

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

FORM 10-Q

(MARK ONE)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the quarterly period ended September 30, 2020

OR

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

Commission file number 001-34717

Alpha and Omega Semiconductor Limited

(Exact name of Registrant as Specified in its Charter)

Bermuda
(State or Other Jurisdiction of Incorporation or Organization)

77-0553536
(I.R.S. Employer Identification Number)

Clarendon House, 2 Church Street
Hamilton HM 11, Bermuda
(Address of Principal Registered
Offices including Zip Code)
(408) 830-9742
(Registrant's Telephone Number, Including Area Code)

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

Indicate by check mark whether 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 and post such files). Yes ☒ No ☐

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

Large accelerated filer ☐ Accelerated filer ☒ Non-accelerated filer ☐

(Do not check if a smaller reporting company)

Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, 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 provided pursuant to Section 13(a) of the Exchange Act. ☐

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Shares	AOSL	The NASDAQ Global Select Market

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

Number of common shares outstanding as of October 23, 2020: 25,487,415

Alpha and Omega Semiconductor Limited
Form 10-Q
Fiscal First Quarter Ended September 30, 2020
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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

ALPHA AND OMEGA SEMICONDUCTOR LIMITED CONDENSED CONSOLIDATED BALANCE SHEETS (Unaudited, in thousands except par value per share)

	September 30, 2020	June 30, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 154,698	\$ 158,536
Restricted cash	2,274	2,190
Accounts receivable, net	26,317	13,272
Inventories	137,700	135,528
Other current assets	10,479	8,807
Total current assets	331,468	318,333
Property, plant and equipment, net	421,642	412,340
Operating lease right-of-use assets, net	32,407	32,948
Intangible assets, net	15,930	16,770
Deferred income tax assets	4,774	4,766
Restricted cash - long-term	2,054	1,978
Other long-term assets	3,473	5,804
Total assets	\$ 811,748	\$ 792,939
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	\$ 87,604	\$ 86,181
Accrued liabilities	55,875	54,986
Income taxes payable	2,100	1,360
Short-term debt	32,746	30,114
Finance lease liabilities	15,844	15,258
Operating lease liabilities	4,095	4,159
Total current liabilities	198,264	192,058
Long-term debt	99,970	99,775
Income taxes payable - long-term	912	903
Deferred income tax liabilities	521	496
Finance lease liabilities - long-term	23,913	26,842
Operating lease liabilities - long-term	29,813	30,254
Other long-term liabilities	9,133	10,723
Total liabilities	362,526	361,051
Commitments and contingencies (Note 10)		
Equity:		
Preferred shares, par value \$0.002 per share:		
Authorized: 10,000 shares; issued and outstanding: none at September 30, 2020 and June 30, 2020	—	—
Common shares, par value \$0.002 per share:		
Authorized: 100,000 shares; issued and outstanding: 32,021 shares and 25,383 shares, respectively at September 30, 2020 and 31,944 shares and 25,305 shares, respectively at June 30, 2020	64	64
Treasury shares at cost: 6,638 shares at September 30, 2020 and 6,639 shares at June 30, 2020	(66,171)	(66,184)
Additional paid-in capital	248,967	246,103
Accumulated other comprehensive loss	(2,146)	(5,127)
Retained earnings	128,394	118,833
Total Alpha and Omega Semiconductor Limited shareholder's equity	309,108	293,689

ALPHA AND OMEGA SEMICONDUCTOR LIMITED
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited, in thousands except par value per share)

Noncontrolling interest	140,114	138,199
Total equity	449,222	431,888
Total liabilities and equity	\$ 811,748	\$ 792,939

See accompanying notes to these condensed consolidated financial statements.

ALPHA AND OMEGA SEMICONDUCTOR LIMITED
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited, in thousands except per share data)

	Three Months Ended September 30,	
	2020	2019
Revenue	\$ 151,551	\$ 117,802
Cost of goods sold	109,028	90,870
Gross profit	42,523	26,932
Operating expenses		
Research and development	14,691	12,368
Selling, general and administrative	17,505	15,185
Total operating expenses	32,196	27,553
Operating income (loss)	10,327	(621)
Interest expense and other income (loss), net	(549)	(827)
Income (loss) before income taxes	9,778	(1,448)
Income tax expense	1,011	410
Net income (loss) including noncontrolling interest	8,767	(1,858)
Net loss attributable to noncontrolling interest	(807)	(2,867)
Net income attributable to Alpha and Omega Semiconductor Limited	\$ 9,574	\$ 1,009
Net income per common share attributable to Alpha and Omega Semiconductor Limited		
Basic	\$ 0.38	\$ 0.04
Diluted	\$ 0.36	\$ 0.04
Weighted average number of common shares attributable to Alpha and Omega Semiconductor Limited used to compute net income per share		
Basic	25,340	24,538
Diluted	26,314	25,130

See accompanying notes to these condensed consolidated financial statements.

ALPHA AND OMEGA SEMICONDUCTOR LIMITED
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Unaudited, in thousands)

	Three Months Ended September 30,	
	2020	2019
Net income (loss) including noncontrolling interest	\$ 8,767	\$ (1,858)
Other comprehensive income (loss), net of tax		
Foreign currency translation adjustment	5,703	(6,151)
Comprehensive income (loss)	14,470	(8,009)
Less: Noncontrolling interest	1,915	(5,835)
Comprehensive income (loss) attributable to Alpha and Omega Semiconductor Limited	<u>\$ 12,555</u>	<u>\$ (2,174)</u>

See accompanying notes to these condensed consolidated financial statements.

ALPHA AND OMEGA SEMICONDUCTOR LIMITED
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
(Unaudited, in thousands)

	Common Shares	Treasury Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total AOS Shareholders' Equity	Noncontrolling Interest	Total Equity
Balance, June 30, 2020	\$ 64	\$ (66,184)	\$ 246,103	\$ (5,127)	\$ 118,833	\$ 293,689	\$ 138,199	\$ 431,888
Reissuance of treasury stock upon exercise of common stock options and release of restricted stock units	—	13	—	—	(13)	—	—	—
Withholding tax on restricted stock units	—	—	(412)	—	—	(412)	—	(412)
Share-based compensation	—	—	2,276	—	—	2,276	—	2,276
Restricted stock units settlement in connection with service	—	—	1,000	—	—	1,000	—	1,000
Net income (loss)	—	—	—	—	9,574	9,574	(807)	8,767
Cumulative translation adjustment	—	—	—	2,981	—	2,981	2,722	5,703
Balance, September 30, 2020	<u>\$ 64</u>	<u>\$ (66,171)</u>	<u>\$ 248,967</u>	<u>\$ (2,146)</u>	<u>\$ 128,394</u>	<u>\$ 309,108</u>	<u>\$ 140,114</u>	<u>\$ 449,222</u>

	Common Shares	Treasury Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total AOS Shareholders' Equity	Noncontrolling Interest	Total Equity
Balance, June 30, 2019	\$ 62	\$ (66,240)	\$ 234,410	\$ (2,693)	\$ 125,485	\$ 291,024	\$ 152,265	\$ 443,289
Reissuance of treasury stock upon exercise of common stock options and release of restricted stock units	—	13	—	—	(13)	—	—	—
Withholding tax on restricted stock units	—	—	(96)	—	—	(96)	—	(96)
Share-based compensation	—	—	2,369	—	—	2,369	—	2,369
Net income (loss)	—	—	—	—	1,009	1,009	(2,867)	(1,858)
Cumulative translation adjustment	—	—	—	(3,183)	—	(3,183)	(2,968)	(6,151)
Balance, September 30, 2019	<u>\$ 62</u>	<u>\$ (66,227)</u>	<u>\$ 236,683</u>	<u>\$ (5,876)</u>	<u>\$ 126,481</u>	<u>\$ 291,123</u>	<u>\$ 146,430</u>	<u>\$ 437,553</u>

See accompanying notes to these condensed consolidated financial statements.

ALPHA AND OMEGA SEMICONDUCTOR LIMITED
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited, in thousands)

	Three Months Ended September 30,	
	2020	2019
Cash flows from operating activities		
Net income (loss) including noncontrolling interest	\$ 8,767	\$ (1,858)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:		
Depreciation and amortization	12,489	10,904
Share-based compensation expense	2,876	2,369
Deferred income taxes, net	17	(32)
Loss on disposal of property and equipment	47	36
Changes in assets and liabilities:		
Accounts receivable, net	(13,044)	(15,033)
Inventories	(2,172)	(5,823)
Other current and long-term assets	(1,011)	3,756
Accounts payable	1,930	753
Income taxes payable	749	47
Accrued and other liabilities	(800)	3,654
Net cash provided by (used in) operating activities	9,848	(1,227)
Cash flows from investing activities		
Purchases of property and equipment excluding JV Company	(7,944)	(8,292)
Purchases of property and equipment in JV Company	(3,393)	(7,506)
Net cash used in investing activities	(11,337)	(15,798)
Cash flows from financing activities		
Withholding tax on restricted stock units	(412)	(96)
Proceeds from borrowings	11,300	2,790
Repayments of borrowings	(11,085)	(2,085)
Principal payments on finance leases	(3,989)	(1,691)
Net cash used in financing activities	(4,186)	(1,082)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	1,997	(805)
Net decrease in cash, cash equivalents and restricted cash	(3,678)	(18,912)
Cash, cash equivalents and restricted cash at beginning of period	162,704	124,295
Cash, cash equivalents and restricted cash at end of period	<u>\$ 159,026</u>	<u>\$ 105,383</u>
Supplemental disclosures of non-cash investing and financing information:		
Property and equipment purchased but not yet paid	\$ 6,877	\$ 8,334

See accompanying notes to these condensed consolidated financial statements.

ALPHA AND OMEGA SEMICONDUCTOR LIMITED
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. The Company and Significant Accounting Policies

The Company

Alpha and Omega Semiconductor Limited and its subsidiaries (the “Company”, “AOS”, “we” or “us”) design, develop and supply a broad range of power semiconductors. The Company's portfolio of products targets high-volume applications, including personal and portable computers, graphic cards, flat panel TVs, home appliances, smart phones, battery packs, quick chargers, home appliances, consumer and industrial motor controls and power supplies for TVs, computers, servers and telecommunications equipment. The Company conducts its operations primarily in the United States of America (“USA”), Hong Kong, China, and South Korea.

Basis of Preparation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States (“U.S. GAAP”) for interim financial information and with the instructions to Article 10 of Securities and Exchange Commission Regulation S-X, as amended. They do not include all information and footnotes necessary for a fair presentation of financial position, results of operations and cash flows in conformity with U.S. GAAP for complete financial statements. These condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and related notes contained in the Company's Annual Report on Form 10-K for the fiscal year ended June 30, 2020. All significant intercompany balances and transactions have been eliminated in consolidation. In the opinion of management, all adjustments (consisting of normal recurring adjustments and accruals) considered necessary for a fair presentation of the results of operations for the periods presented have been included in the interim periods. Operating results for the three months ended September 30, 2020 are not necessarily indicative of the results that may be expected for the fiscal year ending June 30, 2021 or any other interim period. The condensed consolidated balance sheets at June 30, 2020 is derived from the audited financial statements included in the Company's Annual Report on Form 10-K for the fiscal year ended June 30, 2020.

Joint Venture

On March 29, 2016, the Company entered into a joint venture contract (the “JV Agreement”) with two investment funds owned by the Municipality of Chongqing (the “Chongqing Funds”), pursuant to which the Company and the Chongqing Funds formed a joint venture, (the “JV Company”), for the purpose of constructing and operating a power semiconductor packaging, testing and 12-inch wafer fabrication facility in the Liangjiang New Area of Chongqing, China (the “JV Transaction”). The fab is being built in phases. As of September 30, 2020, the Company owns 51%, and the Chongqing Funds own 49% of the equity interest in the JV Company. The Joint Venture is accounted under the provisions of the consolidation guidance since the Company has controlling financial interest. If both parties agree that the termination of the JV Company is the best interest of each party or the JV Company is bankrupt or insolvent where either party may terminate early, after paying the debts of the JV Company, the remaining assets of the JV Company shall be paid to the Chongqing Funds to cover the principal of its total paid-in contributions plus interest at 10% simple annual rate prior to distributing the balance of the JV Company's assets to the Company. The JV Company has reached its targeted production of assembly and testing and is currently ramping up its Phase I of the 12-inch wafer fabrication.

Certain Significant Risks and Uncertainties Related to Outbreak of Coronavirus Disease 2019 (“COVID-19”)

The COVID-19 pandemic has had and continues to have a negative impact on business and economic activities across the globe. As a result of the COVID-19 pandemic and the global economic downturn and changing consumer behaviors due to various restrictions imposed by governments, the Company has experienced shifting market trends, including an increasing demand in the markets for notebooks, PCs and gaming devices and decreasing demand for mobile phone and industrial products, as more consumers are staying at and working from home. While the Company has recently benefited from the increasing demand of PC related products, there is no guarantee that this trend will continue, and such increasing demand may discontinue or decline as government authorities relax COVID-19 related restrictions. Furthermore, as the COVID-19 pandemic continues and global economic downturn and high unemployment persists, consumer spending may slow down substantially, in which case the Company may experience a significant decline of customer orders for its products, including those designed for PC-related applications, and such decline will adversely affect its financial conditions and results of operations. The extent to which the COVID-19 pandemic may impact the Company's business will depend on future

ALPHA AND OMEGA SEMICONDUCTOR LIMITED
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

developments which are uncertain, such as the duration of the outbreak, travel restrictions, governmental mandates issued to mitigate the spread of the disease, business closures, economic disruptions, and the effectiveness of actions taken to contain and treat the virus. Accordingly, the COVID-19 pandemic may have a negative impact on the Company's sales and results of operations, the size and duration of which is difficult to predict.

Use of Estimates

The preparation of the condensed consolidated financial statements in conformity with U.S. GAAP requires the Company to make estimates, judgments and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses. To the extent there are material differences between these estimates and actual results, the Company's condensed consolidated financial statements will be affected. On an ongoing basis, the Company evaluates the estimates, judgments and assumptions including those related to stock rotation returns, price adjustments, allowance for doubtful accounts, inventory reserves, warranty accrual, income taxes, leases, share-based compensation, recoverability of and useful lives for property, plant and equipment and intangible assets, as well as economic implications of the COVID-19 pandemic.

Leases

The Company determines if an arrangement is a lease at inception. Operating leases are included in operating lease right-of-use ("ROU") assets, current operating lease liabilities and long-term operating lease liabilities on the Company's condensed consolidated balance sheets. Finance leases are included in property, plant and equipment, finance lease liabilities and long-term finance leases liabilities on the condensed consolidated balance sheets.

Operating lease ROU assets and operating lease liabilities are recognized based on the present value of the future minimum lease payments over the lease term at commencement date. The Company uses an estimate of its incremental borrowing rate based on the information available at the lease commencement date. The operating lease ROU assets also include any lease payments made and exclude lease incentives. Lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise such options. Operating lease expense is generally recognized on a straight-line basis over the lease term. Variable lease payments are expensed as incurred and are not included within the operating lease ROU asset and lease liability calculation. The Company does not record leases on the condensed consolidated balance sheet with a term of one year or less.

Revenue recognition

The Company determines revenue recognition through the following steps: (1) identification of the contract with a customer; (2) identification of the performance obligations in the contract; (3) determination of the transaction price; (4) allocation of the transaction price to the performance obligations in the contract; and (5) recognition of revenue when, or as, a performance obligation is satisfied. The Company recognizes revenue when product is shipped to the customer, net of estimated stock rotation returns and price adjustments to certain distributors.

Packaging and testing services revenue is recognized upon shipment of serviced products to the customer.

Share-based Compensation Expense

The Company maintains an equity-settled, share-based compensation plan to grant restricted share units and stock options. The Company recognizes expense related to share-based compensation awards that are ultimately expected to vest based on estimated fair values on the date of grant. The fair value of restricted share units is based on the fair value of the Company's common share on the date of grant. For restricted stock awards subject to market conditions, the fair value of each restricted stock award is estimated at the date of grant using the Monte-Carlo pricing model. The fair value of stock options is estimated on the date of grant using the Black-Scholes option valuation model. Share-based compensation expense is recognized on the accelerated attribution basis over the requisite service period of the award, which generally equals the vesting period.

ALPHA AND OMEGA SEMICONDUCTOR LIMITED
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Restricted Cash

As a condition of the loan agreement, the Company is required to keep a compensating balance at the issuing bank (see Note 5). In addition, the Company maintains restricted cash in connection with cash balances temporarily restricted for regular business operations including the possibility of a dispute with a vendor. These balances have been excluded from the Company's cash and cash equivalents balance and are classified as restricted cash in the Company's condensed consolidated balance sheets. As of September 30, 2020 and June 30, 2020, the amount of restricted cash was \$4.3 million and \$4.2 million, respectively.

Fair Value of Financial Instruments

The fair value of cash equivalents is based on observable market prices which have been categorized in Level 1 in the fair value hierarchy. Cash equivalents consist primarily of short-term bank deposits. The carrying values of financial instruments such as cash and cash equivalents, accounts receivable and accounts payable approximate their carrying values due to their short-term maturities. The carrying value of the company's debt is considered a reasonable estimate of fair value which is estimated by considering the current rates available to the Company for debt of the same remaining maturities, structure and terms of the debts.

Government Grants

The Company occasionally receives government grants that provide financial assistance for certain eligible expenditures in China. These grants include reimbursements on interest expense on bank borrowings, payroll tax credits, credit for property, plant and equipment in a particular geographical location, employment credits, as well as business expansion credits. Government grants are not recognized until there is reasonable assurance that the Company will comply with the conditions attaching to it, and that the grant will be received. The Company records such grants either as a reduction of the related expense, a reduction of the cost of the related asset, or as other income depending upon the nature of the grant. As a result of such grants, during the three months ended September 30, 2020, the Company reduced interest expense and operating expenses by \$0.8 million and \$1.9 million, respectively. During the three months ended September 30, 2019, the Company reduced interest expense by \$2.3 million.

Long-lived Assets

The Company evaluates its long-lived assets for impairment whenever events or changes indicate that the carrying amount of such assets may not be recoverable. Due to the COVID-19 pandemic, the Company assessed the changes in circumstances that occurred since the March 2020 quarter. These factors included operating losses, a decrease in the Company's share price in February and March of 2020, which reduced its market capitalization, expectation of lower business growth for the coming quarters, increased and prolonged economic and regulatory uncertainty in the global economies, and the expectation of higher supply chain costs and increased competition. Therefore, the Company performed a recoverability test by comparing the sum of the estimated undiscounted future cash flows of its long-lived assets to their carrying amount as of June 30, 2020. Some of the more significant assumptions used in the estimated future cash flows include net sales, cost of goods sold, operating expenses, working capital, capital expenditures, income tax rates, and long-term growth rates that appropriately reflects the risks inherent in the future cash flow stream. The Company selected the assumptions used in the financial forecasts by referencing to historical data, supplemented by current and anticipated market conditions, estimated product growth rates and management's plans. These estimated future cash flows were consistent with those the Company uses in its internal planning. The result of the recoverability test indicated that the sum of the expected future cash flows (undiscounted and without interest charges) was greater than the carrying amount of the long-lived assets. Therefore, the Company concluded that the carrying amount of the long-lived assets is recoverable as of June 30, 2020. As of September 30, 2020, the Company performed a qualitative assessment and concluded that indicators of potential impairment did not exist. Therefore, there was no impairment of long-lived assets as of September 30, 2020.

Comprehensive Income (Loss)

Comprehensive income (loss) is defined as the change in equity of a business enterprise during a period from transactions and other events and circumstances from non-owner sources. The Company's accumulated other comprehensive income (loss) consists of cumulative foreign currency translation adjustments. Total comprehensive income (loss) is presented in the condensed consolidated statements of comprehensive income (loss).

ALPHA AND OMEGA SEMICONDUCTOR LIMITED
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Recent Accounting Pronouncements

Recently Issued Accounting Standards not yet adopted

In August 2020, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2020-06, Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity, which, among other things, provides guidance on how to account for contracts on an entity's own equity. This ASU simplifies the accounting for certain financial instruments with characteristics of liabilities and equity. Specifically, the ASU eliminated the need for the Company to assess whether a contract on the entity's own equity (1) permits settlement in unregistered shares, (2) whether counterparty rights rank higher shareholder's rights, and (3) whether collateral is required. In addition, the ASU requires incremental disclosure related to contracts on the entity's own equity and clarifies the treatment of certain financial instruments accounted for under this ASU on earnings per share. For public business entities, the ASU is effective for fiscal years beginning after December 15, 2021, and interim periods within those fiscal years. The Company does not expect the adoption of this guidance will have a material impact on its consolidated financial position, results of operations or cash flows.

This ASU may be applied on a full retrospective of modified retrospective basis. This ASU is effective January 1, 2022 and interim periods presented. Early adoption of the ASU is permitted by the Company effective January 1, 2021. The Company is in the process of assessing the adoption of the ASU on the Company's financial statements.

In January 2020, the FASB issued ASU No. 2020-01, "Investments - Equity Securities (Topic 321), Investments - Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815) - Clarifying the Interactions between Topic 321, Topic 323, and Topic 815." The ASU is based on a consensus of the Emerging Issues Task Force and is expected to increase comparability in accounting for these transactions. ASU 2016-01 made targeted improvements to accounting for financial instruments, including providing an entity the ability to measure certain equity securities without a readily determinable fair value at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. Among other topics, the amendments clarify that an entity should consider observable transactions that require it to either apply or discontinue the equity method of accounting. For public business entities, the amendments in the ASU are effective for fiscal years beginning after December 15, 2020, and interim periods within those fiscal years. The Company does not expect the adoption of this guidance will have a material impact on its consolidated financial position, results of operations or cash flows.

In December 2019, the FASB issued ASU No. 2019-12 "Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes ("ASU 2019-12") by removing certain exceptions to the general principles. The amendments will be effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. Early adoption of the amendments is permitted. Depending on the amendment, adoption may be applied on a retrospective, modified retrospective or prospective basis. The Company is currently evaluating the impacts of adoption of the new guidance to its consolidated financial statements.

Recently Adopted Accounting Standards

In August 2018, the FASB issued ASU 2018-15 "Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract". These amendments align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal-use software license). The accounting for the service element of a hosting arrangement that is a service contract is not affected by these amendments. ASU 2018-15 had no material impact on the Company's consolidated financial statements.

ALPHA AND OMEGA SEMICONDUCTOR LIMITED
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

In August 2018, the FASB issued ASU 2018-13, "Fair Value Measurement (Topic 820): Disclosure Framework-Changes to the Disclosure Requirements for Fair Value Measurement ("ASU 2018-13"). ASU 2018-13 amends existing fair value measurement disclosure requirements by adding, changing, or removing certain disclosures. 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. ASU 2018-13 had no material impact on the Company's consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, "Financial Instruments - Credit Losses (Topic 326). Topic 326 adds to U.S. GAAP the current expected credit loss ("CECL") model, a measurement model based on expected losses rather than incurred losses. Under this new standard, an entity recognizes its estimate of expected credit losses as an allowance. The new standard is also intended to reduce the complexity of U.S. GAAP by decreasing the number of credit loss models that entities use to account for debt instruments. The new guidance significantly changes the accounting for credit losses. The Company adopted ASU 2016-13 using the modified-retrospective approach in the first quarter of fiscal 2021 with no impact to its condensed consolidated financial statements.

The adoption of Topic 326 did not significantly change the Company's approach to the valuation of trade receivables. The Company determines whether there is an expected loss on its accounts receivable by reviewing all available data, including its customers' latest available financial statements, their credit standing and historical collection experience, as well as current and future market and economic conditions. As of September 30, 2020 and June 30, 2020, the allowance for credit losses on the Company's trade receivables remained immaterial.

2. Net Income Per Common Share Attributable to Alpha and Omega Semiconductor Limited

The following table presents the calculation of basic and diluted net income per share attributable to common shareholders:

	Three Months Ended September 30,	
	2020	2019
	(in thousands, except per share data)	
Numerator:		
Net income attributable to Alpha and Omega Semiconductor Limited	\$ 9,574	\$ 1,009
Denominator:		
Basic:		
Weighted average number of common shares used to compute basic net income per share	25,340	24,538
Diluted:		
Weighted average number of common shares used to compute basic net income per share	25,340	24,538
Effect of potentially dilutive securities:		
Stock options, RSUs and ESPP shares	974	592
Weighted average number of common shares used to compute diluted net income per share	26,314	25,130
Net income per share attributable to Alpha and Omega Semiconductor Limited:		
Basic	\$ 0.38	\$ 0.04
Diluted	\$ 0.36	\$ 0.04

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The following potential dilutive securities were excluded from the computation of diluted net income per share as their effect would have been anti-dilutive:

	Three Months Ended September 30,	
	2020	2019
	(in thousands)	
Employee stock options and RSUs	124	338
ESPP	233	961
Total potential dilutive securities	357	1,299

3. Concentration of Credit Risk and Significant Customers

The Company manages its credit risk associated with exposure to distributors and direct customers on outstanding accounts receivable through the application and review of credit approvals, credit ratings and other monitoring procedures. In some instances, the Company also obtains letters of credit from certain customers.

Credit sales, which are mainly on credit terms of 30 to 60 days, are only made to customers who meet the Company's credit requirements, while sales to new customers or customers with low credit ratings are usually made on an advance payment basis. The Company considers its trade accounts receivable to be of good credit quality because its key distributors and direct customers have long-standing business relationships with the Company and the Company has not experienced any significant bad debt write-offs of accounts receivable in the past. The Company closely monitors the aging of accounts receivable from its distributors and direct customers, and regularly reviews their financial positions, where available.

In the past, the Company shipped its product indirectly to Huawei and its affiliates (collectively, "Huawei") through distributors. Typically, the Company sold its products to distributors who then sold to original design manufacturers ("ODMs") that incorporated our products into end applications that were then shipped to Huawei. While distributor point of sale reports summarize distributor sales to ODMs, the Company must make certain assumptions and estimates in order to determine the amount of revenues attributed to indirect shipment to Huawei. During the fiscal year ended June 30, 2019, the estimated revenues attributed to indirect shipments to Huawei were approximately 2% of total revenues. During the period from May 2019 to December 2019, estimated revenues earned by the Company from shipments indirectly made to Huawei were in the range of \$11 million to \$13 million. The Company has not shipped any products to Huawei after December 31, 2019. See Note 10.

Summarized below are individual customers whose revenue or accounts receivable balances were 10% or higher than the respective total consolidated amounts:

Percentage of revenue	Three Months Ended September 30,	
	2020	2019
Customer A	28.8%	28.8%
Customer B	33.1%	35.1%

Percentage of accounts receivable	September 30, 2020	June 30, 2020
Customer A	10.5%	*
Customer B	18.8%	*
Customer C	25.6%	29.8%
Customer E	*	20.1%
Customer F	*	10.4%
Customer G	*	10.3%
Customer H	*	10.9%

* Less than 10%

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4. Balance Sheet Components

Accounts receivable, net

	September 30, 2020	June 30, 2020
	(in thousands)	
Accounts receivable	\$ 57,876	\$ 43,394
Less: Allowance for price adjustments	(31,529)	(30,092)
Less: Allowance for doubtful accounts	(30)	(30)
Accounts receivable, net	<u>\$ 26,317</u>	<u>\$ 13,272</u>

Inventories

	September 30, 2020	June 30, 2020
	(in thousands)	
Raw materials	\$ 54,949	\$ 55,377
Work in-process	67,033	61,863
Finished goods	15,718	18,288
	<u>\$ 137,700</u>	<u>\$ 135,528</u>

Other current assets

	September 30, 2020	June 30, 2020
	(in thousands)	
VAT receivable	\$ 1,255	\$ 1,639
Other prepaid expenses	2,432	1,900
Prepaid insurance	2,761	1,520
Prepaid maintenance	923	587
Prepayment to supplier	1,266	938
Prepaid income tax	1,790	1,991
Customs deposit	23	163
Other receivables	29	69
	<u>\$ 10,479</u>	<u>\$ 8,807</u>

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Property, plant and equipment, net:

	September 30, 2020	June 30, 2020
	(in thousands)	
Land	\$ 4,877	\$ 4,877
Building	61,008	58,875
Manufacturing machinery and equipment	477,461	447,079
Equipment and tooling	25,931	25,398
Computer equipment and software	39,212	38,779
Office furniture and equipment	3,595	3,529
Leasehold improvements	71,298	68,224
Land use rights	8,828	8,502
	692,210	655,263
Less: accumulated depreciation	(306,956)	(291,515)
	385,254	363,748
Equipment and construction in progress	36,388	48,592
Property, plant and equipment, net	\$ 421,642	\$ 412,340

Intangible assets, net:

	September 30, 2020	June 30, 2020
	(in thousands)	
Patents and technology rights	\$ 18,037	\$ 18,037
Trade name	268	268
Customer relationships	1,150	1,150
	19,455	19,455
Less: accumulated amortization	(3,794)	(2,954)
	15,661	16,501
Goodwill	269	269
Intangible assets, net	\$ 15,930	\$ 16,770

Estimated future minimum amortization expense of intangible assets is as follows (in thousands):

Year ending June 30,	
2021 (Remaining)	\$ 2,520
2022	3,360
2023	3,286
2024	3,249
2025	3,246
	\$ 15,661

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Other long-term assets:

	September 30, 2020	June 30, 2020
	(in thousands)	
Prepayments for property and equipment	\$ 482	\$ 2,242
Investment in a privately held company	100	100
Customs deposit	1,076	1,662
Other long-term deposits	880	850
Office leases deposits	771	766
Other	164	184
	\$ 3,473	\$ 5,804

Accrued liabilities:

	September 30, 2020	June 30, 2020
	(in thousands)	
Accrued compensation and benefits	\$ 22,625	\$ 19,968
Warranty accrual	707	709
Stock rotation accrual	3,743	3,358
Accrued professional fees	3,712	5,868
Accrued inventory	776	775
Accrued facilities related expenses	2,157	1,831
Accrued property, plant and equipment	10,327	11,039
Other accrued expenses	7,129	8,017
Customer deposit	2,777	2,813
ESPP payable	1,922	608
	\$ 55,875	\$ 54,986

The activities in the warranty accrual, included in accrued liabilities, are as follows:

	Three Months Ended September 30,	
	2020	2019
	(in thousands)	
Beginning balance	\$ 709	\$ 623
Additions	71	21
Utilization	(73)	(3)
Ending balance	\$ 707	\$ 641

The activities in the stock rotation accrual, included in accrued liabilities, are as follows:

	Three Months Ended September 30,	
	2020	2019
	(in thousands)	
Beginning balance	\$ 3,358	\$ 1,921
Additions	3,016	2,565
Utilization	(2,631)	(1,869)
Ending balance	\$ 3,743	\$ 2,617

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Other long-term liabilities:

	September 30, 2020		June 30, 2020
	(in thousands)		
Customer deposits	\$ 6,000 *	\$	8,000 *
Computer software liabilities	1,431		1,897
Deferred payroll taxes	1,702		826
Other long-term liabilities	\$ 9,133	\$	10,723

* Customer deposits are from Customer A and Customer B for securing future product shipments from the Company. The Company reclassified \$2.0 million of the customer deposit to short term accrued liabilities during the three months ended September 30, 2020 since the repayment of this amount is due within a year.

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5. Bank Borrowings

Short-term borrowings

On April 15, 2020, the JV Company entered into a one-year loan agreement with China Everbright Bank in China to borrow a maximum of Chinese Renminbi (RMB) 100 million (approximately \$14.3 million based on the currency exchange rate between RMB and U.S. Dollar on April 15, 2020), in the amount in RMB or USD. Interest payments are due on the 20th of each month, and the entire principal is due on April 16, 2021. The loan consists of RMB 20 million for working capital borrowing in Chinese yuan and RMB 80 million for borrowing in US dollars that is collateralized by eligible accounts receivable. During the three months ended June 30, 2020, the JV Company borrowed RMB 20 million, or \$2.8 million based on the currency exchange rate between RMB and U.S. Dollar, at a fixed interest rate of 5.1375% per annum under the working capital loan. The JV Company also borrowed \$7.1 million and \$1.9 million at a fixed interest rate of 2.7% and 2.8% per annum, respectively, during the same period under the accounts receivable collateralized loan. During the three months ended September 30, 2020, the JV Company repaid \$9.0 million and borrowed \$11.3 million at a fixed interest rate of 2.7% per annum under the accounts receivable collateralized loan. As of September 30, 2020, the total outstanding balance under the loan was \$14.2 million.

In October 2019, the Company's subsidiary in China entered into a line of credit facility with Bank of Communications Limited in China. This line of credit matures on February 14, 2021 and is based on the China Base Rate multiplied by 1.05, or 4.99% on October 31, 2019. The purpose of the credit facility is to provide short-term borrowings. The Company could borrow up to approximately RMB 60.0 million or \$8.5 million based on the currency exchange rate between the RMB and the U.S. Dollar on October 31, 2019. As of September 30, 2020, there was no outstanding balance under the loan.

On September 23, 2019, the JV Company entered into a short-term revolving loan agreement with China Everbright bank in China. The JV Company can borrow up to RMB 50.0 million, or \$7.1 million based on the currency exchange rate between RMB and U.S. Dollar on September 23, 2019, at varying interest rates, in RMB or USD. Interest payments with the entire principal were due no later than 90 days from each borrowing date. As of September 30, 2020, there was no outstanding balance under the loan.

On November 29 and December 4, 2018, the JV Company entered into two, one-year loan agreements with China Merchant Bank and Chongqing LiangJiang New District China Merchants Group Limited Company in China to provide loans for RMB 80 million and RMB 20 million, respectively, or \$14.5 million in total based on the currency exchange rate between RMB and U.S. Dollar on December 31, 2018, at varying interest rates. On January 20, 2020, the JV Company renewed the loan agreements with the same terms. Interest payments are due monthly and quarterly with the entire principal due not later than January 21, 2021. As of September 30, 2020, there was no outstanding balance under the loan.

On November 16, 2018, the Company's subsidiary in China entered into a line of credit facility with Industrial and Commercial Bank of China, which expired on September 30, 2019. The purpose of the credit facility was to provide short-term borrowings. The Company could borrow up to approximately RMB 72.0 million or \$10.3 million based on currency exchange rate between RMB and U.S. Dollar on November 16, 2018. In October 2019, this line of credit was renewed with the same terms and a maturity date of September 30, 2020. On September 30, 2020, there was no outstanding balance under the line of credit and the line of credit expired.

Accounts Receivable Factoring Agreement

On August 9, 2019, one of the Company's wholly-owned subsidiaries (the "Borrower") entered into a factoring agreement with the Hongkong and Shanghai Banking Corporation Limited ("HSBC"), whereby the Borrower assigns certain of its accounts receivable with recourse. This factoring agreement allows the Borrower to borrow up to 70% of the net amount of its eligible accounts receivable of the Borrower with a maximum amount of \$30.0 million. The interest rate is based on one month London Interbank Offered Rate ("LIBOR") plus 1.75% per annum. The Company is the guarantor for this agreement. The Company is accounting for this transaction as a secured borrowing under the Transfers and Servicing of Financial Assets guidance. In addition, any cash held in the restricted bank account controlled by HSBC has a legal right of offset against the borrowing. This agreement, with certain financial covenants required, has no expiration date. The Borrower was in compliance with these covenants as of September 30, 2020. During the three months ended September 30, 2020, the Company borrowed \$29.7 million and repaid this amount in full. As of September 30, 2020, there was no outstanding balance and the Company had unused credit of approximately \$30.0 million.

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Credit Facilities

On May 9, 2018 (the “Effective Date”), the JV Company entered into a lease finance agreement and a security agreement (the “Agreements”) with YinHai Leasing Company and China Import/Export Bank (the “Lenders”). Pursuant to the Agreements, the Lenders agreed to provide an aggregate of RMB 400.0 million, or \$62.8 million based on the currency exchange rate between RMB and U.S. Dollar on the Effective Date, of financing to the JV Company (the “Lease Financing”). In exchange for the Lease Financing, the JV Company agreed to transfer title of its assembly and testing equipment to the Lenders, and the Lenders leased such equipment to the JV Company under a five-year lease arrangement, pursuant to which the JV Company makes quarterly lease payments to the Lenders consisting of principal and interest based on a repayment schedule mutually agreed by the parties. The interest under the Lease Financing is accrued based on the China Base Rate multiplied by 1.15, or 5.4625% on the Effective Date. Under the Agreements, at the end of the five-year lease term, the Lenders agree to sell such equipment back to the JV Company for a nominal amount (RMB 1). The JV Company’s obligations under the Lease Financing are secured by the land and building owned by the JV Company (the “Collateral”). The proceeds from the Lease Financing were used primarily for the acquisition and installation of the 12-inch fabrication equipment and other expenses of the JV Company relating to the completion of the fabrication facility located in Chongqing. The Agreements contain customary representation, warranties and covenants, including restrictions on the transfer of the Collateral. The Agreements also contain customary events of default, including but not limited to, failure to make payments and breach of material terms under the Agreements. The Agreements include certain customary closing conditions, including the payment of deposit by the JV Company. On June 28, 2020, the parties entered into a modification to this agreement, pursuant to which the interest rate was changed to be the five-year loan prime rate in China plus 0.8125%, or 5.4625%. Other terms of this agreement remain the same. As of September 30, 2020, the outstanding balance of the Lease Financing of 271.0 million RMB (equivalent of \$39.8 million based on the currency exchange rate as of September 30, 2020) was recorded under short-term and long-term finance lease liabilities.

See future minimum lease payment table for finance lease liabilities in Note 6.

Long-term debt

On April 26, 2020, the JV Company entered into a loan agreement with China Development Bank, Agricultural Bank of China, China Merchants Bank and Chongqing Rural Commercial Bank (collectively, “the Banks”) in the aggregate principal amount of RMB 250 million (approximately \$35.7 million based on the currency exchange rate between RMB and U.S. Dollar on April 26, 2020). The obligation under the loan agreement is secured by certain assets of the JV Company. Beginning December 18, 2020, the JV Company is required to make consecutive semi-annual payments of principal until December 8, 2024. Interest payment is due on March 20, June 20, September 20 and December 20 of each year based on China one-year loan prime rate (“LPR”) plus 1.3%. The JV Company drew down RMB 250 million (approximately \$35.3 million based on the currency exchange rate between RMB and U.S. Dollar on June 30, 2020) in April 2020. As of September 30, 2020, the outstanding balance of the loan was \$36.7 million.

In December 2019, the JV Company entered into a loan agreement with China Development Bank in the amount of \$24.0 million. The obligation under the loan agreement is secured by certain assets of the JV Company. Beginning December 18, 2020, the JV Company will make consecutive semi-annual payments of principal until December 8, 2024. The interest is accrued based on the LIBOR rate plus 2.8%. The interest is required to be paid on March 21 and September 21 each year. As of September 30, 2020, the outstanding balance of the loan was \$24.0 million.

On March 12, 2019, the JV Company entered into a loan agreement with The Export-Import Bank of China in the aggregate principal amount of RMB 200 million (approximately \$29.8 million based on currency exchange rate between RMB and U.S. Dollar on March 31, 2019). The loan will mature on February 20, 2025. The JV Company drew down RMB 190 million and RMB 10 million in March 2019 and December 2019, respectively. The loan withdraw window expired on February 28, 2020. The interest is accrued based on the China Base Rate multiplied by 1.1, or 5.39%. The loan requires quarterly interest payments. The principal payments are required to be paid every 6 months over the term of loan commencing in October 2019. This loan is secured by the buildings and certain equipment owned by the JV Company. As a condition of the loan arrangement, 14 million RMB (approximately \$2.0 million) of cash is held as restricted cash by the JV Company as a compensating balance at the bank until the principal is paid. On June 24, 2020, a modification of this loan was signed, pursuant to which the interest rate was changed to be based on the five-year loan prime rate in China plus 0.74%, or 5.39%. Other terms of this loan remain the same. During the three months ended December 31, 2019, the JV Company paid 6.0 million RMB

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under this agreement. As of September 30, 2020, the outstanding balance of the loan was 194 million RMB (equivalent of \$28.5 million based on the currency exchange rate as of September 30, 2020).

On May 1, 2018, Jireh Semiconductor Incorporated ("Jireh"), a wholly-owned subsidiary of the Company, entered into a loan agreement with a financial institution (the "Bank") that provided a term loan in the amount of \$17.8 million. The obligation under the loan agreement is secured by certain real estate assets of Jireh and guaranteed by the Company. The loan has a five-year term and matures on June 1, 2023. Beginning June 1, 2018, Jireh made consecutive monthly payments of principal and interest to the Bank. The outstanding principal accrues interest at a fixed rate of 5.04% per annum on the basis of a 360-day year. The loan agreement contains customary restrictive covenants and includes certain financial covenants that require the Company to maintain, on a consolidated basis, specified financial ratios. The Company was in compliance with these covenants as of September 30, 2020. As of September 30, 2020, the outstanding balance of the term loan was \$15.7 million.

On August 15, 2017, Jireh entered into a credit agreement with the Bank that provided a term loan in an amount up to \$30.0 million for the purpose of purchasing certain equipment for the Company's fabrication facility located in Oregon. The obligation under the credit agreement is secured by substantially all assets of Jireh and guaranteed by the Company. The credit agreement has a five-year term and matures on August 15, 2022. In January 2018 and July 2018, Jireh drew down the loan in the amount of \$13.2 million and \$16.7 million, respectively. Beginning in October 2018, Jireh was required to pay to the Bank on each payment date, the outstanding principal amount of the loan in monthly installments. The loan accrues interest based on an adjusted LIBOR as defined in the credit agreement, plus a specified applicable margin in the range of 1.75% to 2.25%, based on the outstanding balance of the loan. The credit agreement contains customary restrictive covenants and includes certain financial covenants that require the Company to maintain, on a consolidated basis, specified financial ratios and fixed charge coverage ratio. The Company was in compliance with these covenants as of September 30, 2020. As of September 30, 2020, the outstanding balance of the term loan was \$14.9 million.

Maturities of short-term debt and long-term debt were as follows (in thousands):

Year ending June 30,		
2021 (Remaining)	\$	31,157
2022		26,890
2023		37,579
2024		23,352
2025		15,017
Total principal of debts		133,995
Less: debt issuance costs		(1,279)
Total principal of debt, less debt issuance costs	\$	132,716
	Short-term Debt	Long-term Debt
Principal amount	\$ 33,243	\$ 100,752
Less: debt issuance costs	(497)	(782)
Total debt, less debt issuance costs	\$ 32,746	\$ 99,970

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6. Leases

The Company evaluates contracts for lease accounting at contract inception and assesses lease classification at the lease commencement date. Operating leases are included in operating lease right-of-use ("ROU") assets, operating lease liabilities and operating lease liabilities - long-term on the Company's condensed consolidated balance sheets. Finance leases are included in property, plant and equipment, finance lease liabilities and finance lease liabilities-long-term on the condensed consolidated balance sheets. The Company recognizes a ROU asset and corresponding lease obligation liability at the lease commencement date where the lease obligation liability is measured at the present value of the minimum lease payments. As most of the leases do not provide an implicit rate, the Company uses its incremental borrowing rate at lease commencement. The Company uses an interest rate commensurate with the interest rate to borrow on a collateralized basis over a similar term with an amount equal to the lease payments. Operating leases are primarily related to offices, research and development facilities, sales and marketing facilities, and manufacturing facilities. In addition, long-term supply agreements to lease gas tank equipment and purchase industrial gases are accounted for as operating leases. Lease agreements frequently include renewal provisions and require the Company to pay real estate taxes, insurance and maintenance costs. For operating leases, the amortization of the ROU asset and the accretion of its lease obligation liability result in a single straight-line expense recognized over the lease term. The finance lease is related to the RMB 400.0 million of lease financing of the JV Company with YinHai Leasing Company and The Export-Import Bank of China. See Note 5 - Bank Borrowings for details. The Company does not record leases on the condensed consolidated balance sheets with a term of one year or less.

The components of the Company's operating and finance lease expenses are as follows for the periods presented (in thousands):

	Three Months Ended September 30,	
	2020	2019
Operating Leases:		
Fixed rent expense	\$ 1,688	\$ 1,281
Variable rent expense	203	207
Finance Lease:		
Amortization of equipment	559	1,093
Interest	615	740
Short-term leases		
Short-term lease expenses	58	75
Total lease expenses	<u>\$ 3,123</u>	<u>\$ 3,396</u>

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Supplemental balance sheets information related to the Company's operating and finance leases is as follows (in thousands, except lease term and discount rate):

	September 30, 2020	June 30, 2020
Operating Leases:		
ROU assets associated with operating leases	\$ 32,407	\$ 32,948
Finance Lease:		
Property, plant and equipment, gross	\$ 108,387	\$ 104,374
Accumulated depreciation	(90,251)	(86,540)
Property, plant and equipment, net	\$ 18,136	\$ 17,834
Weighted average remaining lease term (in years)		
Operating leases	9.46	9.57
Finance lease	2.47	2.72
Weighted average discount rate		
Operating leases	4.83%	4.45%
Finance lease	5.46%	5.46%

Supplemental cash flow information related to the Company's operating and finance lease is as follows (in thousands):

	Three Months Ended September 30,	
	2020	2019
Cash paid from amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	\$ 1,642	\$ 1,160
Operating cash flows from finance lease	\$ 615	\$ 740
Financing cash flows from finance lease	\$ 3,989	\$ 1,691

Future minimum lease payments are as follows as of September 30, 2020 (in thousands):

	Operating Leases	Finance Leases
The remainder of 2021	\$ 4,216	\$ 13,366
2022	5,401	17,059
2023	4,481	12,365
2024	4,001	—
2025	3,563	—
Thereafter	21,041	—
Total minimum lease payments	42,703	42,790
Less amount representing interest	(8,795)	(3,033)
Total lease liabilities	\$ 33,908	\$ 39,757

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7. Shareholders' Equity and Share-based Compensation

Share Repurchase

In September 2017, the Board of Directors approved a repurchase program (the "Repurchase Program") that allowed the Company to repurchase its common shares from the open market pursuant to a pre-established Rule 10b5-1 trading plan or through privately negotiated transactions up to an aggregate of \$30.0 million. The amount and timing of any repurchases under the Repurchase Program depend on a number of factors, including but not limited to, the trading price, volume and availability of the Company's common shares. Shares repurchased under this program are accounted for as treasury shares and the total cost of shares repurchased is recorded as a reduction of shareholders' equity. From time to time, treasury shares may be reissued as part of the Company's share-based compensation programs. Gains on re-issuance of treasury stock are credited to additional paid-in capital; losses are charged to additional paid-in capital to offset the net gains, if any, from previous sales or re-issuance of treasury stock. Any remaining balance of the losses is charged to retained earnings.

During the three months ended September 30, 2020, the Company did not repurchase any shares pursuant to the Repurchase Program. Since the inception of the program, the Company repurchased an aggregate of 6,784,648 shares for a total cost of \$67.3 million, at an average price of \$9.92 per share, excluding fees and related expenses. No repurchased shares have been retired. Of the 6,784,648 repurchased shares, 146,928 shares with a weighted average repurchase price of \$10.30 per share, were reissued at an average price of \$5.25 per share pursuant to option exercises and vested restricted share units ("RSU"). As of September 30, 2020, approximately \$13.4 million remained available under the Repurchase Program.

Time-based Restricted Stock Units ("TRSU")

The following table summarizes the Company's TRSU activities for the three months ended September 30, 2020:

	Number of Restricted Stock Units	Weighted Average Grant Date Fair Value Per Share	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Nonvested at June 30, 2020	932,138	\$ 11.36	1.66	\$ 10,141,661
Granted	109,425	\$ 12.91		
Vested	(110,495)	\$ 13.51		
Forfeited	(4,625)	\$ 10.86		
Nonvested at September 30, 2020	926,443	\$ 11.29	1.49	\$ 11,876,999

Market-based Restricted Stock Units ("MSUs")

During the quarter ended September 30, 2018, the Company granted 1.3 million market-based restricted stock units ("MSUs") to certain personnel. The number of shares to be earned at the end of performance period is determined based on the Company's achievement of specified stock prices and revenue thresholds during the performance period from January 1, 2019 to December 31, 2021 as well as the recipients remaining in continuous service with the Company through such period. The MSUs vest in four equal annual installments after the end of each performance period. The Company estimated the grant date fair values of its MSUs using a Monte-Carlo simulation model. On August 31, 2020, the Compensation Committee of the Board approved a modification of the terms of MSU to extend the performance period through December 31, 2022 and change the commencement date for the four-year time-based service period January 1, 2023. The fair value of these MSUs was recalculated to reflect the change as of August 31, 2020 and the unrecognized compensation amount was adjusted to reflect the increase in fair value. The incremental expenses for the three months ended September 30, 2020 was immaterial. The Company recorded approximately \$0.2 million and \$0.2 million of expenses for MSUs during the three months ended September 30, 2020 and 2019, respectively.

Performance-based Restricted Stock Units ("PRSUs")

In March each year since year 2017, The Company granted performance-based RSUs ("PRSUs") to certain personnel. The number of shares to be earned under the PRSUs is determined based on the level of attainment of predetermined financial goals. The PRSUs vest in four equal annual installments from the first anniversary date after the grant date if certain predetermined financial

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goals were met. The Company recorded approximately \$0.4 million and \$0.2 million of expense for these PRSUs during the three months ended September 30, 2020 and 2019, respectively.

During the three months ended June 30, 2019, the Company announced an incentive program. Under this program, each participant's award is denominated in stock and subject to achievement of certain objective goals within certain timelines. In June 2020, the Company believed it was most likely that predetermined goal measures would be met. Therefore, started June 2020 quarter the Company recorded \$0.6 million of non-cash compensation expense each quarter for these awards. The expense was reported in the other current liabilities line on the condensed consolidated balance sheets as the amount of bonus is to be settled in variable number of RSU's at the completion of the objective goals. Such non-cash compensation expense was recorded as part of share-based compensation expense in the condensed consolidated statements of operations. In September 2020, the Company granted RSUs total valued at \$1.0 million to participants, which were fully vest immediately due to achievement of certain objective measures.

The following table summarizes the Company's PRSUs activities for the three months ended September 30, 2020:

	Number of Performance-based Restricted Stock Units	Weighted Average Grant Date Fair Value Per Share	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Nonvested at June 30, 2020	342,775	\$ 12.38	1.60	\$ 3,729,392
Forfeited	(1,500)	\$ 16.67		
Nonvested at September 30, 2020	341,275	\$ 12.36	1.34	\$ 4,375,146

Stock Options

The Company did not grant any stock options during the three months ended September 30, 2020 and 2019. The following table summarizes the Company's stock option activities for the three months ended September 30, 2020:

	Number of Shares	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding at June 30, 2020	643,978	\$ 8.79	2.89	\$ 1,544,664
Outstanding at September 30, 2020	643,978	\$ 8.79	2.64	\$ 2,593,702
Options vested and expected to vest	643,978	\$ 8.79	2.64	\$ 2,593,702
Exercisable at September 30, 2020	643,978	\$ 8.79	2.64	\$ 2,593,702

Employee Share Purchase Plan ("ESPP")

The assumptions used to estimate the fair values of common shares issued under the ESPP were as follows:

	Three Months Ended September 30, 2020
Volatility rate	58.3%
Risk-free interest rate	0.2%
Expected term	1.3 years
Dividend yield	0%

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Share-based Compensation Expense

The total share-based compensation expense recognized in the condensed consolidated statements of operations for the periods presented was as follows:

	Three Months Ended September 30,	
	2020	2019
	(in thousands)	
Cost of goods sold	\$ 385	\$ 436
Research and development	1,080	524
Selling, general and administrative	1,411	1,409
	<u>\$ 2,876</u>	<u>\$ 2,369</u>

As of September 30, 2020, total unrecognized compensation cost under the Company's equity plans was \$13.1 million, which is expected to be recognized over a weighted-average period of 2.5 years.

8. Income Taxes

The Company recognized income tax expense of approximately \$1.0 million and \$0.4 million for the three months ended September 30, 2020 and 2019, respectively. The income tax expense of \$1.0 million for the three months ended September 30, 2020 included a \$0.03 million discrete tax benefit. The income tax expense of \$0.4 million for the three months ended September 30, 2019 included a \$0.02 million discrete tax expense. Excluding the discrete income tax items, the effective tax rate for the three months ended September 30, 2020 and 2019 was 10.7% and (27.3)%, respectively. The changes in the effective tax rate and tax expense between the periods resulted primarily from the Company reporting pretax book income of \$9.8 million for the three months ended September 30, 2020 vs. a pretax book loss of \$1.4 million for the three months ended September 30, 2019.

The Company files its income tax returns in the United States and in various foreign jurisdictions. The tax years 2001 to 2020 remain open to examination by U.S. federal and state tax authorities. The tax years 2013 to 2020 remain open to examination by foreign tax authorities.

The Company's income tax returns are subject to examinations by the Internal Revenue Service and other tax authorities in various jurisdictions. In accordance with the guidance on the accounting for uncertainty in income taxes, the Company regularly assesses the likelihood of adverse outcomes resulting from these examinations to determine the adequacy of its provision for income taxes. These assessments can require considerable estimates and judgments. As of September 30, 2020, the gross amount of unrecognized tax benefits was approximately \$7.2 million, of which \$4.3 million, if recognized, would reduce the effective income tax rate in future periods. If the Company's estimate of income tax liabilities proves to be less than the ultimate assessment, then a further charge to expense would be required. If events occur and the payment of these amounts ultimately proves to be unnecessary, the reversal of the liabilities would result in tax benefits being recognized in the period when the Company determines the liabilities are no longer necessary. The Company does not anticipate any material changes to its uncertain tax positions during the next twelve months.

U.S. Coronavirus Aid, Relief and Economic Security Act ("CARES Act"), Enacted March 27, 2020

On March 27, 2020, the United States enacted the Coronavirus Aid, Relief and Economic Security Act ("the CARES Act"), which made the changes to existing U.S. tax laws, including, but not limited to, (1) allowing U.S. federal net operating losses originated in the 2018, 2019 or 2020 tax years to be carried back five years to recover taxes paid based upon taxable income in the prior five years, (2) eliminating the 80% of taxable income limitation on net operating losses for the 2018, 2019 and 2020 tax years (the 80% limitation will be reinstated for tax years after 2020), (3) accelerating the refund of prior year alternative minimum tax credits, (4) modifying the bonus depreciation for qualified improvement property and (5) modifying the limitation on deductible interest expense.

As a result of the ability to carryback net operating losses from the June 2018 and June 2019 years to the June 2015 to June 2017 tax years, net operating losses which were previously tax-effected using the current 21% U.S. federal tax rate were

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revalued to the U.S. tax rates in effect for the June 2015 to June 2017 tax years due to the ability of receiving tax refunds for the taxes paid in these years. Accordingly, we reported a discrete tax benefit of \$1.1 million in the quarter ended March 31, 2020 related to the re-measurement of the net operating losses that could be realized via the new net operating loss carryback provisions.

On July 27, 2015, in *Altera Corp. v. Commissioner*, the U.S. Tax Court issued an opinion related to the treatment of stock-based compensation expense in an intercompany cost-sharing arrangement. In the July 2015 ruling, the Tax Court concluded that the sharing of the cost of employee stock compensation in a company's cost-sharing arrangement was invalid under the U.S. Administrative Procedures Act. In June 2019, a panel of the Ninth Circuit of the U.S. Court of Appeals reversed this decision. In July 2019, Altera petitioned U.S. Court of Appeals for the Ninth Circuit to hold an en banc rehearing of the case. The petition was subsequently denied by the Ninth Circuit. Altera appealed the case to the U.S. Supreme Court in February 2020, but the U.S. Supreme Court declined to hear the case in June 2020, leaving intact the U.S. Court of Appeals for the Ninth Circuit's decision. AOS has not recorded any benefit related to the Altera Corporation Tax Court decision in any period through September 2020. The Company will continue to monitor ongoing developments and potential impact to its financial statements.

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9. Segment and Geographic Information

The Company is organized as, and operates in, one operating segment: the design, development and supply of power semiconductor products for computing, consumer electronics, communication and industrial applications. The chief operating decision-maker is the Chief Executive Officer. The financial information presented to the Company's Chief Executive Officer is on a consolidated basis, accompanied by information about revenue by customer and geographic region, for purposes of evaluating financial performance and allocating resources. The Company has one business segment, and there are no segment managers who are held accountable for operations, operating results and plans for products or components below the consolidated unit level. Accordingly, the Company reports as a single operating segment.

The Company sells its products primarily to distributors in the Asia Pacific region, who in turn sell these products to end customers. Because the Company's distributors sell their products to end customers which may have a global presence, revenue by geographical location is not necessarily representative of the geographical distribution of sales to end user markets.

The revenue by geographical location in the following tables is based on the country or region in which the products were shipped to:

	Three Months Ended September 30,	
	2020	2019
	(in thousands)	
Hong Kong	\$ 126,600	\$ 93,102
China	23,209	16,512
South Korea	136	5,990
United States	1,456	1,101
Other countries	150	1,097
	<u>\$ 151,551</u>	<u>\$ 117,802</u>

The following is a summary of revenue by product type:

	Three Months Ended September 30,	
	2020	2019
	(in thousands)	
Power discrete	\$ 119,375	\$ 100,541
Power IC	29,455	15,724
Packaging and testing services	2,721	1,537
	<u>\$ 151,551</u>	<u>\$ 117,802</u>

Long-lived assets, net consisting of property, plant and equipment and land use rights, by geographical area are as follows:

	September 30, 2020	June 30, 2020
	(in thousands)	
China	\$ 318,143	\$ 310,600
United States	102,734	100,984
Other countries	765	756
	<u>\$ 421,642</u>	<u>\$ 412,340</u>

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10. Commitments and Contingencies

Purchase Commitments

As of September 30, 2020 and June 30, 2020, the Company had approximately \$44.4 million and \$43.9 million, respectively, of outstanding purchase commitments primarily for purchases of semiconductor raw materials, wafers, spare parts, packaging and testing services and others.

As of September 30, 2020 and June 30, 2020, the Company had approximately \$19.8 million and \$18.0 million, primarily for the JV Company, respectively, of capital commitments for the purchase of property and equipment.

Other Commitments

See Note 1, Note 5 and Note 6 of the Notes to the Condensed Consolidated Financial Statements contained in this Quarterly Report on Form 10-Q for descriptions of commitments including Joint Venture, bank borrowings and leases.

Contingencies and Indemnities

The Company has in the past, and may from time to time in the future, become involved in legal proceedings arising from the normal course of business activities. The semiconductor industry is characterized by frequent claims and litigation, including claims regarding patent and other intellectual property rights as well as improper hiring practices. Irrespective of the validity of such claims, the Company could incur significant costs in the defense of such claims and suffer adverse effects on its operations.

In December 2019, the U.S. Department of Justice ("DOJ") commenced an investigation into the Company's compliance with export control regulations relating to its business transactions with Huawei and its affiliates ("Huawei"), which were added to the "Entity List" maintained by the Department of Commerce ("DOC") on May 16, 2019. The Company is cooperating fully with federal authorities in the investigation, including responding to requests for documents and information from DOJ in connection with the investigation. The Company has maintained an export control compliance program and has been committed to comply fully with all applicable laws and regulations. In connection with this investigation, DOC requested the Company to suspend shipments of its products to Huawei, and the Company complied with such request, and the Company has not shipped any product to Huawei after December 31, 2019 (see Note 3). The Company is currently working with DOC to resolve this issue. Given the case is still ongoing and neither DOJ nor DOC have provided the Company with any clear indication of the timing and schedule for the investigation, the Company cannot estimate the reasonably possible loss or range of loss that may occur. Also, the Company is unable to predict the duration, scope, result or related costs of the investigation, although the Company expects to incur additional professional fees as a result of this matter. In addition, the Company is unable to predict what, if any, further action that may be taken by the government in connection with the investigation, or what, if any, penalties, sanctions or remedial actions may be sought.

On March 19, 2020, Darryl Gray, a stockholder of the Company (the "Plaintiff"), filed a putative class action complaint in the United States District Court for the Southern District of New York (the "Gray Action"), alleging that the Company and its management members made material misstatements or omissions regarding the Company's business and operations, including its export control practices relating to business transactions with Huawei and its affiliate. The Gray Action asserts claims under Section 10(b) of the Exchange Act against the Company, its Chief Executive Officer and Chief Financial Officer (collectively, the Defendants), as well as claims under Section 20(a) of the Exchange Act against the Chief Executive Officer and Chief Financial Officer. Among other remedies, the Gray Action seeks to recover compensatory and other damages as well as attorney's fees and costs.

On May 18, 2020, Plaintiff moved for an order appointing him as Lead Plaintiff pursuant to Section 21D of the Exchange Act and approving Glancy Prongay & Murray LLP as Lead Counsel for the putative class (the "Motion"). On July 1, 2020, the Court entered an order granting the Motion and requiring that: (i) Lead Plaintiff file an amended complaint or designate the current complaint as operative within sixty days; (ii) Defendants answer the complaint or otherwise move within sixty days of such filing or designation; (iii) Lead Plaintiff file an opposition, if any, within forty-five days; and (iv) Defendants file a reply, if any, forty-five days thereafter. On August 28, 2020, Plaintiff filed an amended complaint asserting the same claims against the Defendants, and adding the Company's Executive Vice President of Product Line as a defendant on both claims. On October 27, 2020, the Defendants moved to dismiss the action in its entirety. The Company believes the claims in the Gray Action are

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without merit and intends to vigorously defend this litigation. Given the case is in its early stages and still on going, the Company cannot estimate the reasonably possible loss or range of loss that may occur.

The Company is a party to a variety of agreements that it has contracted with various third parties. Pursuant to these agreements, the Company may be obligated to indemnify another party to such an agreement with respect to certain matters. Typically, these obligations arise in the context of contracts entered into by the Company, under which the Company customarily agrees to hold the other party harmless against losses arising from a breach of representations and covenants related to such matters as title to assets sold, certain intellectual property rights, specified environmental matters and certain income taxes. In these circumstances, payment by the Company is customarily conditioned on the other party making a claim pursuant to the procedures specified in the particular contract, which procedures typically allow the Company to challenge the other party's claim. Further, the Company's obligations under these agreements may be limited in time and/or amount, and in some instances, the Company may have recourse against third parties for certain payments made by it under these agreements. The Company has not historically paid or recorded any material indemnifications, and no accrual was made at September 30, 2020 and June 30, 2020.

The Company has agreed to indemnify its directors and certain employees as permitted by law and pursuant to its Bye-laws, and has entered into indemnification agreements with its directors and executive officers. The Company has not recorded a liability associated with these indemnification arrangements, as it historically has not incurred any material costs associated with such indemnification obligations. Costs associated with such indemnification obligations may be mitigated by insurance coverage that the Company maintains. However, such insurance may not cover any, or may cover only a portion of, the amounts the Company may be required to pay. In addition, the Company may not be able to maintain such insurance coverage in the future.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Except for the historical information contained herein, the matters addressed in this Item 2 constitute “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These forward looking statements include, but are not limited to, statements regarding future financial performance of the Company; the expected ramp up timeline of the 12-inch fab at the JV Company; the impact of government investigation and coronavirus on our financial performance; and other statements and information set forth under the heading “Factors Affecting Our Performance”. Such forward-looking statements are subject to a variety of risks and uncertainties, including those discussed below under the heading “Risk Factors” and elsewhere in this Quarterly Report on Form 10-Q, that could cause actual results to differ materially from those anticipated by the Company’s management. The Private Securities Litigation Reform Act of 1995 (the “Act”) provides certain “safe harbor” provisions for forward-looking statements. All forward-looking statements made in this Quarterly Report on Form 10-Q are made pursuant to the Act. The Company undertakes no obligation to publicly release the results of any revisions to its forward-looking statements that may be made to reflect events or circumstances after the date hereof or to reflect the occurrence of unexpected events. Unless the context otherwise requires, the words “AOS,” the “Company,” “we,” “us” and “our” refer to Alpha and Omega Semiconductor Limited and its subsidiaries.

This management’s discussion should be read in conjunction with the management’s discussion included in the Company’s Annual Report on Form 10-K for the fiscal year ended June 30, 2020, filed with the Securities and Exchange Commission on September 2, 2020.

Overview

We are a designer, developer and global supplier of a broad portfolio of power semiconductors. Our portfolio of power semiconductors includes approximately 2,300 products, and has grown significantly with the introduction of over 160 new products in the fiscal year ended June 30, 2020, and over 200 new products in each of the fiscal year ended June 30, 2019 and 2018, respectively. During the three months ended September 30, 2020, we introduced an additional 44 new products. Our teams of scientists and engineers have developed extensive intellectual properties and technical knowledge that encompass major aspects of power semiconductors, which we believe enables us to introduce and develop innovative products to address the increasingly complex power requirements of advanced electronics. We have an extensive patent portfolio that consists of 832 patents and 70 patent applications in the United States as of September 30, 2020. We also have a total of 861 foreign patents, which were based primarily on our research and development efforts through September 30, 2020. We differentiate ourselves by integrating our expertise in technology, design and advanced manufacturing and packaging to optimize product performance and cost. Our portfolio of products targets high-volume applications, including personal and portable computers, graphic cards, flat panel TVs, home appliances, smart phones, battery packs, game consoles, consumer and industrial motor controls and power supplies for TVs, computers, servers and telecommunications equipment.

Our business model leverages global resources, including research and development and manufacturing in the United States and Asia. Our sales and technical support teams are localized in several growing markets. We operate an 8-inch wafer fabrication facility located in Hillsboro, Oregon, or the Oregon fab, which is critical for us to accelerate proprietary technology development, new product introduction and improve our financial performance. To meet the market demand for the more mature high volume products, we also utilize the wafer manufacturing capacity of selected third party foundries. For assembly and test, we primarily rely upon our in-house facilities in China. In addition, we utilize subcontracting partners for industry standard packages. We believe our in-house packaging and testing capability provides us with a competitive advantage in proprietary packaging technology, product quality, cost and sales cycle time.

We formed a joint venture (the “JV Company”) which consists of a power semiconductor packaging, testing and 12-inch wafer fabrication facility in Chongqing, China with two investment funds owned by the Municipality of Chongqing (the “Chongqing Funds”). We currently own 51%, and the Chongqing Funds own 49%, of the equity interest in the JV Company. While the JV Company is our consolidated subsidiary for purpose of financial reporting, it operates as an independent and separate legal entity. As a result, the JV Company’s assets and liabilities are generally segregated from our company’s assets and liabilities. For example, the JV Company incurs debt through its own financing and bank loan agreements, and our parent company and other subsidiaries are not parties to these agreements and do not provide any guarantee or security for the JV Company’s debt, nor do we have direct access to any cash proceeds borrowed from such loan agreements. As part of our strategic plan, we built the JV Company to fulfill growing customer demand. We expect the joint venture to provide much needed capacity to support our future growth, enhance our market positions in China, and drive improvements in capital expenditures. During the quarter ended September 30, 2020, the additional capacity at the JV Company contributed significantly

to meeting the increasing demand for our products. The JV Company has reached its targeted production of assembly and testing and is currently ramping up its Phase I of the 12-inch wafer fabrication. During the three months ended September 30, 2020, we recorded \$0.8 million in net loss attributable to the noncontrolling interest in the JV Company. Our current goal is to achieve Phase I target run rate in the quarter ending September 30, 2021, but our goal may be affected by the impact of the global COVID-19 pandemic and related economic downturn, intensified geopolitical tensions between China and U.S., logistical difficulties and other factors beyond our control. We will continue to monitor and evaluate market conditions closely during this period and react quickly to the changing environment as necessary to achieve an optimal production level at the JV Company.

During the fiscal quarter ended September 30, 2020, we continued our diversification program by developing new silicon and packaging platforms to expand our serviceable available market, or SAM and offer higher performance products. Our metal-oxide-semiconductor field-effect transistors, or MOSFET, an power IC product portfolio expanded significantly. Our high performance products and deepened customer relationships with our OEM and ODM customers resulted in our record high quarterly revenue of \$151.6 million, a 28.6% growth compared to the same quarter last year.

Impact of COVID-19 Pandemic to our Business

Our business operations have been impacted, and expect to continue to be impacted, by the global COVID-19 pandemic and the resulting economic downturn. Numerous governmental jurisdictions, including the States of California, Oregon and Texas in the U.S. and countries throughout the Asia Pacific region have imposed “stay-at-home” orders, quarantines, travel bans and similar governmental orders and restrictions to control the spread of COVID-19. Such orders and restrictions have resulted in business closures, work stoppages, slowdowns and delays in commercial activities, unprecedented and widespread unemployment, disruptions to ports and other shipping infrastructure, border closures, and other travel or health-related restrictions, thereby negatively impacting our customers, suppliers, distributors, employees, offices, and the entire semiconductor ecosystem.

As a result of the COVID-19 pandemic and changing consumer behaviors due to various government restrictions, including “stay-at-home” orders, we have experienced shifting market trends, including an increasing demand in markets for notebooks, PCs and gaming devices and decreasing demand for mobile phone products. While we have recently benefited from the increasing demand for PC related products, there is no guarantee that this trend will continue, and such increasing demand may discontinue or decline as government authorities relax COVID-19 related restrictions. Furthermore, as the COVID-19 pandemic continues and global economic downturn and high unemployment persist, consumer spending in general may slow down substantially, in which case we may experience a significant decline of customer orders for our products, including those designed for PC-related applications, and such decline is expected to adversely affect our financial conditions and results of operations. While some government authorities recently have permitted some reopening of businesses and approved gradual easing of various restrictions, many businesses may decide not to open fully or at all due to ongoing concerns with safety at the workplace, and there is no guarantee that governmental orders will not be re-imposed or modified to reinstate prior restrictions if the COVID-19 pandemic continues or caseloads deteriorate.

In an effort to protect the health and safety of our employees and to comply with various government and regulatory guidelines, we took proactive actions to adopt policies and protocols at our locations around the world, including social distancing guidelines, working from home, limiting the number of employees attending meetings, reducing the number of people in our sites at any one time, and suspending employee travel. In the U.S., federal and state authorities imposed “stay-at-home” orders, we have taken similar proactive actions in California, Oregon and Texas where we have business activities in order to protect the health and safety of our employees, while maintaining our core operations. We expect these measures will result in difficulties and logistical challenges in our business operations, and in some cases, reduce the productivity of our workforce and cause disruptions and delays in shipping products to our customers. This may impact our ability to respond quickly and effectively to changing market demands as the COVID-19 pandemic continues to cause economic disruption and recession around the globe. In addition, the COVID-19 pandemic and related events have slowed the pace of ramp-up activities at the JV Company, and we have modified our goal and currently we expect to achieve Phase I target run rate in the quarter ending September 30, 2021.

We cannot predict the long-term economic impact of the COVID-19 pandemic, but we will continue to actively monitor the situation and may take further actions altering our business operations that we determine are in the best interests of our employees, customers, partners, suppliers, and stakeholders, or as required by federal, state, or local authorities. The ultimate effects that any such alterations or modifications may have on our business are not clear, including the effects on our customers, employees, and prospects, or on our financial results.

Other Factors affecting our performance

In addition to the impact of the COVID-19 pandemic as described above, our performance is affected by several key factors, including the following:

Costs of JV Company and digital power business: We have incurred an increase in operating expenses due to the additional costs associated with pre-production and production ramp-up activities of the JV Company, as well as the initial startup work to develop and establish our new digital power business, both of which have had a significant impact on our financial performance. Even though the COVID-19 pandemic has slowed its production, we are making persistent progress. The JV Company has reached its targeted production of assembly and testing and is currently ramping up its Phase I of the 12-inch wafer fabrication. For the quarter ending December 31, 2020, we expect the JV Company to gradually increase the production of its 12-inch wafer fabrication and assembly and test. We did not incur pre-production costs after July 2019 as the JV Company has commenced limited mass production.

In addition, we are developing our digital power business based on the STMicro license agreement, which will allow us to design and distribute a full suite of advanced low-voltage power IC products. We have incurred and expect to continue to incur additional costs, including costs relating to compensation of qualified engineers and technical staff and other research and development and management activities, as we continue to build this new business. In the short term, we will not be able to generate sufficient amount of revenue from either of these two business initiatives to offset the increased costs, which will likely negatively impact our results of operations.

Manufacturing costs: Our gross margin is affected by a number of factors including our manufacturing costs, utilization of our manufacturing facilities, the production mixtures of our sales, pricing of wafers from third party foundries and pricing of semiconductor raw materials. Capacity utilization affects our gross margin because we have certain fixed costs associated with our packaging and testing facilities at our Oregon fab and our Chongqing fabrication facility operated by the JV Company. We expect that in the long term our JV Company will reduce our cost of manufacturing. If we are unable to utilize our manufacturing facilities at a desired level, our gross margin may be adversely affected. In addition, from time to time, we may experience wafer capacity constraints, particularly at third party foundries, that may prevent us from meeting fully the demand of our customers. While we can mitigate such constraints by increasing and re-allocating capacity at our own fab, we may not be able to do so quickly or at sufficient level, which could adversely affect our financial conditions and results of operations.

Erosion and fluctuation of average selling price: Erosion of average selling prices of established products is typical in our industry. Consistent with this historical trend, we expect our average selling prices of existing products to decline in the future. However, in the normal course of business, we seek to offset the effect of declining average selling price by introducing new and higher value products, expanding existing products for new applications and new customers and reducing the manufacturing cost of existing products. These strategies may cause the average selling price of our products to fluctuate significantly from time to time, thereby affecting our financial performance and profitability.

The global, regional economic and PC market conditions: Because our products primarily serve consumer electronic applications, a deterioration of the global and regional economic conditions could materially affect our revenue and results of operations. For example, because a significant amount of our revenue is derived from sales of products in the personal computing ("PC") markets, such as notebooks, motherboards and notebook battery packs, a significant decline or downturn in the PC market can have a material adverse effect on our revenue and results of operations. The PC markets have experienced a modest global decline in recent years due to continued growth of demand in tablets and smart phones, worldwide economic conditions and the industry inventory correction which had and may continue to have a material impact on the demand for our products. While recently we have experienced an increase of demand in PC market due to the impact of the COVID-19 pandemic and resulting shift in market trend, we cannot predict whether and how long this trend will continue. A decline of the PC market may have a negative impact on our revenue, factory utilization, gross margin, our ability to resell excess inventory, and other performance measures. We have executed and continue to execute strategies to diversify our product portfolio, penetrate other market segments, including the consumer, communications and industrial markets, and improve gross margins and profit by implementing cost control measures. While making efforts to reduce our reliance on the computing market, we continue to support our computing business and capitalize on the opportunities in this market with a more focused and competitive PC product strategy to gain market share.

Product introductions and customers' product requirements: Our success depends on our ability to introduce products on a timely basis that meet or are compatible with our customers' specifications and performance requirements. Both factors, timeliness of product introductions and conformance to customers' requirements, are equally important in securing design wins with our customers. As we accelerate the development of new technology platforms, we expect to increase the pace at which we introduce new products and seek and acquire design wins. Our failure to introduce new products on a timely basis that meet

customers' specifications and performance requirements, particularly those products with major OEM customers, and our inability to continue to expand our serviceable markets, could adversely affect our financial performance, including loss of market share. We believe that the JV Transaction will increase and diversify our customer base, particularly in China, in the long term. However, the ramp-activities and production schedule of our JV Company have been impacted by the COVID-19 pandemic and related events, as discussed above. Even if we are able to ramp up the operation of the JV Company timely, we may not be successful in acquiring a sufficient number of new customers to offset additional costs due to various factors, including but are not limited to, competition from other semiconductor companies in the region, our lack of history and prior relationships with customers as a new entrant, difficulties in executing our joint venture strategies and the general economic conditions in Chongqing and China.

Distributor ordering patterns, customer demand and seasonality: Our distributors place purchase orders with us based on their forecasts of end customer demand, and this demand may vary significantly depending on the sales outlook and market and economic conditions of end customers. Because these forecasts may not be accurate, channel inventory held at our distributors may fluctuate significantly, which in turn may prompt distributors to make significant adjustments to their purchase orders placed with us. As a result, our revenue and operating results may fluctuate significantly from quarter to quarter. In addition, because our products are used in consumer electronics products, our revenue is subject to seasonality. Our sales seasonality is affected by numerous factors, including global and regional economic conditions as well as the PC market conditions, revenue generated from new products, changes in distributor ordering patterns in response to channel inventory adjustments and end customer demand for our products and fluctuations in consumer purchase patterns prior to major holiday seasons. In recent periods, broad fluctuations in the semiconductor markets and the global and regional economic conditions, in particular the decline of the PC market conditions, have had a more significant impact on our results of operations than seasonality. Furthermore, our revenue may be impacted by the level of demand from our major customers due to factors outside of our control. If these major customers experience significant decline in the demand of their products, encounter difficulties or defects in their products, or otherwise fail to execute their sales and marketing strategies successfully, it may adversely affect our revenue and results of operations.

Regulatory Development: The U.S. Department of Justice commenced an investigation into the Company's compliance with export control regulations relating to certain business transactions with Huawei and its affiliates ("Huawei"), which were added to the "Entity List" by the Department of Commerce ("DOC") in May 2019. In connection with this investigation, DOC requested the Company to suspend shipments of its products to Huawei, and the Company complied with such request, and the Company has not shipped any product to Huawei after December 31, 2019. The Company is currently working with DOC to resolve this issue and seeks permission to reinstate shipment to Huawei. As of the date of this report, DOC has not provided the Company with any definitive timeline or schedule for responding to the Company's request. We expect the financial performance will be negatively impacted by the Huawei shipment interruption until such time when DOC permits us to continue shipment to Huawei. There is no guarantee that DOC will agree to permit us to resume shipment to Huawei on a timely basis, or at all, and we may not be able to acquire new or additional customers or demand to offset such loss of shipment. Our failure to do so will negatively impact our revenue and profitability. Furthermore, the Company is expected to incur significant costs and expenses, including legal and professional fees, in connection with the government investigation, which may reduce our profitability and margin.

Principal line items of statements of operations

The following describes the principal line items set forth in our condensed consolidated statements of operations:

Revenue

We generate revenue primarily from the sale of power semiconductors, consisting of power discretes and power ICs. Historically, a majority of our revenue has been derived from power discrete products. Because our products typically have three-year to five-year life cycles, the rate of new product introduction is an important driver of revenue growth over time. We believe that expanding the breadth of our product portfolio is important to our business prospects, because it provides us with an opportunity to increase our total bill-of-materials within an electronic system and to address the power requirements of additional electronic systems. In addition, a small percentage of our total revenue is generated by providing packaging and testing services to third parties through one of our subsidiaries.

Our product revenue is reported net of the effect of the estimated stock rotation returns and price adjustments that we expect to provide to our distributors. Stock rotation returns are governed by contract and are limited to a specified percentage of the monetary value of products purchased by the distributor during a specified period. At our discretion or upon our direct negotiations with the original design manufacturers ("ODMs") or original equipment manufacturers ("OEMs"), we may elect to grant special pricing that is below the prices at which we sold our products to the distributors. In these situations, we will grant

price adjustments to the distributors reflecting such special pricing. We estimate the price adjustments for inventory at the distributors based on factors such as distributor inventory levels, pre-approved future distributor selling prices, distributor margins and demand for our products.

Cost of goods sold

Our cost of goods sold primarily consists of costs associated with semiconductor wafers, packaging and testing, personnel, including share-based compensation expense, overhead attributable to manufacturing, operations and procurement, and costs associated with yield improvements, capacity utilization, warranty and inventory reserves. As the volume of sales increases, we expect cost of goods sold to increase. We implemented a process to improve our factory capacity utilization rates by transferring more wafer production to our Oregon fab and reducing our reliance on outside foundries. While our utilization rates cannot be immune to the market conditions, our goal is to make them less vulnerable to market fluctuations. We believe our market diversification strategy and product growth will drive higher volume of manufacturing which will improve our factory utilization rates and gross margin in the long run.

Operating expenses

Our operating expenses consist of research and development, selling, general and administrative expenses and impairment of long-lived assets. We expect our operating expenses as a percentage of revenue to fluctuate from period to period as we continue to exercise cost control measures in response to the declining PC market as well as align our operating expenses to the revenue level.

Research and development expenses. Our research and development expenses consist primarily of salaries, bonuses, benefits, share-based compensation expense, expenses associated with new product prototypes, travel expenses, fees for engineering services provided by outside contractors and consultants, amortization of software and design tools, depreciation of equipment and overhead costs. We continue to invest in developing new technologies and products utilizing our own fabrication and packaging facilities as it is critical to our long-term success. We also evaluate appropriate investment levels and stay focused on new product introductions to improve our competitiveness. We expect that our research and development expenses will fluctuate from time to time.

Selling, general and administrative expenses. Our selling, general and administrative expenses consist primarily of salaries, bonuses, benefits, share-based compensation expense, product promotion costs, occupancy costs, travel expenses, expenses related to sales and marketing activities, amortization of software, depreciation of equipment, maintenance costs and other expenses for general and administrative functions as well as costs for outside professional services, including legal, audit and accounting services. We expect our selling, general and administrative expenses to fluctuate in the near future as we continue to exercise cost control measures.

Income tax expense

We are subject to income taxes in various jurisdictions. Significant judgment and estimates are required in determining our worldwide income tax expense. The calculation of tax liabilities involves dealing with uncertainties in the application of complex tax regulations of different jurisdictions globally. We establish accruals for potential liabilities and contingencies based on a more likely than not threshold to the recognition and de-recognition of uncertain tax positions. If the recognition threshold is met, the applicable accounting guidance permits us to recognize a tax benefit measured at the largest amount of tax benefit that is more likely than not to be realized upon settlement with a taxing authority. If the actual tax outcome of such exposures is different from the amounts that were initially recorded, the differences will impact the income tax and deferred tax provisions in the period in which such determination is made. Changes in the location of taxable income (loss) could result in significant changes in our income tax expense.

We record a valuation allowance against deferred tax assets if it is more likely than not that a portion of the deferred tax assets will not be realized, based on historical profitability and our estimate of future taxable income in a particular jurisdiction. Our judgments regarding future taxable income may change due to changes in market conditions, changes in tax laws, tax planning strategies or other factors. If our assumptions and consequently our estimates change in the future, the deferred tax assets may increase or decrease, resulting in corresponding changes in income tax expense. Our effective tax rate is highly dependent upon the geographic distribution of our worldwide profits or losses, the tax laws and regulations in each geographical region where we have operations, the availability of tax credits and carry-forwards and the effectiveness of our tax planning strategies.

U.S. Coronavirus Aid, Relief and Economic Security Act” (“CARES Act”), Enacted March 27, 2020

On March 27, 2020, the United States enacted the Coronavirus Aid, Relief and Economic Security Act (“the CARES Act”), which made the changes to existing U.S. tax laws, including, but not limited to, (1) allowing U.S. federal net operating losses originated in the 2018, 2019 or 2020 tax years to be carried back five years to recover taxes paid based upon taxable income in the prior five years, (2) eliminating the 80% of taxable income limitation on net operating losses for the 2018, 2019 and 2020 tax years (the 80% limitation will be reinstated for tax years after 2020), (3) accelerating the refund of prior year alternative minimum tax credits, (4) modifying the bonus depreciation for qualified improvement property and (5) modifying the limitation on deductible interest expense.

As a result of the ability to carryback net operating losses from the June 2018 and June 2019 years to the June 2015 to June 2017 tax years, net operating losses which were previously tax-effected using the current 21% U.S. federal tax rate were revalued to the U.S. tax rates in effect for the June 2015 to June 2017 tax years due to the ability of receiving tax refunds for the taxes paid in these years. Accordingly, we reported a discrete tax benefit of \$1.1 million in the quarter ended March 31, 2020 related to the re-measurement of the net operating losses that could be realized via the new net operating loss carryback provisions.

Results of Operations

The following tables set forth statements of operations, also expressed as a percentage of revenue, for the three months ended September 30, 2020 and 2019. Our historical results of operations are not necessarily indicative of the results for any future period.

	Three Months Ended September 30,					
	2020		2019			
	(in thousands)		(% of revenue)			
Revenue	\$	151,551	\$	117,802	100.0 %	100.0 %
Cost of goods sold		109,028		90,870	71.9 %	77.1 %
Gross profit		42,523		26,932	28.1 %	22.9 %
Operating expenses						
Research and development		14,691		12,368	9.7 %	10.5 %
Selling, general and administrative		17,505		15,185	11.6 %	12.9 %
Total operating expenses		32,196		27,553	21.3 %	23.4 %
Operating income (loss)		10,327		(621)	6.8 %	(0.5)%
Interest expense and other income (loss), net		(549)		(827)	(0.3)%	(0.7)%
Income (loss) before income taxes		9,778		(1,448)	6.5 %	(1.2)%
Income tax expense		1,011		410	0.7 %	0.3 %
Net income (loss) including noncontrolling interest		8,767		(1,858)	5.8 %	(1.5)%
Net loss attributable to noncontrolling interest		(807)		(2,867)	(0.5)%	(2.4)%
Net income attributable to Alpha and Omega Semiconductor Limited	\$	9,574	\$	1,009	6.3 %	0.9 %

Share-based compensation expense was recorded as follows:

	Three Months Ended September 30,					
	2020		2019			
	(in thousands)		(% of revenue)			
Cost of goods sold	\$	385	\$	436	0.3%	0.4%
Research and development		1,080		524	0.7%	0.4%
Selling, general and administrative		1,411		1,409	0.9%	1.2%
Total	\$	2,876	\$	2,369	1.9%	2.0%

Three Months Ended September 30, 2020 and 2019

Revenue

The following is a summary of revenue by product type:

	Three Months Ended September 30,						
	2020		2019		Change		
	(in thousands)		(in thousands)		(in percentage)		
Power discrete	\$	119,375	\$	100,541	\$	18,834	18.7%
Power IC		29,455		15,724		13,731	87.3%
Packaging and testing services		2,721		1,537		1,184	77.0%
	\$	151,551	\$	117,802	\$	33,749	28.6%

Total revenue was \$151.6 million for the three months ended September 30, 2020, an increase of \$33.7 million, or 28.6%, as compared to \$117.8 million for the same quarter last year. The increase was primarily due to an increase of \$18.8 million and \$13.7 million in sales of power discrete products and sales of power IC products, respectively. The increase in power discrete and power IC product sales was primarily due to a 39.7% increase in unit shipments, partially offset by an 8.4% decrease in average selling price as compared to same quarter last year due to a shift in product mix. The increase in revenue of packaging and testing services for the three months ended September 30, 2020, as compared to same quarter last year, was primarily due to increased demand.

Cost of goods sold and gross profit

	Three Months Ended September 30,						
	2020		2019		Change		
	(in thousands)		(in thousands)		(in percentage)		
Cost of goods sold	\$	109,028	\$	90,870	\$	18,158	20.0%
Percentage of revenue		71.9%		77.1%			
Gross profit	\$	42,523	\$	26,932	\$	15,591	57.9%
Percentage of revenue		28.1%		22.9%			

Cost of goods sold was \$109.0 million for the three months ended September 30, 2020, an increase of \$18.2 million, or 20.0%, as compared to \$90.9 million for the same quarter last year. The increase was primarily due to 28.6% increase in revenue. Gross margin increased by 5.2 percentage points to 28.1% for the three months ended September 30, 2020, as compared to 22.9% for the same quarter last year. The increase in gross margin was primarily due to a reduction of production ramp-up costs in our JV Company during the three months ended September 30, 2020.

Research and development expenses

	Three Months Ended September 30,						
	2020		2019		Change		
	(in thousands)		(in thousands)		(in percentage)		
Research and development	\$	14,691	\$	12,368	\$	2,323	18.8%

Research and development expenses were \$14.7 million for the three months ended September 30, 2020, an increase of \$2.3 million, or 18.8%, as compared to \$12.4 million for the same quarter last year. The increase was primarily attributable to a \$0.6 million increase in employee compensation and benefits expense mainly due to higher bonuses, a \$0.8 million increase in product prototyping engineering expense as a result of increased engineering activities, a \$0.3 million increase in professional services expense as a result of higher consulting fees, partially offset by lower recruiting fees, as well as a \$0.6 million increase in share-based compensation expense due to an increase in stock awards granted during the current quarter.

Selling, general and administrative expenses

	Three Months Ended September 30,			
	2020	2019	Change	
	(in thousands)	(in thousands)	(in thousands)	(in percentage)
Selling, general and administrative	\$ 17,505	\$ 15,185	\$ 2,320	15.3%

Selling, general and administrative expenses were \$17.5 million for the three months ended September 30, 2020, an increase of \$2.3 million, or 15.3%, as compared to \$15.2 million for the same quarter last year. The increase was primarily attributable to a \$1.6 million increase in employee compensation and benefits expenses, mainly due to increased headcount, higher bonus expenses and increased employee insurance expenses. The increase was also attributable a \$1.2 million increase in legal expenses related to the government investigation. These increases were partially offset by a \$0.4 million decrease in employee business expenses due to decreased travel expenses as a result of the COVID-19 pandemic.

Interest expense and other income (loss), net

	Three Months Ended September 30,			
	2020	2019	Change	
	(in thousands)	(in thousands)	(in thousands)	(in percentage)
Interest expense and other income (loss), net	\$ (549)	\$ (827)	\$ 278	(33.6)%

Interest expense was primarily related to bank borrowings. The increase in interest expenses during the three months ended September 30, 2020 as compared to the same period last year was primarily due to an increase in bank borrowings, partially offset by a \$2.7 million interest refund from the Chinese government in the JV Company in the same period last year.

Interest income and others were primarily related to interest earned from cash and cash equivalents, as well as foreign exchange gains (losses). The decrease in interest income and others, net during the three months ended September 30, 2020 as compared to the same quarter last year was primarily due to higher foreign currency exchange gains as a result of the depreciation of USD against RMB.

Income tax expense

	Three Months Ended September 30,			
	2020	2019	Change	
	(in thousands)	(in thousands)	(in thousands)	(in percentage)
Income tax expense	\$ 1,011	\$ 410	\$ 601	146.6%

For the three months ended September 30, 2020, the Company recognized income tax expense of approximately \$1.0 million, compared to income tax expense of \$0.4 million for the three months ended September 30, 2019. The income tax expense of \$1.0 million for the three months ended September 30, 2020 included a \$0.03 million discrete tax benefit. The income tax expense of \$0.4 million for the three months ended September 30, 2019 included a \$0.02 million discrete tax expense. Excluding the discrete income tax items, the effective tax rate for the three months ended September 30, 2020 and 2019 was 10.7% and (27.3)%, respectively. The changes in the effective tax rate and tax expense between the periods resulted primarily from the Company reporting pretax book income of \$9.8 million for the three months ended September 30, 2020 vs. a pretax book loss of \$1.4 million for the three months ended September 30, 2019.

Liquidity and Capital Resources

Our principal need for liquidity and capital resources is to maintain sufficient working capital to support our operations and to invest adequate capital expenditures to grow our business. To date, we finance our operations and capital expenditures primarily through funds generated from operations and borrowings under our term loans, financing lease and other debt agreements.

In October 2019, our subsidiary in China entered into a line of credit facility with Bank of Communications Limited in China. This line of credit matures on February 14, 2021 and is based on the China Base Rate multiplied by 1.05, or 4.99% on October 31, 2019. The purpose of the credit facility is to provide short-term borrowings. We could borrow up to approximately RMB 60.0 million or \$8.5 million based on the currency exchange rate between the RMB and the U.S. Dollar on October 31, 2019. As of September 30, 2020, there was no outstanding balance under the loan.

On November 16, 2018, our subsidiary in China entered into a line of credit facility with Industrial and Commercial Bank of China, which expired on September 30, 2019. The purpose of the credit facility was to provide short-term borrowings. We could borrow up to approximately RMB 72.0 million or \$10.3 million based on currency exchange rate between RMB and U.S. Dollar on November 16, 2018. In October 2019, this line of credit was renewed with the same terms and a maturity date of September 30, 2020. On September 30, 2020, there was no outstanding balance under the line of credit and the line of credit expired.

On August 9, 2019, one of our wholly-owned subsidiaries (the "Borrower") entered into a factoring agreement with the Hongkong and Shanghai Banking Corporation Limited ("HSBC"), whereby the Borrower assigns certain of its accounts receivable with recourse. This factoring agreement allows the Borrower to borrow up to 70% of the net amount of its eligible accounts receivable of the Borrower with a maximum amount of \$30.0 million. The interest rate is based on one month London Interbank Offer Rate ("LIBOR") plus 1.75% per annum. We are the guarantor for this agreement. We are accounting for this transaction as a secured borrowing under the Transfers and Servicing of Financial Assets guidance. In addition, any cash held in the restricted bank account controlled by HSBC has a legal right of offset against the borrowing. This agreement, with certain financial covenants required, has no expiration date. The Borrower was in compliance with these covenants as of September 30, 2020. During the three months ended September 30, 2020, the Borrower borrowed \$29.7 million and repaid this amount in full. As of September 30, 2020, there was no outstanding balance and the Borrower had unused credit of approximately \$30.0 million.

On May 1, 2018, Jireh Semiconductor Incorporated ("Jireh"), a wholly-owned subsidiary of the Company, entered into a loan agreement with a financial institution (the "Bank") that provided a term loan in the amount of \$17.8 million. The obligation under the loan agreement is secured by certain real estate assets of Jireh and guaranteed by the Company. The loan has a five-year term and matures on June 1, 2023. Beginning June 1, 2018, Jireh made consecutive monthly payments of principal and interest to the Bank. The outstanding principal accrues interest at a fixed rate of 5.04% per annum on the basis of a 360-day year. The loan agreement contains customary restrictive covenants and includes certain financial covenants that require the Company to maintain, on a consolidated basis, specified financial ratios. We were in compliance with these covenants as of September 30, 2020. As of September 30, 2020, the outstanding balance of the term loan was \$15.7 million.

On August 15, 2017, Jireh entered into a credit agreement with the Bank that provided a term loan in an amount up to \$30.0 million for the purpose of purchasing certain equipment for our fabrication facility located in Oregon. The obligation under the credit agreement is secured by substantially all assets of Jireh and guaranteed by us. The credit agreement has a five-year term and matures on August 15, 2022. In January 2018 and July 2018, Jireh drew down the loan in the amount of \$13.2 million and \$16.7 million, respectively. Beginning in October 2018, Jireh was required to pay to the Bank on each payment date, the outstanding principal amount of the loan in monthly installments. The loan accrues interest based on an adjusted LIBOR as defined in the credit agreement, plus a specified applicable margin in the range of 1.75% to 2.25%, based on the outstanding balance of the loan. The credit agreement contains customary restrictive covenants and includes certain financial covenants that require us to maintain, on a consolidated basis, specified financial ratios and fixed charge coverage ratio. We were in compliance with these covenants as of September 30, 2020. As of September 30, 2020, the outstanding balance of the term loan was \$14.9 million.

In September 2017, the Board of Directors approved a repurchase program (the "Repurchase Program") that allowed us to repurchase our common shares from the open market pursuant to a pre-established Rule 10b5-1 trading plan or through privately negotiated transactions up to an aggregate of \$30.0 million. The amount and timing of any repurchases under the Repurchase Program depend on a number of factors, including but not limited to, the trading price, volume and availability of our common shares. Shares repurchased under this program are accounted for as treasury shares and the total cost of shares repurchased is recorded as a reduction of shareholders' equity. We did not repurchase any shares pursuant to the Repurchase Plan during the three months ended September 30, 2020. Since the inception of the program, we repurchased an aggregate of 6,784,648 shares for a total cost of \$67.3 million, at an average price of \$9.92 per share, excluding fees and related expenses. As of September 30, 2020, of the 6,784,648 repurchased shares, 146,928 shares with a weighted average repurchase price of \$10.30 per share, were reissued at an average price of \$5.25 per share pursuant to option exercises and vested restricted share units. We had \$13.4 million remained available under the Repurchase Program as of September 30, 2020.

We believe that our current cash and cash equivalents and cash flows from operations will be sufficient to meet our anticipated cash needs, including working capital and capital expenditures, for at least the next twelve months. In the long-term, we may require additional capital due to changing business conditions or other future developments, including any investments or acquisitions we may decide to pursue. If our cash is insufficient to meet our needs, we may seek to raise capital through equity or debt financing. The sale of additional equity securities could result in dilution to our shareholders. The incurrence of indebtedness would result in increased debt service obligations and may include operating and financial covenants that would restrict our operations. We cannot be certain that any financing will be available in the amounts we need or on terms acceptable to us, if at all.

JV Company Financing Transactions

From time to time the JV Company entered into financing and loan agreements with banks and other third parties to fund capital expenditures and other operational expenses in connection with the constructions and ramp-up of the manufacturing facility in Chongqing. The JV Company incurs debt through its own financing agreements, and our parent company and other subsidiaries are not parties to these agreements and do not provide any guarantee or security for JV Company's debt, nor do we have direct access to any cash proceeds borrowed from such loan agreements.

On May 9, 2018 (the "Effective Date"), the JV Company entered into a lease finance agreement and a security agreement (the "Agreements") with YinHai Leasing Company and China Import/Export Bank (the "Lenders"). Pursuant to the Agreements, the Lenders agree to provide an aggregate of RMB 400.0 million, or \$62.8 million based on the currency exchange rate between RMB and U.S. Dollar on the Effective Date, of financing to the JV Company (the "Lease Financing"). In exchange for the Lease Financing, the JV Company agrees to transfer title of its assembly and testing equipment to the Lenders, and the Lenders lease such equipment to the JV Company under a five-year lease arrangement, pursuant to which the JV Company makes quarterly lease payments to the Lenders consisting of principal and interest based on a repayment schedule mutually agreed by the parties. The interest under the Lease Financing is accrued based on the China Base Rate multiplied by 1.15, or 5.4625% on the Effective Date. Under the Agreements, at the end of the five-year lease term, the Lenders agree to sell such equipment back to the JV Company for a nominal amount (RMB 1). The JV Company's obligations under the Lease Financing are secured by the land and building owned by the JV Company (the "Collateral"). The proceeds from the Lease Financing were used primarily for the acquisition and installation of the 12-inch fabrication equipment and other expenses of the JV Company relating to the completion of the fabrication facility located in Chongqing. The Agreements contain customary representation, warranties and covenants, including restrictions on the transfer of the Collateral. The Agreements also contain customary events of default, including but not limited to, failure to make payments and breach of material terms under the Agreements. The Agreements include certain customary closing conditions, including the payment of deposit by the JV Company. On June 28, 2020, the parties entered into a modification to this agreement, pursuant to which the interest rate was changed to be the five-year loan prime rate in China plus 0.8125%, or 5.4625%. Other terms of this agreement remain the same. As of September 30, 2020, the outstanding balance of the Lease Financing was approximately \$39.8 million based on the currency exchange rate as of September 30, 2020.

On November 29 and December 4, 2018, the JV Company entered into two, one-year loan agreements with China Merchant Bank and Chongqing LiangJiang New District China Merchants Group Limited Company in China to provide loans for RMB 80 million and RMB 20 million, respectively, or \$14.5 million in total based on the currency exchange rate between RMB and U.S. Dollar on December 31, 2018, at varying interest rates. On January 20, 2020, the JV Company renewed the loan agreements with the same terms. Interest payments are due monthly and quarterly with the entire principal due not later than January 21, 2021. As of September 30, 2020, there was no outstanding balance under the loan.

On September 23, 2019, the JV Company entered into a short-term loan agreement with China Everbright bank in China. The JV Company can borrow up to RMB 50.0 million or \$7.1 million based on the currency exchange rate between RMB and U.S. Dollar on September 23, 2019 at varying interest rates, in RMB or USD. Interest payments with the entire principal are due no later than 90 days from each borrowing date. As of September 30, 2020, there was no outstanding balance under the loan.

On March 12, 2019, the JV Company entered into a loan agreement with The Export-Import Bank of China in the aggregate principal amount of RMB 200 million (approximately \$29.8 million based on currency exchange rate between RMB and U.S. Dollar on March 31, 2019). The loan will mature on February 20, 2025. The JV Company drew down RMB 190 million and RMB 10 million in March 2019 and December 2019, respectively. The loan withdraw window expired on February 28, 2020. The interest is accrued based on the China Base Rate multiplied by 1.1, or 5.39%. The loan requires quarterly interest payments. The principal payments are required to be paid every 6 months over the term of loan commencing in October 2019. This loan is secured by the buildings and certain equipment owned by the JV Company. As a condition of the loan arrangements, 14 million RMB (approximately \$2.0 million) of cash is held as restricted cash by the JV Company as a

compensating balance at the JV Company's bank until the principal is paid. On June 24, 2020, a modification of this loan was signed, pursuant to which the interest rate was changed to be based on the five-year loan prime rate in China plus 0.74%, or 5.39%. Other terms of this loan remain the same. During the three months ended December 31, 2019, the JV Company paid 6.0 million RMB under this agreement. As of September 30, 2020, the outstanding balance of the loan was 194 million RMB (equivalent of \$28.5 million based on the currency exchange rate as of September 30, 2020).

In December 2019, the JV Company entered into a loan agreement with China Development Bank in the amount of \$24.0 million. The obligation under the loan agreement is secured by certain assets of the JV Company. Beginning December 18, 2020, the JV Company will make consecutive semi-annual payments of principal until December 8, 2024. The interest is accrued based on the LIBOR rate plus 2.8%. The interest is required to be paid March 21 and September 21 each year. As of September 30, 2020, the outstanding balance of the loan was \$24.0 million.

On April 15, 2020, the JV Company entered into a one-year loan agreement with China Everbright Bank in China to borrow a maximum of Chinese Renminbi (RMB) 100 million (approximately \$14.3 million based on the currency exchange rate between RMB and U.S. Dollar on April 15, 2020) in the amount in RMB or USD. Interest payments are due on the 20th of each month, and the entire principal is due on April 16, 2021. The loan consists of RMB 20 million for working capital borrowing in Chinese yuan and RMB 80 million for borrowing in US dollars that is collateralized by eligible accounts receivable. During the three months ended June 30, 2020, the JV Company borrowed RMB 20 million, or \$2.8 million based on the currency exchange rate between RMB and U.S. Dollar, at a fixed interest rate of 5.1375% per annum under the working capital loan. The JV Company also borrowed \$7.1 million and \$1.9 million at a fixed interest rate of 2.7% and 2.8% per annum, respectively, during the same period under the accounts receivable collateralized loan. During the three months ended September 30, 2020, the JV Company repaid \$9.0 million and borrowed \$11.3 million at a fixed interest rate of 2.7% per annum under the accounts receivable collateralized loan. As of September 30, 2020, the total outstanding balance under the loan was \$14.2 million.

On April 26, 2020, the JV Company entered into a loan agreement with China Development Bank, Agricultural Bank of China, China Merchants Bank and Chongqing Rural Commercial Bank (collectively, "the Banks") in the aggregate principal amount of RMB 250 million, (approximately \$35.7 million based on the currency exchange rate between RMB and U.S. Dollar on April 26, 2020). The obligation under the loan agreement is secured by certain assets of the JV Company. Beginning December 18, 2020, the JV Company is required to make consecutive semi-annual payments of principal until December 8, 2024. Interest payment is due on March 20, June 20, September 20 and December 20 of each year based on China one-year loan prime rate ("LPR") plus 1.3%. The JV Company drew down RMB 250 million (approximately \$35.3 million based on the currency exchange rate between RMB and U.S. Dollar on June 30, 2020) in April 2020. As of September 30, 2020, the outstanding balance of the loan was \$36.7 million.

Cash, cash equivalents and restricted cash

As of September 30, 2020 and June 30, 2020, we had \$159.0 million and \$162.7 million of cash, cash equivalents and restricted cash, respectively. Our cash, cash equivalents and restricted cash primarily consist of cash on hand, restricted cash, and short-term bank deposits with original maturities of three months or less. Of the \$159.0 million and \$162.7 million cash, cash equivalents and restricted cash, \$138.3 million and \$120.3 million, respectively, are deposited with financial institutions outside the United States.

The following table shows our cash flows from operating, investing and financing activities for the periods indicated:

	Three Months Ended September 30,	
	2020	2019
	(in thousands)	
Net cash provided by (used in) operating activities	\$ 9,848	\$ (1,227)
Net cash used in investing activities	(11,337)	(15,798)
Net cash used in financing activities	(4,186)	(1,082)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	1,997	(805)
Net decrease in cash, cash equivalents and restricted cash	\$ (3,678)	\$ (18,912)

Cash flows from operating activities

Net cash provided by operating activities of \$9.8 million for the three months ended September 30, 2020 resulted primarily from net income of \$8.8 million and non-cash expenses of \$15.4 million, partially offset by net changes in assets and liabilities using net cash of \$14.3 million. The non-cash expenses of \$15.4 million primarily included \$12.5 million of depreciation and amortization expenses and \$2.9 million of share-based compensation expense. The net changes in assets and liabilities using cash of \$14.3 million were primarily due to a \$13.0 million increase in accounts receivable as a result of better-than-expected revenue, a \$2.2 million increase in inventories due to a continued ramp of the JV Company, and a \$1.0 million increase in other current and long-term assets due to increase in advance payments to vendors, and a \$0.8 million decrease in accrued and other liabilities, partially offset by a \$1.9 million increase in accounts payable due to timing of payments, and a \$0.7 million increase in income taxes payable.

Net cash used in operating activities of \$1.2 million for the three months ended September 30, 2019 resulted primarily from net loss of \$1.9 million and net changes in assets and liabilities of \$12.6 million, partially offset by non-cash expenses of \$13.3 million. The non-cash expenses of \$13.3 million primarily included \$10.9 million of depreciation and amortization expenses and \$2.4 million of share-based compensation expense. The net changes in assets and liabilities of \$12.6 million were primarily due to a \$5.8 million increase in inventories and a \$15.0 million increase in accounts receivable from a one day delay of \$9.2 million receivable payment from one of our major distributors due to the bank shut down on September 30, 2019 due to Typhoon Mitag in Taiwan, as well as increased billings in the current quarter as compared to the prior quarter, partially offset by a \$3.8 million decrease in other current and long term assets due to decrease in advance payments to vendors, \$0.8 million increase in accounts payable due to timing of payment, and a \$3.7 million increase in accrued and other liabilities.

Cash flows from investing activities

Net cash used in investing activities of \$11.3 million for the three months ended September 30, 2020 was primarily attributable to \$11.3 million purchases of property and equipment, including \$3.4 million purchased by the JV Company.

Net cash used in investing activities of \$15.8 million for the three months ended September 30, 2019 was primarily attributable to \$15.8 million purchases of property and equipment, including \$7.5 million purchased by the JV Company.

Cash flows from financing activities

Net cash used in financing activities of \$4.2 million for the three months ended September 30, 2020 was primarily attributable to \$11.1 million in repayments of borrowings, \$4.0 million in payment of finance lease obligations, and \$0.4 million in common shares acquired to settle withholding tax related to vesting of restricted stock units, partially offset by \$11.3 million proceeds from borrowings.

Net cash used in financing activities of \$1.1 million for the three months ended September 30, 2019 was primarily attributable to \$2.1 million in repayments of borrowings, \$1.7 million in payment of finance lease obligations, and \$0.1 million in common shares acquired to settle withholding tax related to vesting of restricted stock units, partially offset by \$2.8 million proceeds from borrowings.

Commitments

See Note 10 of the Notes to the Condensed Consolidated Financial Statements contained in this Quarterly Report on Form 10-Q for a description of commitments.

Off-Balance Sheet Arrangements

As of September 30, 2020, we had no material off-balance sheet arrangements as defined in Regulation S-K 303(a)(4)(ii) arrangements.

Contractual Obligations

There were no material changes outside of our ordinary course of business in our contractual obligations from those disclosed in our Annual Report on Form 10-K for the fiscal year ended June 30, 2020.

Recent Accounting Pronouncements

See [Note 1](#) of the Notes to the Condensed Consolidated Financial Statements contained in this Quarterly Report on Form 10-Q for a description of recent accounting pronouncements, including the expected dates of adoption and estimated effects on results of operations and financial condition, which is incorporated herein by reference.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

There have been no material changes in the market risks previously disclosed in Part II, Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," of our Annual Report on Form 10-K for the year ended June 30, 2020, filed with the SEC on September 2, 2020.

ITEM 4. CONTROLS AND PROCEDURES

Management's Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, (the "Exchange Act")), as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures as of September 30, 2020 have been designed and are functioning effectively to provide reasonable assurance that the information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the three months ended September 30, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitation on Effectiveness of Controls

While our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance that their respective objectives will be met, we do not expect that our disclosure controls and procedures or our internal control over financial reporting are or will be capable of preventing or detecting all errors and all fraud. Any control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

As previously disclosed, U.S. Department of Justice (“DOJ”) commenced an investigation into the Company’s compliance with export control regulations relating to its business transactions with Huawei and its affiliates (“Huawei”), which were added to the “Entity List” by the Department of Commerce (“DOC”) in May 2019. The Company is cooperating fully with federal authorities in the investigation. The Company has continued to respond to inquiries and requests from DOJ for documents and information relating to the investigation, and the matter is currently pending at DOJ. In connection with this investigation, DOC previously requested the Company to suspend shipments of its products to Huawei. The Company complied with such request, and the Company has not shipped any product to Huawei after December 31, 2019. The Company continues to work with DOC to resolve this issue and requested DOC to grant permission to reinstate the Company’s shipments to Huawei. As part of this process and in response to DOC’s request, the Company provided certain documents and materials relating to the Company’s supply chain and shipment process to DOC for its review. DOC has not informed the Company of any specific timeline or schedule under which DOC will provide a response to the Company’s request.

On March 19, 2020, Darryl Gray, a stockholder of the Company (the “Plaintiff”), filed a putative class action complaint in the United States District Court for the Southern District of New York (the “Gray Action”), alleging that the Company and its management members made material misstatements or omissions regarding the Company’s business and operations, including its export control practices relating to business transactions with Huawei and its affiliate. The Gray Action asserts claims under Section 10(b) of the Exchange Act against the Company, its Chief Executive Officer and Chief Financial Officer (collectively, the Defendants”), as well as claims under Section 20(a) of the Exchange Act against the Chief Executive Officer and Chief Financial Officer. Among other remedies, the Gray Action seeks to recover compensatory and other damages as well as attorney’s fees and costs.

On May 18, 2020, Plaintiff moved for an order appointing him as Lead Plaintiff pursuant to Section 21D of the Exchange Act and approving Glancy Prongay & Murray LLP as Lead Counsel for the putative class (the “Motion”). On July 1, 2020, the Court entered an order granting the Motion and requiring that: (i) Lead Plaintiff file an amended complaint or designate the current complaint as operative within sixty days; (ii) Defendants answer the complaint or otherwise move within sixty days of such filing or designation; (iii) Lead Plaintiff file an opposition, if any, within 45 days; and (iv) Defendants file a reply, if any, forty-five days thereafter. On August 28, 2020, Plaintiff filed an amended complaint asserting the same claims against the Defendants, and adding the Company’s Executive Vice President of Product Line as a defendant on both claims. On October 27, 2020, the Defendants moved to dismiss the action in its entirety. The Company believes the claims in the Gray Action are without merit and intends to vigorously defend this litigation.

We have in the past, and may from time to time in the future, become involved in legal proceedings arising from the normal course of business activities. The semiconductor industry is characterized by frequent claims and litigation, including claims regarding patent and other intellectual property rights as well as improper hiring practices. Irrespective of the validity of such claims, we could incur significant costs in the defense thereof or could suffer adverse effects on our operations.

ITEM 1A. RISK FACTORS

Item 1A of Part I of our Annual Report on Form 10-K for the year ended June 30, 2020, filed with the SEC on September 2, 2020, contains risk factors identified by the Company. Except as noted below, there have been no material changes to the risk factors we previously disclosed in our filings with the SEC. Our operations could also be affected by additional factors that are not presently known to us or by factors that we currently consider immaterial to our business.

Our business operation and financial performance may be adversely affected by the COVID-19 pandemic and related events.

We are subject to risks related to the global pandemic associated with the COVID-19 disease, which has spread globally from China to the U.S. and other countries where we have operations. Numerous governmental jurisdictions, including the States of California, Oregon and Texas and countries throughout the Asia Pacific region, have imposed “stay-at-home” orders, quarantines, travel bans and similar governmental orders and restrictions to control the spread of COVID-19. Such orders or restrictions have resulted in business closures, work stoppages, slowdowns and delays in commercial activities, unprecedented

and widespread unemployment, disruptions to ports and other shipping infrastructure, border closures, and other travel or health-related restrictions, thereby negatively impacting our customers, suppliers, distributors, employees, offices, and the entire semiconductor ecosystem.

As a result of the COVID-19 pandemic and changing consumer behaviors due to “stay-at-home” restrictions, we have experienced shifting market trends, including an increasing demand in the markets for notebooks, PCs and gaming devices and decreasing demand for mobile phone and industrial related products. While we have recently benefited from the increasing demand of PC related products, there is no guarantee that this trend will continue, and such increasing demand may discontinue as government authorities relax COVID-19 related restrictions. Furthermore, as the COVID-19 pandemic continues and global economic downturn and high unemployment persist, consumer spending may slow down substantially, in which case we may experience a significant decline of customer orders for our products, including those designed for PC-related applications, and such decline will adversely affect our financial conditions and results of operations. While we are implementing measures to enhance our marketing and sales opportunities, there is no guarantee that such measures will succeed and be sufficient to mitigate the rapidly shifting market demand. Furthermore, we are experiencing and may continue to experience supply chain challenges in our manufacturing activities as a result of various government-imposed restrictions and limitations. Our JV Company has also slowed ramp-up activities, which may cause delay and disruption to our timeline to reach full production for the 12” fabrication facility in Chongqing, China, and we recently adjusted our timeline for reaching our target Phase I run rate to the quarter ending September 30, 2021.

In addition to the impact on our financial performance and manufacturing process, we are subject to the following risks resulting from the COVID-19 pandemic and related events:

- the economic recession and deteriorating financial market in the U.S. and globally resulting from the COVID-19 pandemic may make it more difficult for us to obtain credit and secure debt financing on terms favorable to us, or at all, and we may not be able to comply with financial covenants in our existing credit agreements or service our existing debt if we do not generate sufficient cash flow from our operations;
- we may encounter difficulties and disruptions in communication and coordination among our employees, partners, customers and others, which may reduce our productivity and interfere with our ability to serve our customers;
- widespread COVID-19 disease could damage the health of our employees and management team, which may disrupt our business operations;
- the value of our common shares may decline significantly as a result of factors outside of our control, such as stock market volatility, which will cause our shareholders to lose their investment.

The impact of the COVID-19 pandemic is highly uncertain and subject to change. We cannot predict when this pandemic will end and when related governmental orders and restrictions will be eased or lifted. While some government authorities recently have permitted some reopening of businesses and approved gradual easing of various restrictions, many businesses may decide not to open fully or at all due to ongoing concerns with safety at the workplace, and there is no guarantee that governmental orders will not be re-imposed or modified to reinstate prior restrictions if the COVID-19 pandemic continues or caseloads deteriorate. Any extension or prolonged implementation of these restrictions will further adversely affect our business, customers and financial results. Even after such orders and restrictions are eased or lifted, the severe economic harm inflicted upon the jurisdictions and areas in which we operate may last for an extended period of time and continue to adversely affect our business and financial performance, and there is no guarantee that we will be able to act quickly and effectively to return to our normal operations.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

In September 2017, the Board of Directors approved a repurchase program (the “Repurchase Program”) that allowed us to repurchase our common shares from the open market pursuant to a pre-established Rule 10b5-1 trading plan or through privately negotiated transactions up to an aggregate of \$30.0 million. The amount and timing of any repurchases under the Repurchase Program depend on a number of factors, including but not limited to, the trading price, volume and availability of our common shares. There is no guarantee that such repurchases under the Repurchase Program will enhance the value of our shares. Shares repurchased under this program are accounted for as treasury shares and the total cost of shares repurchased is recorded as a reduction of shareholders' equity. During the three months ended September 30, 2020, we did not repurchase any shares under the Repurchase Program. As of September 30, 2020, approximately \$13.4 million remained available under the Repurchase Program.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

Not applicable.

ITEM 6. EXHIBITS

10.1	<u>Amendment to Market Performance Restricted Share Unit Agreement</u>
10.2	<u>Supplemental Agreement to Financing Lease Contract, dated August 3, 2020 between YinHai Leasing Company and Chongqing Alpha and Omega Semiconductor Technology Co., Ltd (English Translation)</u>
31.1	<u>Certification of Chief Executive Officer pursuant to Securities Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>
31.2	<u>Certification of Chief Financial Officer pursuant to Securities Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>
32.1	<u>Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
32.2	<u>Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
101.INS	Inline XBRL Instance
101.SCH	Inline XBRL Taxonomy Extension Schema
101.CAL	Inline XBRL Taxonomy Extension Calculation
101.DEF	Inline XBRL Taxonomy Extension Definition
101.LAB	Inline XBRL Taxonomy Extension Labels
101.PRE	Inline XBRL Taxonomy Extension Presentation
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

November 6, 2020

ALPHA AND OMEGA SEMICONDUCTOR LIMITED

By: /s/ YIFAN LIANG
Yifan Liang
Chief Financial Officer and Corporate Secretary
(Principal Financial Officer)

**AMENDMENT TO
MARKET PERFORMANCE RESTRICTED SHARE UNIT AGREEMENT**

This Amendment (the “Amendment”), effective as of _____, 2020, is entered into by and between _____ (“Participant”) and Alpha and Omega Semiconductor Limited, an exempt liability company organized under the laws of Bermuda (the “Company”). All capitalized terms not defined herein shall have the meaning set forth in the Market Performance Restricted Share Unit Agreement dated July __, 2018 (the “Agreement”).

WHEREAS, Participant was granted a market performance restricted share units award (the “Award”) pursuant to the Agreement.

WHEREAS, the Award vests based on (i) the level of attainment of the performance criteria comprised of Company Stock Price measured over the Performance Period and Revenue for calendar year 2021 as set forth on Schedule I to the Agreement and (ii) continued Service over the 4-year period measured from January 1, 2022.

WHEREAS, Participant and the Company desire to amend the Agreement to (a) extend the Performance Period from three years to four years so that the Performance period will be for the period commencing January 1, 2019 and ending December 31, 2022, (b) measure Revenue for calendar year 2022 and (c) change the start of the four-year service-based vesting period so that it commences on January 1, 2023 and ends on December 31, 2026.

NOW, THEREFORE, in consideration of the foregoing recitals and for other consideration, the adequacy and sufficiency of which is hereby acknowledged, the parties hereto agree to amend the Agreement through this Amendment as follows:

1. Section 2(a). Section 2(a) of the Agreement is hereby amended and restated in its entirety as follows:

(a) Determination of Number of Shares Based on Performance Requirement: First, there shall be calculated the maximum number of Common Shares in which Participant can vest under the Award (the “Performance-Qualified Shares”) based upon the level of attainment of the performance criteria specified in Schedule I of this Agreement (the “Performance Goals”) for the performance period commencing on January 1, 2019 and ending on December 31, 2022 (the “Performance Period”) in accordance with the methodology set forth in Schedule I (including any adjustment for individual performance pursuant to Paragraph 6 of Schedule I). The determination of the number of Performance-Qualified Shares shall be made following the end of the Performance Period as set forth in Schedule I. In no event may the number of actual Performance-Qualified Shares exceed one hundred percent (100%) of the Target Performance Shares.

2. Section 2(b). Section 2(b) of the Agreement is hereby amended and restated in its entirety as follows:
-

(b) Service Vesting: The Performance-Qualified Shares (as determined pursuant to Paragraph 2(a)) shall be subject to service-based vesting in four (4) successive annual installments upon Participant's completion of each year of Service over the four (4)-year period measured from January 1, 2023. Should Participant cease Service prior to vesting in one or more Performance-Qualified Shares, the unvested portion of the Award shall be immediately canceled and Participant shall thereupon cease to have any right or entitlement to receive any Common Shares under the cancelled Award.

3. Schedule I. Schedule I of the Agreement is hereby deleted and replaced in its entirety with the new Schedule I attached hereto.

4. Entire Agreement. Except as modified by this Amendment, all the terms and provisions of the Agreement shall continue in full force and effect. This Amendment, together with the Agreement, comprise the parties' entire agreement regarding the subject matter thereof, and supersede any and all other agreements, either oral or in writing, between Participant and the Company regarding the subject matter hereof.

5. Counterparts. This Amendment may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.

IN WITNESS WHEREOF, the parties hereto have executed and delivered this Amendment, effective as of the date first above written.

Alpha and Omega Semiconductor Limited

By: _____
Name:
Title:
Date:

Participant

Name:
Date:

SCHEDULE I

PERFORMANCE PERIOD, PERFORMANCE GOALS, DETERMINATION OF PERFORMANCE-QUALIFIED SHARES

1. Performance Period: January 1, 2019 to December 31, 2022
2. Performance Goals: For the Award to obtain Performance-Qualified Shares, the following two Performance Goals must be achieved:
 - (1) Company Stock Price, as set forth in Paragraph 4 below, must equal or exceed \$26.25 during the Performance Period; and
 - (2) Revenue for calendar year 2022 must equal or exceed \$550 million (the “Threshold Revenue”). If the Threshold Revenue is not attained, none of the Award will vest (regardless of the level of Company Stock Price attained).
3. Performance-Qualified Shares: The number of Performance-Qualified Shares (if any) will be calculated in accordance with the following formula (subject to adjustment for individual performance pursuant to Paragraph 6 below):

$$\text{Performance-Qualified Shares} = \text{Target Performance Shares} \times \text{Stock Price Hurdle Percentage} \times \text{Revenue Multiplier}$$

4. Stock Price Hurdle Percentage: The Stock Price Hurdle Percentage will be determined as follows based on the level of Company Stock Price attained during the Performance Period:

Company Stock Price \$	Stock Price Hurdle Percentage %
≥26.25	25
≥30.00	50
≥37.50	75
≥45.00	100

- “Company Stock Price” means the average closing price of a Common Share as reported on the Stock Exchange (on which the Common Share is then traded) for any period of twenty (20) consecutive trading days at any time during the Performance Period.
 - The Company Stock Price targets in the preceding table in this Paragraph 4 shall be adjusted as appropriate to reflect any adjustment event specified under Paragraph 6 of the Agreement. The Plan Administrator, in order to prevent diminution or enlargement of the
-

benefits or potential benefits intended to be made available under this Agreement, will make the determination of any such adjustments required in connection with any such event.

- The Stock Price Hurdle Percentage will be determined based on the highest Company Stock Price attained during the Performance Period.
- Stock Price Hurdle Percentage will be determined at the meeting of the Compensation Committee of the Board held in the first quarter of 2023.

5. Revenue Multiplier: The Revenue Multiplier will be determined as follows based on the level of Revenue for calendar year 2022:

Revenue for Calendar Year 2022	Company Revenue Multiplier
Less than Threshold Revenue	0.0
Threshold Revenue	0.5
Target Revenue	1.0

- “Revenue” means the Company’s revenue on a consolidated basis for calendar year 2022 as derived from its publicly reported financial statement for calendar year 2022, as adjusted, at the discretion of the Plan Administrator, to exclude any revenue derived from any acquisition or restructuring that occurred during the Performance Period.
- Threshold Revenue means \$550 million
- Target Revenue means \$600 million
- Company Revenue Multiplier will be determined by the Plan Administrator following review and approval of the Company’s audited financial statements for the fiscal year ending June 30, 2023.
- If the Company Revenue attained is between Threshold Revenue and Target Revenue, then the Company Revenue Multiplier will be determined based on straight-line interpolation between the corresponding Company Revenue Multiplier in the table above.

6. Individual Performance: The number of Performance-Qualified Shares may be adjusted down by the Plan Administrator based on its review and assessment of Participant’s individual performance during the Performance Period.

7. Change in Control: If a Change in Control occurs during the Performance Period, then the number of Performance-Qualified Shares will be determined as of the date such Change in Control is consummated in accordance with the following rules (without regard to adjustment for individual performance):

a. If the Change in Control occurs on or prior to March 31, 2022, then:

(i) The number of Performance-Qualified Shares will be determined solely on the basis of the Company Stock Price Hurdle Percentage (without regard to Revenue).

(ii) In determining the Company Stock Price Hurdle Percentage under Paragraph 4 of this Schedule I, the Company Stock Price will mean the higher of (i) the Company Stock Price as defined in Paragraph 4 of this Schedule I and attained prior to the Change in Control or (ii) the Per Share Deal Price. “Per Share Deal Price” means the value of the total amount of consideration paid for a Common Share in connection with the Change in Control. The value of the consideration paid for a Common Share, including the value of any non-cash consideration will be determined in good faith by the Plan Administrator.

(iii) The Target Performance Shares will then be multiplied by the Company Stock Price Hurdle Percentage as so determined and the Award with the resulting number of Performance-Qualified Shares shall be treated in accordance with Paragraph 5 of the Agreement.

b. If the Change in Control occurs after March 31, 2022, then:

(i) The number of Performance-Qualified Shares will be determined in accordance with the formula set forth in Paragraph 3 of this Schedule I.

(ii) In determining the Company Stock Price Percentage under Paragraph 4 of this Schedule I, the Company Stock Price will mean the higher of (i) the Company Stock Price as defined in Paragraph 4 of this Schedule I and attained prior to the Change in Control or (ii) the Per Share Deal Price.

(iii) Revenue for calendar year 2022 will be measured on a cumulative basis from January 1, 2022 through the last day of the fiscal quarter ending immediately prior to or concurrent with the consummation of the Change in Control (such Revenue, the “Adjusted Revenue”) and the Revenue Multiplier will be determined based on the following table instead of the table set forth in Paragraph 5 of this Schedule I:

Adjusted Revenue \$ Million	Company Revenue Multiplier
Less than Adjusted Threshold Revenue	0.0
Adjusted Threshold Revenue	0.5
Adjusted Target Revenue	1.0

(iv) The Target Performance Shares will then be multiplied by the Company Stock Price Percentage and Revenue Multiplier as so determined and the Award with the resulting number of Performance-Qualified Shares shall be treated in accordance with Paragraph 5 of the Agreement.

- If the Adjusted Revenue is less than the Threshold Adjusted Revenue, then the Award will be forfeited regardless of the level of Company Stock Price.
- Adjusted Threshold Revenue and Adjusted Target Revenue depend on the number of full fiscal quarters completed prior to or concurrently with the Change in Control as follows:

Number of Full Fiscal Quarters Completed	Adjusted Threshold Revenue \$ Million	Adjusted Target Revenue \$ Million
1	125.00	136.36
2	260.00	283.64
3	400.00	436.36
4	550.00	600.00

Supplemental Agreement

Party A (the Lessor): Chongqing Yinhai Financial Leasing Co., Ltd.

Legal Representative: Pang Xianwei

Registered Office: No. 56, Middle of Huangshan Avenue, Yubei District, Chongqing

Party B (the Lessee): Chongqing Alpha and Omega Semiconductor Technology Co., Ltd.

Legal Representative: MIKE FUSHING CHANG

Registered Office: No. 288, Yuefu Avenue, Beibei District, Chongqing

Whereas,

Party A and Party B signed the Financial Lease (Leaseback) Contract (Contract No.: YZ(2018)0401 and its Supplemental Agreement (Contract No.: YZ(2018)0401-1) on May 9, 2018 (hereinafter collectively referred to as the “Master Contract”). After signing of the Master Contract, Party A has fully performed its obligations under the Master Contract according to its terms and conditions. The Parties hereby reach the following agreement through consultation:

The Conditions for Lease in Part I Business Terms of the Master Contract are modified as follows:

The lease interest rate shall be a floating rate, and the lease interest rate = loan prime rate (LPR) + spread

The LPR above is the LPR5Y quotation applicable to the working day before the reset day.

The spread is 81.25BP.

II. Article 10.2.1 of the Master Contract is modified as follows:

The rent consists of the principal and the interest. From the lease commencement date, Party A will collect rent by the entire principal for the lease. Interests for the lease shall be determined by the following method B:

A. Fixed interest rate, which will remain unchanged during the term of the lease and will not be adjusted together with People's Bank of China's adjustment of benchmark interest rate for loans during the same term.

B. Floating interest rate: interest rate for the lease is determined by the LPR for five years released by the National Interbank Funding Center plus the spread of 81.25 (each point represents 0.01%) (the formula is: interest rate for the lease = LPR + the spread)

During the term of the lease, when LPR is adjusted by the quotation released by the National Interbank Funding Center, the interest rate for the lease shall be adjusted accordingly. The first Interest Rate Conversion Day for the LPR under the Agreement is June 28, 2020, which will then be adjusted on a quarterly basis. The Financing Rate floating day shall be calculated from Interest Rate Conversion Day. The LPR adopted shall be the LPR applicable to the working day before the interest rate floating day (if the working day before the interest rate floating day is the LPR release day, the LPR newly released on the day shall be applied), commencing from the same day of the next period (if the floating day is at the end of a month, then the reset day shall be determined by the actual day at the end of the month). After expiry of the floating period, the rate for the next floating period shall be determined by the corresponding LPR.

When the above adjustments are made, the Parties shall make corresponding adjustments to rents in Appendix III Rent Payment Form of the Master Contract. Party A shall notify Party B by issuing the Rent Adjustment Notice in the format set forth in Article 3 of the Agreement concerning the above-mentioned adjustments. Party B shall accept such adjustments. The actual day for rent adjustments

shall be subject to the Rent Adjustment Notice issued to Party B in the format set forth in Article 3 of the Agreement.

III. (Format of) Appendix IV in the Master Contract: Rent Adjustment Notice is modified as follows:

Rent Adjustment Notice

To: [Chongqing Alpha and Omega Semiconductor Technology Co., Ltd.]

In accordance with the Financial Lease Contract No. [YZ(2018)0401] between the Parties, we hereby make the following adjustments to the rents under the abovementioned Financial Lease Contract: as of , the interest rate for the lease is adjusted to . Please pay the rents as per the “Amount after Adjustment” in the following form to our company:

Currency: RMB Unit: Yuan

Instalment	Rent Payment Day	Amount before Adjustment	Amount after Adjustment
__th Instalment			
...			
Total			

The rents should be paid to the following account:

Payee: Chongqing Yinhai Financial Leasing Co., Ltd.

Bank: Chongqing Branch of the Export-Import Bank of China

Account No.: 2100000100000237876

Party A: Chongqing Yinhai Financial Leasing Co., Ltd. (Seal)

Legal Representative/Authorized Representative (Signature/Seal): Pang Xianwei

Party B has received the above Rent Adjustment Notice and hereby confirms its content.

Party B: [Chongqing Alpha and Omega Semiconductor Technology Co., Ltd.] (Seal)

Legal Representative/Authorized Representative (Signature/Seal): Mike FuShing Chang

Date:

IV. The Agreement is the supplemental agreement to the Master Contract, and becomes an integral part of the Master Contract upon signing. Terms of the Master Contract not amended in the Agreement shall remain in force.

V. The Agreement comes into effect upon signing and sealing by the Parties. The Agreement is made in four copies with each Party holding two copies. All copies have equal legal force.

VI. The Agreement comes into effect when it is signed/sealed by the legal representatives or authorized representatives of the Parties and sealed with their official seals.

(Remainder of the Page Intentionally Left Blank)

Signature Page of the Supplemental Agreement [Contract No.: YZ(2018)0401]

Party A: Chongqing Yin Hai Financial Leasing Co., Ltd. (Seal)

Legal Representative/Authorized Representative (Signature/Seal): Pang Xianwei

Party B: [Chongqing Alpha and Omega Semiconductor Technology Co., Ltd.] (Seal)

Legal Representative/Authorized Representative (Signature/Seal): Mike FuShing Chang

August 3, 2020

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO
SECURITIES EXCHANGE ACT RULES 13a-14(a) and 15d-14(a), AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Mike F. Chang, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Alpha and Omega Semiconductor Limited (the "registrant");
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 registrant as of, and for, the periods presented in this report;
4. The registrant'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 registrant 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 registrant, 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 registrant'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 registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant'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 registrant'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 registrant's internal control over financial reporting.

Date: November 6, 2020

/s/ Mike F. Chang

Mike F. Chang
Chief Executive Officer

**CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO
SECURITIES EXCHANGE ACT RULES 13a-14(a) and 15d-14(a), AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Yifan Liang, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Alpha and Omega Semiconductor Limited (the "registrant");
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 registrant as of, and for, the periods presented in this report;
4. The registrant'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 registrant 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 registrant, 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 registrant'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 registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant'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 registrant'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 registrant's internal control over financial reporting.

Date: November 6, 2020

/s/ Yifan Liang

Yifan Liang *Chief Financial Officer and Corporate Secretary*

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

I, Mike F. Chang, chief executive officer of Alpha and Omega Semiconductor Limited (the "Company"), certify for the purposes of 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge,

- a. the Quarterly Report of the Company on Form 10-Q for the fiscal quarter ended September 30, 2020 (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- b. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 6, 2020

/s/ Mike F. Chang

Mike F. Chang
Chief Executive Officer

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

I, Yifan Liang, chief financial officer of Alpha and Omega Semiconductor Limited (the "Company"), certify for the purposes of 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge,

- a. the Quarterly Report of the Company on Form 10-Q for the fiscal quarter ended September 30, 2020 (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- b. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 6, 2020

/s/ Yifan Liang

Yifan Liang
Chief Financial Officer and Corporate Secretary