activities was approximately US\$79.6 million for the year ended December 31, 2018, compared to net cash used in investing activities of approximately US\$14.5 million for the year ended December 31, 2017. In 2018, we paid US\$9.7 million for the routine purchase of software, design tools and other items, US\$58.9 million for the purchase of land for our future Taiwan headquarters building and US\$4.7 million for purchase of a long-term investment.

### ***Financing activities***

Our net cash used in financing activities was approximately US\$70.3 million for the year ended December 31, 2019, compared to net cash used in financing activities of approximately US\$101.8 million for the year ended December 31, 2018. Our cash used in financing activities in 2019 consists primarily of US\$44.0 million of dividend payments and US\$26.2 million for share repurchases.

Our net cash used in financing activities was approximately US\$101.8 million for the year ended December 31, 2018, compared to net cash used in financing activities of approximately US\$31.7 million for the year ended December 31, 2017. Our cash used in financing activities in 2018 consists primarily of US\$43.3 million of dividend payments, US\$33.5 million for share repurchases and US\$25 million for repayment of a bank loan.

### **Capital Return to Shareholders**

*Dividend.* On October 25, 2019, we announced an annual cash dividend of \$1.40 per ADS to be paid in four quarterly installments of \$0.35 per ADS, which followed our previous \$1.20 per ADS annual cash dividend. In accordance with our dividend declarations, we paid \$43.3 million and \$44.0 million to shareholders in 2018 and 2019, respectively.

The declaration and payment of future cash dividends are subject to our Board's continuing determination that the payment of dividends are in the best interests of our shareholders and are in compliance with all laws and agreements applicable to the declaration and payment of cash dividends.

*Share Repurchase.* On November 21, 2018, we announced a new share repurchase program to repurchase up to US\$200 million of our ADSs over a 24 month period. In the year ended December 31, 2019, we repurchased 0.8 million ADSs for US\$25.0 million at an average price of US\$32.82 per ADS. In the year ended December 31, 2018, we repurchased 1.0 million ADSs for US\$34.8 million at an average price of US\$34.54 per ADS.

Repurchases are made in the open market or according to other methods in compliance with Securities and Exchange Commission Rule 10b-18, subject to market conditions, applicable legal requirements and other factors. Share repurchase plans announced does not obligate us to acquire any particular amount of ADS and may be suspended at any time at our discretion.

### **Contractual Obligations**

The following table sets forth our commitments to settle contractual obligations in cash as of December 31, 2019:

	Amount of Commitment Maturing by Year				
	Total	Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years
	US\$	US\$	US\$ (in thousands)	US\$	US\$
Operating leases . . . . .	9,301	3,321	4,110	1,819	51
Pension . . . . .	2,167	2,167	(a)	(a)	(a)
Other contractual commitments . . . . .	5,735	5,735	—	—	—
Contractual cash obligations . . . . .	<u>17,203</u>	<u>11,223</u>	<u>4,110</u>	<u>1,819</u>	<u>51</u>

(a) Our pension obligation after one year has not been estimated.

We increased long-term taxes payable of US\$1,948 thousand related to uncertain tax positions as of December 31, 2019. At this time, we are unable to make a reasonably reliable estimate of the timing of payments in individual years beyond 12 months due to uncertainties in the timing and outcome of a potential tax audit.

**Off-balance Sheet Arrangements**

We currently do not have any outstanding derivative financial instruments, off-balance sheet guarantees or arrangements, interest rate swap transactions, or foreign currency forward contracts. We do not engage in any trading activities involving non-exchange traded contracts.

**Recent Accounting Pronouncements**

Please refer to Note 2 to the consolidated financial statements

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

**Executive Officers and Directors**

Members of our board of directors are elected by our shareholders. Our board of directors consists of nine directors. Our executive officers are appointed by, and serve at the discretion of, our board of directors. The following table sets forth information regarding our directors and executive officers as of the date of this annual report.

<u>Name</u>	<u>Age</u>	<u>Position</u>
James Chow . . . . .	69	Chairman of the Board
Wallace C. Kou . . . . .	61	President, Chief Executive Officer and Managing Director
Steve Chen . . . . .	48	Director
Tsung-Ming Chung . . . . .	70	Director
Lien-Chun Liu . . . . .	62	Director
Yung-Chien Wang . . . . .	57	Director
Han-Ping D. Shieh . . . . .	66	Director
Kenneth Kuan-Ming Lin . . . . .	67	Director
Riyadh Lai . . . . .	51	Chief Financial Officer
Nelson Duann . . . . .	51	Senior VP of Marketing & R&D and Director
Arthur Yeh . . . . .	59	VP of Sales, Asia and Greater China
Robert Fan . . . . .	56	President of SMI USA
Ken Chen . . . . .	58	VP of Operations
Kevin Yeh . . . . .	56	VP of R&D, Algorithm & Technology
Kevin Tsai . . . . .	54	Senior Director of R&D, System Validation

**Executive Officers and Directors**

**James Chow, Chairman of the Board of Directors**

Mr. Chow has served as the Chairman of our board of directors since April 2005. Mr. Chow has been the Chairman of Concord Financial Co., Ltd. since 1993. Concord Financial Co., Ltd. is an investment holding company and was one of our significant shareholders. Mr. Chow has an MBA from Columbia University.

**Wallace C. Kou, President, Chief Executive Officer, Managing Director**

Mr. Kou founded Silicon Motion in 1995 and has been our President and Chief Executive Officer since our founding. Prior to founding Silicon Motion, Mr. Kou was the Vice President and Chief Architect at the Multimedia Products Division of Western Digital Corporation, which developed graphics processors for notebook PCs and was sold to Philips Semiconductor in 1995. Before Western Digital, Mr. Kou worked for Wyse Technology. Mr. Kou has a BS in Electrical & Control Engineering from the National Chiao Tung University in Taiwan and an MS in Electrical & Computer Engineering from the University of California at Santa Barbara.

**Steve Chen, Director**

Mr. Chen joined our board of directors in 2012. Mr. Chen is the chairman of Mercuries Co., Ltd.. Mr. Chen has dual M. Eng. from Cornell University.

**Tsung-Ming Chung, Director**

Mr. Chung joined our board of directors in June 2005. Mr. Chung is the Chairman of Dynapack International Technology Corp, a leading provider of battery packs for notebook PCs and tablets. From 1985 to 2000, Mr. Chung was an audit partner at Arthur Andersen. He is also a director at Far East International Bank and Fubon Hyundai Life Insurance Corporation. Mr. Chung has a BA in Business Administration from the National Taiwan University and an MBA from the National Cheng-chi University in Taiwan.

**Lien-Chun Liu, Director**

Ms. Liu joined our board of directors in June 2005. She is Vice President of the International Council of Women and currently also serves on the board of supervisors of Concord VIII Venture Capital Co., Ltd. and the board of directors of New Tamsui Golf Course. She was formerly a research fellow at the Taiwan Research Institute and served on the board of supervisors of China Television Corp. from 2000 to 2004. Ms. Liu has a BA from Wellesley College and a JD from Boston College Law School.

**Yung-Chien Wang, Director**

Mr. Wang joined our board of directors in June 2005. Mr. Wang has over 20 years of working experience in the human resource and legal services industries. Mr. Wang has been a consultant of Professional Trust Co., Ltd., a human resource consulting firm in Taiwan since August 1998 and is currently its Vice President. Mr. Wang has a law degree from Fu Jen Catholic University in Taiwan.

**Han-Ping D. Shieh, Director**

Mr. Shieh joined our board of directors in 2014. He is a Chair Professor at National Chiao Tung University (NCTU) in Taiwan, a fellow of the Institute of Electrical and Electronics Engineers, The Optical Society and the Society for Information Display and a board member of Young Optics Inc. and Focal Tech. Inc. Mr. Shieh received his PhD in Electrical and Computer Engineering from Carnegie Mellon University in 1987. He joined NCTU as a professor in 1992 and was previously a Research Staff Member at the IBM Thomas J. Watson Research Center. He was previously the Dean of the College of Electrical and Computer Engineering and Senior Vice President at NCTU and Vice Chancellor at the University of Taiwan.

**Kenneth Kuan-Ming Lin, Director**

Mr. Lin joined our board of directors in September 2018. Mr. Lin was previously a director on our board from 2009 to 2014. Mr. Lin is the Chairman of Premier Capital Management Corp., Ruby Tech Corp. and Taiwan Health Care Association, Chief Executive Officer of SINOCON Industrial Standards Foundation, and Deputy Secretary-General of Cross-Strait CEO Summit. He was previously the Chairman of the Taiwan Venture Capital Association and the Taiwan Private Equity Association and a Board Director of the Straits Economic & Cultural Interchange Association. Mr. Lin has a BS in Electrical Engineering from the National Taiwan University.

**Riyadh Lai, Chief Financial Officer**

Mr. Lai joined us in April 2007 from ING Corporate Finance, Asia, where he was the Head of the Technology Group. Previously, he was also an investment banker at Morgan Stanley and ABN AMRO and finance manager at PepsiCo in Hong Kong and New York. Mr. Lai has over two decades of finance and financial management experience. He has a BA in Economics from Georgetown University and an MBA from New York University.

### **Nelson Duann, Senior VP of Marketing and R&D and Director**

Mr. Duann became our Senior Vice President of marketing and R&D for mobile storage in November 2018. He joined Silicon Motion in August 2007 as a product marketing director and R&D team leader. Mr. Duann has almost 20 years of experience in the semiconductor industry in product design, development and marketing. Prior to Silicon Motion, he worked for Sun Microsystems focusing on UltraSPARC microprocessor projects. He has an MS in Communications Engineering from National Chiao Tung University in Taiwan and an MS in Electrical Engineering from Stanford University.

### **Arthur Yeh, VP of Sales, Asia and Greater China**

Mr. Yeh has served as our Vice President of our mobile storage sales since November 2004. Mr. Yeh has over 20 years of sales experience managing marketing strategies, including product promotions and sales activities for semiconductor products. Mr. Yeh previously served in management positions at VIA Technologies for 10 years and joined us in 2004. Mr. Yeh holds an MS degree in Management Business Administration from the National Chung Hsing University in Taiwan.

### **Robert Fan, President of SMI USA**

Mr. Fan has served as President of SMI USA, our business operations in the Americas and Europe since November 2016. He also oversees corporate market communications, public relations and our graphics product line. Mr. Fan has over 25 years of sales and marketing experience and joined Silicon Motion in May 2013. Prior to Silicon Motion, Mr. Fan served in executive management roles at Spansion, IDT, Staktek, and at two venture capital-backed startups. He also spent over nine years at Intel in sales, marketing and management positions and was a chip designer earlier in his career. Mr. Fan holds a BS in EECS from UC Berkeley, an MSEE from Santa Clara University and completed the General Management Executive Program at McCombs School of Business, University of Texas.

### **Ken Chen, VP of Operations**

Mr. Chen has served as our Vice President of operations since November 2003. Mr. Chen has over 20 years of manufacturing and operations experience in the semiconductor industry managing supply chain and virtual manufacturing systems including wafer fabrication, mask tooling, as well as assembly and testing. Mr. Chen previously served in management positions at Faraday Technology and UMC, and joined us in 2003. Mr. Chen has a BS in Industrial Engineering from Chung Yuan Christian University in Taiwan and an MS in Industrial Engineering and Engineering Management from the National Tsing Hua University, Taiwan.

### **Kevin Yeh, VP of R&D, Algorithm & Technology**

Mr. Yeh became our Vice President of research and development in August 2012. He joined Silicon Motion in September 2003 as a product marketing director, before leading our Algorithm and Technology R&D team. Mr. Yeh has more than 20 years of experience in semiconductor product design, development and marketing. Prior to Silicon Motion, Mr. Yeh worked at TSMC, Neo Magic, VLSI Technology and LSI. Mr. Yeh holds a BS degree in Control Engineering from National Chiao Tung University in Taiwan and an MS degree in Electronic Engineering from Syracuse University.

### **Kevin Tsai, Senior Director of R&D, System Validation**

Mr. Tsai joined us in January 2020 with approximately 30 years of storage industry R&D experience relating to SSDs, HDDs and ODDs. Prior to joining Silicon Motion, he was the VP of R&D for DRAM module and Flash-related applications at TIGO Semiconductor and had also worked at Lite-on and Taiwan's Industrial Technology Research Institute (ITRI). Mr. Tsai holds an MS degree in Communications Engineering from National Chiao Tung University in Taiwan.

There is no arrangement or understanding 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.

## **Board Practices**

### ***Board Committees***

Our board of directors has established an audit committee, a compensation committee, and a nominating and corporate governance committee.

*Audit Committee.* The audit committee is responsible for reviewing the financial information that will be provided to shareholders and others, reviewing the systems of internal controls that management and the board of directors have established, appointing, retaining and overseeing the performance of independent registered public accounting firms, overseeing our accounting and financial reporting processes and the audits of our financial statements, and pre-approving audit and permissible non-audit services provided by independent registered public accounting firms. Tsung-Ming Chung, Lien-Chun Liu, and Yung-Chien Wang are members of our audit committee. Our board of directors has determined that Mr. Chung, the Chairman of the audit committee, is the committee's "Audit Committee Financial Expert" as required by Nasdaq and the U.S. Securities and Exchange Commission ("SEC") rules.

*Compensation Committee.* The compensation committee's basic responsibility is to review the performance and development of management in achieving corporate goals and objectives and to assure that our senior executives are compensated effectively in a manner consistent with our strategy, competitive practice and the requirements of the appropriate regulatory bodies. Toward that end, this committee oversees, reviews and administers all of our compensation, equity and employee benefit plans and programs. Lien-Chun Liu, Steve Chen, and Yung-Chien Wang are members of our compensation committee, with Mr. Chen serving as the Chairman of the committee.

*Nominating and Corporate Governance Committee.* The nominating and corporate governance committee is responsible for overseeing, reviewing and making periodic recommendations concerning our corporate governance policies, and for recommending to the full board of directors candidates for election to the board of directors. Lien-Chun Liu, Steve Chen, and Yung-Chien Wang are members of our nominating and corporate governance committee, with Ms. Liu serving as the Chairman of the committee.

Our board of directors has adopted a code of ethics, which is applicable to all of our employees. Our Code of Ethics is posted on our website at [www.siliconmotion.com](http://www.siliconmotion.com).

### **Duties of Directors**

Under Cayman Islands law, our directors have a duty to act honestly, in good faith and with a view to the best interests of our company. Our directors also have a duty to exercise the care, diligence and skills that a reasonably prudent person would exercise in comparable circumstances. In fulfilling their duty of care to our company, our directors must ensure compliance with our memorandum and articles of association. The functions and powers of our board of directors include, among others:

- convening shareholders' meetings and reporting its work to shareholders at such meetings;
- implementing shareholders' resolutions;
- determining our business plans and investment proposals;
- formulating our profit distribution plans and loss recovery plans;
- determining our debt and finance policies and proposals for the increase or decrease in our registered capital and the issuance of debentures;
- formulating our major acquisition and disposition plans, and plans for merger, division or dissolution;

- proposing amendments to our amended and restated memorandum and articles of association; and
- exercising any other powers conferred by the shareholders' meetings or under our amended and restated memorandum and articles of association.

### **Terms of Directors and Officers**

Under Cayman Islands law and our articles of association, our directors hold office until a successor has been duly elected and qualified. Our articles of association provide that our directors serve for a term of three years, with one-third of the directors (or, if their number is not a multiple of three, the number nearest to but not greater than one-third) subject to re-election at each annual general meeting of shareholders (chairman and managing director not subject to retirement by rotation nor to be taken into account in determining the number of directors to retire), unless the director was appointed by the board of directors, in which case such director holds office until the next annual meeting of shareholders at which time such director is eligible for re-election. One of our seven directors is currently subject to re-election at our next annual general meeting of shareholders. All of our executive officers are appointed by and serve at the discretion of our board of directors.

### **Limitation on Liability and Other Indemnification Matters**

Cayman Islands law and our articles of association allow us to indemnify our directors, secretary and other officers acting in relation to any of our affairs against actions, costs, charges, losses, damages and expenses incurred by reason of any act done or omitted in the execution of their duties as our directors, secretary and other officers. Under our memorandum and articles of association, indemnification is not available to any matter in respect of any fraud, dishonesty, willful misconduct or bad faith which may attach to any of them.

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

For the year ended December 31, 2019, the aggregate compensation to our directors and senior executive officers was approximately US\$ 2.77 million. In 2019, we granted restricted stock units to our executive officers as a group to acquire an aggregate of 202,000 ordinary shares. The restricted stock units granted to our executive officers and non-executive directors are subject to the same vesting conditions as those of our employees.

### **Service Contracts**

We currently do not have service contracts with our directors.

### **Share-Based Compensation Plans and Option Grants**

On June 3, 2015, the board of directors adopted the 2015 Incentive Plan (the "2015 Plan"). The 2015 Plan reserved 20,000,000 shares of ordinary shares for issuance upon exercise of stock options and restricted stock units. The Plans provide for the grant of stock options, stock bonuses, restricted stock awards, restricted stock units and stock appreciation rights, which may be granted to our employees (including officers), directors and consultants.

*Share Reserve.* The aggregate number of ordinary shares that may be issued pursuant to awards granted under the 2015 Plan will not exceed 20,000,000. Guidelines for Issuance and Subscription of Employee Stock Option, which options we have, subject to the consent of the respective option-holders, agreed to assume in the share exchange.

The following types of shares issued under the Plans may again become available for the grant of new awards under the Plans: restricted stock issued under the Plans that is forfeited or repurchased by us prior to it becoming fully vested; shares withheld for taxes; shares tendered to us to pay the exercise price of an option; and shares subject to awards issued under the Plans that have expired or otherwise terminated without having been exercised in full.

*Administration.* The board of directors will administer the Plans and may delegate this authority to administer the plan to a committee. Subject to the terms of the Plans, the plan administrator, which is our board of directors or its authorized committee, determines recipients, grant dates, the numbers and types of stock awards to be granted and the terms and conditions of the stock awards, including the period of their exercisability and vesting. Subject to certain limitations, the plan administrator will also determine the exercise price of options granted, the purchase price for restricted stock and restricted stock units, and, if applicable, the strike price for stock appreciation rights.

*Capitalization adjustments.* In the event of a dividend or other distribution (whether in the form of cash, ordinary shares, other securities, or other property), recapitalization, stock split, reorganization, merger, consolidation, exchange of our ordinary shares or our other securities, or other change in our corporate structure, the board of directors may adjust the number and class of shares that may be delivered under the Plans and the number, class and price of the shares covered by each outstanding stock award.

*Changes in control.* In the event of a change in control of the company, all outstanding options and other awards under the Plans may be assumed, continued or substituted for by any surviving or acquiring entity. If the surviving or acquiring entity elects not to assume, continue or substitute for such awards, the vesting of such awards held by award holders whose service with us or any of our affiliates has not terminated will be accelerated and such awards will be fully vested and exercisable immediately prior to the consummation of such transaction, and the stock awards shall automatically terminate upon consummation of such transaction if not exercised prior to such event.

*Future amendments and termination.* The board of directors may amend (subject to shareholder approval if required by applicable law), suspend or terminate the 2015 Plan at any time. The 2015 Plan will terminate pursuant to its terms on June 3, 2025.

### ***Employees***

The following table sets forth the number of our employees categorized by function as of the dates indicated.

	<b>As of December 31,</b>		
	<b>2017</b>	<b>2018</b>	<b>2019</b>
Management and administration . . . . .	128	132	120
Operations . . . . .	42	41	33
Research and development . . . . .	861	897	880
Sales and marketing . . . . .	219	237	204
Total . . . . .	<u>1,250</u>	<u>1,307</u>	<u>1,237</u>

As of December 31, 2019, we had 1,237 total employees, including 907 in Taiwan, 32 in the United States, 281 in China, 8 in Korea, and 9 in Japan. 1,012 of our total employees are engineers.

We do not have any collective bargaining arrangements with our employees and consider our relations with our employees to be good.

### ***Share Ownership***

Under U.S. securities law, a person is deemed to be a “beneficial owner” of a security if that person has or shares “voting power,” which includes the power to vote or to direct the voting of such security, or “investment power,” which includes the power to dispose of or to direct the disposition of such security. A person is also deemed to be the beneficial owner of any securities of which that person has a right to acquire beneficial ownership within 60 days. Under these rules, more than one person may be deemed a beneficial owner of securities as to which such person has no economic interest.

There were 140,585,484 of our ordinary shares outstanding as of April 30, 2020. The following table sets forth information with respect to the beneficial ownership of our ordinary shares as of April 30, 2020, less otherwise indicated in the footnotes, by each of our directors and officers:

	Shares Beneficially Owned	
	Number	%
<b>Executive Officers and Directors:</b>		
James Chow <sup>(1)</sup> . . . . .	2,381,266	1.69
Wallace C. Kou <sup>(2)</sup> . . . . .	1,917,248	1.36
Steve Chen . . . . .	50,000	*
Tsung-Ming Chung . . . . .	80,000	*
Lien-Chun Liu . . . . .	234,280	*
Yung-Chien Wang . . . . .	838,674	*
Han-Ping D. Shieh . . . . .	60,800	*
Kenneth Kuan-Ming Lin . . . . .	20,000	*
Riyadh Lai <sup>(3)</sup> . . . . .	1,793,580	1.28
Nelson Duann . . . . .	46,000	*
Arthur Yeh . . . . .	42,524	*
Robert Fan . . . . .	62,000	*
Ken Chen <sup>(4)</sup> . . . . .	200,649	*
Kevin Yeh . . . . .	60,600	*
Kevin Tsai . . . . .	—	*

\* Less than one percent

- (1) Represents 2,381,266 shares owned by Mr. Chow. Mr. Chow is the chairman of Concord Consulting Inc. and Concord Financial Co. Ltd. which owned 42,445 and 196,491 shares, respectively. Mr. Chow disclaims any beneficial ownership of these shares.
- (2) Represents 1,597,248 shares owned by Mr. Kou, 320,000 shares owned by his family members.
- (3) Represents 973,700 shares owned by Mr. Lai and 819,880 shares owned by his spouse.
- (4) Represents 18,324 shares owned by Mr. Chen and 182,325 shares owned by his spouse.

## ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

### Major Shareholders

As of April 30, 2020, there were 140,585,484 of our ordinary shares outstanding. The Bank of New York Mellon, the depository under our ADS deposit agreement, has advised us that as of April 30, 2020, we had 35,072,052 ADSs, representing 140,288,208 ordinary shares.

The following table sets forth information with respect to the beneficial ownership of more than 5% of our ordinary shares as of April 30, 2020:

Identity of person or group	Number of shares owned	Percentage Owned <sup>(1)</sup>
Massachusetts Financial Services Company . . . . .	15,272,360 <sup>(2)</sup>	10.9%
Cardinal Capital Management, LLC . . . . .	9,457,452 <sup>(3)</sup>	6.7%
Yiheng Capital Partners, L.P. . . . .	7,906,040 <sup>(4)</sup>	5.6%
ARGA Investment Management, LP and Avula Rama Krishna. . . . .	7,688,452 <sup>(5)</sup>	5.5%

- (1) Based on 140,585,484 ordinary shares outstanding as of April 30, 2020.
- (2) Massachusetts Financial Services Company held 3,818,090 ADSs (representing 15,272,360 ordinary shares) according to a Schedule 13G dated February 14, 2020.

- (3) Cardinal Capital Management, LLC held 2,364,363 ADSs (representing 9,457,452 ordinary shares) according to a Schedule 13G filed February 14, 2020.
- (4) Yiheng Capital Partners, L.P. held 1,976,510 (representing 7,906,040 ordinary shares) according to a Schedule 13G filed April 6, 2020.
- (5) ARG Investment Management, LP and Avula Rama Krishna held 2,088,771 ADSs (representing 7,688,452 ordinary shares), according to a Schedule 13G dated February 11, 2019.

To our knowledge, we are not owned or controlled, directly or indirectly, by another corporation, by any foreign government or by any other natural or legal persons, severally or jointly. We are not aware of any arrangement which may at a later date result in a change of control of our company.

No holder of our ordinary shares has preferential voting rights.

### **Related Party Transactions**

In May 2019, we completed the divestiture of FCI to Dialog Semiconductor. During Dialog's due diligence process, it was determined that Jeonse housing leases in Korea were arranged between the lessee, FCI, and lessors, certain FCI employees, including three of our executive officers, or their immediate relatives. These leases, in place from 2007 to 2019, involve the lessee depositing funds equivalent to approximately 80% of the market value of the property interest-free with the lessor in exchange for rent-free housing for the employees. Deposited funds are returned to the lessee in full at the end of the lease period. The total value of the leases in 2017 and 2018 were US\$1.6 million and US\$1.5 million, of which US\$1.3 million and US\$1.2 million were with executive officers or their immediate relatives, respectively. The Jeonse leases have all been terminated. The Company has taken additional steps to improve its internal control structure to reduce the risk of undisclosed related party transactions.

## **ITEM 8. FINANCIAL INFORMATION**

### **Consolidated Financial Statements**

See "Item 18. Financial Statements" and pages F-1 through F-35 of this annual report.

### **Legal Proceedings**

As an active operating company, we are subject to legal proceedings and claims, either asserted or unasserted, which arise in the ordinary course of business. Although the outcome of such proceedings and claims cannot be predicted with certainty, management does not believe that the outcome of any of these matters will have a material adverse effect on our business, results of operations, financial position or cash flows. Any litigation, however, involves potential risk and potentially significant litigation costs, and therefore there can be no assurance that any litigation which is now pending or which may arise in the future would not have such material adverse effect on our business, financial position, results of operations or cash flows.

All American Semiconductor, Inc. ("All American" or "AASI") was a former distributor for the Company. On April 25, 2007, All American filed for Chapter 11 bankruptcy protection. At the time of the filing, the Company had US\$256 thousand of unpaid accounts receivable from All American. On April 17, 2009 SMI USA and related entities were named as defendants in an adversary proceeding filed by the AASI Creditor Liquidating Trust ("CLT") in the bankruptcy case pending in the U.S. Bankruptcy Court for the Southern District of Florida. The CLT was seeking the return of allegedly avoidable transfers in the amount of US\$854 thousand. SMI USA filed an answer and affirmative defenses. In March 2010, SMI USA settled with the CLT by paying the amount of US\$220 thousand and on April 1, 2010, the Bankruptcy Court granted the motion to approve stipulations to compromise controversy. On August 23, 2010, the Court entered an order dismissing the adversary proceeding. In June 2011, Liquidating Trustee for the CLT filed the AASI Creditor Liquidating Trustee's Seventeenth

Omnibus Objection to Claims but in August 2011, withdrew it with respect to SMI USA’s proof of claim. As a holder of allowed claims, we are entitled to receive distribution pursuant to the bankruptcy plan. As of December 31, 2017, we received total distributions of US\$265 thousand from the CLT and this case is officially closed.

### Significant Changes

No significant changes have occurred since the date of our audited consolidated financial statements.

## ITEM 9. THE OFFER AND LISTING

### Market and Share Price Information

Our ADSs, each representing four of our ordinary shares, have been listed on Nasdaq since June 30, 2005. Our ADSs trade under the symbol “SIMO.” The Nasdaq Global Select Market is the principal trading market for our ADSs, which are not listed on any other exchanges in or outside the United States. The high and low sales prices of our ADSs on Nasdaq since 2015 are as follows:

	Price per ADS (US\$)	
	High	Low
<b>Annual:</b>		
2015 .....	37.60	20.01
2016 .....	55.85	27.41
2017 .....	55.68	37.37
2018 .....	61.85	31.73
2019 .....	50.87	30.86
<b>Quarterly:</b>		
First Quarter, 2018 .....	56.51	42.57
Second Quarter, 2018 .....	54.62	44.54
Third Quarter, 2018 .....	61.85	47.88
Fourth Quarter, 2018 .....	54.76	31.73
First Quarter, 2019 .....	44.30	32.15
Second Quarter, 2019 .....	44.41	36.43
Third Quarter, 2019 .....	47.23	30.86
Fourth Quarter, 2019 .....	50.87	34.73
First Quarter, 2020 .....	53.04	26.72
Second Quarter, 2020 <sup>(1)</sup> .....	52.46	35.10
<b>Monthly</b>		
November 2019 .....	44.55	41.18
December 2019 .....	50.87	42.49
January 2020 .....	53.04	45.62
February 2020 .....	49.75	35.89
March 2020 .....	38.58	26.72
April 2020 .....	47.35	35.10
May 2020 .....	52.46	41.04
June 2020 <sup>(1)</sup> .....	47.43	43.89

(1) Through June 10, 2020.

## **ITEM 10. ADDITIONAL INFORMATION**

### **Memorandum and Articles of Association**

The information called for by Item 10B (“Memorandum and Articles of Association”) is incorporated by reference to the information under the heading “Description of Share Capital” in our Registration Statement on Form F-1, as amended (Registration Number 333-125673) and as filed with the SEC on June 5, 2005.

### **Material Contracts**

We have not entered into any material contracts within the past two fiscal years other than in the ordinary course of business and other than those described in Item 4, “Information on the Company” or elsewhere in this annual report.

### **Exchange Controls**

See “Policy on Dividend Distributions” above.

### **Taxation**

#### **United States Federal Income Taxation**

The following discussion summarizes certain U.S. federal income tax consequences to a U.S. Holder, as defined below, who purchases our ADSs and ordinary shares. This discussion assumes that investors will hold their ADSs or ordinary shares as capital assets (generally, property held for investment). This discussion does not discuss all aspects of U.S. federal income taxation which may be important to particular investors in light of their individual circumstances, including investors subject to special taxation, such as:

- banks and financial institutions;
- brokers and dealers in securities or currencies;
- insurance companies;
- tax-exempt organizations and retirement plans;
- grantor trusts;
- S corporations;
- persons holding ADSs or ordinary shares as part of hedging, conversion, constructive sale, straddle or other integrated transactions;
- persons who acquired their ordinary shares upon the exercise of employee stock options or otherwise as compensation;
- persons who have elected the mark-to-market method of accounting;
- persons who own 10% or more of our ADSs or shares;
- real estate investment trusts or regulated investment companies;
- U.S. persons whose “functional currency” is not the U.S. dollar;
- certain former citizens or long-term residents of the United States; and
- Non-U.S. Holders (as defined below).

This discussion is based in part on representations by the depositary and assumes that each obligation under the deposit agreement and any related agreement will be performed in accordance with its terms. Furthermore, the discussion below is based upon the provisions of the Internal Revenue Code of 1986, as amended (the “Code”), and U.S. Treasury regulations, rulings and judicial decisions hereunder as of the date hereof. Such authorities are subject to change, possibly on a retroactive basis, which may result in U.S. federal income tax consequences different from those discussed below.

**A person considering an investment in our ADSs or ordinary shares is urged to consult its tax advisor concerning U.S. federal, state, local and non-U.S. income and other tax consequences.**

A U.S. Holder is a beneficial owner of ADSs or ordinary shares that is for U.S. federal income tax purposes:

- a citizen or resident individual of the United States;
- a corporation or other entity taxable as a corporation created or organized in or under the laws of the United States, any state thereof, or the District of Columbia;
- an estate the income of which is subject to U.S. federal income taxation, regardless of its source; or
- a trust if it 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 substantial decisions of the trust or has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

A beneficial owner of ADSs or ordinary shares that is not a U.S. Holder is referred to herein as a “Non-U.S. Holder.” If a partnership or limited liability company treated as a partnership for U.S. federal income tax purposes holds ADSs or ordinary shares, the tax treatment of a partner or member will generally depend on the status of the partner or member and the activities of the partnership or such limited liability company. A partner of a partnership or a member of such a limited liability company holding ADSs or ordinary shares is urged to consult its tax advisors regarding an investment in our ADSs or ordinary shares.

*ADSs.* In general, for U.S. federal income tax purposes, a U.S. Holder of ADSs will be treated as the owner of the underlying ordinary shares that are represented by such ADSs. Deposits and withdrawals of ordinary shares in exchange for ADSs will not be subject to U.S. federal income taxation.

*Distributions on ADSs or ordinary shares.* Unless the passive foreign investment company rules, as discussed below, apply, the gross amount of the distributions in respect of the ADSs or ordinary shares will be subject to tax as dividend income to the extent of our current and accumulated earnings and profits, as determined under U.S. federal income tax principles. Subject to certain limitations, dividends paid to non-corporate U.S. Holders, including individuals, may be eligible for a reduced rate of taxation if we are deemed to be a “qualified foreign corporation” for U.S. federal income tax purposes, provided that such holder satisfies certain holding period requirements with respect to the ownership of our ADSs or ordinary shares. Subject to the exceptions discussed below, a corporation is a qualified foreign corporation if it is:

- a foreign corporation that is eligible for the benefits of a comprehensive income tax treaty with the United States that includes an exchange of information program; or
- a foreign corporation if its stock with respect to which a dividend is paid or its ADSs backed by such stock are readily tradable on an established securities market within the United States.

The Cayman Islands does not currently have a comprehensive income tax treaty with the United States. A foreign corporation (even if it is described above) does not constitute a qualified foreign corporation if, for the taxable year in which the dividend is paid or the preceding taxable year, the foreign corporation is or was a passive foreign investment company. Although we believe that we are a qualified foreign corporation because the ADSs will be traded on an established U.S. securities market and, as discussed below, we believe that we were not a passive foreign investment company for our 2019 tax year, no assurance can be given in this regard. In addition, our status as a qualified foreign corporation may change. A U.S. Holder that exchanges its ADSs for ordinary shares may not be eligible for the reduced rate of taxation on dividends if the ordinary shares are not deemed to be readily tradable on an established securities market within the United States.

Dividends will be includable in a U.S. Holder’s gross income on the date actually or constructively received by the depository, in the case of ADSs or, in the case of ordinary shares, by such U.S. Holder. These dividends will not be eligible for the dividends-received deduction generally allowed to U.S. corporations in respect of dividends received from other U.S. corporations.

To the extent we pay dividends on the ADSs or ordinary shares in a currency other than the U.S. dollar, the U.S. dollar value of such dividends should be calculated by reference to the exchange rate prevailing on the date of actual or constructive receipt of the dividend, regardless of whether the foreign currency is converted into U.S. dollars at that time. If the foreign currency is converted into U.S. dollars on the date of actual or constructive receipt of such dividends, the tax basis of the U.S. Holder in such foreign currency will be equal to its U.S. dollar value on that date and, as a result, the U.S. Holder generally should not be required to recognize any foreign currency exchange gain or loss. Dividends paid in respect of the ADSs or ordinary shares generally will be treated as income from sources outside the United States.

To the extent that the amount of any distribution exceeds our current and accumulated earnings and profits, the distribution will first be treated as a tax-free return of capital, causing a reduction in the adjusted basis of the ADSs or ordinary shares, and the balance in excess of adjusted basis will be taxed as capital gain.

*Sale, exchange or other disposition of ADSs or ordinary shares.* Unless the passive foreign investment company rules, as discussed below, apply, upon the sale, exchange or other disposition of ADSs or ordinary shares a U.S. Holder generally will recognize capital gain or loss equal to the difference between the amount realized upon the sale, exchange or other disposition and the adjusted tax basis of the U.S. Holder in the ADSs or ordinary shares. The capital gain or loss generally will be long-term capital gain or loss if, at the time of sale, exchange or other disposition, the U.S. Holder has held the ADS or ordinary share for more than one year. Net long-term capital gains of non-corporate U.S. Holders, including individuals, are eligible for reduced rates of taxation. The deductibility of capital losses is subject to limitations. Any gain or loss that a U.S. Holder recognizes generally will be treated as gain or loss from sources within the United States for U.S. foreign tax credit limitation purposes.

*Additional tax on net investment income.* An additional 3.8% federal income tax may be assessed on net investment income (including dividends, other distributions, and gain realized on the sale of ADSs or ordinary shares) earned by certain U.S. Holders. This tax does not apply to U.S. Holders who hold ADSs or ordinary shares in the ordinary course of certain trades or businesses.

*Passive foreign investment company rules.* In general, we will be classified as a passive foreign investment company for any taxable year in which either (a) at least 75% of our gross income is passive income or (b) at least 50% of the value (determined on the basis of a quarterly average) of our assets is attributable to assets that produce or are held for the production of passive income. For this purpose, passive income generally includes dividends, interest, royalties, rents (other than rents and royalties derived in the active conduct of a trade or business and not derived from a related person), annuities and gains from assets that produce passive income. If we own directly or indirectly at least 25% by value of the equity shares of another corporation, we will be treated for purposes of the passive foreign investment company tests as owning a proportionate share of the assets of the other corporation, and as receiving directly a proportionate share of the other corporation's income.

We believe, based on our present and projected composition of our income and valuation of our assets, we were not classified as a passive foreign investment company for U.S. federal income tax purposes for our 2019 tax year, although no assurance can be given in this regard. Whether we are a passive foreign investment company for any particular taxable year is determined on an annual basis and will depend on the composition of our income and assets, including goodwill. The calculation of goodwill will be based, in part, on the then market value of our capital stock, which is subject to fluctuation. Accordingly, there can be no assurance that we will not be classified as a passive foreign investment company in the current or any future taxable year.

If we are a passive foreign investment company for any taxable year during which a U.S. Holder has an equity interest in our company, unless the U.S. Holder makes a mark-to-market election as discussed below, such U.S. Holder will be subject to special tax rules in any future taxable year regardless of whether we are classified as a passive foreign investment company in such future years with respect to (a) "excess distributions" and (b) gain from the disposition of stock. Excess distributions are defined generally as the excess of the amount received with respect to the equity interests in the taxable year over 125% of the average annual distributions

received in the shorter of either the three previous years or a U.S. Holder's holding period before the taxable year and must be allocated ratably to each day of the U.S. Holder's holding period. The amount allocated to the current taxable year or any year before we became a passive foreign investment company will be included as ordinary income in a U.S. Holder's gross income for that year. The amount allocated to other prior taxable years will be taxed as ordinary income at the highest rate in effect for a U.S. Holder in that prior year and the tax is subject to an interest charge at the rate applicable to deficiencies in income taxes. The entire amount of any gain realized upon the sale or other disposition of the equity interests will be treated as an excess distribution made in the year of sale or other disposition and as a consequence will be treated as ordinary income and, to the extent allocated to years prior to the year of sale or disposition with respect to which we were a passive foreign investment company, will be subject to the interest charge described above.

In certain circumstances, instead of being subject to the excess distribution rules discussed above, a U.S. Holder may make an election to include gain on the ADSs or ordinary shares of a passive foreign investment company as ordinary income under a mark-to-market method, provided that the ADSs or ordinary shares are regularly traded on a qualified exchange. Under current law, the mark-to-market election is only available for ADSs or ordinary shares that are regularly traded within the meaning of U.S. Treasury regulations on certain designated U.S. exchanges and foreign exchanges that meet trading, listing, financial disclosure and other requirements to be treated as a qualified exchange under applicable U.S. Treasury regulations. The Nasdaq Stock Market is a qualified exchange. The ordinary shares may not be eligible for mark-to-market treatment under the foregoing rule even if the ADSs otherwise satisfy the applicable requirement.

If a U.S. Holder makes a mark-to-market election, the U.S. Holder will include each year as ordinary income, rather than capital gain, the excess, if any, of the fair market value of the U.S. Holder's ADSs or ordinary shares at the end of the taxable year over such U.S. Holder's adjusted basis in the ADSs (or ordinary shares, if applicable) and will be permitted an ordinary loss in respect of the excess, if any, of the adjusted basis of these ADSs or ordinary shares over their fair market value at the end of the taxable year, but only to the extent of the net amount previously included in income as a result of the mark-to-market election. A U.S. Holder's basis in the ADSs or ordinary shares will be adjusted to reflect any such income or loss amounts. Any gain or loss on the sale of the ADSs or ordinary shares will be ordinary income or loss, except that this loss will be ordinary loss only to the extent of the previously included net mark-to-market gain.

If we are a passive foreign investment company, then under certain circumstances a U.S. Holder must file Internal Revenue Service Form 8621.

*Information Reporting and Back-up Withholding.* The Foreign Account Tax Compliance Act ("FATCA") generally requires that individuals that hold certain specified foreign financial assets worth in excess of certain thresholds of \$50,000 or more, depending on the individual's circumstances, report such ownership to the IRS using IRS Form 8938. The definition of specified foreign financial assets includes not only financial accounts maintained in foreign financial institutions, but also, unless held in accounts maintained by a financial institution, any stock or security issued by a non-U.S. person, any financial instrument or contract held for investment that has an issuer or counterparty other than a U.S. person and any interest in a foreign entity. A U.S. Holder may be subject to this reporting requirement unless such holder's ADSs or ordinary shares are held in an account at a domestic financial institution. The penalty for failing to file Form 8938 is substantial.

U.S. holders generally are subject to information reporting requirements with respect to dividends on, or proceeds from the disposition of, our ordinary shares. In addition, a U.S. holder may be subject, under certain circumstances, to backup withholding at a rate of up to 24% with respect to dividends paid on, or proceeds from the disposition of, our ordinary shares unless the U.S. holder provides proof of an applicable exemption or correct taxpayer identification number, and otherwise complies with the applicable requirements of the backup withholding rules. A U.S. holder of our ordinary shares who provides an incorrect taxpayer identification number may be subject to penalties imposed by the IRS. Amounts withheld under the backup withholding rules are not an additional tax and may be refunded or credited against the U.S. holder's U.S. federal income tax liability, provided the required information is furnished to the IRS.

A U.S. Holder is urged to consult its tax advisor concerning the U.S. federal income tax consequences of an investment in our ADSs or ordinary shares if we are or become a passive foreign investment company, including the possibility of making a mark-to-market election.

### **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 our company 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. The Cayman Islands are not party to any double taxation treaties. There are no exchange control regulations or currency restrictions in the Cayman Islands.

We have, pursuant to Section 6 of the Tax Concessions Law (1999 Revision) of the Cayman Islands, obtained an undertaking from the Governor-in-Council that:

- no law which is enacted in the Cayman Islands imposing any tax to be levied on profits or income or gains or appreciation applies to us or our operations; and
- the aforesaid tax or any tax in the nature of estate duty or inheritance tax are not payable on our ordinary shares, debentures or other obligations.

The undertaking that we have obtained is for a period of 20 years from March 1, 2005.

In December 2018, the Cayman Islands published The International Tax Co-operation (Economic Substance) Law in response to the OECD's Base Erosion and Profit Shifting (BEPS) standards. Silicon Motion Technology Corp. is a Cayman company and may be affected by the new law's economic substance requirements, which require companies registered in the Cayman Islands to show business activity in the Caymans, tax residency elsewhere, or be subject to penalties. Economic substance requirements will apply to existing Cayman companies, such as our company, from July 1, 2019. See "Risk Factor — The enactment of legislation implementing changes in taxation of international business activities, the adoption of other tax reform policies or change in tax legislation or policies could materially impact our financial position and results of operations."

### **Documents on Display**

We have previously filed with the SEC our registration statement on Form F-6 under the Securities Act of 1933, as amended (the "Securities Act") with respect to our ADSs.

We are subject to the periodic reporting and other informational requirements of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act"). Under the Exchange Act, we are required to file reports and other information with the SEC. Specifically, we are required to file annually a Form 20-F no later than four months after the close of each fiscal year, which is December 31. As a foreign private issuer, we are exempt from the rules under the Exchange Act prescribing the furnishing and content of quarterly reports and proxy statements, and our officers, directors, and principal shareholders are exempt from the reporting and short-swing profit recovery provisions of Section 16 of the Exchange Act.

Copies of reports and other information, when so filed, may be inspected without charge and may be obtained at prescribed rates at the public reference facilities maintained by the Securities and Exchange Commission at the SEC's public reference room in Washington D.C. at 100 F Street, N.E., Room 1580, Washington D.C. 20549. You can request copies of these documents upon payment of a duplicating fee, by writing to the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference rooms. The SEC also maintains a Website at [www.sec.gov](http://www.sec.gov) that contains reports, proxy and information statements, and other information regarding registrants that make electronic filings with the SEC using its EDGAR system.

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

*Interest rate risk.* Our exposure to changes in interest rates is limited to interest income generated by our cash deposited with banks and short-term investments maintained in principal protected notes. We have not entered into any interest rate swap transactions. We do not believe that a 1% change in interest rates would have a significant impact on our operations.

*Foreign currency risk.* Since 2012, we consider our direct exposure to foreign exchange rate fluctuations to be minimal. Prior to 2012, we reported our financial results in NT dollars and our direct exposure to foreign exchange rate fluctuations was more significant. Gains or losses from foreign currency re-measurement are included in “Non-Operating Income (Expenses)” in our Consolidated Financial Statements. The impact of foreign currency transaction gain or loss included in determining net income (loss) for 2017, 2018 and 2019 was US\$(0.2) million, US\$(0.6) million and US\$0.1 million, respectively. Currently, the majority of our revenue, cost of sales, accounts receivable, and accounts payable are denominated in U.S. dollars. Increases in the value of the U.S. dollar relative to other currencies would make our products more expensive, which could negatively impact our ability to compete. Conversely, decreases in the value of the U.S. dollar relative to other currencies could result in our suppliers raising their prices in order to continue doing business with us. Fluctuations in currency exchange rates could harm our business in the future. We do not utilize foreign exchange derivatives contracts to protect against changes in foreign exchange rates.

Also refer to “Risk Factors — Our business, financial condition and results of operations could be adversely affected by the political and economic conditions of the countries in which we conduct business and other factors related to our international operations.”

*Investment Risk.* We invest in equity instruments of privately held companies. We have minority stake equity investments in Cashido, Vastview and Deep Vision, private companies related to the semiconductor and other technology industries. These investments are accounted for under the cost method because our ownership is less than 20% and we do not have the ability to exercise significant influence over the operations of these companies. In 2018, we invested in 49% of the equity of ProGrade which was accounted for this investment under the equity method and we disposal it in 2019. As of December 31, 2019, the aggregate carrying value of these investments on our balance sheet was US\$3.0 million. We monitor these investments for impairment and make appropriate reductions in carrying value when an impairment is deemed to be other than temporary. The impairments losses for the years ended on December 31, 2017, 2018 and 2019 were US\$0.1 million, nil and nil, respectively.

As of December 31, 2019, we also had the short-term investments of US\$2.0 million in principal protected notes.

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

*Depository Fees and Charges.* For the year-ended December 31, 2019, we received from our depository bank a reimbursement of US\$0.6 million, net of withholding tax, for our continuing annual stock exchange listing fees and our other expenses incurred in connection with maintaining and promoting our ADS program. In addition, the depository bank has agreed to reimburse us annually for a fixed number of years for our continuing annual stock exchange listing fees and our other expenses incurred in connection with maintaining and promoting our ADS program. The amount of annual reimbursements is subject to certain limits.

## PART II

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

Not applicable.

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

Not applicable.

### ITEM 15. CONTROLS AND PROCEDURES

#### Disclosure Controls and Procedures

We performed an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2019. Disclosure controls and procedures are designed to ensure that the material financial and non-financial information required to be disclosed in this annual report on Form 20-F and filed with the SEC is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. The evaluation was performed with the participation of our key corporate senior management, and under the supervision of our Chief Financial Officer, or CFO, Riyadh Lai, and our President and Chief Executive Officer, or CEO, Wallace Kou. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable, rather than absolute, assurances of achieving the desired control objectives, and management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the foregoing, our management, including our CEO and CFO, concluded that our disclosure controls and procedures were effective.

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

Our management, including our CEO and CFO, is responsible for establishing and maintaining adequate internal control over financial reporting, as defined under Exchange Act Rules 13a-15(f) and 15d-15(f). Our 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. 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 our assets, (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 our receipts and expenditures are being made only in accordance with appropriate authorizations; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the financial statements.

Our management assessed the effectiveness of our internal control over financial reporting as of the end of the period covered by this annual report based on the criteria set forth in the Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Their assessment included an evaluation of the design of our internal control over financial reporting and testing of the operational effectiveness of our internal control over financial reporting. Based on that assessment, our management concluded that as of December 31, 2019 the company's internal control over financial reporting was effective.

Deloitte & Touche, the independent registered public accounting firm that audited our consolidated financial statements included in this annual report has issued an attestation report regarding internal control over financial reporting.

### ***Changes in Internal Control over Financial Reporting***

During 2019, no change to our internal control over financial reporting occurred that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

### ***Inherent Limitations on Effectiveness of Controls***

All internal control systems no matter how well designed and implemented have inherent limitations. Even systems determined to be effective may not prevent or detect misstatements or fraud and can only provide reasonable assurance with respect to disclosure and financial statement presentation and reporting. Additionally, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changed conditions and the degree of compliance with the policies or procedures may deteriorate.

### ***Attestation Report Of The Independent Registered Public Accounting Firm***

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

To the Shareholders and Board of Directors of  
Silicon Motion Technology Corporation

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

We have audited the internal control over financial reporting of Silicon Motion Technology Corporation and subsidiaries (the “Company”) as of December 31, 2019, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

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, 2019, of the Company and our report dated June 12, 2020 expressed an unqualified opinion on those financial statements and included an explanatory paragraph regarding the Company’s adoption of a new accounting standard.

### ***Basis for Opinion***

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

### ***Definition and Limitations of Internal Control over Financial Reporting***

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ Deloitte & Touche  
Taipei, Taiwan  
The Republic of China  
June 12, 2020

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

Our board of directors has determined that Mr. Tsung-Ming Chung, the Chairman of our audit committee and an independent director, is an "audit committee financial expert" under Nasdaq and SEC rules.

### **ITEM 16B. CODE OF ETHICS**

Our board of directors has adopted a code of business conduct and ethics applicable to every employee of our company, including our CEO and our CFO, consistent with the requirements of the Nasdaq Stock Market. A copy of our code of ethics has been filed with the SEC as Exhibit 11.1 to our annual report on Form 20-F filed on June 30, 2006. For further information, see our Code of Ethics posted on our website ([www.siliconmotion.com](http://www.siliconmotion.com)).

### **ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

Deloitte & Touche has acted as the independent registered public accountants of our company and its subsidiaries for 2018 and 2019. The following table sets forth the aggregate fees by categories specified below in connection with certain professional services rendered by Deloitte & Touche for the periods indicated.

	<u>2018</u>	<u>2019</u>
	US\$	US\$
	(in thousands)	
Audit Fees <sup>(1)</sup> .....	1,011	881
Audit-Related Fees <sup>(2)</sup> .....	—	—
Tax Fees <sup>(3)</sup> .....	200	200
All Other Fees <sup>(4)</sup> .....	—	—
Total .....	1,211	1,081

(1) *Audit Fees.* This category includes the audit and review of our annual financial statements and services that are normally provided by the independent auditors in connection with regulatory filings or engagements, consultations provided on audit and accounting matters that arise during, or as a result of, the audits or the reviews of interim financial statements, audit procedures related to reviews of offering documents, registration statements and issuance of comfort letters.

- (2) *Audit-Related Fees.* This category consists of assurance and related services by Deloitte & Touche that are reasonably related to the performance of the audit or review of our financial statements and are not reported above under “Audit Fees.” Deloitte & Touche did not provide any services under this category in 2018 or 2019.
- (3) *Tax Fees.* This category consists of professional services rendered by Deloitte & Touche for tax compliance and tax advice. The services for the fees disclosed in this category include tax return preparation and technical tax advice.
- (4) *All other fees.* Deloitte & Touche did not provide any services under this category in 2018 or 2019.

Our audit committee is responsible for the retention of our independent registered public accounting firm, which currently is Deloitte & Touche. Our audit committee has adopted its own rules of procedure, in the form of an audit committee charter. The audit committee’s rules of procedure provide for a process with respect to the prior approval of all non-audit services to be performed by our independent auditors. Our audit committee reports to our board of directors regarding the scope and results of our annual audits, compliance with our accounting and financial policies and management’s procedures and policies related to the adequacy of our internal accounting controls.

In 2019 our audit committee approved all of the audit services provided by Deloitte & Touche and the other services provided by Deloitte & Touche.

**ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES**

Not applicable.

**ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS**

Not applicable.

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

Not applicable.

**ITEM 16G. CORPORATE GOVERNANCE**

We are incorporated in the Cayman Islands and our corporate governance practices are governed by applicable Cayman Islands law. In addition, because our ADSs are listed on the Nasdaq Global Select Market, we are subject to Nasdaq corporate governance requirements. Nasdaq Listing Rule 5615(a)(3) permits foreign private issuers like us to follow “home country practice” with respect to certain corporate governance matters, such as, for example, our establishment in 2015 of our 2015 Incentive Plan. We are committed to a high standard of corporate governance. As such, we endeavor to comply with the Nasdaq corporate governance practices and believe that we are currently in compliance with Nasdaq corporate governance practices that are applicable to foreign private issuers.

### PART III

#### ITEM 17. FINANCIAL STATEMENTS

Not applicable.

#### ITEM 18. FINANCIAL STATEMENTS

Our consolidated financial statements are included in this annual report at pages F-1 through F-35.

#### ITEM 19. EXHIBITS

<u>Exhibit Number</u>	<u>Description</u>
1.1	Memorandum of Association of the Registrant (incorporated by reference to Exhibit 3.1 to the company's Registration Statement on Form F-1 (file no. 333-125673) filed with the Securities and Exchange Commission on June 9, 2005).
1.2	Articles of Association of the Registrant (incorporated by reference to Exhibit 3.2 to the company's Registration Statement on Form F-1 (file no. 333-125673) filed with the Securities and Exchange Commission on June 9, 2005).
2.1	Specimen of American Depositary Receipt (incorporated by reference to Exhibit 4.1 to the company's Registration Statement on Form F-1 (file no. 333-125673) filed with the Securities and Exchange Commission on June 9, 2005).
2.2	Form of Amended and Restated Deposit Agreement (incorporated by reference to Exhibit 1 to the company's Registration Statement on Form F-6 (file no. 333-125801) filed with the Securities and Exchange Commission on December 5, 2013).
2.3	Silicon Motion Technology Corporation 2015 Incentive Plan (incorporated by reference to Exhibit 4.1 of the Company's registration statement on Form S-8 filed June 11, 2015).
4.1	Share Purchase Agreement dated as of April 24, 2015 among Silicon Motion Technology Corporation, Silicon Motion Technology (Hong Kong) Ltd., F-Tec Holdings International Ltd., the shareholders of F-Tec Holdings International Ltd. and Xueshi Yang, as the Sellers' Representative (incorporated by reference to Exhibit 4.13 to the Company's Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 30, 2015).
8.1*	List of Subsidiaries.
11.1	Code of Ethics (incorporated by reference to Exhibit 11.1 to the company's Annual Report on Form 20-F filed with the Securities and Exchange Commission on June 30, 2006).
12.1*	Certification of Chief Executive Officer Required by Rule 13a-14(a).
12.2*	Certification of Chief Financial Officer Required by Rule 13a-14(a).
13.1*	Certification of Chief Executive Officer and Chief Financial Officer required by Rule 13a-14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code.
23.1*	Consent of Deloitte & Touche.
101.INS*	Inline XBRL Instance Document — the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document

<b>Exhibit Number</b>	<b>Description</b>
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File — the cover page XBRL tags are embedded within the Exhibit 101 Inline XBRL document set

\* Filed herewith.

**SIGNATURES**

The registrant hereby certifies that it meets all 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.

**SILICON MOTION TECHNOLOGY CORPORATION**

**By:** \_\_\_\_\_ /s/ WALLACE C. KOU  
**Wallace C. Kou,**  
**President and Chief Executive Officer**

Date: June 12, 2020

**SILICON MOTION TECHNOLOGY CORPORATION AND SUBSIDIARIES**  
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## **REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Shareholders and the Board of Directors of  
Silicon Motion Technology Corporation

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

We have audited the accompanying consolidated balance sheets of Silicon Motion Technology Corporation and subsidiaries (the “Company”) as of December 31, 2018 and 2019, the related consolidated statements of income, comprehensive income, changes in shareholders’ equity, and cash flows for each of the three years in the period ended December 31, 2019, 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 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, 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, 2019, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated June 12, 2020, expressed an unqualified opinion on the Company’s internal control over financial reporting.

### **Change in Accounting Principle**

As discussed in Note 2 and Note 18 to the financial statements, the Company has changed its method of accounting for leases in 2019 due to the adoption of FASB Accounting Standards Codification (“ASC”) Topic 842, *Leases*.

### **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.

### **Critical Audit Matter**

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

**Goodwill — Shannon Reporting Unit — Refer to Notes 2 and 10 to the financial statements.**

***Critical Audit Matter Description***

The Company's evaluation of goodwill for impairment involves the comparison of the fair value of each reporting unit to its carrying value. The Company used the discounted cash flow model to estimate fair value, which requires management to make significant estimates and assumptions related to forecasts of revenue and selection of discount rates. Changes in these assumptions could have a significant impact on either the fair value, the amount of any goodwill impairment charge, or both. Due to a significantly reduced sales forecast during the year, the Company was required to test goodwill impairment for its Shannon reporting unit ("Shannon") during an interim period that resulted in a write down of US\$15,715 thousand. As a result, the goodwill balance related to Shannon was approximately US\$17,489 thousand as of December 31, 2019. The fair value of Shannon exceeded its carrying value as of November 30, 2019, the measurement date and, therefore, no further impairment was recognized.

We identified goodwill valuation of Shannon as a critical audit matter because of the subjectivity in estimating the forecast of future revenue and selection of the discount rate. This required a high degree of auditor judgment and an increased extent of effort, including the need to involve our fair value specialists, when evaluating the audit evidence supporting these estimates.

***How the Critical Audit Matter Was Addressed in the Audit***

Our audit procedures related to forecasts of future revenue and selection of the discount rate for Shannon included the following, among others:

- We tested the effectiveness of controls over management's goodwill impairment valuation, including those over the determination of the fair value of Shannon, such as controls related to management's forecasts of revenue and selection of the discount rate.
- We evaluated management's ability to accurately forecast future revenue by comparing actual results to management's historical forecasts.
- We evaluated the reasonableness of management's forecasts of revenue by comparing the forecasts to:
  - Historical revenues.
  - Internal communications to management and the Board of Directors of the Company's business plans that support the forecast of revenue.
  - Forecasted information included in Company's press releases as well as in analyst and industry reports for the Company and its peer companies.
- We evaluated the impact of changes in management's forecasts from November 30, 2019, the annual measurement date, to December 31, 2019.
- With the assistance of our fair value specialists, we evaluated the reasonableness of the discount rate by (1) testing the source information underlying the determination of the discount rate and the mathematical accuracy of the calculation, and (2) developing a range of independent estimates and comparing those to the discount rate selected by management.

/s/ Deloitte & Touche  
Taipei, Taiwan  
The Republic of China  
June 12, 2020

We have served as the Company's auditor since 1999.

**SILICON MOTION TECHNOLOGY CORPORATION AND SUBSIDIARIES**

**CONSOLIDATED BALANCE SHEETS**

(In Thousands, Except Par Value)

	December 31	
	2018	2019
	US\$	US\$
<b>ASSETS</b>		
Current Assets		
Cash and cash equivalents	284,989	323,166
Short-term investments	3,609	2,010
Notes and accounts receivable, net	91,763	108,734
Inventories	81,518	88,439
Restricted assets-current	19,157	24,085
Noncurrent assets held for sale	10,576	10,405
Prepaid expenses and other current assets	6,878	8,360
Total current assets	498,490	565,199
Long-term investments	4,242	3,000
Property and equipment, net	101,410	98,488
Deferred income tax assets, net	5,066	3,948
Goodwill	58,331	17,489
Intangible assets, net	1,021	—
Operating lease assets	—	8,603
Other assets	4,054	1,002
Total assets	672,614	697,729
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
Current Liabilities		
Notes and accounts payable	27,657	30,687
Income tax payable	4,163	2,465
Refund liabilities	2,093	2,260
Current portion of long-term payable	319	—
Accrued expenses and other current liabilities	79,419	96,076
Total current liabilities	113,651	131,488
Other long-term liabilities	26,686	29,457
Total liabilities	140,337	160,945
Commitments and Contingencies (Note 19)		
Shareholders' Equity		
Ordinary Shares at US\$0.01 par value per share		
Authorized: 500,000 thousand shares		
Issued and outstanding: 144,679 thousand shares in 2018 and 139,110 thousand shares in 2019	1,447	1,391
Additional paid-in capital	263,230	265,210
Accumulated other comprehensive income (loss)	495	(785)
Retained Earnings	301,860	270,968
Treasury Stock	(34,755)	—
Total shareholders' equity	532,277	536,784
Total liabilities and shareholders' equity	672,614	697,729

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

**SILICON MOTION TECHNOLOGY CORPORATION AND SUBSIDIARIES**

**CONSOLIDATED STATEMENTS OF INCOME**  
(In Thousands, Except Earnings Per Share)

	Year Ended December 31		
	2017	2018	2019
	US\$	US\$	US\$
NET SALES .....	523,404	530,348	457,253
COST OF SALES .....	272,210	269,541	235,081
GROSS PROFIT .....	251,194	260,807	222,172
OPERATING EXPENSES			
Research and development .....	102,053	102,028	110,305
Sales and marketing .....	25,868	29,279	25,108
General and administrative .....	16,933	17,633	17,878
Impairment of goodwill and intangible assets .....	10,337	4,069	15,970
Amortization of intangible assets .....	2,534	2,964	766
Gain from disposal of noncurrent assets held for sale .....	(1,880)	—	—
Total operating expenses .....	155,845	155,973	170,027
OPERATING INCOME .....	95,349	104,834	52,145
NON-OPERATING INCOME (EXPENSES)			
Gain from disposal of subsidiary .....	—	—	12,409
Gain from disposal of long-term investments .....	—	—	473
Gain from disposal of short-term investments .....	103	134	48
Interest income .....	4,268	6,301	6,751
Foreign exchange gain (loss), net .....	(157)	(615)	148
Impairment of long-term investments .....	(120)	—	—
Interest expense .....	(423)	(378)	(3)
Loss on equity-method investment .....	—	(473)	—
Other income (loss), net .....	(19)	58	103
Total non-operating income .....	3,652	5,027	19,929
INCOME BEFORE INCOME TAX .....	99,001	109,861	72,074
INCOME TAX EXPENSE .....	24,046	11,791	7,676
NET INCOME .....	74,955	98,070	64,398
EARNINGS PER ORDINARY SHARE:			
Basic .....	0.53	0.68	0.46
Diluted .....	0.52	0.68	0.46
WEIGHTED AVERAGE ORDINARY SHARES OUTSTANDING			
Basic (Thousands) .....	142,738	144,123	140,708
Diluted (Thousands) .....	143,606	144,512	141,183
EARNINGS PER ADS (one ADS equals four ordinary shares):			
Basic .....	2.10	2.72	1.83
Diluted .....	2.09	2.71	1.82
WEIGHTED AVERAGE ADS OUTSTANDING			
Basic (Thousands) .....	35,684	36,031	35,177
Diluted (Thousands) .....	35,902	36,128	35,296

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

**SILICON MOTION TECHNOLOGY CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**  
(In Thousands)

	<u>Year Ended December 31</u>		
	<u>2017</u>	<u>2018</u>	<u>2019</u>
	<u>US\$</u>	<u>US\$</u>	<u>US\$</u>
NET INCOME .....	74,955	98,070	64,398
OTHER COMPREHENSIVE INCOME (LOSS), NET OF TAX EFFECT OF NIL			
Change in net foreign currency translation adjustments .....	3,390	(2,148)	(1,265)
Change in deferred pension gain (loss) .....	285	—	(15)
OTHER COMPREHENSIVE INCOME (LOSS) .....	<u>3,675</u>	<u>(2,148)</u>	<u>(1,280)</u>
TOTAL COMPREHENSIVE INCOME .....	<u>78,630</u>	<u>95,922</u>	<u>63,118</u>

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

**SILICON MOTION TECHNOLOGY CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY**  
(In Thousands, Except Per Share Data)

	Ordinary Share		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Treasury Stock	Total Shareholders' Equity
	Shares (thousands)	Amount US\$					
BALANCE, JANUARY 1, 2017 . . . .	141,311	1,413	226,658	(1,032)	215,724	—	442,763
Net income . . . . .	—	—	—	—	74,955	—	74,955
Other comprehensive income . . . .	—	—	—	3,675	—	—	3,675
Stock-based compensation expenses . . . . .	—	—	15,494	—	—	—	15,494
Issuance of ordinary shares upon exercise of employee stock options and restricted stock units . . . . .	1,851	18	335	—	—	—	353
Dividends declared (US\$0.30 per ordinary share) . . . . .	—	—	—	—	(43,189)	—	(43,189)
BALANCE, DECEMBER 31, 2017 ..	143,162	1,431	242,487	2,643	247,490	—	494,051
Net income . . . . .	—	—	—	—	98,070	—	98,070
Other comprehensive income (loss) . . . . .	—	—	—	(2,148)	—	—	(2,148)
Stock-based compensation expenses . . . . .	—	—	20,779	—	—	—	20,779
Issuance of ordinary shares upon exercise of employee stock options and restricted stock units . . . . .	1,517	16	(36)	—	—	—	(20)
Share repurchase . . . . .	—	—	—	—	—	(34,755)	(34,755)
Dividends declared (US\$0.30 per ordinary share) . . . . .	—	—	—	—	(43,700)	—	(43,700)
BALANCE, DECEMBER 31, 2018 ..	144,679	1,447	263,230	495	301,860	(34,755)	532,277
Net income . . . . .	—	—	—	—	64,398	—	64,398
Other comprehensive income (loss) . . . . .	—	—	—	(1,280)	—	—	(1,280)
Stock-based compensation expenses . . . . .	—	—	14,591	—	—	—	14,591
Issuance of ordinary shares upon exercise of restricted stock units . . . . .	1,505	15	(37)	—	—	—	(22)
Share repurchase . . . . .	—	—	—	—	—	(25,103)	(25,103)
Treasury stock retired . . . . .	(7,074)	(71)	(12,574)	—	(47,213)	59,858	—
Dividends declared (US\$0.35 per ordinary share) . . . . .	—	—	—	—	(48,077)	—	(48,077)
BALANCE, DECEMBER 31, 2019 ..	139,110	1,391	265,210	(785)	270,968	—	536,784

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

**SILICON MOTION TECHNOLOGY CORPORATION AND SUBSIDIARIES**

**CONSOLIDATED STATEMENTS OF CASH FLOWS**

**(In Thousands)**

	<b>Year Ended December 31</b>		
	<b>2017</b>	<b>2018</b>	<b>2019</b>
	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>			
Net income	74,955	98,070	64,398
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	10,599	11,832	12,447
Amortization of intangible assets	2,534	2,964	766
Gain from disposal of short-term investments	(103)	(134)	(48)
Gain from disposal of subsidiary	—	—	(12,409)
Gain from disposal of long-term investments	—	—	(473)
Loss on equity-method investment	—	473	—
Impairment of long-term investments	120	—	—
Stock-based compensation	15,494	20,779	14,591
Loss on disposal of property and equipment	4	66	22
Impairment of goodwill and intangible assets	10,337	4,069	15,970
Gain from disposal of noncurrent assets held for sale	(1,880)	—	—
Deferred income taxes	581	(1,664)	1,118
Changes in operating assets and liabilities:			
Short-term investments	(3,208)	3,240	1,627
Notes and accounts receivable	(5,156)	(12,628)	(18,755)
Inventories	(22,299)	12,668	(10,155)
Prepaid expenses and other current assets	1,585	2,689	(1,932)
Other assets	(138)	142	(397)
Notes and accounts payable	24,248	(28,766)	4,426
Refund liabilities	—	2,093	167
Accrued expenses and other current liabilities	458	(4,679)	10,607
Income tax payable	(8,779)	(7,329)	(1,698)
Other liabilities	4,529	4,357	(2,577)
Net cash provided by operating activities	<u>103,881</u>	<u>108,242</u>	<u>77,695</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>			
Purchase of long-term investment	—	(4,715)	—
Proceeds from sale of subsidiary	—	—	43,968
Proceeds from sale of long-term investment	—	—	1,715
Business acquisition-net of cash, cash equivalents, and restricted cash acquired	(2,865)	—	—
Purchase of property and equipment	(11,683)	(74,853)	(11,015)
Net cash provided by (used in) investing activities	<u>(14,548)</u>	<u>(79,568)</u>	<u>34,668</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>			
Proceeds from issuance of ordinary shares upon exercise of employee stock options	380	—	—
Proceeds from bank loan	25,000	—	—
Repayments of bank loan	(25,000)	(25,000)	—
Dividends paid	(32,120)	(43,281)	(44,029)
Share repurchase	—	(33,539)	(26,231)
Net cash used in financing activities	<u>(31,740)</u>	<u>(101,820)</u>	<u>(70,260)</u>
NET INCREASE (DECREASE) IN CASH, CASH EQUIVALENTS, AND RESTRICTED CASH	57,593	(73,146)	42,103
EFFECT OF EXCHANGE RATE CHANGES	2,753	(1,250)	(977)
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH, BEGINNING OF YEAR	321,177	381,523	307,127
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH, END OF YEAR	<u>381,523</u>	<u>307,127</u>	<u>348,253</u>
<b>SUPPLEMENTAL INFORMATION</b>			
Interest paid	<u>367</u>	<u>376</u>	<u>—</u>
Income taxes paid	<u>30,910</u>	<u>13,792</u>	<u>5,612</u>
<b>Acquisition of Bigtera</b>			
Fair value of assets acquired, net of cash, cash equivalents, and restricted cash acquired	4,586	—	—
Other current liabilities	(1,244)	—	—
Other long-term liabilities	(477)	—	—
Cash paid for business acquisition, net of cash, cash equivalents, and restricted cash acquired	<u>2,865</u>	<u>—</u>	<u>—</u>
<b>Disposal of FCI</b>			
Total consideration	—	—	54,129
Other current assets	—	—	(245)
Cash and restricted cash disposed	—	—	(9,916)
Proceeds from sale of subsidiary	<u>—</u>	<u>—</u>	<u>43,968</u>

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

**SILICON MOTION TECHNOLOGY CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**(In Thousands)**

**1. ORGANIZATION AND OPERATIONS**

Silicon Motion Technology Corporation (“SMTC”, collectively with its subsidiaries the “Company”) is the global leader in selling NAND flash controllers for solid state storage devices and the merchant leader in supplying SSD controllers. The Company has the broadest portfolio of controller technologies and its controllers are widely used in embedded storage products such as SSDs and eMMC and UFS devices, which are found in smartphones, PCs and commercial and industrial applications. It has shipped over six billion NAND controllers in the last ten years, more than any other company in the world. The Company also supplies customized high-performance hyperscale data center and industrial SSD solutions. The Company’s customers include most of the NAND flash vendors, storage device module makers and leading OEMs. For further information on Silicon Motion, visit us at [www.siliconmotion.com](http://www.siliconmotion.com).

**2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

***Basis of Presentation***

The consolidated financial statements have been prepared in accordance with U.S. GAAP. The consolidated financial statements include the accounts of SMTC and its wholly-owned subsidiaries. The Company owns 100% of the outstanding shares in all of its subsidiaries. All significant intercompany balances and transactions have been eliminated upon consolidation.

***Use of Estimates***

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect certain reported amounts and disclosures. The actual results could differ from those estimates.

***Disposal of Subsidiary***

The Company accounts for the disposal of a subsidiary when it ceases to control the subsidiary’s assets and liabilities. A gain or loss is recognized and measured as the difference between the fair value of consideration received or to be received and the value of assets, liabilities and equity components de-recognized, related to that subsidiary when deconsolidated.

On May 31, 2019, the Company completed the sale of FCI to Dialog Semiconductor for a total consideration of approximately US\$ 54 million. The Company derecognized the assets and liabilities and recorded a gain of US\$12,409 thousand, net of transaction fees on the disposal, which is the difference between the consideration of US\$54 million and the US\$39,367 thousand carrying value of the subsidiary. US\$5,400 thousand of the consideration was withheld and deposited into an escrow account and, as the escrowed amount is expected to be released within 12 months, it was classified as restricted assets-current on the consolidated balance sheet as of December 31, 2019.

***Concentration of Credit Risk and Significant Customers***

Financial instruments that potentially subject the Company to a significant concentration of credit risk consist principally of cash equivalents, short term investments and accounts receivable. Cash, cash equivalents and short-term investments balances are maintained with high quality financial institutions, the composition and

maturities of which are regularly monitored by management. The Company believes that the concentration of credit risk in its trade receivables, is substantially mitigated by the Company's credit evaluation process, relatively short collection terms and the high level of credit worthiness of its customers. The Company performs ongoing credit evaluations of its customers' financial conditions and limits the amount of credit extended based upon payment history and the customer's current credit worthiness. The Company regularly reviews the allowance for bad debt and doubtful accounts by considering factors such as historical experience, credit quality, age of the accounts receivable balances and current economic conditions that may affect a customer's ability to pay.

Historically, a relatively small number of customers have accounted for a significant portion of our net revenue. Sales to two customers in 2017, 2018 and 2019, accounted for 10% or more of our net revenue, representing 39%, 34% and 31% of our net revenue in 2017, 2018 and 2019, respectively. In 2019, the significant customers were Intel and Micron and in 2017 and 2018, were SK Hynix and Intel. The Company's top ten customers in 2017, 2018 and 2019 accounted for approximately 72%, 69% and 74% of net sales, respectively.

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

The carrying amount of the Company's financial instruments, including cash and cash equivalents, notes and accounts receivable and notes and accounts payables approximates fair value due to the short-term maturity of the instruments. Fair values of short-term investments represent quoted market prices, if available. If no quoted market prices are available, fair values are estimated based on discounted cash flow, or other valuation techniques. Long-term investments in privately-held companies with no readily determinable market value are recorded using the cost method, since the cost of obtaining verifiable fair value is unreasonably high. Upon adoption of Accounting Standard Update No. 2016-01, Recognition and Measurement of Financial Assets and Financial Liabilities ("ASU 2016-01") starting January 1, 2018, these investments are measured at cost less impairment, if any, plus or minus any changes resulting from observable price changes in orderly transactions for an identical or similar investment of the same issuer. Any resulting change in carrying amount would be reflected in net income. The Company's long-term liabilities approximate their fair values as they contain interest rates that vary according to market interest rates.

Fair value is the price that would be received upon sale of an asset or paid upon transfer of a liability in an orderly transaction between market participants at the measurement date and in the principal or most advantageous market for that assets or liability. The fair value should be calculated based on assumptions that market participants would use in pricing the asset or liability, not on assumptions specific to the Company. 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. The hierarchy prioritizes the inputs into three levels based on the extent to which inputs used in measuring fair value are observable in the market. Each fair value measurement is reported in one of the three levels which is determined by the lowest level input that is significant to the fair value measurement in its entirety. These levels are:

Level 1 — Use unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2 — Use observable inputs other than Level 1 prices such as quoted prices for identical or similar instruments in markets that are not active, quoted prices for similar instruments in active markets, and model-based valuation in which all significant inputs are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 — Use inputs that are generally unobservable and reflect the use of significant management judgments and estimates.

See Note 21, "Fair Value Measurement", for the related disclosure.

### ***Cash Equivalents***

The Company considers all highly liquid instruments acquired with a remaining maturity of three months or less when purchased to be cash equivalents. In addition, time deposits with maturities ranging from more than three months to one year are considered qualified as cash equivalents as the nature of the time deposits are similar to cash such that without advance notice to the bank, they can be readily converted into known amounts of cash with the principal of the time deposits protected and not subject to penalty in the event of an early withdrawal. Also, the risk of changes in value because of changes in interest rates is insignificant due to the fact that the Company can still earn interest based on a rate close to the on-going published interest rate applicable for the actual period of the time deposits in the event of an early withdrawal. Cash and cash equivalents are stated at cost, which approximates their fair value.

### ***Short-term Investments***

The Company's short-term investments primarily includes short-term income yielding investments with original maturities greater than three months from the purchase date and remaining maturities less than one year. These short-term investments consist mostly of bond funds and principal protected notes that are bought and held principally for the purpose of selling them in the near term and are classified as trading securities as well as senior notes classified as held-to-maturity investments with maturities less than one year. Trading securities are reported at fair value with the subsequent changes in fair value recorded in earnings as unrealized gains and losses. Senior notes are measured at amortized cost using the effective interest method less any impairment.

### ***Allowance for Doubtful Receivables***

An allowance for doubtful receivables is provided based on a review of the collectability of accounts receivables. The Company determines the amount of allowance for doubtful receivables by examining the historical collection experience and current trends in the credit quality of its customers as well as its internal credit policies.

### ***Inventories***

Inventories are stated at the lower of cost or net realizable value for raw materials, work in process and finished goods. Inventories are recorded at standard cost and adjusted to the approximate weighted-average cost at the balance sheet date. The Company assesses its net realizable value of the inventory for estimated obsolescence or unmarketable inventory based upon management's assumptions about future demand and market conditions. In estimating reserves for obsolescence, the Company primarily evaluates estimates based on the timing of the introduction of new products and the quantities remaining of old products and provides reserves for inventory on hand in excess of the estimated demand. Estimated losses on slow-moving items are recognized and included in the allowance for losses.

### ***Long-term Investments***

Investee companies over which the Company had the ability to exercise significant influence but did not have a controlling interest and was the primary beneficiary were accounted for using the equity method. Significant influence was generally considered to exist when the Company had an ownership interest in the voting shares of the investee between 20% and 50%, and other factors, such as representation in the investee's board of directors, voting rights and the impact of commercial arrangements, were considered in determining whether the equity method of accounting was appropriate. Under this method of accounting, the Company recorded its proportionate share of the net earnings or losses of equity method investees and a corresponding increase or decrease to the investment balances. The Company evaluated its equity method investments for impairment whenever events or changes in circumstances indicated that the carrying amounts of such investments might not be recoverable.

Prior to adopting ASU 2016-01 on January 1, 2018, the Company had long-term investments in companies that it does not exercise significant influence and accounted for these investments under the cost method. Management regularly evaluates financial information related to these investments to determine whether an other than temporary decline in their value exists. Factors indicative of an other than temporary decline include recurring operating losses, credit defaults and subsequent rounds of financings at an amount below the cost basis of the investment. Management periodically weighs all quantitative and qualitative factors in determining if any impairment loss exists. When a decline in value is deemed to be other-than-temporary, the Company recognizes an impairment loss in other income and expense. After adopting ASU 2016-01 on January 1, 2018, the Company elected to record equity investments without readily determinable fair values and not accounted for by the equity method at cost less impairment, adjusted for subsequent observable price changes whether there are observable price changes in orderly transactions for the identical or similar investment of the same issuer.

### ***Noncurrent Assets Held for Sale***

Noncurrent assets are presented separately as held for sale when the Company is committed to selling the asset, an active plan of sale has commenced, and the sale is expected to be completed within 12 months or under a specified market condition that meets an exception to one-year requirement. Assets held for sale are measured at the lower of their carrying amount and fair value less cost to sell. Assets held for sale are no longer amortized or depreciated.

### ***Property and Equipment***

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

Depreciation is computed using the straight-line method over estimated useful lives that range as follows: buildings — 25 to 50 years; machinery and equipment — 3 to 6 years; furniture and fixtures — 3 to 8 years; software — 1 to 5 years; leasehold and buildings improvement — the shorter of the estimated useful life or lease term, which is generally 2 to 6 years. Land is not depreciated. Depreciation expense on property and equipment were approximately US\$10,599 thousand, US\$11,832 thousand and US\$12,447 thousand for the years ended December 31, 2017, 2018 and 2019, respectively.

Upon the sale or other disposal of property and equipment, the related cost and accumulated depreciation are removed from the accounts, and any gain or loss is credited or charged to operating income.

### ***Lease***

On January 1, 2019, the Company adopted Accounting Standards Update No. 2016-02, Leases (Topic 842) (ASU 2016-02) using the modified retrospective transition approach by applying the new standard to all leases existing at the date of initial application. The Company elected the package of practical expedients permitted under the transition guidance within the new standard, which among other things, allows the Company to carry forward the historical lease classification. The Company elected to apply the short-term lease measurement and recognition exemption in which right-of-use assets and lease liabilities are not recognized for short-term leases. Results and disclosure requirements for reporting periods beginning after January 1, 2019 are presented under Topic 842, while prior period amounts have not been adjusted and continue to be reported in accordance with our historical accounting under Topic 840.

Upon adoption, the Company recognized leased assets and corresponding liabilities in operating lease assets of US\$7,202 thousand, which includes US\$238 thousand of previously recognized prepaid use rights, as well as corresponding accrued expenses and other current liabilities of US\$1,428 thousand and other long-term liabilities of US\$5,536 thousand.

The lease assets include adjustments for prepayments and accrued lease payments. The adoption did not impact the beginning retained earnings, or the prior year consolidated statements of income and statements of cash flows. Under Topic 842, the Company determines if an arrangement is a lease at inception. The lease assets and liabilities are recognized at commencement date based on the present value of remaining lease payments over the lease term. For this purpose, the Company considers only payments that are fixed and determinable at the time of commencement. As most of the leases do not provide an implicit rate, the Company uses the incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. The incremental borrowing rate is based on the estimated rate of interest for collateralized borrowing over a similar term of the lease payments. The operating lease asset also includes any lease payments made prior to commencement and is recorded net of any lease incentives received. The lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise such options. When determining the probability of exercising such options, the Company considers contract-based, asset-based, entity-based, and market-based factors. The lease agreements may contain variable costs such as common area maintenance, insurance, real estate taxes or other costs. Variable lease costs are expensed as incurred on the consolidated statements of income. The lease agreements generally do not contain any residual value guarantees or restrictive covenants. The Company recognized leased assets in operating lease assets of US\$8,603 thousand and corresponding accrued expenses and other current liabilities of US\$3,046 thousand, and other long-term liabilities of US\$5,621 thousand. The weight average remaining lease term was 3.5 years, and the weight average discount rate was 3.78% as of December 31, 2019.

#### ***Government Grants***

Grants received by the Company from the Korean government to assist with specific research and development activities were deducted from those research and development costs incurred, in the period in which the related expenses are incurred, to the extent that they are non-refundable. Government grants that were used for the acquisition of fixed assets were deducted from the acquisition costs of the acquired assets and amortized over the useful lives of the related assets. The Company recognized refundable government grants as long-term payable and current portion of long-term payable on its consolidated balance sheet.

#### ***Goodwill and Intangible Assets***

Goodwill is the excess of the purchase price paid over the fair value of the net tangible and intangible assets acquired in a business combination. Intangible assets, which consist primarily of development technology, are amortized over their estimated useful lives, of 3.5 to 5.5 years.

#### ***Impairment of Goodwill and Long-Lived Assets***

The Company evaluates the recoverability of long-lived assets whenever events or changes in circumstances indicate the carrying value may not be recoverable. The determination of recoverability is based on an estimate of undiscounted cash flows expected to result from the use of an asset and its eventual disposition. The estimate of cash flows is based upon, among other things, certain assumptions about expected future operating performance, growth rates and other factors. Estimates of undiscounted cash flows may differ from actual cash flows due to, among other things, technological changes, economic conditions, changes to the business model or changes in operating performance. If the sum of the undiscounted cash flows is less than the carrying value, an impairment loss is recognized, measured as the amount by which the carrying value exceeds the fair value of the asset. Fair value is determined by reference to quoted market prices, if available, or discounted cash flows, as appropriate. See Note 10, "Goodwill and Acquired Intangible Assets," regarding impairment testing in fiscal year 2017, 2018 and 2019.

The Company monitors the recoverability of goodwill recorded in connection with acquisitions, by reporting unit, annually, or sooner if events or changes in circumstances indicate that the carrying amount may

not be recoverable. The Company conducts its annual impairment test of goodwill on November 30. Reporting units may be operating segments as a whole or an operation one level below an operating segment, referred to as a component. Prior to fiscal 2017, goodwill impairment is tested using a two-step approach. The first step compares the fair value of a reporting unit to its carrying amount, including goodwill. If the fair value of the reporting unit is greater than its carrying amount, goodwill is not considered impaired and the second step is not required. If the fair value of the reporting unit is less than its carrying amount, the second step of the impairment test measures the amount of the impairment loss, if any, by comparing the implied fair value of goodwill to its carrying amount. If the carrying amount of goodwill exceeds its implied fair value, an impairment loss is recognized equal to that excess. The implied fair value of goodwill is calculated in the same manner that goodwill is calculated in a business combination, whereby the fair value of the reporting unit is allocated to all of the assets and liabilities of that unit, with the excess purchase price over the amounts assigned to assets and liabilities.

In January 2017, the Financial Accounting Standards Board (“FASB”) issued Accounting Standard Update (“ASU”) 2017-04, which removes step two from the goodwill impairment test. The Company elected to early adopt this ASU in the fourth quarter of 2017, in conjunction with the Company’s annual review for impairment.

Estimating fair value is performed by utilizing various valuation approaches, such as income approach or market approach. The total of all reporting unit fair values is also compared to the Company’s market capitalization plus control premium for reasonableness. See Note 10, “Goodwill and Acquired Intangible Assets,” regarding impairment testing.

#### ***Other Assets***

Other assets primarily consist of industrial property right and deposit for office leases.

#### ***Restricted Assets***

Restricted assets consist of restricted cash. Restricted cash represents cash set aside as collateral for obtaining capacity, escrow relating to the sale of a subsidiary and borrowings as well as cash received from government grants with restriction on its usage.

#### ***Bank loans***

Revolver credit from financial institutions are stated at the amount of unpaid principal.

#### ***Other long-term liabilities***

Other long-term liabilities primarily consist of noncurrent lease liabilities and unrecognized tax benefit.

#### ***Pension Costs***

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

#### ***Revenue Recognition***

Through the fiscal year ended December 31, 2017, revenue from product sales was generally recognized upon shipment to the customer provided that the Company had received a signed purchase order, the price was fixed or determinable, transfer of title had occurred in accordance with the shipping terms specified in the

arrangement with the customer, collectability from the customer was considered reasonably assured, product returns were reasonably estimable and there were no remaining significant obligations or customer acceptance requirements. Revenue on development service orders was generally recognized upon completion and customer acceptance of contractually agreed milestones.

As a result of the adoption of the new revenue standard (ASC 606) on January 1, 2018, using the modified retrospective method with the cumulative effect of initially applying it recognized at the date of initial application, the Company revised its revenue recognition policy. The Company now recognizes revenue upon transfer of control of promised products or services to customers in an amount that reflects the consideration the Company expects to receive in exchange for those products or services. Under the new revenue recognition standard, the Company applies the following five step approach: (1) identify the contract with a customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract, and (5) recognize revenue when a performance obligation is satisfied.

The Company enters into contracts that may include products that are capable of being distinct and accounted for as separate performance obligations. To date, the majority of the revenue has been generated by sales associated with products of storage and mobile communication, where a single performance obligation is identified in general. Revenue from services has been insignificant. Performance obligations associated with product sales transactions are generally satisfied when control passes to customers upon shipment or the written acceptance of the customers. Accordingly, product revenue is recognized at a point in time when control of the asset is transferred to the customer. The Company recognizes revenue when it satisfies a performance obligation by transferring control of a product to a customer in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods. Some of the Company's sales are made to distributors. Control passes to the distributor upon shipment, and terms and payment by the Company's distributors is not contingent on resale of the product.

The Company grants certain distributors limited rights of return and price protection rights on unsold products. The return rights are generally limited to five percent of the monetary value of products purchased within the preceding six months, provided that the distributor places a corresponding restocking order of equal or greater value. An allowance for sales returns for distributors and all customers is recorded at the time of sale based on historical returns information available, management's judgment and any known factors at the time the financial statements are prepared that would significantly affect the allowance. Price protection rights are based on the inventory products the distributors have on hand at the date the price protection is offered. The actual price adjustments to distributors incurred by the Company are minimal.

The Company provides the warranty for manufacturing defects of its products. Warranty returns have been infrequent and relate to defective or off-specification parts. The Company estimates a reserve for warranty based on historical experience and records this amount to cost of sales. For the years ended December 31, 2017, 2018 and 2019, the Company did not experience significant costs associated with warranty returns.

### ***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 that will be useful in developing new products or at significantly enhancing existing products as well as expenditures incurred for the design and testing of product alternatives. All expenditures related to research and development activities of the Company are charged to operating expenses when incurred. Third-party research and development costs are expensed when the contracted work has been performed or as milestone results have been achieved.

### ***Income Taxes***

The provision for income tax represents income tax paid and payable for the current year plus changes in the deferred income tax assets and liabilities during the years. Deferred income tax assets are recognized for net operating loss carryforwards, research and development credits, and temporary differences. 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. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. The Company records interest and penalties related to unrecognized tax benefits in income tax expense.

### ***Foreign Currency Transactions***

Foreign currency transactions are recorded at the rates 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 receivables and payables are settled, are credited or charged to income in the period of conversion or settlement. At the balance sheet date, assets and liabilities denominated in foreign currencies are remeasured 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 U.S. dollars. The functional currency of some of the Company's subsidiaries is the local currency of the respective entity. Accordingly, the financial statements of the foreign subsidiaries were translated into U.S. dollars at the following exchange rates: assets and liabilities — current rate on the balance sheet date; shareholders' equity — historical rates; income and expenses — average rate during the period. The resulting translation adjustment is recorded as a separate component of comprehensive income.

### ***Comprehensive Income (Loss)***

Comprehensive income and loss represents net income (loss) plus the results of certain changes in shareholders' equity during a period from non-owner sources. The following table presents the components of accumulated other comprehensive income (loss) as of December 31, 2017, 2018 and 2019:

	<u>Year Ended December 31, 2017</u>			<u>Year Ended December 31, 2018</u>			<u>Year Ended December 31, 2019</u>		
	US\$			US\$			US\$		
	<u>Foreign</u>	<u>Defined</u>	<u>Accumulated</u>	<u>Foreign</u>	<u>Defined</u>	<u>Accumulated</u>	<u>Foreign</u>	<u>Defined</u>	<u>Accumulated</u>
	<u>currency</u>	<u>pension</u>	<u>other</u>	<u>currency</u>	<u>pension</u>	<u>other</u>	<u>currency</u>	<u>pension</u>	<u>other</u>
	<u>items</u>	<u>plans</u>	<u>comprehensive</u>	<u>items</u>	<u>plans</u>	<u>comprehensive</u>	<u>items</u>	<u>plans</u>	<u>comprehensive</u>
			<u>income (loss)</u>			<u>income (loss)</u>			<u>income (loss)</u>
Beginning balance . . . . .	(69)	(963)	(1,032)	3,321	(678)	2,643	1,173	(678)	495
Current-period change . .	<u>3,390</u>	<u>285</u>	<u>3,675</u>	<u>(2,148)</u>	<u>—</u>	<u>(2,148)</u>	<u>(1,265)</u>	<u>(15)</u>	<u>(1,280)</u>
Ending balance . . . . .	<u>3,321</u>	<u>(678)</u>	<u>2,643</u>	<u>1,173</u>	<u>(678)</u>	<u>495</u>	<u>(92)</u>	<u>(693)</u>	<u>(785)</u>

### ***Legal Contingencies***

The Company is regularly involved in various claims and legal proceedings. Periodically, the Company reviews the status of each significant matter and assesses the potential financial exposure. If the potential loss from any claim or legal proceeding is considered probable and the amount can be estimated, the Company accrues a liability for the estimated loss. Because of uncertainties related to these matters, accruals are based only on the best information available at the time. As additional information becomes available, the Company reassesses the potential liability related to the pending claims and litigation and revises these estimates as appropriate. Such revisions in the estimates of the potential liabilities could have a material impact on the results of operations and financial position.

### ***Earnings Per Share***

Basic earnings per share are computed by dividing net earnings attributable to ordinary shareholders by the weighted-average number of ordinary shares outstanding during the period. Diluted earnings per share are computed by dividing net income attributable to ordinary shareholders by the weighted-average number of ordinary shares and potentially dilutive shares of ordinary shares outstanding during the period. Dilutive shares outstanding include unvested RSUs. Dilutive securities are excluded from the computation of the diluted income per share in periods when their effect is anti-dilutive. The effect of dilutive securities were 868 thousand shares (218 thousand ADSs), 389 thousand shares (97 thousand ADSs) and 475 thousand shares (119 thousand ADSs) for the years ended December 31, 2017, 2018 and 2019, respectively.

### ***Stock-Based Compensation***

The Company accounts for stock-based compensation in accordance with ASC 718 Compensation — Stock Compensation. The value of our restricted stock units is based on the fair value of our shares on the date of grant and expensed over the vesting period.

Prior to the initial declaration of a quarterly cash dividend on January 22, 2013, the fair value of restricted stock units (“RSUs”) was measured based on the grant date share price, as the Company did not historically pay cash dividends on our common stock. For awards granted on or subsequent to January 22, 2013, the fair value of RSUs was measured based on the grant date share price, less the present value of expected dividends during the vesting period, discounted at a risk-free interest rate.

### ***Treasury Stock***

Treasury stock is stated at cost and shown as a reduction to shareholders’ equity.

The Company retires 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. A repurchase of ADSs is recorded as treasury stock until the Company completes the withdrawal of the underlying ordinary shares from the ADS program.

### ***Recent Accounting Pronouncements***

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. In November 2018, the FASB issued an accounting update to clarify that receivables arising from operating leases are not within the scope of new credit losses guidance. Instead, impairment of receivables arising from operating leases should be accounted for in accordance with Topic 842, Leases. 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 did not 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. The amendments removed (1) the disclosure requirements for transfers between Levels 1 and 2 of the fair value hierarchy, (2) the policy for timing of transfers between levels of the fair value hierarchy; and (3) 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 disclosure requirements of (1) the weighted-average interest crediting rates for cash balance plans and other plans with promised interest crediting rates; (2) an explanation of the reasons for significant gains and losses related to changes in the benefit obligation for the period, have been added. The amendment also clarified the disclosure requirements with respect to the projected benefit obligation and the accumulated benefit obligation. 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 December 2019, the FASB issued Accounting Standard Update No. 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes (ASU 2019-12), which simplifies the accounting for income taxes. This guidance will be effective for the Company in the first quarter of 2021 on a prospective basis, and 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.

### 3. CASH, CASH EQUIVALENTS, AND RESTRICTED CASH

	December 31	
	2018	2019
	US\$	US\$
Cash and deposits in bank .....	54,918	61,184
Time deposits .....	220,047	229,419
Bonds acquired under repurchase agreements .....	10,024	32,563
Total cash and cash equivalents .....	284,989	323,166
Restricted cash .....	22,138	25,087
	<u>307,127</u>	<u>348,253</u>

### 4. SHORT-TERM INVESTMENTS

	December 31	
	2018	2019
	US\$	US\$
Trading securities .....	3,609	2,010

The Company classified certain short-term investments as trading securities. Realized gains on sales of these trading securities were US\$103 thousand, US\$134 thousand and US\$48 thousand for the years ended December 31, 2017, 2018 and 2019, respectively. The amount of unrealized losses related to trading securities at year end was nil for the years ended December 31, 2017, 2018 and 2019, respectively.

### 5. NOTES AND ACCOUNTS RECEIVABLE

	December 31	
	2018	2019
	US\$	US\$
Trade accounts receivable .....	92,408	110,351
Allowance for doubtful accounts .....	(645)	(1,617)
	<u>91,763</u>	<u>108,734</u>

The changes in the allowances are summarized as follows:

	Year Ended December 31		
	2017	2018	2019
	US\$	US\$	US\$
Allowances for doubtful accounts			
Balance, beginning of year .....	723	598	645
Additions (reversals) charged to expense, net .....	(125)	47	1,164
Write-offs .....	—	—	(192)
Balance, end of year .....	<u>598</u>	<u>645</u>	<u>1,617</u>

	Year Ended December 31
	2017
	US\$
Allowances for sales returns and discounts*	
Balance, beginning of year .....	1,624
Additions charged to expense, net .....	3,093
Actual sales return and discount .....	(3,285)
Balance, end of year .....	<u>1,432</u>

\* As of January 1, 2018, the Company has adopted the new revenue recognition standard (ASC 606). Allowance for sales returns and discounts for the year ended December 31, 2018 has been adjusted to reflect these changes in accounting policies, see Note 2 summary of significant accounting policies.

## 6. INVENTORIES

The components of inventories are as follows:

	<b>December 31</b>	
	<b>2018</b>	<b>2019</b>
	<b>US\$</b>	<b>US\$</b>
Finished goods . . . . .	26,059	26,305
Work in process . . . . .	30,830	37,342
Raw materials . . . . .	24,629	24,792
	<u>81,518</u>	<u>88,439</u>

The Company wrote down US\$698 thousand, US\$2,095 thousand and US\$9,085 thousand in 2017, 2018 and 2019, respectively, for estimated obsolete or unmarketable inventory.

## 7. LONG-TERM INVESTMENTS

As of December 31, 2018 and 2019, the Company held equity investments in several privately-held companies with the carrying value as follows:

	<b>Percentage of Ownership</b>		<b>December 31</b>	
	<b>2018</b>	<b>2019</b>	<b>2018</b>	<b>2019</b>
			<b>US\$</b>	<b>US\$</b>
Cost less impairment method:				
Cashido Corp. (Cashido) . . . . .	1.8%	0.6%	—	—
Vastview Technology, Corp. (Vastview) . . . . .	2.9%	2.9%	—	—
Deep Vision, Inc (Deep Vision) . . . . .	14.8%	14.8%	3,000	3,000
Equity method:				
ProGrade Digital, Inc. (ProGrade) . . . . .	49.0%	—	<u>1,242</u>	<u>—</u>
			<u>4,242</u>	<u>3,000</u>

In July 2001, the Company invested in the common stock of Cashido. At the time of investment, Cashido manufactured flash memory storage devices. Cashido currently focuses on the manufacture of computer accessories and ozone-based sterilization devices. In 2017, the Company recognized impairment charges of US\$91 thousand in its investment in Cashido.

In December 2006 and February 2007, the Company invested US\$3,360 thousand in the common stock of Vastview. Vastview is a fabless semiconductor company that develops and markets driver ICs and other ICs for the TFT-LCD industry. In 2009 and 2013, the Company received US\$808 thousand and US\$46 thousand from capital reductions at Vastview. From 2008 to 2010, due to the declining financial performance of Vastview, the Company recognized impairment charges of US\$2,462 thousand in its investment, and an additional charge of US\$29 thousand in 2017.

In May 2018, the Company invested US\$1,715 thousand in the preferred stock of ProGrade which is accounted for under the equity method. ProGrade is a supplier of professional-grade memory cards. In May 2019, the Company sold US\$1,715 thousand in the preferred stock of ProGrade and recognized a gain from disposal of US\$473 thousand.

In June 2018, the Company invested US\$3,000 thousand in the preferred stock of Deep Vision which is accounted for under the cost method. Deep Vision is a developer of low-power deep-learning processors.

## 8. NONCURRENT ASSETS HELD FOR SALE

	<b>December 31</b>	
	<b>2018</b>	<b>2019</b>
	<b>US\$</b>	<b>US\$</b>
Assets held for sale .....	<u>10,576</u>	<u>10,405</u>
	<u>10,576</u>	<u>10,405</u>

The Company vacated from premises in an office building located in Shanghai, China and in 2018 took actions to sell this property. The sale plan met all of the held-for-sale criteria in accordance with ASC 360 — Property, Plant and Equipment and accordingly, in 2018, the property was reclassified to noncurrent assets held for sale. The Company has actively marketed the asset, but because of challenging market conditions, no reasonable offers to purchase have been received, and continues to actively seek the sale of this property. In 2017, the Company sold another property to a non-affiliated third party and recognized a gain from disposal of US\$1,880 thousand.

## 9. PROPERTY AND EQUIPMENT

	<b>December 31</b>	
	<b>2018</b>	<b>2019</b>
	<b>US\$</b>	<b>US\$</b>
Cost:		
Land .....	68,243	68,243
Buildings .....	18,130	18,130
Machinery and equipment .....	26,902	26,426
Furniture and fixtures .....	8,538	6,919
Leasehold and buildings improvement .....	7,661	7,964
Software .....	<u>23,971</u>	<u>25,938</u>
Total .....	<u>153,445</u>	<u>153,620</u>
Accumulated depreciation:		
Buildings .....	3,231	3,632
Machinery and equipment .....	19,005	18,828
Furniture and fixtures .....	5,808	5,196
Leasehold and buildings improvement .....	4,921	5,350
Software .....	<u>19,269</u>	<u>22,312</u>
	52,234	55,318
Prepayment and construction in progress .....	<u>199</u>	<u>186</u>
	<u>101,410</u>	<u>98,488</u>

In April 2006, the Company began leasing a property located in Taipei, Taiwan to a third party. The lessee has been renewing the operating lease annually and last renewed in March 2020. Net carrying value of the properties as of December 31, 2018 and 2019 was US\$691 thousand and US\$673 thousand, respectively. Annual rental income from the lease is about US\$42 thousand each year.

In September 2018, the Company paid US\$58,931 thousand to acquire land in Hsinchu, Taiwan for the purpose of constructing its future Taiwan headquarters building.

For non-cash investing activities, increase (decrease) in accrued expenses and other current liabilities arising from the purchase of property, plant and equipment was US\$1,474 thousand, US\$(1,631) thousand and US\$(707) thousand for the year ended December 31, 2017, 2018 and 2019, respectively.

## 10. GOODWILL AND ACQUIRED INTANGIBLE ASSETS

**Intangible assets:** The intangible assets acquired from the Company's acquisition of Shannon Systems in 2015 and Bigtera in 2017 are as follows:

	December 31							
	2018				2019			
	US\$				US\$			
Cost	Accumulated Impairment	Accumulated Amortization	Net Carrying Amount	Cost	Accumulated Impairment	Accumulated Amortization	Net Carrying Amount	
Acquisition-related intangible assets . . . . .	13,117	(3,444)	(8,652)	1,021	13,117	(3,699)	(9,418)	—

The Company assesses the impairment of intangible assets whenever events or changes in circumstances indicate that the carrying value may not be recoverable. No impairment losses were recognized in 2017. In 2018 and 2019, the Company determined that the carrying amounts for intangible assets of its Bigtera and Shannon units exceeded its fair value, which was close to nil, and recorded impairment charges of US\$3,444 thousand and US\$255 thousand due to lower than projected business outlook. The impairment was measured based on a discounted cash flow method, which uses assumptions that are considered Level 3 within the fair value hierarchy due to the significant use of unobservable company specific information. Amortization expense of acquisition-related intangible assets for the years ended December 31, 2017, 2018 and 2019 were US\$2,534 thousand, US\$2,964 thousand and US\$766 thousand, respectively.

**Goodwill:** Goodwill is not amortized, but instead is reviewed and tested for impairment at least annually and whenever events or circumstances occur which indicate that goodwill might be impaired. The goodwill that resulted from the Company's acquisition of FCI and Centronix in 2007 and purchase of BTL's assets in 2011 was US\$66,300 thousand. As a result of the acquisition of Shannon Systems in 2015 and Bigtera in 2017, the Company recorded additional goodwill of US\$33,204 thousand and US\$625 thousand, respectively. Goodwill is tested for impairment annually on November 30. Total goodwill was US\$58,331 thousand and US\$17,489 thousand as of December 31, 2018 and 2019, respectively. The Company recognizes an impairment charge for the amount by which the carrying amount of the reporting unit exceeds its implied fair value.

The Company elected to adopt ASU 2017-04 starting 2017 (as described in Note 2 above). Under the updated guidance, the Company applied a one-step quantitative test and recorded the amount of goodwill impairment as the excess of a reporting unit's carrying amount over its fair value. Fair value determinations are sensitive to changes in the underlying assumptions and factors including those relating to estimating future operating cash flows to be generated from the reporting unit which are dependent upon historical data and internal forecasts and projections developed by management. Assumptions used to determine fair value used are classified as Level 3 within the fair value hierarchy due to the significant use of unobservable company-specific information. As a result of the goodwill impairment tests conducted as of November 30, 2018, June 30, 2019 and November 30, 2019, the Company determined that the carrying amounts for Bigtera unit and Shannon unit exceeded the fair value and recorded goodwill impairment charges of US\$625 thousand and US\$15,715 thousand in the fourth quarter of 2018 and in the third quarter of 2019, respectively. The company used discounted cash flow method to determine the fair value of the Bigtera unit and the Shannon unit.

	December 31								
	2018				2019				
	US\$				US\$				
Cost	Accumulated Impairment	Foreign Currency Adjustment	Net Carrying Amount	Cost	Disposal of FCI	Accumulated Impairment	Foreign Currency Adjustment	Net Carrying Amount	
Goodwill . . . . .	100,129	(41,770)	(28)	58,331	100,129	(25,117)	(57,485)	(38)	17,489

## 11. SHORT-TERM BANK LOANS

The interest expenses for the years ended December 31, 2017, 2018 and 2019 were US\$387 thousand, US\$355 thousand and nil, respectively.

The loan was repaid in 2018. Interest rates ranged from 1.51% to 2.95% per annum on outstanding monthly balance. In 2018, loans no longer required pledged deposits.

## 12. REFUND LIABILITIES

	December 31	
	2018	2019
	US\$	US\$
Refund liabilities (Note 5) .....	<u>2,093</u>	<u>2,260</u>

Estimated sales returns and other allowances are made and adjusted based on historical experience and the consideration of varying contractual terms.

The changes in the refund liabilities are summarized as follows:

	Year Ended December 31	
	2018	2019
	US\$	US\$
Refund liabilities		
Balance, beginning of year .....	1,432	2,093
Additions .....	4,908	5,076
Actual sales return and discount .....	(4,247)	(4,909)
Balance, end of year .....	<u>2,093</u>	<u>2,260</u>

## 13. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

	December 31	
	2018	2019
	US\$	US\$
Wages and bonus .....	25,169	26,643
Dividends .....	32,871	36,919
Research and development payable .....	3,108	5,693
License fees and royalties .....	6,739	9,371
Professional fees .....	1,867	1,772
Equipment .....	1,264	557
Lease liabilities .....	—	3,046
Others .....	<u>8,401</u>	<u>12,075</u>
	<u>79,419</u>	<u>96,076</u>

## 14. PENSION PLAN

SMI Taiwan, the Company's largest operating company is a Taiwan registered company and subject to Taiwan's Labor Pension Act (the "Act"), which became effective on July 1, 2005, and the pension mechanism under the Act is deemed a defined contribution plan. The employees who were subject to the Labor Standards Law prior to July 1, 2005 could choose to be subject to the pension mechanism under the Act or continue to be

subject to the pension mechanism under the Labor Standards Law. For those employees who were subject to the Labor Standards Law prior to July 1, 2005 and still work for the same company after July 1, 2005 and have chosen to be subject to the pension mechanism under the Act, their seniority as of July 1, 2005 were maintained. The Act prescribes that the rate of contribution by an employer to employees' pension accounts per month will not be less than 6% of each employee's monthly salary. According to the Act, SMI Taiwan made monthly contributions and recognized pension costs of US\$1,579 thousand, US\$1,682 thousand and US\$1,783 thousand for the years ended December 31, 2017, 2018 and 2019, respectively.

The Company provides a defined benefit plan to the employees of SMI Taiwan under the Labor Standards Law that offers benefits based on an employee's length of service and average monthly salary for the six-month period prior to retirement. The Company contributes an amount equal to 2% of salaries paid each month to a pension funds (the "Funds"), which is administered by the Labor Pension Fund Supervisory Committee established by the government (the "Committee") and deposited in the Committee's name in the Bank of Taiwan. Before the end of each year, the Company assesses the balance in the Funds. If the amount of the balance in the Funds is inadequate to pay retirement benefit for employees who conform to retirements in the next year, the Company is required to fund the difference in one appropriation that should be made before the end of March of the next year. 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 2019, 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. 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 Company by the government. Therefore, the Company is unable to provide the required fair value disclosures related to pension plan assets. Future contributions will be based on 2% of the employee salaries at that time. The Company estimates its contribution for the year ending December 31, 2020 to be US\$62 thousand which was determined based on 2% of estimated salaries in 2020.

Starting in 2010, the Company provides a defined benefit pension plan to the Korean employees of FCI with at least one year of service. FCI's overall investment strategy is to avoid a negative return on plan assets. On May 31, 2019, the Company divested FCI.

For employees under defined contribution pension plans, pension costs are recorded based on the actual contributions made to employees' individual pension accounts. For employees under defined benefit pension plans, pension costs are recorded based on actuarial calculations. Determining the cost associated with such benefits is dependent on various actuarial assumptions, including discount rate, expected return on plan assets, compensation increase, employee mortality and turnover rates. The Company reviewed its actuarial assumptions at the measurement date on December 31 every year. The effect of modifications to assumptions is recorded in accumulated other comprehensive loss and amortized to net periodic cost over future periods using the corridor method. The Company believes that assumptions utilized in recording its obligations under its plans are reasonable based on its experience and market conditions. Independent actuaries perform the required calculations to determine expense in accordance with U.S. GAAP. Actual results may differ from the actuarial assumptions and are generally accumulated and amortized into earnings over future periods. The net periodic costs are recognized as employees render services necessary to earn the benefits.

The changes in benefits obligation and plan assets and the reconciliation of funded status are as follows:

	<b>December 31</b>		
	<b>2017</b>	<b>2018</b>	<b>2019</b>
	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>
<b>Change in benefit obligation</b>			
Projected benefit obligation at beginning of year . . . . .	4,242	5,131	5,838
Service cost . . . . .	1,572	568	275
Interest cost . . . . .	336	126	91
Actuarial loss (gain) . . . . .	(665)	146	72
Benefits paid . . . . .	(354)	(133)	(450)
Disposal of subsidiary . . . . .	—	—	(4,072)
Projected benefit obligation at end of year . . . . .	<u>5,131</u>	<u>5,838</u>	<u>1,754</u>
<b>Change in plan assets</b>			
Fair value of plan assets at beginning of year . . . . .	3,902	5,114	5,410
Actual return on plan assets . . . . .	81	63	98
Employer contributions . . . . .	1,358	331	85
Benefits paid . . . . .	(227)	(98)	(448)
Disposal of subsidiary . . . . .	—	—	(3,658)
Fair value of plan assets at end of year . . . . .	<u>5,114</u>	<u>5,410</u>	<u>1,487</u>
Funded status recognized as an other liabilities . . . . .	<u>(17)</u>	<u>(428)</u>	<u>(267)</u>

Amounts recognized in accumulated other comprehensive income consist of the following:

	<b>Year Ended December 31</b>		
	<b>2017</b>	<b>2018</b>	<b>2019</b>
	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>
Net loss . . . . .	<u>678</u>	<u>678</u>	<u>693</u>
Total recognized in accumulated other comprehensive income . . . . .	<u>678</u>	<u>678</u>	<u>693</u>

The accumulated benefit obligation for all defined benefit pension plans was US\$3,210 thousand, US\$3,864 thousand and US\$939 thousand at December 31, 2017, 2018 and 2019, respectively.

The components of net periodic benefit cost are as follows:

	<b>Year Ended December 31</b>		
	<b>2017</b>	<b>2018</b>	<b>2019</b>
	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>
Service cost . . . . .	1,572	568	275
Interest cost . . . . .	336	126	91
Projected return on plan assets . . . . .	(58)	(78)	(77)
Amortization of unrecognized net transition obligation and unrecognized net actuarial gain . . . . .	<u>37</u>	<u>41</u>	<u>48</u>
Net periodic benefit cost . . . . .	<u>1,887</u>	<u>657</u>	<u>337</u>

Other changes in plan assets and benefit obligation recognized in other comprehensive loss:

	<u>2017</u>	<u>2018</u>	<u>2019</u>
	US\$	US\$	US\$
Recognize the decrease in net gain (loss) . . . . .	(285)	—	15
Amortization of net loss . . . . .	—	—	—
Total recognized in other comprehensive loss (income) . . . . .	<u>(285)</u>	<u>—</u>	<u>15</u>

The estimated net gain for the defined benefit pension plans that will be amortized from accumulated other comprehensive income into net periodic benefit cost over the next fiscal year is US\$35 thousand.

Expected benefit payments:

	US\$
2020 . . . . .	7
2021 . . . . .	43
2022 . . . . .	50
2023 . . . . .	18
2024 . . . . .	77
2025 and thereafter . . . . .	405

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

	<u>2017</u>		<u>2018</u>		<u>2019</u>
	<u>Taiwan</u>	<u>Korea</u>	<u>Taiwan</u>	<u>Korea</u>	<u>Taiwan</u>
Weighted-average assumptions used to determine benefit obligations:					
Discount rate . . . . .	1.63%	4.10%	1.38%	3.60%	1.00%
Rate of compensation increase . . . . .	4.25%	3.50%	4.25%	3.00%	4.00%
Weighted-average assumptions used to determine net projected benefit cost:					
Discount rate . . . . .	1.63%	4.10%	1.38%	3.60%	1.00%
Expected long-term return on plan assets . . . . .	1.75%	1.10%	1.75%	1.40%	2.00%
Rate of compensation increase . . . . .	4.25%	3.50%	4.25%	3.00%	4.00%

In 2018, FCI's pension plan assets were invested in principal guaranteed interest insurance contracts and fixed bank deposits, which are principal and interest guaranteed products and are classified as Level 2. These Level 2 securities were valued by discounting future cash flows using benchmark yield rates.

The fair values of FCI's pension plan assets at December 31, 2018 are as follows:

	<u>December 31</u>
	<u>2018</u>
	US\$
Guaranteed interest contract	
Kyobo Life Insurance Co. Ltd. . . . .	1,605
Shinhan Investment Co. . . . .	466
Fixed deposit	
Industrial Bank of Korea . . . . .	2,014
	<u>4,085</u>

## 15. INCOME TAXES

The components of income tax expense are as follows:

	Year Ended December 31		
	2017	2018	2019
	US\$	US\$	US\$
Current .....	23,465	13,455	6,558
Deferred .....	581	(1,664)	1,118
Income tax expense .....	<u>24,046</u>	<u>11,791</u>	<u>7,676</u>

The income (loss) before income taxes for domestic and foreign entities is as follows:

	Year Ended December 31		
	2017	2018	2019
	US\$	US\$	US\$
Domestic .....	(27,902)	(23,750)	(3,911)
Foreign .....	<u>126,903</u>	<u>133,611</u>	<u>75,985</u>
	<u>99,001</u>	<u>109,861</u>	<u>72,074</u>

Since the Company is based in the Cayman Islands, a British overseas territory with no corporate income tax, tax on pretax income is calculated at the Cayman Islands statutory rate of zero for each year.

The Company and its subsidiaries file separate income tax returns. A reconciliation of income tax expense on pretax income at statutory rate and income tax expense is shown below:

	Year Ended December 31		
	2017	2018	2019
	US\$	US\$	US\$
Tax expense at statutory rate of Cayman .....	—	—	—
Differences between Cayman and foreign statutory tax rates .....	24,255	12,509	846
Permanent differences .....	(4,249)	(703)	4,109
Temporary differences .....	(1,445)	(159)	638
Alternative minimum tax .....	4	9	1
Income tax on undistributed earnings .....	2,709	408	575
Net changes in income tax credit .....	166	116	3,917
Net changes in valuation allowance of deferred income tax assets .....	(2,401)	1,243	(1,820)
Net operating loss carryforwards .....	1,492	(1,431)	(294)
Liabilities related to unrealized tax benefits .....	3,455	(302)	(171)
Adjustment of prior years' taxes and others .....	60	101	(125)
Income tax expense .....	<u>24,046</u>	<u>11,791</u>	<u>7,676</u>

Deferred income tax assets (liabilities) are as follows:

	December 31	
	2018	2019
	US\$	US\$
Notes and accounts receivable . . . . .	47	3
Stock-based compensation . . . . .	2,103	1,104
Allowance for sales return . . . . .	210	541
Inventory reserve . . . . .	1,283	1,733
Foreign currency translation . . . . .	(8)	(20)
Property and equipment . . . . .	(52)	(359)
Investment tax credits . . . . .	8,684	4,532
Net operating loss carryforwards . . . . .	11,895	14,028
Others . . . . .	945	494
Valuation allowance . . . . .	(20,041)	(18,108)
	<u>5,066</u>	<u>3,948</u>

The valuation allowance shown in the table above relates to net operating loss carryforwards, tax credits and temporary differences for which the Company believes that realization is uncertain. Valuation allowance increased by US\$969 thousand for the year ended December 31, 2018 and decreased by US\$1,933 thousand for the year ended December 31, 2019, respectively. The decrease in valuation allowance in 2019 was primarily due to the FCI disposal. The increase in valuation allowance in 2018 is primarily due to the uncertainty in generating sufficient taxable income in the future and utilization of operating loss carryforwards and research and development credits before they expire.

Starting from 2018 the corporate income tax rate in Taiwan increased from 17% to 20%. In addition, the rate of the corporate surtax applicable to 2018 unappropriated earnings was reduced from 10% to 5%.

As of December 31, 2019, the Company's U.S. federal net operating loss carryforwards for federal income tax purposes were approximately US\$9,475 thousand. If not utilized, the federal net operating loss carryforwards will expire in 2039.

As of December 31, 2019, the Company's U.S. federal and state research and development tax credit carryforwards for federal and state income tax purposes were approximately US\$2,659 thousand and US\$1,873 thousand, respectively. If not utilized, the federal tax credit carryforwards will expire starting in 2039 while the state tax credit carryforward has no expiration date.

Current U.S. federal and California state laws include substantial restrictions on the utilization of net operating losses and credits in the event of an "ownership change" of a corporation. Accordingly, the Company's ability to utilize net operating loss and tax credit carryforwards may be limited as a result of such "ownership change". Such a limitation could result in the expiration of carryforwards before they are utilized.

As of December 31, 2019, the Company had accumulated undistributed earnings from a foreign subsidiary of US\$345 million. No deferred tax liability was recorded in respect of those amounts as these earnings are considered indefinitely reinvested. It is not practicable to estimate the amount of unrecognized deferred tax liabilities for these undistributed foreign earnings.

## Unrecognized Tax Benefit

A reconciliation of the beginning and ending balances of the total amounts of unrecognized tax benefits is as follows:

	<u>Year Ended December 31</u>		
	<u>2017</u>	<u>2018</u>	<u>2019</u>
	US\$	US\$	US\$
Balance, beginning of year . . . . .	10,286	15,056	18,707
Increases in tax positions taken in current year . . . . .	6,647	5,937	6,890
Decrease in tax position taken in prior year primarily related to the resolution of tax audit . . . . .	<u>(1,877)</u>	<u>(2,286)</u>	<u>(4,942)</u>
Balance, end of year . . . . .	<u>15,056</u>	<u>18,707</u>	<u>20,655</u>

At December 31, 2019, the Company had US\$20,655 thousand of unrecognized tax benefits that if recognized would affect the effective tax rate. For the years ended December 31, 2017, 2018 and 2019, the total amount of interest expense and penalties related to uncertain tax positions recorded in the provision for income tax expense was approximately US\$617 thousand, US\$776 thousand and US\$319 thousand, respectively. The total amount of accrued interest and penalties recognized as of December 31, 2018 and 2019 was US\$4,091 thousand and US\$4,511 thousand, respectively. The Company does not expect uncertain tax positions to change in the next twelve months, except in the case of settlements with tax authorities, the likelihood and timing of which are difficult to estimate.

The Company files income tax returns in the U.S. and foreign jurisdictions. The following table summarizes the Company's major jurisdictions and tax year that remain subject to examination by tax authorities as of December 31, 2019:

<u>Tax Jurisdiction</u>	<u>Tax Years</u>
China . . . . .	2016 and onward
Hong Kong . . . . .	2016 and onward
Taiwan . . . . .	2014 and onward
United States . . . . .	2014 onward

## 16. SHAREHOLDERS' EQUITY

### Dividends

The Company declared cash dividends per ordinary share during the periods presented as follows:

	<u>2017</u>		<u>2018</u>		<u>2019</u>	
	<u>Dividends Per Share (US\$)</u>	<u>Amount (in US\$ thousand)</u>	<u>Dividends Per Share (US\$)</u>	<u>Amount (in US\$ thousand)</u>	<u>Dividends Per Share (US\$)</u>	<u>Amount (in US\$ thousand)</u>
First quarter . . . . .	\$0.050	\$ 7,134	\$0.075	\$10,832	\$ 0.075	\$10,956
Second quarter . . . . .	\$0.050	7,148	\$0.075	10,835	\$ 0.075	10,957
Third quarter . . . . .	\$0.050	7,155	\$0.075	10,843	\$ 0.075	10,029
Fourth quarter . . . . .	\$0.075	10,737	\$0.075	10,849	\$0.0875	12,171
		<u>\$32,174</u>		<u>\$43,359</u>		<u>\$44,113</u>

Beginning on November 2, 2015, the board of directors, instead of declaring a quarterly dividend, declared an annual dividend of US\$0.60, equivalent to US\$0.15 per ordinary shares, payable in four quarterly installments. The board of directors declared annual dividends of US\$1.20, US\$1.20 and US\$1.40, equivalent to

US\$0.30, US\$0.30 and US\$0.35 per common share, payable in four quarterly installments on October 24, 2017, October 29, 2018 and October 25, 2019, respectively. Future dividends, if any, will be declared by and subject to the discretion of the Company's board of directors. If the Company's board of directors decides to distribute dividends, the form, frequency and amount of such dividends will depend upon the Company's future operations and earnings, capital requirements and surplus, general financial condition, contractual restrictions and other factors the board of directors may deem relevant.

Any future dividend the Company declares will be paid to the holders of ADSs, subject to the terms of the deposit agreement, to the same extent as holders of the Company's ordinary shares, to the extent permitted by applicable laws and regulations, less the fees and expenses payable under the deposit agreement. Any dividend the Company declares will be distributed by the depositary bank to the holders of our ADSs. Cash dividends on our ordinary shares, if any, will be paid in U.S. dollars. For non-cash financing activities, net increase in dividends payable arising from the declared dividend was US\$11,069 thousand, US\$420 thousand and US\$4,048 thousand for the year ended December 31, 2017, 2018 and 2019, respectively.

### **Treasury Stock**

On November 21, 2018, the board of directors of the Company approved share buyback plans to repurchase up to US\$200 million of the Company's ADSs over a 24 month period. The program did not obligate the Company to acquire any particular amount of ADS and the program may be modified or suspended at any time at the Company's discretion. All the treasury stock under this share repurchase program was retired in September 2019.

For the years ended December 31, 2018 and 2019, the Company repurchased 1,006 thousand and 762 thousand ADSs for a total cost of US\$34,755 thousand and US\$25,103 thousand, respectively. The weighted average purchase price per ADS repurchased was US\$34.54 and US\$32.82 in 2018 and 2019, respectively.

## **17. EQUITY INCENTIVE PLAN**

### ***2005 Equity Incentive Plan and 2015 Equity Incentive Plan***

On April 22, 2005, the Company adopted its 2005 Equity Incentive Plan ("the 2005 Plan"). The 2005 Plan provides for the grant of stock options, stock bonuses, restricted stock awards, restricted stock units and stock appreciation rights, which may be granted to employees (including officers), directors and consultants. The 2005 Plan reserved 10,000 thousand shares of ordinary shares, inclusive of the number of assumed share options under the 2004 Plan, for issuance upon the exercise of stock options.

In 2006, the Company amended the 2005 Plan to reserve an additional 15,000 thousand ordinary shares for issuance upon exercise of stock options and restricted stock units. In 2009, the Company amended the Plan to reserve an additional 15,000 thousand ordinary shares for issuance upon exercise of stock options and restricted stock units.

Restricted stock units are converted into shares of the Company's ordinary shares upon vesting on one-for-one basis. The vesting of restricted stock unit is subject to the employee's continuing service to the Company. The cost of these awards is determined using the fair value of the Company's ordinary share on the date of the grant, and compensation is recognized on a straight-line basis over the requisite service period. The Company's restricted stock units are considered non-vested share awards as defined under ASC 718.

In April 2010, the Company's Board of Directors and Compensation Committee approved an employee stock option exchange program that required certain employees to exchange eligible stock options for a lesser number of new stock options that have approximately the same fair values as the options surrendered. Eligible options included stock options granted between August 17, 2005 and July 31, 2008 that had an exercised price

above US\$1.85. In 2010, 4,369 thousand eligible stock options were exchanged for 3,785 thousand new stock options granted. The new stock options have an exercise price of US\$1.47, which was equal to the market price of the Company's ordinary share on April 26, 2010, the date eligible stock options were surrendered and new stock options granted. The new stock options were issued under the 2005 Plan and are subject to its terms and conditions. The new stock options will continue to vest according to the original vesting schedule. Using the Black-Scholes option pricing model, the Company determined that the fair value of the surrendered stock options on a grant-by-grant basis was approximately equal, as of the date of the exchange, to the fair value of the new stock options granted, resulting in insignificant incremental share-based compensation.

On June 3, 2015, the Company adopted its 2015 Equity Incentive Plan ("the 2015 Plan"). The 2015 Plan provides for the grant of stock options, stock bonuses, restricted stock awards, restricted stock units and stock appreciation rights, which may be granted to employees (including officers), directors and consultants. The 2015 Plan reserved 20,000 thousand shares of ordinary shares for issuance upon exercise of stock options and restricted stock units.

### Stock Option and Restricted Stock Units Activity

The following is a summary of, the 2005 Plan and the 2015 Plan, which includes stock options and restricted stock units:

	<u>Unit</u> <u>(in Thousands)</u>
Available for grant at January 1, 2017 .....	18,751
Restricted stock units granted .....	(1,391)
Restricted stock units forfeited .....	<u>27</u>
Available for grant at December 31, 2017 .....	17,387
Restricted stock units granted .....	(1,622)
Restricted stock units forfeited .....	<u>22</u>
Available for grant at December 31, 2018 .....	15,787
Restricted stock units granted .....	(1,584)
Restricted stock units forfeited .....	<u>57</u>
Available for grant at December 31, 2019 .....	<u><u>14,260</u></u>

### Stock Options

A summary of the stock option activity and related information is as follows:

	<u>Number of</u> <u>Options</u> <u>Shares</u> <u>(in Thousands)</u>	<u>Weighted</u> <u>Average</u> <u>Exercise</u> <u>Price</u> <u>(US\$)</u>	<u>Weighted</u> <u>Average</u> <u>Remaining</u> <u>Contractual</u> <u>Life</u> <u>(Years)</u>
Outstanding at January 1, 2017 .....	258	1.47	0.25
Options exercised .....	<u>(258)</u>	<u>1.47</u>	
Outstanding at December 31, 2017 .....	<u>—</u>	<u>—</u>	—

No stock options were granted in 2017, 2018 and 2019. The intrinsic value of options exercised, determined as of the date of option exercise, was US\$3,040 thousand, nil and nil, 2017, 2018 and 2019, respectively.

As of December 31, 2019, total unrecognized compensation cost related to non-vested share-based compensation awards granted under the Company's stock option plans, net of estimated forfeitures, was nil.

The total cash received from employees as a result of employee stock option exercises were US\$380 thousand, nil and nil for the years ended December 31, 2017, 2018 and 2019, respectively.

The related tax effect for stock-based compensation benefit (expense) were US\$124 thousand, US\$177 thousand and (US\$49) thousand for 2017, 2018 and 2019, respectively. The related tax effect for stock-based compensation expense for option and restricted stock units exercised during 2017, 2018 and 2019 was US\$2,273 thousand, US\$2,211 thousand and US\$3,446 thousand, respectively. The related tax effect was determined using the applicable tax rates in jurisdictions to which this expense relates.

### Restricted Stock Units

A summary of the status of restricted stock units and changes is as follows:

	Number of Non-vested Stock Units (in Thousands)	Weighted Average Grant Date Fair Value (US\$)	Weight Average Remaining Recognition Period (Years)
Non-vested at January 1, 2017	1,767	11.65	0.47
Restricted stock units granted	1,391	10.75	
Restricted stock units vested	(1,593)	12.08	
Restricted stock units forfeited	(27)	10.69	
Non-vested at December 31, 2017	1,538	10.36	0.33
Restricted stock units granted	1,622	13.86	
Restricted stock units vested	(1,517)	9.79	
Restricted stock units forfeited	(22)	11.75	
Non-vested at December 31, 2018	1,621	13.85	0.38
Restricted stock units granted	1,584	8.01	
Restricted stock units vested	(1,505)	14.12	
Restricted stock units forfeited	(57)	9.59	
Non-vested at December 31, 2019	1,643	8.08	0.29

As of December 31, 2019, there was US\$3,665 thousand of total unrecognized compensation cost related to restricted stock units granted under the 2015 Plan.

### Stock-based Compensation Expense

The following table shows total stock-based compensation expense included in the Consolidated Statements of Income for the years ended December 31, 2017, 2018 and 2019.

	Year Ended December 31		
	2017 US\$	2018 US\$	2019 US\$
Cost of sales	293	390	305
Research and development	9,255	13,278	9,927
Sales and marketing	3,167	3,407	1,789
General and administrative	2,779	3,704	2,570
	<u>15,494</u>	<u>20,779</u>	<u>14,591</u>

## 18. LEASE

### Operating Leases

The Company entered into various operating lease agreements which consist of real property and office equipment with lease periods expiring between fiscal years 2020 and 2027.

Future minimum lease payments under the operating leases as of December 31, 2019, were as follows:

	<u>Operating Lease Obligations</u>
<b>Fiscal Year:</b>	
2020 .....	\$3,321
2021 .....	2,652
2022 .....	1,458
2023 .....	1,087
2024 .....	732
2025 and thereafter .....	<u>51</u>
Total .....	9,301
Less imputed interest .....	<u>634</u>
Present value of net future minimum lease payments .....	8,667
Less operating lease liabilities-current .....	<u>3,046</u>
Long-term operating lease liabilities .....	<u><u>\$5,621</u></u>

Operating lease expense for the years ended December 31, 2017, 2018 and 2019 of US\$3,131 thousand, US\$3,933 thousand, and US\$4,775 thousand, respectively. For the supplemental cash flow information related to lease, the cash paid for amounts included in the measurement of operating lease liabilities was US\$3,233 thousand for the year ended December 31, 2019.

## 19. COMMITMENTS AND CONTINGENCIES

FCI provided their employees with collateral for personal loans which is deposited at a designated bank and the amount deposited was US\$448 thousand at December 31, 2018. Such amounts were accounted for as restricted cash.

### Litigation

The Company is subject to legal proceedings and claims, either asserted or unasserted, which arise in the ordinary course of business. Although the outcome of such proceedings and claims cannot be predicted with certainty, management does not believe that the outcome of any of these matters will have a material adverse effect on our business, results of operations, financial position or cash flows. Any litigation, however, involves potential risk and potentially significant litigation costs, and therefore there can be no assurance that any litigation which is now pending or which may arise in the future would not have such a material adverse effect on our business, financial position, results of operations or cash flows.

All American Semiconductor, Inc. (“All American” or “AASI”) was a former distributor for the Company. On April 25, 2007, All American filed for Chapter 11 bankruptcy protection. At the time of the filing, the Company had US\$256 thousand of unpaid accounts receivable from All American. On April 17, 2009 SMI USA and related entities were named as defendants in an adversary proceeding filed by the AASI Creditor Liquidating Trust (“CLT”) in the bankruptcy case pending in the U.S. Bankruptcy Court for the Southern District of Florida. The CLT was seeking the return of allegedly avoidable transfers in the amount of US\$854 thousand. SMI USA filed an answer and affirmative defenses. In March 2010, SMI USA settled with the CLT by paying the amount

of US\$220 thousand and on April 1, 2010, the Bankruptcy Court granted the motion to approve stipulations to compromise controversy. On August 23, 2010, the Court entered an order dismissing the adversary proceeding. In June 2011, Liquidating Trustee for the CLT filed the AASI Creditor Liquidating Trustee's Seventeenth Omnibus Objection to Claims but in August 2011, withdrew it with respect to SMI USA's proof of claim. As a holder of allowed claims, we are entitled to receive distribution pursuant to the bankruptcy plan. On December 31, 2017, we received total distributions of US\$265 thousand from the CLT and this case is officially closed.

## 20. SEGMENT INFORMATION

The Company is the global leader and pioneer in developing NAND flash controllers for solid storage devices. The Company currently operates as one reportable segment. The chief operating decision maker ("CODM") is the Chief Executive Officer. The fact that the Company operates in only one reportable segment is because the decisions on allocation of resources and other operational decisions are made by the CODM based on his direct involvement with the Company's operations and product development.

The Company groups its products into three categories, based on the markets in which they may be used. The following summarizes the Company's revenue by product category:

	Year Ended December 31		
	2017	2018	2019
	US\$	US\$	US\$
Mobile Storage . . . . .	480,735	494,012	441,700
Mobile Communications . . . . .	37,447	30,163	10,356
Others . . . . .	5,222	6,173	5,197
	<u>523,404</u>	<u>530,348</u>	<u>457,253</u>

Revenue is attributed to a geographic area based on the bill-to location. The following summarizes the Company's revenue by geographic area:

	Year Ended December 31		
	2017 <sup>(1)</sup>	2018 <sup>(1)</sup>	2019
	US\$	US\$	US\$
Taiwan . . . . .	72,768	70,984	77,117
United States . . . . .	40,344	53,476	63,432
Korea . . . . .	176,813	135,845	52,885
China . . . . .	126,048	142,948	123,261
Malaysia . . . . .	49,919	49,444	50,663
Singapore . . . . .	25,057	35,387	45,032
Others . . . . .	32,455	42,264	44,863
	<u>523,404</u>	<u>530,348</u>	<u>457,253</u>

(1) The figure represents the revenue by geographic area based on the bill-to location. Commencing in 2019, revenue derived from Japan was reclassified to others. The above breakdown for 2017 and 2018 has been reclassified on the same basis.

Major customers representing at least 10% of net sales

	Year Ended December 31					
	2017		2018		2019	
	US\$	%	US\$	%	US\$	%
Intel . . . . .	50,205	10	67,791	13	75,608	16
Micron . . . . .	*	*	*	*	67,682	15
SK Hynix . . . . .	150,762	29	111,265	21	*	*

\* Less than 10%

Long-lived assets (property and equipment, net) by geographic area were as follows:

	<b>Year Ended December 31</b>		
	<b>2017</b>	<b>2018</b>	<b>2019</b>
	<b>US\$</b>	<b>US\$</b>	<b>US\$</b>
Taiwan .....	36,369	96,920	94,996
United States .....	242	348	315
Korea .....	1,936	1,645	23
China .....	12,798	2,447	3,117
Japan .....	25	50	37
	<u>51,370</u>	<u>101,410</u>	<u>98,488</u>

## 21. FAIR VALUE MEASUREMENT

The following section describes the valuation methodologies the Company uses to measure assets and liabilities at fair value.

The Company uses quoted prices in active markets for identical assets to determine fair value where applicable. This pricing methodology applies to Level 1 investments such as bond funds. The fair value of the principal protected notes was determined by its present value utilizing rate of return as the market observable input and therefore, these are classified as Level 2 instruments. This is because there generally are no quoted prices in active markets for identical principal protected notes at the reporting date. Hence, in order to determine the fair value, the Company must use observable inputs other than quoted prices in active markets for identical or similar instruments, quoted prices for similar instruments in active markets, or other inputs that are observable.

For the years ended December 31, 2018 and 2019, none of the Company's assets measured on a recurring basis was determined by using significant unobservable inputs.

The following table presents our assets measured at fair value on a recurring basis as of December 31, 2018 and 2019:

December 31, 2018

	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
	<u>US\$</u>	<u>US\$</u>	<u>US\$</u>	<u>US\$</u>
Assets				
Short-term investments — trading securities .....	—	3,609	—	3,609

December 31, 2019

	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
	<u>US\$</u>	<u>US\$</u>	<u>US\$</u>	<u>US\$</u>
Assets				
Short-term investments — trading securities .....	—	2,010	—	2,010

## 22. RELATED PARTY TRANSACTIONS

Lease support arrangements, known in Korea as Jeonse, were in place for certain Korean employees, primarily executive officers. These arrangements, in place from 2007 to 2019, consisted of a program which the Company facilitated housing arrangements by depositing funds with lessors who are either third parties, employees or relatives of the employees. Such funds would serve to establish the leasehold interest for the employees. When such arrangements were finished, the Company received the deposited funds back in full. The deposited amount of these arrangements for such employees was US\$1.5 million and nil as of December 31, 2018, and 2019, respectively. These arrangements ended in 2019 with the divestiture of FCI.

**Subsidiaries of Silicon Motion Technology Corporation**

<b>Name of Entity</b>	<b>Jurisdiction of Incorporation</b>
Bigtera (Beijing) .....	China
Shannon Systems .....	China
Silicon Motion, Inc. ....	California
Silicon Motion, Inc. ....	Taiwan
Silicon Motion, Inc. (Shanghai) .....	China
Silicon Motion, Inc. (Shenzhen) .....	China
Silicon Motion (MCO) Ltd. ....	Macau
Silicon Motion Technology (HK) Ltd. ....	Hong Kong
FCI Inc.* .....	Korea

\* We completed the sale of FCI Inc. in May 2019.

**Certification by the Chief Executive Officer Pursuant to  
Section 302 of the Sarbanes-Oxley Act of 2002**

I, Wallace C. Kou, certify that:

1. I have reviewed this annual report on Form 20-F of Silicon Motion Technology Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
  - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of company's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: June 12, 2020

/s/ Wallace C. Kou

Name: Wallace C. Kou

Title: President and Chief Executive Officer

**Certification by the Chief Financial Officer Pursuant to  
Section 302 of the Sarbanes-Oxley Act of 2002**

I, Riyadh Lai, certify that:

1. I have reviewed this annual report on Form 20-F of Silicon Motion Technology Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
  - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of company's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: June 12, 2020

/s/ Riyadh Lai

Name: Riyadh Lai

Title: Chief Financial Officer

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned each hereby certifies that, to his knowledge, the annual report on Form 20-F of Silicon Motion Technology Corporation for the year ended December 31, 2019 fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, and that the information contained in the periodic report fairly presents, in all material respects, the financial condition and results of operations of Silicon Motion Technology Corporation.

The foregoing certification is being furnished pursuant to 18 U.S.C. Section 1350 solely for purposes of complying with the provisions of Section 906 of the Sarbanes-Oxley Act of 2002, is not intended to be used or relied upon for any other purpose and is not being filed as part of the periodic report or as a separate disclosure document.

Date: June 12, 2020

/s/ Wallace C. Kou

Name: Wallace C. Kou

Title: President and Chief Executive Officer

/s/ Riyadh Lai

Name: Riyadh Lai

Title: Chief Financial Officer

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in Registration Statement No. 333-204876 on Form S-8 of our reports dated June 12, 2020, relating to the consolidated financial statements of Silicon Motion Technology Corporation and subsidiaries and the effectiveness of Silicon Motion Technology Corporation and subsidiaries' internal control over financial reporting, appearing in the Annual Report on Form 20-F for the year ended December 31, 2019.

/s/ Deloitte & Touche  
Taipei, Taiwan  
The Republic of China

June 12, 2020

## Board of Directors

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- **James Chow**  
*Chairman of the Board*  
Silicon Motion Technology Corporation
- **Wallace C. Kou**  
*President & Chief Executive Officer*  
Silicon Motion Technology Corporation
- **Steve Chen**  
*Chairman*  
Mercuries Co., Ltd.
- **Tsung-Ming Chung**  
*Chairman*  
Dynapack International Technology Corp.
- **Lien-Chun Liu**  
*Research Fellow*  
Taiwan Research Institute
- **Yung-Chien Wang**  
*Vice President*  
Professional Trust Co., Ltd.
- **Han-Ping D. Shieh**  
*Professor*  
National Chiao Tung University's Display Institute and  
Department of Photonics
- **Kenneth Kuan-Ming Lin**  
*Chairman*  
Premier Capital Management Corp.
- **Nelson Duann**  
*Senior VP of Marketing & R&D*  
Silicon Motion Technology Corporation

## ADS Listing

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Our American Depositary Shares (ADSs) trade on the NASDAQ Global Select Market under the symbol "SIMO"

## ADS Depositary

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The Bank of New York Mellon, New York, NY

## Executive Officers

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- **Wallace C. Kou**  
*President & Chief Executive Officer*
- **Riyadh Lai**  
*Chief Financial Officer*
- **Nelson Duann**  
*Senior VP of Marketing & R&D*
- **Arthur Yeh**  
*VP of Sales, Asia and Greater China*
- **Robert Fan**  
*President of SMI USA*
- **Ken Chen**  
*VP of Operations*
- **Kevin Yeh**  
*VP of R&D, Algorithm & Technology*
- **Kevin Tsai**  
*Senior Director of R&D, System Validation*

## Independent Auditors

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Deloitte & Touche, Taipei, Taiwan

## Legal Counsel

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K&L Gates, Taipei, Taiwan

## Investor Relations

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For more information about Silicon Motion, please visit our website at [www.siliconmotion.com](http://www.siliconmotion.com) or e-mail us at [ir@siliconmotion.com](mailto:ir@siliconmotion.com)

[www.siliconmotion.com](http://www.siliconmotion.com)

