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 October 31, 2023

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)

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Ordinary Shares, $0.00045 Par Value Per Share	AMBA	The Nasdaq Global Select Market

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a 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	☐	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 of the Registrant outstanding as of November 30, 2023 was 40,248,073 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)

	As of	
	October 31, 2023	January 31, 2023
ASSETS		
Current assets:		
Cash and cash equivalents	$ 143,787	$ 113,541
Marketable debt securities	78,549	93,322
Accounts receivable, net	22,968	51,987
Inventories	30,783	40,486
Restricted cash	7	8
Prepaid expenses and other current assets	3,728	5,288
Total current assets	279,822	304,632
Property and equipment, net	10,917	11,814
Deferred tax assets, non-current	22,952	19,276
Intangible assets, net	58,805	58,497
Operating lease right-of-use assets, net	5,760	8,339
Goodwill	303,625	303,625
Other non-current assets	2,748	4,012
Total assets	$ 684,629	$ 710,195
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	9,298	17,845
Accrued and other current liabilities	57,991	56,655
Operating lease liabilities, current	3,553	3,539
Income taxes payable	2,391	4,112
Deferred revenue, current	2,596	1,311
Total current liabilities	75,829	83,462
Operating lease liabilities, non-current	2,316	5,097
Other long-term liabilities	14,696	15,548
Total liabilities	92,841	104,107
Commitments and contingencies (Note 13)		
Shareholders' equity:		
Preference shares, $0.00045 par value per share, 20,000,000 shares authorized and no shares issued and outstanding at October 31, 2023 and January 31, 2023, respectively	—	—
Ordinary shares, $0.00045 par value per share, 200,000,000 shares authorized; 40,229,267 and 39,043,000 shares issued and outstanding at October 31, 2023 and January 31, 2023, respectively	18	18
Additional paid-in capital	667,313	572,076
Accumulated other comprehensive loss	(1,219)	(492)
Retained earnings (accumulated deficit)	(74,324)	34,486
Total shareholders’ equity	591,788	606,088
Total liabilities and shareholders' equity	$ 684,629	$ 710,195

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 October 31, 2023	Three Months Ended October 31, 2022	Nine Months Ended October 31, 2023	Nine Months Ended October 31, 2022
Revenue	$ 50,595	$ 83,096	$ 174,858	$ 254,285
Cost of revenue	20,612	31,418	68,894	94,996
Gross profit	29,983	51,678	105,964	159,289
Operating expenses:				
Research and development	53,702	52,864	163,060	151,892
Selling, general and administrative	18,246	18,944	55,750	58,213
Total operating expenses	71,948	71,808	218,810	210,105
Loss from operations	(41,965)	(20,130)	(112,846)	(50,816)
Other income, net	1,900	1,433	3,923	1,493
Loss before income taxes	(40,065)	(18,697)	(108,923)	(49,323)
Provision (benefit) for income taxes	1,645	1,112	(113)	4,958
Net loss	$ (41,710)	$ (19,809)	$ (108,810)	$ (54,281)
Net loss per share attributable to ordinary shareholders:				
Basic	$ (1.04)	$ (0.51)	$ (2.74)	$ (1.42)
Diluted	$ (1.04)	$ (0.51)	$ (2.74)	$ (1.42)
Weighted-average shares used to compute net loss per share attributable to ordinary shareholders:				
Basic	40,053,251	38,582,584	39,710,248	38,185,421
Diluted	40,053,251	38,582,584	39,710,248	38,185,421

See accompanying notes to condensed consolidated financial statements.

AMBARELLA, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(unaudited, in thousands)

	Three Months Ended October 31,		Nine Months Ended October 31,	
	2023	2022	2023	2022
Net loss	$ (41,710)	$ (19,809)	$ (108,810)	$ (54,281)
Other comprehensive loss, net of tax:				
Net unrealized losses on investments	(289)	(1,041)	(727)	(1,043)
Other comprehensive loss, net of tax	(289)	(1,041)	(727)	(1,043)
Comprehensive loss	$ (41,999)	$ (20,850)	$ (109,537)	$ (55,324)

See accompanying notes to condensed consolidated financial statements.

AMBARELLA, INC.
CONDENSED CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(in thousands, except share data)
(unaudited)

	Outstanding Ordinary Shares		Additional Paid-in	Accumulated Other Comprehensive	Retained Earnings (Accumulated	
	Shares	Amount	Capital	Loss	Deficit)	Total
Balance--January 31, 2023	39,043,000	$ 18	$ 572,076	$ (492)	$ 34,486	$ 606,088
Issuance of shares through employee equity plans	467,996	—	5,198	—	—	5,198
Issuance of shares through employee stock purchase plan	80,207	—	4,448	—	—	4,448
Stock-based compensation expense	—	—	26,249	—	—	26,249
Other comprehensive gain - net of tax	—	—	—	110	—	110
Net loss	—	—	—	—	(35,902)	(35,902)
Balance--April 30, 2023	39,591,203	18	607,971	(382)	(1,416)	606,191
Issuance of shares through employee equity plans	279,568	—	553	—	—	553
Stock-based compensation expense	—	—	27,320	—	—	27,320
Other comprehensive loss - net of tax	—	—	—	(548)	—	(548)
Net loss	—	—	—	—	(31,198)	(31,198)
Balance--July 31, 2023	39,870,771	18	635,844	(930)	(32,614)	602,318
Issuance of shares through employee equity plans	286,684	—	334	—	—	334
Issuance of shares through employee stock purchase plan	71,812	—	3,486	—	—	3,486
Stock-based compensation expense	—	—	27,649	—	—	27,649
Other comprehensive loss - net of tax	—	—	—	(289)	—	(289)
Net loss	—	—	—	—	(41,710)	(41,710)
Balance--October 31, 2023	40,229,267	$ 18	$ 667,313	$ (1,219)	$ (74,324)	$ 591,788

	Outstanding Ordinary Shares		Additional Paid-in	Accumulated Other Comprehensive	Retained Earnings (Accumulated	
	Shares	Amount	Capital	Loss	Deficit)	Total
Balance--January 31, 2022	37,302,818	$ 17	$ 447,287	$ —	$ 99,872	$ 547,176
Issuance of shares through employee equity plans	736,516	—	8,589	—	—	8,589
Issuance of shares through employee stock purchase plan	43,545	—	3,250	—	—	3,250
Stock-based compensation expense	—	—	26,155	—	—	26,155
Net loss	—	—	—	—	(10,822)	(10,822)
Balance--April 30, 2022	38,082,879	17	485,281	—	89,050	574,348
Issuance of shares through employee equity plans	323,572	—	1,204	—	—	1,204
Stock-based compensation expense	—	—	26,211	—	—	26,211
Other comprehensive loss - net of tax	—	—	—	(2)	—	(2)
Net loss	—	—	—	—	(23,650)	(23,650)
Balance--July 31, 2022	38,406,451	17	512,696	(2)	65,400	578,111
Issuance of shares through employee equity plans	278,687	—	386	—	—	386
Issuance of shares through employee stock purchase plan	61,041	—	3,386	—	—	3,386
Stock-based compensation expense	—	—	27,365	—	—	27,365
Other comprehensive loss - net of tax	—	—	—	(1,041)	—	(1,041)
Net loss	—	—	—	—	(19,809)	(19,809)
Balance--October 31, 2022	38,746,179	$ 17	$ 543,833	$ (1,043)	$ 45,591	$ 588,398

See accompanying notes to condensed consolidated financial statements.

AMBARELLA, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited, in thousands)

	Nine Months Ended October 31,	
	2023	2022
Cash flows from operating activities:		
Net loss	$ (108,810)	$ (54,281)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation and amortization	18,402	14,426
Amortization (accretion) of premium (discount) on marketable debt securities, net	(957)	(281)
Stock-based compensation	82,796	82,051
Deferred income taxes	(3,676)	755
Other non-cash items, net	1,066	28
Changes in operating assets and liabilities:		
Accounts receivable	29,019	(4,249)
Inventories	9,703	(176)
Prepaid expenses and other current assets	1,539	80
Other non-current assets	105	841
Accounts payable	(8,553)	(2,044)
Accrued and other current liabilities	6,938	2,813
Income taxes payable	(1,721)	2,537
Deferred revenue	171	(378)
Operating lease liabilities	(2,940)	(3,254)
Other long-term liabilities	(26)	135
Net cash provided by operating activities	23,056	39,003
Cash flows from investing activities:		
Purchase of investments	(34,433)	(87,641)
Sales of investments	5,222	756
Maturities of investments	44,310	—
Purchase of tangible and intangible assets	(10,047)	(13,023)
Escrow claim associated with business acquisition	—	749
Net cash provided by (used in) investing activities	5,052	(99,159)
Cash flows from financing activities:		
Proceeds from exercise of stock options and employee stock purchase plan	6,912	6,834
Payment for intangible assets	(4,775)	(4,887)
Net cash provided by financing activities	2,137	1,947
Net increase (decrease) in cash, cash equivalents and restricted cash	30,245	(58,209)
Cash, cash equivalents and restricted cash at beginning of period	113,549	171,053
Cash, cash equivalents and restricted cash at end of period	$ 143,794	$ 112,844
Supplemental disclosure of cash flow information:		
Cash paid for income taxes	$ 5,499	$ 1,340
Supplemental disclosure of noncash investing activities:		
Unpaid liabilities related to tangible and intangible assets purchases	$ 6,868	$ 1,239

See accompanying notes to condensed consolidated financial statements.

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 leading developer of low-power semiconductor solutions offering high-definition (HD) and Ultra HD compression, image processing, and powerful deep neural network processing. 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, or SoC, designs fully integrate high-definition video processing, image processing, artificial intelligence (AI) computer vision algorithms, audio processing and system functions onto a single chip. These low power SoCs deliver exceptional video and image quality and can extract valuable data from high-resolution video and radar streams. The Company is currently addressing a broad range of human and computer vision applications, including video security, advanced driver assistance systems (ADAS), electronic mirrors, drive recorders, driver/cabin monitoring systems, autonomous driving, and industrial and robotic applications.

The Company sells its solutions to leading original equipment manufacturers, or OEMs, who include the Company's SoCs in their products, and original design manufacturers, or ODMs, who include the Company's SoCs in the products that they supply to 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 2023 fiscal year filed with the SEC on March 31, 2023 (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.

Significant Accounting Policies

There have been no material changes to the Company's significant accounting policies described in Note 1 - Organization and Summary of Significant Accounting Policies, of the Notes to Consolidated Financial Statements included in the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2023.

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 two major distributors, WT Microelectronics Co., Ltd., formerly Wintech Microelectronics Co., Ltd., or WT, which serves as its non-exclusive sales representative and fulfillment partner in Asia other than Japan, and Hakuto Co., Ltd., or Hakuto, a Japan distributor, and to one ODM, Chicony Electronics Co., Ltd., or Chicony, which manufactures devices incorporating the Company’s solutions on behalf of multiple end-customers. Termination of the relationships with these customers could result in a temporary or permanent loss of revenue. Furthermore, any credit issues from these customers could impair their abilities to make timely payment to the Company. See Note 14 for additional information regarding revenue and credit concentration with these customers.

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash, cash equivalents, marketable debt 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 losses on deposits of its cash. In order to limit the exposure of each investment, the cash equivalents and marketable debt securities consist primarily of money market funds, commercial paper, corporate bonds, asset-backed securities and U.S. government securities which management assesses to be highly liquid. The Company does not hold or issue financial instruments for trading purposes.

The Company performs ongoing credit evaluation of its customers and adjusts credit limits based upon payment history and customers’ credit worthiness. The Company regularly monitors collections and payments from its customers.

Restricted Cash

Amounts included in restricted cash represent those required to be set aside to secure certain transactions in a foreign entity. As of October 31, 2023 and January 31, 2023, restricted cash was immaterial, respectively. The following table presents cash, cash equivalents and restricted cash reported on the condensed consolidated balance sheets, and the totals are presented on the condensed consolidated statements of cash flows:

	As of			
	October 31, 2023	January 31, 2023	October 31, 2022	January 31, 2022
	(in thousands)			
Cash and cash equivalents	$ 143,787	$ 113,541	$ 112,837	$ 171,043
Restricted cash	7	8	7	10
Total as presented in the condensed consolidated statements of cash flows	$ 143,794	$ 113,549	$ 112,844	$ 171,053

Recent Accounting Pronouncements

None.

2. Financial Instruments and Fair Value

The Company invests a portion of its cash in money market funds and debt securities that are denominated in United States dollars. The debt security investment portfolio consists of commercial paper, corporate bonds, asset-backed securities and U.S. government securities. 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 October 31, 2023			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)			
Money market funds	$ 1,649	$ —	$ —	$ 1,649
Commercial paper	22,963	—	—	22,963
Corporate bonds	40,667	7	(642)	40,032
Asset-backed securities	17,269	—	(256)	17,013
U.S. government securities	22,491	—	(328)	22,163
Total cash equivalents and marketable debt securities	$ 105,039	$ 7	$ (1,226)	$ 103,820

	As of January 31, 2023			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)			
Money market funds	$ 7,872	$ —	$ —	$ 7,872
Commercial paper	18,333	—	—	18,333
Corporate bonds	23,472	50	(224)	23,298
Asset-backed securities	18,753	44	(149)	18,648
U.S. government securities	33,256	22	(235)	33,043
Total cash equivalents and marketable debt securities	$ 101,686	$ 116	$ (608)	$ 101,194

The following table provides the breakdown of unrealized losses as of October 31, 2023, aggregated by investment category and length of time that individual securities have been in a continuous loss position:

	As of October 31, 2023					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
	(in thousands)					
Corporate bonds	$ 29,661	$ (406)	$ 9,098	$ (236)	$ 38,759	$ (642)
Asset-backed securities	9,550	(87)	7,463	(169)	17,013	(256)
U.S. government securities	14,761	(185)	7,402	(143)	22,163	(328)
Total marketable debt securities at loss position	$ 53,972	$ (678)	$ 23,963	$ (548)	$ 77,935	$ (1,226)

As of January 31, 2023, there were no debt securities with unrealized losses for more than twelve months.

	As of	
	October 31, 2023	January 31, 2023
	(in thousands)	
Included in cash equivalents	$ 25,271	$ 7,872
Included in marketable debt securities	78,549	93,322
Total cash equivalents and marketable debt securities	$ 103,820	$ 101,194

The contractual maturities of the investments at October 31, 2023 and January 31, 2023 were as follows:

	As of	
	October 31, 2023	January 31, 2023
	(in thousands)	
Due within one year	$ 39,736	$ 48,016
Due in 1 - 5 years	64,084	52,414
Due in 5 - 7 years	—	764
Total cash equivalents and marketable debt securities	$ 103,820	$ 101,194

The unrealized gains and losses on the available-for-sale securities were primarily caused by fluctuations in market value and interest rates as a result of the economic environment. In accordance with ASU No. 2016-13, Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments, the Company estimates the expected losses at an individual security level whenever a security's fair value is below its amortized cost basis using the discounted cash flow method. The credit-related portion of the loss is recognized in other income, net, in the condensed consolidated statements of operations but is limited to the difference between the fair value and the amortized cost basis of the security, adjusted for accrued interest. The non-credit-related portion of the loss is recognized in accumulated other comprehensive loss in the condensed consolidated balance sheets. The credit-related losses were not material for the three and nine months ended October 31, 2023 and 2022, respectively.

Interest income, including amortization of premiums and accretion of discounts related to the investments, as well as realized gains and losses from sales of the investments are recorded in other income, net, in the condensed consolidated statements of operations. For the three months ended October 31, 2023 and 2022, interest income and realized gains and losses, net, were approximately $1.3 million and $0.7 million, respectively. For the nine months ended October 31, 2023 and 2022, interest income and realized gains and losses, net, were approximately $3.5 million and $0.8 million, 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 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 tables present the fair value of the financial instruments measured on a recurring basis as of October 31, 2023 and January 31, 2023, respectively:

	As of October 31, 2023			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Money market funds	$ 1,649	$ 1,649	$ —	$ —
Commercial paper	22,963	—	22,963	—
Corporate bonds	40,032	—	40,032	—
Asset-backed securities	17,013	—	17,013	—
U.S. government securities	22,163	—	22,163	—
Total cash equivalents and marketable debt securities	$ 103,820	$ 1,649	$ 102,171	$ —

	As of January 31, 2023			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Money market funds	$ 7,872	$ 7,872	$ —	$ —
Commercial paper	18,333	—	18,333	—
Corporate bonds	23,298	—	23,298	—
Asset-backed securities	18,648	—	18,648	—
U.S. government securities	33,043	—	33,043	—
Total cash equivalents and marketable debt securities	$ 101,194	$ 7,872	$ 93,322	$ —

3. Inventories

Inventories at October 31, 2023 and January 31, 2023 consisted of the following:

	As of October 31, 2023	As of January 31, 2023
	(in thousands)	
Work-in-progress	$ 19,016	$ 26,023
Finished goods	11,767	14,463
Total	$ 30,783	$ 40,486

4. Property and Equipment, Net

Depreciation expense was approximately $1.2 million and $1.0 million for the three months ended October 31, 2023 and 2022, respectively, and was approximately $3.5 million and $2.8 million for the nine months ended October 31, 2023 and 2022, respectively. Property and equipment at October 31, 2023 and January 31, 2023 consisted of the following:

	As of October 31, 2023	As of January 31, 2023
	(in thousands)	
Computer hardware and software	$ 22,869	$ 20,733
Tools and equipment	8,174	8,325
Furniture and fixtures	1,347	1,311
Leasehold improvements	3,414	3,295
Construction in progress	422	513
	36,226	34,177
Less: accumulated depreciation and amortization	(25,309)	(22,363)
Total property and equipment, net	$ 10,917	$ 11,814

5. Goodwill and Intangible Assets, Net

Goodwill represents the excess of the purchase price over the fair value of net tangible and identifiable intangible assets acquired in a business combination.

Intangible assets primarily consist of software licenses as well as developed technology, customer relationships and trade name that were acquired from business combinations.

The Company enters into certain software license agreements with third parties from time-to-time. The software licenses consist of noncancelable on-premise internal-use software and software with alternative use that is to be sold, leased or otherwise marketed as part of a product. The licenses have been capitalized as intangible assets, and the corresponding future payments have been recorded as liabilities at net present value. As of October 31, 2023, approximately $8.5 million was recorded in accrued and other current liabilities and $9.8 million was recorded in other long-term liabilities in the condensed consolidated balance sheets.

The components of intangible assets as of October 31, 2023 and January 31, 2023 were as follows:

	As of October 31, 2023			As of January 31, 2023		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
	(in thousands)					
Software licenses	$ 44,340	$ (12,584)	$ 31,756	$ 34,128	$ (6,319)	$ 27,809
Developed technology	21,200	(6,204)	14,996	21,200	(3,932)	17,268
Customer relationships	13,200	(2,933)	10,267	13,200	(1,833)	11,367
Trade name	2,500	(714)	1,786	2,500	(447)	2,053
Total intangible assets, net	$ 81,240	$ (22,435)	$ 58,805	$ 71,028	$ (12,531)	$ 58,497

During the nine months ended October 31, 2023, there were approximately $12.5 million of software licenses purchased and approximately $2.2 million of software licenses retired. The amortization expense associated with software licenses was approximately $3.1 million and $2.0 million for the three months ended October 31, 2023 and 2022, respectively, and was approximately $8.5 million and $5.2 million for the nine months ended October 31, 2023 and 2022, respectively. The amortization expense associated with acquisition-related intangible assets, including developed technology, customer relationships and trade name, was approximately $1.2 million and $1.2 million for the three months ended October 31, 2023 and 2022, respectively, and was approximately $3.6 million and $3.6 million for the nine months ended October 31, 2023 and 2022 respectively. As of October 31, 2023, the Company has not commenced amortization with respect to approximately $9.4 million of software licenses with alternative uses that are to be sold, leased or otherwise marketed as part of products. Once the associated products are available for general release to customers, the Company will commence amortization on a product-by-product basis over the remaining estimated economic life of the products. The expected future amortization expense related to these intangible assets as of October 31, 2023 is as follows:

Fiscal Year	As of October 31, 2023 (in thousands)
2024 (3 months remaining)	$ 4,188
2025	14,841
2026	12,479
2027	7,609
2028	6,081
Thereafter	13,607
Total future amortization expenses:	$ 58,805

Goodwill and indefinite-lived intangible assets are tested for impairment at least annually, in the fourth fiscal quarter, or more frequently if events or changes in circumstances indicate that they may be impaired. There were no goodwill and intangible asset impairments for the three and nine months ended October 31, 2023 and 2022, respectively.

6. Accrued and Other Current Liabilities

Accrued and other current liabilities at October 31, 2023 and January 31, 2023 consisted of the following:

	As of	
	October 31, 2023	January 31, 2023
	(in thousands)	
Accrued employee compensation	$ 14,851	$ 22,152
Accrued product development costs	27,819	19,433
Software license liabilities, current	8,466	7,059
Other accrued liabilities	6,855	8,011
Total accrued and other current liabilities	$ 57,991	$ 56,655

The timing of SoC development and invoicing from outside foundries usually results in the fluctuation of accrued product development costs. For the accrued employee compensation, approximately $5.6 million of annual bonus was paid in the first quarter of fiscal year 2024, of which $1.1 million was paid in cash and $4.5 million was settled with restricted stock units.

7. Leases

The Company enters into various operating leases for its worldwide facilities. The operating lease expense was approximately $1.0 million and $1.0 million for the three months ended October 31, 2023 and 2022, respectively, and was approximately $2.8 million and $2.8 million for the nine months ended October 31, 2023 and 2022, respectively. The Company's short-term leases and finance leases were not material as of October 31, 2023 and January 31, 2023, respectively.

Supplemental cash flow information related to the operating leases is as follows:

	Three Months Ended October 31, 2023	Nine Months Ended October 31, 2023
	(in thousands)	
Cash paid for operating leases included in operating cash flows	$ 947	$ 2,940
Supplemental non-cash information related to lease liabilities arising from obtaining right-of-use assets	51	171

As of October 31, 2023, the weighted average remaining lease term is 1.95 years, and the weighted average discount rate is 3.62 percent. Future minimum lease payments for the lease liabilities are as follows:

Fiscal Year	As of October 31, 2023 (in thousands)
2024 (3 months remaining)	$ 936
2025	3,353
2026	1,364
2027	289
2028	100
Thereafter	—
Total future annual minimum lease payments	6,042
Less: interest	(173)
Total lease liabilities	$ 5,869

8. Other Long-Term Liabilities

Other long-term liabilities at October 31, 2023 and January 31, 2023 consisted of the following:

	As of October 31, 2023	As of January 31, 2023
	(in thousands)	
Unrecognized tax benefits, including interest	$ 3,848	$ 3,770
Deferred tax liabilities, non-current	1,018	1,120
Software license liabilities, non-current	9,827	9,614
Other long-term liabilities	3	1,044
Total other long-term liabilities	$ 14,696	$ 15,548

9. Capital Stock

Preference shares

Since the Company’s initial public offering, or IPO, 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 October 31, 2023 and January 31, 2023, respectively.

Ordinary shares

As of October 31, 2023 and January 31, 2023, the following ordinary shares were reserved for future issuance under the Company’s equity plans and employee stock purchase plan:

	As of October 31, 2023	As of January 31, 2023
Shares reserved for options, restricted stock and restricted stock units under equity plans	4,783,996	5,822,819
Shares reserved for employee stock purchase plan	2,834,384	2,986,403

Stock repurchase program

On May 26, 2023, the Company's Board of Directors approved an extension of the Company's existing share repurchase program for an additional twelve months through June 30, 2024. There were no ordinary shares repurchased in the nine months ended October 31, 2023. As of October 31, 2023, there was approximately $49.0 million available for repurchases under the current repurchase program through June 30, 2024. 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.

10. Stock-based Compensation

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

	Three Months Ended October 31,		Nine Months Ended October 31,	
	2023	2022	2023	2022
	(in thousands)			
Stock-based compensation:				
Cost of revenue	$ 868	$ 360	$ 2,694	$ 1,071
Research and development	17,898	18,741	54,809	53,775
Selling, general and administrative	8,643	9,000	25,293	27,205
Total stock-based compensation	$ 27,409	$ 28,101	$ 82,796	$ 82,051

As of October 31, 2023, approximately $1.4 million of stock-based compensation expense was accrued in accrued and other current liabilities in the condensed consolidated balance sheets. Total unrecognized compensation cost related to unvested stock options at October 31, 2023 was $8.3 million and is expected to be recognized over a weighted-average period of 1.45 years. Total unrecognized compensation cost related to unvested restricted stock units at October 31, 2023 was approximately $188.0 million and is expected to be recognized over a weighted-average period of 2.56 years.

On October 17, 2023, the Company entered into a separation agreement and release with Mr. Brian White, the Company's Chief Financial Officer, associated with his retirement for his continued service through January 31, 2024 ("the separation date"). The agreement provides for acceleration of vesting of 24,559 shares of equity awards and compensation of $693,000 which is expected to be settled through the issuance of restricted stock units. As a result, the Company expects to recognize approximately $1.9 million of additional stock-based compensation expense through the separation date, of which $0.2 million has been recognized in the three months ended October 31, 2023.

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

	Three Months Ended October 31,		Nine Months Ended October 31,	
	2023	2022	2023	2022
Employee stock purchase plan awards:				
Volatility	54 %	72 %	56 %	81 %
Risk-free interest rate	5.49 %	3.78 %	5.11 %	2.32 %
Expected term (years)	0.5	0.5	0.5	0.5
Dividend yield	0 %	0 %	0 %	0 %

The following table summarizes stock option activities for the period indicated:

	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, 2023	484,791	$ 42.18				
Exercised	(65,188)	23.62		$ 3,418		
Forfeited	(926)	42.59				
Expired	(1,064)	74.33				
Outstanding at October 31, 2023	417,613	45.00			3.68	$ 2,584
Exercisable at October 31, 2023	358,750	$ 46.30			3.15	$ 1,790

The intrinsic value of options outstanding and 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 October 31, 2023 was $44.99, as reported by The Nasdaq Global Select 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 unit activities for the period indicated:

	Shares	Weighted-Average Grant-Date Fair Value
Unvested at January 31, 2023	2,573,359	$ 86.81
Granted	1,190,375	71.77
Vested	(969,060)	78.11
Forfeited	(128,201)	76.31
Unvested at October 31, 2023	2,666,473	$ 83.76

As of October 31, 2023, the aggregate intrinsic value of unvested restricted stock units was $120.0 million.

11. Net Loss Per Ordinary Share

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

	Three Months Ended October 31,		Nine Months Ended October 31,	
	2023	2022	2023	2022
	(in thousands, except share and per share data)			
Numerator:				
Net loss	$ (41,710)	$ (19,809)	$ (108,810)	$ (54,281)
Denominator:				
Weighted-average ordinary shares - basic	40,053,251	38,582,584	39,710,248	38,185,421
Weighted-average ordinary shares - diluted	40,053,251	38,582,584	39,710,248	38,185,421
Net loss per ordinary share:				
Basic	$ (1.04)	$ (0.51)	$ (2.74)	$ (1.42)
Diluted	$ (1.04)	$ (0.51)	$ (2.74)	$ (1.42)

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

	Three Months Ended October 31,		Nine Months Ended October 31,	
	2023	2022	2023	2022
Options to purchase ordinary shares	214,595	314,645	242,277	351,595
Restricted stock units	1,560,921	1,408,315	1,374,705	1,549,473
Employee stock purchase plan	17,373	10,231	11,649	10,899
	1,792,889	1,733,191	1,628,631	1,911,967

12. Income Taxes

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

	Three Months Ended October 31,		Nine Months Ended October 31,	
	2023	2022	2023	2022
	(in thousands)			
Loss before income taxes	$ (40,065)	$ (18,697)	$ (108,923)	$ (49,323)
Provision (benefit) for income taxes	1,645	1,112	(113)	4,958
Effective tax rate	(4.1)%	(6.0)%	0.1%	(10.1)%

The Company recorded an expense for income taxes of $1.6 million for the three months ended October 31, 2023 and a benefit for income taxes of $0.1 million for the nine months ended October 31, 2023, respectively. For the three and nine months ended October 31, 2022, the Company recorded an expense for income taxes of $1.1 million and $5.0 million, respectively. The increase in income tax expense for the three months ended October 31, 2023, as compared to the same period in the prior fiscal year, was primarily due to an increase in non-deductible stock-based compensation. The decrease in income tax expense for the nine months ended October 31, 2023 was primarily due to the tax benefit from the release of a $4.0 million valuation allowance on the deferred tax assets of Oculii Corp, or Oculii, partially offset by an increase in the proportion of profits generated in higher tax jurisdictions.

The Company periodically evaluates the realizability of its net deferred tax assets based on all available evidence, using a "more likely than not" standard. The realizability of the Company's net deferred tax assets is dependent on its ability to generate sufficient future taxable income during periods prior to the expiration of tax attributes to fully utilize these assets. During the second quarter of fiscal year 2024, based on all available positive and negative evidence, the Company determined it was appropriate to release the valuation allowance on Oculii's US federal deferred tax assets. The Company recognized a $3.6 million tax benefit in the first half of fiscal year 2024 as a result of the valuation allowance release. The Company recognized an additional $0.4 million tax benefit during the three months ended October 31, 2023.

The Company files federal and state income tax returns in the United States and in various foreign jurisdictions. The Company's fiscal years 2020 through 2023 are generally open and subject to potential examination by U.S. federal tax authorities. The Company's fiscal years 2019 through 2023 are generally open and subject to potential examination by state tax authorities. The Company's fiscal years 2016 to 2023 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 October 31, 2023, the gross amount of unrecognized tax benefits was approximately $22.6 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.

13. Commitments and Contingencies

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 upon agreement between the Company and third-party manufacturers. These manufacturing purchase commitments typically provide the Company with flexibility to cancel, reschedule or adjust requirements based upon business needs but the Company may incur certain costs depending on the production stage of the products. As of October 31, 2023 and January 31, 2023, total manufacturing purchase commitments were approximately $26.2 million and $43.6 million, respectively. The Company also reviews and assesses the need for any expected loss liabilities on quarterly basis for all products that it does not expect to sell for which it has committed purchases from suppliers and records the liabilities in accrued and other current liabilities in the condensed consolidated balance sheets. The liabilities for these purchase commitments were immaterial as of October 31, 2023 and were approximately $2.9 million as of January 31, 2023.

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 and product liability 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 as of October 31, 2023, and no liabilities have been recorded for these obligations in the condensed consolidated balance sheets as of October 31, 2023 and January 31, 2023, respectively.

Other Matters

From time to time, the Company is subject to commercial disputes, employment issues, intellectual property claims and litigation, in the ordinary course of its business. Although the ultimate disposition of asserted claims cannot be predicted with certainty, it is the Company's belief that the outcome of any such claims, either individually or on a combined basis, will not have a material adverse effect on its consolidated financial position. The results of any litigation cannot be predicted with certainty, and regardless of the outcome, litigation can have an adverse impact on the Company because of defense and settlement costs, diversion of management resources, and other factors. As of October 31, 2023 and January 31, 2023, there were no accruals for contingent liabilities related to such matters recorded in the condensed consolidated balance sheets.

14. Segment Reporting

The Company operates in one operating and reporting segment related to the development and sales of low-power, HD, Ultra HD video compression, image processing and computer vision solutions. 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. Certain prior quarter amounts of revenue by geographic region have been adjusted to reflect the appropriate bill-to location for the related revenue. These adjustments did not impact the total revenues in any of the periods presented.

	Three Months Ended October 31,		Nine Months Ended October 31,	
	2023	2022	2023	2022
	(in thousands)			
Taiwan	$ 27,179	$ 51,306	$ 91,295	$ 150,595
Asia Pacific	14,300	15,309	45,378	54,724
Europe	2,869	5,310	9,058	18,472
North America other than United States	5,032	8,870	24,407	21,930
United States	1,215	2,301	4,720	8,564
Total revenue	$ 50,595	$ 83,096	$ 174,858	$ 254,285

Substantially all of the Company’s property and equipment were located in the Asia Pacific region, United States and Europe. As of October 31, 2023, the net amount of these fixed assets located in these regions was approximately $5.7 million, $3.9 million and $1.3 million, respectively. As of January 31, 2023, the net amount of these fixed assets located in these regions was approximately $6.3 million, $4.0 million and $1.5 million, respectively.

Major Customers

For the three months ended October 31, 2023, the customers representing 10% or more of revenue were WT, Hakuto and Chicony, which accounted for approximately 53.7%, 12.0% and 11.7% of total revenue, respectively. For the nine months ended October 31, 2023, the customers representing 10% or more of revenue were WT and Chicony, which accounted for approximately 52.2% and 13.9% of total revenue, respectively. For the three and nine months ended October 31, 2022, the customers representing 10% or more of revenue were WT and Chicony, which accounted for approximately 61.6% and 10.7% of total revenue for the three months ended October 31, 2022, respectively, and accounted for approximately 59.1% and 11.6% of total revenue for the nine months ended October 31, 2022, respectively. Accounts receivable with WT, Chicony and Hakuto were approximately $8.1 million, $6.0 million and $1.1 million as of October 31, 2023, respectively.

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, 2023 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 2023 fiscal year filed with the Securities and Exchange Commission, or SEC, on March 31, 2023.

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," "should," "anticipate," "outlook," "if," "future," "intend," "plan," "estimate," "predict," "potential," "target," "seek," "project," "forecast," "continue" or "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 and our ability to compete in such markets, our product strategy, our ability to develop and introduce 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 repurchase programs, our expectations about taxes, operating expenses, and cost recognition, the availability of third-party components and economic and political 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; risks associated with the overall economy, including higher inflation and escalating trade tensions between the U.S. and China; 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 and preferences 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 or seek to operate; our expectations regarding computer vision; our ability to effectively generate 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," and 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 low-power system-on-a-chip, or SoC, semiconductors providing powerful artificial intelligence, or AI, processing, advanced image signal processing and high-resolution video compression. Since inception, we have primarily served human viewing applications with video and image processors for enterprise, public infrastructure and home applications, such as internet protocol, or IP, security cameras, sports cameras, wearables, aerial drones, and aftermarket automotive video recorders. Our recent development efforts have focused on creating advanced AI technology that enables edge devices to visually perceive the environment and make decisions based on the data collected from cameras and, most recently, other types of sensors. This category of AI technology is known as computer vision, or CV, and our CV SoCs integrate our state-of-the-art video processor technology together with our deep learning neural network processing technology, which we refer to as CVflow™. The CVflow-architecture supports a variety of CV algorithms, including object detection, classification and tracking, semantic and instance segmentation, image processing, stereo object detection, terrain mapping, and face recognition. CVflow can process other sensor modalities including lidar and radar, and allows customers to differentiate their products by porting their own, or third party, neural networks and/or classical CV algorithms to our CVflow-based SoCs. Our SoC designs fully integrate AI, computer vision functionality, high-definition, or HD, video processing, image processing, audio processing, and system functions onto a single chip, delivering exceptional video and image quality at high compression rates, differentiated functionality and low power consumption. These CV-based technologies are allowing us to address a broader range of markets and applications requiring AI video features, including IP security cameras, a variety of automotive cameras, consumer cameras, and industrial and robotic applications. We anticipate that our CV technology will also enable us to capture more content per electronic system and increase our average selling price.

Our development efforts are focused on SoCs that provide human viewing, computer vision and radar detection functionalities. As a result, we believe that our future revenue growth, if any, will significantly depend upon our ability to expand within camera markets with our AI and computer vision technology, particularly in the Internet of Things, or IoT, markets, as well as emerging markets such as AI-enabled security cameras, AI-based driving applications, including driver monitoring systems, advanced blind spot detection, object detection, and deep learning algorithms for HD mapping solutions, automotive advanced driver assistance systems, or ADAS, applications, and industrial and robotics markets. We expect our research and development expenditures to increase in comparison to prior periods as we devote additional resources to the development of innovative video and image processing solutions with increased functionality, such as AI and CV capabilities, and as we target new markets.

We sell our SoC solutions to leading original design manufacturers, or ODMs, and original equipment manufacturers, or OEMs, globally, and in the automotive market, we also sell to Tier-1 suppliers. We refer to ODMs and Tier-1 automotive suppliers as our customers and OEMs as our end customers, except as otherwise indicated or as the context otherwise requires.

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 and 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 or Tier-1 supplier on behalf of the OEM.

Volume production may begin within 9 to 18 months after a design win, but could be longer in certain markets, depending on the complexity of our customer's product and other factors upon which we may have little or no influence. In general, design cycles will be longer in the OEM automotive and industrial and robotics markets than in the IoT markets. Once our solutions have been incorporated into a customer's design, they are likely to be used for the life cycle of the customer's product. Conversely, a design loss to a competitor will likely preclude any opportunity for 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. An IoT product typically has a life cycle of 6 to 24 months. We anticipate that product life cycles will typically be longer than 24 months in the OEM automotive and industrial and robotics markets, as new product introductions occur less frequently in these markets.

Financial Highlights

- We recorded revenue of $50.6 million and $174.9 million for the three and nine months ended October 31, 2023, respectively. This represented decreases of 39.1% and 31.2%, respectively, as compared to the same periods in the prior fiscal year. The decreases in revenue were primarily attributable to lower product unit shipments as a result of customer inventory level reduction efforts, as well as lower nonrecurring engineering (NRE) project services. The decreased revenues from lower product shipments were partially offset by continued adoption of our CV-based solutions, which have higher average selling prices than non-CV solutions.
- We recorded operating losses of $42.0 million and $112.8 million for the three and nine months ended October 31, 2023, respectively, as compared to operating losses of $20.1 million and $50.8 million for the three and nine months ended October 31, 2022, respectively. The increased operating losses were primarily due to decreased revenue and gross profit, as well as increased operating expenses. The increased operating expenses primarily related to higher chip tape-out costs and engineering-related expenses associated with the progress, complexity and number of chips in development, as well as higher compensation expenses including severance charges associated with a workforce reduction.
- We generated cash flows from operating activities of $23.1 million for the nine months ended October 31, 2023, as compared to $39.0 million for the nine months ended October 31, 2022. The lower cash flows from operating activities were primarily attributable to higher net loss adjusted for certain non-cash items, and a decrease in liabilities associated with the timing of payments to our suppliers, partially offset by higher collections of accounts receivable associated with the timing of sales and decreased inventory purchases due to lower demand from customers.

Factors Affecting Our Performance

Impact of Global Supply Chain Conditions on Our Business. Uncertainty in customer demand as well as the worldwide economy, in general, have increased volatility in our sales and revenues, primarily owing to uncertainty around demand for semiconductor products. Some customers have indicated they are reducing their inventory levels, as some component lead times contract toward normal levels, which has reduced and may continue to reduce demand for our products. Uncertain market demand may be exacerbating these customers' inventory reduction efforts. Supply chain issues can impact our business as they relate to both our suppliers and our customers. With respect to our suppliers, we have in the past experienced supply constraints for certain chips from Samsung Electronics Corporation and we may in the future experience similar issues. With respect to our customers, to the extent customers face supply chain issues with other components needed to pair with our products in order to produce their end products, such customers may delay future orders of our products or hold inventory of our products for longer periods of time. We believe that our customers are making progress with their inventory reduction efforts, and we expect conditions to return to more stability in future periods.

Ability to Capitalize on AI and Computer Vision Trends. We expect that AI and computer vision functionality will become an increasingly important requirement in many of our current and future markets, including IoT, automotive, industrial and robotics markets. As a result, we believe that our ability to develop advanced AI computer vision technology, enable and support customer product development in emerging applications, such as ADAS, advanced blind spot detection, object detection, classification and tracking, people recognition, retail analytics, and machine learning, and gain customer acceptance of our technology platform and solutions will be critical to our future success. Moreover, achieving design wins, particularly for computer vision-centric applications in the IoT, automotive, industrial and robotics markets, is vital to our ability to generate revenue growth. As such, we closely monitor our design wins with our customers. However, a design win may not successfully materialize into revenue, and even if it does result in revenue, the amount generated by each design win can vary significantly.

Ability to Develop and Introduce New or Enhanced Solutions. We operate in a dynamic environment characterized by rapidly changing technologies and technological obsolescence. To compete successfully, we must design, develop, market and sell enhanced solutions with increased levels of performance and functionality that meet the expectations of our customers. As such, we continuously invest in our research and development projects, especially AI and computer vision technologies. However, failure to anticipate or timely develop new or enhanced solutions in response to technology shifts and trends could result in decreased revenue and our competitors achieving design wins we sought. Moreover, any reliability or quality problems with our solutions could harm our reputation, increase additional development and replacement costs, and prevent us from retaining existing customers and attracting new customers.

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 applications or, in the future, advanced driver assistance systems, 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 by us or our competitors.

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

Continued Concentration of Revenue by End Market. Historically, our revenue has been significantly concentrated in a small number of end markets and we developed technologies to provide solutions for new markets as they emerged. Since fiscal year 2018, the IoT markets and automotive markets have been our largest end markets and sales into these markets collectively generated the majority of our revenue. We believe, however, that continued expansion into new markets is required to facilitate revenue growth and customer diversification. We have recently introduced solutions to address emerging applications and markets, such as the incorporation of AI and computer vision functionalities for AI-enabled security cameras, AI-based driving applications and industrial and robotics markets. While we will continue to seek to expand our end market exposure, we anticipate that sales to a limited number of markets will continue to account for a significant percentage of our total revenue for the foreseeable future. Our concentration in a limited number of markets 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 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.

Sales Volume. A typical 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. Our ability to accurately forecast demand can be adversely affected by a number of factors, including the reputation of the end customer, market penetration, product capabilities, size of the end market that the product addresses, our end customers' ability to sell their products, 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. 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. We typically commence commercial shipments from 9 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, such as in the automotive market. An IoT product typically has a product life cycle of 6 to 24 months. We anticipate that product development and product life cycles will typically be longer than 24 months in the OEM automotive, Tier-1 automotive suppliers and robotics markets, as new product introductions typically occur less frequently in these markets.

Results of Operations

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

	Three Months Ended October 31,		Nine Months Ended October 31,	
	2023	2022	2023	2022
Revenue	$ 50,595	$ 83,096	$ 174,858	$ 254,285
Cost of revenue	20,612	31,418	68,894	94,996
Gross profit	29,983	51,678	105,964	159,289
Operating expenses:				
Research and development	53,702	52,864	163,060	151,892
Selling, general and administrative	18,246	18,944	55,750	58,213
Total operating expenses	71,948	71,808	218,810	210,105
Loss from operations	(41,965)	(20,130)	(112,846)	(50,816)
Other income, net	1,900	1,433	3,923	1,493
Loss before income taxes	(40,065)	(18,697)	(108,923)	(49,323)
Provision (benefit) for income taxes	1,645	1,112	(113)	4,958
Net loss	$ (41,710)	$ (19,809)	$ (108,810)	$ (54,281)

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

	Three Months Ended October 31,		Nine Months Ended October 31,	
	2023	2022	2023	2022
Revenue	100 %	100 %	100 %	100 %
Cost of revenue	41	38	39	37
Gross profit	59	62	61	63
Operating expenses:				
Research and development	106	64	93	60
Selling, general and administrative	36	23	32	23
Total operating expenses	142	87	125	83
Loss from operations	(83)	(25)	(64)	(20)
Other income, net	4	2	2	1
Loss before income taxes	(79)	(23)	(62)	(19)
Provision (benefit) for income taxes	3	1	—	2
Net loss	(82)%	(24)%	(62)%	(21)%

Revenue

We derive substantially all of our revenue from the sale of HD and Ultra HD video and image processing SoC solutions to IoT OEMs, IoT ODMs, automotive OEMs or Tier-1 automotive suppliers, either directly or through our distributors. In recent years, our SoC solutions have been primarily used in IoT camera markets, such as IP security, automotive video recorder, drone and wearable cameras. Although we expect these human viewing camera markets to continue to generate revenue for the foreseeable future, we have recently introduced new SoCs targeting emerging AI and computer vision applications in the IoT, automotive, industrial and robotics markets. For the nine months ended October 31, 2023, we derived a substantial portion of our revenue from sales made indirectly through one of our distributors, WT Microelectronics Co., Ltd., formerly Wintech Microelectronics Co., Ltd., or WT, which serves as our non-exclusive sales representative and fulfillment partner in Asia other than Japan, and to one ODM, Chicony Electronics Co., Ltd., or Chicony, which manufactures devices incorporating our solutions on behalf of multiple end-customers.

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 CV-based solutions generally have higher selling prices than our traditional video and image processing SoC solutions that do not enable CV functionality. 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 and timing 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 AI and computer vision 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, testing and manufacturing support operations, such as logistics, planning and quality assurance, as well as personnel costs (including stock-based compensation) related to project service agreements. Cost of revenue also includes indirect costs, such as inventory valuation reserves, adverse purchase commitment reserves, facility cost allocations, amortization of developed technology and software licenses, warranty and other general overhead costs.

We expect that our gross margin may fluctuate from period to period as a result of changes in customer mix, 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, and in future advanced automotive OEM applications, have had or are expected to 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.

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, costs of fabrication of mask sets for prototype products, the cost and depreciation of equipment, outside services as well as 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 and development of computer vision technology.

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 amortization of trade name and customer relationships, 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 business strategy of addressing new opportunities with our computer vision technology.

Other Income, Net

Other income, net, consists primarily of interest income and yields from our cash deposits and debt security investments, realized gains and losses from equity and debt security investments, subsidies granted by foreign governments, as well as gains and losses from foreign currency transactions and remeasurements.

Provision (Benefit) for Income Taxes

We are incorporated and domiciled in the Cayman Islands and also conduct business in several locations such as the United States, China, Taiwan, Hong Kong, Italy, South Korea, Germany, 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 Nine Months Ended October 31, 2023 and 2022

Revenue

	Three Months Ended October 31,		Change		Nine Months Ended October 31,		Change	
	2023	2022	Amount	%	2023	2022	Amount	%
	(dollars in thousands)							
Revenue	$ 50,595	$ 83,096	$ (32,501)	(39.1)%	$ 174,858	$ 254,285	$ (79,427)	(31.2)%

Revenue decreased for the three and nine months ended October 31, 2023, as compared to the same periods in the prior fiscal year, primarily due to lower product unit shipments as a result of customer inventory level reduction efforts, as well as lower NRE project services. The decreased revenues from lower product shipments were partially offset by continued adoption of our CV-based solutions, which have higher average selling prices than non-CV solutions.

Cost of Revenue and Gross Margin

	Three Months Ended October 31,		Change		Nine Months Ended October 31,		Change	
	2023	2022	Amount	%	2023	2022	Amount	%
	(dollars in thousands)							
Cost of revenue	$ 20,612	$ 31,418	$ (10,806)	(34.4)%	$ 68,894	$ 94,996	$ (26,102)	(27.5)%
Gross profit	29,983	51,678	(21,695)	(42.0)%	105,964	159,289	(53,325)	(33.5)%
Gross margin	59.3%	62.2%	—	(2.9)%	60.6%	62.6%	—	(2.0)%

Cost of revenue decreased for the three and nine months ended October 31, 2023, as compared to the same periods in the prior fiscal year, primarily due to lower product unit shipments associated with lower revenue and reversals of adverse purchase commitments recognized in prior periods as a result of favorable changes in contract terms and business alternatives. The decreases were partially offset by increased assembly costs and higher amortization of intangible assets. For the nine months ended October 31, 2023, the decrease in cost of revenue was also partially offset by higher inventory reserves on excess inventory due to lower demand outlook.

Gross margin decreased for the three and nine months ended October 31, 2023, as compared to the same periods in the prior fiscal year, primarily due to unfavorable product mix and lower NRE project services, as well as higher indirect costs associated with assembly cost and amortization of intangible assets, partially offset by reversals of adverse purchase commitments recognized in prior periods and sales of inventory that were previously reserved. For the nine months ended October 31, 2023, the gross margin was also negatively impacted by higher inventory reserves.

Research and Development

	Three Months Ended October 31,		Change		Nine Months Ended October 31,		Change	
	2023	2022	Amount	%	2023	2022	Amount	%
	(dollars in thousands)							
Research and development	$ 53,702	$ 52,864	$ 838	1.6 %	$ 163,060	$ 151,892	$ 11,168	7.4 %

Research and development expense increased for the three and nine months ended October 31, 2023, as compared to the same periods in the prior fiscal year, primarily due to approximately $1.2 million and $7.7 million, respectively, of additional SoC development cost and engineering-related expenses associated with the complexity, progress and number of chips in development. The increases were also attributable to approximately $0.7 million of severance charges associated with a workforce reduction in the third quarter of fiscal year 2024. Personnel costs, including stock-based compensation, employee benefits and incentive bonus, decreased by approximately $1.1 million for the three months ended October 31, 2023 as a result of lower headcount while increased by approximately $2.7 million for the nine months ended October 31, 2023.

Selling, General and Administrative

	Three Months Ended October 31,		Change		Nine Months Ended October 31,		Change	
	2023	2022	Amount	%	2023	2022	Amount	%
	(dollars in thousands)							
Selling, general and administrative	$ 18,246	$ 18,944	$ (698)	(3.7)%	$ 55,750	$ 58,213	$ (2,463)	(4.2)%

Selling, general and administrative expense decreased for the three and nine months ended October 31, 2023, as compared to the same periods in the prior fiscal year, primarily due to approximately $0.4 million and $1.0 million, respectively, of lower traveling, sales support and facility-related expenses. The decreases were also attributable to approximately $0.5 million lower personnel costs for the three months ended October 31, 2023 as a result of lower headcount and approximately $1.7 million of lower stock-based compensation for the nine months ended October 31, 2023 associated with an acceleration of certain equity awards in the first quarter of fiscal year 2023 that did not recur in fiscal year 2024. The decreases were partially offset by approximately $0.1 million of severance charges associated with a workforce reduction in the third quarter of fiscal year 2024.

Other Income, Net

	Three Months Ended October 31,		Change		Nine Months Ended October 31,		Change	
	2023	2022	Amount	%	2023	2022	Amount	%
	(dollars in thousands)							
Other income, net	$ 1,900	$ 1,433	$ 467	32.6 %	$ 3,923	$ 1,493	$ 2,430	162.8 %

The increases in other income, net, for the three and nine months ended October 31, 2023, as compared to the same periods in the prior fiscal year, were primarily due to $1.4 million and $4.5 million, respectively, of additional yields and interest income from our debt security investments and cash deposits. The increases were partially offset by an approximately $0.7 million of lower other income associated with lower subsidies from a foreign government and increased interest expenses associated with software license purchases, as well as $0.3 million of net losses from foreign currency remeasurements. For the nine months ended October 31, 2023, the increase was also negatively impacted by an approximately $1.2 million impairment recognized in the second quarter of fiscal year 2024 relating to an equity investment.

Provision (Benefit) for Income Taxes

	Three Months Ended October 31,		Change		Nine Months Ended October 31,		Change	
	2023	2022	Amount	%	2023	2022	Amount	%
	(dollars in thousands)							
Provision (benefit) for income taxes	$ 1,645	$ 1,112	$ 533	47.9 %	$ (113)	$ 4,958	$ (5,071)	(102.3)%
Effective tax rate	(4.1) %	(6.0) %	—	1.9 %	0.1 %	(10.1) %	—	10.2 %

The quarterly income taxes reflect an estimate of the corresponding fiscal year's annual effective tax rate and include, when applicable, adjustments from discrete tax items arising in the quarter.

The increase in income tax expense for the three months ended October 31, 2023, as compared to the same period in the prior fiscal year, was primarily due to an increase in non-deductible stock-based compensation. The decrease in income tax expense for the nine months ended October 31, 2023 was primarily due to the tax benefit from the release of a $4.0 million valuation allowance on the deferred tax assets of Oculii Corp, or Oculii, partially offset by an increase in the proportion of profits generated in higher tax jurisdictions.

Liquidity and Capital Resources

As of October 31, 2023 and January 31, 2023, we had cash, cash equivalents and marketable debt securities of approximately $222.3 million and $206.9 million, respectively. We invest in highly-liquid, short-term marketable debt securities and hold these investments as available-for-sale securities. As of October 31, 2023, these securities had a fair value of approximately $103.8 million with unrealized losses of approximately $1.2 million caused by market fluctuations. For the three and nine months ended October 31, 2023, there was approximately $1.3 million and $3.5 million, respectively, of interest and other income related to the debt security investments recorded in other income, net in the condensed consolidated statements of operations. The current inflationary environment in the United States and resulting high interest rates have not had a material impact on our investment portfolio and financial position.

Cash Flows

The following table summarizes our cash flows for the periods indicated:

	Nine Months Ended October 31,	
	2023	2022
	(in thousands)	
Net cash provided by operating activities	$ 23,056	$ 39,003
Net cash provided by (used in) investing activities	5,052	(99,159)
Net cash provided by financing activities	2,137	1,947
Net increase (decrease) in cash, cash equivalents and restricted cash	$ 30,245	$ (58,209)

Net Cash Provided by Operating Activities

Net cash provided by operating activities decreased for the nine months ended October 31, 2023, as compared to the same period in the prior fiscal year, primarily attributable to higher net loss adjusted for certain non-cash items, and a decrease in liabilities associated with the timing of payments to our suppliers, partially offset by higher collections of accounts receivable associated with the timing of sales and decreased inventory purchases due to lower demand from customers.

Net Cash Provided by (Used in) Investing Activities

Net cash used in investing activities decreased for the nine months ended October 31, 2023, as compared to the same period in the prior fiscal year, primarily attributable to approximately $53.2 million of less cash outflow for debt securities due to the timing of investment, $48.8 million of cash receipts from maturities and sales of our debt security investments, as well as $3.0 million less in payments for purchase of property, equipment and licenses, partially offset by a $0.7 million claim from an acquisition escrow account in fiscal year 2023 that did not recur in fiscal year 2024.

Net Cash Provided by Financing Activities

Net cash provided by financing activities increased for the nine months ended October 31, 2023, as compared to the same period in the prior fiscal year, primarily due to approximately $0.1 million less in payments for the purchase of licenses.

Stock Repurchase Program

No ordinary shares were repurchased during the three and nine months ended October 31, 2023. On May 26, 2023, our Board of Directors approved an extension of the existing share repurchase program for an additional twelve months through June 30, 2024. The repurchase program does not obligate us to acquire any particular amount of ordinary shares, and it may be suspended at any time at our discretion. As of October 31, 2023, there was approximately $49.0 million remaining available for repurchases under the repurchase program through June 30, 2024.

Operating and Capital Expenditure Requirements

As of October 31, 2023, we had cash, cash equivalents and marketable debt securities on hand of approximately $222.3 million. We believe that our existing cash balances will be sufficient to meet our anticipated cash requirements through at least the next 12 months. In the future, we expect our operating and capital expenditures to increase as we expand our business activities and implement and enhance our information technology platforms. As we expand our operations, we may require more working capital. If our available cash balances are insufficient to satisfy our future liquidity requirements, we may seek to sell equity or convertible debt securities or borrow funds commercially. The sale of equity and convertible debt securities may result in dilution to our shareholders, and those securities may have rights senior to those of our ordinary shares. If we raise additional funds through the issuance of convertible debt securities or borrowing funds commercially, we may become subject to covenants that would restrict our operations. We may require additional capital beyond our currently anticipated amounts. Additional capital may not be available to us on reasonable terms, or at all.

Our short-term and long-term capital requirements will depend on many factors, including the following:

- our ability to generate cash from operations;
- our ability to control our costs;
- the expansion of our research and development of new technologies and products to address new markets and applications;
- the emergence of competing or complementary technologies or products;
- global economic and political conditions, including macroeconomic conditions, high inflation and trade restrictions, the impact of COVID-19, as well as effects of the measures implemented to control the spread of the virus;
- the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights or participating in litigation-related activities; and
- our acquisition of complementary businesses, products and technologies.

Contractual Obligations, Commitments and Contingencies

Manufacturing Purchase Obligations

As of October 31, 2023, we had purchase obligations with our independent contract manufacturers of $26.2 million.

Intangible Assets

During the nine months ended October 31, 2023, we entered into several noncancelable on-premise internal-use software license agreements for product design. As of October 31, 2023, the total estimated future undiscounted cash payments for these licenses were approximately $7.5 million, of which $2.9 million will be paid within 12 months and the remaining $4.6 million will be paid within 12 to 36 months.

Except as described above, there were no other material changes in our contractual obligations, commitments and contingencies from those disclosed in our Annual Report on Form 10-K for the fiscal year ended January 31, 2023. Please see Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Contractual Obligations, Commitments and Contingencies” in our Annual Report on Form 10-K for the fiscal year ended January 31, 2023 for a description of our contractual obligations.

Off-Balance Sheet Arrangements

As of October 31, 2023, we did not engage in any off-balance sheet arrangements, including the use of structured finance, special purpose entities or variable interest entities.

Recent Authoritative Accounting Guidance

See Note 1 of Notes to Condensed Consolidated Financial Statements for information regarding recently issued accounting pronouncements.

Critical Accounting Policies and Significant Management Estimates

There have been no material changes to our critical accounting policies and estimates as compared to the critical accounting policies and estimates described in our Annual Report on Form 10-K for the 2023 fiscal year filed with the SEC on March 31, 2023.

ITEM 3. Quantitative and Qualitative Disclosures about Market Risk

As of October 31, 2023 and January 31, 2023, we had cash, cash equivalents and marketable debt securities totaling $222.3 million and $206.9 million, respectively. Our cash is deposited in checking accounts with reputable financial institutions in excess of the Federal Deposit Insurance Corporation, or FDIC, insurance coverage limit of $250,000 per depositor, per FDIC-insured bank, per ownership category. The cash equivalents and marketable debt securities consist primarily of investments in money market funds, commercial paper, corporate bonds, asset-backed securities and U.S. government securities. Our cash is held primarily for working capital purposes. We do not enter into investments for trading or speculative purposes.

Interest Rate Fluctuation Risk

The primary objective of our investment activities is to preserve capital, provide liquidity and maximize income without significantly increasing risk. Some of the securities we invest in are subject to market risk. This means that a change in prevailing interest rates may have an impact on the interest income and the fair market value of those securities. To minimize this risk, we maintain our portfolio in a variety of debt securities with high liquidity and low credit risk. The current inflationary environment in the United States and resulting high interest rates have generated high interest income and have not had a material negative impact on our investment portfolio and financial position to date. We do not enter into investments for trading or speculative purposes. As of October 31, 2023, a hypothetical 10% change in interest rates would not have a material impact on our interest income or investment fair value. The liquidity risk and the risk associated with fluctuating interest rates are limited to our investment portfolio.

Foreign Currency Risk

To date, all of our product sales and inventory purchases have been denominated in U.S. dollars. We therefore have not had any foreign currency risk associated with these two activities. The functional currency of all of our entities is the U.S. dollar. Our operations outside of the United States incur operating expenses and hold assets and liabilities denominated in foreign currencies, principally the New Taiwan Dollar, the Chinese Yuan Renminbi and the Eurozone Euro. Our results of operations and cash flows are subject to fluctuations due to changes in foreign currency exchange rates. As we grow our operations, our exposure to foreign currency risk could become more significant. To date, we have not entered into any foreign currency exchange contracts and currently do not expect to enter into foreign currency exchange contracts for trading or speculative purposes.

ITEM 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Principal Executive Officer and Principal Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Quarterly Report on Form 10-Q. The term "disclosure controls and procedures" (as defined in Rules 13a- 15(e) and 15d- 15(e)) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Based upon such evaluation, our Principal Executive Officer and Principal Financial Officer have concluded that, as of October 31, 2023, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the Company's fiscal quarter ended October 31, 2023 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Inherent Limitations of Disclosure Controls and Internal Control over Financial Reporting

Because of their inherent limitations, our disclosure controls and procedures and our internal control over financial reporting may not prevent material errors or fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. The effectiveness of our disclosure controls and procedures and our internal control over financial reporting is subject to risks, including that the controls may become inadequate because of changes in conditions or that the degree of compliance with our policies or procedures may deteriorate.

PART II – OTHER INFORMATION

ITEM 1. Legal Proceedings

We are not engaged in any material legal proceedings at this time. Refer to Note 13, Commitments and Contingencies, to the condensed consolidated financial statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

ITEM 1A. Risk Factors

Certain factors may have a material adverse effect on our business, financial condition and results of operations. You should consider carefully the risks and uncertainties described below, in addition to other information contained in this Quarterly Report on Form 10-Q, including our unaudited condensed consolidated financial statements and related notes. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that adversely affect our business. If any of the following risks actually occurs, our business, financial condition, results of operations, and future prospects could be materially and adversely affected. In that event, the trading price of our ordinary shares could decline, and you could lose part or all of your investment.

Summary of Risk Factors

Our business and our industry is subject to numerous risks and uncertainties, including those described in the following Risk Factors. These risks include, but are not limited to, the following:

- Risks related to global semiconductor supply shortages and weak economic conditions could adversely affect our business, financial condition, and results of operations.
- If our customers do not design our solutions into their product offerings, or if our customers' product offerings are not commercially successful, our business would suffer.

- If we fail to penetrate new markets, including the automotive original equipment manufacturer (OEM) and advanced driver assistance systems (ADAS) market, our revenue and financial condition could be harmed.
- If we fail to develop and introduce new or enhanced solutions that meet market requirements on a timely basis, our ability to attract and retain customers could be impaired and our competitive position could be harmed.
- Shortages in, or increased costs of, wafers and materials could adversely impact our gross margins and lead to reduced revenues.
- Our primary inventory warehouse is located in Hong Kong and may be affected by political, social and economic conditions in Hong Kong.
- Our target markets may not grow or develop as we currently expect and are subject to market risks, any of which could harm our business, revenue and operating results.
- Our customers may cancel their orders, change production quantities or delay production. If we fail to accurately forecast demand for our solutions, revenue shortfalls or excess, obsolete or insufficient inventory could result.
- We are subject to governmental export and import controls that could subject us to liability or impair our ability to compete in international markets, including China. In addition, our ability to sell our products to certain China customers has been restricted.
- Global economic and political conditions, including high inflation and trade restrictions, recessionary concerns and trade restrictions, may impact our business and financial condition in ways that we currently cannot predict.
- We depend on a limited number of customers and end customers for a significant portion of our revenue. If we fail to retain or expand our customer relationships, our revenue could decline.
- Achieving design wins is subject to lengthy competitive selection processes that require us to incur significant costs. Even if we begin a product design, a customer may decide to cancel or change its product plans, resulting in no revenue from such expenditures.
- Some of our customers may require our products and our third-party contractors to undergo a qualification process that does not assure product sales. If we are unsuccessful or delayed in qualifying these products or third-party contractors with a customer, our business and operating results could suffer.
- We expect competition to increase in the future, which could have an adverse effect on our revenue and market share.
- A breach of our security systems may have a material adverse effect on our business.
- While we intend to continue to invest in research and development, we may be unable to make the substantial investments that are required to remain competitive in our business.
- We rely on highly skilled personnel and, if we are unable to hire, retain or motivate key personnel, we may not be able to grow effectively. Similarly, the loss of any of our key personnel could seriously harm our business.
- The average selling prices of semiconductor solutions in our target markets have typically decreased over time and will likely do so in the future, which could harm our revenue and gross margins.
- If we are unable to manage any future growth, we may not be able to execute our business plan and our operating results could suffer.
- Deterioration of the financial conditions of our customers could adversely affect our operating results.
- We are subject to the cyclical nature of the semiconductor industry. We may have difficulty accurately predicting our future revenue and appropriately budgeting our expenses.
- The complexity of our solutions could result in unforeseen delays or expenses from undetected defects, errors or bugs in hardware or software which could reduce the market adoption of our new solutions, damage our reputation with current or prospective customers and adversely affect our operating costs.
- We may experience difficulties transitioning to new wafer fabrication process technologies or achieving higher levels of design integration, which may result in reduced manufacturing yields, delays in product deliveries and increased costs.
- Rapidly changing industry standards could make our video and image processing solutions obsolete, which would cause our operating results to suffer.

- Some of our operations and a significant portion of our customers and our subcontractors are located outside of the United States, which subjects us to additional risks, including increased complexity and costs of managing international operations and geopolitical instability.
- Any acquisitions we may make in the future could disrupt our business, cause dilution to our shareholders, reduce our financial resources and harm our business.
- We face tax risks, including relating to the complexity of calculating our tax provision, changes in effective tax rates, or unfavorable tax law changes.
- Fluctuations in our operating results on a quarterly and annual basis could cause the market price of our ordinary shares to decline.
- If we do not generate revenue growth, we may not be able to execute our business plan and our operating results could suffer.
- We do not have long-term supply contracts with our third-party manufacturing vendors, and they may not allocate sufficient capacity to us at reasonable prices to meet future demands for our solutions.
- Our customers incorporate components supplied by multiple third parties, and a supply shortage or delay in delivery of these components could delay orders for our solutions by our customers.
- We outsource our wafer fabrication, assembly and testing operations to third parties, and if these parties fail to produce and deliver our products according to requested demands in specification, quantity, cost and time, our reputation, customer relationships and operating results could suffer.
- A substantial portion of our revenue is processed through a single distributor and the loss of this distributor may cause disruptions in our shipments, which may adversely affect our operations and financial condition.
- We are subject to risks associated with our distributors' product inventories.
- We rely on various third-party vendors, service providers and contractors in the operation of our business.
- We are subject to warranty and product liability claims and to product recalls.
- We are subject to numerous regulatory compliance requirements, which are costly to comply with, and our failure to comply with these requirements could harm our business and operating results.
- Third parties’ assertions of infringement of their intellectual property rights could result in our having to incur significant costs and cause our operating results to suffer. Any potential dispute involving our intellectual property could affect our customers, which could trigger our indemnification obligations to them and result in substantial expense to us.
- The COVID-19 pandemic has adversely affected our business and could materially and adversely affect our business in the future.

Risks Related to Our Business and Our Industry

Impacts of the global semiconductor supply shortage and uncertain macroeconomic conditions could adversely affect our business, financial condition, and results of operations.

During the COVID-19 global pandemic, various restrictions were put in place causing a temporary decline in demand for certain items. As restrictions began easing across the world, an increase in demand for products containing semiconductor chips exacerbated bottlenecks in the supply chain, resulting in a global semiconductor supply shortage impacting our industry, which resulted in a lengthening of the manufacturing lead time for our products and impacting the normal forecasting and ordering patterns of our customers. While we work closely with our suppliers and customers to minimize the potential adverse impacts of these considerations of supply shortage and longer lead times, we have experienced increased volatility in our business. In recent periods, some customers have indicated they are reducing their inventory levels as lead times for semiconductor chips and other components used by customers begin to shrink, which has reduced, and may continue to reduce, such customers' demand for our products and harm our financial results. Weak economic conditions or uncertain demand for their products may exacerbate such customers' inventory reduction efforts, further impacting such customers' demand for our products. To the extent customers face supply chain issues with respect to other components needed to pair with our products in order to produce their end products, such customers may delay future orders of our products or hold inventory of our products for longer periods of time. With respect to our suppliers, we have in the past experienced supply constraints for certain chips from Samsung and we may in the future experience similar issues. Impacts of the global supply shortages and uncertainty in customer demand and the worldwide economy in general may be exacerbated by the impacts of high inflation and global banking concerns, and we may experience increased volatility in sales and revenues as a result.

If our customers do not design our solutions into their product offerings, or if our customers' product offerings are not commercially successful, our business would suffer.

We sell our video and image processing system-on-a-chip, or SoC, solutions to original equipment manufacturers, or OEMs, who include our SoCs in their products, and to original design manufacturers, or ODMs, who include our SoCs in the products that they supply to OEMs. We generally refer to ODMs as our customers and OEMs as our end customers, except as otherwise indicated or as the context otherwise requires. Our SoCs are generally incorporated into our customers' products at the design stage, which is referred to as a design win. As a result, we rely on OEMs to design our solutions into the products that they design and sell. Without these design wins, our business would be significantly harmed. We often incur significant expenditures developing a new SoC solution without any assurance that any OEM will select our solution for design into its own product. Once an OEM designs a competitor's device into its product, it becomes significantly more difficult for us to sell our SoC solutions to that OEM because changing suppliers involves significant cost, time, effort and risk for the OEM. We anticipate that it will take longer and require more resources and greater expenditures to achieve design wins, and likely take longer to generate revenue from such design wins, in the new markets we are targeting, such as the OEM automotive and robotics markets, than our legacy camera markets. We also face certain competitive disadvantages in these markets relative to larger competitors that have significantly more resources and a longer history working with OEMs and ODMs in these markets. In addition, trade tensions between the United States and China and potential new export restrictions may make it more difficult to secure future design wins with China customers.

Even if an OEM designs one of our SoC solutions into its product, we cannot be assured that the OEM's product will be commercially successful over time or at all. For example, in the past we have secured design wins for customer products that were never commercially released by our customer or did not sell in volumes initially forecast by the customer, as a result of factors beyond our control. If products incorporating our SoC solutions are not commercially successful or experience rapid decline, our revenue and business will suffer. Similarly, if an OEM designs one of our SoC solutions into its product, we are not assured that we will receive or continue to receive new design wins from that OEM, which could negatively impact our business.

If we fail to penetrate new markets, including the automotive OEM and ADAS market, our revenue and financial condition could be harmed.

We believe that our future revenue growth, if any, significantly depends on our ability to expand within the Internet of Things, or IoT, camera markets with our new artificial intelligence, or AI, computer vision SoC solutions, and the OEM automotive, robotics and industrial markets. Our AI computer vision SoC solutions have functionality that may also be applicable to other developing markets, such as processing of large language models (LLMs). Each of these markets presents distinct and substantial risks and, in many cases, requires us to develop new functionality or software to address the particular requirements of that market. If any of these markets do not develop as we currently anticipate, the technical requirements of these markets evolve in ways we do not anticipate, the development of such markets is delayed or impacted by factors outside of our control, or if we are unable to penetrate them successfully with our solutions, our revenue could decline and our financial condition would be negatively impacted. Some of these markets are primarily served by only a few large, multinational OEMs with substantial negotiating power relative to us and, in some instances, with internal solutions that are competitive to our products. Meeting the technical requirements and securing design wins with any of these companies requires a substantial investment of our time and resources and we cannot assure you that we will secure design wins from these or other companies or that we will achieve meaningful revenue from the sales of our solutions into these markets. In addition, we face competition from larger competitors with greater resources and more history in these markets, which may put us at a competitive disadvantage to these larger competitors. If we fail to penetrate these or other new markets we are targeting, our financial condition would likely suffer. Moreover, if we are successful in achieving design wins in these new markets, it will likely take longer to generate revenue from such design wins than in our traditional markets.

If we fail to develop and introduce new or enhanced solutions that meet market requirements on a timely basis, our ability to attract and retain customers could be impaired and our competitive position could be harmed.

We operate in a dynamic environment characterized by rapidly changing technologies. To compete successfully, we must design, develop, market and sell enhanced solutions that provide increasingly higher levels of performance and functionality and that meet the technical and cost expectations of our customers. Our existing or future solutions could be rendered obsolete by the introduction of new products by our competitors; convergence of other markets with or into the camera market; the market adoption of products based on new or alternative technologies; the emergence of new industry standards applicable to our solutions; or the requirement of additional functionality included in video processors. In addition, some of the markets for our solutions are characterized by frequent introduction of next-generation and new products, short product life cycles, increasing demand for added functionality and significant price competition. As we develop and introduce new solutions, we also face the risk that customers may not value or be willing to bear the cost of incorporating these newer solutions into their products, particularly if they believe their customers are satisfied with current solutions. Regardless of the improved features or superior performance of the newer solutions, customers may be unwilling to adopt our new solutions due to design or pricing constraints. If we or our customers are unable to manage product transitions in a timely and cost-effective manner, our business and results of operations would suffer.

Our failure to anticipate or timely develop new or enhanced solutions in response to technological shifts could result in decreased revenue and our competitors achieving design wins that we sought. In particular, we may experience difficulties with product design, development of new software, manufacturing, marketing or qualification that could delay or prevent our development, introduction or marketing of new or enhanced solutions. In addition, for some markets, such as the automotive OEM market, we need to establish and maintain relationships with third-party suppliers or software providers in order to effectively market our solutions to end-customers. Failure to establish these relationships could harm our ability to achieve design wins. Delays in product development could impair our relationships with our customers and negatively impact sales of our solutions under development. If we fail to introduce new or enhanced solutions that meet the needs of our customers or penetrate new markets in a timely fashion, we will lose market share, and our operating results will be adversely affected.

Shortages in, or increased costs of, wafers and materials could adversely impact our gross margins and lead to reduced revenues.

Worldwide manufacturing capacity for silicon wafers is relatively inelastic. If the demand for silicon wafers or assembly material exceeds market supply, our supply of silicon wafers or assembly material could quickly become limited or prohibitively expensive. Silicon wafers constitute a material portion of our product cost and if we are unable to purchase wafers at favorable prices, our results of operations and financial condition will be adversely affected. The semiconductor industry has recently experienced significant shortages of manufacturing capacity, which resulted in a lengthening of the manufacturing lead time for our products and which has at times harmed our revenue. While this capacity shortage has improved, lead times for our products remain longer than normal, which could negatively impact our ability to meet our customer’s demand for our products and have an adverse impact on our revenue, results of operations and customer relationships. We have also experienced, during times of supply chain capacity shortages, customers placing orders for our products that exceed their actual demand, which may lead to us manufacturing a surplus of products and could have a negative impact on our results of operations and cash reserves and lead to our customers having excess inventory. In recent periods, some customers have indicated they are reducing their inventory levels as lead times for semiconductor chips and other components used by customers shrink, which may reduce such customers’ demand for our products in future periods and harm our financial results.

Our primary inventory warehouse is located in Hong Kong and may be affected by continued political, social, health and economic conditions in Hong Kong.

We operate a warehouse facility in Hong Kong through which the substantial majority of our finished SoCs are shipped to customers or our logistic partners. Hong Kong has experienced, and continues to experience, political unrest and social strife in addition to the impact of the COVID-19 pandemic. The Bureau of Industry and Security, or BIS, has imposed restrictions on exports and reexports of U.S.-controlled items to Hong Kong by imposing on Hong Kong the same stringent licensing requirements applicable to China. It is possible that the U.S. government may take future measures to impose stricter export controls or duties on shipments made to Hong Kong, which could harm our business, increase the cost of conducting our operations in Hong Kong or result in retaliatory actions against U.S. interests. While we have not been materially impacted by these problems to date, continued deterioration in political, social or economic conditions in Hong Kong or future unforeseen problems, including health pandemics, could affect deliveries of our SoCs to our customers or logistic partners, possibly resulting in business interruptions, substantially delayed or lost sales, loss of inventory, or increased expenses that cannot be passed on to customers, any of which could ultimately have a material adverse effect on our business and financial results. In addition, we could be forced to relocate our warehouse operations, either temporarily or permanently, to another potentially costlier location (or a location resulting in higher tax costs) or find alternative potentially costlier methods of shipping our finished SoCs to customers and logistic partners.

Our target markets may not grow or develop as we currently expect and are subject to market risks, any of which could harm our business, revenue and operating results.

We are focusing our development resources on addressing computer vision applications, primarily in the automotive and IoT markets. The application of computer vision functionality in these markets is relatively new, and we may be unable to predict the timing or development of these markets with accuracy. For example, a slower than expected adoption rate for computer vision technology in automotive or IP security camera applications could slow the demand for our new solutions. If our key target markets do not grow, grow slower, or do not develop in ways that we currently expect, demand for our SoCs may not materialize as expected, and our business and operating results could suffer.

The COVID-19 pandemic has adversely affected our business and could materially and adversely affect our business in the future.

Our business has been, and may in the future be, adversely impacted by the effects of the COVID-19 pandemic. In addition to global macroeconomic effects, the COVID-19 pandemic and related adverse public health developments caused, and may again cause, disruption to our operations. We have had to impose remote or work from home conditions at different times for varying periods of time in most of our offices. Approximately 340 of our employees are located in Taiwan and approximately 225 employees are located in China, and lengthy closures of these offices could significantly disrupt our software engineering and customer support operations. In addition, we and our suppliers, third-party distributors and customers have been, and may in the future again be, disrupted by quarantines and restrictions on certain employees' ability to perform their jobs, office closures or restrictions, disruptions to shipping infrastructure, or other travel or health-related restrictions. Moreover, if there is a significant COVID-19 outbreak that impacts Samsung's ability to manufacture our SoCs or our third-party contractors' ability to assemble, test and ship our products, we could experience delays or reductions in our ability to ship products to our customers.

Since fiscal year 2023, we have experienced, and we expect to continue to experience, a significant disruption of orders by customers. During the first half of fiscal year 2023, we experienced a significant increase in the manufacturing lead time for our products, including supply constraints for certain chips from Samsung Electronics Corporation (Samsung), which disrupted the normal ordering patterns of our customers and harmed our revenue, but which may have in turn led to increased customer demand for our products in order to increase their inventory levels. In recent periods, some customers have sought to reduce their inventory levels as lead times for semiconductor chips and other components used by customers shrink, which has reduced, and may continue to reduce, such customers' demand for our products in future periods. Weak or uncertain economic conditions, including high inflation or reduced market demand, may exacerbate these risks. In addition, decreased consumer demand from the impact of pandemic lockdowns in China contributed to, and could in the future contribute to, decreased revenue in consumer-related markets.

Our customers may cancel their orders, change production quantities or delay production. If we fail to accurately forecast demand for our solutions, revenue shortfalls or excess, obsolete or insufficient inventory could result.

Our customers typically do not provide us with firm, long-term purchase commitments. A substantial majority of our sales are made on a purchase order basis, which permits our customers to cancel, change or delay their product purchase commitments with little or no notice to us and often without penalty to them. Because production lead times often exceed the amount of time required by our customers to fill their orders, we often must build SoCs in advance of receiving orders from customers, relying on an imperfect demand forecast to project volumes and product mix. As a result of a number of factors, including longer manufacturing times for our products and increased demand from customers during fiscal year 2023, we increased our inventory levels. In recent periods, some customers have indicated they are reducing their inventory levels of our products, which may reduce such customers' demand for our products in future quarters.

Our SoCs are incorporated into products manufactured by or for our end customers, and as a result, demand for our solutions is influenced by the demand for our customers' products. Our ability to accurately forecast demand can be adversely affected by a number of factors, including inaccurate forecasting by our customers, changes in market conditions including reductions in market activity due to the COVID-19 pandemic, adverse changes in our product order mix and fluctuating demand for our customers' products. Even after an order is received, our customers may cancel these orders, request a decrease in production quantities or request a delay in the delivery of our solutions. Any such cancellation, decrease or delay subjects us to a number of risks, most notably that our projected sales will not materialize on schedule or at all, leading to unanticipated revenue shortfalls and excess or obsolete inventory that we may be unable to sell to other customers.

Alternatively, if we are unable to project customer requirements accurately, we may not build enough SoCs, which could lead to delays in product shipments and lost sales opportunities in the near term, as well as force our customers to identify alternative sources, which could affect our ongoing relationships with these customers. In addition, the rapid pace of innovation in our industry could render portions of our inventory obsolete. Excess or obsolete inventory levels could result in unexpected expenses or increases in our reserves that could adversely affect our business, operating results and financial condition.

We depend on a limited number of customers and end customers for a significant portion of our revenue. If we fail to retain or expand our customer relationships, our revenue could decline.

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 anticipate that this customer concentration will continue for the foreseeable future. In fiscal year 2023, the customers representing 10% or more of our revenue were WT Microelectronics Co., Ltd., or WT, which serves as our non-exclusive sales representative and fulfillment partner in Asia other than Japan, and Chicony Electronics Co., Ltd., or Chicony, one ODM which manufactures devices incorporating our solutions on behalf of multiple end-customers, accounted for approximately 57% and 12% of total revenue, respectively. For the nine months ended October 31, 2023, the customers representing 10% or more of revenue were WT and Chicony, which accounts for approximately 52% and 14% of total revenue, respectively. In addition, we believe that revenue from our top 10 end customers, either directly or through a distributor or an ODM, accounted for approximately 47% of our total revenue in fiscal year 2023 and accounted for approximately 54% of our total revenue for the nine months ended October 31, 2023. We believe that our operating results for the foreseeable future will continue to depend on sales to a relatively small number of customers and end customers. In the future, these customers may decide not to purchase our SoC solutions at all, may purchase fewer solutions than they did in the past or may alter their purchasing patterns. As substantially all of our sales to date have been made on a purchase order basis, these customers may cancel, change or delay product purchase commitments with little or no notice to us and often without penalty and may make our revenue volatile from period to period, which has happened in the past. The loss of a significant customer, or substantial reduction in purchases by a significant customer, could happen again at any time and without notice, and such loss would likely harm our financial condition and results of operations. Moreover, because several of our largest OEM customers have a dominant position in their markets, a loss of a significant customer may not be easily replaced.

Achieving design wins is subject to lengthy competitive selection processes that require us to incur significant costs. Even if we begin a product design, a customer may decide to cancel or change its product plans, resulting in no revenue from such expenditures.

We are focused on selling our SoC solutions to ODMs and OEMs for incorporation into their products at the design stage. These efforts to achieve design wins typically are lengthy, especially in emerging markets, such as the OEM automotive market, and in any case can require us to both incur design and development costs and dedicate scarce engineering resources in pursuit of a single customer opportunity. We may not prevail in the competitive selection process, and even when we do achieve a design win, we may never generate any revenue despite incurring development expenditures. In addition, even if an OEM designs one of our SoC solutions into one of its products, we cannot be assured that we will secure new design wins from that OEM for future products. Further, even after securing a design win, we have experienced and may again experience delays in generating revenue from our solutions as a result of the lengthy product development cycle typically required, if we generate any revenue at all as a result of any such design win.

Our customers generally take a considerable amount of time to evaluate our solutions. The typical time from early engagement by our sales force to actual product introduction runs from nine to 12 months for IoT markets and potentially significantly longer in the OEM automotive, robotics and industrial markets. The delays inherent in these lengthy sales cycles increase the risk that a customer will decide to cancel, curtail, reduce or delay its product plans, causing us to lose anticipated sales. In addition, any delay or cancellation of a customer's plans could harm our financial results, as we may have incurred significant expense and generated no revenue. If we were unable to generate revenue after incurring substantial expenses to develop any of our solutions, our business would suffer.

Some of our customers may require our products and our third-party contractors to undergo a qualification process that does not assure product sales. If we are unsuccessful or delayed in qualifying these products or third-party contractors with a customer, our business and operating results could suffer.

Prior to purchasing our products, some of our customers, particularly in the automotive market, may require that our products and our third-party contractors undergo extensive qualification processes, which involve testing of our products in the customers' systems, as well as testing for reliability of our products and our supply chain. This qualification process may take several months and qualification of a product by a customer does not assure any sales of the product to that customer. Even after successful qualification and sales of a product to a customer, a subsequent revision in our third party contractors' manufacturing process or our selection of a new supplier may require a new qualification process, which may result in delays and in our holding excess or obsolete inventory. After our products are qualified, it can take several months or more before the customer commences volume production of components or systems that incorporate our products. Despite these uncertainties, we devote substantial resources, including design, engineering, sales, marketing and management efforts, to qualify our products with customers in anticipation of sales. If we are unsuccessful or delayed in qualifying these products with a customer, sales of the products to the customer may be precluded or delayed, which may impede our growth and cause our business to suffer.

We expect competition to increase in the future, which could have an adverse effect on our revenue and market share.

The global semiconductor market in general, and the computer vision and video/image processing markets in particular, are highly competitive. We compete in different target markets to various degrees on the basis of a number of competitive factors, including our solutions' performance, features, energy efficiency, size, ease with which our solution may be integrated into our customers' products, customer support, reliability and price, as well as on the basis of our reputation. We expect competition to increase and intensify as more and larger semiconductor companies enter our markets and as existing competitors improve or expand their product offerings. We also expect that the trend among large OEMs to seek to develop their own semiconductor solutions will continue and expand, particularly in camera markets experiencing consolidation, such as the IP security market. In addition, in our newer markets, such as the OEM automotive and robotics markets, we will face competition from larger competitors with greater resources, longer histories in these markets and established relationships with OEMs and ODMs. Increased competition could result in price pressure, reduced profitability and loss of market share, any of which could harm our business, revenue and operating results.

Our competitors range from large, international companies with greater resources offering a wide range of semiconductor products to smaller, nimble companies specializing in narrow markets. In the IoT market, our primary competitors include AMLogic Inc., Fuzhou Rockchip Electronics Co., Ltd., HiSilicon Technologies Co., Ltd., or HiSilicon, which is owned by Huawei Technologies Co., Ingenic Semiconductor Co., Ltd., Novatek Microelectronics Corp., or Novatek, NVIDIA Corporation, or NVIDIA, OmniVision Technologies, Inc., Qualcomm Incorporated, or Qualcomm, SigmaStar Technology Corp., and Socionext Inc. In the automotive camera market, we compete against Allwinner Technology Co., Ltd., Horizon Robotics Inc., iCatch Technology, Inc., Mobileye, a subsidiary of Intel Corporation, Novatek, NVIDIA, NXP Semiconductors N.V., Qualcomm, Renesas Electronics Corporation, and Texas Instruments. Certain of our customers and suppliers also have divisions that produce products competitive with ours and other customers may seek to vertically integrate competitive solutions in the future. In addition, certain third-party developers of technology competitive to our solutions have licensed their technology, including image signal processing and computer vision IP, which potentially enables a greater number of competitors to offer competitive solutions.

Our ability to compete successfully depends on elements both within and outside of our control. Many of our competitors are substantially larger, have greater financial, technical, marketing, distribution, customer support and other resources, are more established than we are and have significantly better brand recognition and broader product offerings than us, which may enable them to develop and enable new technology into product solutions better or faster than us and to better withstand adverse economic or market conditions in the future. Our ability to compete will depend on a number of factors, including:

- our ability to anticipate market and technology trends and successfully develop solutions that meet market needs;
- our ability to understand the price points and performance metrics of competing products in the marketplace;
- our solutions' performance and cost-effectiveness relative to that of competing products;

- our success in identifying and penetrating new markets, applications and customers;
- our ability to gain access to leading design tools and product specifications at the same time as our competitors;
- our ability to develop and maintain relationships with key OEMs and ODMs;
- our products' effective implementation of video processing or radar standards;
- our ability to protect our intellectual property;
- our ability to expand international operations in a timely and cost-efficient manner;
- our ability to deliver products in volume on a timely basis at competitive prices;
- our ability to support our customers' incorporation of our solutions into their products; and
- our ability to recruit design and application engineers with expertise in computer vision, video and image processing technologies and sales and marketing personnel.

Our competitors may also establish cooperative relationships among themselves or with third parties or acquire companies that provide similar products to ours. As a result, new competitors or alliances may emerge that could acquire significant market share. Any of these factors, alone or in combination with others, could harm our business and result in a loss of market share and an increase in pricing pressure.

A breach of our security systems may have a material adverse effect on our business.

Our security systems are designed to maintain the physical security of our facilities and information systems and protect our customers', suppliers' and employees' confidential information. Accidental or willful security breaches or incidents or other unauthorized access by third parties to our facilities or our information systems or the existence of computer viruses or other malicious code or security vulnerabilities in our data or software could expose us to a risk of loss, unavailability, misappropriation and other unauthorized processing of proprietary and confidential information. The costs to us to eliminate or alleviate cyber or other security problems, bugs, viruses, ransomware and other malicious software programs and security vulnerabilities could be significant, and our efforts to address these problems may not be successful and could result in interruptions and delays that may impede our sales, product distribution, financial reporting or other critical functions. In addition, we could incur significant costs in notifying affected persons and entities and otherwise complying with the multitude of foreign, federal, state and local laws and regulations relating to the unauthorized access to, or use or disclosure of, personal information.

Security breaches and incidents, computer malware and computer hacking attacks have become more prevalent and sophisticated. These threats are constantly evolving, making it increasingly difficult to successfully defend against or implement adequate preventive measures, and we may face difficulties or delays in identifying and otherwise responding to any security breach or incident. Moreover, remote work by our personnel and remote access to our systems have increased significantly, which also increases our cybersecurity risk profile. We expect to incur significant costs in an effort to detect and prevent security breaches and incidents, and we may face increased costs and requirements to expend substantial resources in the event of an actual or perceived security breach or incident. Our policies and security measures cannot guarantee security, and our IT infrastructure, including our networks and systems, may be vulnerable to security breaches and incidents, cyber-attacks, or fraud. Third parties have attempted, and will likely continue to attempt, to penetrate and/or infect our network and systems with malicious software and phishing attacks in an effort to gain access to our network and systems. Experienced computer programmers and hackers may be able to penetrate our security controls and misappropriate or compromise our confidential information or that of third parties or create system disruptions. Computer programmers and hackers also may be able to deploy viruses, worms and other malicious software programs that attack our information systems and cause disruptions of our business. For portions of our IT infrastructure, we rely on products and services provided by third parties. These third-party providers may also experience breaches, incidents, and attacks compromising or otherwise impacting their products, and their products may contain security vulnerabilities, each of which could impact our systems. Data security breaches and incidents may also result from non-technical means, including, for example, intentional malfeasance or negligence by an employee or contractor. Any data security breach or incident or theft, misuse, loss, unavailability or other unauthorized processing of this information, or the perception that any of these matters has occurred, could result in, among other things, damage to our reputation, allegations by our customers that we have not performed our contractual obligations, regulatory investigations and other proceedings, litigation by affected parties and possible penalties, damages, and other liabilities, any of which could have a material adverse effect on our business, financial condition, our reputation, and our relationships with our customers and partners. We may also encounter errors resulting in corruption or loss of data, an inability to accurately process or record transactions, and security or technical reliability issues. All of these could harm our ability to conduct core operating functions such as product development, customer support, processing purchase orders and invoices, product distribution, recording and reporting financial and management information on a timely and accurate basis, and could impact our internal control compliance efforts. Due to political uncertainty and military actions associated with the ongoing hostility between Russia and Ukraine, we and our vendors, contractors, and other third parties we work with are vulnerable to a heightened risk of cybersecurity attacks, phishing attacks, viruses, malware, ransomware, hacking or similar breaches and incidents from nation-state and affiliated actors, including attacks that could materially disrupt our supply chain and our systems and operations.

We also rely on a number of third-party “cloud-based” service providers of corporate infrastructure services relating to, among other things, human resources, electronic communication services and some finance functions, and we are, of necessity, dependent on the security systems of these providers. These third-party service providers also are subject to similar, and in certain cases greater, security threats. Any unauthorized access by third parties to the systems of our cloud-based service providers, any other security breaches or incidents impacting such systems, or the existence of computer viruses, ransomware or other malicious code in their data or software could expose us to a risk of loss, misappropriation, unavailability and other unauthorized processing of information.

Additionally, we cannot be certain that our insurance coverage will be adequate or otherwise protect us with respect to claims, expenses, fines, penalties, business loss, data loss, litigation, regulatory actions, or other impacts arising from security breaches or incidents, or that such coverage will continue to be available on acceptable terms or at all. Any of these results could adversely affect our business, financial condition, and operating results.

While we intend to continue to invest in research and development, we may be unable to make the substantial investments that are required to remain competitive in our business.

The semiconductor industry requires substantial investment in research and development in order to bring to market new and enhanced solutions. Our research and development expense was $204.9 million, $167.3 million and $140.8 million in fiscal years 2023, 2022 and 2021, respectively. For the nine months ended October 31, 2023, our research and development expense was $163.1 million. In general, we expect to increase our research and development expenditures in future periods as compared to prior periods as part of our strategy of focusing on the development of innovative computer vision, video and image processing solutions with increased functionality, and as we target new markets, such as the automotive OEM and robotics markets. We are unable to predict whether we will have sufficient resources to achieve the level of investment in research and development required to remain competitive. For example, development in the latest process nodes, such as 5 nanometer, or nm, or smaller, costs significantly more than required to develop in larger process nodes, such as 14 or 10nm. This added cost could prevent us from being able to maintain a technology advantage over larger competitors that have significantly more resources to invest in research and development. In addition, we cannot assure you that the technologies which are the focus of our research and development expenditures will become commercially successful or generate any revenue.

The loss of any of our key personnel could seriously harm our business.

We believe our future success depends in large part upon the continuing services of the members of our senior management team and various engineering and other technical personnel. If one or more of our senior executives or other key personnel are unable or unwilling to continue in their present positions, we may not be able to replace them easily or at all, our business may be disrupted, and our financial condition and results of operations may be materially and adversely affected. In addition, if any member of our senior management team or any of our other key personnel joins a competitor or forms a competing company, we may experience material disruption of our operations and development plans and lose customers, know-how and key professionals and staff members, and we may incur increased operating expenses as the attention of other senior executives is diverted to recruit replacements for key personnel.

We rely on highly skilled personnel and, if we are unable to hire, retain or motivate key personnel, we may not be able to grow effectively.

Our performance largely depends on the talents and efforts of highly skilled individuals. Our future success depends on our continuing ability to identify, hire, develop, motivate, and retain highly skilled personnel for all areas of our organization. Our industry is characterized by high demand and intense competition for talent, particularly for engineering personnel. The pool of qualified candidates is limited, particularly in Silicon Valley and parts of Asia for very-large-scale integration, or VLSI, and artificial intelligence and computer vision engineers, and certain of our competitors and potential competitors with greater resources have directly targeted our employees. In addition, we also face competition in hiring artificial intelligence engineers, including from companies with which we do not directly compete. Our compensation arrangements, such as our equity award programs, may not always be successful in attracting new employees and retaining and motivating our existing employees. Our continued ability to compete effectively, and to grow our business, depends on our ability to attract new employees and to retain and motivate our existing employees.

The average selling prices of semiconductor solutions in our target markets have typically decreased over time and will likely do so in the future, which could harm our revenue and gross margins.

Average selling prices of semiconductor products in the markets we serve have historically decreased over time, and we expect such declines to occur for our solutions over time. Our gross margins and financial results will suffer if we are unable to offset reductions in our average selling prices by reducing our costs, developing new or enhanced SoC solutions, such as our new AI computer vision-based solutions, on a timely basis with higher selling prices or gross margins, or increasing our sales volumes. Additionally, because we do not operate our own manufacturing, assembly or testing facilities, we may not be able to reduce our costs as rapidly as companies that operate their own facilities, and our costs may even increase, which could also reduce our gross margins. In the past, we have reduced the prices of our SoC solutions in anticipation of future competitive pricing pressures, new product introductions by us or our competitors and other factors. We expect that we will have to address pricing pressures again in the future, particularly in markets experiencing consolidation, which could require us to reduce the prices of our SoC solutions and harm our operating results.

If we are unable to manage any future growth, we may not be able to execute our business plan and our operating results could suffer.

Our business has grown rapidly in the past. Our future operating results depend to a large extent on our ability to successfully manage any expansion and growth, including the challenges of managing a company with an executive management team in the United States and the majority of its employees in Asia. We are increasing our investment in research and development and other functions to grow our business and address new markets, such as the OEM automotive and robotics markets. To manage growth successfully, we believe we must effectively, among other things:

- recruit, hire, train and manage additional qualified engineers for our research and development activities, particularly for the positions of semiconductor design and systems, AI computer vision development and applications engineering;
- add additional sales and business development personnel;
- maintain and improve our administrative, financial and operational systems, procedures and controls;
- enhance our information technology support for enterprise resource planning and design engineering by adapting and expanding our systems and tool capabilities, and properly training new hires as to their use; and
- be able to secure sufficient manufacturing capacity.

We are likely to incur the costs associated with any increased investments earlier than some of the anticipated benefits, and the return on these investments, if any, may be lower, may develop more slowly than we expect or may not materialize. If we are unable to manage growth effectively, we may not be able to take advantage of market opportunities or develop new solutions, and we may fail to satisfy customer product or support requirements, maintain product quality, execute our business plan or respond to competitive pressures.

Deterioration of the financial conditions of our customers could adversely affect our operating results.

Deterioration of the financial condition of our distributors or customers could adversely impact our collection of accounts receivable. For the fiscal year ended January 31, 2023, the customers representing 10% or more of revenue were WT and Chicony, which accounted for approximately 57% and 12% of total revenue, respectively. For the nine months ended October 31, 2023, the customers representing 10% or more of revenue were WT and Chicony, which accounts for approximately 52% and 14% of total revenue, respectively. As of October 31, 2023, accounts receivable with WT and Chicony were approximately $8.1 million and $6.0 million, respectively. We regularly review the collectability and creditworthiness of our distributors and customers to determine an appropriate allowance for credit losses. Based on our review of our distributors and customers, we currently have only immaterial reserves for uncollectible accounts. If our uncollectible accounts, however, were to exceed our current or future allowance for credit losses, our operating results would be negatively impacted.

We are subject to the cyclical nature of the semiconductor industry.

The semiconductor industry is highly cyclical and is characterized by constant and rapid technological change, rapid product obsolescence, price erosion, evolving standards, short product life cycles and wide fluctuations in product supply and demand. Cyclical downturns have been characterized by diminished product demand, production overcapacity, high inventory levels and accelerated erosion of average selling prices, which could harm our business and operating results. We are dependent on the availability of third-party foundry and assembly capacity to manufacture and assemble our SoC solutions. None of our third-party foundry or assembly contractors has provided assurances that adequate capacity will be available to us in the future. The semiconductor industry recently experienced significant shortages of capacity, which resulted in a lengthening of the manufacturing lead time for our products. Such capacity shortages could negatively impact our ability to meet our customers' demand for our products and have an adverse impact on our revenue, results of operations and customer relationships. We have also experienced, during times of supply chain capacity shortage, customers placing orders for our products that exceed their actual demand, which may lead to us manufacturing a surplus of products and could have a negative impact on our results of operations and cash reserves. Most recently, some customers have indicated their intent to reduce their inventory levels as capacity shortages improve, which has and may continue to negatively impact such customers' demand for our solutions in future periods and, in turn, harm our financial results.

The complexity of our solutions could result in unforeseen delays or expenses from undetected defects, errors or bugs in hardware or software which could reduce the market adoption of our new solutions, damage our reputation with current or prospective customers and adversely affect our operating costs.

Highly complex SoC solutions such as ours frequently contain defects, errors and bugs when they are first introduced or as new versions are released. We have in the past and may in the future experience these defects, errors and bugs. If any of our solutions have reliability, quality or compatibility problems, we may not be able to successfully correct these problems in a timely manner or at all. In addition, if any of our proprietary features contain defects, errors or bugs when first introduced or as new versions of our solutions are released, we may be unable to timely correct these problems. Consequently, our reputation may be damaged and customers may be reluctant to buy our solutions, which could harm our ability to retain existing customers and attract new customers, and could adversely affect our financial results. In addition, these defects, errors or bugs could interrupt or delay sales to our customers. If any of these problems are not found until after we have commenced commercial production of a new product, we may incur significant additional development costs and product recall, repair or replacement costs. These problems may also result in claims against us by our customers or others.

We may experience difficulties in transitioning to new wafer fabrication process technologies or in achieving higher levels of design integration, which may result in reduced manufacturing yields, delays in product deliveries and increased costs.

We aim to use the most advanced manufacturing process technology appropriate for our products that is available from our third-party foundries. As a result, we periodically evaluate the benefits of migrating our solutions to smaller geometry process technologies in order to improve performance and reduce costs. We believe this strategy will help us remain competitive. We may face difficulties, delays and increased expense as we transition our products to new processes, such as the 4nm or 3nm process nodes, and potentially to new foundries. We currently depend on Samsung, as the principal foundry for our products, to transition to new processes successfully. We cannot assure you that Samsung will be able to effectively manage such transitions or that we will be able to maintain our relationship with Samsung or develop relationships with new foundries. Moreover, as we utilize more advanced process nodes beyond 5nm, we are increasingly dependent upon a very small number of foundries currently available for certain advanced process technologies. If we or our foundry vendors experience significant delays in transitioning to smaller geometries or fail to efficiently implement transitions, we could experience reduced manufacturing yields, delays in product deliveries and increased costs, all of which could harm our relationships with our customers and our operating results.

Rapidly changing industry standards could make our video and image processing solutions obsolete, which would cause our operating results to suffer.

We design our video and image processing solutions to conform to video compression standards, including MPEG-2, H.264 Advanced Video Coding (AVC) and H.265 High Efficiency Video Coding (HEVC), set by industry standards setting bodies such as ITU-T Video Coding Experts Group and the ISO/IEC Moving Picture Experts Group. Generally, our solutions comprise only a part of a camera device. All components of these devices must uniformly comply with industry standards in order to operate efficiently together. We depend on companies that provide other components of the devices to support prevailing industry standards. Many of these companies are significantly larger and more influential in driving industry standards than we are. Some industry standards may not be widely adopted or implemented uniformly, and competing standards may emerge that may be preferred by our customers or by consumers. If our customers or the suppliers that provide other device components adopt new or competing industry standards with which our solutions are not compatible, or if the industry groups fail to adopt standards with which our solutions are compatible, our existing solutions would become less desirable to our customers. If our solutions are not in compliance with prevailing industry standards for a significant period of time, we could miss opportunities to achieve crucial design wins, which could harm our business. As a result, our sales would suffer, and we could be required to make significant expenditures to develop new SoC solutions to ensure compliance with relevant standards.

Some of our operations and a significant portion of our customers and our subcontractors are located outside of the United States, which subjects us to additional risks, including increased complexity and costs of managing international operations and geopolitical instability.

We have research and development design centers and business development offices in China, Germany, Italy, Japan, South Korea and Taiwan, and we expect to continue to conduct business with companies that are located outside the United States, particularly in Asia. We purchase wafers from foreign foundries, have our solutions assembled and tested by subcontractors located in Asia, and supply our solutions to customers located outside of the United States. Even customers of ours that are based in the United States often use contract manufacturers based in Asia to manufacture their products, and these contract manufacturers typically purchase products directly from us. As a result of our international focus, we face numerous challenges and risks, including:

- increased complexity and costs of managing international operations;

- longer and more difficult collection of receivables from customers;
- difficulties in enforcing contracts generally;
- regional economic instability;
- geopolitical instability and military conflicts, including the ongoing conflicts in Ukraine and the Middle East;
- limited protection of our intellectual property and other assets;
- compliance with local laws and regulations and unanticipated changes in local laws and regulations, including tax laws and regulations;
- trade and foreign exchange restrictions and higher tariffs;
- travel restrictions;
- timing and availability of import and export licenses and other governmental approvals, permits and licenses, including export classification requirements;
- foreign currency exchange fluctuations relating to our international operating activities;
- restrictions imposed by the U.S. government on our ability to do business with certain companies or in certain countries as a result of international political conflicts;
- transportation delays and other consequences of limited local infrastructure, and disruptions, such as large-scale outages or interruptions of service from utilities or telecommunications providers;
- heightened risk of terrorist acts;
- local business and cultural factors that differ from standards and practices in the U.S.;
- differing employment practices and labor relations;
- regional health issues, pandemics, and natural disasters; and
- work stoppages.

Any acquisitions we may make in the future could disrupt our business, cause dilution to our shareholders, reduce our financial resources and harm our business.

Prior to our acquisition of Oculii in 2021, we had not made any acquisitions since our acquisition of VisLab S.r.l. in 2015. Our ability to make and successfully integrate acquisitions is largely unproven. Any future acquisitions may not strengthen our competitive position and may be viewed negatively by our customers, financial markets or investors, and we may not achieve our goals in a timely manner, or at all. In addition, any acquisitions we make could lead to difficulties in integrating personnel, technologies and operations from the acquired businesses and in retaining and motivating key personnel from these businesses. Acquisitions may disrupt our ongoing operations, divert management from their primary responsibilities, subject us to additional liabilities, increase our expenses and adversely impact our business, operating results, financial condition and cash flows. Acquisitions may also reduce our cash available for operations and other uses, and could also result in an increase in amortization expense related to identifiable assets acquired, potentially dilutive issuances of equity securities or the incurrence of debt, any of which could harm our business.

The complexity of calculating our tax provision may result in errors that could result in restatements of our financial statements.

We are incorporated in the Cayman Islands and our operations are subject to income and transaction taxes in the United States, China, Hong Kong, Germany, Italy, Japan, South Korea, Taiwan and other jurisdictions in which we do business. Due to the complexity associated with the calculation of our tax provision, we have hired independent tax advisors to assist us. If we or our independent tax advisors fail to resolve or fully understand certain issues, there may be errors that could result in us having to restate our financial statements. The risk of errors may be exacerbated by the significant number of tax law changes recently enacted in the United States and other jurisdictions. Restatements are generally costly and could adversely impact our results of operations or have a negative impact on the trading price of our ordinary shares.

Risks Related to Our Financial Performance or Results

Fluctuations in our operating results on a quarterly and annual basis could cause the market price of our ordinary shares to decline.

Our revenue and operating results have fluctuated significantly from period to period in the past and are likely to do so in the future. As a result, you should not rely on period-to-period comparisons of our operating results as an indication of our future performance. It is also possible that our normal seasonal patterns will be impacted by ongoing macroeconomic uncertainty, effects of the COVID-19 pandemic, supply chain disruptions and semiconductor capacity shortages, including the buildup of inventory by customers in response to such shortages, and high inflation. In future periods, our forecasted or actual revenue and results of operations may be below the expectations of analysts and investors, which could cause the market price of our ordinary shares to decline.

Factors that may affect our operating results include:

- fluctuations in demand, sales cycles, product mix, and prices for our products;
- the forecasting, scheduling, rescheduling or cancellation of orders by our customers;
- shifts in consumer or manufacturer preferences and any resultant change in demand for our customers' products;
- changes in the competitive dynamics of our markets, including new entrants or pricing pressures;
- delays in our customers' ability to manufacture and ship products that incorporate our solutions caused by internal and external factors beyond our control;
- our ability to successfully define, design and release new solutions in a timely manner that meet our customers' needs;
- timely availability of adequate manufacturing capacity from our manufacturing subcontractors;
- changes in manufacturing costs, including wafer, test and assembly costs, mask costs, manufacturing yields and product quality and reliability;
- the timing of product announcements by our competitors or by us;
- incurrence of research and development and related new products expenditures;
- write-downs of inventory for excess quantities and technological obsolescence;
- impairment of investment or other asset values;
- future accounting pronouncements and changes in accounting policies;
- volatility in our share price, which may lead to higher stock-based compensation expense;
- volatility in our effective tax rate;
- general socioeconomic and political conditions in the countries where we operate or where our products are sold or used, including recent macroeconomic volatility, the COVID-19 pandemic, U.S.-China relations and the conditions in Hong Kong; and
- costs associated with litigation, especially related to intellectual property.

Moreover, the semiconductor industry has historically been cyclical in nature, reflecting overall economic conditions as well as budgeting and buying patterns of consumers. For example, the semiconductor industry recently experienced significant shortages of capacity, which resulted in a lengthening of the manufacturing lead time for our products and could be impacting the normal forecasting and ordering patterns of our customers. In recent periods, some customers have indicated they are reducing their inventory levels as lead times for semiconductor chips and other components used by customers shrink, which has reduced, and may continue to reduce, such customers' demand for our products in future periods. We expect these cyclical conditions to continue. As a result, our quarterly operating results are difficult to predict, even in the near term. Our expense levels are relatively fixed in the short term and are based, in part, on our expectations of future revenue. If revenue levels are below our expectations, we may experience material adverse impacts on our business, including declines in margins and profitability, or incur losses.

If we do not generate revenue growth, we may not be able to execute our business plan and our operating results could suffer.

We believe that our future revenue growth, if any, will significantly depend on our ability to expand within our existing IoT camera markets, such as the existing professional and home security and monitoring camera markets, and successfully penetrate new markets, such as the OEM automotive, robotics and industrial markets, with our new AI computer vision-based SoC solutions. We believe that executing upon our business plan requires us to continue to develop new SoCs and new software to address the particular requirements of these markets. Accordingly, we continue to invest in the development of new technology and solutions and expect our research and development expenditures to increase compared to prior periods. If we are unable to generate or maintain adequate revenue growth, our financial results could suffer and we may not be able to continue to invest in the development of new technology and solutions required to be successful.

We may have difficulty accurately predicting our future revenue and appropriately budgeting our expenses.

The rapidly evolving nature of the markets in which we sell our solutions, combined with substantial uncertainty concerning how these markets may develop, the considerable amount of time our customers generally take to evaluate our solutions, and other factors beyond our control, limits our ability to accurately forecast quarterly or annual revenue. In the recent years, we expanded our staffing and increased our expenditures in anticipation of future revenue growth. If our revenue does not increase as anticipated, we could incur significant losses due to our higher expense levels if we are not able to decrease our expenses in a timely manner to offset any shortfall in future revenue. Continued or persistent losses may require us to obtain additional capital that may not be available on reasonable terms or at all.

Changes to financial accounting standards may affect our results of operations and could cause us to change our business practices.

We prepare our consolidated financial statements to conform to generally accepted accounting principles, or GAAP, in the United States. These accounting principles are subject to interpretation by the American Institute of Certified Public Accountants, the SEC and various bodies formed to interpret and create accounting rules and regulations. Changes in those accounting rules could have a significant effect on our financial results, require significant resources, pose challenges in forecasting revenue and may affect our reporting of transactions completed before a change is announced. Changes to those rules or the questioning of current practices may adversely affect our reported financial results or the way we conduct our business.

Fluctuations in exchange rates between and among the currencies of the countries in which we do business may adversely affect our operating results.

Our sales have been historically denominated in U.S. dollars. An increase in the value of the U.S. dollar relative to the currencies of the countries in which our end customers operate could impair the ability of our end customers to cost-effectively integrate our SoCs into their devices which may materially affect the demand for our solutions and cause these end customers to reduce their orders, which would adversely affect our revenue and business. We may experience foreign exchange gains or losses due to the volatility of other currencies compared to the U.S. dollar. A significant portion of our solutions are sold to customers located outside the United States, primarily in Asia. Sales to customers in Asia accounted for approximately 79%, 86% and 88% of our total revenue in fiscal years 2023, 2022 and 2021, respectively. For the nine months ended October 31, 2023, sales to customers in Asia accounted for approximately 78% of our total revenue. Certain prior quarter amounts of revenue by geographic region have been adjusted to reflect the appropriate bill-to location for the related revenue. These adjustments did not impact the total revenues in any of the periods presented. Because most of our end customers or their ODM manufacturers are located in Asia, we anticipate that a majority of our future revenue will continue to come from sales to that region. Although a large percentage of our sales are made to customers in Asia, we believe that a significant number of the products designed by these customers and incorporating our SoCs are then sold to consumers globally. In addition, if in the future we sell products or purchase inventory in currencies other than the U.S. dollar, our exposure to foreign currency risk could become more significant.

A significant number of our employees are located in Asia, principally Taiwan and China, and Europe. Therefore, a portion of our payroll as well as certain other operating expenses are paid in currencies other than the U.S. dollar, such as the New Taiwan Dollar, the Chinese Yuan Renminbi and the Eurozone Euro. Our operating results are denominated in U.S. dollars and the difference in exchange rates in one period compared to another may directly impact period-to-period comparisons of our operating results. Furthermore, currency exchange rates, particularly the exchange rates between the Chinese Yuan Renminbi and the U.S. dollar, between the New Taiwan Dollar and the U.S. dollar, and between the Eurozone Euro and the U.S. dollar, have been volatile in the recent past and these currency fluctuations may make it difficult for us to predict our operating results.

We have not implemented any hedging strategies to mitigate risks related to the impact of fluctuations in currency exchange rates. Even if we were to implement hedging strategies, not every exposure can be hedged and, where hedges are put in place based on expected foreign exchange exposure, they are based on forecasts which may vary or which may later prove to have been inaccurate. Failure to hedge successfully or anticipate currency risks accurately could adversely affect our operating results.

We cannot predict our future capital needs, and we may not be able to obtain additional financing to fund our operations.

We may need to raise additional funds in the future. Any required additional financing may not be available on terms acceptable to us, or at all. If we raise additional funds by issuing equity securities or convertible debt, investors may experience significant dilution of their ownership interest, and the newly-issued securities may have rights senior to those of the holders of our ordinary shares. If we raise additional funds by obtaining loans from third parties, the terms of those financing arrangements may include negative covenants or other restrictions on our business that could impair our operational flexibility and would also require us to incur interest expense. If additional financing is not available when required or is not available on acceptable terms, we may have to scale back our operations or limit our production activities, and we may not be able to expand our business, develop or enhance our products, take advantage of business opportunities or respond to competitive pressures which could result in lower revenue and reduce the competitiveness of our products.

Our marketable securities portfolio could experience a decline in market value or otherwise become illiquid, which could materially and adversely affect our financial results.

As of October 31, 2023, we had approximately $103.8 million in money market funds and debt security investments. The debt security investments consisted of commercial paper, corporate bonds, asset-backed securities and U.S. government securities. We currently do not use derivative financial instruments to adjust our investment portfolio risk or income profile. These investments, as well as any cash deposited in bank accounts, are subject to general credit, liquidity, market and interest rate risks, which may be exacerbated by unusual events, such as the COVID-19 pandemic, the Eurozone crisis and the U.S. debt ceiling crisis, which affected various sectors of the financial markets and led to global credit and liquidity issues. For example, in March 2023, Silicon Valley Bank (SVB) was closed and the Federal Deposit Insurance Corporation (FDIC) was appointed as receiver. At the time of closing on March 10, 2023, we had cash deposits with SVB of approximately $17.0 million. We also had cash equivalents and marketable debt security investments residing in custodial accounts held by U.S. Bank for which SVB Asset Management was the investment advisor until March 15, 2023. While we were able to recover all deposited amounts from SVB, there can be no assurance that our current or future banks will not face similar risks as SVB or that we will be able to recover in full our deposits in the event of similar closures. We regularly maintain cash balances that are not insured or are in excess of the FDIC's insurance limit. If the global financial markets continue to experience volatility or deteriorate, our investment portfolio may be impacted and some or all of our investments may become illiquid or otherwise experience loss which could adversely impact our financial results and position. To the extent that we increase the amount of our security investments in the future, these risks would be exacerbated.

Risks Related to Our Dependence on Third Parties

We do not have long-term supply contracts with our third-party manufacturing vendors, and they may not allocate sufficient capacity to us at reasonable prices to meet future demands for our solutions.

The semiconductor industry is subject to intense competitive pricing pressure from customers and competitors. Accordingly, any increase in the cost of our solutions, whether by adverse purchase price variances or adverse manufacturing cost variances, will reduce our gross margins and operating profit. We currently do not have long-term supply contracts with most of our primary third-party vendors, and we negotiate pricing with our main vendors on a purchase order-by-purchase order basis. Therefore, they are not obligated to perform services or supply product to us for any specific period, in any specific quantities, or at any specific price, except as may be provided in a particular purchase order. The ability of our foundry vendors to provide us with a product, which is solely sourced at each foundry, is limited by their available capacity, existing obligations and technological capabilities. Foundry capacity may not be available when we need it or at reasonable prices. None of our third-party foundry or assembly and test vendors have provided contractual assurances to us that adequate capacity will be available to us to meet our anticipated future demand for our solutions. Moreover, availability of foundry capacity at our primary foundry vendor has tightened recently, which could limit the volume of products we can produce and/or delay production of new products, both of which would negatively impact our business and operations. Similarly, our assembly vendors have recently experienced shortages of certain substrates necessary for the production of our solutions due in part to COVID-19, which has negatively impacted the production time of our devices. If these conditions continue for a substantial period or worsen, our ability to meet our anticipated demand for our solutions could be impacted which, in turn, could negatively impact our operations and financial results.

Our foundry and assembly and test vendors may allocate capacity to the production of other companies' products while reducing deliveries to us on short notice. In particular, other companies that are larger and better financed than we are or that have long-term agreements with our foundry or assembly and test vendors may cause our foundry or assembly and test vendors to reallocate capacity to them, decreasing the capacity available to us. Converting or transferring manufacturing from a primary location or supplier to a backup provider could be expensive and would likely take at least two or more quarters. There are only a few foundries, including Samsung and Taiwan Semiconductor Manufacturing Co., Ltd., or TSMC, that are currently available for certain advanced process technologies that we utilize or may utilize, such as 10nm or 5nm. Accordingly, as we continue to develop solutions in advanced process nodes, we will be increasingly dependent upon such foundries. The unavailability of one or both of these foundries could significantly impact our ability to produce our new products or delay production, which would negatively impact our business.

Our customers incorporate components supplied by multiple third parties, and a supply shortage or delay in delivery of these components could delay orders for our solutions by our customers.

Our customers purchase components used in the manufacture of their products from various sources of supply, often involving several specialized components, including lenses, sensors, microcontrollers, power management integrated circuits (PMICs), Wi-Fi chips, and memory chips. Any supply shortage or delay in delivery by third-party component suppliers, or a third-party supplier's cessation or shut down of its business, may prevent or delay production of our customers' products. As a result of delays in delivery or supply shortages of third-party components, orders for our solutions may be delayed or canceled and our business may be harmed. For example, the semiconductor industry recently experienced shortages of certain devices, including microcontrollers, PMICs, Wi-Fi chips, which impacted our customers' ability to build their products and negatively impact our customers' demand for our solutions. We believe these shortages were exacerbated by the COVID-19 pandemic. Similarly, our ability to generate design wins in some markets, such as the automotive OEM market, requires us to collaborate with third-party software suppliers in order to offer a complete solution to customers. Our inability to successfully collaborate with such third-party suppliers, or such suppliers' inability to develop and deliver software, could harm our ability to achieve design wins and harm our business.

We outsource our wafer fabrication, assembly and testing operations to third parties, and if these parties fail to produce and deliver our products according to requested demands in specification, quantity, cost and time, our reputation, customer relationships and operating results could suffer.

We rely on third parties for substantially all of our manufacturing operations, including wafer fabrication, assembly and testing. Currently, the majority of our SoCs are supplied by Samsung in facilities located in Austin, Texas and South Korea, from whom we have the option to purchase both fully assembled and tested products as well as tested die in wafer form for assembly. Samsung subcontracts the assembly and initial testing of the assembled chips it supplies to us to Signetics Corporation and STATS ChipPAC Ltd. In the case of purchases of tested die from Samsung, we contract the assembly to Advanced Semiconductor Engineering, Inc., or ASE. Final testing of all of our products is handled by Sigurd Corporation or King Yuan Electronics Co., Ltd. under the supervision of our engineers. We depend on these third parties to supply us with material of a requested quantity in a timely manner that meets our standards for yield, cost and manufacturing quality. Availability of capacity within our supply chain tightened during fiscal year 2023, which at times limited the volume of products we can produce, negatively impacting our business and operations, and similar capacity constraints may adversely affect our business in the future. Moreover, because each SoC is fabricated in only one manufacturing facility, or single sourced, any disruption to a facility could cause significant delays in the production or shipment of the products produced in that facility that could not be easily offset by having such product(s) produced in another facility. We do not have any long-term supply agreements with any of our manufacturing suppliers. If one or more of these vendors terminates its relationship with us, or if we encounter any problems with our manufacturing supply chain, including available capacity constraints, our ability to ship our solutions to our customers on time and in the quantity required would be adversely affected, which in turn could cause an unanticipated decline in our sales and damage our customer relationships.

If, in the future, we enter into arrangements with suppliers that include additional fees to expedite delivery, nonrefundable deposits or loans in exchange for capacity commitments or commitments to purchase specified quantities over extended periods, such arrangements may be costly, reduce our financial flexibility and be on terms unfavorable to us, if we are able to secure such arrangements at all. To date, we have not entered into any such arrangements with our suppliers. If we need additional foundry or assembly and test subcontractors because of increased demand or the inability to obtain timely and adequate deliveries from our current vendors, we may not be able to do so cost-effectively, if at all.

A substantial portion of our revenue is processed through a single distributor and the loss of this distributor may cause disruptions in our shipments, which may adversely affect our operations and financial condition.

We sell a significant percentage of our solutions through a single distributor, WT, which serves as our non-exclusive sales representative and fulfillment partner in Asia other than Japan. Approximately 57%, 62% and 63% of our revenue was derived from sales through WT for the fiscal years ended January 31, 2023, 2022 and 2021, respectively, and approximately 52% of our revenue was derived from sales through WT for the nine months ended October 31, 2023. We anticipate that a significant portion of our revenue will continue to be derived from sales through WT in the foreseeable future. Our current agreement with WT is effective until January 2026, unless it is terminated earlier by either party for any or no reason with 60 days written notice or by failure of the breaching party to cure a material breach within 30 days following written notice of such material breach by the non-breaching party. Our agreement with WT will automatically renew for additional successive 12-month terms unless at least 60 days before the end of the then-current term either party provides written notice to the other party that it elects not to renew the agreement. Termination of the relationship with WT, either by us or by WT, could result in a temporary or permanent loss of revenue. We may not be successful in finding suitable alternative distributors on satisfactory terms, or at all, and this could adversely affect our ability to effectively sell our solutions in certain geographical locations or to certain end customers. Furthermore, WT, or any successor or other distributors we do business with, may face issues obtaining credit, which could impair their ability to make timely payments to us.

We are subject to risks associated with our distributors' product inventories.

We sell many of our products to customers through distributors who maintain their own inventory of our products for sale to ODMs and end customers. We allow limited price adjustments on sales to distributors. Price adjustments may be effected by way of credits for future product or by cash payments to the distributor, either in arrears or in advance, using estimates based on historical transactions. In accordance with ASC 606, we recognize revenue on sales to distributors upon shipment and transfer of control (known as “sell-in” revenue recognition) based on the amount of consideration expected to be received. To the extent that the actual consideration received is materially different from estimated variable consideration recognized, we may be required to adjust revenue in subsequent periods.

If our distributors are unable to sell an adequate amount of their inventory of our products in a given quarter to ODMs and end customers, or if they decide to decrease their inventories for any reason, such as adverse global economic conditions or a downturn in technology spending, our sales to these distributors and our revenues may decline. We also face the risk that our distributors may purchase, or for other reasons accumulate, inventory levels of our products in any particular quarter in excess of future anticipated sales to end customers. If such sales do not occur in the time frame anticipated by these distributors for any reason, these distributors may substantially decrease the amount of product they order from us in subsequent periods until their inventory levels realign with end-customer demand, which would harm our business and could adversely affect our revenues in such subsequent periods. In recent periods, some end customers have indicated they are seeking to reduce their inventory levels, which may reduce such customers' demand for our products, including products purchased through our distributors, in future periods and harm our financial results.

If our foundry vendors do not achieve satisfactory yields or quality, our reputation and customer relationships could be harmed.

The fabrication of our video and image processing SoC solutions is a complex and technically demanding process. Minor deviations in the manufacturing process can cause substantial decreases in yields, and in some cases, cause production to be suspended. Our foundry vendors, from time to time, experience manufacturing defects and reduced manufacturing yields, including in the fabrication of our SoCs. Changes in manufacturing processes or the inadvertent use of defective or contaminated materials by our foundry vendors could result in lower than anticipated manufacturing yields or unacceptable performance of our SoCs. Many of these problems are difficult to detect at an early stage of the manufacturing process and may be time consuming and expensive to correct. Poor yields from our foundry vendors, or defects, integration issues or other performance problems in our solutions, could cause us significant customer relations and business reputation problems, harm our financial results and give rise to financial or other damages to our customers. Our customers might consequently seek damages from us for their losses. A product liability claim brought against us, even if unsuccessful, would likely be time consuming and costly to defend.

Each of our SoC solutions is manufactured at a single location. If we experience manufacturing problems at a particular location, we would be required to transfer manufacturing to a new location or supplier. Converting or transferring manufacturing from a primary location or supplier to a backup fabrication facility could be expensive and could take two or more quarters. During such a transition, we would be required to meet customer demand from our then-existing inventory, as well as any partially finished goods that could be modified to the required product specifications. We do not seek to maintain sufficient inventory to address a lengthy transition period because we believe it is uneconomical. As a result, we may not be able to meet customer needs during such a transition, which could delay shipments, cause production delays, result in a decline in our sales and damage our customer relationships.

We rely on third-party vendors to supply software development tools to us for the development of our new products, and we may be unable to obtain the tools necessary to develop or enhance new or existing products.

We rely on third-party software development tools to assist us in the design, simulation and verification of new products or product enhancements. To bring new products or product enhancements to market in a timely manner, or at all, we need software development tools that are sophisticated enough or technologically advanced enough to complete our design, simulations and verifications. In the future, the design requirements necessary to meet consumer demands for more features and greater functionality from our solutions may exceed the capabilities of available software development tools. Unavailability of software development tools may result in our missing design cycles or losing design wins, either of which could result in a loss of market share or negatively impact our operating results.

Because of the importance of software development tools to the development and enhancement of our solutions, our relationships with leaders in the computer-aided design industry, including Cadence Design Systems, Inc., Mentor Graphics Corporation and Synopsys, Inc., are critical to us. If these relationships are not successful, we may be unable to develop new products or product enhancements in a timely manner, which could result in a loss of market share, a decrease in revenue or negatively impact our operating results.

We rely on third parties to provide services and technology necessary for the operation of our business. Any failure of one or more of our vendors, suppliers or licensors to provide such services or technology could harm our business.

We rely on third-party vendors to provide critical services, including, among other things, services related to accounting, human resources, information technology and network monitoring that we cannot or do not create or provide ourselves. We depend on these vendors to ensure that our corporate infrastructure will consistently meet our business requirements. The ability of these third-party vendors to successfully provide reliable and high-quality services is subject to technical and operational uncertainties that are beyond our control. While we may be entitled to damages if our vendors fail to perform under their agreements with us, our agreements with these vendors limit the amount of damages we may receive. In addition, we do not know whether we will be able to collect on any award of damages or that these damages would be sufficient to cover the actual costs we would incur as a result of any vendor's failure to perform under its agreement with us. Upon expiration or termination of any of our agreements with third-party vendors, we may not be able to replace the services provided to us in a timely manner or on terms and conditions, including service levels and cost, that are favorable to us, and a transition from one vendor to another vendor could subject us to operational delays and inefficiencies until the transition is complete.

Any disruption to the operations of our third-party contractors and their suppliers could cause significant delays in the production or shipment of our products.

Our operations could be harmed if manufacturing, logistics or other operations of our third-party contractors or their suppliers are disrupted for any reason, including natural disasters, high heat events or water shortages, severe storms, other negative impacts from climate change, information technology system failures, military actions or environmental, public health or regulatory issues. The majority of our products are manufactured by or receive components from third-party contractors located in South Korea, Taiwan and Japan. The risk of an earthquake or tsunami in South Korea, Taiwan, Japan and elsewhere in the Pacific Rim region is significant due to the proximity of major earthquake fault lines. A disruption in the availability of image sensors from Sony Corporation as a result of the 2016 Kumamoto, Japan earthquake impacted our customers' ability to build or launch cameras and, as a result, negatively impacted the timing and scope of demand for our SoCs in fiscal year 2017. Similarly, a severe cold storm in Texas in February 2021 disrupted the manufacturing of some of our products at Samsung's Texas facility for several weeks. Any disruption resulting from such events could cause significant delays in the production or shipment of our products until we are able to shift our manufacturing, assembling or testing from the affected contractor to another third-party vendor. We may not be able to obtain alternate capacity on favorable terms, or at all.

Risks Related to Our Legal and Regulatory Environment

Global economic and political conditions, including high inflation, recessionary concerns and trade restrictions, may have an impact on our business and financial condition in ways that we currently cannot predict.

Our operations and performance depend significantly on global, regional and U.S. economic and geopolitical conditions. Customer demand for our solutions may be negatively impacted by weak economic conditions, high inflation or recessionary environments in the US and other nations. Inflation or other deteriorations in global economic conditions may impact our operating expenses and third parties may demand pricing accommodations, which could harm our ability to meet customer demands or collect revenue or otherwise harm our business and financial results. In recent periods, customers have indicated they are reducing their inventory levels as lead times for semiconductor chips and other components used by customers shrink, which has reduced, and may continue to reduce, such customers' demand for our products in future periods. Weak or uncertain economic conditions may exacerbate these risks.

General trade tensions between the United States and China have been escalating, which has, in our view, created and will perpetuate an uncertain business environment. Additionally, the U.S. government announced new controls restricting the ability to send certain products and technology related to semiconductors, semiconductor manufacturing, advanced computing, supercomputing, and artificial intelligence to China, including Hong Kong, without an export license. In many cases, these licenses are subject to a policy of denial and will not be issued. While our current products are not restricted by these controls, such controls could impact our ability to export products to China in the future. It also is possible that the Chinese government will retaliate in ways that could impact our business.

If additional tariffs or trade restrictions are imposed on our SoC solutions or the products of our customers, or trade restrictions are imposed on our ability to conduct business with certain customers, there could be a negative impact on our operations and financial performance. Even in the absence of new restrictions, tariffs or changes in export classifications, it is possible that foreign customers could take actions to reduce dependence on the supply of components, including our solutions, that could be subject to new export classifications or trade restrictions. There are also risks that the Chinese government may, among other things, require the use of local suppliers, compel companies that do business in China to partner with local companies to conduct business and provide incentives to government-backed local customers to buy from local suppliers. A large portion of our employee base is in China and impacts to our China offices could significantly harm our operations, make it difficult to support customers and negatively impact product development. The materialization of these risks could have a material adverse effect on our business and financial condition. Further, our business and performance are subject to economic conditions, and our suppliers, distributors, and customers may suffer their own financial and economic challenges.

Russia's ongoing conflict with Ukraine has triggered significant sanctions from U.S. and European leaders. Changes in U.S. trade policy could trigger retaliatory actions by Russia, its allies and other affected countries, including China, resulting in a trade war. For example, in addition to controls imposed on China discussed above, following Russia's invasion of Ukraine, the United States and other countries imposed certain economic sanctions and severe export control restrictions against Russia and Belarus, as well as certain Russian nationals, which caused us to terminate certain business relationships in those countries. These sanctions and restrictions have continued to increase as the conflict has further escalated, and the United States and other countries could impose wider sanctions and export restrictions and take other actions in the future that could impact our business. Furthermore, if the conflict between Russia and Ukraine continues for a long period of time, or if other countries, including the U.S., become further involved in the conflict, we could face significant adverse effects to our business and financial condition. In addition, some of our customers and third-party partners have engineering teams located in Russian and/or Ukraine, whose operations have been and may continue to be disrupted by the ongoing conflict between the countries. If such disruption were to continue for an extended period, our customers could face delays in the launch of new products containing our solutions, resulting in delayed or decreased demand for our solutions.

We have significant business operations in Taiwan, including approximately 340 employees, and many of our third-party manufacturing suppliers are located in Taiwan. Accordingly, our business, financial condition and results of operations may be affected by changes in governmental and economic policies in Taiwan, social instability and diplomatic and social developments in or affecting Taiwan due to its international political status. Although significant economic and cultural relations have been established between Taiwan and China, we cannot assure that relations between Taiwan and China will not face political or economic uncertainties in the future. Any deterioration in the relations between Taiwan and China, and other factors affecting military, political or economic conditions in Taiwan, could disrupt our business operations and materially and adversely affect our results of operations.

Our ability to sell our products to several China customers has been restricted.

Several of our customers, including Hangzhou Hikvision Digital Technology Co., Ltd, or Hikvision, Zhejiang Dahua Technology Co., Ltd., or Dahua, and affiliates of Shenzhen Dajiang Baiwang Technology Co., Ltd., have been added to the Entity List of the Bureau of Industry and Security, or BIS, of the U.S. Department of Commerce, or Commerce, which imposes limitations on the supply of U.S. controlled items to the listed entities. In October 2022, BIS imposed additional restrictions on transactions with Dahua involving items subject to BIS export regulations. Notwithstanding our ability to continue to supply some SoC products to some affiliates of the listed entities, these customers may seek to obtain similar or substitute products from our competitors that are not subject to these limitations, or to develop similar or substitute products themselves. We also cannot be certain what additional actions the U.S. government may take with respect to any of our China customers, including changes to the Entity List restrictions, export regulations, tariffs or other trade restrictions, or whether the Chinese government may take any actions in response to U.S. government action that may adversely affect our ability to do business with our China customers. Even in the absence of new restrictions, tariffs or trade actions imposed by the U.S. or Chinese government, our China customers may take actions to reduce dependence on the supply of components subject to U.S. trade regulations, including our SoC solutions, which could have a material adverse effect on our operating results. We are unable to predict the duration of the restrictions imposed by the U.S. government or of any additional governmental actions, any of which could have a long-term adverse effect on our business, operating results and financial condition.

We are subject to governmental export and import controls that could subject us to liability or impair our ability to compete in international markets.

The U.S. and various foreign governments have imposed controls, export license requirements and restrictions on the import or export of certain products, technologies and software. We must export our products in compliance with U.S. export controls, including the Commerce's Export Administration Regulations. We may not always be successful in obtaining necessary export licenses, and our failure to obtain required import or export approval for our products or limitations on our ability to export or sell our products imposed by these laws may harm both our international and domestic sales and adversely affect our revenue. Noncompliance with these laws could have negative consequences, including government investigations, penalties and reputational harm.

Changes in our products or changes in export, import and economic sanctions laws and regulations may delay our introduction of new products in international markets, prevent our customers from deploying our products internationally or, in some cases, prevent the export or import of our products to or from certain countries altogether. Any change in export or import regulations or legislation, shift or change in enforcement, or change in the countries, persons or technologies targeted by these regulations, could result in decreased use of our products by, or in our decreased ability to export or sell our products to, existing or potential customers with international operations. In such event, our business and results of operations could be adversely affected.

We are subject to warranty and product liability claims and to product recalls.

From time to time, we are subject to warranty claims that may require us to make significant expenditures to defend these claims or pay damage awards. In the future, we may also be subject to product liability claims resulting from failure of our solutions or if products we design, manufacture, or sell, cause personal injury or property damage, even where the cause is unrelated to product defects. These risks will likely increase as our products are introduced into new devices, markets, or applications, including autonomous and semi-autonomous automotive, drone and robotic applications. In the event of a warranty claim, we may also incur costs if we compensate the affected customer. We maintain product liability insurance, but this insurance is limited in amount and subject to significant deductibles. There is no guarantee that our insurance will be available or adequate to protect against all claims. We also may incur costs and expenses relating to a recall of one of our customers' products containing one of our devices. The process of identifying a recalled product in consumer devices that have been widely distributed may be lengthy and require significant resources, and we may incur significant replacement costs, contract damage claims from our customers and reputational harm. Costs or payments made in connection with warranty and product liability claims and product recalls could harm our financial condition and results of operations, as well as harm our reputation and cause the market value of our ordinary shares to decline.

We are subject to governmental laws, regulations and other legal obligations related to privacy, data protection and cybersecurity.

The legislative and regulatory framework for privacy, data protection and cybersecurity issues worldwide is rapidly evolving and is likely to remain uncertain for the foreseeable future. We collect and otherwise process personal information and other data as part of our business processes and activities. This data is subject to a variety of U.S. and international laws and regulations, including oversight by various regulatory or other governmental bodies. Many foreign countries and governmental bodies, including China, the European Union and other relevant jurisdictions where we conduct business, have laws and regulations concerning the collection, use and other processing of personal information and other data obtained from their residents or by businesses operating within their jurisdictions that are more restrictive than those in the U.S. For example, the European Union has adopted the General Data Protection Regulation, or GDPR, which imposed stringent data protection requirements and provided for substantial penalties for noncompliance, including the potential for fines of up to €20 million or 4% of the annual global revenues of the noncompliant entity, whichever is greater. The United Kingdom has adopted legislation that substantially implements the GDPR and provides for a similar penalty structure. Similarly, California has adopted the California Consumer Privacy Act of 2018, or CCPA, which took effect in 2020. California has adopted a new law, the California Privacy Rights Act of 2020, or CPRA, that substantially expanded the CCPA as of January 1, 2023. The CCPA, as amended and modified by the CPRA, gives California residents the right to access, delete and opt out of certain sharing of their information, and imposes penalties for failure to comply. Numerous other U.S. states have proposed, and in certain cases enacted, similar general privacy legislation.

In 2021, the National People's Congress passed the Data Security Law of the People's Republic of China (Data Security Law) and China's Personal Information Protection Law (PIPL). The Data Security Law is the first comprehensive data security legislation in China and aims to regulate a wide range of issues in relation to the collection, storage, processing, use, provision, transaction and publication of any kind of data. The PIPL is the first national-level law comprehensively regulating issues in relation to personal information protection in China. Significant uncertainty remains regarding how regulators will interpret and enforce these laws, but the Data Security Law contains provisions that allow substantial government oversight and include fines for failure to obtain required approval from China's cyber and data protection regulators for cross-border personal information-related data transfers. PIPL authorizes enforcement by cybersecurity authorities and other regulators, and provides for fines and other remedies for noncompliance.

Aspects of these laws remain unclear, resulting in further uncertainty and potentially requiring us to modify our data practices and policies and to incur substantial additional costs and expenses in an effort to comply. Because the interpretation and application of many laws and regulations relating to privacy, data protection, and data security, along with industry standards, are uncertain, it is possible that these laws and regulations may be interpreted and applied in a manner that is inconsistent with our data management practices or the features of our products or solutions, and we could face fines, lawsuits, regulatory investigations, and other claims and penalties, and we could be required to fundamentally change our products or our business practices, which could have an adverse effect on our business. Any inability, or perceived inability, to adequately address privacy and data protection concerns, or to comply with applicable laws, regulations, policies, industry standards, contractual obligations or other legal obligations, even if unfounded, could result in additional cost and liability to us, inhibit sales, damage our reputation and adversely affect our business.

Failure to comply with the U.S. Foreign Corrupt Practices Act, or FCPA, and similar laws associated with our activities outside of the United States could subject us to penalties and other adverse consequences.

We face significant risks if we fail to comply with the FCPA and other anti-corruption laws that prohibit improper payments or offers of payment to foreign governments and political parties by us for the purpose of obtaining or retaining business. In many foreign countries, particularly in countries with developing economies, it may be a local custom that businesses operating in such countries engage in business practices that are prohibited by the FCPA or other applicable laws and regulations. Although we implemented an FCPA compliance program, we cannot assure you that all of our employees and agents, as well as those companies to which we outsource certain of our business operations, will not take actions in violation of our policies and applicable law, for which we may be ultimately held responsible. Any violation of the FCPA or other applicable anti-corruption laws could result in severe criminal or civil sanctions and, in the case of the FCPA, suspension or debarment from U.S. government contracting, which could have a material and adverse effect on our reputation, business, financial condition, operating results and cash flows.

We, our customers and third-party contractors are subject to increasingly complex environmental regulations and compliance with these regulations may delay or interrupt our operations and adversely affect our business.

We face increasing complexity in our procurement, design, and research and development operations as a result of requirements relating to the materials composition of our products, including the European Union's, or EU's, Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, or RoHS, directive, which restricts the content of lead and certain other hazardous substances in specified electronic products put on the market in the EU and similar Chinese legislation relating to marking of electronic products which became effective in March 2007. Failure to comply with these and similar laws and regulations could subject us to fines, penalties, civil or criminal sanctions, contract damage claims, and take-back of non-compliant products, which could harm our business, reputation and operating results. The passage of similar requirements in additional jurisdictions or the tightening of these standards in jurisdictions where our products are already subject to such requirements could cause us to incur significant expenditures to make our products compliant with new requirements, or could limit the markets into which we may sell our products.

Our failure to comply with present and future environmental, health and safety laws could cause us to incur substantial costs, result in civil or criminal fines and penalties and decreased revenue, which could adversely affect our operating results. Failure by our foundry vendors or other suppliers to comply with applicable environmental laws and requirements could cause disruptions and delays in our product shipments, which could adversely affect our relations with our ODMs and OEMs and adversely affect our business and results of operations.

Regulations related to "conflict minerals" may force us to incur additional expenses, may make our supply chain more complex and may result in damage to our reputation with customers.

Pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, or the Dodd-Frank Act, the Securities and Exchange Commission, or the SEC, has adopted requirements for companies that use certain minerals and metals, known as conflict minerals, in their products, whether or not these products are manufactured by third parties. These requirements require companies to perform due diligence, disclose and report whether or not such minerals originate from the Democratic Republic of the Congo and adjoining countries. These requirements could adversely affect the sourcing, availability and pricing of minerals used in the manufacture of semiconductor devices, including our products. While these requirements continue to be subject to administrative uncertainty, we have incurred, and may continue to incur, costs to comply with the disclosure requirements, including costs related to determining the source of any of the relevant minerals and metals used in our products. Since our supply chain is complex, we may not be able to sufficiently verify the origins for these minerals and metals used in our products through the due diligence procedures that we implement, which may harm our reputation. In such event, we may also face difficulties in satisfying customers who require that all of the components of our products are certified as conflict mineral free.

We are subject to regulatory compliance requirements, including Section 404 of the Sarbanes-Oxley Act of 2002, which are costly to comply with, and our failure to comply with these requirements could harm our business and operating results.

We are subject to disclosure and compliance requirements associated with being a public company, including but not limited to compliance with Section 404 of the Sarbanes-Oxley Act of 2002. For example, Section 404 of the Sarbanes-Oxley Act requires that our management report on, and our independent auditors attest to, the effectiveness of our internal control structure and procedures for financial reporting. Compliance with Section 404 requires a significant amount of time, expenses and diversion of internal resources. If we or our auditors discover a material weakness in our internal controls, the disclosure of that fact, even if quickly remedied, could reduce the market's confidence in our financial statements and harm our stock price. In addition, if we fail to maintain effective controls over financial reporting, we could be subject to sanctions or investigations by The Nasdaq Stock Market, the SEC, or other regulatory authorities. Irrespective of compliance with Section 404, any failure of our internal controls could have a material adverse effect on our stated results of operations and harm our reputation. Furthermore, investor perceptions of our company may suffer, and this could cause a decline in the market price of our ordinary shares.

Changes in effective tax rates or adverse outcomes resulting from examination of our income tax returns could adversely affect our results.

Our future effective tax rates could be adversely affected if our earnings are lower than anticipated in countries where we have lower statutory rates and higher than anticipated in countries where we have higher statutory rates, by changes in the valuation of our deferred tax assets and liabilities, transfer pricing adjustments, re-organization or restructuring of our businesses, changes in our corporate structure, including the effect of acquisitions on our legal structure, by tax costs related to intercompany realignments, tax effects of share-based compensation, expiration of or lapses in tax incentives, or by changes in tax laws, regulations, accounting principles or interpretations thereof. For example, changes in tax laws, including the U.S. federal tax legislation commonly referred to as the Tax Cuts and Jobs Act of 2017, or Tax Act, as well as other factors, could cause us to experience fluctuations in our tax obligations and effective tax rates and otherwise adversely affect our tax positions and/or our tax liabilities. The Tax Act requires complex computations not previously provided in U.S. tax law. The U.S. Department of Treasury has broad authority to issue regulations and interpretative guidance that may significantly impact how we will apply the law and impact our results of operations in the period issued. In August 2022, the U.S. enacted the Inflation Reduction Act of 2022, or IRA, which includes a new 15% corporate minimum tax as well as a 1% excise tax on the fair value of corporate stock repurchases made by U.S. corporations and certain foreign corporations after December 31, 2022. We do not expect the IRA to have a material impact on our financial statements.

In addition, our income tax returns are subject to continuous examination by the Internal Revenue Service, or IRS, and other tax authorities. We regularly assess the likelihood of adverse outcomes resulting from these examinations to determine the adequacy of our provision for income taxes. We cannot assure you that the outcomes from these continuous examinations will not have an adverse effect on our operating results and financial condition.

Unfavorable tax law changes, an unfavorable governmental review of our tax returns, changes in our geographical earnings mix or imposition of withholding taxes on repatriated earnings could adversely affect our effective tax rate and our operating results.

Our operations are subject to certain taxes, such as income and transaction taxes, in the Cayman Islands, the United States, China, Hong Kong, Japan, Italy, Germany, South Korea, Taiwan and other jurisdictions in which we do business. A change in the tax laws in the jurisdictions in which we do business, including an increase in tax rates or an adverse change in the treatment of an item of income or expense, possibly with retroactive effect, could result in a material increase in the amount of taxes we incur. In particular, past proposals have been made to change certain U.S. tax laws relating to foreign entities with U.S. connections, which may include us. For example, previously proposed legislation has considered treating certain foreign corporations as U.S. domestic corporations (and therefore taxable on all of their worldwide income) if the management and control of the foreign corporation occurs, directly or indirectly, primarily within the United States. If such legislation were enacted, we could, depending on the precise form, be subject to U.S. taxation notwithstanding our domicile outside the United States. In addition, over the last several years, the Organization for Economic Co-operation and Development (OECD) has been working on a Base Erosion and Profit Shifting Project and has been issuing guidelines and proposals covering a number of issues, including country-by-country reporting, permanent establishment rules, transfer pricing rules and tax treaties. Many of these changes have been or are in the process of being adopted by numerous countries and could materially and adversely affect our provision for income taxes. In 2021, more than 140 countries tentatively signed on to a framework that imposes a global minimum tax of 15%. The Council of the European Union has adopted this initiative for enactment by European Union member states, with implementation into the domestic laws of those states by the end of 2023, for fiscal years starting on or after December 31, 2023 for multinationals that meet the annual threshold of at least EUR 750 million of consolidated revenues. Additional changes to global tax laws are likely to occur, and such changes may adversely affect our effective tax rate, operating results, and cash flow.

In December 2018, the Cayman Islands passed the International Tax Co-Operation (Economic Substance) Law, 2018, which requires Cayman Islands companies carrying on one or more relevant activities to maintain a substantial economic presence in the Cayman Islands. Effective from December 31, 2019, we have structured our activities to comply with the new law. However, the legislation remains subject to further clarification and interpretation and accordingly, there is no guarantee that we will be deemed to be compliant. Furthermore, this legislation may require us to make additional changes to the activities we carry on in the Cayman Islands, which could increase our cost of operations, and we could be subject to penalties for lack of compliance. As a result, we are not able to determine the impact on our operations and net income as of the current period.

We are subject to periodic audits or other reviews by tax authorities in the jurisdictions in which we conduct our activities. Any such audit, examination or review requires management’s time, diverts internal resources and, in the event of an unfavorable outcome, may result in additional tax liabilities or other adjustments to our historical results.

Because we conduct operations in multiple jurisdictions, our effective tax rate is influenced by the amounts of income and expense attributed to each such jurisdiction. If such amounts were to change so as to increase the amounts of our net 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 be adversely affected. In addition, we may determine that it is advisable from time to time to repatriate earnings from subsidiaries under circumstances that could give rise to imposition of potentially significant withholding taxes by the jurisdictions in which such amounts were earned, without our receiving the benefit of any offsetting tax credits, which could also adversely impact our effective tax rate.

We may be classified as a passive foreign investment company which could result in adverse U.S. federal income tax consequences for U.S. holders of our ordinary shares.

Based on the current and anticipated valuation of our assets and the composition of our income and assets, we do not expect to be considered a passive foreign investment company, or PFIC, for U.S. federal income tax purposes for our 2023 fiscal year or the foreseeable future. However, a separate determination must be made at the close of each taxable year as to whether we are a PFIC for that taxable year, and we cannot assure you that we will not be a PFIC for our 2024 fiscal year or any future taxable year. Under current law, a non-U.S. corporation will be considered a PFIC for any taxable year if either (a) at least 75% of its gross income is passive income or (b) at least 50% of the value of its assets, generally based on an average of the quarterly values of the assets during a taxable year, is attributable to assets that produce or are held for the production of passive income. PFIC status depends on the composition of our assets and income and the value of our assets (which may be based in part on the value of our ordinary shares, which may fluctuate), including, among others, a pro rata portion of the income and assets of each subsidiary in which we own, directly or indirectly, at least 25% by value of the subsidiary’s equity interests, from time to time. Because we currently hold, and expect to continue to hold, a substantial amount of cash or cash equivalents, and because the calculation of the value of our assets may be based in part on the value of our ordinary shares, which may fluctuate and may fluctuate considerably given that market prices of technology companies historically often have been volatile, we may be a PFIC for any taxable year. If we were treated as a PFIC for any taxable year during which a U.S. holder held ordinary shares, certain adverse U.S. federal income tax consequences could apply for such U.S. holder.

Changes in our United States federal income tax classification, or that of our subsidiaries, could result in adverse tax consequences to our 10% or greater U.S. shareholders.

The Tax Act may have changed the consequences to U.S. shareholders that own, or are considered to own, as a result of certain attribution rules, 10% or more of the voting power or value of the stock of a non-U.S. corporation (a 10% U.S. shareholder) under the U.S. federal income tax law applicable to owners of U.S. controlled foreign corporations, or CFCs.

Prior to the Tax Act, we did not believe that we, or any of our non-U.S. subsidiaries, were considered a CFC, which is a determination made daily based on whether the 10% U.S. shareholders together own, or are considered to own under the attribution rules, more than 50% of the voting power or value of a non-U.S. corporation. Under the Tax Act, however, because our group includes one or more U.S. subsidiaries, certain of our non-U.S. subsidiaries may be classified as CFCs with respect to any single 10% U.S. shareholder, even without regard to whether 10% U.S. shareholders together own, directly or indirectly, more than 50% of the voting power or value of the Company. Our 10% or greater U.S. shareholders should consult their individual tax advisors for advice regarding the Tax Act's revision to the U.S. federal income tax law applicable to owners of CFCs.

Risks Related to Our Intellectual Property

Our failure to adequately protect our intellectual property rights could impair our ability to compete effectively or defend ourselves from litigation, which could harm our business, financial condition and results of operations.

Our success depends, in part, on our ability to protect our intellectual property. We rely primarily on patent, copyright, trademark and trade secret laws, as well as confidentiality and non-disclosure agreements and other contractual protections, to protect our proprietary technologies and know-how, all of which offer only limited protection. The steps we have taken to protect our intellectual property rights may not be adequate to prevent misappropriation of our proprietary information or infringement of our intellectual property rights, and our ability to prevent such misappropriation or infringement is uncertain, particularly in countries outside of the United States. The failure of our patents to adequately protect our technology might make it easier for our competitors to offer similar products or technologies, which would harm our business. For example, our patents and patent applications could be opposed, contested, circumvented, designed around by our competitors or be declared invalid or unenforceable in judicial or administrative proceedings. Our foreign patent protection is generally not as comprehensive as our U.S. patent protection and may not protect our intellectual property in some countries where our products are sold or may be sold in the future. Many U.S.-based companies have encountered substantial intellectual property infringement in foreign countries, including countries where we sell products. Even if foreign patents are granted, effective enforcement in foreign countries may not be available. For example, the legal environment relating to intellectual property protection in certain emerging market countries where we operate is relatively weaker, often making it difficult to create and enforce such rights. We may not be able to effectively protect our intellectual property rights in these emerging markets or elsewhere. If such an impermissible use of our intellectual property or trade secrets were to occur, our ability to sell our solutions at competitive prices may be adversely affected and our business, financial condition, operating results and cash flows could be materially and adversely affected.

We may in the future need to initiate infringement claims or litigation in order to try to protect our intellectual property rights. Litigation, whether we are a plaintiff or a defendant, can be expensive, time-consuming and may divert the efforts of our technical staff and management, which could harm our business, whether or not such litigation results in a determination favorable to us. Litigation also puts our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not being issued. Additionally, any enforcement of our patents or other intellectual property may provoke third parties to assert counterclaims against us. If we are unable to protect our proprietary rights or if third parties independently develop or gain access to our or similar technologies, our business, revenue, reputation and competitive position could be harmed.

Third parties' assertions of infringement of their intellectual property rights could result in our having to incur significant costs and cause our operating results to suffer.

The semiconductor industry is characterized by vigorous protection and pursuit of intellectual property rights and positions, which has resulted in protracted and expensive litigation for many companies. We and certain of our customers have received, and in the future may receive, communications from others alleging our infringement of their patents, trade secrets or other intellectual property rights. In addition, we and certain of our end customers have been the subject of lawsuits alleging infringement of intellectual property rights by our solutions or products incorporating our solutions, including the assertion that the alleged infringement may be attributable, at least in part, to our technology. Such lawsuits could subject us to significant liability for damages and invalidate our proprietary rights, though this has not occurred to date. Any potential intellectual property litigation also could force us to do one or more of the following:

- stop selling products or using technology that contain the allegedly infringing intellectual property;
- incur significant legal expenses;
- pay substantial damages to the party whose intellectual property rights we may be found to be infringing;
- redesign those products that contain the allegedly infringing intellectual property;
- attempt to obtain a license to the relevant intellectual property from third parties, which may not be available on reasonable terms or at all; or
- lose the opportunity to license our technology to others or to collect royalty payments based upon successful protection and assertion of our intellectual property against others.

Any significant impairment of our intellectual property rights from any litigation we face could harm our business and our ability to compete.

Any potential dispute involving our patents or other intellectual property could affect our customers, which could trigger our indemnification obligations to them and result in substantial expense to us.

In any potential dispute involving our patents or other intellectual property, our customers could also become the target of litigation. Certain of our customers have received notices from third parties claiming to have patent rights in certain technology and inviting our customers to license this technology, and certain of our end customers have been the subject of lawsuits alleging infringement of patents by products incorporating our solutions, including the assertion that the alleged infringement may be attributable, at least in part, to our technology. Because we generally indemnify our customers for intellectual property claims made against them for products incorporating our technology, any litigation could trigger technical support and indemnification obligations under some of our license agreements, which could result in substantial expense to us. Because some of our ODMs and OEMs are larger than we are and have greater resources than we do, they may be more likely to be the target of an infringement claim by third parties than we would be, which could increase our chances of becoming involved in a future lawsuit. If any such claims were to succeed, we might be forced to pay damages on behalf of our ODMs or OEMs that could increase our expenses, disrupt our ability to sell our solutions and reduce our revenue. In addition to the time and expense required for us to supply support or indemnification to our customers, any such litigation could severely disrupt or shut down the business of our customers, which in turn could hurt our relations with our customers and cause the sale of our products to decrease.

The use of open source software in our products, processes and technology may expose us to additional risks and compromise our proprietary intellectual property.

Our products, processes and technology sometimes utilize and incorporate software that is subject to an open source license. Open source software is typically freely accessible, usable and modifiable. Certain open source software licenses, such as the GNU General Public License, require a user who intends to distribute the open source software as a component of the user's software to disclose publicly part or all of the source code to the user's software. In addition, certain open source software licenses require the user of such software to make any derivative works of the open source code available to others on terms unfavorable to us or at no cost. This can subject previously proprietary software to open source license terms.

While we monitor the use of open source software in our products, processes and technology and try to ensure that no open source software is used in such a way as to require us to disclose the source code to the related product, processes or technology when we do not wish to do so, such use could inadvertently occur. Additionally, if a third-party software provider has incorporated certain types of open source software into software we license from such third-party for our products, processes or technology, we could, under certain circumstances, be required to disclose the source code to our products, processes or technology. This could harm our intellectual property position and our business, results of operations and financial condition.

Risks Related to Ownership of Our Ordinary Shares

The market price of our ordinary shares may be volatile, which could cause the value of your investment to decline.

The market price of our ordinary shares has historically been highly volatile, and has been particularly volatile in recent years. For example, since February 1, 2020, the trading price of our common stock ranged from a low of \$36.02 to a high of \$227.59 and was \$44.99 at the close of trading on October 31, 2023. The trading price of our ordinary shares is likely to remain volatile and could be subject to wide fluctuations in price in response to various factors, some of which are beyond our control. These factors include:

- changes in financial estimates, including our ability to meet our future revenue and operating profit or loss projections;
- fluctuations in our operating results or those of other semiconductor or comparable companies;
- fluctuations in the economic performance or market valuations of companies perceived by investors to be comparable to us;
- economic developments in the semiconductor industry as a whole;
- general economic conditions, including conditions related to the banking industry or caused by pandemics and high inflation, and slow or negative market growth;
- trade and other geopolitical activities affecting markets we address;
- announcements by us or our competitors of acquisitions, new products, significant contracts or orders, commercial relationships or capital commitments;
- our ability to develop and market new and enhanced solutions on a timely basis;

- changes in the demand for our customers' products;
- commencement of or our involvement in litigation;
- disruption to our operations;
- any major change in our board of directors or management;
- political or social conditions in the markets where we sell our products;
- changes in governmental regulations; and
- changes in earnings estimates or recommendations by securities analysts.

In addition, the stock market in general, and the market for semiconductor and other technology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. These broad market and industry factors may cause the market price of our ordinary shares to decrease, regardless of our actual operating performance. These trading price fluctuations may also make it more difficult for us to use our ordinary shares as a means to make acquisitions or to use options to purchase our ordinary shares to attract and retain employees. If the market price of our ordinary shares declines, you may not realize any return on your investment in us and may lose some or all of your investment. In addition, in the past, following periods of volatility in the overall market and the market price of a company's securities, securities class action litigation has often been instituted against these companies. This litigation, if instituted against us, could result in substantial costs and a diversion of our management's attention and resources.

Our actual operating results may not meet or exceed our guidance and investor expectations, which would likely cause our stock price to decline.

From time to time, we may release guidance in our earnings releases, earnings conference calls or otherwise, regarding our future performance that represent our management's estimates as of the date of release. If given, this guidance, which will include forward-looking statements, will be based on projections prepared by our management. Projections are based upon a number of assumptions and estimates that, while presented with numerical specificity, are inherently subject to significant business, economic and competitive uncertainties and contingencies, many of which are beyond our control. The principal reason that we expect to release guidance is to provide a basis for our management to discuss our business outlook with analysts and investors. With or without our guidance, analysts and other investors may publish expectations regarding our business, financial performance and results of operations. We do not accept any responsibility for any projections or reports published by any such third persons.

Guidance is necessarily speculative in nature, and it can be expected that some or all of the assumptions of the guidance furnished by us will not materialize or will vary significantly from actual results. If our actual performance does not meet or exceed our guidance or investor expectations, the trading price of our ordinary shares is likely to decline. Similarly, if our guidance does not meet or exceed expectations of investors or securities analysts, the trading price of our ordinary shares is likely to decline.

The price of our ordinary shares could decrease as a result of shares being sold in the market.

Sales of a substantial number of our ordinary shares in the public market, or the perception that these sales might occur, could cause the market price of our ordinary shares to decline. In the past, we have issued stock options to employees and we regularly issue restricted stock units (RSUs) to employees, which settle as ordinary shares upon vesting. These shares can be freely sold in the public market upon issuance and vesting, subject to restrictions provided under the terms of the applicable plan and/or the option agreements entered into with option holders. We may also issue ordinary shares or securities convertible into ordinary shares from time to time in connection with a financing, acquisition or otherwise. Any such issuance could result in substantial dilution to our existing shareholders and cause the trading price of our stock to decline.

We do not intend to pay dividends on our ordinary shares and, consequently, a shareholder's ability to achieve a return on its investment will depend on appreciation in the price of our ordinary shares.

We have never declared or paid any cash dividends on our ordinary shares and do not currently intend to do so for the foreseeable future. We currently intend to invest our future earnings, if any, to fund our growth. Therefore, shareholders are not likely to receive any dividends on their ordinary shares for the foreseeable future and the success of an investment in our ordinary shares will depend upon any future appreciation in their value. There is no guarantee that our ordinary shares will appreciate in value or even maintain the price at which our shareholders have purchased their shares. Investors seeking cash dividends should not purchase our ordinary shares.

Provisions of our memorandum and articles of association and Cayman Islands corporate law may discourage or prevent an acquisition of us which could adversely affect the value of our ordinary shares.

Provisions of our memorandum and articles of association and Cayman Islands law may have the effect of delaying or preventing a change of control or changes in our management. These provisions include the following:

- the division of our board of directors into three classes;
- the right of our board of directors to elect a director to fill a vacancy created by the expansion of our board of directors or due to the resignation or departure of an existing board member;
- prohibition of cumulative voting in the election of directors which would otherwise allow less than a majority of shareholders to elect director candidates;
- the requirement for the advance notice of nominations for election to our board of directors or for proposing matters that can be acted upon at a shareholders' meeting;
- the ability of our board of directors to issue, without shareholder approval, such amounts of preference shares as the board of directors deems necessary and appropriate with terms set by our board of directors, which rights could be senior to those of our ordinary shares;
- the elimination of the rights of shareholders to call a special meeting of shareholders and to take action by written consent in lieu of a meeting; and
- the required approval of a special resolution of the shareholders, being a two-thirds vote of shares held by shareholders present and voting at a shareholder meeting, to alter or amend the provisions of our post-offering memorandum and articles of association.

Holders of our ordinary shares may face difficulties in protecting their interests because we are incorporated under Cayman Islands law.

Our corporate affairs are governed by our amended and restated memorandum and articles of association, by the Companies Law (as the same may be supplemented or amended from time to time) of the Cayman Islands and by the common law of the Cayman Islands. The rights of our shareholders and the fiduciary responsibilities of our directors under Cayman Islands law are not as clearly established as under statutes or judicial precedent in existence in jurisdictions in the United States. In particular, the Cayman Islands has a less developed body of securities laws than the United States and provides significantly less protection to investors. There is no legislation specifically dedicated to the rights of investors in securities and thus no statutorily defined private cause of action specific to investors such as those provided under the Securities Act or the Securities Exchange Act of 1934, as amended. In addition, shareholders of Cayman Islands companies may not have standing to initiate shareholder derivative actions in U.S. federal courts. Therefore, you may have more difficulty in protecting your interests in the face of actions by our management, directors or controlling shareholders than would shareholders of a corporation incorporated in a jurisdiction in the United States due to the comparatively less developed nature of Cayman Islands law in this area.

Shareholders of Cayman Islands exempted companies, such as our company, have no general rights under Cayman Islands law to inspect corporate records and accounts or to obtain copies of lists of shareholders of the company. Our directors have discretion under our articles of association to determine whether or not, and under what conditions, our corporate records may be inspected by our shareholders, but are not obliged to make them available to our shareholders. This may make it more difficult for you to obtain the information needed to establish any facts necessary for a shareholder motion or to solicit proxies from other shareholders in connection with a proxy contest.

Subject to limited exceptions, under Cayman Islands law, a minority shareholder may not bring a derivative action against the board of directors.

Holders of our ordinary shares may have difficulty obtaining or enforcing a judgment against us because we are incorporated under the laws of the Cayman Islands.

It may be difficult or impossible for you to bring an action against us in the Cayman Islands if you believe your rights have been infringed under U.S. securities laws. There is no statutory recognition in the Cayman Islands of judgments obtained in the United States, although the courts of the Cayman Islands will in certain circumstances recognize and enforce a non-penal judgment of a foreign court of competent jurisdiction without retrial on the merits. While there is no binding authority on this point, this is likely to include, in certain circumstances, a non-penal judgment of a United States court imposing a monetary award based on the civil liability provisions of the U.S. federal securities laws. The Grand Court of the Cayman Islands may stay proceedings if concurrent proceedings are being brought elsewhere. There is uncertainty as to whether the Grand Court of the Cayman Islands would recognize or enforce judgments of United States courts obtained against us predicated upon the civil liability provisions of the securities laws of the United States or any state thereof and whether the Grand Court of the Cayman Islands would hear original actions brought in the Cayman Islands against us predicated upon the securities laws of the United States or any state thereof.

General Risk Factors

If our operations are interrupted, our business and reputation could suffer.

Our operations and those of our manufacturers are vulnerable to interruption caused by technical breakdowns, computer hardware and software malfunctions, software viruses, infrastructure failures, pandemics, including the COVID-19 pandemic and regional health issues, earthquakes, fires, severe storms, floods and other negative impacts from climate change, power losses, telecommunications failures, terrorist attacks, wars, Internet failures and other events beyond our control. Our operations could also be disrupted by geopolitical conditions, particularly in Taiwan or China, where the majority of our employees are located. Any disruption in our services or operations could result in a reduction in revenue, delay product development and R&D, or result in a claim for substantial damages against us, regardless of whether we are responsible for that failure. If remote or work from home conditions were to continue for an extended period of time, we may experience delays in product development, a decreased ability to support our customers, reduced design win activity, and overall lack of productivity. We rely on our computer equipment, database storage facilities and other office equipment, which are located primarily in the seismically active San Francisco Bay Area and Taiwan. If we suffer a significant database or network facility outage, our business could experience disruption until we fully implement our back-up systems.

If securities analysts or industry analysts downgrade our ordinary shares, publish negative research or reports or fail to publish reports about our business, our stock price and trading volume could decline.

The trading market for our ordinary shares will be influenced by the research and reports that industry or securities analysts publish about us, our business and our market. If one or more analysts adversely changes their recommendation regarding our stock or our competitors' stock, our stock price would likely decline. If one or more analysts cease coverage of us or fail to regularly publish reports on us, we could lose visibility in the financial markets which in turn could cause our stock price or trading volume to decline.

ITEM 5. Other Information

Securities Trading Plans of Directors and Executive Officers

During our last fiscal quarter ending October 31, 2023, no director or officer, as defined in Rule 16a-1(f), adopted or terminated a "Rule 10b5-1 trading arrangement" or a "non-Rule 10b5-1 trading arrangement," each as defined in Regulation S-K Item 408.

ITEM 6. Exhibits

The exhibits listed in the accompanying Exhibit Index are filed or incorporated by reference as part of this Quarterly Report.

EXHIBIT INDEX

Exhibit Number	Description
3.1(1)	Amended and Restated Memorandum of Association and Second Amended and Restated Articles of Association of the Registrant.
10.1*	Separation Agreement entered into by Ambarella Corp. with Brian White dated October 17, 2023.
10.2*	Employment letter entered into by Ambarella Corp. with John Young dated October 17, 2023.
31.1	Certification of Principal Executive Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.
31.2	Certification of Principal Financial Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.
32.1±	Certification of Principal Executive Officer and Principal Financial Officer Required Under Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. §1350.
101.INS	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data file because its XBRL tags are embedded within the Inline XBRL document
101.SCH	Inline XBRL Taxonomy Schema Linkbase Document
101.CAL	Inline XBRL Taxonomy Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Labels Linkbase Document
101.PRE	Inline XBRL Taxonomy Presentation Linkbase Document
104	The cover page from the Company's Quarterly Report on Form 10-Q for the quarter ended October 31, 2023, has been formatted in Inline XBRL and included in Exhibit 101.

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(1) Incorporated by reference to the Registrant's registration statement on Form S-1 (No. 333-174838) Amendment No. 3 as filed with the Securities and Exchange Commission on September 12, 2012.

* Management contracts or compensation plans or arrangements in which directors or executive officers are eligible to participate.

± In accordance with Item 601(b)(32)(ii) of Regulation S-K and SEC Release No. 33-8238 and 34-47986, Final Rule: Management's Reports on Internal Control Over Financial Reporting and Certification of Disclosure in Exchange Act Periodic Reports, the certifications furnished in Exhibits 32.1 hereto are deemed to accompany this Form 10-Q and will not be deemed "filed" for purposes of Section 18 of the Exchange Act. Such certifications will not be deemed to be incorporated by reference into any filings under the Securities Act or the Exchange Act, except to the extent that the registrant specifically incorporates it by reference.

Signatures

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

		AMBARELLA, INC.
Date: December 8, 2023	By:	/s/ Feng-Ming Wang
		Feng-Ming Wang
		President and Chief Executive Officer
Date: December 8, 2023	By:	/s/ Brian C. White
		Brian C. White
		Chief Financial Officer

Exhibit 10.1

SEPARATION AGREEMENT AND RELEASE

This Separation Agreement and Release ("Agreement") is made by and between Brian White ("Employee") and Ambarella Corporation (the "Company") (collectively referred to as the "Parties" or individually referred to as a "Party").

RECITALS

WHEREAS, Employee is employed by the Company;

WHEREAS, Employee signed an offer letter with the Company on March 18, 2022 (the "Offer Letter");

WHEREAS, Employee signed a Change of Control and Severance Agreement with the Company on March 28, 2022 (the "Severance Agreement");

WHEREAS, Employee signed an At-Will Employment, Confidential Information, Invention Assignment, and Arbitration Agreement with the Company on March 28, 2022 (the "Confidentiality Agreement");

WHEREAS, Employee holds certain outstanding equity awards ("Awards") covering ordinary shares of the Company ("Shares") granted under and subject to the Company's 2021 Equity Incentive Plan (the "Plan") and award agreements thereunder, as set forth in Schedule 1 hereto (the "Award Documents");

WHEREAS, Employee will separate from employment with the Company effective February 2, 2024 (the "Scheduled Separation Date," and the actual date of separation is referred to herein the "Separation Date", which may be the same date as the Scheduled Separation Date); and

WHEREAS, the Parties wish to resolve any and all disputes, claims, complaints, grievances, charges, actions, petitions, and demands that the Employee may have against the Company and any of the Releasees as defined below, including, but not limited to, any and all claims arising out of or in any way related to Employee's employment with or separation from the Company.

NOW, THEREFORE, in consideration of the mutual promises made herein, the Company and Employee hereby agree as follows:

COVENANTS

1. Consideration.

a. *Transitional Services.* Employee shall be permitted to continue Employee's full-time employment with the Company until the Scheduled Separation Date (the period between the Effective Date of this Agreement (as defined in Section 20) and the Scheduled Separation Date, the

"Transition Period"). Employee agrees to provide services to the Company in good faith and to transition Employee's role during the Transition Period as determined and instructed by the Company in the Company's sole discretion.

b. *Compensation.* The Company shall continue to pay Employee's base salary until the Separation Date at the rate set for Employee as of the Effective Date, less applicable withholdings, payable in accordance with the Company's regular payroll practices. However, Employee's participation in the Company's Fiscal Year 2024 Annual Bonus Plan (the "Bonus Plan") will cease as of the Effective Date and Employee shall not be eligible to receive any bonus or other payment under the Bonus Plan. During the Transition Period, Employee shall remain eligible to vest in Employee's Awards in accordance with the terms and conditions of the applicable Award Documents. Employee's other benefits shall remain in force and effect during the Transition Period, except as required by the Company's applicable policies and plans.

c. *Acknowledgement*. Employee acknowledges that without this Agreement, Employee is otherwise not entitled to the consideration listed in this section 1.

2. Supplemental Release. Employee agrees that the consideration set forth in the Supplemental Release is expressly conditioned upon Employee's continued employment with the Company through the Scheduled Separation Date, Employee's execution and non-revocation of the Supplemental Release Agreement attached hereto as Exhibit A (the "Supplemental Release"), and Employee's fulfillment of its terms and conditions. In addition, Employee agrees that the consideration set forth in Section 1.a. will be payable to Employee in the form, as elected by the Company in its sole discretion, of either (x) cash in an amount equal to the Payment, as defined in the Supplemental Release (the "Cash Severance"), or (y) the number of Shares as set forth in the Supplemental Release to be issued pursuant to a Severance Award, as defined in the Supplemental Release, granted under the Plan and applicable restricted stock unit award agreement thereunder, in either case in accordance with the terms and conditions of, the Supplemental Release. In the event that any Severance Award is granted to Employee (which shall be granted, if at all, no later than the Separation Date), then 100% of the Shares underlying such Severance Award will vest subject to Employee's continued employment in accordance with this Agreement through the Scheduled Separation Date, and become payable contingent on the timely effectiveness and irrevocability of the Supplemental Release.

3. Benefits. Employee's health insurance benefits shall cease on the last day of the month in which the Separation Date occurs, subject to Employee's right to continue Employee's health insurance under COBRA. Employee's participation in all benefits and incidents of employment, including, but not limited to, vesting in any equity awards including the Awards and any Severance Award, and the accrual of bonuses, vacation, and paid time off, shall cease as of the Separation Date, subject to the application of the acceleration of Award vesting provisions as set forth in, and in accordance with, the terms and conditions of the Supplement Release.

4. Payment of Salary and Receipt of All Benefits. Employee acknowledges and represents that, other than the consideration set forth in this Agreement, the Company has paid or provided all salary, wages, bonuses, accrued vacation/paid time off, premiums, leaves, housing allowances, relocation costs, interest, severance, outplacement costs, fees, reimbursable expenses, commissions, stock, stock options, vesting, and any and all other benefits and compensation due to Employee.

5. Release of Claims. Employee agrees that the foregoing consideration represents settlement in full of all outstanding obligations owed to Employee by the Company and its current and former officers, directors, employees, agents, investors, attorneys, shareholders, administrators, affiliates, benefit plans, plan administrators, professional employer organization or co-employer, insurers, trustees, divisions, subsidiaries, predecessor and successor corporations, and assigns (collectively, the "Releasees"). Employee, on Employee's own behalf and on behalf of Employee's respective heirs, family members, executors, agents, and assigns, hereby and forever releases the Releasees from, and agrees not to sue concerning, or in any manner to institute, prosecute, or pursue, any claim, complaint, charge, duty, obligation, demand, or cause of action relating to any matters of any kind, whether presently known or unknown, suspected or unsuspected, that Employee may possess against any of the Releasees arising from any omissions, acts, facts, or damages that have occurred up until and including the date Employee signs this Agreement, including, without limitation:

a. any and all claims relating to or arising from Employee's employment relationship with the Company and the termination of that relationship;

b. any and all claims relating to, or arising from, Employee's right to purchase, or actual purchase of shares of stock of the Company, including, without limitation, any claims for fraud, misrepresentation, breach of fiduciary duty, breach of duty under applicable state corporate law, and securities fraud under any state or federal law;

c. any and all claims for wrongful discharge of employment, termination in violation of public policy, discrimination, harassment, retaliation, breach of contract (both express and implied), breach of covenant of good faith and fair dealing (both express and implied), promissory estoppel, negligent or intentional infliction of emotional distress, fraud, negligent or intentional misrepresentation, negligent or intentional interference with contract or prospective economic advantage, unfair business practices, defamation, libel, slander, negligence, personal injury, assault, battery, invasion of privacy, false imprisonment, conversion, and disability benefits;

d. any and all claims for violation of any federal, state, or municipal statute, including, but not limited to, Title VII of the Civil Rights Act of 1964, the Civil Rights Act of 1991, the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, the Equal Pay Act, the Fair Labor Standards Act, the Fair Credit Reporting Act, the Employee Retirement Income Security Act of 1974, the Worker Adjustment and Retraining Notification Act, the Family and Medical Leave Act, the Immigration Reform and Control Act, the California Family Rights Act, the California Labor Code, and the California Workers' Compensation Act.

e. any and all claims for violation of the federal or any state constitution;

f. any and all claims arising out of any other laws and regulations relating to employment or employment discrimination;

g. any claim for any loss, cost, damage, or expense arising out of any dispute over the nonwithholding or other tax treatment of any of the proceeds received by Employee as a result of this Agreement; and

h. any and all claims for attorneys' fees and costs.

Employee agrees that the release set forth in this section shall be and remain in effect in all respects as a complete general release as to the matters released. This release does not extend to any obligations incurred under this Agreement. This release does not release claims that cannot be released as a matter of law. This release does not extend to any right Employee may have to unemployment compensation benefits. Nothing herein releases any rights or claims Employee may have under the California Fair Employment and Housing Act.

6. Trade Secrets and Confidential Information/Company Property. Employee acknowledges that, separate from this Agreement, Employee remains under continuing obligations to the Company under the Confidentiality Agreement, including the provisions therein regarding nondisclosure of the Company's trade secrets and confidential and proprietary information. Employee agrees and acknowledges that any incentive-based compensation provided to Employee shall be subject to the Company's Executive Compensation Clawback Policy and any clawback policy adopted pursuant to the listing standards of any national securities exchange or association on which the Company's securities are listed or that otherwise is adopted pursuant to the Dodd-Frank Wall Street Reform and Consumer Protect Act or other applicable law.

7. No Cooperation. Subject to the Protected Activity provision below, Employee agrees that Employee will not knowingly encourage, counsel, or assist any attorneys or their clients in the presentation or prosecution of any disputes, differences, grievances, claims, charges, or complaints by any third party against any of the Releasees, unless under a subpoena or other court order to do so. Employee agrees both to immediately notify the Company upon receipt of any such subpoena or court order or written request from an administrative agency or the legislature, and to furnish, within three (3) business days of its receipt, a copy of such subpoena or other court order or written request from an administrative agency or the legislature. If approached by anyone for counsel or assistance in the presentation or prosecution of any disputes, differences, grievances, claims, charges, or complaints against any of the Releasees, Employee shall state no more than that Employee cannot provide counsel or assistance.

8. Protected Activity Not Prohibited. Employee understands that nothing in this Agreement shall in any way limit or prohibit Employee from engaging in any Protected Activity. Protected Activity includes: (i) filing and/or pursuing a charge, complaint, or report with, or otherwise communicating, cooperating, or participating in any investigation or proceeding that may be conducted by any federal, state or local government agency or commission, including the Securities and Exchange Commission, the Equal Employment Opportunity Commission, the Occupational Safety and Health Administration, and the National Labor Relations Board ("Government Agencies"); (ii) disclosing information pertaining to sexual harassment or any other unlawful or potentially unlawful conduct; and/or (iii) disclosing factual information (other than the amount paid under this Agreement) related to a claim filed in a civil action or complaint filed in an administrative action about sexual assault, an act of sexual harassment, or an act of (or failure to prevent) harassment or discrimination based on sex, or an act of retaliation against a person for reporting harassment or discrimination based on sex. Employee understands that in connection with such Protected Activity, Employee is permitted to make disclosures as permitted by law, without giving notice to, or receiving authorization from, the Company. Notwithstanding the foregoing, Employee agrees to take all reasonable precautions to prevent any unauthorized use or disclosure of any information that may constitute Company confidential information under the Confidentiality Agreement to any parties or in any manner not protected by law. Employee further understands that "Protected Activity" does not include the disclosure of any Company attorney-client privileged communications or attorney work

product. Any language in the Confidentiality Agreement regarding Employee's right to engage in Protected Activity that conflicts with, or is contrary to, this section is superseded by this Agreement. In addition, pursuant to the Defend Trade Secrets Act of 2016, Employee is notified that an individual will not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that (i) is made in confidence to a federal, state, or local government official (directly or indirectly) or to an attorney *solely* for the purpose of reporting or investigating a suspected violation of law, or (ii) is made in a complaint or other document filed in a lawsuit or other proceeding, if (and only if) such filing is made under seal. In addition, an individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the individual's attorney and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal and does not disclose the trade secret, except pursuant to court order.

9. Breach. In addition to the rights provided in the "Attorneys' Fees" section below, Employee acknowledges and agrees that any material breach of this Agreement or of any provision of the Confidentiality Agreement shall entitle the Company immediately to recover and/or cease providing the consideration provided to Employee under this Agreement and to obtain damages.

10. No Admission of Liability. Employee understands and acknowledges that with respect to all claims released herein, this Agreement constitutes a compromise and settlement of any and all actual or potential disputed claims by Employee unless such claims were explicitly not released by the release in this Agreement. No action taken by the Company hereto, either previously or in connection with this Agreement, shall be deemed or construed to be (a) an admission of the truth or falsity of any actual or potential claims or (b) an acknowledgment or admission by the Company of any fault or liability whatsoever to Employee or to any third party.

11. Costs. The Parties shall each bear their own costs, attorneys' fees, and other fees incurred in connection with the preparation of this Agreement.

12. Tax Consequences. The Company makes no representations or warranties with respect to the tax consequences of the payments and any other consideration provided to Employee or made on Employee's behalf under the terms of this Agreement or the Supplemental Release. Employee agrees and understands that Employee is responsible for payment, if any, of local, state, and/or federal taxes on the payments and any other consideration provided hereunder or under the Supplemental Release by the Company and any penalties or assessments thereon, and all amounts payable hereunder are subject to applicable tax withholdings. Employee further agrees to indemnify and hold the Releasees harmless from any claims, demands, deficiencies, penalties, interest, assessments, executions, judgments, or recoveries by any government agency against the Company for any amounts claimed due on account of (a) Employee's failure to pay or delayed payment of federal or state taxes, or (b) damages sustained by the Company by reason of any such claims, including attorneys' fees and costs. The Parties agree and acknowledge that the payments made pursuant to section 1 of this Agreement and section 1 of the Supplemental Release are not related to sexual harassment or sexual abuse and not intended to fall within the scope of 26 U.S.C. Section 162(q).

13. Section 409A. It is intended that this Agreement and the Supplemental Release are exempt from, or if not exempt from, will comply with, Section 409A of the Internal Revenue Code of 1986, as amended (the "Code"), and any final regulations and official guidance thereunder, and

any applicable state law equivalent, as each may be amended or promulgated from time to time (together, "Section 409A"), so that none of the payments to be provided under this Agreement or under the Supplemental Release will be subject to the additional tax imposed under Section 409A, and any ambiguities or ambiguous terms herein or under the Supplemental Release will be interpreted to be so exempt from or so comply with Section 409A. Each payment and benefit to be paid or provided under this Agreement is intended to constitute a separate payment for purposes of Section 1.409A-2(b)(2) of the Treasury Regulations. Notwithstanding any provisions to the contrary under this Agreement or the Supplemental Release, if and to the extent necessary to avoid subjecting Employee to an additional tax under Section 409A, any payments or benefits deemed to be separation-related deferred compensation (within the meaning of Section 409A), whether under this Agreement, the Supplemental Release or any other arrangement, payable to Employee will be delayed until the date that is six (6) months and one (1) day following Employee's separation from service (within the meaning of Section 409A), except that in the event of Employee's death, any such delayed payments will be paid as soon as practicable after the date of Employee's death, and in each case all subsequent payments and benefits will be payable in accordance with the payment schedule applicable to such payment or benefit. To the extent necessary to comply with Section 409A, references to the termination of Employee's employment or similar terms under this Agreement and the Supplemental Release will mean Employee's separation from service within the meaning of Section 409A. In no event will the Company or any other Releasees have any responsibility, liability, or obligations to reimburse, hold harmless, or indemnify Employee for any taxes or costs that may be imposed on Employee as a result of Section 409A. Company and Employee will work together in good faith to consider either (i) amendments to this Agreement; or (ii) revisions to this Agreement with respect to the payment of any amounts, awards, or benefits, which are necessary or appropriate to avoid imposition of any additional tax or income recognition prior to the actual payment to Employee under Section 409A.

14.Authority. The Company represents and warrants that the undersigned has the authority to act on behalf of the Company and to bind the Company and all who may claim through it to the terms and conditions of this Agreement. Employee represents and warrants that Employee has the capacity to act on Employee's own behalf and on behalf of all who might claim through Employee to bind them to the terms and conditions of this Agreement. Each Party warrants and represents that there are no liens or claims of lien or assignments in law or equity or otherwise of or against any of the claims or causes of action released herein.

15.Severability. In the event that any provision or any portion of any provision hereof or any surviving agreement made a part hereof becomes or is declared by a court of competent jurisdiction or arbitrator to be illegal, unenforceable, or void, this Agreement shall continue in full force and effect without said provision or portion of provision.

16.Attorneys' Fees. In the event that either Party brings an action to enforce or effect its rights under this Agreement, the prevailing Party shall be entitled to recover its costs and expenses, including the costs of mediation, arbitration, litigation, court fees, and reasonable attorneys' fees incurred in connection with such an action.

17.Entire Agreement. This Agreement, together with the Confidentiality Agreement and the Award Documents, to the extent not modified hereby, represents the entire agreement and understanding between the Company and Employee concerning the subject matter of this Agreement and Employee's employment with and separation from the Company and the events leading thereto and associated therewith, and supersedes and replaces any and all prior agreements and understandings concerning the subject matter of this Agreement and Employee's relationship with the Company.

18. No Oral Modification. This Agreement may only be amended in a writing signed by Employee and the Company's Chief Executive Officer.

19. Governing Law. This Agreement shall be governed by the laws of the State of California, without regard for choice-of-law provisions. Employee consents to personal and exclusive jurisdiction and venue in the State of California.

20. Effective Date. This Agreement will become effective on the date it has been signed by both Parties (the "Effective Date").

21. Counterparts. This Agreement may be executed in counterparts and each counterpart shall be deemed an original and all of which counterparts taken together shall have the same force and effect as an original and shall constitute an effective, binding agreement on the part of each of the undersigned. The counterparts of this Agreement may be executed and delivered by facsimile, photo, email PDF, or other electronic transmission or signature.

22. Voluntary Execution of Agreement. Employee understands and agrees that Employee executed this Agreement voluntarily and without any duress or undue influence on the part or behalf of the Company or any third party, with the full intent of releasing all of Employee's claims against the Company and any of the other Releasees. Employee acknowledges that:

() Employee has read this Agreement;

() Employee has been represented in the preparation, negotiation, and execution of this Agreement by legal counsel of Employee's own choice or has elected not to retain legal counsel;

() Employee understands the terms and consequences of this Agreement and of the releases it contains;

() Employee is fully aware of the legal and binding effect of this Agreement; and

(e) Employee has not relied upon any representations or statements made by the Company that are not specifically set forth in this Agreement.

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK;
SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have executed this Agreement on the respective dates set forth below.

BRIAN WHITE, an individual

Dated: October 17, 2023 /s/ Brian White
Brian White

AMBARELLA CORPORATION

Dated: October 17, 2023 By /s/ Fermi Wang
Fermi Wang
Chief Executive Officer

EXHIBIT A

SUPPLEMENTAL RELEASE

This Supplemental Release ("Supplemental Release") is made by and between Brian White ("Employee") and Ambarella Corporation (the "Company") (collectively referred to as the "Parties" or individually referred to as a "Party").

RECITALS

WHEREAS, Employee was employed by the Company;

WHEREAS, Employee signed an offer letter with the Company on March 18, 2022 (the "Offer Letter");

WHEREAS, Employee signed a Change of Control and Severance Agreement with the Company on March 28, 2022 (the "Severance Agreement");

WHEREAS, Employee signed an At-Will Employment, Confidential Information, Invention Assignment, and Arbitration Agreement with the Company on March 28, 2022 (the "Confidentiality Agreement");

WHEREAS, the Parties entered into the Separation Agreement and Release, dated [October 17, 2023] (the "Agreement");

WHEREAS, the Company previously granted Employee certain equity awards ("Awards") covering ordinary shares of the Company ("Shares") under and subject to the Company's 2021 Equity Incentive Plan (the "Plan") and applicable award agreements thereunder, as set forth in Schedule 1 to the Agreement (the "Award Documents");

WHEREAS, Employee separated from employment with the Company effective [February 2, 2024] (the "Separation Date"); and

WHEREAS, the Parties wish to resolve any and all disputes, claims, complaints, grievances, charges, actions, petitions, and demands that the Employee may have against the Company and any of the Releasees as defined below, including, but not limited to, any and all claims arising out of or in any way related to Employee's employment with or separation from the Company.

NOW, THEREFORE, in consideration of the mutual promises made herein, the Company and Employee hereby agree as follows:

COVENANTS

1. Consideration.

a. *Payment*. [The Company agrees to pay Employee a total of $630,000.00, representing the sum of (x) twelve months of Employee's salary, plus (y) Employee's target bonus amount under the Fiscal Year 2023 Bonus Plan (the "Payment"), subject to the terms of this

Supplemental Release, including this Section 1(a). Such Payment will be made, less applicable withholdings, as soon as reasonably practicable following the date the Agreement becomes effective and irrevocable, but no later than April 15, 2024, subject to Section 13 of the Agreement.] OR [In addition to the Awards, the Company has granted Employee an award of vested restricted stock units covering [*Insert number*] Shares as of the date immediately prior to the Separation Date (the "Severance Award"), under the Plan and applicable award agreement thereunder (the "Severance Award Agreement"). The number of Shares subject to the Severance Award reflects such number determined as (i) the product of (A) 110%, and (B) $630,000, which represents the sum of (x) twelve months of Employee's salary, plus (y) Employee's target bonus amount under the Fiscal Year 2023 Bonus Plan, divided by (ii) the closing price of a Share as reported on the Nasdaq Global Select Market on the last trading day immediately prior to the Separation Date, with any resulting fractional Share rounded down to the nearest whole Share. Delivery of the Shares under the Severance Award will occur as soon as reasonably practicable following the date the Agreement becomes effective and irrevocable, but no later than April 15, 2024, subject to Section 13 of the Agreement. In the event that the conditions for payment of the Severance Award are not met in full, then the Severance Award will be forfeited automatically and Employee no longer will have any rights to such Severance Award or the Shares subject thereto.]

b. *Equity Awards.* Subject to the effectiveness of this Supplemental Release as provided herein, Employee's vesting in the following Awards (each, an "RSU Grant" and together, the "RSU Grants") will accelerate as to the number of Shares subject to the RSU Grant that would have been scheduled to vest through the one-year anniversary of the Separation Date had Employee remained employed with the Company through such date. As result of such acceleration, the following number of Shares will vest under each RSU Grant:

i. Grant Number U006706: 20,000 shares
ii. Grant Number U007922: 4,559 shares

Subject to the effectiveness of this Supplemental Release as provided herein and subject to Section 13 of the Agreement, all portions of the RSU Grants the vesting of which is accelerated pursuant to the terms herein will be settled within thirty (30) days following the Separation Date. The RSU Grants and the Shares issued thereunder will continue to be governed by the terms and conditions of the Award Documents.

To the extent any Award has not vested through the Separation Date or is not eligible for the vesting acceleration provided above in this subsection b., such unvested portion of the Award automatically has been forfeited as of the end of the Separation Date and Employee no longer has any rights to such forfeited Awards (or applicable portions thereof) or the Shares subject thereto. For purposes of clarity, the Award of performance-based restricted stock units Grant Number P000084 has been forfeited in its entirety as of the Separation Date without having vested as to any portion thereof, and never will become vested.

d. *COBRA*. Provided Employee timely elects continuation coverage pursuant to the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"), within the time period prescribed pursuant to COBRA, the Company shall pay directly to the insurance provider for the costs Employee otherwise would incur for COBRA coverage for Employe and Employee's eligible dependents for a period of twelve (12) months beginning the calendar month immediately following the calendar month in which the Separation Date occurred, or, if earlier, until the earlier of the date Employee is no longer eligible for continuation coverage under COBRA or Employee has secured health insurance coverage through another employer. However, if the Company determines in its sole discretion that it cannot provide the following COBRA benefits without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act), the Company will instead provide the Employee a taxable payment in an amount equal to the monthly COBRA premium that the Employee would be required to pay to continue the Employee's group health coverage in effect on the date of termination of employment (which amount will be based on the premium for the first month of COBRA coverage), which payments will be made regardless of whether the Employee elects COBRA continuation coverage and will commence in the month following the month of the Separation Date and continue for the period of months indicated in this section (the "COBRA Replacement Payments"). For the avoidance of doubt, the COBRA Replacement Payments may be used for any purpose, including, but not limited to continuation coverage under COBRA, and will be subject to any applicable withholdings.

e. *Acknowledgement*. Employee acknowledges that without this Supplemental Release, Employee is otherwise not entitled to the consideration listed in this section 1.

2. Release of Claims. Employee hereby releases and waives any and all claims, whether or not now known, that Employee has or might have against the Company or any of its current and/or former officers, directors, employees, agents, investors, attorneys, shareholders, administrators, affiliates, benefit plans, plan administrators, professional employer organization or co-employer, insurers, trustees, divisions, subsidiaries, predecessor and successor corporations, and assigns (collectively the "Releasees") arising from any omissions, acts, facts, or damages that have occurred up until and including that date Employee signed this Supplemental Release, including, but not limited to, the following: (a) claims arising under the federal or any state constitution; (b) claims arising under the federal or any state statute, including the Age Discrimination in Employment Act of 1967, the Older Workers Benefit Protection Act, Title VII of the Civil Rights Act of 1964, the Civil Rights Act of 1991, the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, the Equal Pay Act, the Fair Labor Standards Act, the Fair Credit Reporting Act, the Employee Retirement Income Security Act of 1974, the Worker Adjustment and Retraining Notification Act, the Family and Medical Leave Act, the Immigration Reform and Control Act, the California Family Rights Act, the California Labor Code, and the California Workers' Compensation Act; (c) claims arising under federal, state or local laws prohibiting discrimination in employment, including laws prohibiting discrimination in employment on the basis of race, sex, age, disability, national origin, or religion, such as the California Fair Employment and Housing Act; (d) claims for misclassification, wrongful discharge, breach of contract, breach of contract, breach of public policy, physical or mental harm or distress; (e) any claim for attorneys' fees and costs; (f) any and all claims relating to, or arising from, Employee's right to purchase, or actual purchase of shares of stock of the Company; (g) any claims of amounts due for fees, commissions, expenses, salary, bonuses, profit sharing, fringe benefits; and (h) any and all other claims arising from Employee's relationship with the Company or the termination of that relationship, including, but not limited to, claims that may have arisen since the date Employee signed the Agreement. Employee agrees that Employee will not file any legal action asserting any such claims. Employee agrees that the release set forth in this Section 2 shall be and remain in effect in all respects as a complete general release as to the matters released. This release does not extend to: (i) any obligations incurred under this Supplemental Release; or (ii) claims that cannot be released as a matter of law.

3. Return of Company Property. Employee's signature below constitutes Employee's certification under penalty of perjury that Employee has returned all documents and other items provided to Employee by the Company (with the exception of a copy of the Employee Handbook and personnel documents specifically relating to Employee), developed or obtained by Employee in connection with Employee's employment with the Company, or otherwise belonging to the Company.

4. Extension of The Agreement's Provisions. The undersigned Parties further acknowledge that the terms of the Agreement, including, but not limited to, Sections 4 (Payment of Salary and Receipt of All Benefits), 6 (Trade Secrets and Confidential Information), 8 (Protected Activity Not Prohibited), 12 (Tax Consequences), and 13 (Section 409A) of the Agreement shall apply to this Supplemental Release and are expressly incorporated herein.

5. Acknowledgment of Waiver of Claims under ADEA. Employee acknowledges that Employee is waiving and releasing any rights Employee may have under the Age Discrimination in Employment Act of 1967 ("ADEA"), and that this waiver and release is knowing and voluntary. Employee agrees that this waiver and release does not apply to any rights or claims that may arise under the ADEA after the date Employee signs this Supplemental Release. Employee acknowledges that the consideration given for this waiver and release is in addition to anything of value to which Employee was already entitled. Employee further acknowledges that Employee has been advised by this writing that: (a) Employee should consult with an attorney prior to executing this Supplemental Release; (b) Employee has twenty-one (21) days within which to consider this Supplemental Release; (c) Employee has seven (7) days following Employee's execution of this Supplemental Release to revoke this Supplemental Release; (d) this Supplemental Release shall not be effective until after the revocation period has expired; and (e) nothing in this Supplemental Release prevents or precludes Employee from challenging or seeking a determination in good faith of the validity of this waiver under the ADEA, nor does it impose any condition precedent, penalties, or costs for doing so, unless specifically authorized by federal law. In the event Employee signs this Supplemental Release and returns it to the Company in less than the 21-day period identified above, Employee hereby acknowledges that Employee has freely and voluntarily chosen to waive the time period allotted for considering this Supplemental Release. Employee acknowledges and understands that revocation must be accomplished by a written notification to the person executing this Supplemental Release on the Company's behalf that is received prior to the Effective Date. The Parties agree that changes, whether material or immaterial, do not restart the running of the 21-day period.

6. California Civil Code Section 1542. Employee acknowledges that Employee has been advised to consult with legal counsel and is familiar with the provisions of California Civil Code Section 1542, a statute that otherwise prohibits the release of unknown claims, which provides as follows:

> A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS THAT THE CREDITOR OR RELEASING PARTY DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE AND THAT, IF KNOWN BY HIM OR HER, WOULD HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR OR RELEASED PARTY.

Employee, being aware of said code section, agrees to expressly waive any rights Employee may have thereunder, as well as under any other statute or common law principles of similar effect.

7. No Pending or Future Lawsuits. Employee represents that Employee has no lawsuits, claims, or actions pending in Employee's name, or on behalf of any other person or entity, against the Company or any of the other Releasees. Employee also represents that Employee does not intend to bring any claims on Employee's own behalf or on behalf of any other person or entity against the Company or any of the other Releasees.

8. Mutual Nondisparagement. Employee agrees to refrain from any disparagement, defamation, libel, or slander of any of the Releasees, and agrees to refrain from any tortious interference with the contracts and relationships of any of the Releasees. The Company agrees to refrain from making any disparaging statements about Employee. Employee understands that the Company's obligations under this paragraph extend only to the Company's current executive officers and only for so long as each officer is an employee of the Company. Employee shall direct any inquiries by potential future employers to the Company's human resources department.

9. ARBITRATION. EXCEPT AS PROHIBITED BY LAW, THE PARTIES AGREE THAT ANY AND ALL DISPUTES ARISING OUT OF THE TERMS OF THE AGREEMENT OR THIS SUPPLEMENTAL RELEASE, THEIR INTERPRETATION, EMPLOYEE'S EMPLOYMENT WITH THE COMPANY OR THE TERMS THEREOF, OR ANY OF THE MATTERS HEREIN RELEASED, SHALL BE SUBJECT TO ARBITRATION UNDER THE FEDERAL ARBITRATION ACT (THE "FAA") AND THAT THE FAA SHALL GOVERN AND APPLY TO THIS ARBITRATION AGREEMENT WITH FULL FORCE AND EFFECT; HOWEVER, WITHOUT LIMITING ANY PROVISIONS OF THE FAA, A MOTION OR PETITION OR ACTION TO COMPEL ARBITRATION MAY ALSO BE BROUGHT IN STATE COURT UNDER THE PROCEDURAL PROVISIONS OF SUCH STATE'S LAWS RELATING TO MOTIONS OR PETITIONS OR ACTIONS TO COMPEL ARBITRATION. EMPLOYEE AGREES THAT, TO THE FULLEST EXTENT PERMITTED BY LAW, EMPLOYEE MAY BRING ANY SUCH ARBITRATION PROCEEDING ONLY IN EMPLOYEE'S INDIVIDUAL CAPACITY. ANY ARBITRATION WILL OCCUR IN SANTA CLARA COUNTY, CALIFORNIA, BEFORE JAMS, PURSUANT TO ITS EMPLOYMENT ARBITRATION RULES & PROCEDURES ("JAMS RULES"), EXCEPT AS EXPRESSLY PROVIDED IN THIS SECTION. THE PARTIES AGREE THAT THE ARBITRATOR SHALL HAVE THE POWER TO DECIDE ANY MOTIONS BROUGHT BY ANY PARTY TO THE ARBITRATION, INCLUDING MOTIONS FOR SUMMARY JUDGMENT AND/OR ADJUDICATION, AND MOTIONS TO DISMISS AND DEMURRERS, APPLYING THE STANDARDS SET FORTH UNDER THE CALIFORNIA CODE OF CIVIL PROCEDURE. THE PARTIES AGREE THAT THE ARBITRATOR SHALL ISSUE A WRITTEN DECISION ON THE MERITS. THE PARTIES ALSO AGREE THAT THE ARBITRATOR SHALL HAVE THE POWER TO AWARD ANY REMEDIES AVAILABLE UNDER APPLICABLE LAW, AND THAT THE ARBITRATOR MAY AWARD ATTORNEYS' FEES AND COSTS TO THE PREVAILING PARTY, WHERE PERMITTED BY APPLICABLE LAW. THE ARBITRATOR MAY GRANT INJUNCTIONS AND OTHER RELIEF IN SUCH DISPUTES. THE DECISION OF THE ARBITRATOR SHALL BE FINAL, CONCLUSIVE, AND BINDING ON THE PARTIES TO THE ARBITRATION. THE PARTIES AGREE THAT THE PREVAILING PARTY IN ANY ARBITRATION SHALL BE ENTITLED TO INJUNCTIVE RELIEF IN ANY COURT OF COMPETENT JURISDICTION TO ENFORCE THE ARBITRATION AWARD. THE PARTIES TO THE ARBITRATION SHALL EACH PAY AN EQUAL SHARE OF THE COSTS AND EXPENSES OF SUCH ARBITRATION, AND EACH PARTY SHALL SEPARATELY PAY FOR ITS RESPECTIVE COUNSEL FEES AND

EXPENSES; PROVIDED, HOWEVER, THAT THE ARBITRATOR MAY AWARD ATTORNEYS' FEES AND COSTS TO THE PREVAILING PARTY, EXCEPT AS PROHIBITED BY LAW. THE PARTIES HEREBY AGREE TO WAIVE THEIR RIGHT TO HAVE ANY DISPUTE BETWEEN THEM RESOLVED IN A COURT OF LAW BY A JUDGE OR JURY. NOTWITHSTANDING THE FOREGOING, THIS SECTION WILL NOT PREVENT EITHER PARTY FROM SEEKING INJUNCTIVE RELIEF (OR ANY OTHER PROVISIONAL REMEDY) FROM ANY COURT HAVING JURISDICTION OVER THE PARTIES AND THE SUBJECT MATTER OF THEIR DISPUTE RELATING TO THE AGREEMENT, THIS SUPPLEMENTAL RELEASE, AND THE AGREEMENTS INCORPORATED HEREIN BY REFERENCE. SHOULD ANY PART OF THE ARBITRATION AGREEMENT CONTAINED IN THIS SECTION CONFLICT WITH ANY OTHER ARBITRATION AGREEMENT BETWEEN THE PARTIES, INCLUDING, BUT NOT LIMITED TO THE ARBITRATION SECTION OF THE CONFIDENTIALITY AGREEMENT, THE PARTIES AGREE THAT THIS ARBITRATION AGREEMENT IN THIS SECTION SHALL GOVERN.

10.Entire Agreement. This Supplemental Release represents the entire agreement and understanding between the Company and Employee concerning the subject matter of this Supplemental Release and Employee's employment with and separation from the Company and the events leading thereto and associated therewith, and supersedes and replaces any and all prior agreements and understandings concerning the subject matter of this Supplemental Release and Employee's relationship with the Company, including the Severance Agreement, with the exception of the Agreement, the Confidentiality Agreement, [the Severance Award Agreement,] and the Award Documents, except as otherwise modified or superseded herein. For purposes of clarity, Employee will not be eligible for any severance payments or benefits under the Severance Agreement.

11.Effective Date. Employee has twenty-one (21) days to consider this Supplemental Release and seven (7) days to revoke this Supplemental Release after Employee executes this Supplemental Release. This Supplemental Release will become effective on the eighth (8th) day after Employee signed this Supplemental Release, so long as it has been signed by Employee within ten (10) days immediately following the Separation Date and has not been revoked by either Party before that date (the "Effective Date").

12.Governing Law and Forum and Signing of Supplemental Release. This Supplemental Release shall be governed by the laws of the State of California, without regard for choice-of-law provisions, except that any dispute regarding the enforceability of the arbitration section of this Supplemental Release shall be governed by the FAA. Employee consents to personal and exclusive jurisdiction and venue in the State of California. This Supplemental Release may be executed in counterparts and each counterpart shall be deemed an original and all of which counterparts taken together shall have the same force and effect as an original and shall constitute an effective, binding agreement on the part of each of the undersigned. The counterparts of this Supplemental Release may be executed and delivered by facsimile, photo, email PDF, or other electronic transmission or signature.

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK; SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have executed this Supplemental Release on the respective dates set forth below.

BRIAN WHITE, an individual

Dated: _________________, 2024 _________________

Brian White

AMBARELLA CORPORATION

Dated: _________________, 2024 By __________

Fermi Wang

Chief Executive Officer

SCHEDULE 1

EQUITY AWARDS

Grant Date	Type of Award	Grant Number	Equity Plan	Number of Shares Subject to Award at Grant[1]	Number of Shares That Will Have Vested Under the Award Through 1/31/2024[2]
3/28/2022	Restricted Stock Units	U006706	2021	80,000	35,000
3/2/2023	Restricted Stock Units	U007922	2021	13,678	3,420
4/3/2023	Performance-Based Restricted Stock Units	P000084	2021	13,678	0

(1) Number of Shares shown for any Award of performance-based restricted stock units is based on target number of Shares subject to the Award at grant.

(2) Subject to Employee’s continued employment with the Company through such date. The number of Shares shown does not include any Shares that may vest pursuant to the acceleration of vesting provisions set forth in the Supplemental Release.

Exhibit 10.2

Ambarella
3101 Jay Street
Santa Clara, CA 95054
Phone: +1.408.734.8888
Fax: +1.408.734.0788
www.ambarella.com

October 17, 2023

John Young

Dear John,

As discussed, I am pleased to offer you a position with Ambarella Corporation (the "Company") as Chief Financial Officer ("CFO"), reporting to the Company's Chief Executive Officer (the "CEO"), who currently is myself, effective upon Brian White's anticipated retirement at the end of the current fiscal year. You will perform the duties and responsibilities customary for such position and such other related duties that are lawfully assigned by the CEO. Your primary work location will continue to be the Company's offices in Santa Clara, California, subject to any travel required for business from time to time commensurate with your role as CFO.

This is a salaried full-time position. Upon assuming the role of CFO, you will be paid a base salary semi-monthly in the amount of $12,500.00 (an annual equivalent of $300,000) in accordance with the Company's normal payroll procedures. You will continue to be eligible to participate in the benefit plans and programs established by the Company for its employees from time to time, subject to their applicable terms and conditions, including without limitation any eligibility requirements. The Company reserves the right to modify, amend, suspend or terminate the benefit plans and programs it offers to its employees at any time. You should note that your base salary will be subject to review and adjustment from time to time by the Company's Board of Directors (the "Board") or its Compensation Committee (the "Committee"), as applicable, in its sole discretion.

Upon assuming the role of CFO, you will be eligible to participate in the Company's bonus plan with an annual bonus target of 70% of your base salary based on the plan guidelines. Bonus payments under such plan will be subject to the achievement of the applicable individual and Company objectives as determined by the Board or Committee, in its sole discretion, and may be prorated for the Company's fiscal year in which you assume the role of CFO. As retention is a key component of our bonus program, in order to earn any annual bonus, you must remain employed through the date such bonus is actually paid to you. Any bonus amount paid pursuant to such annual bonus program shall in no event be paid after the later of (i) 2½ months after the end of the Company's fiscal year in which such bonus is earned or, (ii) March 15th following the calendar year in which any such bonus is earned. Your annual bonus opportunity and the applicable terms and conditions, as well as the bonus plan, may be adjusted from time to time by the Board or the Committee, as applicable, at its sole discretion. No payments may be made under the bonus plan if required objectives are not achieved. In addition, the Board or Committee may award you discretionary bonuses at such times and with such terms and conditions as it deems appropriate from time to time.

In connection with your assuming the role of CFO, you will be granted an award of Restricted Stock Units covering 30,000 Ordinary Shares of the Company (the "RSU"), which will be scheduled to vest quarterly in equal installments on each March 15th, June 15th, September 15th, and December 15th (each a "*Quarterly Vest Date*") over 4 years. The grant date of the RSU will be no later than the next Quarterly Vest Date that follows the meeting of the Board in which your RSU is approved for grant. The RSU shall be subject to the terms and conditions of the Company's 2021 Equity Incentive Plan (the "Plan") and the related Restricted Stock Unit Award Agreement, including vesting requirements. No right to any stock is earned or accrued until such time that vesting occurs, nor does the grant confer any right to continue vesting or employment.

Further, you will also be eligible to participate in the Company's annual executive equity program beginning with fiscal year 2025 (beginning February 1, 2024). For fiscal year 2025, you will be eligible for an award of RSUs and/or performance-based RSUs with an aggregate target value of $1,850,000, subject to the terms and conditions of the Plan and the related Restricted Stock Unit Agreement(s).

All grants of equity awards will be subject to the approval of the Board or Committee, as applicable. The Board or Committee, as applicable, will determine in its sole discretion whether you will be granted any additional equity awards and the terms of any such awards in accordance with the terms of any applicable plan or arrangement that may be in effect from time to time.

In addition, the Company will enter into an amended Change of Control and Severance Agreement (the "Severance Agreement") with you that will provide you with certain benefits upon a termination of your employment under conditions described in the Severance Agreement. Any severance payments and benefits will be subject to the terms and conditions of such Severance Agreement, including provisions intended for such payments and benefits to be exempt from, or otherwise to comply with, the requirements of Section 409A of the Internal Revenue Code, and any ambiguities herein will be interpreted to so comply. You and the Company agree to work together in good faith to consider amendments to this letter agreement and to take such reasonable actions necessary, appropriate or desirable to avoid imposition of any additional tax or income recognition prior to actual payment to you under Section 409A. Upon the effectiveness of the Severance Agreement, the Severance Agreement will supersede in its entirety the Change of Control and Severance Agreement you previously entered into with the Company.

The Company is excited about your continuing employment in this new role. Nevertheless, you should be aware that your employment with the Company is for no specified period and constitutes at-will employment. As a result, you are free to resign at any time, for any reason or for no reason. Similarly, the Company is free to conclude its employment relationship with you at any time, with or without cause, and with or without notice. We request that, in the event of resignation, you give the Company at least two weeks' notice. Any termination of your employment for any reason will constitute, without any further required action by you, your resignation from all officer and/or director positions held at the Company or any of its subsidiaries and affiliates, and at the Board's request, you will execute any documents reasonably necessary to reflect such resignations.

This letter agreement, along with any agreements relating to proprietary rights between you and the Company, the Plan, and any award agreements under the Plan, set forth the terms of your employment with the Company and supersede any prior representations or agreements including, but not limited to, any representations made during your recruitment, interviews or pre-employment negotiations, whether written or oral. This letter agreement, including, but not limited to, its at-will employment provision, may not be modified or amended except by a written agreement signed by the President of the Company and you. All payments and benefits under this letter agreement will be subject to any applicable withholdings and payroll deductions.

We look forward to a continued beneficial and productive relationship.

Sincerely,

/s/ Feng-Ming Wang

Feng-Ming Wang
Chief Executive Officer

Agreed to and accepted:

/s/ John Young

John Young
Date: 10-17-2023

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
Certification of Principal Executive Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.

I, Feng-Ming Wang, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Ambarella, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: December 8, 2023

/s/ Feng-Ming Wang
Feng-Ming Wang
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
Certification of Principal Financial Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.

I, Brian C. White, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Ambarella, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: December 8, 2023

/s/ Brian C. White
Brian C. White
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

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

I, Feng-Ming Wang, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Ambarella, Inc. on Form 10-Q for the fiscal quarter ended October 31, 2023 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that the information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of Ambarella, Inc.

Date: December 8, 2023

By:	/s/ Feng-Ming Wang
Name:	Feng-Ming Wang
Title:	President and Chief Executive Officer

I, Brian C. White, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Quarterly Report of Ambarella, Inc. on Form 10-Q for the fiscal quarter ended October 31, 2023 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that the information contained in such Quarterly Report on Form 10-Q fairly presents in all material respects the financial condition and results of operations of Ambarella, Inc.

Date: December 8, 2023

By:	/s/ Brian C. White
Name:	Brian C. White
Title:	Chief Financial Officer