

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

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 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: 000-30269

PIXELWORKS, INC.

(Exact name of registrant as specified in its charter)

Oregon
(State or other jurisdiction of incorporation or organization)

91-1761992
(I.R.S. Employer Identification No.)

16760 SW Upper Boones Ferry Rd., Ste. 101

Portland, Oregon
(Address of principal executive offices)

97224
(Zip Code)

(503) 601-4545
(Registrant's telephone number, including area code)

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Stock, par value \$0.001 per share	PXLW	The Nasdaq Global 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, 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	<input type="checkbox"/>	Accelerated Filer	<input type="checkbox"/>
Non-accelerated Filer	<input checked="" type="checkbox"/>	Smaller Reporting Company	<input checked="" type="checkbox"/>
Emerging Growth Company	<input type="checkbox"/>		

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

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

The number of outstanding shares of the registrant's common stock, par value \$0.001 per share, was 56,693,517 as of November 3, 2023

PIXELWORKS, INC.
FORM 10-Q
FOR THE QUARTERLY PERIOD ENDED SEPTEMBER 30, 2023
TABLE OF CONTENTS

Note regarding Forward Looking Statements	3
Summary Risk Factors	4

PART I – FINANCIAL INFORMATION

Item 1.	Financial Statements (Unaudited)	6
	Condensed Consolidated Balance Sheets	6
	Condensed Consolidated Statements of Operations	7
	Condensed Consolidated Statements of Comprehensive Loss	8
	Condensed Consolidated Statements of Cash Flows	9
	Consolidated Statements of Shareholders' Equity	10
	Notes to Condensed Consolidated Financial Statements	11
Item 2.	Management's Discussion and Analysis of Financial Condition and Results of Operations	26
Item 4.	Controls and Procedures	34

PART II – OTHER INFORMATION

Item 1A.	Risk Factors	35
Item 6.	Exhibits	57
	<u>SIGNATURE</u>	58

NOTE REGARDING FORWARD LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains "forward-looking statements" that are based on current expectations, estimates, beliefs, assumptions and projections about our business. Words such as "may," "will," "appears," "predicts," "continue," "expects," "anticipates," "intends," "plans," "believes," "seeks," "estimates" and the negative or other variations of such words and similar expressions are intended to identify such forward-looking statements. These forward-looking statements include, but are not limited to, statements regarding: the impact of the COVID-19 pandemic (including any changes in laws or regulations in reaction to same) on Company personnel, on revenue, on Company suppliers, and on Company customers and their respective end markets; the redeemable non-controlling interests in our subsidiary, Pixelworks Semiconductor Technology (Shanghai) Co., Ltd. ("PWSH"), including the possible redemption thereof and the impact thereof, and any changes in carrying value of such interests that are attributable to foreign currency, and the rights related thereto; our strategic plan of re-aligning our mobile, projector, and video delivery businesses and timing and expectations related thereto, including the Listing and timing and benefits thereof, including improved access to new capital markets and the funding of our growth worldwide; our international operations; our strategy, including with respect to our intellectual property portfolio, research and development efforts and acquisition and investment opportunities; our gross profit margin; any future restructuring programs; our liquidity, capital resources and the sufficiency of our working capital and need for, or ability to secure, additional financing and the potential impact thereof; our contractual obligations, exchange rate and interest rate risks; our income taxes, including our ability to realize the benefit of net deferred tax assets, our uncertain tax position liability; accounting policies and use of estimates and potential impact of changes thereto; our revenue, the potential impact on our business of certain risks, including the concentration of our suppliers, risks of technological change, concentration of credit risk, changes in the markets in which we operate, our international operations, including in China and other parts of Asia and our exchange rate risks, our indemnification obligations and litigation risks and statements relating to our customer agreement that defrays R&D expenses, including amounts to be received thereunder, the accounting treatment thereof, the timing of the work thereunder, expenses and offsets related thereto and our expectations with respect to sales and offsets related thereto. These statements are not guarantees of future performance and involve certain risks and uncertainties that are difficult to predict and which may cause actual outcomes and results to differ materially from what is expressed or forecasted in such forward-looking statements. A detailed discussion of risks and uncertainties that could cause actual results and events to differ materially from such forward-looking statements, including risks related to the global economy and COVID-19, risks related to our operations in China, risks related to our business, risks related to our industry, and risks related to our strategic plan and STAR Market listing is included in Part II, Item 1A of this Quarterly Report on Form 10-Q. These forward-looking statements speak only as of the date on which they are made, and we do not intend to update any forward-looking statement to reflect events or circumstances after the date of this Quarterly Report on Form 10-Q unless required by law or regulation. If we do update or correct one or more forward-looking statements, you should not conclude that we will make additional updates or corrections with respect thereto or with respect to other forward-looking statements. Except where the context otherwise requires, in this Quarterly Report on Form 10-Q, the "Company," "Pixelworks," "we," "us" and "our" refer to Pixelworks, Inc., an Oregon corporation, and its subsidiaries.

SUMMARY RISK FACTORS

Our business is subject to varying degrees of risk and uncertainty. Investors should consider the risks and uncertainties summarized below, as well as the risks and uncertainties discussed in Part II, Item 1A, “Risk Factors” of this Quarterly Report on Form 10-Q. Investors should also refer to the other information contained or incorporated by reference in this Quarterly Report on Form 10-Q for the quarter ended September 30, 2023, including our condensed consolidated financial statements and related notes, and our other filings made from time to time with the Securities and Exchange Commission. Our business operations could also be affected by factors that we currently consider to be immaterial or that are unknown to us at the present time. If any of these risks occur, our business, financial condition, and results of operations could be materially and adversely affected, and the trading price of our common stock could decline.

Our business is subject to the following principal risks and uncertainties:

- The continued uncertain global economic environment and volatility in global credit, banking and financial markets could materially and adversely affect our business and results of operations.
- The ongoing effects of the COVID-19 pandemic have disrupted and may continue to disrupt our business or the business of our customers or suppliers, and as such, may adversely affect our financial condition.
- If we fail to meet the evolving needs of our markets, identify new products, services or technologies, or successfully compete in our target markets, our revenue and financial results will be adversely impacted.
- Our product strategy may not address the demands of our target customers and may not lead to increased revenue in a timely manner or at all, which could materially adversely affect our results of operations and limit our ability to grow.
- Achieving design wins involves lengthy competitive selection processes that require us to incur significant expenditures prior to generating any revenue or without any guarantee of any revenue related to this business. If we fail to generate revenue after incurring substantial expenses to develop our products, our business and operating results would suffer.
- If we fail to retain or attract the specialized technical and management personnel required to successfully operate our business, it could harm our business and may result in lost sales and diversion of management resources.
- We have significantly fewer financial resources than most of our competitors, which limits our ability to implement new products or enhancements to our current products, which in turn could adversely affect our future sales and financial condition.
- If we are not profitable in the future, we may be unable to continue our operations.
- A significant amount of our revenue comes from a limited number of customers and distributors exposing us to increased credit risk and subjecting our cash flow to the risk that any of our customers or distributors could decrease or cancel their orders.
- We generally do not have long-term purchase commitments from our customers and if our customers cancel or change their purchase commitments, our revenue and operating results could suffer.
- Our revenue and operating results can fluctuate from period to period, which could cause our share price to decline.
- If we are unable to generate sufficient cash from operations and are forced to seek additional financing alternatives our working capital may be adversely affected and our shareholders may experience dilution or our operations may be impaired.
- We license our intellectual property, which exposes us to risks of infringement or misappropriation, and may cause fluctuations in our operating results.
- We face a number of risks as a result of the concentration of our operations and customers in Asia.
- Our operations in Asia expose us to heightened risks due to natural disasters.
- Our international operations expose us to risks resulting from the fluctuations of foreign currencies.
- If we are unable to maintain effective disclosure controls and internal controls over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, and the market price of our common stock may be materially and adversely affected.
- Our dependence on selling to distributors and integrators increases the complexity of managing our supply chain and may result in excess inventory or inventory shortages.
- We may be unable to successfully manage any future growth, including the integration of any acquisition or equity investment, which could disrupt our business and severely harm our financial condition.
- Continued compliance with regulatory and accounting requirements will be challenging and will require significant resources.
- Regulations related to conflict minerals may adversely impact our business.
- Dependence on a limited number of sole-source, third-party manufacturers for our products exposes us to possible shortages based on low manufacturing yield, errors in manufacturing, uncontrollable lead-times for manufacturing, capacity allocation, price increases with little notice, volatile inventory levels and delays in product delivery, any of which could result in delays in satisfying customer demand, increased costs and loss of revenue.

- Shortages of materials used in the manufacturing of our products and other key components of our customers' products may increase our costs, impair our ability to ship our products on time and delay our ability to sell our products.
- Our highly integrated products and high-speed mixed signal products are difficult to manufacture without defects and the existence of defects could result in increased costs, delays in the availability of our products, reduced sales of products or claims against us.
- The development of new products is extremely complex and we may be unable to develop our new products in a timely manner, which could result in a failure to obtain new design wins and/or maintain our current revenue levels.
- Intense competition in our markets may reduce sales of our products, reduce our market share, decrease our gross profit and result in large losses.
- If we are not able to respond to the rapid technological changes and evolving industry standards in the markets in which we compete, or seek to compete, our products may become less desirable or obsolete.
- We use a customer-owned tooling process for manufacturing most of our products, which exposes us to the possibility of poor yields and unacceptably high product costs.
- We depend on the manufacturers of our semiconductor products not only to respond to changes in technology and industry standards but also to continue the manufacturing processes on which we rely.
- Because of our long product development process and sales cycles, we may incur substantial costs before we earn associated revenue and ultimately may not sell as many units of our products as we originally anticipated.
- Our developed software may be incompatible with industry standards and challenging and costly to implement, which could slow product development or cause us to lose customers and design wins.
- The competitiveness and viability of our products could be harmed if necessary licenses of third-party technology are not available to us on terms that are acceptable to us or at all.
- Our limited ability to protect our IP and proprietary rights could harm our competitive position by allowing our competitors to access our proprietary technology and to introduce similar products.
- Our products are characterized by average selling prices that can decline over relatively short periods of time, which will negatively affect our financial results unless we are able to reduce our product costs or introduce new products with higher average selling prices.
- The cyclical nature of the semiconductor industry may lead to significant variances in the demand for our products and could harm our operations.
- Risks associated with our operations in China, including the risk of changes in China's political, economic or social conditions or changes in U.S.-China relations, as well as liquidity risks, any of which may adversely and materially affect our results of operations, financial position and value of our securities.
- Legal and operational risks related to the PRC legal system, including uncertainties regarding the enforcement of laws, and sudden or unexpected changes in laws, required approvals and permissions, and regulations in China, which could adversely affect us and limit the legal protections available to the Company and its stockholders, as well as materially and adversely affect our business and value of our securities.
- If we are unable to implement our strategy to expand our PRC operations, our ability to access capital, customers, and talent in China could suffer, which in turn may materially and adversely affect our worldwide growth and revenue potential.
- Even if we complete a listing on The Shanghai Exchange's Science and Technology Innovation Board, known as the STAR Market (the "Listing"), we may not achieve the results contemplated by our business strategy and our strategy for growth in the PRC may not result in increases in the price of our common stock.
- Pixelworks Semiconductor Technology (Shanghai) Co., Ltd.'s ("PWSH") status as a publicly traded company that is controlled, but less than wholly owned, by Pixelworks could have an adverse effect on us.
- The STAR Market is relatively new, and as a result, it is difficult to predict the effect of the proposed Listing, which may in turn negatively affect the price of our common stock on the Nasdaq Global Market.
- If the Listing is completed, Pixelworks and PWSH both will be public reporting companies, but each will be subject to separate, and potentially inconsistent, accounting and disclosure requirements, which may lead to investor confusion or uncertainty that could cause decreased demand for, or fluctuations in the price of, one or both of the companies' publicly traded shares.
- The price of our common stock has and may continue to fluctuate substantially.

PART I – FINANCIAL INFORMATION

Item 1. Financial Statements.

PIXELWORKS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands)
(Unaudited)

	September 30, 2023	December 31, 2022
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 50,318	\$ 56,821
Accounts receivable, net	10,165	10,047
Inventories	5,905	1,760
Prepaid expenses and other current assets	2,307	3,745
Total current assets	68,695	72,373
Property and equipment, net	6,562	4,632
Operating lease right-of-use assets	5,365	3,331
Other assets, net	2,145	3,580
Goodwill	18,407	18,407
Total assets	\$ 101,174	\$ 102,323
LIABILITIES, REDEEMABLE NON-CONTROLLING INTEREST AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 4,356	\$ 3,143
Accrued liabilities and current portion of long-term liabilities	10,203	8,849
Current portion of income taxes payable	138	519
Total current liabilities	14,697	12,511
Long-term liabilities, net of current portion	1,645	1,005
Deposit liability	13,227	13,537
Operating lease liabilities, net of current portion	3,043	2,148
Income taxes payable, net of current portion	951	872
Total liabilities	33,563	30,073
Commitments and contingencies (Note 12)		
Redeemable non-controlling interest	27,398	28,919
Shareholders' equity:		
Preferred stock		—
Common stock	485,205	481,229
Accumulated other comprehensive income	4,439	2,178
Accumulated deficit	(473,417)	(450,985)
Total Pixelworks, Inc. shareholders' equity	16,227	32,422
Non-controlling interest	23,986	10,909
Total shareholders' equity	40,213	43,331
Total liabilities, redeemable non-controlling interest and shareholders' equity	\$ 101,174	\$ 102,323

See accompanying notes to condensed consolidated financial statements.

PIXELWORKS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share data)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Revenue, net	\$ 16,032	\$ 17,552	\$ 39,603	\$ 53,258
Cost of revenue (1)	9,150	8,756	22,870	26,351
Gross profit	6,882	8,796	16,733	26,907
Operating expenses:				
Research and development (2)	8,752	8,445	23,925	24,126
Selling, general and administrative (3)	5,776	5,082	17,316	16,590
Total operating expenses	14,528	13,527	41,241	40,716
Loss from operations	(7,646)	(4,731)	(24,508)	(13,809)
Interest income and other, net	471	165	1,615	428
Total other income, net	471	165	1,615	428
Loss before income taxes	(7,175)	(4,566)	(22,893)	(13,381)
Provision (benefit) for income taxes	158	(70)	318	245
Net loss	(7,333)	(4,496)	(23,211)	(13,626)
Less: Net (income) loss attributable to redeemable non-controlling interest and non-controlling interest	334	—	779	(470)
Net loss attributable to Pixelworks Inc.	\$ (6,999)	\$ (4,496)	\$ (22,432)	\$ (14,096)
Net loss attributable to Pixelworks Inc. per share - basic and diluted	\$ (0.12)	\$ (0.08)	\$ (0.40)	\$ (0.26)
Weighted average shares outstanding - basic and diluted	56,410	54,826	55,917	54,120
(1) Includes:				
Stock-based compensation	21	(47)	67	20
Amortization of acquired intangible assets	—	—	—	72
(2) Includes stock-based compensation	452	565	1,470	1,795
(3) Includes:				
Stock-based compensation	779	776	2,140	2,223
Amortization of acquired intangible assets	—	—	—	18

See accompanying notes to condensed consolidated financial statements.

PIXELWORKS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(In thousands)
(Unaudited)

	<u>Three Months Ended September 30,</u>		<u>Nine Months Ended September 30,</u>	
	<u>2023</u>	<u>2022</u>	<u>2023</u>	<u>2022</u>
Net loss	\$ (7,333)	\$ (4,496)	\$ (23,211)	\$ (13,626)
Other comprehensive loss, net of tax:				
Foreign currency translation adjustment	161	1,657	1,372	3,173
Comprehensive loss	(7,172)	(2,839)	(21,839)	(10,453)
Less: comprehensive (income) loss attributable to redeemable non-controlling interest and non-controlling interest	334	—	779	(470)
Total comprehensive loss attributable to Pixelworks, Inc.	<u>\$ (6,838)</u>	<u>\$ (2,839)</u>	<u>\$ (21,060)</u>	<u>\$ (10,923)</u>

See accompanying notes to condensed consolidated financial statements.

PIXELWORKS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)
(Unaudited)

	Nine Months Ended September 30,	
	2023	2022
Cash flows from operating activities:		
Net loss	\$ (23,211)	\$ (13,626)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	3,677	4,038
Depreciation and amortization	3,211	3,490
Deferred income tax expense	314	396
Reversal of uncertain tax positions	(2)	(121)
Amortization of acquired intangible assets	—	90
Changes in operating assets and liabilities:		
Accounts receivable, net	(118)	(2,062)
Inventories	(4,145)	(1,247)
Prepaid expenses and other current and long-term assets, net	4,683	3,131
Accounts payable	1,133	(276)
Accrued current and long-term liabilities	(2,268)	(5,084)
Income taxes payable	(300)	(232)
Net cash used in operating activities	(17,026)	(11,503)
Cash flows from investing activities:		
Purchases of property and equipment	(3,440)	(1,287)
Purchases of licensed technology	—	(1,415)
Net cash used in investing activities	(3,440)	(2,702)
Cash flows from financing activities:		
Net proceeds from issuance of equity interest to non-controlling interest	14,596	10,738
Payments on asset financings	(932)	(892)
Proceeds from issuance of common stock under employee equity incentive plans	299	387
Net cash provided by financing activities	13,963	10,233
Net decrease in cash and cash equivalents	(6,503)	(3,972)
Cash and cash equivalents, beginning of period	56,821	61,587
Cash and cash equivalents, end of period	\$ 50,318	\$ 57,615
Supplemental disclosure of cash flow information:		
Cash paid during the period for income taxes, net of refunds received	\$ 302	\$ 17
Cash paid during the period for interest	116	153
Non-cash investing and financing activities:		
Acquisitions of property and equipment and other assets under extended payment terms	\$ 1,980	\$ 160

See accompanying notes to condensed consolidated financial statements.

PIXELWORKS, INC.
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(In thousands, except share data)
(Unaudited)

	Common Stock		Accumulated Other Comprehensive Income (loss)	Accumulated Deficit	Non-Controlling Interest	Total Shareholders' Equity
	Shares	Amount				
2023						
Balance as of December 31, 2022	55,113,186	\$ 481,229	\$ 2,178	\$ (450,985)	\$ 10,909	\$ 43,331
Stock issued under employee equity incentive plans	606,539	156	—	—	—	156
Stock-based compensation expense	—	1,166	—	—	—	1,166
Foreign currency translation adjustment	—	—	(333)	—	(33)	(366)
Net proceeds from issuance of equity interest to non-controlling interest	—	—	—	—	14,596	14,596
Net loss attributable to non-controlling interest	—	—	—	—	(338)	(338)
Net loss attributable to Pixelworks, Inc.	—	—	—	(9,396)	—	(9,396)
Balance as of March 31, 2023	55,719,725	\$ 482,551	\$ 1,845	\$ (460,381)	\$ 25,134	\$ 49,149
Stock issued under employee equity incentive plans	396,703	—	—	—	—	—
Stock-based compensation expense	—	1,259	—	—	—	1,259
Foreign currency translation adjustment	—	—	2,353	—	(776)	1,577
Net loss attributable to non-controlling interest	—	—	—	—	(107)	(107)
Net loss attributable to Pixelworks, Inc.	—	—	—	(6,037)	—	(6,037)
Balance as of June 30, 2023	56,116,428	\$ 483,810	\$ 4,198	\$ (466,418)	\$ 24,251	\$ 45,841
Stock issued under employee equity incentive plans	577,089	\$ 143	\$ —	\$ —	\$ —	\$ 143
Stock-based compensation expense	—	1,252	—	—	—	1,252
Foreign currency translation adjustment	—	—	241	—	(80)	161
Net loss attributable to non-controlling interest	—	—	—	—	(185)	(185)
Net loss attributable to Pixelworks, Inc.	—	—	—	(6,999)	—	(6,999)
Balance as of September 30, 2023	56,693,517	\$ 485,205	\$ 4,439	\$ (473,417)	\$ 23,986	\$ 40,213
2022						
Balance as of December 31, 2021	53,367,136	\$ 475,644	\$ (468)	\$ (434,955)	\$ —	\$ 40,221
Stock issued under employee equity incentive plans	630,876	217	—	—	—	217
Stock-based compensation expense	—	1,049	—	—	—	1,049
Foreign currency translation adjustment	—	—	(152)	—	—	(152)
Net loss attributable to Pixelworks, Inc.	—	—	—	(4,592)	—	(4,592)
Balance as of March 31, 2022	53,998,012	\$ 476,910	\$ (620)	\$ (439,547)	\$ —	\$ 36,743
Stock issued under employee equity incentive plans	233,860	—	—	—	—	—
Stock-based compensation expense	—	1,695	—	—	—	1,695
Foreign currency translation adjustment	—	—	1,668	—	—	1,668
Net loss attributable to Pixelworks, Inc.	—	—	—	(5,008)	—	(5,008)
Balance as of June 30, 2022	54,231,872	\$ 478,605	\$ 1,048	\$ (444,555)	\$ —	\$ 35,098
Stock issued under employee equity incentive plans	604,167	170	—	—	—	170
Stock-based compensation expense	—	1,294	—	—	—	1,294
Foreign currency translation adjustment	—	—	1,657	—	—	1,657
Net proceeds from issuance of equity interest to non-controlling interest	—	—	—	—	10,738	10,738
Net loss attributable to Pixelworks, Inc.	—	—	—	(4,496)	—	(4,496)
Balance as of September 30, 2022	54,836,039	\$ 480,069	\$ 2,705	\$ (449,051)	\$ 10,738	\$ 44,461

See accompanying notes to condensed consolidated financial statements.

PIXELWORKS, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share data)
(Unaudited)

NOTE 1: BASIS OF PRESENTATION

Nature of Business

Pixelworks is a leading provider of high-performance and power-efficient visual processing semiconductor and software solutions that enable consistently high-quality and authentic viewing experiences in a wide variety of applications. We define our primary target markets as Mobile (smartphone and tablet), Home & Enterprise (projectors, personal video recorders ("PVR"), and over-the-air ("OTA") streaming devices), and Cinema (creation, remastering, and delivery of digital video content). Previously we classified our primary target markets as Mobile, Projector, Video Delivery and Cinema, but have since aggregated the Projector and Video Delivery categories into one market called "Home & Enterprise".

Pixelworks has been a pioneer in visual processing technology for over 20 years. We were one of the first companies to commercially launch a video System on Chip ("SoC") capable of deinterlacing 1080i HDTV signals and one of the first companies with a commercial dual-channel 1080i deinterlacer integrated circuit. We launched one of the industry's first single-chip SoCs for digital projection. We were the first company to integrate motion estimation / motion compensation technology ("MEMC") as a mobile-optimized solution for smartphones. In 2019, we introduced our Hollywood award-winning TrueCut Motion™ video platform, the industry's first motion grading technology that allows fine tuning of motion appearance in cinematic content.

As of September 30, 2023, we had an intellectual property portfolio of 278 patents related to the visual display of digital image data. We focus our research and development efforts on developing video algorithms that improve quality, and architectures that reduce system power, cost, bandwidth and increase overall system performance and device functionality. We seek to expand our technology portfolio through internal development and co-development with business partners, and we continually evaluate acquisition opportunities and other ways to leverage our technology into other high-value markets.

Our core visual processing technology intelligently processes digital images and video from a variety of sources and optimizes the content for a superior viewing experience. Rapid growth in video and gaming consumption, combined with the move towards bright, high resolution, high frame rate and high refresh rate displays, especially in mobile, is increasing the demand for our solutions. Our technologies can be applied across a wide range of applications: cinema theaters, low-power mobile tablets, smartphones, streaming devices, and digital projectors for the home, school, or the workplace. Our products are designed and optimized for power, cost, bandwidth, viewer experience, and overall system performance, according to the requirements of the specific application. On occasion, we have also licensed our technology.

During the third quarter of 2021, we engaged in a strategic plan to re-align our Mobile and Home & Enterprise businesses to improve their focus on their Asia-centered customers and employee stakeholders. Our subsidiary, Pixelworks Semiconductor Technology (Shanghai) Co., Ltd. (or "PWSH"), now operates these businesses as a full profit-and-loss center underneath Pixelworks. In connection with this strategic plan, the Company and PWSH closed three separate financing transactions in 2021 and 2022, which are further described in "Note 13: Redeemable Non-Controlling Interest and Equity Interest of PWSH Sold to Employees" and "Note 14: Non-Controlling Interest", which are incorporated by reference into this section.

PWSH is in the process of preparing to file an application for an initial public offering of PWSH shares on the Shanghai Stock Exchange's Science Technology Innovation Board, known as the STAR Market (the "Listing"). We believe that the Listing will have many benefits, including improved access to new capital markets and the funding of PWSH's growth worldwide. The process of going public on the STAR Market is lengthy and includes several periods of review by various government agencies of the People's Republic of China ("PRC"), such as the Shanghai Stock Exchange ("SSE") and the China Securities Regulatory Commission ("CSRC"). There is no guarantee that PWSH will be approved for a Listing at any point in the future. The CSRC and the SSE have recently tightened the standards for the STAR Market and are currently advising companies that are not yet profitable under China GAAP standards against filing an IPO application in the present environment. The Company believes this is in large part due to the current economic conditions in China and the recent performance of companies already listed on the STAR Market that were not profitable at the time of their IPO. PWSH is not currently profitable under China GAAP standards. The CSRC and the SSE may relax the standards, but there is no guarantee that this will happen in any particular time frame. The Company will continue to prepare our application so it is ready to file once the situation changes or PWSH achieves profitability under China GAAP standards. Any listing of PWSH on the STAR Market will not change the status of PXLW as a U.S. public company. We are neither a PRC operating company nor do we conduct our operations in China through the use of variable interest entities.

Pixelworks was founded in 1997 and is incorporated under the laws of the state of Oregon. On August 2, 2017, we acquired ViXS Systems, Inc., a corporation organized in Canada ("ViXS").

Condensed Consolidated Financial Statements

The financial information included herein for the three and nine months ended September 30, 2023 and 2022 is prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP") and is unaudited. Such information reflects all adjustments, consisting of only normal recurring adjustments, that are, in the opinion of management, necessary for a fair presentation of our condensed consolidated financial statements for these interim periods. The financial information as of December 31, 2022 is derived from our audited consolidated financial statements and notes thereto for the fiscal year ended December 31, 2022, included in Item 8 of our Annual Report on Form 10-K, filed with the Securities and Exchange Commission on March 8, 2023, and should be read in conjunction with such consolidated financial statements.

The results of operations for the three and nine months ended September 30, 2023 and 2022 are not necessarily indicative of the results expected for future periods or for the entire fiscal year ending December 31, 2023.

Recent Accounting Pronouncements

The Company's recently adopted accounting pronouncements are disclosed in "Note 2. Summary of Significant Accounting Policies" in Part II, Item 8 of our Annual Report on Form 10-K, filed with the Securities and Exchange Commission on March 8, 2023. We did not adopt any new accounting pronouncements during the three or nine months ended September 30, 2023.

Use of Estimates

The preparation of condensed consolidated financial statements in conformity with U.S. GAAP requires us to make estimates and judgments that affect amounts reported in the financial statements and accompanying notes. Our significant estimates and judgments include those related to revenue recognition, valuation of excess and obsolete inventory, useful lives and recoverability of equipment and other long-lived assets, valuation of goodwill, valuation of share-based payments, income taxes, litigation and other contingencies. The actual results experienced could differ materially from our estimates.

NOTE 2: BALANCE SHEET COMPONENTS

Accounts Receivable, Net

Accounts receivable are contract assets that arise from the performance of our obligation pursuant to our contracts with our customers and represent our unconditional right to payment for the satisfaction of our performance obligations. They are recorded at invoiced amount and do not bear interest when recorded or accrue interest when past due. Accounts receivable are stated net of an allowance for doubtful accounts, which is maintained for estimated losses that may result from the inability of our customers to make required payments.

Accounts receivable net, consist of the following:

	September 30, 2023	December 31, 2022
Accounts receivable, gross	\$ 10,191	\$ 10,124
Less: allowance for doubtful accounts	(26)	(77)
Accounts receivable, net	<u>\$ 10,165</u>	<u>\$ 10,047</u>

The following is the change in our allowance for doubtful accounts:

	Nine Months Ended September 30,	
	2023	2022
Balance at beginning of period	\$ 77	\$ 36
Reductions credited	(51)	(10)
Balance at end of period	<u>\$ 26</u>	<u>\$ 26</u>

Inventories

Inventories consist of finished goods and work-in-process, and are stated at the lower of standard cost (which approximates actual cost on a first-in, first-out basis) or market (net realizable value).

Inventories consist of the following:

	September 30, 2023	December 31, 2022
Finished goods	\$ 4,251	\$ 480
Work-in-process	1,654	1,280
Inventories	<u>\$ 5,905</u>	<u>\$ 1,760</u>

Property and Equipment, Net

Property and equipment, net consists of the following:

	September 30, 2023	December 31, 2022
Gross property and equipment	\$ 25,084	\$ 20,792
Less: accumulated depreciation and amortization	(18,522)	(16,160)
Property and equipment, net	<u>\$ 6,562</u>	<u>\$ 4,632</u>

Acquired Intangible Assets, Net

In connection with the acquisition of ViXS (the "Acquisition"), we recorded certain identifiable intangible assets. Acquired intangible assets resulting from this transaction were assigned to Pixelworks, Inc., and consist of the following:

	September 30, 2023	December 31, 2022
Developed technology	\$ 5,050	\$ 5,050
Customer relationships	1,270	1,270
Backlog and tradename	410	410
	6,730	6,730
Less: accumulated amortization	(6,730)	(6,730)
Acquired intangible assets, net	<u>\$ —</u>	<u>\$ —</u>

Developed technology and customer relationships were fully amortized as of March 31, 2022, tradename was fully amortized as of March 31, 2019 and backlog was fully amortized as of September 30, 2018.

Goodwill

Goodwill resulted from the Acquisition, whereby we recorded goodwill of \$18,407.

Goodwill is not amortized; however, we review goodwill for impairment annually and whenever events or changes in circumstances indicate that the fair value of the reporting unit may be less than its carrying value. Conditions that would trigger an impairment assessment include, but are not limited to, a significant adverse change in our business climate or a current period operating or cash flow loss combined with a history of operating or cash flow losses or a projection or forecast that demonstrates continued losses or adverse changes in legal factors, regulation or business environment or a sustained decrease in stock price. Our stock price has declined recently, however, combined with our assessment of other events and circumstances, we do not believe this to be a current triggering event requiring a goodwill impairment assessment as of September 30, 2023. . We perform our annual impairment assessment for goodwill on November 30 of each year.

Accrued Liabilities and Current Portion of Long-Term Liabilities

Accrued liabilities and current portion of long-term liabilities consist of the following:

	September 30, 2023	December 31, 2022
Accrued payroll and related liabilities	\$ 3,938	\$ 3,632
Operating lease liabilities, current	2,423	1,391
Current portion of accrued liabilities for asset financings	1,295	876
Deferred revenue	400	230
Accrued interest payable	88	246
Accrued commissions and royalties	30	210
Other	2,029	2,264
Accrued liabilities and current portion of long-term liabilities	<u>\$ 10,203</u>	<u>\$ 8,849</u>

Deferred revenues are contract liabilities that arise when cash payments are received or due in advance of the satisfaction of our performance obligations. Any increase in deferred revenues is driven by cash payments received or due in advance of satisfying our performance obligation pursuant to the contract with the customer. Any decrease in deferred revenues is due to the recognition of revenue related to satisfying our performance obligation.

The change in deferred revenue is as follows:

	Nine Months Ended September 30,	
	2023	2022
Deferred revenue:		
Balance at beginning of period	\$ 230	\$ 50
Revenue deferred	385	940
Revenue recognized	(215)	(730)
Balance at end of period	<u>\$ 400</u>	<u>\$ 260</u>

NOTE 3: FAIR VALUE MEASUREMENTS

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Three levels of inputs may be used to measure fair value:

- Level 1: Valuations based on quoted prices in active markets for identical assets and liabilities.
- Level 2: Valuations based on inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Valuations based on unobservable inputs in which there is little or no market data available, which require the reporting entity to develop its own assumptions.

The following table presents information about our assets measured at fair value on a recurring basis in the condensed consolidated balance sheets as of September 30, 2023 and December 31, 2022:

	Level 1	Level 2	Level 3	Total
As of September 30, 2023:				
Assets:				
Cash equivalents:				
Certificates of deposit	\$ 10,000	\$ —	\$ —	\$ 10,000
Money market funds	970	—	—	970
As of December 31, 2022:				
Assets:				
Cash equivalents:				
Money market funds	\$ 18,836	\$ —	\$ —	\$ 18,836
Certificates of deposit	5,000	—	—	5,000

We primarily use the market approach to determine the fair value of our financial assets. The fair value of our current assets and liabilities, including accounts receivable and accounts payable approximates the carrying value due to the short-term nature of these balances. We have currently chosen not to elect the fair value option for any items that are not already required to be measured at fair value in accordance with U.S. GAAP.

NOTE 4: LEASES

We determine if an arrangement is a lease at inception. Operating leases are included in operating lease right-of-use (“ROU”) assets, accrued liabilities and current portion of long-term liabilities, and operating lease liabilities in our condensed consolidated balance sheets.

ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. Operating lease ROU assets also exclude lease incentives received. For purposes of calculating operating lease liabilities, lease terms may be deemed to include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option.

We have operating leases for office buildings and two vehicles. Our leases have remaining lease terms of one year to four years. Supplemental information related to lease expense and valuation of the ROU assets and lease liabilities was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Operating lease cost:	\$ 765	\$ 659	\$ 2,129	\$ 2,004

	Nine Months Ended September 30,	
	2023	2022
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	\$ 2,025	\$ 2,076
Supplemental non-cash information related to lease liabilities arising from obtaining right-of-use assets	3,881	734
Weighted average remaining lease term (in years)	2.39	2.90
Weighted average discount rate	6.93 %	4.18 %

Future minimum lease payments under non-cancellable leases as of September 30, 2023 were as follows:

Operating Lease Payments

Three months ending December 31, 2023	\$ 594
Years ending December 31:	
2024	2,733
2025	1,856
2026	698
Thereafter	86
Total operating lease payments	5,967
Less imputed interest	(501)
Total operating lease liabilities	\$ 5,466

As of September 30, 2023, we had no operating lease liabilities that had not commenced.

NOTE 5: REVENUE

Revenue is recognized when control of the promised good or service is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those goods or services. Our principal revenue generating activities consist of the following:

Product Sales - We sell integrated circuit products, also known as “chips” or “ICs”, based upon a customer purchase order, which includes a fixed price per unit. ICs are sold into two target end markets: Mobile and Home & Enterprise. We have elected to account for shipping and handling as activities to fulfill the promise to transfer the goods, and not evaluate whether these activities are promised services to the customer. We generally satisfy our single performance obligation upon shipment of the goods to the customer and recognize revenue at a point in time upon shipment of the underlying product.

Our shipments are subject to limited return rights subject to our limited warranty for our products sold. In addition, we may provide other credits to certain customers pursuant to price protection and stock rotation rights, all of which are considered variable consideration when estimating the amount of revenue to recognize. We use the “most likely amount” method to determine the amount of consideration to which we are entitled. Our estimate of variable consideration is reassessed at the end of each reporting period based on changes in facts and circumstances. Historically, returns and credits have not been material.

Engineering Services - We enter into contracts for professional engineering services that include software development and customization. We identify each performance obligation in our engineering services agreements (“ESAs”) at contract inception. The ESA generally includes project deliverables specified by the customer. The performance obligations in the ESA are generally combined into one deliverable, with the pricing for services stated at a fixed amount. Services provided under the ESA generally result in the transfer of control over time. We recognize revenue on ESAs based on the proportion of labor hours expended to the total hours expected to complete the contract performance obligation. ESAs could include substantive customer acceptance provisions. In ESAs that include substantive customer acceptance provisions, we recognize revenue upon customer acceptance.

License Revenue - On occasion, we derive revenue from the license of our internally developed intellectual property (“IP”). Additionally, for certain IP license agreements, royalties are collected as customers sell their own products that incorporate our IP. IP licensing agreements that we enter into generally provide licensees the right to incorporate our IP components in their products with terms and conditions that vary by licensee. Fees under these agreements generally include license fees or royalty fees relating to our IP and support service fees, resulting in two performance obligations. We evaluate each performance obligation, which generally results in the transfer of control at a point in time for the license fee and over time for support services. Royalties are recognized as revenue is earned, generally when the customer sells its products that incorporate our IP.

Other - From time-to-time, we enter into arrangements for other revenue generating activities, such as providing technical support services to customers through technical support agreements. In each circumstance, we evaluate such arrangements for our performance obligations which generally results in the transfer of control for such services over time. Historically, such arrangements have not been material to our operating results.

The following table provides information about disaggregated revenue based on the preceding categories, with IC sales disaggregated further into net revenue from external customers for each group of similar products, for the three and nine months ended September 30, 2023 and 2022:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
IC sales	\$ 15,972	\$ 17,188	\$ 39,187	\$ 52,337
Engineering services, license and other	60	364	416	921
Total revenues	\$ 16,032	\$ 17,552	\$ 39,603	\$ 53,258

IC sales by end market:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Mobile market	\$ 8,237	\$ 5,738	\$ 18,158	\$ 18,519
Home & Enterprise market	7,735	11,450	21,029	33,818
Total IC sales	\$ 15,972	\$ 17,188	\$ 39,187	\$ 52,337

For segment information, including revenue by geographic region, see "Note 10: Segment Information".

Our contract balances include accounts receivable and deferred revenue. For information concerning these contract balances, see "Note 2: Balance Sheet Components".

Payment terms and conditions for goods and services provided vary by contract; however, payment is generally required within 30 to 60 days of invoicing.

We have not identified any material costs incurred associated with obtaining a contract with a customer which would meet the criteria to be capitalized, therefore, these costs are expensed as incurred.

There is no amount of transaction price allocated to unsatisfied performance obligations with an original expected duration of greater than one year.

Revenue related to the Cinema market was not material during the three and nine months ended September 30, 2023 and 2022, and was therefore included in the engineering services, license revenue and other category within the Mobile market.

NOTE 6: INTEREST INCOME AND OTHER, NET

Interest income and other, net, consists of the following:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Interest income	\$ 500	\$ 165	\$ 1,487	\$ 388
Interest expense	(29)	(10)	3	(32)
Other income	—	10	125	72
Total interest income and other, net	\$ 471	\$ 165	\$ 1,615	\$ 428

NOTE 7: RESEARCH AND DEVELOPMENT

During the third quarter of 2021, we entered into a best-efforts co-development agreement with a customer to defray a portion of the research and development expenses we expect to incur in connection with our development of an integrated circuit product. We expect our development costs to exceed the amounts received from the customer, and although we expect to sell units of the product to the customer, there is no commitment or agreement from the customer for such sales at this time. Additionally, we retain ownership of any modifications or improvements to our pre-existing intellectual property and may use such improvements in products sold to other customers.

Under the co-development agreement, \$5,800 was payable by the customer within 60 days of the date of the agreement and three additional payments of \$2,500, \$1,900 and \$1,300 are each payable upon completion of certain development milestones. As amounts become due and payable, they are offset against research and development expense on a pro rata basis. We recognized offsets to research and development expense of \$43 and \$0, during the three months ended September 30, 2023 and 2022, respectively and \$1,943 and \$1,838 during the nine months ended September 30, 2023 and 2022, respectively.

NOTE 8: INCOME TAXES

The provision for income taxes during the 2023 and 2022 periods is primarily comprised of current and deferred tax expense in profitable cost-plus foreign jurisdictions, accruals for tax contingencies in foreign jurisdictions and benefits for the reversal of previously recorded foreign tax contingencies due to the expiration of the applicable statutes of limitation. We recorded a benefit for the reversal of previously recorded foreign tax contingencies of \$2 and \$121 during the first nine months of 2023 and 2022, respectively.

As we do not believe that it is more likely than not that we will realize a benefit from our U.S. net deferred tax assets, including our U.S. net operating losses, we continue to provide a full valuation allowance against essentially all of those assets, therefore, we do not incur significant U.S. income tax expense or benefit. We have not recorded a valuation allowance against our other foreign net deferred tax assets, with the exception of Canada and China, as we believe that it is more likely than not that we will realize a benefit from those assets.

As of September 30, 2023 and December 31, 2022, the amount of our uncertain tax positions was a liability of \$381 and \$378, respectively, as well as a contra deferred tax asset of \$1,443 and \$1,353, respectively. A number of years may elapse before an uncertain tax position is resolved by settlement or statute of limitation. Settlement of any particular position could require the use of cash. If the uncertain tax positions we have accrued for are sustained by the taxing authorities in our favor or if the statute of limitation expires, the reduction of the liability will reduce our effective tax rate. We reasonably expect reductions in the liability for unrecognized tax benefits and interest and penalties of approximately \$3 within the next twelve months due to the expiration of statutes of limitation in foreign jurisdictions. We recognize interest and penalties related to uncertain tax positions in income tax expense in our condensed consolidated statements of operations.

NOTE 9: EARNINGS (LOSS) PER SHARE

The following table sets forth the computation of basic and diluted net loss per share (in thousands, except per share data):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net loss	\$ (7,333)	\$ (4,496)	\$ (23,211)	\$ (13,626)
Less: Net (income) loss attributable to redeemable non-controlling interest and non-controlling interest	334	—	779	(470)
Net loss attributable to Pixelworks, Inc. - for purposes of earnings per share calculation	<u>\$ (6,999)</u>	<u>\$ (4,496)</u>	<u>\$ (22,432)</u>	<u>\$ (14,096)</u>
Weighted average shares outstanding - basic and diluted	56,410	54,826	55,917	54,120
Net loss attributable to Pixelworks, Inc. per share - basic and diluted	<u>\$ (0.12)</u>	<u>\$ (0.08)</u>	<u>\$ (0.40)</u>	<u>\$ (0.26)</u>

Basic and diluted earnings (loss) per share was computed by dividing the net income (loss) by the weighted-average number of common shares outstanding for the period. The numerator adjustments include an allocation of PWSH income to the non-controlling interests, the redeemable non-controlling interests and the employee owned entities. The equity interest associated with the employee-owned entities are considered participating securities at PWSH and will be allocated income, however, they are not required to fund losses, and therefore, no allocations of losses will be made to the employee owned entities in periods of loss at PWSH. Potentially dilutive common shares from employee equity incentive plans are determined by applying the treasury stock method to the assumed exercise of outstanding stock options, the assumed vesting of outstanding restricted stock units, and the assumed issuance of common stock under the employee stock purchase plan.

The following shares were excluded from the calculation of diluted net loss per share as their effect would have been anti-dilutive (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Employee equity incentive plans	4,183	3,997	4,001	4,003

NOTE 10: SEGMENT INFORMATION

We operate in one segment: the design, development, marketing and sale of IC solutions for use in electronic display devices. We generate our revenue from two broad product markets: the Mobile market and the Home & Enterprise market. The chief operating decision maker, or CODM, is our CEO. Our CODM evaluates financial performance and allocates resources using financial information reported on a company-wide basis. The Cinema market does not contribute material revenue and is therefore being included in this one segment.

Geographic Information

Revenue by geographic region, is as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
China	\$ 8,777	\$ 5,482	\$ 20,906	\$ 21,371
Japan	7,070	10,908	17,752	27,604
Taiwan	185	464	836	2,421
United States	—	648	109	1,736
Korea	—	50	—	50
Europe	—	—	—	76
	<u>\$ 16,032</u>	<u>\$ 17,552</u>	<u>\$ 39,603</u>	<u>\$ 53,258</u>

Significant Customers

The percentage of revenue attributable to our distributors, top five end customers, and individual distributors or end customers that represented 10% or more of revenue in at least one of the periods presented, is as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Distributors:				
All distributors	60 %	57 %	63 %	61 %
Distributor A	50 %	29 %	45 %	33 %
Distributor B	4 %	23 %	8 %	16 %
End customers: ¹				
Top five end customers	93 %	83 %	88 %	79 %
End customer A	40 %	39 %	37 %	36 %
End customer B	26 %	15 %	25 %	13 %
End customer C	20 %	— %	12 %	— %
End customer D	3 %	12 %	4 %	6 %
End customer E	— %	13 %	— %	19 %

¹ End customers include customers who purchase directly from us, as well as customers who purchase our products indirectly through distributors.

The following accounts represented 10% or more of total accounts receivable in at least one of the periods presented:

	September 30, 2023	December 31, 2022
Account W	62 %	31 %
Account X	27 %	27 %
Account Y	— %	12 %
Account Z	— %	11 %

NOTE 11: RISKS AND UNCERTAINTIES

Concentration of Suppliers

We do not own or operate a semiconductor fabrication facility and do not have the resources to manufacture our products internally. We rely on a limited number of foundries and assembly and test vendors to produce all of our wafers and for completion of finished products. We do not have any long-term agreements with any of these suppliers. In light of these dependencies, it is reasonably possible that failure to perform by one of these suppliers could have a severe impact on our results of operations. Additionally, the concentration of these vendors within Taiwan and the People's Republic of China increases our risk of supply disruption due to natural disasters, economic instability, political unrest or other regional disturbances.

Risk of Technological Change

The markets in which we compete, or seek to compete, are subject to rapid technological change, frequent new product introductions, changing customer requirements for new products and features, and evolving industry standards. The introduction of new technologies and the emergence of new industry standards could render our products less desirable or obsolete, which could harm our business.

Concentrations of Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk consist of cash equivalents and accounts receivable. We limit our exposure to credit risk associated with cash equivalent balances by holding our funds in high quality, highly liquid money market accounts. We limit our exposure to credit risk associated with accounts receivable by carefully evaluating creditworthiness before offering terms to customers.

NOTE 12: COMMITMENTS AND CONTINGENCIES

Indemnifications

Certain of our agreements include indemnification provisions for claims from third parties relating to our intellectual property. It is not possible for us to predict the maximum potential amount of future payments or indemnification costs under these or similar agreements due to the conditional nature of our obligations and the unique facts and circumstances involved in each particular agreement. We have not made any payments under these agreements in the past, and as of September 30, 2023, we have not incurred any material liabilities arising from these indemnification obligations. In the future, however, such obligations could materially impact our results of operations.

Legal Proceedings

We are subject to legal matters that arise from time to time in the ordinary course of our business. Although we currently believe that resolving such matters, individually or in the aggregate, will not have a material adverse effect on our financial position, our results of operations, or our cash flows, these matters are subject to inherent uncertainties and our view of these matters may change in the future.

Other Contractual Obligations

As part of the Acquisition, we acquired debt associated with an agreement with the Government of Canada called Technology Partnerships Canada ("TPC"). As part of the TPC agreement, ViXS Systems, Inc. was provided funding to assist in research and development expenses of which a portion was later required to be repaid because the conditions for repayment were met. The scheduled payments are made on a quarterly basis and end in January 2024. As of September 30, 2023, \$128 is included in accrued liabilities and current portion of long-term liabilities in our condensed consolidated balance sheets.

Contract Manufacturers

In the normal course of business, we commit to purchase products from our contract manufacturers to be delivered within the next approximately 90 days. In certain situations, should we cancel an order, we could be required to pay cancellation fees. Such obligations could impact our immediate results of operations but would not materially affect our business.

NOTE 13: REDEEMABLE NON-CONTROLLING INTEREST AND EQUITY INTEREST OF PWSH SOLD TO EMPLOYEES

During the third quarter of 2021, Pixelworks and our subsidiary, PWSH, entered into a capital increase agreement (the "Capital Increase Agreement") with certain private equity and strategic investors based in China (collectively, the "Investors") and certain entities which collectively are owned by approximately 75% of the employees of PWSH and its subsidiaries (collectively, the "ESOP") (together, the "Investors" and the "ESOP" are referred to below as the "Capital Contributors"). The ESOP entities do not qualify as Employee Share Ownership Programs under IRC 4975(e)(7), but do qualify as employee share ownership plans qualified under the laws of China, under which the employees hold a pro rata share of an ESOP partnership entity that then holds an equity ownership in trust for employees.

Under the Capital Increase Agreement, during 2021, the Investors invested approximately \$30,844 in exchange for a redeemable non-controlling equity interest of 10.45% of PWSH and the ESOP entities invested approximately \$12,329 in exchange for a redeemable non-controlling equity interest representing 5.95% of PWSH, which includes a discount of 30% from the valuation paid by the Investors. The agreement further provided that the Capital Contributors have a liquidation preference in PWSH, a right to co-sell their interest in PWSH along with the Company on the same terms and conditions as the Company, a right to participate on a pro rata basis in any future financing rounds of PWSH, and the Company's agreement while it remains an owner of PWSH and for two (2) years thereafter to not compete with the business of PWSH, nor solicit or otherwise cause any of PWSH's core employees or customers to end their relationship with PWSH. These rights all expire upon initial public offering on the STAR Market.

Prior to entering into a certain supplemental agreement, each Investor had the right to require PWSH to redeem the entire equity interest held by such Investor, at the original purchase price paid plus 3% annual interest, if PWSH did not consummate an initial public offering on the STAR Market on or before June 30, 2024. Based on this contingency, the initial carrying amount of the redeemable non-controlling interests was recorded at fair value on the date of issuance of PWSH equity interests, net of issuance costs and presented in temporary equity on the condensed consolidated balance sheets. Until the interest that was to accrue on the redeemable non-controlling interest was deleted with the Supplemental Agreement, the Company had elected to accrete changes in the redemption value of the redeemable non-controlling interests from the issuance date through the earliest redemption date of June 30, 2024 using the interest method (as the non-controlling interest was probable of becoming redeemable upon the passage of time for the original issuance price plus 3% annual interest).

On March 24, 2022, Pixelworks and our subsidiary, PWSH, entered into a Supplemental Agreement to the Capital Increase Agreement (the "Supplemental Agreement") with the Capital Contributors. The Supplemental Agreement, among other things, deletes the interest that was to accrue on the redemption obligation of affiliated entities of PWSH, and adds a provision that will suspend the redemption obligation on the date PWSH files its initial public offering listing documents pending the approval of such documents by the applicable authorities. The suspension ends if PWSH withdraws the listing application or such application is finally rejected, at which point the redemption obligation will once again become effective with a deadline of the later of the date of the withdrawal/rejection and June 30, 2024.

In connection with the Supplemental Agreement, on March 24, 2022, Pixelworks and the Capital Contributors entered into a Side Letter to the Capital Increase Agreement ("Side Letter") which provides that, in the event of a change in control of Pixelworks, Pixelworks shall ensure that the definitive agreement related to such transaction includes a post-closing repurchase covenant that requires the successor entity in such transaction to repurchase all of PWSH's equity held by a Capital Contributor at the original subscription price plus 20% upon the request of the Capital Contributor within 60 days after (a) the change in control; or (b) if PWSH fails to consummate its initial public offering by June 30, 2024, because Pixelworks decides against pursuing the offering. If PWSH continues to diligently pursue the application but the initial public offering still fails to launch by June 30, 2024, the redemption obligation of the Supplemental Agreement would instead apply. The Side Letter terminates on the launch date of PWSH's initial public offering.

After entering into the Supplemental Agreement, the redeemable non-controlling interest will no longer accrete up to a redemption amount because the interest component has been removed. The Investors will continue to hold PWSH equity and be considered as a redeemable non-controlling interest, however, the redeemable non-controlling interest is only probable of becoming redeemable upon the passage of time for its original issuance price. Therefore, until the redemption feature expires, we will only allocate profits to the redeemable non-controlling interest and continue to recognize the non-controlling interest at an amount at least equal to its redemption value. Because the redeemable non-controlling interest is denominated in RMB, it will be revalued to USD at the end of each reporting period, with the changes in carrying value attributable to foreign currency being reflected within accumulated other comprehensive income on the condensed consolidated balance sheets.

Each of the ESOP entities has the right to require a repurchase of the entire equity interest held by such ESOP entities at the original purchase price paid plus 5% annual interest, if PWSH does not achieve its Listing on or before December 31, 2024. Because the ESOP entities are owned by employees of PWSH and its subsidiaries and employees are required to render service until either the initial public offering on the STAR Market or repurchase date, the equity interest owned by the ESOP entities will be accounted for under ASC 718 (Compensation - Stock Compensation). The initial carrying amount of the investment has been recorded as a long-term deposit liability on the condensed consolidated balance sheets as the initial public offering cannot be considered probable at this time. We will recognize the periodic interest component of the award as compensation expense and accrete the long-term deposit liability to its redemption value as of December 31, 2024. Because the long-term deposit liability is denominated in RMB and is considered a monetary liability as defined in ASC 255 (Changing Prices), it will be revalued to USD at the end of each reporting period, with the changes in carrying value recorded as foreign currency gain/loss in our condensed consolidated statements of operations. The Supplemental Agreement does not remove the obligation to repurchase the ESOP interests if PWSH fails to consummate an initial public offering by December 31, 2024 along with the 5% annual simple interest.

On December 21, 2022, the Company and its subsidiary, PWSH, entered into a capital increase agreement (the “CIA”) with Jing Xin Ying (Shanghai) Management Consulting Partnership (Limited Partnership), an entity owned by certain of the employees of PWSH (the “ESOP”). The ESOP invested approximately \$1,407 in exchange for an equity interest in PWSH of 0.54%, based on a pre-money valuation of PWSH of RMB 1,750,000 (\$251,256 USD), which includes a discount of 50%.

The CIA provides that if there is a change in control of PWSH that closes prior to its filing an application for the Listing, each capital contributor would be entitled to a minimum return of 10% on the price they paid for their respective equity interest, payable by the Company in cash at the close of the change in control transaction, with such right terminating automatically upon the filing by PWSH of the Listing. The ESOP has a redemption right that is identical to that held by the other ESOP investors from the financing round that closed in 2021: if the Listing is not consummated prior December 31, 2024, the 2022 ESOP may elect to require a repurchase of its respective equity interest for a price equal to the initial purchase price paid plus annual simple interest at a rate of 5%.

The process of going public on the STAR Market includes several periods of review and is therefore a lengthy process. There can be no assurances that PWSH will complete the Listing by June 30, 2024, or at all. In the event Pixelworks is required to redeem the entire equity interest held by the Investors or the ESOP entities, we may be required to seek additional capital in order to redeem their PWSH shares and there would be no assurances that such capital would be available on terms acceptable to us, if at all. Any redemptions could have a material adverse effect on our business, financial condition and results of operations. The listing of PWSH on China’s STAR Market will not change our status as a U.S. public company.

The components of the change in redeemable non-controlling interests for the nine months ended September 30, 2023 are presented in the following table (in thousands):

Carrying Value of Redeemable Non-Controlling Interest as of January 1, 2023	\$	28,919
Net loss attributable to redeemable non-controlling interest		(149)
Effect of foreign currency translation attributable to redeemable non-controlling interest		(1,372)
Carrying Value of Redeemable Non-Controlling Interest as of September 30, 2023	\$	27,398

NOTE 14: NON-CONTROLLING INTEREST

On August 15, 2022, the Company entered into an Equity Transfer Agreement with certain private equity investors based in China (Hainan Qixin Investment Partnership (Limited Partnership) and Suzhou Saixiang Equity Investment Partnership (Limited Partnership)) (collectively, the “Purchasers”). Under this agreement, the Purchasers agreed to pay to the Company, subject to customary closing conditions, a total of 87,500 RMB, approximately \$10,738 (net of issuance costs) at closing, in exchange for a 2.74% equity interest in PWSH. The Company incurred costs related to the sale of equity in PWSH of \$275 paid to a third party for assisting in the transaction close as well as 8,408 RMB to fulfill Chinese withholding tax requirements. Both of these costs are direct and incremental and related to the sale of equity in PWSH and as such will be included as costs that reduce proceeds and carrying amount of the NCI in the Company’s balance sheet.

The Equity Transfer Agreement provides the Purchasers with some additional rights: (1) if there is a change in control of PWSH that closes prior to its filing an application for a listing on the STAR Board of the Shanghai Stock Exchange (the “Listing Application”), each Purchaser would be entitled to a minimum return of 10% on the price they paid for their respective equity interest, payable by the Company in cash at the close of the change in control transaction, with such right terminating automatically upon the filing by PWSH of the Listing Application; and (2) the Company would cause PWSH to give each Purchaser a right to participate on a pro rata basis in any future financing rounds of PWSH, which right also would expire on the filing of a Listing Application.

On December 21, 2022, the Company and its subsidiary, PWSH, entered into a capital increase agreement (the “CIA”) with certain private equity investors based in China who have agreed to pay a total of 99,000 RMB, approximately \$14,596 (net of issuance costs) at closing, in exchange for an equity interest in PWSH of 2.76%, based on a pre-money value of PWSH of 3,500,000 RMB, approximately \$501,400. This transaction closed in February 2023.

The CIA provides that if there is a change in control of PWSH that closes prior to its filing an application for the Listing, each capital contributor would be entitled to a minimum return of 10% on the price they paid for their respective equity interest, payable by the Company in cash at the close of the change in control transaction, with such right terminating automatically upon the filing by PWSH of the Listing.

When the Company’s relative ownership interest in PWSH changes, adjustments to non-controlling interest and paid-in capital, tax effected, will occur. Because these changes in the ownership interest in PWSH do not result in a change of control, the transactions are accounted for as equity transactions under ASC Topic 810, *Consolidation*, which requires that any differences between the carrying value of the Company’s interest in PWSH and the fair value of the consideration received are recognized directly in equity and attributed to the controlling interest. Additionally, there are no substantive profit-sharing arrangements that would cause distributions to be other than pro rata. Therefore, profits and losses are attributed to the common shareholders of PWSH and non-controlling interest pro rata based on ownership interests in PWSH. The following table reconciles the initial investment by the Purchasers and the carrying value of their non-controlling interest as of the Closing Date (as defined in the Equity Transfer Agreement):

Carrying Value of Permanent Equity Non-Controlling Interest as of January 1, 2023	\$	10,909
Increase in additional paid-in capital		14,742
Net loss attributable to non-controlling interest		(630)
Closing and direct costs incurred		(146)
Effect of foreign currency translation attributable to non-controlling interest		(889)
Carrying Value of Permanent Equity Non-Controlling Interest as of September 30, 2023	\$	23,986

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 (“MD&A”) should be read in conjunction with our condensed consolidated financial statements and related notes included elsewhere in this document. In addition to historical information, the MD&A contains forward-looking statements that reflect our plans, estimates, and beliefs that involve significant risks and uncertainties. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to those differences include those discussed below and elsewhere in this Quarterly Report on Form 10-Q, particularly in “Risk Factors,” and “Note Regarding Forward-Looking Statements.”

Overview

Pixelworks is a leading provider of high-performance and power-efficient visual processing semiconductor and software solutions that enable consistently high-quality and authentic viewing experiences in a wide variety of applications. We define our primary target markets as Mobile (smartphone and tablet), Home & Enterprise (projectors, personal video recorders (“PVR”), and over-the-air (“OTA”) streaming devices), and Cinema (creation, remastering, and delivery of digital video content). Previously we classified our primary target markets as Mobile, Projector, Video Delivery and Cinema, but have since aggregated the Projector and Video Delivery categories into one market called “Home & Enterprise”.

Pixelworks has been a pioneer in visual processing technology for over 20 years. We were one of the first companies to commercially launch a video System on Chip (“SoC”) capable of deinterlacing 1080i HDTV signals and one of the first companies with a commercial dual-channel 1080i deinterlacer integrated circuit. We launched one of the industry’s first single-chip SoCs for digital projection. We were the first company to integrate motion estimation / motion compensation technology (“MEMC”) as a mobile-optimized solution for smartphones. In 2019, we introduced our Hollywood award-winning TrueCut Motion™ video platform, the industry’s first motion grading technology that allows fine tuning of motion appearance in cinematic content.

As of September 30, 2023, we had an intellectual property portfolio of 278 patents related to the visual display of digital image data. We focus our research and development efforts on developing video algorithms that improve quality, and architectures that reduce system power, cost, bandwidth and increase overall system performance and device functionality. We seek to expand our technology portfolio through internal development and co-development with business partners, and we continually evaluate acquisition opportunities and other ways to leverage our technology into other high-value markets.

Our core visual processing technology intelligently processes digital images and video from a variety of sources and optimizes the content for a superior viewing experience. Rapid growth in video and gaming consumption, combined with the move towards bright, high resolution, high frame rate and high refresh rate displays, especially in mobile, is increasing the demand for our solutions. Our technologies can be applied across a wide range of applications: cinema theaters, low-power mobile tablets, smartphones, streaming devices, and digital projectors for the home, school, or the workplace. Our products are designed and optimized for power, cost, bandwidth, viewer experience, and overall system performance, according to the requirements of the specific application. On occasion, we have also licensed our technology.

During the third quarter of 2021, we engaged in a strategic plan to re-align our Mobile and Home & Enterprise businesses to improve their focus on their Asia-centered customers and employee stakeholders. Our subsidiary, Pixelworks Semiconductor Technology (Shanghai) Co., Ltd. (or “PWSH”), now operates these businesses as a full profit-and-loss center underneath Pixelworks. In connection with this strategic plan, the Company and PWSH closed three separate financing transactions in 2021 and 2022, which are further described in “Note 13: Redeemable Non-Controlling Interest and Equity Interest of PWSH Sold to Employees” and “Note 14: Non-Controlling Interest”, which are incorporated by reference into this section.

PWSH is in the process of preparing to file an application for an initial public offering of PWSH shares on the Shanghai Stock Exchange's Science Technology Innovation Board, known as the STAR Market (the "Listing"). We believe that the Listing will have many benefits, including improved access to new capital markets and the funding of PWSH's growth worldwide. The process of going public on the STAR Market is lengthy and includes several periods of review by various government agencies of the People's Republic of China ("PRC"), such as the Shanghai Stock Exchange ("SSE") and the China Securities Regulatory Commission ("CSRC"). There is no guarantee that PWSH will be approved for a Listing at any point in the future. The CSRC and the SSE have recently tightened the standards for the STAR Market and are currently advising companies that are not yet profitable under China GAAP standards against filing an IPO application in the present environment. The Company believes this is in large part due to the current economic conditions in China and the recent performance of companies already listed on the STAR Market that were not profitable at the time of their IPO. PWSH is not currently profitable under China GAAP standards. The CSRC and the SSE may relax the standards, but there is no guarantee that this will happen in any particular time frame. The Company will continue to prepare our application so it is ready to file once the situation changes or PWSH achieves profitability under China GAAP standards. Any listing of PWSH on the STAR Market will not change the status of PXLW as a U.S. public company. We are neither a PRC operating company nor do we conduct our operations in China through the use of variable interest entities.

Pixelworks was founded in 1997 and is incorporated under the laws of the state of Oregon. On August 2, 2017, we acquired ViXS Systems, Inc., a corporation organized in Canada ("ViXS").

Results of OperationsRevenue, net

Net revenue for the three and nine months ended September 30, 2023 and 2022, was as follows (dollars in thousands):

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2023	2022	% Change	2023	2022	% Change
Revenue, net	\$ 16,032	\$ 17,552	(9)%	\$ 39,603	\$ 53,258	(26)%

Net revenue decreased \$1.5 million, or 9%, in the third quarter of 2023 compared to the third quarter of 2022 and decreased \$13.7 million, or 26%, in the first nine months of 2023 compared to the first nine months of 2022.

Revenue recorded in the third quarter of 2023 consisted of \$15.9 million in revenue from the sale of integrated circuit ("IC") products and \$0.01 million in revenue related to engineering services, license revenue and other. Revenue recorded in the third quarter of 2022 consisted of \$17.2 million in revenue from the sale of IC products and \$0.4 million in revenue related to engineering services, license revenue and other.

Revenue recorded in the first nine months of 2023 consisted of \$39.2 million in revenue from the sale of IC products and \$0.4 million in revenue related to engineering services, license revenue and other. Revenue recorded in the first nine months of 2022 consisted of \$52.3 million in revenue from the sale of IC products and \$0.9 million in revenue related to engineering services, license revenue and other.

The decrease in IC revenue in the third quarter of 2023 compared to the third quarter of 2022 is due to the following factors:

- Sales into the Home & Enterprise market decreased approximately \$3.7 million or 32%, primarily due to a decrease in customer demand as well as implementing an end-of-life in 2022 on some of our legacy products sold into what we previously referred to as the Video Delivery market. These decreases were partially offset by a slight increase in revenue related to an approximately 13% average selling price ("ASP") increase on a product sold into the projector market.
- Sales into the Mobile market increased approximately \$2.5 million or 44% due to increased units sold as customers adopt and transition to our next generation mobile product which also has higher ASPs.

The decrease in IC revenue in the first nine months of 2023 compared to the first nine months of 2022 is due to the following factors:

- Sales into the Home & Enterprise market decreased \$12.8 million or 38%, primarily due to a decrease in customer demand resulting from customers absorbing inventory purchased with long lead times during the supply shortage in 2022, as well as implementing an end-of-life in 2022 on some of our legacy products sold into what we previously referred to as the Video Delivery market.
- Sales into the Mobile market decreased \$0.4 million or 2%, primarily due to decreased unit sales in the first half of 2023 compared to the first half of 2022 which was almost fully offset by increased unit sales in the third quarter of 2023 compared to the third quarter of 2022 combined with increased ASPs as our customers adopt and transition to our next generation mobile product.

Cost of revenue and gross profit

Cost of revenue and gross profit for the three and nine months ended September 30, 2023 and 2022, were as follows (dollars in thousands):

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2023	% of revenue	2022	% of revenue	2023	% of revenue	2022	% of revenue
Direct product costs and related overhead ¹	\$ 9,129	57 %	\$ 8,760	50 %	\$ 22,741	57 %	\$ 26,207	49 %
Stock-based compensation	21	0	(47)	0	67	0	20	0
Amortization of acquired intangible assets	—	0	—	0	—	0	72	0
Inventory charges ²	—	0	43	0	62	0	52	0
Total cost of revenue	<u>\$ 9,150</u>	57 %	<u>\$ 8,756</u>	50 %	<u>\$ 22,870</u>	58 %	<u>\$ 26,351</u>	49 %
Gross profit	<u>\$ 6,882</u>	43 %	<u>\$ 8,796</u>	50 %	<u>\$ 16,733</u>	42 %	<u>\$ 26,907</u>	51 %

¹ Includes purchased materials, assembly, test, labor, employee benefits and royalties.

² Includes charges to reduce inventory to lower of cost or market and a benefit for sales of previously written down inventory.

Gross profit margin decreased to 43% in the third quarter of 2023 compared to 50% in the third quarter of 2022, primarily due to product mix. The decrease in sales into the Home & Enterprise market unfavorably impacted gross profit margin. The decrease was also due to lower absorption of fixed overhead costs.

Gross profit margin decreased to 42% in the first nine months of 2023 compared to 51% in the first nine months of 2022, primarily due to product mix. The decrease in sales into the Home & Enterprise market unfavorably impacted gross profit margin. The decrease was also due to lower absorption of fixed overhead costs.

Pixelworks' gross profit margin is subject to variability based on changes in revenue levels, product mix, average selling prices, startup costs, amortization related to acquired intangible assets, and the timing and execution of manufacturing ramps as well as other factors.

Research and development

Research and development expense includes compensation and related costs for personnel, development-related expenses, including non-recurring engineering expenses and fees for outside services, depreciation and amortization, expensed equipment, facilities and information technology expense allocations and travel and related expenses.

Co-development agreement

During the third quarter of 2021, we entered into a best efforts co-development agreement with a customer to defray a portion of the research and development expenses we expect to incur in connection with our development of an integrated circuit product. We expect our development costs to exceed the amounts received from the customer, and although we expect to sell units of the product to the customer, there is no commitment or agreement from the customer for such sales at this time. Additionally, we retain ownership of any modifications or improvements to our pre-existing intellectual property and may use such improvements in products sold to other customers.

Under the co-development agreement, \$5.8 million was payable by the customer within 60 days of the date of the agreement and three additional payments of \$2.5 million, \$1.9 million and \$1.3 million are each payable upon completion of certain development milestones. As amounts become due and payable, they are offset against research and development expense on a pro rata basis. We recognized a negligible offset to research and development expense during the three months ended September 30, 2023. We did not recognize an offset to research and development expense during the three months ended September 30, 2022. We recognized offsets to research and development expense of \$1.9 million and \$1.8 million, during the nine months ended September 30, 2023 and 2022, respectively.

During the remainder of 2023, we expect to record an offset to research and development expense of approximately \$1.3 million for the remaining payment milestone.

Research and development expense for the three and nine months ended September 30, 2023 and 2022, was as follows (dollars in thousands):

	Three Months Ended			Nine Months Ended		
	September 30,			September 30,		
	2023	2022	% Change	2023	2022	% Change
Research and development	\$ 8,752	\$ 8,445	4 %	\$ 23,925	\$ 24,126	(1)%

Research and development expense increased \$0.3 million, or 4% in the third quarter of 2023 compared to the third quarter of 2022 due to the following factors:

- Compensation expense increased \$0.3 million primarily due to increased headcount and annual merit salary increases.

Research and development expense decreased \$0.2 million, or 1% in the first nine months of 2023 compared to the first nine months of 2022 due to the following factors:

- Non-recurring engineering expense decreased \$0.8 million primarily due to the timing of development activities.
- This decrease was partially offset by a \$0.6 million increase in compensation expense, primarily due to increased headcount and annual merit salary increases.

Selling, general and administrative

Selling, general and administrative expense includes compensation and related costs for personnel, sales commissions, facilities and information technology expense allocations, travel, outside services and other general expenses incurred in our sales, marketing, customer support, management, legal and other professional and administrative support functions.

Selling, general and administrative expense for the three and nine months ended September 30, 2023 and 2022, was as follows (dollars in thousands):

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2023	2022	% Change	2023	2022	% Change
Selling, general and administrative	\$ 5,776	\$ 5,082	14 %	\$ 17,316	\$ 16,590	4 %

Selling, general and administrative expense increased \$0.7 million, or 14% in the third quarter of 2023 compared to the third quarter of 2022 due to the following factors:

- Accounting and other professional fees increased \$0.6 million primarily due to fees incurred related to our strategic plan with our subsidiary, PWSH.
- Travel related expenses increased \$0.1 million due to increased travel in Shanghai as COVID-19 restrictions have been lifted.

Selling, general and administrative expense increased \$0.7 million, or 4% in the first nine months of 2023 compared to the first nine months of 2022 due to the following factors:

- Accounting and other professional fees increased \$0.3 million primarily due to fees incurred related to our strategic plan with our subsidiary, PWSH.
- Travel related expenses increased \$0.3 million due to increased travel in Shanghai as COVID-19 restrictions have been lifted.
- Compensation expense increased \$0.3 million primarily due to increased headcount and annual merit salary increases.
- Stock-based compensation expense decreased \$0.1 million primarily due to the change in our stock price.
- Foreign currency gains and losses decreased \$0.1 million primarily due to weakening in the CNY compared to USD.

Provision for income taxes

The provision for income taxes during the 2023 and 2022 periods is primarily comprised of current and deferred tax expense in profitable cost-plus foreign jurisdictions, accruals for tax contingencies in foreign jurisdictions and benefits for the reversal of previously recorded foreign tax contingencies due to the expiration of the applicable statutes of limitation. We recorded a negligible benefit for the reversal of previously recorded foreign tax contingencies during the first nine months of 2023 and a benefit of \$0.1 million for the reversal of previously recorded foreign tax contingencies during the first nine months of 2022.

Liquidity and Capital ResourcesCash and cash equivalents

Total cash and cash equivalents decreased \$6.5 million to \$50.3 million at September 30, 2023 from \$56.8 million at December 31, 2022. The net decrease during the first nine months of 2023 was the result of \$17.0 million used in operating activities, \$3.4 million used for purchases of property and equipment and \$0.9 million used for payments on other asset financings. These decreases were partially offset by increases of \$14.6 million received in net proceeds from issuance of equity interest to non-controlling interest and \$0.3 million in proceeds from the issuances of common stock under our employee equity incentive plans.

As of September 30, 2023, our cash and cash equivalents balance consisted of \$39.3 million in cash, \$10.0 million held in U.S. dollar denominated certificates of deposit and \$1.0 million in cash equivalents held in U.S. dollar denominated money market funds. Although we did not hold short- or long-term investments as of September 30, 2023, our investment policy requires that our portfolio maintain a weighted average maturity of less than 12 months. Additionally, no maturities can extend beyond 24 months and concentrations with individual securities are limited. At the time of purchase, the short-term credit rating must be rated at least A-2 / P-2 / F-2 by at least two Nationally Recognized Statistical Rating Organizations ("NRSRO") and securities

of issuers with a long-term credit rating must be rated at least A or A3 by at least two NRSRO. Our investment policy is reviewed at least annually by our Audit Committee.

Accounts receivable, net

Accounts receivable, net increased to \$10.2 million as of September 30, 2023 from \$10.0 million as of December 31, 2022. The average number of days sales outstanding decreased to 42 days as of September 30, 2023 from 54 days as of December 31, 2022. The decrease in days sales outstanding was due to normal fluctuations in the timing of sales and customer receipts within the third quarter of 2023, and the fourth quarter of 2022.

Inventories

Inventories were \$5.9 million as of September 30, 2023 compared to \$1.8 million at December 31, 2022. Inventory turnover decreased to 6.4 as of September 30, 2023 from to 13.7 as of December 31, 2022 primarily due to higher average inventory balances during the third quarter of 2023 compared to the fourth quarter of 2022. Inventory turnover is calculated based on annualized quarterly operating results and average inventory balances during the quarter.

Capital resources

At the Market Offering

On June 5, 2020, we entered into a sales agreement (the "Sales Agreement") with Cowen and Company, LLC ("Cowen"), pursuant to which we may issue and sell shares of the Company's common stock, par value \$0.001 per share, having an aggregate offering price of up to \$25.0 million, from time to time, through an "at the market" equity offering program under which Cowen will act as sales agent. Under the Sales Agreement, Cowen may sell the shares by methods deemed to be an "at the market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended, including sales made by means of ordinary brokers' transactions on the Nasdaq Global Market or on any other existing trading market for the common stock or otherwise at market prices prevailing at the time of sale, in block transactions, or as otherwise directed by us. We pay Cowen a commission equal to three percent (3.0%) of the gross sales proceeds of any common stock sold through Cowen under the Sales Agreement. The Sales Agreement may be terminated by us upon prior notice to Cowen or by Cowen upon prior notice to us, or at any time under certain circumstances, including but not limited to the occurrence of a material adverse change in the Company. We are not obligated to sell any shares under the Sales Agreement.

There was no activity under this at the market offering during the nine months ended September 30, 2023 or September 30, 2022.

Capital Increase Agreements

We have entered into a Capital Increase Agreement pursuant to which our subsidiary PWSH, received net proceeds from the sale of its securities pursuant thereto in an amount of 279.7 million RMB (\$42.3 million USD). Additional information is provided in "Note 13: Redeemable Non-Controlling Interest and Equity Interest of PWSH Sold to Employees", which is incorporated by reference into this section.

We have entered into a Capital Increase Agreement pursuant to which our subsidiary PWSH, received net proceeds from the sale of its securities pursuant thereto in an amount of 99.0 million RMB (\$14.6 million USD). Additional information is provided in "Note 14: Non-Controlling Interest", which is incorporated by reference into this section.

Equity Transfer Agreement

We have entered into an Equity Transfer Agreement pursuant to which we received net proceeds of \$10.7 million in exchange for a 2.73% equity interest in PWSH. Additional information is provided in "Note 14: Non-Controlling Interest", which is incorporated by reference into this section.

Liquidity

As of September 30, 2023, our cash and cash equivalents balance of \$50.3 million was highly liquid. We anticipate that our existing working capital will be adequate to fund our operating, investing and financing needs for the next twelve months and beyond. We may pursue financing arrangements including the issuance of debt or equity securities or reduce expenditures, or both, to meet our cash requirements, including in the longer term. There is no assurance that, if required, we will be able to raise additional capital or reduce discretionary spending to provide the required liquidity which, in turn, may have an adverse effect on our financial position, results of operations and cash flows.

From time to time, we evaluate acquisitions of businesses, products or technologies that complement our business. Any transactions, if consummated, may consume a material portion of our working capital or require the issuance of equity securities that may result in dilution to existing shareholders. Our ability to generate cash from operations is also subject to substantial risks described in Part II, Item 1A., "Risk Factors". If any of these risks occur, we may be unable to generate or sustain positive cash flow from operating activities. We would then be required to use existing cash and cash equivalents to support our working capital and other cash requirements. If additional funds are required to support our working capital requirements, acquisitions or other purposes, we may seek to raise funds through debt financing, equity financing or from other sources. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our shareholders could be significantly diluted, and these newly-issued securities may have rights, preferences or privileges senior to those of existing shareholders. 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 operating flexibility and would also require us to incur interest expense. We can provide no assurance that additional financing will be available at all or, if available, that we would be able to obtain additional financing on terms favorable to us.

Other than as set forth above, there were no material changes to our liquidity and capital resources during the nine month period ended September 30, 2023 from those set forth in our Annual Report on Form 10-K for the year ended December 31, 2022, filed with the Securities and Exchange Commission on March 8, 2023.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Based on management's evaluation (with the participation of our Chief Executive Officer (our Principal Executive Officer) and Chief Financial Officer (our Principal Financial Officer)), our Chief Executive Officer and Chief Financial Officer have evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, (the "Exchange Act")) to determine if they provide reasonable assurance that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms and is accumulated and communicated to management, including our Principal Executive Officer and Principal Financial Officer, as appropriate to allow timely decisions regarding required disclosure. Based on this evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of the period covered by this report, the Company's disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There were no changes to our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the period covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our management, including the Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls or our internal control over financial reporting will prevent or detect all error and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of the effectiveness of controls to future periods are subject to risks. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

PART II – OTHER INFORMATION

Item 1A. Risk Factors.

The following risks could materially and adversely affect our business, financial condition, and results of operations, and the trading price of our common stock could decline. These risk factors do not identify all of the risks that we face. Our business operations could also be affected by factors that we currently consider to be immaterial or that are unknown to us at the present time. Investors should also refer to the other information contained in this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, including our condensed consolidated financial statements and related notes, and our other filings made from time to time with the Securities and Exchange Commission ("SEC").

Risks Related to the Global Economy and COVID-19

The continued uncertain global economic environment and volatility in global credit, banking and financial markets could materially and adversely affect our business and results of operations.

The state of the global economy continues to be uncertain. Additionally, recent high-profile bank failures have caused general uncertainty and concern regarding the liquidity adequacy of the banking industry. As a result of these conditions, we or our manufacturers, vendors and customers might experience deterioration of our or their businesses, cash flow shortages and difficulty obtaining financing, which could result in interruptions or delays in the performance of any contracts, reductions and delays in customer purchases, delays in or the inability of the Company or our customers to obtain financing or of our customers to purchase our products, and bankruptcy of customers. Furthermore, the constraints in the capital and credit markets may limit our ability to access the capital we need when we need it, on favorable terms or otherwise, or limit the ability of our customers to meet their liquidity needs, which could result in an impairment of their ability to make timely payments to us and reduce their demand for our products, adversely impacting our results of operations and cash flows. This environment has also made it difficult for us to accurately forecast and plan future business activities.

The ongoing effects of the COVID-19 pandemic have disrupted and may continue to disrupt our business or the business of our customers or suppliers, and as such, may adversely affect our financial condition.

Our business, the businesses of our customers, and the businesses of our suppliers have been affected and may continue to be affected by the effects of the COVID-19 pandemic and the related governmental, business and community responses to it. Additionally, the economies and financial markets of many countries have been impacted by the pandemic, and the longevity and significance of the resulting economic impact is currently unknown. A significant economic downturn could materially and adversely affect our end customers, and thus could negatively impact demand for our products and our operating results. For example, beginning in March 2022 and lasting through December 2022, various cities in China imposed lockdowns in response to China's "zero-COVID" policy, leading to weaker consumer demand which has had, and we anticipate may continue to have, an adverse impact on China's economy, on our customers and on our business. For example, demand in our Mobile market was down during the second half of 2022 and the first quarter of 2023, which we believe was largely attributable to the imposed lockdowns in China.

The spread of COVID-19 may still cause us to modify our business practices from time-to-time, including implementing work-from-home policies and limiting travel by our employees. Currently all of our offices are operating at full capacity and without restrictions, but new outbreaks and various strict actions mandated in response by the local governments with jurisdiction over those offices may require us to reinstate more strict rules, impacting for example the ability of our sales team in China to make in-person sales calls to current and potential customers at the same volume as they did prior to the outbreak of the pandemic. The Company has taken in the past and may continue to take in the future, certain mitigation measures. For example, and as previously reported, in 2020 the Company implemented several cost-saving measures, including reductions in executive salaries, elimination of bonus programs, and hiring freezes. Since then, the Company has carefully monitored its costs in light of the uncertainty caused by the pandemic.

COVID-19 has, and may continue to, negatively affect the operations of our suppliers and customers, as their own workforces and operations are disrupted by the pandemic, which could result in the interruption of our distribution system, temporary or long-term disruption in our supply chains, or delays in the delivery of our product. For example, the Company experienced some mild supply chain disruption in the first quarter of 2022. Our supply chain partners are currently fully operational.

The future impact of the COVID-19 pandemic, as well as any new pandemic that may arise, on our business, as well as the business of our suppliers and customers, and the additional measures that may be needed in response to it, including any new cost-saving measures, will depend on many factors beyond our control and knowledge. We will continually monitor the situation to determine what actions may be necessary or appropriate to address the impact of the pandemic, which may include actions mandated or recommended by federal, state or local authorities.

Company Specific Risks

If we fail to meet the evolving needs of our markets, identify new products, services or technologies, or successfully compete in our target markets, our revenue and financial results will be adversely impacted.

Pixelworks designs, develops and markets visual processing and advanced media processing solutions in the Mobile, Home & Enterprise and Cinema markets. Our success depends to a significant extent on our ability to meet the evolving needs of these markets and to enhance our existing products, solutions and technologies. In addition, our success depends on our ability to identify emerging industry trends and to develop new products, solutions and technologies. Our existing markets and products and new markets and products may require a considerable investment of technical, financial, compliance, sales and marketing resources.

We cannot assure you that our strategic direction will result in innovative products and technologies that provide value to our customers and partners. If we fail to anticipate the changing needs of our target markets and emerging technology trends, or adapt that strategy as market conditions evolve, in a timely manner to exploit potential market opportunities our business will be harmed. In addition, if demand for products and solutions from these markets is below our expectations, if we fail to achieve consumer or market acceptance of them or if we are not able to develop these products and solutions in a cost effective or efficient manner, we may not realize benefits from our strategy.

Our target markets remain extremely competitive, and we expect competition to intensify as current competitors expand their product and service offerings, industry standards continue to evolve and new competitors enter these markets. If we are unable to successfully compete in our target markets, demand for our products, solutions and technologies could decrease, which would cause our revenue to decline and our financial results to suffer.

Our product strategy, which is targeted at markets demanding superior video and digital image quality as well as efficient video delivery, may not address the demands of our target customers and may not lead to increased revenue in a timely manner or at all, which could materially adversely affect our results of operations and limit our ability to grow.

We have adopted a product strategy that focuses on our core competencies in visual display processing and delivering high levels of video and digital image quality. This strategy is designed to address the needs of the high-resolution and high-quality segment of these markets. Such markets may not develop or may take longer to develop than we expect. We cannot assure you that the products we are developing will adequately address the demands of our target customers, or that we will be able to produce our new products at costs that enable us to price these products competitively.

Achieving design wins involves lengthy competitive selection processes that require us to incur significant expenditures prior to generating any revenue or without any guarantee of any revenue related to this business. If we fail to generate revenue after incurring substantial expenses to develop our products, our business and operating results would suffer.

We must achieve "design wins" that enable us to sell our semiconductor solutions for use in our customers' products. These competitive selection processes typically are lengthy and can require us to incur significant research and development expenditures and dedicate scarce engineering resources in pursuit of a single customer opportunity. We may not achieve a design win and may never generate any revenue despite incurring significant research and development expenditures. This could cause us to lose revenue and require us to write off obsolete inventory and could weaken our position in future competitive selection processes.

Even if our product strategy is properly targeted, we cannot assure you that the products we are developing will lead to an increase in revenue from new design wins. To achieve design wins, we must design and deliver cost-effective, innovative and integrated semiconductors that overcome the significant costs associated with qualifying a new supplier and which make developers reluctant to change component sources. Additionally, potential developers may be unwilling to select our products due to concerns over our financial strength. Further, design wins do not necessarily result in developers ordering large volumes of our products. Developers can choose at any time to discontinue using our products in their designs or product development efforts. A design win is not a binding commitment by a developer to purchase our products, but rather a decision by a developer to use our products in its design process. Even if our products are chosen to be incorporated into a developer's products, we may still not realize significant revenue from the developer if its products are not commercially successful or it chooses to qualify, or incorporate the products, of a second source. Additionally, even if our product strategy is successful at achieving design wins and increasing our revenue, we may continue to incur operating losses due to the significant research and development costs that are required to develop competitive products.

System security and data protection breaches, as well as cyber-attacks, could disrupt our operations, reduce our expected revenue and increase our expenses, which could adversely affect our stock price and damage our reputation.

Security breaches, computer malware and cyber-attacks have become more prevalent and sophisticated in recent years. These attacks have occurred on our systems in the past and are expected to occur in the future. Experienced computer programmers, hackers and employees may be able to penetrate our security controls and misappropriate or compromise our confidential information, or that of our employees or third parties. These attacks may create system disruptions or cause shutdowns. For portions of our IT infrastructure, including business management and communication software products, we rely on products and services provided by third parties. These providers may also experience breaches and attacks to their products which may impact our systems. Data security breaches may also result from non-technical means, such as actions by an employee with access to our systems.

Actual or perceived breaches of our security measures or the accidental loss, inadvertent disclosure or unapproved dissemination of proprietary information or sensitive or confidential data about us, our partners, our customers or third parties could expose the parties affected to a risk of loss, or misuse of this information, resulting in litigation and potential liability, damage to our brand and reputation or other harm to our business. Our efforts to prevent and overcome these challenges could increase our expenses and may not be successful. We may experience interruptions, delays, cessation of service and loss of existing or potential customers. Such disruptions could adversely impact our ability to fulfill orders and interrupt other critical functions. Delayed sales, lower margins or lost customers as a result of these disruptions could adversely affect our financial results, stock price and reputation.

If we fail to retain or attract the specialized technical and management personnel required to successfully operate our business, it could harm our business and may result in lost sales and diversion of management resources.

Our success depends on the continued services of our executive officers and other key management, engineering, and sales and marketing personnel and on our ability to continue to attract, retain and motivate qualified personnel. Competition for skilled engineers and management personnel is intense within our industry, and we may not be successful in hiring and retaining qualified individuals. For example, we have experienced, and may continue to experience, difficulty and increased compensation expense in order to hire and retain qualified engineering personnel in our Shanghai design center. The loss of, or inability to hire, key personnel could limit our ability to develop new products and adapt existing products to our customers' requirements, and may result in lost sales and a diversion of management resources. Any transition in our senior management team may involve a diversion of resources and management attention, be disruptive to our daily operations or impact public or market perception, any of which could have a negative impact on our business or stock price.

We may not fully realize the estimated savings from our restructurings in a timely manner or at all, and our restructuring programs may result in business disruptions and decrease productivity. Any of the foregoing would negatively affect our financial condition and results of operations.

From time to time, we may have the need to execute restructuring plans to make the operation of the Company more efficient. We may not be able to implement our restructuring programs as planned, and we may need to take additional measures to fulfill the objectives of our restructuring. The anticipated expenses associated with our restructuring programs may differ from or exceed our expectations, and we might not be able to realize the full amount of estimated savings from the restructuring programs in a timely manner or at all. Additionally, our restructuring plans may result in business disruptions or decreases in productivity. As a result, our restructuring plans could have an adverse impact on our financial condition or results of operations.

We have significantly fewer financial resources than most of our competitors, which limits our ability to implement new products or enhancements to our current products and may require us to implement additional future restructuring plans, which in turn could adversely affect our future sales and financial condition.

Financial resource constraints could limit our ability to execute our product strategy or require us to implement additional restructuring plans, particularly if we are unable to generate sufficient cash from operations or obtain additional sources of financing. Any future restructuring actions may slow our development of new or enhanced products by limiting our research and development and engineering activities. Our cash balances are also lower than those of our competitors, which may limit our ability to develop competitive new products on a timely basis or at all. If we are unable to successfully introduce new or enhanced products, our sales, operating results and financial condition will be adversely affected.

If we are not profitable in the future, we may be unable to continue our operations.

We have incurred operating losses each fiscal year since 2010 and have an accumulated deficit of \$451.0 million as of December 31, 2022. If and when we achieve profitability depends upon a number of factors, including our ability to develop and market innovative products, accurately estimate inventory needs, contract effectively for manufacturing capacity and maintain sufficient funds to finance our activities. We cannot assure our investors that we will ever achieve annual profitability, or that we will be able to maintain profitability if achieved. If we are not profitable in the future, we may be unable to continue our operations.

A significant amount of our revenue comes from a limited number of customers and distributors and from time to time we may enter into exclusive deals with customers, exposing us to increased credit risk and subjecting our cash flow to the risk that any of our customers or distributors could decrease or cancel its orders.

The display manufacturing market is highly concentrated and we are, and will continue to be, dependent on a limited number of customers and distributors for a substantial portion of our revenue. Sales to our top distributor for the first nine months of 2023 represented 45% of revenue. Sales to our top distributor for the years ended December 31, 2022 and 2021 represented 29% and 27% of revenue, respectively. If any of our distributors ceases to do business with us, it may be difficult for us to find adequate replacements, and even if we do, it may take some time. The loss of any of our top distributors could negatively affect our results of operations. Additionally, revenue attributable to our top five end customers represented 88%, 76% and 76% of revenue for the nine months ended September 30, 2023 and the years ended December 31, 2022 and 2021, respectively. As of September 30, 2023 we had two accounts that each represented 10% or more of accounts receivable. As of December 31, 2022 we had four accounts that each represented 10% or more of accounts receivable. All of the orders included in our backlog are cancellable. A reduction, delay or cancellation of orders from one or more of our significant customers, or a decision by one or more of our significant customers to select products manufactured by a competitor or to use its own internally-developed semiconductors, would significantly and negatively impact our revenue. Further, the concentration of our accounts receivable with a limited number of customers increases our credit risk. The failure of these customers to pay their balances, or any customer to pay future outstanding balances, would result in an operating expense and reduce our cash flows.

We generally do not have long-term purchase commitments from our customers and if our customers cancel or change their purchase commitments, our revenue and operating results could suffer.

Substantially all of our sales to date have been made on a purchase order basis. We generally do not have long-term commitments with our customers. As a result, our customers may cancel, change or delay product purchase commitments, which could cause our revenue to decline and materially and adversely affect our results of operations.

Our revenue and operating results can fluctuate from period to period, which could cause our share price to decline.

Our revenue and operating results have fluctuated in the past and may fluctuate from period to period in the future due to a variety of factors, many of which are beyond our control. Factors that may contribute to these fluctuations include those described in this "Risk Factors" section of this report, such as the timing, changes in or cancellation of orders by customers, market acceptance of our products and our customers' products and the timing and extent of product development costs. Additionally, our business is subject to seasonality related to the markets we serve and the location of our customers. For example, we have historically experienced higher revenue from the digital projector component of the Home & Enterprise market in the third quarter of the year, and lower revenue in the first quarter of the year. As a result of these and other factors, the results of any prior quarterly or annual periods should not be relied upon as indications of our future revenue or operating performance. Fluctuations in our revenue and operating results could cause our share price to decline.

If we are unable to generate sufficient cash from operations and are forced to seek additional financing alternatives, or in the event we acquire or make an investment in companies that complement our business, our working capital may be adversely affected and our shareholders may experience dilution or our operations may be impaired.

We may be unable to generate or sustain positive cash flow from operating activities and would then be required to use existing cash and cash equivalents to support our working capital and other cash requirements. Additionally, from time to time, we may evaluate acquisitions of, or investments in, businesses, products or technologies that complement our business. Any transactions, if consummated, may consume a material portion of our working capital or require the issuance of equity securities that may result in dilution to existing shareholders. If additional funds are required to support our working capital requirements, acquisitions or other purposes, we may seek to raise funds through debt and equity financing or from other sources. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our shareholders could be significantly diluted, and these newly-issued securities may have rights, preferences or privileges senior to those of existing shareholders. 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 operating flexibility, and would also require us to incur interest expense. We can provide no assurance that additional financing will be available at all or, if available, that we would be able to obtain additional financing on terms favorable to us.

We license our intellectual property, which exposes us to risks of infringement or misappropriation, and may cause fluctuations in our operating results.

We have licensed certain intellectual property to third parties and may enter into additional license arrangements in the future. We cannot assure you, however, that others will be interested in licensing our intellectual property on commercially favorable terms or at all. We also cannot ensure that licensees will honor agreed-upon market restrictions, not infringe upon or misappropriate our intellectual property or maintain the confidentiality of our proprietary information.

IP license agreements are complex and earning and recognizing revenue under these agreements depends upon many factors, including completion of milestones, allocation of values to delivered items and customer acceptances. Many of these factors require significant judgments. Also, generating revenue from these arrangements is a lengthy and complex process that may last beyond the period in which efforts begin and, once an agreement is in place, the timing of revenue recognition may depend on events such as customer acceptance of deliverables, achievement of milestones, our ability to track and report progress on contracts, customer commercialization of the licensed technology and other factors, any or all of which may or may not be achieved. The accounting rules associated with recognizing revenue from these transactions are complex and subject to interpretation. Due to these factors, the amount of licensing revenue recognized in any period, if any, and our results of operations, may differ significantly from our expectations.

Finally, because licensing revenue typically has a higher margin compared to product sales, licensing revenue can have a disproportionate impact on our gross profit and results of operations. There is no assurance that we will be able to maintain a consistent level of licensing revenue or mix of licensing revenue and revenue from product sales, which could result in wide fluctuations in our results of operations from period to period, making it difficult to accurately measure the performance of our business.

Our net operating loss carryforwards may be limited or they may expire before utilization.

As of December 31, 2022, we had federal, state and foreign net operating loss carryforwards of approximately \$155.0 million, \$9.6 million, and \$42.7 million, respectively, which will begin to expire in 2024. These net operating loss carryforwards may be used to offset future taxable income and thereby reduce our income taxes otherwise payable. However, we cannot assure you that we will have taxable income in the future before all or a portion of these net operating loss carryforwards expire. Additionally, our federal net operating losses may be limited by Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"), which imposes an annual limit on the ability of a corporation that undergoes an "ownership change" to use its net operating loss carryforwards to reduce its tax liability. An ownership change is generally defined as a greater than 50% increase in equity ownership by 5% shareholders in any three-year period. In the event of certain changes in our shareholder base, we may at some time in the future experience an "ownership change" and the use of our federal net operating loss carryforwards may be limited. In addition, the Tax Cuts and Jobs Act (the "TCJA"), limits the deduction for net operating loss carryforwards to 80 percent of taxable income for losses arising in taxable years beginning after December 31, 2020.

We face a number of risks as a result of the concentration of our operations and customers in Asia.

Many of our customers are located in Japan, China, or Taiwan. Sales outside the U.S. accounted for approximately 100%, 95% and 97% of revenue for the nine months ended September 30, 2023 and the years ended December 31, 2022 and 2021, respectively. We anticipate that sales outside the U.S. will continue to account for a substantial portion of our revenue in future periods. In addition, customers who incorporate our products into their products sell a substantial portion of their products outside of the U.S. All of our products are also manufactured outside of the U.S. and most of our current manufacturers are located in Taiwan. Furthermore, most of our employees are located in China, Japan and Taiwan. Our Asian operations require significant management attention and resources, and we are subject to many risks associated with operations in Asia, including, but not limited to:

- outbreaks of health epidemics in China or other parts of Asia, including COVID-19;
- difficulties in managing international distributors and manufacturers due to varying time zones, languages and business customs;
- compliance with U.S. laws affecting operations outside of the U.S., such as the Foreign Corrupt Practices Act;
- reduced or limited protection of our IP, particularly in software, which is more prone to design piracy;
- difficulties in collecting outstanding accounts receivable balances;
- changes in tax rates, tax laws and the interpretation of those laws;
- difficulties regarding timing and availability of export and import licenses;
- ensuring that we obtain complete and accurate information from our Asian operations to make proper disclosures in the United States;
- political and economic instability, including tensions between China and each of the U.S., Taiwan and Japan;
- difficulties in maintaining sales representatives outside of the U.S. that are knowledgeable about our industry and products;
- changes in the regulatory environment in China, Japan and Taiwan that may significantly impact purchases of our products by our customers or our customers' sales of their own products;
- imposition of new tariffs, quotas, trade barriers and similar trade restrictions on our sales;
- varying employment and labor laws; and
- greater vulnerability to infrastructure and labor disruptions than in established markets.

Any of these factors could require a disproportionate share of management's attention, result in increased costs or decreased revenues, and could materially affect our product sales, financial condition and results of operations.

Our operations in Asia expose us to heightened risks due to natural disasters.

The risk of natural disasters in the Pacific Rim region is significant. Natural disasters in countries where our manufacturers or customers are located could result in disruption of our manufacturers' and customers' operations, resulting in significant delays in shipment of, or significant reductions in orders for, our products. There can be no assurance that we can locate additional manufacturing capacity or markets on favorable terms, or find new customers, in a timely manner, if at all. Natural disasters in this region could also result in:

- reduced end user demand due to the economic impact of any natural disaster;
- a disruption to the global supply chain for products manufactured in areas affected by natural disasters that are included in products purchased either by us or by our customers;
- an increase in the cost of products that we purchase due to reduced supply; and
- other unforeseen impacts as a result of the uncertainty resulting from a natural disaster.

Our international operations expose us to risks resulting from the fluctuations of foreign currencies.

We are exposed to risks resulting from the fluctuations of foreign currencies, primarily those of Japan, Taiwan, China and Canada. We sell our products to OEMs that incorporate our products into other products that they sell outside of the U.S. While sales of our products to OEMs are denominated in U.S. dollars, the products sold by OEMs are denominated in foreign currencies. Accordingly, any strengthening of the U.S. dollar against these foreign currencies will increase the foreign currency price equivalent of our products, which could lead to a change in the competitive nature of these products in the marketplace. This, in turn, could lead to a reduction in revenue.

In addition, a portion of our operating expenses, such as employee salaries and foreign income taxes, are denominated in foreign currencies. Accordingly, our operating results are affected by changes in the exchange rate between the U.S. dollar and those currencies. Any future strengthening of those currencies against the U.S. dollar will negatively impact our operating results by increasing our operating expenses as measured in U.S. dollars.

We may engage in financial hedging techniques in the future as part of a strategy to address potential foreign currency exchange rate fluctuations. These hedging techniques, however, may not be successful at reducing our exposure to foreign currency exchange rate fluctuations and may increase costs and administrative complexity.

Failure to comply with anti-bribery, anti-corruption, and anti-money laundering laws could subject us to penalties and other adverse consequences.

We are subject to the Foreign Corrupt Practices Act ("FCPA") and other anti-corruption, anti-bribery and anti-money laundering laws in various jurisdictions. From time to time, we may leverage third parties to help conduct our businesses abroad. We and our third-party intermediaries may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities and may be held liable for the corrupt or other illegal activities of these third-party business partners and intermediaries, our employees, representatives, contractors, channel partners, and agents, even if we do not explicitly authorize such activities. While we have policies and procedures to address compliance with such laws, we cannot assure you that all of our employees and agents 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-bribery, anti-corruption laws, and anti-money laundering laws could result in whistleblower complaints, adverse media coverage, investigations, loss of export privileges, severe criminal or civil sanctions, or suspension or debarment from U.S. government contracts, all of which may have an adverse effect on our reputation, our business, results of operations and financial condition.

Our reported financial results may be materially and adversely affected by changes in accounting principles generally accepted in the United States.

Generally accepted accounting principles in the United States are subject to interpretation by the Financial Accounting Standards Board ("FASB"), the SEC, and various bodies formed to promulgate and interpret appropriate accounting principles. A change in these principles or interpretations could have a significant effect on our reported financial results and could materially and adversely affect the transactions completed before the announcement of a change. Additionally, the adoption of new or revised accounting principles may require that we make significant changes to our systems, processes and controls.

If we are unable to maintain effective disclosure controls and internal controls over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, and the market price of our common stock may be materially and adversely affected.

If we are unable to maintain effective disclosure controls and internal controls over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports. For example, in the second quarter of 2019, we identified a material weakness in our internal controls over financial reporting related to the review of aged liabilities for possible extinguishment due to the expiration of the statute of limitation, which was remediated as of December 31, 2019. Additionally, if any new internal control procedures which may be adopted or our existing internal control procedures are deemed inadequate, or if we identify additional material weaknesses in our disclosure controls or internal controls over financial reporting in the future, we will be unable to assert that our internal controls are effective. If we are unable to do so, or if our auditors are unable to attest to the effectiveness of our internal controls, we could lose investor confidence in the accuracy and completeness of our financial reports, which would cause the price of our common stock to decline.

As we have limited insurance coverage, any incurred liability resulting from uncovered claims could adversely affect our financial condition and results of operations.

Our insurance policies may not be adequate to fully offset losses from covered incidents, and we do not have coverage for certain losses. For example, we do not have earthquake insurance related to our Asian operations because adequate coverage is not offered at economically justifiable rates. If our insurance coverage is inadequate to protect us against catastrophic losses, any uncovered losses could adversely affect our financial condition and results of operations.

Our dependence on selling to distributors and integrators increases the complexity of managing our supply chain and may result in excess inventory or inventory shortages.

Selling to distributors and OEMs that build display devices based on specifications provided by branded suppliers, also referred to as integrators, reduces our ability to forecast sales accurately and increases the complexity of our business. Our sales are generally made on the basis of customer purchase orders rather than long-term purchase commitments. Our distributors, integrators and customers may cancel or defer purchase orders at any time, but we must order wafer inventory from our contract manufacturers three to four months in advance.

The estimates we use for our advance orders from contract manufacturers are based, in part, on reports of inventory levels and production forecasts from our distributors and integrators, which act as intermediaries between us and the companies using our products. This process requires us to make numerous assumptions concerning demand and to rely on the accuracy of the reports and forecasts of our distributors and integrators, each of which may introduce error into our estimates of inventory requirements. Our failure to manage this challenge could result in excess inventory or inventory shortages that could materially impact our operating results or limit the ability of companies using our semiconductors to deliver their products. If we overestimate demand for our products, it could lead to significant charges for obsolete inventory. On the other hand, if we underestimate demand, we could forego revenue opportunities, lose market share and damage our customer relationships.

We may be unable to successfully manage any future growth, including the integration of any acquisition or equity investment, which could disrupt our business and severely harm our financial condition.

If we fail to effectively manage any future internal growth, our operating expenses may increase more rapidly than our revenue, adversely affecting our financial condition and results of operations. To manage any future growth effectively in a rapidly evolving market, we must be able to maintain and improve our operational and financial systems, train and manage our employee base and attract and retain qualified personnel with relevant experience. We could spend substantial amounts of time and money in connection with expansion efforts for which we may not realize any profit. Our systems, procedures, controls or financial resources may not be adequate to support our operations and we may not be able to grow quickly enough to exploit potential market opportunities. In addition, we may not be able to successfully integrate the businesses, products, technologies or personnel of any entity that we might acquire in the future, or we may fail to realize the anticipated benefits of any such acquisition. The successful integration of any acquired business as well as the retention of personnel may require significant attention from our management and could divert resources from our existing business, which in turn could have an adverse effect on our business operations. Acquired assets or businesses may not achieve the anticipated benefits we expect due to a number of factors including: unanticipated costs or liabilities associated with such acquisition, including in the case of acquisitions we may make outside of the United States, difficulty in operating in foreign countries or complying with foreign regulatory requirements, incurrence of acquisition-related costs, harm to our relationships with existing customers as a result of such acquisition, harm to our brand and reputation, the loss of key employees in the acquired businesses, use of resources that are needed in other parts of our business, and use of substantial portions of our available cash to consummate any such acquisition. Any failure to successfully integrate any entity we may acquire or any failure to achieve the anticipated benefits of any such acquisition could disrupt our business and seriously harm our financial condition.

Continued compliance with regulatory and accounting requirements will be challenging and will require significant resources.

We spend a significant amount of management time and external resources to comply with changing laws, regulations and standards relating to corporate governance and public disclosure, including evolving SEC rules and regulations, Nasdaq Global Market rules, the Dodd-Frank Wall Street Reform and Consumer Protection Act and the Sarbanes-Oxley Act of 2002, which requires management's annual review and evaluation of internal control over financial reporting. Failure to comply with these laws and rules could lead to investigation by regulatory authorities, de-listing from the Nasdaq Global Market, or penalties imposed on us.

Regulations related to conflict minerals may adversely impact our business.

The SEC has adopted disclosure and reporting rules intended to improve transparency and accountability concerning the supply of certain minerals, known as conflict minerals, originating from the Democratic Republic of Congo ("DRC") and adjoining countries. These rules require us to conduct a reasonable inquiry to determine the origin of certain materials used in our products and disclose whether our products use any materials containing conflict minerals originating from the DRC and adjoining countries. Since we do not own or operate a semiconductor fabrication facility and do not manufacture our products internally, we are dependent on the information provided by third-party foundries and production facilities regarding the materials used and the supply chains for the materials. Further, there are costs associated with complying with these rules, including costs incurred to conduct inquiries to determine the sources of any materials containing conflict minerals used in our products, to fulfill our reporting requirements and to develop and implement potential changes to products, processes or sources of supply if it is determined that our products contain or use any conflict minerals from the DRC or adjoining countries. There may only be a limited number of suppliers offering "conflict free" materials and we cannot be sure that we will be able to obtain necessary "conflict free" materials from such suppliers in sufficient quantities or at reasonable prices. In addition, we may face reputational challenges if we determine that any of our products contain minerals that are not conflict free or if we are unable to sufficiently verify the origins for all materials containing conflict minerals used in our products through the procedures we may implement.

Our effective income tax rate is subject to unanticipated changes in, or different interpretations of, tax rules and regulations, and forecasting our effective income tax rate is complex and subject to uncertainty.

As a global company, we are subject to taxation by a number of taxing authorities and as such, our tax rates vary among the jurisdictions in which we operate. Unanticipated changes in our tax rates could affect our future results of operations. Our effective tax rates could be adversely affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in tax laws or the interpretation of tax laws either in the U.S. or abroad, or by changes in the valuation of our deferred tax assets and liabilities. The ultimate outcomes of any future tax audits are uncertain, and we can give no assurance as to whether an adverse result from one or more of them would have a material effect on our operating results and financial position.

The computation of income tax expense is complex as it is based on the laws of numerous tax jurisdictions and requires significant judgment on the application of complicated rules governing accounting for tax provisions under U.S. generally accepted accounting principles. Income tax expense for interim quarters is based on our forecasted tax rate for the year, which includes forward-looking financial projections, including the expectations of profit and loss by jurisdiction, and contains numerous assumptions. For these reasons, our tax rate may be materially different than our forecast.

We rely upon certain critical information systems for the operation of our business, and the failure of any critical information system may result in serious harm to our business.

We maintain and rely upon certain critical information systems for the effective operation of our business. These information systems include telecommunications, the Internet, our corporate intranet, various computer hardware and software applications, network communications and e-mail. These information systems are subject to attacks, failures and access denials from a number of potential sources including viruses, destructive or inadequate code, power failures, and physical damage to computers, communication lines and networking equipment. To the extent that these information systems are under our control, we have implemented security procedures, such as virus protection software and firewall monitoring, to address the outlined risks. Security procedures for information systems cannot be guaranteed to be failsafe and our inability to use or access these information systems at critical times could compromise the timely and efficient operation of our business. Additionally, any compromise of our information security could result in the unauthorized publication of our confidential business or proprietary information, cause an interruption in our operations, result in the unauthorized release of customer or employee data, result in a violation of privacy or other laws, or expose us to a risk of litigation or damage our reputation, any or all of which could harm our business and operating results.

Environmental laws and regulations may cause us to incur significant expenditures to comply with applicable laws and regulations, and we may be assessed considerable penalties for noncompliance.

We are subject to numerous environmental laws and regulations. Compliance with current or future environmental laws and regulations could require us to incur substantial expenses which could harm our business, financial condition and results of operations. We have worked, and will continue to work, with our suppliers and customers to ensure that our products are compliant with enacted laws and regulations. Failure by us or our contract manufacturers to comply with such legislation could result in customers refusing to purchase our products and could subject us to significant monetary penalties in connection with a violation, either of which would have a material adverse effect on our business, financial condition and results of operations.

Increasing attention on environmental, social and governance (ESG) matters may have a negative impact on our business, impose additional costs on us, and expose us to additional risks.

Companies are facing increasing attention from investors, customers, partners, consumers and other stakeholders relating to ESG matters, including environmental stewardship, social responsibility, diversity and inclusion, racial justice and workplace conduct. In addition, organizations that provide information to investors on corporate governance and related matters have developed ratings processes for evaluating companies on their approach to ESG matters. Such ratings are used by some investors to inform their investment and voting decisions. Unfavorable ESG ratings may lead to negative investor sentiment toward the Company, which could have a negative impact on our stock price and our access to and costs of capital.

We have established corporate social responsibility programs aligned with sound environmental, social and governance principles. These programs reflect our current initiatives and are not guarantees that we will be able to achieve them. Our ability to successfully execute these initiatives and accurately report our progress presents numerous operational, financial, legal, reputational and other risks, many of which are outside our control, and all of which could have a material negative impact on our business. Additionally, the implementation of these initiatives imposes additional costs on us. If our ESG initiatives fail to satisfy investors, customers, partners and our other stakeholders, our reputation, our ability to sell products and services to customers, our ability to attract or retain employees, and our attractiveness as an investment, business partner or acquirer could be negatively impacted. Similarly, our failure or perceived failure to pursue or fulfill our goals, targets and objectives or to satisfy various reporting standards within the timelines we announce, or at all, could also have similar negative impacts and expose us to government enforcement actions and private litigation.

Company Risks Related to the Semiconductor Industry and Our Markets

Dependence on a limited number of sole-source, third-party manufacturers for our products exposes us to possible shortages based on low manufacturing yield, errors in manufacturing, uncontrollable lead-times for manufacturing, capacity allocation, price increases with little notice, volatile inventory levels and delays in product delivery, any of which could result in delays in satisfying customer demand, increased costs and loss of revenue.

We do not own or operate a semiconductor fabrication facility and do not have the resources to manufacture our products internally. We rely on a limited number of foundries and assembly and test vendors to produce all of our wafers and for completion of finished products. Our wafers are not fabricated at more than one foundry at any given time and our wafers typically are designed to be fabricated in a specific process at only one foundry. Sole sourcing each product increases our dependence on our suppliers. We have limited control over delivery schedules, quality assurance, manufacturing yields, potential errors in manufacturing and production costs. We do not have long-term supply contracts with our third-party manufacturers, so they are not obligated to supply us with products for any specific period of time, quantity or price, except as may be provided in a particular purchase order. Our suppliers can increase the prices of the products we purchase from them with little notice, which may cause us to increase the prices to our customers and harm our competitiveness. Because our requirements represent only a small portion of the total production capacity of our contract manufacturers, they could reallocate capacity to other customers during periods of high demand for our products, as they have done in the past. We expect this may occur again in the future.

Establishing a relationship with a new contract manufacturer in the event of delays or increased prices would be costly and burdensome. The lead time to make such a change would be at least nine months, and the estimated time for us to adapt a product's design to a particular contract manufacturer's process is at least four months. Additionally, we have chosen, and may continue to choose new foundries to manufacture our wafers which in turn, may require us to modify our design methodology flow for the process technology and intellectual property cores of the new foundry. If we have to qualify a new foundry or packaging, assembly and testing supplier for any of our products or if we are unable to obtain our products from our contract manufacturers on schedule, at costs that are acceptable to us, or at all, we could incur significant delays in shipping products, our ability to satisfy customer demand could be harmed, our revenue from the sale of products may be lost or delayed and our customer relationships and ability to obtain future design wins could be damaged.

Shortages of materials used in the manufacturing of our products and other key components of our customers' products may increase our costs, impair our ability to ship our products on time and delay our ability to sell our products.

We have in the past faced shortages of components and materials that are critical to the manufacture of our products and our customers' products. Such critical components and materials may include semiconductor wafers and packages, double data rate memory die, display components, analog-to-digital converters, digital receivers, video decoders and voltage regulators. These shortages may happen again and if so, could increase our costs and prevent us from shipping our products to our customers in a timely fashion, both of which could harm our business and adversely affect our results of operations.

Our highly integrated products and high-speed mixed signal products are difficult to manufacture without defects and the existence of defects could result in increased costs, delays in the availability of our products, reduced sales of products or claims against us.

The manufacture of semiconductors is a complex process and it is often difficult for semiconductor foundries to produce semiconductors free of defects. Some of our products can be more highly integrated than other semiconductors and can incorporate mixed signal analog and digital signal processing, multi-chip modules and embedded memory technology, making them even more difficult to produce without defects. Defective products can be caused by design or manufacturing difficulties. Identifying quality problems can be performed only by analyzing and testing our semiconductors in a system after they have been manufactured. The difficulty in identifying defects is compounded because the process technology is unique to each of the multiple semiconductor foundries we contract with to manufacture our products. Despite testing by both our customers and us, errors or performance problems may be found in existing or new semiconductors. Failure to achieve defect-free products may result in increased costs and delays in the availability of our products. Defects may also divert the attention of our engineering personnel from our product development efforts to find and correct the issue, which would delay our product development efforts.

Additionally, customers could seek damages from us for their losses, and shipments of defective products may harm our reputation with our customers. If a product liability claim is brought against us, the cost of defending the claim could be significant and would divert the efforts of our technical and management personnel and harm our business. Further, our business liability insurance may be inadequate or future coverage may be unavailable on acceptable terms, which could adversely impact our financial results.

We experience a small number of semiconductor field failures infrequently in certain customer applications that required us to institute additional testing. As a result of these field failures, we have incurred warranty costs due to customers returning potentially affected products and have experienced reductions in revenues due to delays in production. Our customers have also experienced delays in receiving product shipments from us that resulted in the loss of revenue and profits. Additionally, shipments of defective products could cause us to lose customers or to incur significant replacement costs, either of which would harm our reputation and our business. Any defects, errors or bugs could also interrupt or delay sales of our new products to our customers, which would adversely affect our financial results.

The development of new products is extremely complex and we may be unable to develop our new products in a timely manner, which could result in a failure to obtain new design wins and/or maintain our current revenue levels.

In addition to the inherent difficulty of designing complex integrated circuits, product development delays may result from:

- difficulties in hiring and retaining necessary technical personnel;
- difficulties in reallocating engineering resources and overcoming resource limitations;
- difficulties with contract manufacturers;
- changes to product specifications and customer requirements;
- changes to market or competitive product requirements; and
- unanticipated engineering complexities.

If we are not successful in the timely development of new products, we may fail to obtain new design wins and our financial results will be adversely affected.

Intense competition in our markets may reduce sales of our products, reduce our market share, decrease our gross profit and result in large losses.

We compete with specialized and diversified electronics and semiconductor companies that offer display processors or scaling components including: Actions Microelectronics Co., Ltd., ARM Holdings PLC, Dolby Laboratories, Inc., Egis Technology Inc., Hisilicon Technologies Co., Ltd., i-Chips Technology Inc., Lattice Semiconductor Corporation, MediaTek Inc., Novatek Microelectronics Corp., NVIDIA Corporation, Qualcomm Incorporated, Realtek Semiconductor Corp., Renesas Electronics America Inc., Socionext Inc., Solomon Systech (International) Ltd., STMicroelectronics N.V., Sunplus Technology Co., Ltd., Synaptics Incorporated, Texas Instruments Incorporated, Unisoc (Shanghai) Technologies Co., Ltd, and other companies. Potential and current competitors may include diversified semiconductor manufacturers and the semiconductor divisions or affiliates of some of our customers, including: Apple Inc., Broadcom Inc., LG Electronics, Inc., MegaChips Corporation, Mitsubishi Digital Electronics America, Inc., NEC Corporation, Panasonic Corporation, Samsung Electronics Co., Ltd., Socionext Inc., ON Semiconductor Corporation, Seiko Epson Corporation, Sharp Electronics Corporation, Sony Corporation, and Toshiba America, Inc. In addition, start-up companies may seek to compete in our markets.

Many of our competitors have longer operating histories and greater resources to support development and marketing efforts than we do. Some of our competitors operate their own fabrication facilities. These competitors may be able to react more quickly and devote more resources to efforts that compete directly with our own. Additionally, any consolidation in the semiconductor industry may impact our competitive position. Our current or potential customers have developed, and may continue to develop, their own proprietary technologies and become our competitors. Increased competition from both competitors and our customers' internal development efforts could harm our business, financial condition and results of operations by, for example, increasing pressure on our profit margin or causing us to lose sales opportunities. For example, frame rate conversion technology similar to that used in our line of MotionEngine® advanced video co-processors continues to be integrated into the SoC and display timing controller products of our competitors. We cannot assure you that we can compete successfully against current or potential competitors.

If we are not able to respond to the rapid technological changes and evolving industry standards in the markets in which we compete, or seek to compete, our products may become less desirable or obsolete.

The markets in which we compete or seek to compete are subject to rapid technological change and miniaturization capabilities, frequent new product introductions, changing customer requirements for new products and features and evolving industry standards. The introduction of new technologies and the emergence of new industry standards could render our products less desirable or obsolete, which could harm our business and significantly decrease our revenue. Examples of changing industry standards include the growing use of broadband to deliver video content, increased display resolution and size, faster screen refresh rates, video capability such as High Dynamic Range, the proliferation of new display devices and the drive to network display devices together. Our failure to predict market needs accurately or to timely develop new competitively priced products or product enhancements that incorporate new industry standards and technologies, including integrated circuits with increasing levels of integration and new features, using smaller geometry process technologies, may harm market acceptance and sales of our products.

Our products are incorporated into our customers' products, which have different parts and specifications and utilize multiple protocols that allow them to be compatible with specific computers, video standards and other devices. If our customers' products are not compatible with these protocols and standards, consumers will return, or not purchase these products and the markets for our customers' products could be significantly reduced. Additionally, if the technology used by our customers becomes less competitive due to cost, customer preferences or other factors relative to alternative technologies, sales of our products could decline.

We use a customer-owned tooling process for manufacturing most of our products, which exposes us to the possibility of poor yields and unacceptably high product costs.

We build most of our products on a customer-owned tooling basis, whereby we directly contract the manufacture of our products, including wafer production, assembly and testing. As a result, we are subject to increased risks arising from wafer manufacturing yields and risks associated with coordination of the manufacturing, assembly and testing process. Poor product yields result in higher product costs, which could make our products less competitive if we increase our prices to compensate for our higher costs or could result in lower gross profit margins if we do not increase our prices.

We depend on manufacturers of our semiconductor products not only to respond to changes in technology and industry standards but also to continue the manufacturing processes on which we rely.

To respond effectively to changes in technology and industry standards, we depend on our contracted foundries to implement advanced semiconductor technologies and our operations could be adversely affected if those technologies are unavailable, delayed or inefficiently implemented. In order to increase performance and functionality and reduce the size of our products, we are continuously developing new products using advanced technologies that further miniaturize semiconductors and we are dependent on our foundries to develop and provide access to the advanced processes that enable such miniaturization. We cannot be certain that future advanced manufacturing processes will be implemented without difficulties, delays or increased expenses. Our business, financial condition and results of operations could be materially adversely affected if advanced manufacturing processes are unavailable to us, substantially delayed or inefficiently implemented.

Creating the capacity for new technological changes may cause manufacturers to discontinue older manufacturing processes in favor of newer ones. We must then either retire the affected part or port (develop) a new version of the part that can be manufactured with a newer process technology. In the event that a manufacturing process is discontinued, our current suppliers may be unwilling or unable to manufacture our current products. We may not be able to place last time buy orders for the old technology or find alternate manufacturers of our products to allow us to continue to produce products with the older technology while we expend the significant costs for research and development and time to migrate to new, more advanced processes.

Because of our long product development process and sales cycles, we may incur substantial costs before we earn associated revenue and ultimately may not sell as many units of our products as we originally anticipated.

We develop products based on anticipated market and customer requirements and incur substantial product development expenditures, which can include the payment of large up-front, third-party license fees and royalties, prior to generating the associated revenue. Our work under these projects is technically challenging and places considerable demands on our limited resources, particularly on our most senior engineering talent. Additionally, the transition to smaller geometry process technologies continues to significantly increase the cost and complexity of new product development, particularly with regards to tooling, software tools, third party IP and engineering resources. Because the development of our products incorporates not only our complex and evolving technology, but also our customers' specific requirements, a lengthy sales process is often required before potential customers begin the technical evaluation of our products. Our customers typically perform numerous tests and extensively evaluate our products before incorporating them into their systems. The time required for testing, evaluation and design of our products into a customer's system can take nine months or more. It can take an additional nine months or longer before a customer commences volume shipments of systems that incorporate our products, if at all. Because of the lengthy development and sales cycles, we will experience delays between the time we incur expenditures for research and development, sales and marketing and inventory and the time we generate revenue, if any, from these expenditures.

Furthermore, we have entered into and may in the future enter into, co-development agreements that do not guarantee future sales volumes and limit our ability to sell the developed products to other customers. The exclusive nature of these development agreements increases our dependence on individual customers, particularly since we are limited in the number of products we are able to develop at any one time.

If actual sales volumes for a particular product are substantially less than originally anticipated, we may experience large write-offs of capitalized license fees, software development tools, product masks, inventories or other capitalized or deferred product-related costs, any of which would negatively affect our operating results.

Our developed software may be incompatible with industry standards and challenging and costly to implement, which could slow product development or cause us to lose customers and design wins.

We provide our customers with software development tools and with software that provides basic functionality for our integrated circuits and enables enhanced connectivity of our customers' products. Software development is a complex process and we are dependent on software development languages and operating systems from vendors that may limit our ability to design software in a timely manner. Also, as software tools and interfaces change rapidly, new software languages introduced to the market may be incompatible with our existing systems and tools, requiring significant engineering efforts to migrate our existing systems in order to be compatible with those new languages. Software development disruptions could slow our product development or cause us to lose customers and design wins. The integration of software with our products adds complexity, may extend our internal development programs and could impact our customers' development schedules. This complexity requires increased coordination between hardware and software development schedules and increases our operating expenses without a corresponding increase in product revenue. This additional level of complexity lengthens the sales cycle and may result in customers selecting competitive products requiring less software integration.

The competitiveness and viability of our products could be harmed if necessary licenses of third-party technology are not available to us on terms that are acceptable to us or at all.

We license technology from independent third parties that is incorporated into our products or product enhancements. Future products or product enhancements may require additional third-party licenses that may not be available to us on terms that are acceptable to us or at all. In addition, in the event of a change in control of one of our licensors, it may become difficult to maintain access to its licensed technology. If we are unable to obtain or maintain any third-party license required to develop new products and product enhancements, we may have to obtain substitute technology with lower quality or performance standards, or at greater cost, either of which could seriously harm the competitiveness of our products.

Our limited ability to protect our IP and proprietary rights could harm our competitive position by allowing our competitors to access our proprietary technology and to introduce similar products.

Our ability to compete effectively with other companies depends, in part, on our ability to maintain the proprietary nature of our technology, including our semiconductor designs and software code. We provide the computer programming code for our software to customers in connection with their product development efforts, thereby increasing the risk that customers will misappropriate our proprietary software. We rely on a combination of patent, copyright, trademark and trade secret laws, as well as nondisclosure agreements and other methods, to help protect our proprietary technologies. As of September 30, 2023, we held 278 patents and had 18 patent applications pending for protection of our significant technologies. Competitors in both the U.S. and foreign countries, many of whom have substantially greater resources than we do, may apply for and obtain patents that will prevent, limit or interfere with our ability to make and sell our products, or they may develop similar technology independently or design around our patents. Effective patent, copyright, trademark and trade secret protection may be unavailable or limited in foreign countries and, thus, make the possibility of piracy of our technology and products more likely in these countries.

We cannot assure you that the degree of protection offered by patent or trade secret laws will be sufficient. Furthermore, we cannot assure you that any patents will be issued as a result of any pending applications or that any claims allowed under issued patents will be sufficiently broad to protect our technology. We may incur significant costs to stop others from infringing our patents. In addition, it is possible that existing or future patents may be invalidated, diluted, circumvented, challenged or licensed to others.

Others may bring infringement or indemnification actions against us that could be time-consuming and expensive to defend.

We may become subject to claims involving patents or other intellectual property rights. In recent years, there has been significant litigation in the U.S. and in other jurisdictions involving patents and other intellectual property rights. This litigation is particularly prevalent in the semiconductor industry, in which a number of companies aggressively use their patent portfolios to bring infringement claims. In recent years, there has been an increase in the filing of so-called "nuisance suits," alleging infringement of intellectual property rights. These claims may be asserted initially or as counterclaims in response to claims made by a company alleging infringement of intellectual property rights. These suits pressure defendants into entering settlement arrangements to quickly dispose of such suits, regardless of merit. We may also face claims brought by companies that are organized solely to hold and enforce patents. In addition, we may be required to indemnify our customers against IP claims related to their usage of our products as certain of our agreements include indemnification provisions from third parties relating to our intellectual property.

IP claims could subject us to significant liability for damages and invalidate our proprietary rights. Responding to such claims, regardless of their merit, can be time-consuming, result in costly litigation, divert management's attention and resources and cause us to incur significant expenses. As each claim is evaluated, we may consider the desirability of entering into settlement or licensing agreements. No assurance can be given that settlements will occur or that licenses can be obtained on acceptable terms or that litigation will not occur. In the event there is a temporary or permanent injunction entered prohibiting us from marketing or selling certain of our products, or a successful claim of infringement against us requiring us to pay damages or royalties to a third-party and we fail to develop or license a substitute technology, our business, results of operations or financial condition could be materially adversely affected. Any IP litigation or claims also could force us to do one or more of the following:

- stop selling products using technology that contains the allegedly infringing IP;
- attempt to obtain a license to the relevant IP, which may not be available on terms that are acceptable to us or at all;
- attempt to redesign those products that contain the allegedly infringing IP; or
- pay damages for past infringement claims that are determined to be valid or which are arrived at in settlement of such litigation or threatened litigation.

If we are forced to take any of the foregoing actions, we may incur significant additional costs or be unable to manufacture and sell our products, which could seriously harm our business. In addition, we may not be able to develop, license or acquire non-infringing technology under reasonable terms. These developments could result in an inability to compete for customers or otherwise adversely affect our results of operations.

Our products are characterized by average selling prices that can decline over relatively short periods of time, which will negatively affect our financial results unless we are able to reduce our product costs or introduce new products with higher average selling prices.

Average selling prices for our products can decline over relatively short periods of time, while many of our product costs are relatively fixed. When our average selling prices decline, our gross profit declines unless we are able to sell more units or reduce the cost to manufacture our products. We have experienced declines in our average selling prices and expect that we will continue to experience them in the future, although we cannot predict when they may occur or how severe they will be. Our financial results will suffer if we are unable to offset any reductions in our average selling prices by increasing our sales volumes, reducing our costs, adding new features to our existing products or developing new or enhanced products in a timely manner with higher selling prices or gross profits.

The cyclical nature of the semiconductor industry may lead to significant variances in the demand for our products and could harm our operations.

In the past, the semiconductor industry has been characterized by significant downturns and wide fluctuations in supply and demand. Also, the industry has experienced significant fluctuations in anticipation of changes in general economic conditions, including economic conditions in Asia, Europe and North America. The cyclical nature of the semiconductor industry has also led to significant variances in product demand and production capacity. We have experienced, and may continue to experience, periodic fluctuations in our financial results because of changes in industry-wide conditions.

Risks Related to Our Operations in China

We face additional risks associated with our operations in China, including the risk of changes in China's political, economic or social conditions or changes in U.S.-China relations, as well as liquidity risks, any of which may adversely and materially affect our results of operations, financial position and value of our securities.

We have, and expect to continue to have, significant operations in China as our Chinese subsidiary, Pixelworks Semiconductor Technology (Shanghai) Co., Ltd (“PWSH”), is a full profit-and-loss center underneath the Company for our Mobile and Home & Enterprise businesses. The economy of China differs from the economies of the United States in important respects such as structure, government involvement, level of development, growth rate, capital reinvestment, allocation of resources, self-sufficiency, rate of inflation, foreign currency flows and balance of payments position, among others. There can be no assurance that China’s economic policies will be consistent or effective and because a significant portion of our operations are in China, our results of operations, financial position and value of our securities may be materially harmed by changes in China’s political, economic or social conditions. Additionally, the political and economic relationship between the U.S. and China is uncertain, and any changes in policy as a result may adversely affect our business. For example, recent statements and actions by the United States regarding the export of certain semiconductor technology, although not applicable to our technology or products, could result in responsive actions taken by China that could adversely impact our operations, financial position, or the value of our securities.

In addition, the Company faces certain liquidity risks from its operations in China. PWSH has, in the past, and may decide in the future, to sell shares of its stock, such as in a private placement similar to that which closed in August 2021, in an initial public offering on a stock exchange located in China, such as the Shanghai Stock Exchange’s (“SSE”) Science Technology Innovation Board, known as the STAR Market (the “Listing”), or otherwise. In addition, PWSH may, in the future, become profitable. Any proceeds raised or generated by PWSH are subject to certain PRC laws and regulations that may make it difficult, if not impossible, for the Company to use such proceeds to fund its operations outside of China. For example, China's government imposes control over the convertibility of RMB into foreign currencies, which can cause difficulties converting cash held in RMB to other currencies. It is therefore unlikely that funds raised or generated by PWSH will be readily distributable to the Company or its U.S. shareholders. Additionally, cash is transferred through the Company between entities through settling cash owed between one entity and another, for example for services rendered, through intercompany agreements. While currently the Company has been able to settle cash owed between PWSH and other entities within the Company, PRC laws and regulations could change so as to make it more difficult, if not impossible, to make such transfers in the future, which in turn would adversely affect our results of operations.

We face legal and operational risks related to the PRC legal system, including uncertainties regarding the enforcement of laws, and sudden or unexpected changes in laws, required approvals and permissions, and regulations in China, which could adversely affect us and limit the legal protections available to the Company and its stockholders, as well as materially and adversely affect our business and value of our securities.

While the overall effect of legislation over the past two decades has significantly enhanced the protections afforded to various foreign investments in China, China has not developed a fully integrated legal system based on the rule of law, and recently enacted laws and regulations may not sufficiently cover all aspects of economic activities in China. Because the PRC legal system continues to evolve rapidly, the interpretations of many laws, regulations and rules are not always uniform and enforcement of these laws, regulations and rules involves uncertainties, which may limit legal protections available to the Company. Uncertainties due to evolving laws and regulations could also impede the ability of an entity based in China, such as PWSH, to obtain or maintain permits or licenses required to conduct business in China. In addition, some regulatory requirements issued by certain PRC government authorities may not be consistently applied by other PRC government authorities (including local government authorities), thus making strict compliance with all regulatory requirements impractical, or in some circumstances impossible. In addition, China's legal system is based in part on government policies and internal rules, some of which are not published on a timely basis or at all, which may have a retroactive effect. As a result, we may not be aware of our violation of these policies and rules until after the violation occurs. Any administrative and court proceedings in China may be protracted, resulting in substantial costs and diversion of resources and management attention. Further, since Chinese administrative and court authorities have significant discretion in interpreting and implementing statutory and contractual terms, it may be more difficult to evaluate the outcome of administrative and court proceedings. These uncertainties may also impede our ability to enforce the contracts entered into by PWSH and could materially and adversely affect our business and results of operations.

The PRC government at times will exercise significant oversight and discretion over the conduct of business in the PRC and may intervene or influence business operations as the government deems appropriate to further regulatory, political and societal goals. PWSH is required to obtain certain permits and licenses from certain PRC government agencies to operate businesses in China, such as business licenses from the State Administration for Market Regulation (“SAMR”), registrations with PRC tax authorities, filings with PRC customs for carrying out export and import business activities and registrations with China’s State Administration of Foreign Exchange (SAFE) for the ability to receive funds from offshore entities and transfer funds to offshore entities. We are not currently required to obtain permissions or approvals from the Cyberspace Administration of China (“CAC”) or China Securities Regulatory Commission (“CSRC”), but would need to obtain approval from CSRC if PWSH applies for a listing on The Shanghai Exchange’s Science and Technology Innovation Board, known as the STAR Market (the “Listing”), and as a listed company PWSH would continue to be subject to CSRC rules and regulations. As of the date of this report, PWSH has obtained the required business licenses from the SAMR and complied with registration and filing requirements of other Chinese government agencies, and has not been denied such registrations or filings by any PRC authority, however, if we do not receive or maintain the necessary permissions or approvals, inadvertently conclude that such permissions or approvals are not required, or applicable laws, regulations or interpretations change and we become required to obtain such permissions or approvals in the future and we fail to do so, we may be subject to investigations, fines, penalties, suspensions in operations, or other punitive action which could result in a material adverse change in our PRC operations and our results of operation, which in turn could cause our stock price to be materially and adversely affected.

Additionally, rules and regulations in China can change quickly and with little advance notice. For example, the PRC government has recently initiated a series of regulatory actions and made a number of public statements on the regulation of businesses in China with little advance notice, including enhancing supervision over China-based companies listed overseas, adopting new measures to extend the scope of cybersecurity reviews, and expanding efforts in anti-monopoly enforcement. While we do not believe we are subject to these regulatory actions or statements, as we have not implemented the kind of monopolistic behavior that is the target of these rules, and our business does not involve large-scale collection of user data, implicate cybersecurity, or involve any other type of restricted industry, and therefore these regulatory actions and statements do not impact our ability to conduct our business, accept foreign investments into PWSH, or list our PWSH shares on the STAR Market, there is no guarantee that the PRC government will refrain from releasing regulations or policies regarding the Company’s industry that could adversely affect our business, financial condition, results of operations or ability to list PWSH shares on the STAR market.

If we are unable to implement our strategy to expand our PRC operations, including the positioning of our subsidiary to qualify and seek an initial public offering on the STAR Market, our ability to access capital, customers, and talent in China could suffer, which in turn may materially and adversely affect our worldwide growth and revenue potential.

In August 2021, we announced our strategic plan to transform PWSH into a profit center for our Mobile and Home & Enterprise businesses to improve our access to capital, customers, and talent in China. As part of this strategic plan, we intend to qualify PWSH to file an application for an initial public offering on the STAR Market to further improve our access to capital markets and to fund growth. We may not be successful in the implementation of our strategic plan, and we may not be able to complete the Listing for a number of reasons, including those related to the risks we face associated with our operations in China as detailed separately above, many of which are outside our control. With respect to the Listing, PWSH must succeed in obtaining PRC governmental approvals required to permit the Listing, and one or more of those approvals may be denied, or significantly delayed, by the PRC regulators for reasons outside our control or unknown to us, or may be conditioned on requirements that we deem would result in an undue burden or material adverse impact on our business. Similarly, the Listing application may be denied or delayed by the Shanghai Stock Exchange in its discretion. Further, the COVID-19 outbreak, the tensions between the United States and China, or other geopolitical forces, including war, could negatively impact our currently planned projects and investments in the PRC, including the Listing.

Additionally, pursuant to our August 2021 Capital Increase Agreement and the agreements for the employee-owned entities that have invested in PWSH (the “ESOP”), PWSH agreed to attempt to complete all requirements to qualify for a Listing such that the Listing is consummated prior to a certain date (for the private equity and strategic investors (“Investors”), June 30, 2024, and for the ESOP, December 31, 2024). If PWSH has not consummated the Listing before those dates, or if it seriously violates certain other restructuring actions required by the Capital Increase Agreement such that a Listing by such dates becomes impossible, the respective purchasers may elect to require that we repurchase the purchaser’s respective equity interest for a price equal to the initial purchase price paid by the purchaser (and for the ESOP, plus annual simple interest at a rate of 5%). As noted above, various elements in the Listing process are outside our control or may be subject to conditions that are unacceptable to us, and if we fail to obtain the Listing, the provisions of the Capital Increase Agreement would require a use of cash for purposes not otherwise planned for, which in turn would negatively impact our plans for growth and our cash position.

If we are unable to successfully implement our strategic plan, including the Listing, we may not realize the advantages to our PRC operations contemplated by our business strategy, including improving our access to capital markets, customers, and talent in China. Because it may be several years before we know whether the Listing will be completed, we may, in the interim, forego or postpone other alternative actions to strengthen our market position and operations in the PRC.

PRC companies are critical to the global semiconductor industry, and our current business is substantially concentrated in the PRC market. Our inability to build, or any delay in growing, our PRC-based operations over the next several years would materially and adversely limit our operations and operating results, including our revenue growth. In addition, during that time, the process underlying the Listing could result in significant diversion of management time as well as substantial out-of-pocket costs, which could further impair our ability to expand our business.

Even if we complete the Listing, we may not achieve the results contemplated by our business strategy and our strategy for growth in the PRC may not result in increases in the price of our common stock.

We cannot assure you that, even if the Listing is completed, we will realize any or all of our anticipated benefits of the Listing. Our completion of the Listing may not have the anticipated effects of providing access to new capital markets or strengthening our market position and operations in the PRC. If the Listing is completed, PWSH will have broad discretion in the use of the proceeds from the initial sales of shares to PWSH investors, and it may not spend or invest those proceeds in a manner that results in our operating success or with which the common shareholders of Pixelworks agree. Our failure to successfully leverage the completion of the Listing to enhance our access to new capital markets and expand our PRC business could result in a decrease in the price of our common stock, and we cannot assure you that the success of PWSH will have an associated positive effect on the price of our common stock.

The CSRC and the SSE have recently tightened the standards for the STAR Market and are currently advising companies that are not yet profitable under China GAAP standards against filing an IPO application in the present environment. The Company believes this is in large part due to the current economic conditions in China and the recent performance of companies already listed on the STAR Market that were not profitable at the time of their IPO. PWSH is not currently profitable under China GAAP standards. The CSRC and the SSE may relax the standards, but there is no guarantee that this will happen in any particular time frame. The Company will continue to prepare our application so it is ready to file once the situation changes or PWSH achieves profitability under China GAAP standards. There can be no assurances that the Listing will occur at all. In the interim, PWSH may require additional funding from Pixelworks to augment its PRC operations, and we cannot give any assurance that such capital will be available from Pixelworks on terms acceptable to us. Any such inability to obtain funds from Pixelworks or other sources may impair the ability of PWSH to grow its operations, which could have a material adverse effect on our consolidated operating results and on the price of our common stock.

PWSH's status as a publicly traded company that is controlled, but less than wholly owned, by Pixelworks could have an adverse effect on us.

PWSH is not currently a wholly owned subsidiary of Pixelworks, and following the Listing, other holders may hold as much as 30% of the subsidiary. The interests of PWSH may diverge from the interests of Pixelworks and its other subsidiaries in the future. We may face conflicts of interest in managing, financing, or engaging in transactions with PWSH, or allocating business opportunities between our subsidiaries, including future arrangements for operating subsidiaries other than PWSH to license and use our intellectual property.

Pixelworks will retain majority ownership of PWSH after the Listing, but PWSH will be managed by a separate board of directors and officers and those directors and officers will owe fiduciary duties to the various stakeholders of PWSH, including shareholders other than Pixelworks. In the operation of PWSH's business, there may be situations that arise whereby the directors and officers of PWSH, in the exercise of their fiduciary duties, take actions that may be contrary to the best interests of Pixelworks or its shareholders. Additionally, because PWSH will be managed by a separate board of directors and officers, our organizational structure will become more complex, which may in turn require substantial financial, operational, and management resources.

In the future, PWSH may issue options, restricted shares, and other forms of share-based compensation to its directors, officers, and employees, which could dilute Pixelworks' ownership in PWSH. In addition, PWSH may engage in capital raising activities in the future that could further dilute Pixelworks' ownership interest.

The STAR Market is relatively new, and as a result, it is difficult to predict the effect of the proposed Listing, which may in turn negatively affect the price of our common stock on the Nasdaq Global Market.

The China Securities Regulatory Commission, or the CSRC, initially launched the STAR Market in June 2019 and trading on that market began in July 2019. No assurance can be given regarding the effect of the Listing on the market price of PWSH shares or on the price of our common stock on the Nasdaq Global Market. The market price of the PWSH shares and Pixelworks common stock may be volatile or may decline for reasons other than the risk and uncertainties described above, as the result of investor negativity or uncertainty with respect to the proposed Listing.

If the Listing is completed, Pixelworks and PWSH both will be public reporting companies, but each will be subject to separate, and potentially inconsistent, accounting and disclosure requirements, which may lead to investor confusion or uncertainty that could cause decreased demand for, or fluctuations in the price of, one or both of the companies' publicly traded shares.

If PWSH completes the Listing, it will be subject to accounting, disclosure, and other regulatory requirements of the STAR Market. At the same time, Pixelworks will remain subject to accounting, disclosure, and other regulatory requirements of the SEC and the Nasdaq Global Market. As a result, Pixelworks and PWSH periodically will disclose information simultaneously pursuant to differing laws and regulations. The information disclosed by the two companies will differ, and may differ materially from time to time, due to the distinct, and potentially inconsistent, accounting standards applicable to the two companies and disclosure requirements imposed by securities regulatory authorities, as well as differences in language, culture, and expression habit, in composition of investors in the United States and PRC, and in the capital markets of the United States and the PRC. Differing disclosures could lead to confusion or uncertainty among investors in the publicly traded shares of one or both companies. Differences between the price of PWSH shares on the STAR Market and the price of Pixelworks common stock on Nasdaq Global Market could lead to increased volatility, as some investors seek to arbitrage price differences. Additionally, news about PWSH may affect the price of Pixelworks' common stock, and vice versa, creating additional uncertainty and volatility.

General Risks

The price of our common stock has and may continue to fluctuate substantially.

Our stock price and the stock prices of technology companies similar to Pixelworks have been highly volatile. The price of our common stock may decline and the value of our shareholders' investment may be reduced regardless of our performance.

The daily trading volume of our common stock has historically been relatively low, although, in the three most recent years, trading volume increased compared to historical levels. As a result of the historically low volume, our shareholders may be unable to sell significant quantities of common stock in the public trading markets without a significant reduction in the price of our common shares. Additionally, market fluctuations, as well as general economic and political conditions, including recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of our common stock. Other factors that could negatively impact our stock price include:

- actual or anticipated fluctuations in our operating results;
- changes in or failure to meet expectations as to our future financial performance;
- changes in or failure to meet financial estimates of securities analysts;
- announcements by us or our competitors of technological innovations, design wins, contracts, standards, acquisitions or divestitures;
- the operating and stock price performance of other comparable companies;
- issuances or proposed issuances of equity, debt or other securities by us, or sales of securities by our security holders; and
- changes in market valuations of other technology companies.

Any inability or perceived inability of investors to realize a gain on an investment in our common stock could have an adverse effect on our business, financial condition and results of operations by potentially limiting our ability to retain our customers, to attract and retain qualified employees and to raise capital. In addition, in the past, following periods of volatility in the overall market and the market price of a particular 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.

The interest of our current or potential significant shareholders may conflict with other shareholders and they may attempt to effect changes or acquire control, which could adversely affect our results of operations and financial condition.

Our shareholders may from time to time engage in proxy solicitations, advance shareholder proposals, acquire control or otherwise attempt to effect changes, including by directly voting their shares on shareholder proposals. Campaigns by shareholders to effect changes at publicly traded companies are sometimes led by investors seeking to increase short-term shareholder value through actions such as financial restructuring, increased debt, special dividends, stock repurchases or sales of assets or the entire company. Responding to proxy contests and other actions by activist shareholders can be costly and time-consuming, disrupting our operations and diverting the attention of our Board of Directors and senior management from the pursuit of business strategies. Additionally, uncertainty over our direction and leadership may negatively impact our relationship with our customers and make it more difficult to attract and retain qualified personnel and business partners. As a result, shareholder campaigns could adversely affect our results of operations and financial condition.

Future sales of our equity could result in significant dilution to our existing shareholders and depress the market price of our common stock.

It is likely that we will need to seek additional capital in the future and from time to time. If this financing is obtained through the issuance of equity securities, debt convertible into equity securities, options or warrants to acquire equity securities or similar instruments or securities, our existing shareholders will experience dilution in their ownership percentage upon the issuance, conversion or exercise of such securities and such dilution could be significant. For example, in December 2020, we completed a private placement of 3,200,000 shares of common stock to certain accredited investors at a purchase price of \$2.071 per share. The issuance and sale of the shares in the private placement had a dilutive impact on our existing stockholders. Additionally, also in December 2020, we completed the sale of 4,900,000 shares of common stock in an underwritten registered offering and an additional 735,000 shares were issued pursuant to the 30-day over-allotment option exercised by the underwriter, at a price to the public of \$2.45 per share. Additionally, pursuant to our “at the market” equity offering program, we may sell shares of our common stock having aggregate sales proceeds of up to \$25.0 million from time to time through Cowen and Company, LLC, as our agent. Through September 30, 2023, we sold an aggregate of 1,808,484 shares of our common stock under this at the market offering. The issuance and sale of additional shares of our common stock pursuant to our “at the market” equity offering program or otherwise will have a dilutive impact on our existing stockholders. Additionally, any new equity securities issued by us could have rights, preferences or privileges senior to those of our common stock. Further, the issuance and sale of, or the perception that we may issue and sell, additional shares of common stock pursuant to our “at the market” equity offering program or an additional private placement or another offering could have the effect of depressing the market price of our common stock or increasing the volatility thereof.

Any issuance by us or sales of our securities by our security holders, including by any of our affiliates, or the perception that such issuances or sales could occur, could negatively impact the market price of our securities. For example, a number of shareholders own significant blocks of our common stock. If one or more of these large shareholders were to sell large portions of their holdings in a relatively short time, for liquidity or other reasons, the prevailing market price of our common stock could be negatively affected. This could result in further potential dilution to our existing shareholders and the impairment of our ability to raise capital through the sale of equity, debt or other securities.

We may be unable to maintain compliance with Nasdaq Marketplace Rules which could cause our common stock to be delisted from the Nasdaq Global Market. This could result in the lack of a market for our common stock, cause a decrease in the value of our common stock, and adversely affect our business, financial condition and results of operations.

Under the Nasdaq Marketplace Rules our common stock must maintain a minimum price of \$1.00 per share for continued inclusion on the Nasdaq Global Market. Our closing stock price was \$1.07 on October 3, 2023, and we cannot guarantee that our stock price will remain at or above \$1.00 per share. If the price drops below \$1.00 per share, our stock could become subject to delisting, and we may seek shareholder approval for a reverse stock split, which in turn could produce adverse effects and may not result in a long-term or permanent increase in the price of our common stock. Further, for continued listing on the Nasdaq Global Market we must have at least 400 total shareholders.

In addition to the minimum \$1.00 per share and 400 total shareholders requirements, the Nasdaq Global Market has other continued listing requirements, and we must meet all of the criteria under at least one of the following three standards: (i) a minimum of \$50.0 million in total asset value and \$50.0 million in revenues in the latest fiscal year or in two of the last three fiscal years, at least 1.1 million publicly held shares, at least \$15.0 million in market value of publicly held shares and at least four registered and active market makers (as such term is defined by the Nasdaq Marketplace Rules); (ii) a minimum of \$50.0 million in market value of listed securities, at least 1.1 million publicly held shares, at least \$15.0 million in market value of publicly held shares and at least four registered and active market makers; or (iii) a minimum of \$10.0 million in shareholders' equity, at least 750,000 publicly held shares, at least \$5.0 million in market value of publicly held shares and at least two registered and active market makers. As of September 30, 2023, we were in compliance with these listing requirements. Our stock price is volatile and we believe that we continue to remain susceptible to the market value of our listed securities and/or the market value of our publicly held securities falling below \$50.0 million and \$5.0 million, respectively. Accordingly, we cannot assure you that we will be able to continue to comply with Nasdaq Global Market's listing requirements. Should we be unable to remain in compliance with these requirements, our stock could become subject to delisting.

If our common stock is delisted, trading of the stock will most likely take place on an over-the-counter market established for unlisted securities. An investor is likely to find it less convenient to sell, or to obtain accurate quotations in seeking to buy, our common stock on an over-the-counter market, and many investors may not buy or sell our common stock due to difficulty in accessing over-the-counter markets, or due to policies preventing them from trading in securities not listed on a national exchange or other reasons. For these reasons and others, delisting would adversely affect the liquidity, trading volume and price of our common stock, causing the value of an investment in us to decrease and having an adverse effect on our business, financial condition and results of operations by limiting our ability to attract and retain qualified executives and employees and limiting our ability to raise capital.

The anti-takeover provisions of Oregon law and in our articles of incorporation could adversely affect the rights of the holders of our common stock, including by preventing a sale or takeover of us at a price or prices favorable to the holders of our common stock.

Provisions of our articles of incorporation and bylaws and provisions of Oregon law may have the effect of delaying or preventing a merger or acquisition of us, making a merger or acquisition of us less desirable to a potential acquirer or preventing a change in our management, even if our shareholders consider the merger, acquisition or change in management favorable or if doing so would benefit our shareholders. In addition, these provisions could limit the price that investors would be willing to pay in the future for shares of our common stock. The following are examples of such provisions:

- if the number of directors is fixed by the board at eight or more, our board of directors is divided into three classes serving staggered terms, which would make it more difficult for a group of shareholders to quickly replace a majority of directors;
- our board of directors is authorized, without prior shareholder approval, to create and issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us or to effect a change of control, commonly referred to as "blank check" preferred stock;
- members of our board of directors can be removed only for cause and at a meeting of shareholders called expressly for that purpose, by the vote of 75 percent of the votes then entitled to be cast for the election of directors;
- our board of directors may alter our bylaws without obtaining shareholder approval; and shareholders are required to provide advance notice for nominations for election to the board of directors or for proposing matters to be acted upon at a shareholder meeting;
- Oregon law permits our board to consider other factors beyond stockholder value in evaluating any acquisition offer (so-called "expanded constituency" provisions); and
- a supermajority (67%) vote of shareholders is required to approve certain fundamental transactions.

Item 6.	Exhibits.
3.1	Sixth Amended and Restated Articles of Incorporation of Pixelworks, Inc., as amended (incorporated by reference to Exhibit 3.1 to the Company's Annual Report on Form 10-K filed on March 9, 2022).
3.2	Third Amended and Restated Bylaws of Pixelworks, Inc. (incorporated by reference to Exhibit 3(ii).1 to the Company's Form 8-K filed on February 1, 2023).
10.1+	Executive Compensation Recovery Policy, as amended and restated as of August 14, 2023 (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on August 17, 2023).
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350).
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350).
32.1*	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350).
32.2*	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. Section 1350).
101**	Inline XBRL Document Set for the financial statements and accompanying notes in Part I, Item 1, "Financial Statements (Unaudited)" of this Quarterly Report on Form 10-Q
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
104**	Inline XBRL for the cover page of this Quarterly Report on Form 10-Q, included in the Exhibit 101 Inline XBRL Document Set

+ Indicates a management contract or compensation arrangement.

* Exhibits 32.1 and 32.2 are being furnished and shall not be deemed to be "filed" for under the Securities Act of 1933, as amended (the "Securities Act") or the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liability of that section, nor shall such exhibits be deemed to be incorporated by reference in any registration statement or other document filed under the Securities Act or the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language contained in such filing, except to the extent specifically stated in such filing.

** Filed herewith.

SIGNATURE

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.

PIXELWORKS, INC.

Dated: November 7, 2023

/s/ Haley F. Aman

Haley F. Aman
Chief Financial Officer,
(Duly Authorized Officer and Principal Accounting and Principal Financial Officer)

CERTIFICATION

I, Todd A. DeBonis, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Pixelworks, 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: November 7, 2023

By: /s/ Todd A. DeBonis
Todd A. DeBonis
President and Chief Executive Officer
(Principal Executive Officer)

CERTIFICATION

I, Haley F. Aman, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Pixelworks, 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: November 7, 2023

By: /s/ Haley F. Aman
Haley F. Aman
Chief Financial Officer
(Principal Accounting and Financial Officer)

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

In connection with the Quarterly Report of Pixelworks, Inc. (the "Company") on Form 10-Q for the quarterly period ended September 30, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Todd A. DeBonis, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ Todd A. DeBonis
Todd A. DeBonis
President and Chief Executive Officer
(Principal Executive Officer)

Date: November 7, 2023

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

In connection with the Quarterly Report of Pixelworks, Inc. (the “Company”) on Form 10-Q for the quarterly period ended September 30, 2023 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Haley F. Aman, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ Haley F. Aman

Haley F. Aman

Chief Financial Officer

(Principal Accounting and Financial Officer)

Date: November 7, 2023