AMBARELLA INC
Form 10-Q
September 08, 2017

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 July 31, 2017

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: 001-35667

AMBARELLA, INC.

(Exact name of registrant as specified in its charter)

Cayman Islands	98-0459628
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

3101 Jay Street

Santa Clara, California	95054
(Address of principal executive offices)	(Zip Code)

(408) 734-8888

(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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes 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 the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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.

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

The number of ordinary shares, $0.00045 par value, of the Registrant, outstanding as of September 1, 2017 was 33,214,205 shares.

AMBARELLA, INC.

QUARTERLY REPORT ON FORM 10-Q

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PART I – FINANCIAL INFORMATION

ITEM 1. Financial Statements

AMBARELLA, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS

(in thousands, except share and per share data)

(unaudited)

	July 31, 2017	January 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$309,738	$322,872
Marketable securities	91,077	82,522
Accounts receivable, net	38,351	38,596
Inventories	17,726	20,145
Restricted cash	9	8
Prepaid expenses and other current assets	2,810	4,392
Total current assets	459,711	468,535
Property and equipment, net	5,636	4,988
Deferred tax assets, non-current	6,299	5,774
Intangible assets, net	12,970	4,149
Goodwill	26,601	26,601
Other non-current assets	2,229	2,224
Total assets	$513,446	$512,271
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	23,466	19,955
Accrued and other current liabilities	19,906	26,448
Income taxes payable	2,014	568
Deferred revenue	6,203	7,425
Total current liabilities	51,589	54,396
Other long-term liabilities	9,131	3,241
Total liabilities	60,720	57,637
Commitments and contingencies (Note 14)		
Shareholders' equity:		
Preference shares, $0.00045 par value per share, 20,000,000 shares authorized and no shares issued and outstanding at July 31, 2017 and January 31, 2017, respectively	—	—
Ordinary shares, $0.00045 par value per share, 200,000,000 shares authorized at July 31, 2017 and January 31, 2017, respectively;	15	15

33,220,378 shares issued and outstanding at July 31, 2017; 33,369,032 shares issued and outstanding at January 31, 2017		
Additional paid-in capital	204,513	212,276
Accumulated other comprehensive loss	(82)	(70)
Retained earnings	248,280	242,413
Total shareholders’ equity	452,726	454,634
Total liabilities and shareholders' equity	$513,446	$512,271

See accompanying notes to condensed consolidated financial statements.

AMBARELLA, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except share and per share data)

(unaudited)

	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
Revenue	$71,630	$65,142	$135,765	$122,299
Cost of revenue	26,825	21,672	49,997	42,122
Gross profit	44,805	43,470	85,768	80,177
Operating expenses:				
Research and development	27,538	23,643	54,140	48,109
Selling, general and administrative	11,962	10,565	23,706	21,458
Total operating expenses	39,500	34,208	77,846	69,567
Income from operations	5,305	9,262	7,922	10,610
Other income	224	171	377	198
Income before income taxes	5,529	9,433	8,299	10,808
Provision for income taxes	2,226	801	2,432	393
Net income	$3,303	$8,632	$5,867	$10,415
Net income per share attributable to ordinary shareholders:				
Basic	$0.10	$0.27	$0.18	$0.32
Diluted	$0.10	$0.25	$0.17	$0.31
Weighted-average shares used to compute net income per share attributable to ordinary shareholders:				
Basic	33,227,717	32,557,398	33,240,767	32,492,723
Diluted	34,572,927	34,175,466	34,629,004	34,063,103

See accompanying notes to condensed consolidated financial statements.

AMBARELLA, INC.

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(unaudited, in thousands)

	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
Net income	$3,303	$8,632	$5,867	$10,415
Other comprehensive income (loss), net of tax:				
Unrealized gains (losses) on investments	6	13	(12)	40
Other comprehensive income (loss), net of tax	6	13	(12)	40
Comprehensive income	$3,309	$8,645	$5,855	$10,455

See accompanying notes to condensed consolidated financial statements.

AMBARELLA, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

(unaudited, in thousands)

	Six Months Ended July 31, 2017	2016
Cash flows from operating activities:		
Net income	$5,867	$10,415
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation of property and equipment	855	819
Amortization of intangible assets	1,147	23
Amortization/accretion of marketable securities	101	125
Stock-based compensation	27,407	22,767
Other non-cash items, net	43	67
Changes in operating assets and liabilities:		
Accounts receivable	245	5,820
Inventories	2,419	(2,731)
Prepaid expenses and other current assets	1,618	2
Deferred tax assets	(525)	1,054
Other assets	(5)	119
Accounts payable	3,511	5,548
Accrued liabilities	(9,293)	(543)
Income taxes payable	1,446	(787)
Deferred tax liabilities	—	(58)
Deferred revenue	(1,222)	(4,613)
Other long-term liabilities	39	26
Net cash provided by operating activities	33,653	38,053
Cash flows from investing activities:		
Purchase of investments	(28,049)	(50,214)
Sales of investments	4,500	19,827
Maturities of investments	14,840	19,560
Purchase of property and equipment	(1,853)	(997)
Net cash used in investing activities	(10,562)	(11,824)
Cash flows from financing activities:		
Stock repurchase	(38,720)	(20,183)
Proceeds from exercise of stock options and employee stock purchase plan	3,396	2,405
Payment for software license liabilities	(901)	—
Net cash used in financing activities	(36,225)	(17,778)
Net increase (decrease) in cash and cash equivalents	(13,134)	8,451
Cash and cash equivalents at beginning of period	322,872	268,056
Cash and cash equivalents at end of period	$309,738	$276,507
Supplemental disclosure of cash flow information:		
Cash paid for income taxes	$567	$637
Supplemental disclosure of noncash investing and financing activities:		
Increase in liabilities related to intangible and fixed asset purchases	$9,193	$86

See accompanying notes to condensed consolidated financial statements.

AMBARELLA, INC.

Notes to Condensed Consolidated Financial Statements

(Unaudited)

1. Organization and Summary of Significant Accounting Policies

Organization

Ambarella, Inc. (the “Company”) was incorporated in the Cayman Islands on January 15, 2004. The Company is a developer of semiconductor processing solutions for video that enable high-definition video capture, sharing, analysis and display. The Company combines its processor design capabilities with its expertise in video and image processing, algorithms and software to provide a technology platform that is designed to be easily scalable across multiple applications and enable rapid and efficient product development. The Company’s system-on-a-chip (“SoC”) designs fully integrate high-definition video processing, image processing, analysis, audio processing and system functions onto a single chip, delivering exceptional video and image quality, differentiated functionality and low power consumption.

The Company sells its solutions to leading original design manufacturers (“ODMs”) and original equipment manufacturers (“OEMs”) globally.

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared by the Company in accordance with the instructions to Form 10-Q pursuant to the rules and regulations of the Securities and Exchange Commission (“SEC”) and, therefore, do not include all information and notes normally provided in audited financial statements. The accounting policies are described in the “Notes to Consolidated Financial Statements” in the Annual Report on Form 10-K for the 2017 fiscal year filed with the SEC on March 30, 2017 (the “Form 10-K”) and updated, as necessary, in this Form 10-Q. The year-end condensed consolidated balance sheet data presented for comparative purposes was derived from audited financial statements, but does not include all disclosures required by generally accepted accounting principles in the United States (“U.S. GAAP”). In the opinion of management, all adjustments (consisting of normal recurring accruals and adjustments) considered necessary for a fair statement have been included. The results of operations for any interim period are not necessarily indicative of, nor comparable to, the results of operations for any other interim period or for a full fiscal year. These unaudited condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and related notes contained in the Form 10-K.

Basis of Consolidation

The Company’s fiscal year ends on January 31. The condensed consolidated financial statements of the Company and its subsidiaries have been prepared in conformity with U.S. GAAP. All intercompany transactions and balances have been eliminated upon consolidation.

Use of Estimates

The preparation of condensed consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expense during the reported periods. Actual results could differ from those estimates.

On an ongoing basis, management evaluates its estimates and assumptions, including those related to (i) the collectibility of accounts receivable; (ii) write down of excess and obsolete inventories; (iii) intangible assets and goodwill; (iv) the estimated useful lives of long-lived assets; (v) impairment of long-lived assets and financial instruments; (vi) warranty obligations; (vii) the valuation of stock-based compensation awards and financial instruments; (viii) the probability of performance objectives achievement; (ix) the realization of tax assets and estimates of tax liabilities, including reserves for uncertain tax positions; and (x) the recognition and disclosure of contingent liabilities. These estimates and assumptions are based on historical experience and on various other factors which the Company believes to be reasonable under the circumstances. The Company may engage third-party valuation specialists to assist with estimates related to the valuation of financial instruments and assets associated with various contractual arrangements. Such estimates often require the selection of appropriate valuation methodologies and significant judgment. Actual results could differ from these estimates under different assumptions or circumstances.

Concentration of Risk

The Company's products are manufactured, assembled and tested by third-party contractors located primarily in Asia. The Company does not have long-term agreements with these contractors. A significant disruption in the operations of one or more of these contractors would impact the production of the Company's products which could have a material adverse effect on its business, financial condition and results of operations.

A substantial portion of the Company's revenue is derived from sales through its logistics provider, Wintech Microelectronics Co., Ltd., or Wintech, which serves as its non-exclusive sales representative and logistics provider in Asia other than Japan. Termination of the relationship with Wintech could result in a temporary or permanent loss of revenue and result in an obligation to repurchase unsold product. Any Wintech credit issue could impair its ability to make timely payment to the Company. See Note 15 for additional information regarding revenue and credit concentration with this customer.

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash, cash equivalents, marketable securities and accounts receivable. The Company maintains its cash primarily in checking accounts with reputable financial institutions. Cash deposits held with these financial institutions may exceed the amount of insurance provided on such deposits. The Company has not experienced any material losses on deposits of its cash. In order to limit the exposure of each investment, cash equivalents and marketable securities consist primarily of money market funds, asset-backed securities, commercial paper, U.S. government securities and debt securities of corporations which management assesses to be highly liquid. The Company does not hold or issue financial instruments for trading purposes.

The Company performs ongoing credit evaluations of each of its customers and adjusts credit limits based upon payment history and the customers' credit worthiness. The Company regularly monitors collections and payments from its customers.

Cash Equivalents and Marketable Securities

The Company considers all highly liquid investments with original maturities of less than three months at the time of purchase to be cash equivalents. Investments that are highly liquid with original maturities at the time of purchase greater than three months are considered marketable securities.

The Company classifies these investments as "available-for-sale" securities carried at fair value, based on quoted market prices of similar assets, with the unrealized gains or losses reported, net of tax, as a separate component of shareholders' equity and included in accumulated other comprehensive income (loss) in the condensed consolidated balance sheets. The amortization of premiums and accretion of discounts and the realized gains and losses are both recorded in other income (loss), net in the condensed consolidated statements of operations. The Company reviews its investments for possible other-than-temporary impairments on a regular basis. If any loss on investment is believed to be other-than-temporary, a charge will be recorded and a new cost basis in the investment will be established. In evaluating whether a loss on a security is other-than-temporary, the Company considers the following factors: 1) general market conditions, 2) the duration and extent to which the fair value is less than cost, 3) the Company's intent and ability to hold the investment.

For securities in an unrealized loss position which is deemed to be other-than-temporary, the difference between the security's then-current amortized cost basis and fair value is separated into (i) the amount of the impairment related to the credit loss (i.e., the credit loss component) and (ii) the amount of the impairment related to all other factors (i.e., the non-credit loss component). The credit loss component is recognized in earnings. The non-credit loss component is recognized in accumulated other comprehensive income (loss). Due to the relative short term nature of the investments, there have been no other-than-temporary impairments recorded to date.

Inventories

The Company records inventories at the lower of cost or net realizable value. The cost includes materials and other production costs and is computed using standard cost on a first-in, first-out basis. Inventory reserves are recorded for estimated obsolescence or unmarketable inventories based on forecast of future demand and market conditions. Any adjustments to reduce the cost of inventories to their net realizable value are recognized in earnings in the current period. Once inventory is written down, a new accounting cost basis is established and, accordingly, any associated reserve is not released until the inventory is sold or scrapped. There were no material inventory losses recognized for the three and six months ended July 31, 2017 and 2016, respectively.

Noncancelable Internal-Use Software License

The Company accounts for a noncancelable on premise internal-use software license as the acquisition of an intangible asset and the incurrence of a liability to the extent that all or a portion of the software licensing fees are not paid on or before the license acquisition date. The intangible asset and related liability are recorded at net present value and interest expense is recorded over the payment term.

Business Combinations and Intangible Assets

The Company allocates the fair value of purchase price to the assets acquired and liabilities assumed based on their estimated fair values. The excess of the fair value of purchase price over the fair values of these identifiable assets and liabilities is recorded as goodwill. When determining the fair values of assets acquired and liabilities assumed, especially with respect to intangible assets, management makes significant estimates and assumptions.

Critical estimates in valuing certain intangible assets include, but are not limited to, replacement cost. Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates.

Goodwill and In-Process Research and Development

Goodwill and in-process research and development ("IPR&D") are required to be tested for impairment at least annually or sooner whenever events or changes in circumstances indicate that the assets may be impaired. The Company has a single reporting unit for goodwill impairment test purposes based on its business and reporting structure.

The Company does not amortize goodwill. Acquired IPR&D is capitalized at fair value as an intangible asset and amortization commences upon completion of the underlying projects. When a project underlying reported IPR&D is completed, the corresponding amount of IPR&D is reclassified as an amortizable purchased intangible asset and is amortized over its estimated useful life.

Revenue Recognition

The Company generates revenue from the sales of its SoCs to OEMs or ODMs, either directly or through logistics providers. Revenue from sales directly to OEMs and ODMs is recognized upon shipment provided that persuasive evidence of an arrangement exists, legal title to the products and risk of ownership have transferred, the fee is fixed or determinable, and collection of the resulting receivable is reasonably assured. The Company provides its logistics providers with the rights to return excess levels of inventory and to future price adjustments. Given the inability to reasonably estimate these price changes and returns, revenue and costs related to shipments to logistics providers are deferred until the Company has received notification from its logistics providers that they have sold the Company's products. Information reported by the Company's logistics providers includes product resale price, quantity and end customer shipment information as well as remaining inventory on hand. At the time of shipment to a logistics provider, the Company records a trade receivable as there is a legally enforceable right to receive payment, reduces inventory for the value of goods shipped as legal title has passed to the logistics provider and defers the related margin as deferred revenue in the condensed consolidated balance sheets. Any price adjustments are recorded as a change to deferred revenue at the time the adjustments are agreed upon.

Arrangements with certain OEM customers provide for pricing that is dependent upon the end products into which the Company's SoCs are used. These arrangements may also entitle the Company to a share of the product margin ultimately realized by the OEM. The minimum guaranteed amount of revenue related to the sale of products subject to these arrangements is recognized when all other elements of revenue recognition are met. Any amounts at the date of shipment invoiced in excess of the minimum guaranteed contract price are deferred until the additional amounts the Company is entitled to are fixed or determinable. Additional amounts earned by the Company resulting from margin sharing arrangements and determination of the end products into which the products are ultimately incorporated are recognized when end customer sales volume is reported to the Company. Revenues from margin sharing arrangements were not material for the three and six months ended July 31, 2017 and 2016, respectively.

The Company also enters into engineering service agreements with certain customers. These agreements may include multiple deliverables, such as software development services, licensing of intellectual property and post-contract customer support, or PCS. The Company does not sell separately any of these components and does not have Vendor Specific Objective Evidence, or VSOE, for the deliverables. Accordingly, revenues from these agreements are deferred for any amounts billed until delivery of all the elements. If the agreements include PCS, the revenues are recognized ratably over the estimated supporting periods. Revenues from engineering service agreements were not material for the three and six months ended July 31, 2017 and 2016, respectively.

Cost of Revenue

Cost of revenue includes cost of materials, cost associated with packaging and assembly, testing and shipping, cost of personnel, stock-based compensation, logistics and quality assurance, warranty cost, royalty expense, write-downs of inventories and allocation of overhead.

Income Taxes

The Company records income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in its financial statements or tax returns. In estimating future tax consequences, generally all expected future events other than enactments or changes in the tax law or rates are considered. Valuation allowances are provided when necessary to reduce deferred tax assets to the amount expected to be realized.

The Company applies authoritative guidance for the accounting for uncertainty in income taxes. The guidance requires that tax effects of a position be recognized only if it is “more likely than not” to be sustained based solely on its technical merits as of the reporting date. In estimating the Company’s tax positions and tax benefits, the Company considers and evaluates numerous factors, which may require periodic adjustments and which may not reflect the final tax liabilities. The Company adjusts its financial statements to reflect only those tax positions that are more likely than not to be sustained under examination.

As part of the process of preparing condensed consolidated financial statements, the Company is required to estimate its taxes in each of the jurisdictions in which it operates. The Company estimates actual current tax exposure together with assessing temporary differences resulting from differing treatment of items, such as accruals and allowances not currently deductible for tax purposes. These differences result in deferred tax assets, which are included in the condensed consolidated balance sheets. In general, deferred tax assets represent future tax benefits to be received when certain expenses previously recognized in the condensed consolidated statements of operations become deductible expenses under applicable income tax laws, or loss or credit carryforwards are utilized.

In assessing whether deferred tax assets may be realized, management considers whether it is more likely than not that some portion or all of deferred tax assets will be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income.

The Company makes estimates and judgments about its future taxable income based on assumptions that are consistent with its plans and estimates. Should the actual amounts differ from estimates, the amount of valuation allowance could be materially impacted. Any adjustment to the deferred tax asset valuation allowance would be recorded in the condensed consolidated income statement for the periods in which the adjustment is determined to be required.

Net Income Per Ordinary Share

Basic earnings per share is computed by dividing net income available to ordinary shareholders by the weighted-average number of ordinary shares outstanding during the period. Diluted earnings per share is computed by dividing net income available to ordinary shareholders by the weighted-average number of ordinary shares outstanding during the period increased to include the number of additional ordinary shares that would have been outstanding if potentially dilutive securities had been issued. Potentially dilutive securities include outstanding stock options, shares to be purchased under the Company’s employee stock purchase plan, unvested restricted stock and restricted stock units. The dilutive effect of potentially dilutive securities is reflected in diluted earnings per share by application of the treasury stock method.

Comprehensive Income (Loss)

Comprehensive income (loss) includes unrealized gains or losses from available-for-sale securities that are excluded from net income.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2014-09, Revenue from Contracts with Customers (Topic 606) (“ASU 2014-09”). The new guidance clarifies the principles and develops a common revenue recognition guidance for U.S. GAAP and International Financial Reporting Standards (“IFRS”). Under the new guidance, an entity is required to recognize an amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. This new revenue standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017. Subsequently, the FASB issued the following standards related to ASU 2014-09: ASU No. 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (“ASU 2016-08”); ASU No. 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing (“ASU 2016-10”); ASU No. 2016-12, Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients (“ASU 2016-12”); and ASU No. 2016-20, Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers (“ASU 2016-20”). Accordingly, the Company must adopt ASU 2016-08, ASU 2016-10, ASU 2016-12 and ASU 2016-20 with ASU 2014-09 (collectively, the “new revenue standards”) in its first quarter of fiscal year 2019. The new revenue guidance may be adopted by full retrospective method, which applies retrospectively to each prior period presented, or by modified retrospective method with the cumulative effect adjustment recognized in the beginning of retained earnings as of the date of adoption. The Company currently anticipates adopting the new guidance using the modified retrospective method. The new guidance also requires additional disclosures about the nature, amount, timing and uncertainty of revenue and considerations arising from customer contracts, including significant judgments and estimates. While the Company is continuing to evaluate all potential impacts of the guidance, the Company expects the most significant impacts will relate to the determination of transaction price and the timing of revenue recognition for transactions with its logistics providers.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). This standard requires entities that lease assets to recognize on the balance sheet the assets and liabilities for the rights and obligations created by those leases. The standard is effective for fiscal years and the interim periods within those fiscal years beginning after December 15, 2018. The guidance is required to be applied by the modified retrospective transition approach. The Company is currently assessing the impact of the adoption of this new guidance on its financial position, results of operations and disclosures.

In June 2016, the FASB issued ASU 2016-13, Financial Instruments – Credit Losses (Topic 326), to introduce a new impairment model for recognizing credit losses on financial instruments based on an estimate of current expected credit losses (“ECL”). Under the new model, an entity is required to estimate ECL on available-for-sale (AFS) debt securities only when the fair value is below the amortized cost of the asset and is no longer based on an impairment being “other-than-temporary”. The new model also requires the impairment calculation on an individual security level and requires an entity use present value of cash flows when estimating the ECL. The credit-related losses are required to be recognized through earnings and non-credit related losses are reported in other comprehensive income. The ASU will be effective for public entities in fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. The new guidance will require modified retrospective application to all outstanding instruments, with a cumulative effect adjustment recorded to opening retained earnings as of the beginning of the first period in which the guidance becomes effective. The Company does not believe the adoption of this new guidance will have a material impact on its consolidated financial statements.

In October 2016, the FASB issued ASU 2016-16, Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory. The new guidance requires that entities recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. The new guidance will be effective for annual reporting periods beginning after December 15, 2017, including interim reporting periods within those annual reporting periods. The new guidance should also be applied on a modified retrospective basis through a cumulative-effect adjustment to retained earnings as of the beginning of the period of adoption. The Company is currently assessing the impact of the adoption of this new guidance on its financial position, results of operations and disclosures.

In November 2016, the FASB issued ASU 2016-18, Statement of Cash Flows (Topic 230), to require entities to show the changes in the total of cash, cash equivalents, restricted cash and restricted cash equivalents in the statement of cash flows. As a result, entities will no longer present transfers between cash and cash equivalents and restricted cash and restricted cash equivalents in the statement of cash flows. When cash, cash equivalents, restricted cash and restricted cash equivalents are presented in more than one line item on the balance sheet, the new guidance requires a reconciliation of the totals in the statement of cash flows to the related captions in the balance sheet. Entities will also have to disclose the nature of restricted cash and restricted cash equivalent balances. The new guidance will be effective for fiscal years beginning after December 15, 2017, including the interim periods within those years and is applied retrospectively. The Company does not believe the adoption of this new guidance will have a material impact on its consolidated statement of cash flows and disclosures.

In January 2017, the FASB issued ASU 2017-04, Intangibles – Goodwill and Other (Topic 350): Simplifying the Test of Goodwill Impairment, to eliminate the requirement to calculate the implied fair value of goodwill to measure a goodwill impairment charge. Instead, entities will record an impairment charge based on the excess of a reporting unit's carrying amount over its fair value. This new guidance will be applied prospectively and is effective for annual and interim periods beginning after December 15, 2019. The Company does not believe the adoption of this new guidance will have a material impact on its financial position, results of operations and disclosures.

In March 2017, the FASB issued ASU 2017-08, Receivables – Nonrefundable Fees and Other Costs (Subtopic 310-20): Premium Amortization On Purchased Callable Debt Securities, to shorten the amortization period for the premium to the earliest call date instead of the contractual life of the instrument. This new guidance will be effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. Entities will be required to apply the new guidance using the modified retrospective method with a cumulative-effect adjustment to retained earnings upon the adoption date. The Company does not believe the adoption of this new guidance will have a material impact on its financial position, results of operations and disclosures.

2. Financial Instruments and Fair Value

The Company invests a portion of its cash in debt securities that are denominated in U.S. dollars. The investment portfolio consists of money market funds, asset-backed securities, commercial paper, U.S. government securities and debt securities of corporations. All of the investments are classified as available-for-sale securities and reported at fair value in the condensed consolidated balance sheets as follows:

	As of July 31, 2017			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)			
Money market funds	$10,232	$ —	$ —	$10,232
Commercial paper	6,980	—	—	6,980
Corporate bonds	48,758	3	(33)	48,728
Asset-backed securities	13,024	—	(7)	13,017
U.S. government securities	22,397	—	(45)	22,352
Total cash equivalents and marketable securities	$101,391	$ 3	$ (85)	$101,309

	As of January 31, 2017			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)			
Money market funds	$8,328	$ —	$ —	$8,328
Demand deposits	10,000	—	—	10,000
Commercial paper	4,784	—	—	4,784
Corporate bonds	42,713	6	(41)	42,678
Asset-backed securities	11,686	1	(12)	11,675
U.S. government securities	23,409	6	(30)	23,385
Total cash equivalents and marketable securities	$100,920	$ 13	$ (83)	$100,850

As of

	July 31, 2017	January 31, 2017
	(in thousands)	
Included in cash equivalents	$10,232	$ 18,328
Included in marketable securities	91,077	82,522
Total cash equivalents and marketable securities	$101,309	$ 100,850

The contractual maturities of the investments at July 31, 2017 and January 31, 2017 were as follows:

	As of July 31, 2017	January 31, 2017
	(in thousands)	
Due within one year	$86,791	$ 76,992
Due within one to two years	14,518	23,858
Total cash equivalents and marketable securities	$101,309	$ 100,850

The unrealized losses on the available-for-sale securities were caused by fluctuations in market value and interest rates as a result of the economic environment. As the decline in market value was attributable to changes in market conditions and not credit quality, and because the Company neither intended to sell nor was it more likely than not that it would be required to sell these investments prior to a recovery of par value, the Company did not consider these investments to be other-than temporarily impaired as of July 31, 2017 and January 31, 2017, respectively.

The following fair value hierarchy is applied for disclosure of the inputs used to measure fair value. This hierarchy prioritizes the inputs into three broad levels as follows:

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

Level 2—Inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the assets or liabilities, either directly or indirectly through market corroboration, for substantially the full term of the financial instruments.

Level 3—Unobservable inputs based on the Company’s own assumptions used to measure assets and liabilities at fair value. The inputs require significant management judgment or estimation.

The Company measures the fair value of money market funds and demand deposits using quoted prices in active markets for identical assets and classifies them within Level 1. The fair value of the Company’s investments in other debt securities are obtained based on quoted prices for similar assets in active markets and are classified within Level 2.

The following table presents the fair value of the financial instruments measured on a recurring basis as of July 31, 2017 and January 31, 2017:

	As of July 31, 2017			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Money market funds	$10,232	$10,232	$—	$ —
Commercial paper	6,980	—	6,980	—
Corporate bonds	48,728	—	48,728	—
Asset-backed securities	13,017	—	13,017	—
U.S. government securities	22,352	—	22,352	—
Total cash equivalents and marketable securities	$101,309	$10,232	$91,077	$ —

	As of January 31, 2017			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Money market funds	$8,328	$8,328	$—	$ —
Demand deposits	10,000	10,000	—	—
Commercial paper	4,784	—	4,784	—
Corporate bonds	42,678	—	42,678	—
Asset-backed securities	11,675	—	11,675	—
U.S. government securities	23,385	—	23,385	—

Total cash equivalents and marketable securities	$100,850	$18,328	$82,522	$ —

3. Inventories

Inventory at July 31, 2017 and January 31, 2017 consisted of the following:

	As of July 31, 2017	January 31, 2017
	(in thousands)	
Work-in-progress	$11,156	$ 10,105
Finished goods	6,570	10,040
Total	$17,726	$ 20,145

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4. Property and Equipment, Net

Depreciation expense was approximately $0.5 million and $0.3 million for the three months ended July 31, 2017 and 2016, respectively. Depreciation expense was approximately $0.9 million and $0.8 million for the six months ended July 31, 2017 and 2016, respectively. Property and equipment at July 31, 2017 and January 31, 2017 consisted of the following:

	As of July 31, 2017	January 31, 2017
	(in thousands)	
Computer equipment and software	$7,352	$ 6,798
Machinery and equipment	3,610	3,405
Furniture and fixtures	829	797
Leasehold improvements	1,625	1,672
Construction in progress	1,372	755
	14,788	13,427
Less: accumulated depreciation and amortization	(9,152)	(8,439)
Total property and equipment, net	$5,636	$ 4,988

5. Intangible Assets

The intangible assets primarily consist of $4.1 million of IPR&D from the acquisition of VisLab S.r.l., or VisLab, in June 2015 and $8.9 million of a noncancelable software license. Acquired IPR&D is capitalized at fair value and the amortization commences upon completion of the underlying projects. When a project underlying reported IPR&D is completed, the corresponding amount of IPR&D is reclassified as an amortizable purchased intangible asset and is amortized over its estimated useful life. As of July 31, 2017, there was no IPR&D amortized.

During the six months ended July 31, 2017, the Company entered into certain noncancelable software license agreements in which the Company committed to pay an aggregate amount of $10.5 million through January 2020. The licenses have been capitalized as intangible assets, and the corresponding future payments have been recorded as liabilities at net present value. As of July 31, 2017, $3.2 million was recorded in accrued and other current liabilities and $5.9 million was recorded in other long-term liabilities in the condensed consolidated balance sheets. For the three and six months ended July 31, 2017, there was $0.8 million and $1.1 million of amortization expense recorded in the condensed consolidated statements of operations, respectively.

There were no intangible asset impairments for the three and six months ended July 31, 2017 and 2016, respectively.

6. Goodwill

On June 25, 2015, the Company completed the acquisition of VisLab, a privately-held Italian company that develops computer vision and intelligent control systems for automotive and other commercial applications, including advanced driver assistance systems and several generations of autonomous vehicle driving systems, for $30.0 million in cash. As a result, there was $25.3 million attributed to goodwill, $4.1 million attributed to intangible assets and $0.6 million attributed to net assets acquired. A deferred tax liability of $1.3 million related to the intangible assets was recorded to account for the difference between financial reporting and tax basis at the acquisition date, with an addition to goodwill. The Company does not amortize goodwill. There were no goodwill impairments for the three and six months ended July 31, 2017 and 2016, respectively.

7. Accrued and Other Current Liabilities

Accrued and other current liabilities at July 31, 2017 and January 31, 2017 consisted of the following:

	As of July 31, 2017	January 31, 2017
	(in thousands)	
Accrued employee compensation	$11,986	$ 14,685
Accrued warranty	800	500
Accrued rebates	865	972
Accrued product development costs	1,232	7,605
Software license liabilities, current	3,216	—
Other accrued liabilities	1,807	2,686
Total accrued and other current liabilities	$19,906	$ 26,448

8. Deferred Revenue and Deferred Cost

Deferred revenue and related cost at July 31, 2017 and January 31, 2017 consisted of the following:

	As of July 31, 2017	January 31, 2017
	(in thousands)	
Deferred revenue from product shipments	$7,573	$ 7,725
Deferred revenue from services	1,023	1,748
Deferred cost of revenue from product shipments	(2,393)	(2,048)
Total deferred revenue, net	$6,203	$ 7,425

9. Other Long-Term Liabilities

Other long-term liabilities at July 31, 2017 and January 31, 2017 consisted of the following:

	As of July 31, 2017	January 31, 2017
	(in thousands)	
Unrecognized tax benefits, including interest	$1,942	$ 1,905
Deferred tax liabilities, non-current	1,333	1,333
Software license liabilities, non-current	5,851	—
Other long-term liabilities	5	3
Total other long-term liabilities	$9,131	$ 3,241

10. Capital Stock

Preference shares

After completion of the Company's initial public offering in 2012, a total of 20,000,000 preference shares, with a $0.00045 par value per share, were authorized. There were no preference shares issued and outstanding as of July 31, 2017 and January 31, 2017, respectively.

Ordinary shares

As of July 31, 2017 and January 31, 2017, a total of 200,000,000 ordinary shares were authorized.

On March 30, 2017, the Company added 1,501,606 ordinary shares to the ordinary shares reserved for issuance, pursuant to an "evergreen" provision contained in the 2012 Equity Incentive Plan ("EIP"). Pursuant to such provision, on February 1st of each fiscal year, the number of ordinary shares reserved for issuance under the EIP is automatically increased by a number equal to the lesser of (i) 3,500,000 ordinary shares, (ii) four and one half percent (4.5%) of the aggregate number of ordinary shares outstanding on January 31st of the preceding fiscal year, or (iii) a lesser number of shares that may be determined by the Company's Board of Directors.

On March 30, 2017, the Company added 417,112 ordinary shares to the ordinary shares reserved for issuance, pursuant to an "evergreen" provision contained in the Amended and Restated 2012 Employee Stock Purchase Plan ("ESPP"). Pursuant to such provision, on February 1st of each fiscal year, the number of ordinary shares reserved for issuance under the ESPP is automatically increased by a number equal to the lesser of (i) 1,500,000 ordinary shares, (ii) one and one quarter percent (1.25%) of the aggregate number of ordinary shares outstanding on such date, or (iii) an amount determined by the Company's Board of Directors or a duly authorized committee of the Board of Directors.

As of July 31, 2017 and January 31, 2017, the following ordinary shares were reserved for future issuance under the EIP and ESPP:

	As of July 31, 2017	January 31, 2017
Shares reserved for options, restricted stock and restricted stock units under EIP	6,109,476	5,167,688
Shares reserved for ESPP	1,619,541	1,252,465

Shares repurchased

On May 31, 2016, the Company's Board of Directors authorized the repurchase of up to $75.0 million of the Company's ordinary shares through June 30, 2017. On May 31, 2017, the Company's Board of Directors authorized the additional repurchase of up to $50.0 million of the Company's ordinary shares over a twelve-month period commencing July 1, 2017. Repurchases may be made from time-to-time through open market purchases, 10b5-1 plans or privately negotiated transactions subject to market conditions, applicable legal requirements and other relevant factors. The repurchase program does not obligate the Company to acquire any particular amount of ordinary shares, and it may be suspended at any time at the Company's discretion. The repurchase program is funded using the Company's working capital and any repurchased shares are recorded as authorized but unissued shares. There were 758,508 shares repurchased during the six months ended July 31, 2017 for approximately $38.7 million in cash. As of July 31, 2017, a total of 1,163,597 shares have been repurchased for approximately $58.9 million in cash and recorded as a reduction to equity. As of July 31, 2017, there was approximately $47.8 million available for repurchases under the repurchase program through June 30, 2018.

11. Stock-based Compensation

The following table presents the classification of stock-based compensation for the periods indicated:

	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
	(in thousands)			
Stock-based compensation:				
Cost of revenue	$332	$246	$635	$491
Research and development	8,649	6,873	16,626	13,592
Selling, general and administrative	5,454	4,347	10,146	8,684
Total stock-based compensation	$14,435	$11,466	$27,407	$22,767

As of July 31, 2017, total unrecognized compensation cost related to unvested stock options was $7.4 million and is expected to be recognized over a weighted-average period of 2.05 years. Total unrecognized compensation cost related to unvested restricted stock units was $98.7 million and is expected to be recognized over a weighted-average period of 2.61 years. Total unrecognized compensation cost related to unvested restricted stock awards was $4.9 million and is expected to be recognized over a weighted-average period of 1.41 years.

The following table sets forth the weighted-average assumptions used to estimate the fair value of stock options and employee stock purchase plan awards for the periods indicated:

	Three Months Ended July 31, 2017	2016	Six Months Ended July 31, 2017	2016
Stock Options:				
Volatility	53 %	38 %	53 %	38 %
Risk-free interest rate	1.88 %	1.39 %	2.08 %	1.55 %
Expected term (years)	6.08	6.08	6.07	5.96
Dividend yield	0 %	0 %	0 %	0 %
Employee stock purchase plan awards:				
Volatility	—	—	39 %	67 %
Risk-free interest rate	—	—	0.89 %	0.52 %
Expected term (years)	—	—	0.5	0.5
Dividend yield	—	—	0 %	0 %

The Company calculates expected volatility for stock options based on the weighted average of historical volatilities of its own stock price and the share prices of similar companies that are publicly available for a period commensurate with the expected term. The Company calculates expected volatility for ESPP based on its own historical stock price for a period commensurate with the offering period.

The following table summarizes stock option activity for the six months ended July 31, 2017:

	Option Outstanding					
	Shares	Weighted-Average Exercise Price	Weighted-Average Grant-date Fair Value	Total Intrinsic Value Of Options Exercised (in thousands)	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding at January 31, 2017	1,703,524	$ 21.66				
Granted	72,400	55.69	$ 28.84			
Exercised	(89,829)	13.13		$ 3,783		
Forfeited	(13,818)	56.69				
Expired	(5,495)	68.57				
Outstanding at July 31, 2017	1,666,782	23.15			4.85	$ 48,972
Exercisable at July 31, 2017	1,366,052	$ 16.81			4.11	$ 47,343

The intrinsic value of options outstanding and options exercisable is calculated based on the difference between the fair market value of the Company's ordinary shares on the reporting date and the exercise price. The closing price of the Company's ordinary shares on July 31, 2017 was $50.05, as reported by The NASDAQ Global Market. The intrinsic value of exercised options is calculated based on the difference between the fair market value of the Company's ordinary shares on the exercise date and the exercise price.

The following table summarizes restricted stock and restricted stock units activities for the period indicated:

	Shares	Weighted-Average Grant-Date Fair Value
Unvested at January 31, 2017	2,175,673	$ 56.76
Granted	364,861	56.79
Vested	(506,826)	45.60
Forfeited	(70,588)	55.15
Unvested at July 31, 2017	1,963,120	$ 59.71

As of July 31, 2017, the aggregate intrinsic value of unvested restricted stock and restricted stock units was $98.3 million.

12. Net Income Per Ordinary Share

The following table sets forth the computation of basic and diluted net income per ordinary share for the periods indicated:

	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
	(in thousands, except share and per share data)			
Numerator:				
Net income	$3,303	$8,632	$5,867	$10,415
Denominator:				
Weighted-average ordinary shares - basic	33,227,717	32,557,398	33,240,767	32,492,723
Effect of potentially dilutive securities:				
Employee stock options	984,064	1,074,331	995,107	1,062,310
Restricted stock and restricted stock units	356,253	530,279	389,498	498,128
Employee stock purchase plan	4,893	13,458	3,632	9,942
Weighted-average ordinary shares - diluted	34,572,927	34,175,466	34,629,004	34,063,103
Net income per ordinary share:				
Basic	$0.10	$0.27	$0.18	$0.32
Diluted	$0.10	$0.25	$0.17	$0.31

The following weighted-average potentially dilutive securities were excluded from the computation of diluted net income per ordinary share as their effect would have been antidilutive:

	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
Options to purchase ordinary shares	271,516	471,534	266,619	476,116
Restricted stock and restricted stock units	796,472	893,341	854,799	1,047,630
Employee stock purchase plan	—	—	12,974	17,191
	1,067,988	1,364,875	1,134,392	1,540,937

13. Income Taxes

The following table provides details of income taxes for the periods indicated:

	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
	(in thousands)			
Income before income taxes	$5,529	$9,433	$8,299	$10,808
Provision for income taxes	2,226	801	2,432	393

Effective tax rate	40.3 %	8.5 %	29.3 %	3.6 %

The effective tax rate increased for the three and six months ended July 31, 2017 compared to the same periods in the prior fiscal year primarily due to a decrease in the proportion of profits generated in lower tax jurisdictions; and an increase in non-deductible stock-based compensation expense.

The Company files federal and state income tax returns in the United States and in various foreign jurisdictions. The tax years 2012 to 2016 remain open to examination by U.S. federal tax authorities. The tax years 2007 to 2016 remain open to examination by U.S. state tax authorities. The tax years 2011 to 2016 remain open to examination by foreign tax authorities. Fiscal years outside of the normal statute of limitations remain open to audit by tax authorities due to tax attributes generated in those earlier years, which have been carried forward and may be audited in subsequent years when utilized.

The Company regularly assesses the likelihood of adverse outcomes resulting from potential tax examinations to determine the adequacy of its provision for income taxes. These assessments can require considerable estimates and judgments. As of July 31, 2017, the gross amount of unrecognized tax benefits was approximately $41.8 million. If the estimates of income tax liabilities prove to be less than the ultimate assessment, then a further charge to expense could be required. If events occur and the payment of these amounts ultimately proves to be unnecessary, the reversal of the liabilities could result in tax benefits being recognized in the period in which the Company determines the liabilities are no longer necessary. The Company does not anticipate significant changes to its uncertain tax positions during the next twelve months.

14. Commitments and Contingencies

The Company leases its principal facilities under operating lease agreements and leases time-based software licenses from time to time. Net operating lease expense for the three months ended July 31, 2017 and 2016 was approximately $1.2 million and $1.9 million, respectively. Net operating lease expense for the six months ended July 31, 2017 and 2016 was approximately $2.9 million and $3.6 million, respectively. Future annual minimum payments under these operating leases with initial lease terms in excess of one year are as follows:

Fiscal Year	As of July 31, 2017 (in thousands)
2018	$ 1,483
2019	2,885
2020	2,341
2021	812
2022	247
Total future annual minimum lease payments	$ 7,768

Contract Manufacturer Commitments

The Company’s components and products are procured and built by independent contract manufacturers based on sales forecasts. These forecasts include estimates of future demand, historical trends, analysis of sales and marketing activities, and adjustment of overall market conditions. The Company regularly issues purchase orders to independent contract manufacturers which are cancelable only upon agreement between the Company and the third-party manufacturers. As of July 31, 2017 and January 31, 2017, total manufacturing purchase commitments were approximately $36.8 million and $23.9 million, respectively, as a result of seasonal fluctuations.

Indemnification

The Company, from time to time, in the normal course of business, indemnifies certain vendors with whom it enters into contractual relationships. The Company has agreed to hold the other party harmless against third-party claims in connection with the Company’s future products. The Company also indemnifies certain customers against third-party claims related to certain intellectual property matters. It is not possible to determine the maximum potential amount of liability under these indemnification obligations due to the limited history of prior indemnification claims and the unique facts and circumstances that are likely to be involved in each particular claim. The Company has not made payments under these obligations and no liabilities have been recorded for these obligations in the condensed consolidated balance sheets as of July 31, 2017 and January 31, 2017, respectively.

15. Segment Reporting

The Company operates in one reportable segment related to the development and sales of low-power, high-definition video products. The Chief Executive Officer of the Company has been identified as the Chief Operating Decision Maker (the “CODM”) and manages the Company’s operations as a whole. For the purpose of evaluating financial performance and allocating resources, the CODM reviews financial information presented on a consolidated basis accompanied by information by customer and geographic region.

Geographic Revenue

The following table sets forth the Company’s revenue by geographic region based on bill-to location for the periods indicated. Prior period revenue amounts by geographic region have been reclassified to conform to the fiscal year 2018 presentation. These reclassifications did not impact total revenues in the prior periods.

	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
	(in thousands)			
Taiwan	$48,052	$46,803	$94,468	$88,905
Asia Pacific	12,291	11,577	24,050	19,163
Europe	6,444	3,282	8,344	8,634
North America other than United States	2,979	1,095	4,984	1,365
United States	1,864	2,385	3,919	4,232
Total revenue	$71,630	$65,142	$135,765	$122,299

As of July 31, 2017, substantially all of the Company’s property and equipment, net were located in the United States and Asia Pacific region with approximate net amounts of $2.3 million and $2.4 million, respectively.

Major Customers

For the three and six months ended July 31, 2017, the only customer representing 10% or more of revenue and accounts receivable was Wintech, the Company’s logistics provider, which accounted for approximately 67% and 70% of total revenue, respectively. For the three months ended July 31, 2016, the customers representing 10% or more of revenue and accounts receivable were Wintech and Chicony Electronics Co., Ltd. (“Chicony”), a direct ODM customer, which accounted for approximately 72% and 12% of total revenue, respectively. For the six months ended July 31, 2016, the only customer representing 10% or more of revenue and accounts receivable was Wintech, which accounted for approximately 73% of total revenue. Accounts receivable with Wintech accounted for approximately $23.2 million and $19.3 million as of July 31, 2017 and January 31, 2017, respectively.

16. Related-Party Transactions

The Company considers an entity to be a related party if it owns more than 10% of the Company’s total voting stock at the end of each reporting period or if an officer or employee of an entity also serves on the Company’s board of directors or if it is a significant shareholder and has material business transactions with the Company.

The Company enters into software license agreements with Cadence Design Systems, Inc. (“Cadence”) from time to time. The Chief Executive Officer of Cadence, who is also the President and a Director of Cadence, was a member of the Company’s Board of Directors until June 7, 2017. In March 2017, the Company entered into a noncancelable software license agreement with Cadence. Under this agreement, the Company committed to pay an aggregate amount of $10.3 million through January 2020. The Company paid $0.9 million and $0.7 million to Cadence for the three months ended July 31, 2017 and 2016, respectively. The Company paid $1.0 million and $1.3 million to Cadence for the six months ended July 31, 2017 and 2016, respectively. License expenses related to these agreements included in research and development expense were approximately $0.8 million and $0.7 million for the three months ended July 31, 2017 and 2016, respectively. License expenses related to these agreements included in research and development expense were approximately $1.6 million and $1.4 million for the six months ended July 31, 2017 and 2016, respectively.

17. Subsequent Events

As of September 7, 2017, a total of 59,143 shares have been repurchased for approximately $2.7 million in cash and recorded as a reduction to equity after the balance sheet date. As of September 7, 2017, there was approximately $45.1 million available for repurchases under the repurchase program through June 30, 2018.

ITEM 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the unaudited condensed consolidated financial statements and related notes included elsewhere in this Quarterly Report on Form 10-Q, and the consolidated financial statements and notes thereto for the fiscal year ended January 31, 2017 and management's discussion and analysis of our financial condition and results of operations included in our Annual Report on Form 10-K for the 2017 fiscal year filed with the Securities and Exchange Commission, or SEC, on March 30, 2017.

This Quarterly Report on Form 10-Q, including this "Management's Discussion and Analysis of Financial Condition and Results of Operations", includes a number of forward-looking statements that involve many risks and uncertainties. Forward-looking statements are identified by the use of the words "would," "could," "will," "may," "expect," "believe," "shou "anticipate," "outlook," "if," "future," "intend," "plan," "estimate," "predict," "potential," "target," "seek," "project," "forecast "foreseeable" and similar words and phrases, including the negatives of these terms, or other variations of these terms, that denote future events. Such statements include, but are not limited to, statements concerning our market opportunity, our ability to develop new solutions, our future financial and operating performance, our sales and marketing strategy, our investment strategy, research and development, our customer and supplier relationships and inventory levels, industry trends, our cash needs and capital requirements, our expectations about seasonality, taxes and operating expenses, the availability of third-party components and economic conditions. These statements reflect our current views with respect to future events and our potential financial performance and are subject to risks and uncertainties that could cause our actual results and financial position to differ materially and adversely from what is projected or implied in any forward-looking statements included in this Quarterly Report on Form 10-Q. These factors include, but are not limited to: risks associated with revenue being generated from new customers or design wins, neither of which is assured; our ability to retain and expand customer relationships and to achieve design wins; the commercial success of our customers' products; our growth strategy; fluctuations in our operating results; our ability to anticipate future market demands and future needs of our customers; our ability to introduce new and enhanced solutions; the expansion of our current markets and our ability to successfully enter new markets; anticipated trends and challenges, including competition, in the markets in which we operate; our ability to effectively sustain and manage growth; our ability to retain key employees; the potential for intellectual property disputes or other litigation; the risks described under Item 1A of Part II — "Risk Factors," Item 2 of Part I — "Management's Discussion and Analysis of Financial Condition and Results of Operations"; the risks described elsewhere in this Quarterly Report on Form 10-Q and those discussed in other documents we file with the SEC. We make these forward-looking statements based upon information available on the date of this Quarterly Report on Form 10-Q, and we have no obligation (and expressly disclaim any such obligation) to update or alter any forward-looking statements, whether as a result of new information or otherwise except as otherwise required by securities regulations.

Overview

We are a leading developer of semiconductor processing solutions for video that enable high-definition, or HD, video capture, analysis, sharing, and display. A device that captures video includes four primary components: a lens, an image sensor, a video processor and storage memory. The video processor converts raw video input into a format that can be stored, analyzed and distributed efficiently and, in some cases, analyzes the video data to automate processes. We combine our processor design capabilities with our expertise in video, image processing and computer vision algorithms and software to provide a technology platform that is designed to be easily scalable across multiple applications and enable rapid and efficient product development. Our system-on-a-chip, or SoC, designs fully integrate HD video processing, image processing and analysis, audio processing and system functions onto a single chip, delivering exceptional video and image quality, differentiated functionality and low power consumption.

We sell our solutions to leading original design manufacturers, or ODMs, and original equipment manufacturers, or OEMs, globally. We refer to ODMs as our customers and OEMs as our end customers, except as otherwise indicated or as the context otherwise requires. In the camera market, our solutions enable the creation of high-quality video content in wearable cameras, automotive cameras, Internet Protocol, or IP, security cameras, for both professional use and home security and monitoring, unmanned aerial vehicle cameras, also referred to as UAVs, drones or flying cameras, and virtual reality cameras, also referred to as 360° cameras. In the infrastructure market, our solutions efficiently manage IP video traffic, broadcast encoding, transcoding and IP video delivery applications. We also intend to develop solutions to address emerging markets, such as OEM automotive and robotics markets.

Our sales cycles typically require a significant investment of time and a substantial expenditure of resources before we can realize revenue from the sale of our solutions, if any. Our typical sales cycle consists of a multi-month sales and development process involving our customers' system designers and management along with our sales personnel and software engineers. If successful, this process culminates in a customer's decision to use our solutions in its system, which we refer to as a design win. Our sales efforts are typically directed to the OEM of the product that will incorporate our video and image processing solution, but the eventual design and incorporation of our SoC into the product may be handled by an ODM on behalf of the OEM. Volume production may begin within six to 18 months after a design win, depending on the complexity of our customer's product and other factors upon which we may have little or no influence. Once one of our solutions has been incorporated into a customer's design, we believe that our solution is likely to remain a component of the customer's product for its life cycle because of the time and expense associated with redesigning a product or substituting an alternative solution. Conversely, a design loss to a competitor will likely preclude any opportunity for us to generate future revenue from such customer's product. Even if we obtain a design win and our SoC remains a component through the life cycle of a customer's product, the volume and timing of actual sales of our SoCs to the customer depend upon the production, release and market acceptance of that product, none of which are within our control. A portable consumer device typically has a product life cycle of six to 18 months.

Financial Highlights and Trends

- We recorded revenue of $71.6 million and $135.8 million for the three and six months ended July 31, 2017, respectively. This represented increases of 10.0% and 11.0% for the three and six months ended July 31, 2017, respectively, as compared to the same periods in fiscal year 2017. The increased revenue was primarily due to strong growth in the IP security and automotive camera markets. Both the professional and consumer IP security camera markets demonstrated strong growth, led by solid performance from the China IP security camera market, the North America professional security camera market and the home security and monitoring camera market in the United States. In the automotive camera market, an increase in shipments for OEM automotive video recorders plus growth in shipments for the automotive aftermarket resulted in strong revenue growth for the three and six months ended July 31, 2017. The increases in revenue for the three and six months ended July 31, 2017 were also attributable to revenue growth in the non-sports wearable camera market, along with initial shipments into the virtual reality camera market. The increases were partially offset, however, by decreased revenue from the UAV and sports camera markets. The reduction in revenue in the UAV market was primarily due to difficult comparables to the prior year due to the timing of new product launches by customers, as well as continued weakness of our smaller customers in that market. In the sports camera market, lower revenue resulted from excess inventory of our solutions at our major customer at the end of the previous quarter. For the three and six months ended July 31, 2017, revenue from the infrastructure market declined due to continued weak market conditions in the United States and Europe as investment in network upgrades to the new H.265 video compression technology is delayed.
- We recorded operating income of $5.3 million and $7.9 million for the three and six months ended July 31, 2017, respectively, as compared to $9.3 million and $10.6 million for the three and six months ended July 31, 2016, respectively. The decreases were primarily due to decreased gross profit as a result of the increase in the percentage of our total revenue derived from the lower gross margin IP security camera market combined with the decline of revenue from the higher gross margin UAV camera market. The decreases in operating income were also attributable to increased stock-based compensation expense, as well as increased research and development cost primarily as a result of increased headcount in support of our computer vision technology development for the automotive and other markets.
- We generated cash flows from operating activities of $33.7 million for the six months ended July 31, 2017, as compared to $38.1 million for the six months ended July 31, 2016. The decreased cash flows from operating activities were primarily due to decreased cash receipts associated with the timing of payments from customers and decreased liabilities associated with the timing of payments to suppliers. The decrease in cash flows from operating activities was partially offset by decreased inventory purchases and increased deferred revenue associated with the timing of inventory shipments by our logistics providers.
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Our Board of Directors previously authorized a program to repurchase up to $75.0 million of our ordinary shares through June 30, 2017. On May 31, 2017, our Board of Directors authorized the repurchase of up to an additional $50.0 million of our ordinary shares over a twelve-month period commencing July 1, 2017. For the three months ended July 31, 2017, we repurchased 595,770 shares for approximately $29.9 million in cash. For the six months ended July 31, 2017, we repurchased 758,508 shares for approximately $38.7 million in cash. As of July 31, 2017, we had repurchased a total of 1,163,597 shares for approximately $58.9 million in cash. Repurchases are funded using working capital and any repurchased shares are recorded as authorized but unissued shares. As of July 31, 2017, there was approximately $47.8 million available for repurchases under the repurchase program through June 30, 2018.

Factors Affecting Our Performance

Design Wins. We closely monitor design wins by customer and end market. We consider design wins to be critical to our future success, although a design win may not successfully materialize into revenue, and even if it results in revenue, the amount generated by each design win can vary significantly. Our long-term sales expectations are based on forecasts from customers and internal estimations of customer demand factoring in the expected time to market for end customer products incorporating our solutions and associated revenue potential. Our ability to accurately forecast demand, however, can be adversely affected by a number of factors, including inaccurate forecasting by our customers, miscalculations by our customers of their inventory requirements, changes in market conditions, adverse changes in our product order mix and fluctuating demand for our customers' products.

Pricing, Product Cost and Margin. Our pricing and margins depend on the volumes and features of the solutions we provide to our customers. Additionally, we make significant investments in new solutions for both cost improvements and new features that we expect to drive revenue and maintain margins. In general, solutions incorporated into more complex configurations, such as those used in high-performance camera or infrastructure applications, have higher prices and higher gross margins as compared to solutions sold into lower performing, more competitive camera applications. Our average selling price can vary by market and application due to market-specific supply and demand, the maturation of products launched in previous years and the launch of new products.

We continually monitor the cost of our solutions. As we rely on third-party manufacturers for the production of our products, we maintain a close relationship with these suppliers to continually monitor production yields, component costs and design efficiencies.

Shifting Consumer Preferences. Our revenue is subject to consumer preferences, regarding form factor and functionality, and how those preferences impact the video and image capture electronics that we support. For example, improved smartphone video capture capabilities, and the rapid adoption of smartphones by consumers, led to the decline of pocket video cameras aimed at the video and image capture market. The current video and image capture market is now characterized by a greater volume of more specialized video and image capture devices that are less likely to be replaced with smartphones, such as wearable, IP security, UAV and automotive cameras. This increasing specialization of video capture devices has changed our customer base and end markets and has impacted our revenue. In the future, we expect further changes in the market to continue to impact our business performance.

Continued Concentration of Revenue by End Market. Historically, our revenue has been significantly concentrated in a small number of end markets. In fiscal year 2010, the majority of our revenue came from the pocket video, camcorder and infrastructure markets. Since that time, we have developed technologies to provide solutions for new markets such as the wearable, IP security, UAV and automotive camera markets. We believe these markets can continue to facilitate revenue growth and customer diversification. Since fiscal year 2013, the wearable sports and professional IP security camera markets have been our largest end markets and sales into these markets collectively generated the majority of our revenue. While we will continue to expand our end market exposure, such as to home security and monitoring, non-sports wearable, UAV, automotive, and virtual reality camera markets, we anticipate that sales to a limited number of end markets will continue to account for a significant percentage of our total revenue for the foreseeable future. In addition, several of these markets are characterized by high concentration among one or a few dominant OEMs. Our end market concentration may cause our financial performance to fluctuate significantly from period to period based on the success or failure of products that our SoCs are designed into, our ability to achieve design wins with such dominant OEMs, as well as the overall growth or decline in the video capture markets in which we compete. In addition, we derive a significant portion of our revenue from a limited number of ODMs who build products on behalf of a limited number of OEMs and from a limited number of OEMs to whom we ship directly. We believe that our operating results for the foreseeable future will continue to depend on sales to a relatively small number of customers.

Ability to Capitalize on Connectivity Trends. Mobile connected devices are ubiquitous today and play an increasingly prominent role in consumers' lives. The constant connectivity provided by these devices has created a demand for connected electronic peripherals such as video and image capture devices. Our ability to capitalize on these trends by supporting our end customers in the development of connected peripherals that seamlessly cooperate with other connected devices and allow consumers to distribute and share video and images with online media platforms is critical for our success. We have added wireless communication functionality into our solutions for wearable, IP security, UAV and automotive cameras. The combination of our compression technology with wireless connectivity enables wireless video streaming and uploading of videos and images to the Internet. Our solutions enable IP security camera systems to stream video content to either cloud infrastructure or connected mobile devices, and our solutions for wearable and UAV cameras allow consumers to quickly stream or upload video and images to social media platforms.

Ability to Capitalize on Computer Vision Trends. We expect that computer vision functionality will become an increasingly important requirement in many of our current and future markets, including automotive, IP security, UAV, wearable camera markets, and potentially robotics applications. As a result, we believe that our ability to develop advanced computer vision technology, enable and support customer product development in emerging applications such as advanced driver-assistance systems, object detection, people recognition and machine learning, and gain customer acceptance of our technology platform and solutions, will be critical to our future success.

Sales Volume. A typical camera design win that successfully launches into the marketplace can generate a wide range of sales volumes for our solutions, depending on the end market demand for our customers' products. This can depend on several factors, including the reputation of the end customer, market penetration, product capabilities, size of the end market that the product addresses and our end customers' ability to sell their products. In certain cases, we may provide volume discounts on sales of our solutions, which may be offset by lower manufacturing costs related to higher volumes. In general, our customers with greater market penetration and better branding tend to develop products that generate larger volumes over the product life cycle.

Customer Product Life Cycle. We estimate our customers' product life cycles based on the customer, type of product and end market. In general, products launched in the camera market have shorter life cycles than those sold into the infrastructure market. We typically commence commercial shipments from six to 18 months following a design win, however, in some markets, lengthier product and development cycles are possible, depending on the scope and nature of the project. A portable consumer device typically has a product life cycle of six to 18 months. In the infrastructure market, the product life cycle can range from 24 to 60 months.

Results of Operations

The following table sets forth a summary of our statement of operations for the periods indicated:

	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
	(dollars in thousands)			
Revenue	$71,630	$65,142	$135,765	$122,299
Cost of revenue	26,825	21,672	49,997	42,122
Gross profit	44,805	43,470	85,768	80,177
Operating expenses:				
Research and development	27,538	23,643	54,140	48,109
Selling, general and administrative	11,962	10,565	23,706	21,458
Total operating expenses	39,500	34,208	77,846	69,567
Income from operations	5,305	9,262	7,922	10,610
Other income	224	171	377	198
Income before income taxes	5,529	9,433	8,299	10,808
Provision for income taxes	2,226	801	2,432	393
Net income	$3,303	$8,632	$5,867	$10,415

The following table sets forth operating results as a percentage of revenue of each line item for the periods indicated:

	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
Revenue	100 %	100 %	100 %	100 %
Cost of revenue	37	33	37	34
Gross profit	63	67	63	66
Operating expenses:				
Research and development	38	36	40	39
Selling, general and administrative	17	16	17	18
Total operating expenses	55	52	57	57
Income from operations	8	15	6	9
Other income	—	—	—	—
Income before income taxes	8	15	6	9
Provision for income taxes	3	1	2	—
Net income	5 %	14 %	4 %	9 %

Revenue

We derive substantially all of our revenue from the sale of HD video and image processing SoC solutions to OEMs and ODMs, either directly or through our logistics providers. Our SoC solutions have been used in the camera and infrastructure markets, although we expect the camera market will be the primary market for our solutions for the foreseeable future as the infrastructure market continues to decline due to delays in investments in network upgrades and the trend among consumers transitioning away from traditional broadcast television. We derive a substantial portion of our revenue from sales made indirectly through our logistics provider, Wintech Microelectronics Co., Ltd., or Wintech.

We typically experience seasonal fluctuations in our quarterly revenue with our third fiscal quarter normally being the highest revenue quarter. This fluctuation has been driven primarily by increased sales in consumer camera markets as our customers build inventories in preparation for the holiday shopping season. More generally, our average selling prices fluctuate based on the mix of our solutions sold in a period which reflects the impact of both changes in unit sales of existing solutions as well as the introduction and sales of new solutions. Our solutions are typically characterized by a life cycle that begins with higher average selling prices and lower volumes, followed by broader market adoption, higher volumes and average selling prices that are lower than initial levels.

The end markets into which we sell our products have seen significant changes as consumer preferences have evolved in response to new technologies. As a result, the composition of our revenue may differ meaningfully during periods of technology or consumer preference changes. We expect shifts in consumer use of video capture to continue to change over time, as more specialized use cases emerge and video capture continues to proliferate.

Cost of Revenue and Gross Margin

Cost of revenue includes the cost of materials such as wafers processed by third-party foundries, costs associated with packaging, assembly and testing, and our manufacturing support operations such as logistics, planning and quality assurance. Cost of revenue also includes indirect costs such as warranty, inventory valuation reserves and other general overhead costs.

We expect that our gross margin may fluctuate from period to period as a result of changes in average selling price, product mix and the introduction of new products by us or our competitors. In general, solutions incorporated into more complex configurations, such as those used in high-performance cameras or infrastructure applications, have higher prices and higher gross margins, as compared to solutions sold into the lower performance, more competitive camera applications. As semiconductor products mature and unit volumes sold to customers increase, their average selling prices typically decline. These declines may be paired with improvements in manufacturing yields and lower wafer, packaging and test costs, which offset some of the margin reduction that could result from lower selling prices. We believe that our gross margin will decline in the future as we continue to penetrate the highly competitive camera market.

Research and Development

Research and development expense consists primarily of personnel costs, including salaries, stock-based compensation and employee benefits. The expense also includes costs of development incurred in connection with our collaborations with our foundry vendors, costs of licensing intellectual property from third parties for product development, costs of development for software and hardware tools, cost of fabrication of mask sets for prototype products, and allocated depreciation and facility expenses. All research and development costs are expensed as incurred. We expect our research and development expense to increase in absolute dollars as we continue to enhance and expand our product features and offerings and increase headcount for new SoC development, especially in computer vision technology for the automotive and other markets.

Selling, General and Administrative

Selling, general and administrative expense consists primarily of personnel costs, including salaries, stock-based compensation and employee benefits for our sales, marketing, finance, human resources, information technology and administrative personnel. The expense also includes professional service costs related to accounting, tax, legal services, and allocated depreciation and facility expenses. We expect our selling, general and administrative expense to increase in absolute dollars as we continue to maintain the infrastructure and expand the size of our sales and marketing organization to support our anticipated business growth.

Other Income

Other income consists primarily of interest income from investments and net gains or losses from foreign currency transactions and remeasurements.

Provision for Income Taxes

We are incorporated and domiciled in the Cayman Islands and also conduct business in several countries such as the United States, China, Taiwan, Hong Kong, Italy, South Korea and Japan, and we are subject to taxation in those jurisdictions. Our worldwide operating income is subject to varying tax rates and our effective tax rate is highly dependent upon the geographic distribution of our earnings or losses and the tax laws and regulations in each geographical region. It is also subject to fluctuation from changes in the valuation of our deferred tax assets and liabilities; tax benefits from excess stock-based compensation deductions; transfer pricing adjustments and the tax effects of nondeductible compensation. We have historically had lower effective tax rates as a substantial percentage of our operations are conducted in lower-tax jurisdictions. If our operational structure were to change in such a manner that would increase the amount of operating income subject to taxation in higher-tax jurisdictions, or if we were to commence operations in jurisdictions assessing relatively higher tax rates, our effective tax rate could fluctuate significantly on a quarterly basis and/or be adversely affected.

Significant judgment is required in evaluating our uncertain tax positions and determining our provision for income taxes. Although we believe our reserves are reasonable, no assurance can be given that the final tax outcome of these matters will not be different from that which is reflected in our historical provision for income taxes and accruals. We adjust these reserves in light of changing facts and circumstances, such as the closing of a tax audit or the refinement of an estimate. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences will impact the provision for income taxes in the period in which such determination is made. The provision for income taxes includes the impact of uncertain tax position reserves and changes to reserves that are considered appropriate, as well as the related net interest and penalties.

Significant judgment is also required in determining any valuation allowance recorded against deferred tax assets. In assessing the need for a valuation allowance, we consider all available evidence, including past operating results, estimates of future taxable income, and the feasibility of tax planning strategies. In the event that we change our determination as to the amount of deferred tax assets that can be realized, we will adjust our valuation allowance with a corresponding impact to the provision for income taxes in the period in which such determination is made.

Comparison of the Three and Six Months Ended July 31, 2017 and 2016

Revenue

	Three Months Ended July 31,		Change		Six Months Ended July 31,		Change	
	2017	2016	Amount	%	2017	2016	Amount	%
	(dollars in thousands)							
Revenue	$71,630	$65,142	$6,488	10.0%	$135,765	$122,299	$13,466	11.0%

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Revenue increased for the three and six months ended July 31, 2017 as compared to the same periods in the prior fiscal year primarily due to strong growth in the IP security and automotive camera markets. Both the professional and consumer IP security camera markets demonstrated strong growth, led by solid performance from the China IP security camera market, the North America professional security camera market and the home security and monitoring camera market in the United States. In the automotive camera market, an increase in shipments for OEM automotive video recorders plus growth in shipments for the automotive aftermarket resulted in strong revenue growth for the three and six months ended July 31, 2017. The increases in revenue for the three and six months ended July 31, 2017 were also attributable to revenue growth in the non-sports wearable camera market, along with initial shipments into the virtual reality camera market. The increases were partially offset, however, by decreased revenue from the UAV and sports camera markets. The reduction in revenue in the UAV market was primarily due to difficult comparables to the prior year due to the timing of new product launches by customers, as well as continued weakness of our smaller customers in that market. In the sports camera market, lower revenue resulted from excess inventory of our solutions at our major customer at the end of the previous quarter. For the three and six months ended July 31, 2017, revenue from the infrastructure market declined due to continued weak market conditions in the United States and Europe as investment in network upgrades to the new H.265 video compression technology is delayed.

Cost of Revenue and Gross Margin

	Three Months Ended July 31,		Change		Six Months Ended July 31,		Change	
	2017	2016	Amount	%	2017	2016	Amount	%
	(dollars in thousands)							
Cost of revenue	$26,825	$21,672	$5,153	23.8%	$49,997	$42,122	$7,875	18.7%
Gross profit	44,805	43,470	1,335	3.1 %	85,768	80,177	5,591	7.0 %
Gross margin	62.6 %	66.7 %	—	(4.1)%	63.2 %	65.6 %	—	(2.4)%

Cost of revenue increased for the three and six months ended July 31, 2017 primarily due to increased revenue compared to the same periods in the prior fiscal year. The increases were also attributable to higher volume shipments of higher cost SoCs in fiscal year 2018, as well as $955,000 in cost benefit received from the recovery and sale of inventory previously written down as a result of yield loss in the manufacturing process for the three and six months ended July 31, 2016 that did not recur in fiscal year 2018. The increases were partially offset by cost reductions received from suppliers for certain SoCs that reached lifetime purchase volume milestones.

Gross margin decreased for the three and six months ended July 31, 2017 compared to the same periods in the prior fiscal year primarily due to an increase in the percentage of our total revenue that was derived from the lower gross margin IP security camera market combined with the decline of revenue from the higher gross margin UAV camera market.

Research and Development

	Change		Change

	Three Months Ended July 31,				Six Months Ended July 31,			
	2017	2016	Amount	%	2017	2016	Amount	%
	(dollars in thousands)							
Research and development	$27,538	$23,643	$3,895	16.5%	$54,140	$48,109	$6,031	12.5%

Research and development expense increased for the three and six months ended July 31, 2017 compared to the same periods in the prior fiscal year primarily due to an increase in engineering headcount associated with new SoC development, especially in computer vision technology for the automotive and other markets. Our research and development engineering headcount increased to 497 at July 31, 2017 compared to 473 at July 31, 2016. The increased engineering headcount resulted in increases in salary related expenses of