

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

FORM 10-Q

(Check One)

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

For the quarterly period ended March 31, 2022

TRANSITION PURSUANT TO SECTION 13 OR 15(D)
OF THE SECURITIES EXCHANGE ACT

For the transition period from _____ to _____

COMMISSION FILE NO. (0-16577)

CYBEROPTICS CORPORATION

(Exact name of registrant as specified in its charter)

Minnesota

(State or other jurisdiction of incorporation or organization)

41-1472057

(I.R.S. Employer Identification No.)

5900 Golden Hills Drive

MINNEAPOLIS, MINNESOTA

(Address of principal executive offices)

55416

(Zip Code)

(763) 542-5000

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Securities Exchange Act of 1934:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, no par value	CYBE	NASDAQ Stock Market LLC

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 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

Non-Accelerated Filer

Accelerated Filer

Smaller Reporting Company

Emerging Growth Company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date. At April 30, 2022, there were 7,403,683 shares of the registrant's Common Stock, no par value, issued and outstanding.

PART I. FINANCIAL INFORMATION

ITEM 1. INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

INTERIM CONDENSED CONSOLIDATED BALANCE SHEETS
CYBEROPTICS CORPORATION
(Unaudited)

(In thousands, except share information)	March 31, 2022	December 31, 2021
ASSETS		
Cash and cash equivalents	\$ 10,226	\$ 13,684
Marketable securities	9,079	7,327
Accounts receivable, less allowances of \$385 at March 31, 2022 and \$355 at December 31, 2021	22,271	19,821
Inventories	30,048	27,602
Prepaid expenses	779	808
Other current assets	1,297	864
Total current assets	73,700	70,106
Marketable securities, long-term	18,918	17,281
Equipment and leasehold improvements, net	3,269	3,174
Intangible assets, net	351	375
Goodwill	1,366	1,366
Right-of-use assets (operating leases)	1,916	2,052
Deferred tax assets	3,746	3,668
Total assets	\$ 103,266	\$ 98,022
LIABILITIES AND STOCKHOLDERS' EQUITY		
Accounts payable	\$ 12,346	\$ 10,275
Advance customer payments	1,089	599
Accrued expenses	3,600	4,418
Current operating lease liabilities	878	864
Total current liabilities	17,913	16,156
Other liabilities	187	177
Long-term operating lease liabilities	2,152	2,369
Reserve for income taxes	214	214
Total liabilities	20,466	18,916
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, no par value, 5,000,000 shares authorized, none outstanding	—	—
Common stock, no par value, 25,000,000 shares authorized, 7,402,683 shares issued and outstanding at March 31, 2022 and 7,391,906 shares issued and outstanding at December 31, 2021	39,587	39,052
Accumulated other comprehensive loss	(1,942)	(1,510)
Retained earnings	45,155	41,564
Total stockholders' equity	82,800	79,106
Total liabilities and stockholders' equity	\$ 103,266	\$ 98,022

SEE THE ACCOMPANYING NOTES TO UNAUDITED INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

INTERIM CONDENSED CONSOLIDATED STATEMENTS OF INCOME
CYBEROPTICS CORPORATION
(Unaudited)

(In thousands, except per share amounts)	Three Months Ended March 31,	
	2022	2021
Revenues	\$ 24,246	\$ 17,732
Cost of revenues	12,652	9,353
Gross margin	11,594	8,379
Research and development expenses	2,929	2,761
Selling, general and administrative expenses	4,701	3,888
Income from operations	3,964	1,730
Interest income and other	85	22
Income before income taxes	4,049	1,752
Income tax expense	458	311
Net income	\$ 3,591	\$ 1,441
Net income per share – Basic	\$ 0.49	\$ 0.20
Net income per share – Diluted	\$ 0.47	\$ 0.19
Weighted average shares outstanding – Basic	7,393	7,293
Weighted average shares outstanding – Diluted	7,581	7,463

SEE THE ACCOMPANYING NOTES TO UNAUDITED INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

INTERIM CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
CYBEROPTICS CORPORATION
(Unaudited)

(In thousands)	Three Months Ended March 31,	
	2022	2021
Net income	\$ 3,591	\$ 1,441
Other comprehensive loss before income taxes:		
Foreign currency translation adjustments	(71)	(147)
Unrealized losses on available-for-sale debt securities	(457)	(72)
Total other comprehensive loss before income taxes	(528)	(219)
Income tax benefit	(96)	(15)
Total other comprehensive loss after income taxes	(432)	(204)
Total comprehensive income	<u>\$ 3,159</u>	<u>\$ 1,237</u>

SEE THE ACCOMPANYING NOTES TO UNAUDITED INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

INTERIM CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
CYBEROPTICS CORPORATION
(Unaudited)

(In thousands)	Three Months Ended March 31,	
	2022	2021
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income	\$ 3,591	\$ 1,441
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	569	634
Non-cash operating lease expense	136	152
Provision for doubtful accounts	30	30
Deferred taxes	18	122
Foreign currency transaction (gains) losses	(33)	6
Share-based compensation	353	334
Unrealized loss (gain) on available-for-sale equity security	2	(17)
Changes in operating assets and liabilities:		
Accounts receivable	(2,480)	(1,124)
Inventories	(2,624)	(721)
Prepaid expenses and other assets	(363)	(73)
Accounts payable	2,082	2,703
Advance customer payments and other	486	(120)
Accrued expenses	(798)	(738)
Operating leases	(203)	(211)
Net cash provided by operating activities	766	2,418
CASH FLOWS FROM INVESTING ACTIVITIES:		
Proceeds from maturities of available-for-sale marketable securities	3,184	2,597
Purchases of available-for-sale marketable securities	(7,077)	(2,767)
Additions to equipment and leasehold improvements	(491)	(650)
Additions to patents	(29)	(34)
Net cash used in investing activities	(4,413)	(854)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from exercise of stock options	183	57
Tax payments for shares withheld related to stock option exercises	(1)	—
Net cash provided by financing activities	182	57
Effects of exchange rate changes on cash and cash equivalents	7	11
Net (decrease) increase in cash and cash equivalents	(3,458)	1,632
Cash and cash equivalents – beginning of period	13,684	8,399
Cash and cash equivalents – end of period	\$ 10,226	\$ 10,031

SEE THE ACCOMPANYING NOTES TO UNAUDITED INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

**NOTES TO THE UNAUDITED INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
CYBEROPTICS CORPORATION**

1. INTERIM REPORTING:

The interim condensed consolidated financial statements of CyberOptics Corporation and its wholly-owned subsidiaries ("we", "us" or "our") presented herein as of March 31, 2022, and for the three month periods ended March 31, 2022 and 2021, are unaudited but, in the opinion of management, include all adjustments, consisting of normal recurring adjustments necessary, for a fair presentation of financial position, results of operations and cash flows for the periods presented.

The results of operations for the three month period ended March 31, 2022 do not necessarily indicate the results to be expected for the full year. The December 31, 2021 consolidated balance sheet data was derived from audited consolidated financial statements, but does not include all disclosures required by accounting principles generally accepted in the United States of America ("U.S. GAAP"). The unaudited interim condensed consolidated financial statements should be read in conjunction with our consolidated financial statements and notes thereto contained in our Annual Report on Form 10-K for the year ended December 31, 2021.

2. COVID-19 PANDEMIC:

Effect of Covid-19 Outbreak on Business Operations

Covid-19 was first identified in December 2019, and in March 2020, the World Health Organization categorized Covid-19 as a pandemic. The Covid-19 pandemic is affecting our customers, suppliers, service providers and employees to varying degrees, and the ultimate impacts of Covid-19, including the potential impact of known and future variants, on our business, results of operations, liquidity and prospects are not fully known at this time. Overall, the Covid-19 outbreak has not had a significant impact on our business to date. However, the following factors have affected and may continue to affect our business:

- Our key factories are located in Minnesota and Singapore. Both of these locations have been subject to government mandated shelter-in-place orders. Because our operations have been deemed essential, we were able to keep our factories up and running while the shelter-in-place mandates were in effect. If the pandemic worsens, it is possible that our operations may not be deemed essential under future government mandated shelter-in-place orders, and we may be required to shut-down factory operations. We have periodically implemented split-shifts for our factory operations to minimize the number of employees in our facilities at any given time. These measures have not affected our production capacity. A significant Covid-19 outbreak for an extended period of time in either of our key factories would most likely have a negative effect on our revenue and operating results. To date, the Covid-19 pandemic has not had a significant impact on our factory operations, but that could change in the future if the pandemic worsens and is more than temporary.
- Sales of some products, mainly our SQ3000 Multi-Function systems and MX memory module inspection products, require customer acceptance due to performance or other criteria that is considered more than a formality. Most of our customer's factories have remained open during the Covid-19 pandemic because they are deemed to be essential under government shelter-in-place mandates. However, global travel restrictions and quarantine measures have hindered our ability to obtain customer acceptances for certain of our products at various times during the Covid-19 pandemic. Continuing or new global travel restrictions and quarantine measures could hinder our ability to obtain customer acceptances in a timely manner in the future, and therefore impact the timing of revenue recognition. In addition, government mandated shelter-in-place orders or quarantine measures could cause customers to delay purchases of our products, negatively impacting our revenue and profitability.
- The Covid-19 pandemic has caused disruptions in the global supply chain, including shortages of raw materials, parts and labor, and shipping and logistics issues, including delays in ocean freight and port congestion. Key supply chain disruptions impacting our business have been resolved to date. On-hand inventories have been sufficient to enable us to mitigate any supply disruptions with minimal impact on our sales or ability to service customers. However, it has become increasingly difficult to obtain adequate supplies of certain key components and labor for product assembly. Port congestion and tight bookings for global sea freight have caused delays in product deliveries. The inability to obtain adequate supply of components or labor could result in the inability to meet customer demands and deliver one or more of our products for a period of several months or longer, negatively impacting our revenue and profitability. Supply chain disruptions are expected to continue for the foreseeable future and may increase if the pandemic worsens or continues for an extended period of time.

Although we cannot estimate the continuing impact of the Covid-19 outbreak at this time, it may have an adverse effect on our results of future operations, financial position and liquidity for the remainder of 2022 and beyond.

3. RECENT ACCOUNTING DEVELOPMENTS:

In June 2016, the FASB issued ASU No. 2016-13, *Measurement of Credit Losses on Financial Instruments*, which revises guidance for the accounting for credit losses on financial instruments within its scope, and in November 2018, issued ASU No. 2018-19, which amended the standard. The new standard introduces an approach to estimating credit losses that is based on expected losses (referred to as the current expected credit losses model), and applies to most financial assets measured at amortized cost and certain other instruments, including available-for-sale marketable debt securities, trade and other receivables. The new standard is effective for us on January 1, 2023, with early adoption permitted. We are required to apply the standard's provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is adopted. We presently do not believe the new standard will have a material impact on our consolidated financial statements.

No other new accounting pronouncements are expected to have a significant impact on our consolidated financial statements.

4. REVENUE RECOGNITION:

Our revenue performance obligations are primarily satisfied at a point in time and limited revenue streams are satisfied over time as work progresses.

The following is a summary of our revenue performance obligations:

(In thousands except percentages)	Three Months Ended March 31, 2022		Three Months Ended March 31, 2021	
	Revenues	Percent of Revenues	Revenues	Percent of Revenues
Revenue recognized over time	\$ 842	3.5%	\$ 403	2.3%
Revenue recognized at a point in time	23,404	96.5%	17,329	97.7%
	<u>\$ 24,246</u>	<u>100.0%</u>	<u>\$ 17,732</u>	<u>100.0%</u>

See Note 11 for additional information regarding disaggregation of revenue.

Contract Balances

Contract assets consist of unbilled amounts from sales where we recognize the revenue over time and the revenue recognized exceeds the amount billed to the customer at a point in time. Accounts and trade notes receivable are recorded when the right to payment becomes unconditional. Contract liabilities consist of payments received in advance of performance under the contract. Contract liabilities are recognized as revenue when we perform under the contract.

The following summarizes our contract assets and contract liabilities:

(In thousands)	March 31, 2022	December 31, 2021
Contract assets, included in other current assets	\$ 22	\$ 7
Contract liabilities - advance customer payments	\$ 772	\$ 289
Contract liabilities - deferred warranty revenue	\$ 448	\$ 445

Changes in contract assets in the three months ended March 31, 2022 and the three months ended March 31, 2021 resulted from unbilled amounts under sensor product arrangements and longer duration 3D scanning service projects in which revenue is recognized over time. Changes in contract liabilities primarily resulted from reclassification of beginning contract liabilities to revenue as performance obligations were satisfied or from cash received in advance and not recognized as revenue. See Note 9 for changes in contractual obligations related to deferred warranty revenue. Unsatisfied performance obligations for deferred warranty revenue are generally expected to be recognized as revenue over the next one to three years. There were no impairment losses for contract assets in the three months ended March 31, 2022 or the three months ended March 31, 2021.

The following summarizes the amounts reclassified from beginning contract liabilities to revenue:

(In thousands)	Three Months Ended March 31,	
	2022	2021
Amounts reclassified from beginning contract liabilities to revenue	\$ 178	\$ 339
Amounts reclassified from deferred warranty revenue	115	90
Total	<u>\$ 293</u>	<u>\$ 429</u>

5. MARKETABLE SECURITIES:

Our investments in marketable securities are classified as available-for-sale and consist of the following:

(In thousands)	March 31, 2022			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Short-Term				
U.S. government and agency obligations	\$ 4,091	\$ 3	\$ (17)	\$ 4,077
Corporate debt securities and certificates of deposit	4,731	1	(20)	4,712
Asset backed securities	290	—	—	290
Marketable securities – short-term	<u>\$ 9,112</u>	<u>\$ 4</u>	<u>\$ (37)</u>	<u>\$ 9,079</u>
Long-Term				
U.S. government and agency obligations	\$ 10,259	\$ —	\$ (275)	\$ 9,984
Corporate debt securities and certificates of deposit	6,547	—	(141)	6,406
Asset backed securities	2,538	1	(52)	2,487
Equity security	42	—	(1)	41
Marketable securities – long-term	<u>\$ 19,386</u>	<u>\$ 1</u>	<u>\$ (469)</u>	<u>\$ 18,918</u>

(In thousands)	December 31, 2021			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Short-Term				
U.S. government and agency obligations	\$ 3,005	\$ 13	\$ —	\$ 3,018
Corporate debt securities and certificates of deposit	4,177	8	(2)	4,183
Asset backed securities	125	1	—	126
Marketable securities – short-term	<u>\$ 7,307</u>	<u>\$ 22</u>	<u>\$ (2)</u>	<u>\$ 7,327</u>
Long-Term				
U.S. government and agency obligations	\$ 9,921	\$ 5	\$ (57)	\$ 9,869
Corporate debt securities and certificates of deposit	4,869	9	(18)	4,860
Asset backed securities	2,511	9	(11)	2,509
Equity security	42	1	—	43
Marketable securities – long-term	<u>\$ 17,343</u>	<u>\$ 24</u>	<u>\$ (86)</u>	<u>\$ 17,281</u>

At March 31, 2022 and December 31, 2021, investments in marketable debt securities in an unrealized loss position were as follows:

(In thousands)	In Unrealized Loss Position For Less Than 12 Months		In Unrealized Loss Position For Greater Than 12 Months	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
March 31, 2022				
U.S. government and agency obligations	\$ 10,486	\$ (214)	\$ 2,371	\$ (78)
Corporate debt securities and certificates of deposit	9,978	(153)	319	(8)
Asset backed securities	1,917	(50)	88	(2)
Marketable securities	<u>\$ 22,381</u>	<u>\$ (417)</u>	<u>\$ 2,778</u>	<u>\$ (88)</u>
December 31, 2021				
U.S. government and agency obligations	\$ 9,250	\$ (57)	\$ —	\$ —
Corporate debt securities and certificates of deposit	5,188	(18)	355	(2)
Asset backed securities	1,278	(11)	—	—
Marketable securities	<u>\$ 15,716</u>	<u>\$ (86)</u>	<u>\$ 355</u>	<u>\$ (2)</u>

Our long-term investments in marketable debt securities all have maturities of less than five years. Net pre-tax unrealized losses for marketable debt securities of \$500,000 at March 31, 2022 and \$43,000 at December 31, 2021 have been recorded as a component of accumulated other comprehensive loss in stockholders' equity. We only invest in highly rated investment grade debt securities. We have determined that the net pre-tax unrealized losses for marketable debt securities at March 31, 2022 and December 31, 2021 were caused by fluctuations in interest rates and are temporary in nature. We review our marketable debt securities to identify and evaluate investments that have indications of possible impairment. Factors considered in determining whether a loss is other-than-temporary include the length of time and extent to which fair value has been less than the cost basis, the investment grade credit quality of our debt securities and our ability and intent to hold the investment for a period of time sufficient to allow for any anticipated recovery in market value. At March 31, 2022 there were 152 marketable debt securities in an unrealized loss position, with the largest loss for any single security being equal to approximately \$11,000. No marketable securities were sold in the three months ended March 31, 2022 or the three months ended March 31, 2021. See Note 6 for additional information regarding the fair value of our investments in marketable securities.

Investments in marketable debt securities classified as cash equivalents of \$4.9 million at March 31, 2022 and \$8.8 million at December 31, 2021, consist of commercial money market savings accounts, corporate debt securities and certificates of deposit. There were no unrealized gains or losses associated with any of these securities at March 31, 2022 or December 31, 2021.

Cash and marketable securities held by foreign subsidiaries totaled \$477,000 at March 31, 2022 and \$588,000 at December 31, 2021.

6. FAIR VALUE MEASUREMENTS:

We determine the fair value of our assets and liabilities based on the exchange price that would be received for an asset or paid to transfer a liability (exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value maximize the use of observable inputs and minimize the use of unobservable inputs. We use a fair value hierarchy with three levels of inputs, of which the first two are considered observable and the last is considered unobservable, to measure fair value. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1). The next highest priority is based on observable inputs other than Level 1 inputs including quoted prices for similar assets or liabilities in active markets or quoted prices for identical or similar assets or liabilities in less active markets or other observable inputs (Level 2). The lowest priority is given to unobservable inputs (Level 3). The following provides information regarding fair value measurements for our marketable securities as of March 31, 2022 and December 31, 2021 according to the three-level fair value hierarchy:

(In thousands)	Fair Value Measurements at March 31, 2022 Using			
	Balance March 31, 2022	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Marketable securities:				
U.S. government and agency obligations	\$ 14,061	\$ —	\$ 14,061	\$ —
Corporate debt securities and certificates of deposit	11,118	—	11,118	—
Asset backed securities	2,777	—	2,777	—
Equity security	41	41	—	—
Total marketable securities	<u>\$ 27,997</u>	<u>\$ 41</u>	<u>\$ 27,956</u>	<u>\$ —</u>

(In thousands)	Fair Value Measurements at December 31, 2021 Using			
	Balance December 31, 2021	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Marketable securities:				
U.S. government and agency obligations	\$ 12,887	\$ —	\$ 12,887	\$ —
Corporate debt securities and certificates of deposit	9,043	—	9,043	—
Asset backed securities	2,635	—	2,635	—
Equity security	43	43	—	—
Total marketable securities	<u>\$ 24,608</u>	<u>\$ 43</u>	<u>\$ 24,565</u>	<u>\$ —</u>

During the three months ended March 31, 2022 and the year ended December 31, 2021, we owned no Level 3 securities and there were no transfers within the three level hierarchy. A significant transfer is recognized when the inputs used to value a security have been changed which merit a transfer between the levels of the valuation hierarchy.

The fair value for our U.S. government and agency obligations, corporate debt securities and certificates of deposit and asset backed securities are determined based on valuations provided by external investment managers who obtain them from a variety of industry standard data providers. The fair value for our equity security is based on a quoted market price obtained from an active market. The carrying amounts of financial instruments included in cash equivalents approximate their related fair values due to the short-term maturities of those instruments. See Note 5 for additional information regarding our investments in marketable securities.

Non-financial assets such as equipment and leasehold improvements, goodwill and intangible assets and right-of-use assets for operating leases are subject to non-recurring fair value measurements if they are deemed impaired. We had no re-measurements of non-financial assets to fair value in the three months ended March 31, 2022 or the three months ended March 31, 2021.

7. SHARE-BASED COMPENSATION:

We have three share-based compensation plans that are administered by the Compensation Committee of the Board of Directors. We have (a) an Employee Stock Incentive Plan for officers, other employees, consultants and independent contractors under which we have granted options and restricted stock units to officers and other employees, (b) an Employee Stock Purchase Plan under which shares of our common stock may be acquired by employees at discounted prices, and (c) a Non-Employee Director Stock Plan that provides for automatic grants of restricted shares of our common stock to non-employee directors. New shares of our common stock are issued upon stock option exercises, vesting of restricted stock units, issuances of shares to board members and issuances of shares under the Employee Stock Purchase Plan.

Employee Stock Incentive Plan

As of March 31, 2022, there were 87,507 shares of common stock reserved in the aggregate for issuance pursuant to future awards under our Employee Stock Incentive Plan and 386,651 shares of common stock reserved in the aggregate for issuance pursuant to outstanding awards under such plan. Although our Compensation Committee has authority to issue options, restricted stock, restricted stock units, share grants and other share-based benefits under our Employee Stock Incentive Plan, to date only restricted stock units and stock options have been granted under the plan. Options have been granted at an option price per share equal to the market value of our common stock on the date of grant, vest over a four year period and expire seven years after the date of grant. Restricted stock units vest over a four year period and entitle the holders to one share of our common stock for each restricted stock unit. Reserved shares underlying outstanding awards, including options and restricted stock units, that are forfeited are available under the Employee Stock Incentive Plan for future grant.

Non-Employee Director Stock Plan

As of March 31, 2022, there were 36,000 shares of common stock reserved in the aggregate for issuance pursuant to future restricted share grants under our Non-Employee Director Stock Plan and 8,000 shares of common stock reserved in the aggregate for issuance pursuant to outstanding stock option awards under our Non-Employee Director Stock Plan (which previously authorized the granting of stock options to non-employee directors). Under the terms of the plan, each non-employee director receives annual restricted share grants of 2,000 shares of our common stock on the date of each annual meeting at which such director is elected to serve on the board. The annual restricted share grants of common stock vest in four equal quarterly installments during the year after the grant date, provided the non-employee director is still serving as a director on the applicable vesting date.

On the date of our 2021 annual meeting, we issued 8,000 shares of our common stock to our non-employee directors, which were restricted as specified in the Non-Employee Director Stock Plan. The shares granted at the 2021 annual meeting had an aggregate fair market value on the date of grant equal to \$224,000 (grant date fair value of \$27.96 per share). As of March 31, 2022, 6,000 of these shares were vested. The aggregate fair value of the 2,000 unvested shares based on the closing price of our common stock on March 31, 2022 was \$81,000.

Stock Option Activity

The following is a summary of stock option activity in the three months ended March 31, 2022:

	Options Outstanding	Weighted Average Exercise Price Per Share
Outstanding, December 31, 2021	351,825	\$ 18.11
Exercised	(11,075)	17.39
Outstanding, March 31, 2022	340,750	\$ 18.13
Exercisable, March 31, 2022	245,951	\$ 14.71

The intrinsic value of an option is the amount by which the market price of the underlying common stock exceeds the option's exercise price. For options outstanding at March 31, 2022, the weighted average remaining contractual term of all outstanding options was 3.17 years and their aggregate intrinsic value was \$7.7 million. At March 31, 2022, the weighted average remaining contractual term of options that were exercisable was 2.33 years and their aggregate intrinsic value was \$6.4 million. The aggregate intrinsic value of stock options exercised was \$228,000 in the three months ended March 31, 2022 and \$78,000 in the three months ended March 31, 2021. We received proceeds from stock option exercises of \$183,000 in the three months ended March 31, 2022 and \$57,000 in the three months ended March 31, 2021. No stock options vested in the three months ended March 31, 2022 or the three months ended March 31, 2021. No stock options were granted, forfeited or expired in the three months ended March 31, 2022.

Restricted Shares and Restricted Stock Units

Restricted shares are granted under our Non-Employee Director Stock Plan. Restricted stock units are granted under our Employee Stock Incentive Plan. The fair value of restricted shares and restricted stock units is equal to the fair market value of our common stock on the date of grant. The aggregate fair value of outstanding restricted shares and restricted stock units based on the closing share price of our common stock as of March 31, 2022 was \$2.3 million. The aggregate fair value of restricted shares and restricted stock units that vested, based on the closing price of our common stock on the vesting date, was \$73,000 in the three months ended March 31, 2022 and \$56,000 in the three months ended March 31, 2021.

The following is a summary of activity in restricted shares and restricted stock units in the three months ended March 31, 2022:

Restricted shares and restricted stock units	Shares	Weighted Average Grant Date Fair Value
Non-vested at December 31, 2021	57,901	\$ 28.21
Vested	(2,000)	27.96
Non-vested at March 31, 2022	55,901	\$ 28.22

No restricted shares or restricted stock units were granted or forfeited in the three months ended March 31, 2022.

Employee Stock Purchase Plan

We have an Employee Stock Purchase Plan available to eligible U.S. employees. Under the terms of the plan, eligible employees may designate from 1% to 10% of their compensation to be withheld through payroll deductions, up to a maximum of \$6,500 in each plan year, for the purchase of common stock at 85% of the lower of the market price on the first or last day of the offering period (which begins on August 1st and ends on July 31st of each year). There were no shares purchased under this plan in the three months ended March 31, 2022. As of March 31, 2022, 129,411 shares remain available for future purchase under the Employee Stock Purchase Plan.

Share-Based Compensation Information

All share-based payments to employees and non-employee directors, including grants of stock options, restricted stock units and restricted shares, are required to be recognized as an expense in our consolidated statements of income based on the grant date fair value of the award. We utilize the straight-line method of expense recognition over the award's service period for our graded vesting options. The fair value of stock options has been determined using the Black-Scholes model. We account for the impact of forfeitures related to employee share-based payment arrangements when the forfeitures occur. We have classified employee share-based compensation within our consolidated statements of income in the same manner as our cash-based employee compensation costs.

Pre-tax share-based compensation expense in the three months ended March 31, 2022 totaled \$353,000, and included \$124,000 for stock options, \$34,000 for our Employee Stock Purchase Plan, \$140,000 for restricted stock units and \$55,000 for restricted shares.

Pre-tax share-based compensation expense in the three months ended March 31, 2021 totaled \$334,000, and included \$123,000 for stock options, \$32,000 for our Employee Stock Purchase Plan, \$123,000 for restricted stock units and \$56,000 for restricted shares.

At March 31, 2022, the total unrecognized compensation cost related to non-vested share-based compensation arrangements was \$2.6 million and the related weighted average period over which such cost is expected to be recognized was 2.77 years.

8. CHANGES IN STOCKHOLDERS' EQUITY:

A reconciliation of the changes in our stockholders' equity is as follows:

Three Months Ended March 31, 2022:

(In thousands)	Common Stock		Accumulated Other Comprehensive Loss	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance, December 31, 2021	7,392	\$ 39,052	\$ (1,510)	\$ 41,564	\$ 79,106
Exercise of stock options, net of shares exchanged as payment	11	183	—	—	183
Tax payments for shares withheld related to stock option exercises	—	(1)	—	—	(1)
Share-based compensation	—	353	—	—	353
Other comprehensive loss, net of tax	—	—	(432)	—	(432)
Net income	—	—	—	3,591	3,591
Balance, March 31, 2022	7,403	\$ 39,587	\$ (1,942)	\$ 45,155	\$ 82,800

Three Months Ended March 31, 2021:

(In thousands)	Common Stock		Accumulated Other Comprehensive Loss	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance, December 31, 2020	7,295	\$ 37,817	\$ (1,102)	\$ 28,813	\$ 65,528
Exercise of stock options, net of shares exchanged as payment	4	57	—	—	57
Share-based compensation	—	334	—	—	334
Other comprehensive loss, net of tax	—	—	(204)	—	(204)
Net income	—	—	—	1,441	1,441
Balance, March 31, 2021	7,299	\$ 38,208	\$ (1,306)	\$ 30,254	\$ 67,156

9. OTHER FINANCIAL STATEMENT DATA:

Inventories consisted of the following:

(In thousands)	March 31, 2022	December 31, 2021
Raw materials and purchased parts	\$ 19,301	\$ 18,013
Work in process	1,703	1,655
Finished goods	7,681	6,859
Demonstration inventories, net	1,363	1,075
Total inventories	\$ 30,048	\$ 27,602

Demonstration inventories are stated at cost less accumulated amortization, generally based on a 36 month useful life. Accumulated amortization for demonstration inventories totaled \$2.8 million at March 31, 2022 and \$2.8 million at December 31, 2021. Amortization expense related to demonstration inventories was \$142,000 in the three months ended March 31, 2022 and \$154,000 in the three months ended March 31, 2021.

Accrued expenses consisted of the following:

(In thousands)	March 31, 2022	December 31, 2021
Wages and benefits	\$ 1,936	\$ 2,966
Warranty liability	1,027	949
Income taxes payable	519	341
Other	118	162
Total accrued expenses	\$ 3,600	\$ 4,418

Warranty costs:

We provide for the estimated cost of product warranties, which cover products for periods ranging from one to three years, at the time revenue is recognized. While we engage in extensive product quality programs and processes, including actively monitoring and evaluating the quality of components provided by suppliers, warranty obligations do arise. These obligations are affected by product failure rates, the costs of materials used in correcting product failures and service delivery expenses incurred to make these corrections. If actual product failure rates and material or service delivery costs differ from our estimates, revisions to the estimated warranty liability are required and could be material. At the end of each reporting period, we revise our estimated warranty liability based on these factors. The current portion of our warranty liability is included as a component of accrued expenses. The long-term portion of our warranty liability is included as a component of other liabilities.

A reconciliation of the changes in our estimated warranty liability is as follows:

(In thousands)	Three Months Ended March 31,	
	2022	2021
Balance at beginning of period	\$ 991	\$ 839
Accrual for warranties	261	272
Warranty revision	64	(40)
Settlements made during the period	(233)	(181)
Balance at end of period	1,083	890
Current portion of estimated warranty liability	(1,027)	(851)
Long-term estimated warranty liability	\$ 56	\$ 39

Deferred warranty revenue:

The current portion of our deferred warranty revenue is included as a component of advance customer payments. The long-term portion of our deferred warranty revenue is included as a component of other liabilities. A reconciliation of the changes in our deferred warranty revenue is as follows:

(In thousands)	Three Months Ended March 31,	
	2022	2021
Balance at beginning of period	\$ 445	\$ 344
Revenue deferrals	124	147
Amortization of deferred revenue	(121)	(106)
Total deferred warranty revenue	448	385
Current portion of deferred warranty revenue	(317)	(281)
Long-term deferred warranty revenue	\$ 131	\$ 104

10. INTANGIBLE ASSETS:

Intangible assets consist of the following:

(In thousands)	March 31, 2022			December 31, 2021		
	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
Patents	\$ 2,001	\$ (1,665)	\$ 336	\$ 1,972	\$ (1,614)	\$ 358
Software	206	(206)	—	206	(206)	—
Marketing assets and customer relationships	86	(71)	15	86	(69)	17
Total intangible assets	\$ 2,293	\$ (1,942)	\$ 351	\$ 2,264	\$ (1,889)	\$ 375

Amortization expense in the three months ended March 31, 2022 and March 31, 2021 was as follows:

(In thousands)	Three Months Ended March 31,	
	2022	2021
Patents	\$ 50	\$ 43
Software	—	6
Marketing assets and customer relationships	2	2
Total amortization expense	\$ 52	\$ 51

Estimated aggregate amortization expense based on current intangible assets for the next four years is expected to be as follows: \$146,000 for the remainder of 2022; \$150,000 in 2023; \$54,000 in 2024; and \$1,000 in 2025.

11. REVENUE CONCENTRATIONS, SIGNIFICANT CUSTOMERS AND GEOGRAPHIC AREAS:

The following summarizes our revenue by product line:

(In thousands)	Three Months Ended March 31,	
	2022	2021
High Precision 3D and 2D Sensors	\$ 8,061	\$ 6,357
Inspection and Metrology Systems	9,428	6,339
Semiconductor Sensors	6,757	5,036
Total	\$ 24,246	\$ 17,732

In the three months ended March 31, 2022, sales to significant customer A accounted for 20% of our total revenues. As of March 31, 2022, accounts receivable from significant customer A were \$2.7 million, accounts receivable from significant customer B were \$3.3 million and accounts receivable from significant customer C were \$3.2 million.

Export revenues as a percentage of total revenues in the three months ended March 31, 2022 were 85%. Export revenues as a percentage of total revenues in the three months ended March 31, 2021 were 82%. Export revenues are attributed to the country where the product is shipped. Substantially all of our export revenues are negotiated, invoiced and paid in U.S. dollars. Export revenues by geographic area are summarized as follows:

(In thousands)	Three Months Ended March 31,	
	2022	2021
Americas	\$ 707	\$ 783
Europe	3,186	3,500
China	8,863	5,163
Taiwan	1,012	730
Other Asia	6,729	4,143
Other	26	148
Total export sales	\$ 20,523	\$ 14,467

12. NET INCOME PER SHARE:

Net income per basic share is computed by dividing net income by the weighted average number of common shares outstanding during the period. Net income per diluted share is computed by dividing net income by the weighted average number of common and common equivalent shares outstanding during the period. Common equivalent shares consist of common shares to be issued upon exercise of stock options, vesting of restricted stock units, vesting of restricted shares and from purchases of shares under our Employee Stock Purchase Plan, as calculated using the treasury stock method. Common equivalent shares are excluded from the calculation of net income per diluted share if their effect is anti-dilutive. The components of net income per basic and diluted share were as follows:

(In thousands except per share amounts)	Net Income	Weighted Average Shares Outstanding	Per Share Amount
Three Months Ended March 31, 2022			
Basic	\$ 3,591	7,393	\$ 0.49
Dilutive effect of common equivalent shares	—	188	(0.02)
Dilutive	<u>\$ 3,591</u>	<u>7,581</u>	<u>\$ 0.47</u>

(In thousands except per share amounts)	Net Income	Weighted Average Shares Outstanding	Per Share Amount
Three Months Ended March 31, 2021			
Basic	\$ 1,441	7,293	\$ 0.20
Dilutive effect of common equivalent shares	—	170	(0.01)
Dilutive	<u>\$ 1,441</u>	<u>7,463</u>	<u>\$ 0.19</u>

Potentially dilutive shares consist of stock options, restricted stock units, restricted shares and purchases of shares under our Employee Stock Purchase Plan. Potentially dilutive shares excluded from the calculations of net income per diluted share due to their anti-dilutive effect were as follows: 71,000 shares in the three months ended March 31, 2022 and 97,000 shares in the three months ended March 31, 2021.

13. OTHER COMPREHENSIVE LOSS:

Changes in components of other comprehensive loss and taxes related to items of other comprehensive loss are as follows:

(In thousands)	Three Months Ended March 31, 2022			Three Months Ended March 31, 2021		
	Before Tax	Tax Effect	Net of Tax Amount	Before Tax	Tax Effect	Net of Tax Amount
Foreign currency translation adjustments	\$ (71)	\$ —	\$ (71)	\$ (147)	\$ —	\$ (147)
Unrealized losses on available-for-sale securities	(457)	(96)	(361)	(72)	(15)	(57)
Other comprehensive loss	<u>\$ (528)</u>	<u>\$ (96)</u>	<u>\$ (432)</u>	<u>\$ (219)</u>	<u>\$ (15)</u>	<u>\$ (204)</u>

At March 31, 2022 and 2021, components of accumulated other comprehensive loss is as follows:

(In thousands)	Foreign Currency Translation Adjustments	Available- for- Sale Securities	Accumulated Other Comprehensive Loss
Balances at December 31, 2021	\$ (1,478)	\$ (32)	\$ (1,510)
Other comprehensive loss for the three months ended March 31, 2022	(71)	(361)	(432)
Balances at March 31, 2022	<u>\$ (1,549)</u>	<u>\$ (393)</u>	<u>\$ (1,942)</u>

(In thousands)	Foreign Currency Translation Adjustments	Available- for- Sale Securities	Accumulated Other Comprehensive Loss
Balances at December 31, 2020	\$ (1,285)	\$ 183	\$ (1,102)
Other comprehensive loss for the three months ended March 31, 2021	(147)	(57)	(204)
Balances at March 31, 2021	<u>\$ (1,432)</u>	<u>\$ 126</u>	<u>\$ (1,306)</u>

14. INCOME TAXES:

We recorded income tax expense of \$458,000 in the three months ended March 31, 2022, compared to income tax expense of \$311,000 in the three months ended March 31, 2021. Income tax expense in the three months ended March 31, 2022 reflected an effective tax rate of 11%, compared to an effective tax rate of 18% in the three months ended March 31, 2021. The reduction in the effective income tax rate in the three months ended March 31, 2022, when compared to the three months ended March 31, 2021, was mainly due to enhanced benefits from Foreign Derived Intangible Income (FDII) and Global Intangible Low-Taxed Income (GILTI), resulting from a change in U.S. income tax law requiring capitalization and subsequent amortization of U.S. based R&D expenditures over five years and foreign based R&D expenditures over 15 years. This change increased the income which is eligible for the FDII and GILTI benefits. The change in the treatment of R&D expenditures for income tax purposes is expected to have a favorable impact on our effective tax rate in 2022, but will most likely increase the amount of cash we expend for income taxes in the short term, particularly in 2023 and later years. On a recurring basis, our effective income tax rate is favorably impacted by the U.S. federal R&D tax credit, foreign tax credit, FDII and GILTI.

We have significant deferred tax assets as a result of temporary differences between the taxable income on our tax returns and U.S. GAAP income, R&D tax credit carry forwards and state net operating loss carry forwards. A deferred tax asset generally represents future tax benefits to be received when temporary differences previously reported in our consolidated financial statements become deductible for income tax purposes, when net operating loss carry forwards could be applied against future taxable income, or when tax credit carry forwards are utilized on our tax returns. We assess the realizability of our deferred tax assets and the need for a valuation allowance based on the guidance provided in current financial accounting standards.

Significant judgment is required in determining the realizability of our deferred tax assets. The assessment of whether valuation allowances are required considers, among other matters, the nature, frequency and severity of any current and cumulative losses, forecasts of future profitability, the duration of statutory carry forward periods, our experience with credit and loss carry forwards not expiring unused and tax planning alternatives. In analyzing the need for valuation allowances, we first considered our history of cumulative operating results for income tax purposes over the past three years in each of the tax jurisdictions in which we operate, our financial performance in recent quarters, statutory carry forward periods and tax planning alternatives. In addition, we considered both our near-term and long-term financial outlook. After considering all available evidence (both positive and negative), we concluded that recognition of valuation allowances for substantially all of our U.S. and Singapore based deferred tax assets was not required at March 31, 2022 or December 31, 2021.

The Inland Revenue Authority of Singapore has initiated a routine compliance review of our 2018 income tax return. We presently anticipate that the outcome of this audit will not have a significant impact on our financial position or results of operations.

15. CONTINGENCIES:

We are periodically a defendant in miscellaneous lawsuits, claims and disputes in the ordinary course of business. While the outcome of these matters cannot be predicted with certainty, management presently believes the disposition of these matters will not have a material effect on our financial position, results of operations or cash flows.

In the normal course of business to facilitate sales of our products and services, we at times indemnify other parties, including customers, with respect to certain matters. In these instances, we have agreed to hold the other parties harmless against losses arising out of intellectual property infringement or other types of claims. These agreements may limit the time within which an indemnification claim can be made, and almost always limits the amount of the claim. It is not possible to determine the maximum potential amount of exposure under these indemnification agreements due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each particular agreement. Historically, payments made, if any, under these agreements have not had a material impact on our operating results, financial position or cash flows. However, there can be no assurance that intellectual property infringement and other claims against us or parties we have indemnified will not have a greater impact in the future.

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

FORWARD LOOKING STATEMENTS:

The following management's discussion and analysis of the financial condition and results of operations of CyberOptics Corporation and its wholly-owned subsidiaries ("we", "us" and "our") contains a number of estimates and predictions that are forward looking statements rather than statements based on historical fact. Among other matters, we discuss (i) a possible world-wide recession or depression resulting from the economic consequences of the Covid-19 pandemic; (ii) the potential effect on our revenue and operating results of the Covid-19 crisis on our customers and suppliers, the markets for our products and the global supply chain; (iii) market conditions in the global SMT and semiconductor capital equipment industries; (iv) the timing of orders and shipments of our products, particularly our 3D MRS SQ3000™ and SQ3000™+ Multi-Function systems for automated optical inspection ("AOI") and MX systems for memory module inspection; (v) increasing price competition and price pressure on our product sales, particularly our inspection and metrology systems; (vi) the level of orders from our original equipment manufacturer ("OEM") customers; (vii) the availability of parts required to meet customer orders; (viii) the effect of world events on our sales, the majority of which are from foreign customers; (ix) rapid changes in technology in the electronics and semiconductor markets; (x) product introductions and pricing by our competitors; (xi) the success of our 3D technology initiatives; (xii) the market acceptance of our 3D MRS SQ3000™ and SQ3000+ Multi-Function systems and products for semiconductor inspection and metrology; (xiii) the impact of lower margin MX3000™ memory module inspection systems on our consolidated gross margin in any future period; (xiv) risks related to cancellation or renegotiation of orders we have received; (xv) the level of anticipated revenues, gross margins, and expenses; (xvi) the timing of initial revenue and projected improvements in gross margins from sales of new products that have been recently introduced, that we have under development or that we anticipate introducing in the future; and (xvii) our assessment of trends in the surface mount technology ("SMT") and semiconductor capital equipment markets; Although we have made these statements based on our experience and expectations regarding future events, there may be events or factors that we have not anticipated. Therefore, the accuracy of our forward-looking statements and estimates are subject to a number of risks, including those risks identified in our Annual Report on Form 10-K for the year ended December 31, 2021.

RESULTS OF OPERATIONS

General

We are a leading global developer and manufacturer of high precision 3D sensors and system products for inspection and metrology. We also develop and manufacture our WaferSense® products, which is a family of wireless, wafer-shaped sensors that provide measurements of critical factors in the semiconductor fabrication process. We intend to leverage our sensor technologies in the SMT and semiconductor industries to deliver profitable growth. A key element of our strategy is the continued development and sale of high precision 3D sensors and system products based on our proprietary Multi-Reflection Suppression™ (MRS™) technology. We believe that our MRS technology is a breakthrough 3D optical technology for high-end inspection and metrology with the potential to significantly expand our markets. Another key element in our strategy is the continued development and introduction of new sensor applications for our WaferSense® family of products.

We believe that conditions in the SMT and semiconductor capital equipment markets are favorable, and we believe this market strength will continue in 2022. Over the longer-term (i.e. the next several years), we expect a growing number of opportunities in the markets for SMT and semiconductor inspection and metrology. We believe that our 3D MRS sensor and system products and our WaferSense family of products have the potential to expand our presence in the markets for SMT and semiconductor capital equipment.

Manufacturing yield challenges, as electronics and semiconductors become more complex, are driving the need for more precise inspection and metrology. We believe 3D inspection and metrology represent high-growth segments in both the SMT and semiconductor capital equipment markets. We believe our 3D MRS technology platform is well suited for many applications in these markets, particularly with respect to complex circuit boards and semiconductor wafer and advanced packaging inspection and metrology applications. We are taking advantage of current market trends by deploying our 3D MRS sensor technology in the following products:

- Our SQ3000™ and SQ3000+™ Multi-Function systems for Automated Optical Inspection (AOI), Solder Paste Inspection (SPI) and coordinate measurement (CMM) applications, which are designed to expand our presence in markets requiring high precision inspection and metrology. In these markets, identifying defects has become highly challenging and critical due to smaller semiconductor and electronics packaging and increasing component density on circuit boards. The SQ3000+ Multi-Function system with its higher resolution MRS sensor that inhibits reflection-based distortions caused by shiny components and surfaces is capable of measuring feature sizes down to 50 microns and is specifically designed for high-end inspection and metrology applications including advanced packaging, mini-LED and advanced SMT for high-end electronics. We believe our 3D MRS sensor technology is uniquely suited for many of these applications because of its ability to offer microscopic image quality and superior measurement performance at production line speeds.
- Our next generation ultra-high resolution three micron pixel 3D NanoResolution MRS™ sensor, which is capable of measuring feature sizes down to 25 microns accurately and at high speeds, and is suitable for many semiconductor wafer and advanced packaging inspection and metrology applications. We have adapted the software used in our SQ3000 Multi-Function systems to work with wafer handling equipment to facilitate sales of our 3D NanoResolution MRS sensor to OEM's and system integrators.

- Our next generation MX3000™ AOI system for 3D inspection of memory modules following the singulation step of the manufacturing process. We recognized our first revenue from the sale of the MX3000 in the first quarter of 2020. Two of the world's three largest memory manufacturers and their subcontractors have now purchased our MX3000 system. Additional orders for memory module inspection are expected in future periods, and we believe the potential market opportunity for our MX3000 system and 3D MRS sensors for memory module inspection is significant.
- Our WX3000™ metrology and inspection system for semiconductor wafer and advanced packaging applications, which incorporates our next generation ultra-high resolution 3D NanoResolution MRS sensor, performs 100% 3D and 2D inspection and metrology simultaneously at high speeds and delivers through-put of more than 25 wafers per hour. The WX3000 is suitable for many high volume semiconductor wafer and advanced packaging inspection and metrology applications for feature sizes down to 25-microns. We recently received our first purchase order for the WX3000 and anticipate that sales of sensors and systems for semiconductor wafer and advanced packaging inspection and metrology will provide us with long-term growth opportunities.

Revenue from our MRS-based products, including 3D AOI systems and high precision 3D MRS sensors, increased by \$3.5 million or 42% to \$11.8 million in the first quarter of 2022, from \$8.3 million in the first quarter of 2021. Over the long term, we anticipate continued increases in sales of products based on our MRS technology in the SMT and semiconductor capital equipment markets. In particular, we believe inspection and metrology for mini LED, memory modules and semiconductor wafer and advanced packaging applications represent significant long-term growth opportunities. We anticipate increasing sales of MRS-based products by selling them to new OEM customers and system integrators, and by expanding direct sales of inspection and metrology system products to end-user customers.

We have continued to invest in our WaferSense family of products, because fabricators of semiconductors and other customers view these products as valuable tools for improving yields and productivity. We have recently introduced several new WaferSense products to further increase our revenue growth, and additional WaferSense applications are currently under development, including Automatic Teaching Sensors (ATS) in both wafer and reticle formats and products for wafer edge detection. Over the long-term, strong future sales growth is anticipated for our WaferSense family of products.

Our order backlog was \$47.4 million at March 31, 2022, compared to \$47.3 million at December 31, 2021 and \$32.4 million at March 31, 2021. We are forecasting sales of \$25.0 million to \$28.0 million for the second quarter of 2022 ending June 30, compared to \$25.2 million for the second quarter of 2021. We believe that conditions in the SMT and semiconductor capital equipment markets are favorable, and we believe this market strength will continue in 2022. However, an increase in the severity of the current Covid-19 pandemic, an escalation in the Ukraine conflict, and a resulting economic recession or depression, could cause a slow-down in demand for SMT and semiconductor capital equipment. Over the long term, we believe anticipated sales growth of our products based on 3D MRS technology and WaferSense sensors should increase revenues and net income. We believe that we have the resources required to attain our growth objectives, given our available cash and marketable securities balances totaling \$38.2 million at March 31, 2022.

Impact from Covid-19

Effect of Covid-19 Outbreak on Business Operations

Covid-19 was first identified in December 2019, and in March 2020, the World Health Organization categorized Covid-19 as a pandemic. The Covid-19 pandemic is affecting our customers, suppliers, service providers and employees to varying degrees, and the ultimate impacts of Covid-19, including the potential impact of known and future variants, on our business, results of operations, liquidity and prospects are not fully known at this time. Overall, the Covid-19 outbreak has had a relatively minimal impact on our business to date. Our revenues increased by 37% to \$24.2 million in the first quarter of 2022, from \$17.7 million in the first quarter of 2021. We are forecasting sales of \$25.0 million to \$28.0 million for the second quarter of 2022 ending June 30, compared to \$25.2 million in the second quarter of 2021. Our forecast for the second quarter of 2022 could change if the Covid-19 pandemic worsens, or if unforeseen events related to the pandemic occur. The most significant impacts on our business from the Covid-19 pandemic include the following:

- Our key factories are located in Minnesota and Singapore. Both of these locations have been subject to government mandated shelter-in-place orders. Because our operations have been deemed essential, we were able to keep our factories up and running while the shelter-in-place mandates were in effect. If the pandemic worsens, it is possible that our operations may not be deemed essential under future government mandated shelter-in-place orders, and we may be required to shut-down factory operations. We have periodically implemented split-shifts for our factory operations to minimize the number of employees in our facilities at any given time. These measures have not affected our production capacity. A significant Covid-19 outbreak for an extended period of time in either of our key factories would most likely have a negative effect on our revenue and operating results. To date, the Covid-19 pandemic has not had a significant impact on our factory operations, but that could change in the future if the pandemic worsens and is more than temporary.

- Sales of some products, mainly our SQ3000 Multi-Function systems and MX memory module inspection products, require customer acceptance due to performance or other criteria that is considered more than a formality. Most of our customer's factories have remained open during the Covid-19 pandemic because they are deemed to be essential under government shelter-in-place mandates. However, global travel restrictions and quarantine measures have hindered our ability to obtain some customer acceptances for certain of our products at various times during the Covid-19 pandemic. Continuing or new global travel restrictions and quarantine measures could hinder our ability to obtain customer acceptances in a timely manner in the future, and therefore impact the timing of revenue recognition. In addition, government mandated shelter-in-place orders or quarantine measures could cause customers to delay purchases of our products, negatively impacting our revenue and profitability.
- Certain operating expenses were reduced in 2021 due to the Covid-19 pandemic. Travel, trade show expenses and other costs were reduced due to changes in employee travel patterns and trade show cancellations. Travel, trade show expenses and other costs have started to increase in those parts of the world where the Covid-19 pandemic is easing, and remain constrained in other geographies where the pandemic is strengthening.
- The Covid-19 pandemic has caused disruptions in the global supply chain, including shortages of raw materials, parts and labor, and shipping and logistics issues, including delays in ocean freight and port congestion. Key supply chain disruptions impacting our business have been resolved to date. On-hand inventories have been sufficient to enable us to mitigate any supply disruptions with minimal impact on our sales or ability to service customers. However, it has become increasingly difficult to obtain adequate supplies of certain key components and labor for product assembly. Port congestion and tight bookings for global sea freight have caused delays in product deliveries. Increases in the cost of components, labor and freight could negatively impact our profitability in the future if we are unable to recover these costs by charging more for the products we sell. The inability to obtain adequate supply of components or labor could result in the inability to meet customer demands and deliver one or more of our products for a period of several months or longer, negatively impacting our revenue and profitability. Supply chain disruptions are expected to continue for the foreseeable future and may increase if the pandemic worsens or continues for an extended period of time.

Although we cannot estimate the continuing impact of the Covid-19 outbreak at this time, it may have an adverse effect on our results of future operations, financial position and liquidity in 2022 and beyond. We believe that we have the resources required to meet any unforeseen difficulties resulting from the Covid-19 pandemic. We will continue to closely monitor the Covid-19 pandemic and its impact on our business in the coming months.

Revenues

Our revenues increased by 37% to \$24.2 million in the three months ended March 31, 2022, from \$17.7 million in the three months ended March 31, 2021. The following table sets forth revenues by product line for the three months ended March 31, 2022 and 2021:

(In thousands)	Three Months Ended March 31,		
	2022	2021	% Change
High Precision 3D and 2D Sensors	\$ 8,061	\$ 6,357	27%
Inspection and Metrology Systems	9,428	6,339	49%
Semiconductor Sensors	6,757	5,036	34%
Total	\$ 24,246	\$ 17,732	37%

Revenues from sales of high precision 3D and 2D sensors increased by \$1.7 million or 27% to \$8.1 million in the three months ended March 31, 2022. The increases were due to higher sales of both 3D MRS sensors and legacy 2D sensors resulting from favorable conditions in the global semiconductor and SMT capital equipment markets. Sales of high precision 3D MRS sensors increased by \$650,000 or 15% to \$4.9 million in the three months ended March 31, 2022, from \$4.2 million in the three months ended March 31, 2021.

Sales of high precision 3D and 2D sensors are dependent on the success of our OEM customers and system integrators selling products that incorporate our sensors. We believe sales of our 3D MRS sensors, including our next generation ultra-high resolution three micron pixel 3D NanoResolution MRS sensor, will represent an increasing percentage of our total high precision 3D and 2D sensor sales in the future. Sales of high precision 3D and 2D sensors, including 3D MRS sensors, are prone to significant quarterly fluctuations due to variations in market demand and customer inventory levels. Revenues from sales of high precision 3D and 2D sensors are forecasted to post solid growth on a year-over-year basis in the second quarter of 2022.

Revenues from sales of inspection and metrology systems increased by \$3.1 million or 49% to \$9.4 million in the three months ended March 31, 2022. The increases were due to higher sales of SQ3000™ Multi-Function systems and memory module inspection systems resulting from favorable conditions in the global semiconductor and SMT capital equipment markets, and increasing sales from more complex applications such as inspection and metrology for mini-LED and memory modules. Sales of SQ3000™ Multi-Function systems increased by \$1.8 million or 45% to \$5.9 million in the three months ended March 31, 2022, from \$4.1 million in the three months ended March 31, 2021. Sales of memory module inspection systems totaled \$1.0 million in the three months ended March 31, 2022. There were no sales of memory module inspection systems in the three months ended March 31, 2021. Reflecting normal sales fluctuations of capital equipment, sales of inspection and metrology systems are forecasted to be relatively flat on a year-over-year basis in the second quarter of 2022.

In addition to favorable market conditions, the increase in sales of SQ3000 Multi-Function systems was due to the competitive advantages offered by our 3D MRS sensor technology and many companies transitioning from 2D to 3D AOI systems to meet the increasingly demanding product inspection and metrology requirements in the SMT and semiconductor markets. The market transition away from 2D AOI systems is expected to result in an industry-wide compound annual rate of growth in global sales of 3D AOI systems of almost 20% through 2025. Given these market dynamics and because of the competitive advantages of our 3D MRS sensor technology, we anticipate sales of SQ3000 Multi-Function systems will represent an increasing percentage of our total inspection and metrology system sales in the future.

We believe memory manufacturers have determined that post singulation automated optical inspection of memory modules is an important step in their manufacturing process to improve yields and product quality. We recognized our first revenue from the sale of the 3D MX3000™ memory module inspection system in the first quarter of 2020, and two of the world's three largest memory manufacturers and their subcontractors have now purchased the MX3000 system. At March 31, 2022 our backlog of orders for memory module inspection totaled \$5.9 million, and we expect to recognize these orders as revenue over the balance of 2022. Additional orders for memory module inspection are expected in future periods, and we believe the potential market opportunity for our MX3000 system and 3D MRS sensors for memory module inspection is significant.

Revenues from sales of semiconductor sensors, principally our WaferSense line of products, increased by \$1.7 million or 34% to \$6.8 million in the three months ended March 31, 2022. The revenue increase was due to construction of new semiconductor fabs, favorable market conditions for semiconductor capital equipment spending, and growing acceptance of our WaferSense products as important productivity enhancement tools by semiconductor manufacturers and capital equipment suppliers. Over the long term, we anticipate that the benefits from growing market awareness of our WaferSense products, improved account penetration at major semiconductor manufacturers and capital equipment suppliers and new product introductions will lead to additional WaferSense product sales. Revenues from sales of semiconductor sensors are forecasted to post strong double-digit growth on a year-over-year basis in the second quarter of 2022.

Export revenues totaled \$20.5 million or 85% of our revenues in the three months ended March 31, 2022, compared to \$14.5 million or 82% of our revenues in the three months ended March 31, 2021. Export revenues as a percentage of total revenues increased in the three months ended March 31, 2022 due to higher sales of SQ3000™ Multi-Function systems and MX3000™ memory module inspection systems. A higher proportion of these products are generally sold outside the United States as compared to our other products.

Cost of Revenues and Gross Margin

Cost of revenues increased by \$3.3 million or 35% to \$12.7 million in the three months ended March 31, 2022. Total gross margin as a percentage of revenues was 48% in the three months ended March 31, 2022, compared to 47% in the three months ended March 31, 2021. The increase in cost of revenues in the three months ended March 31, 2022 was mainly due to higher revenues, which increased on a year-over-year basis by 37%. Gross margin percentage in the three months ended March 31, 2022 was up approximately 50 basis points when compared to the three months ended March 31, 2021, mainly due to a slightly better sales mix and gross margins on inspection and metrology system sales.

Our total gross margin as a percentage of revenues in the second quarter of 2022 is expected to be down slightly from the level in the first quarter of 2022, mainly due to revenue mix. Sales of inspection and metrology systems, which typically generate a lower gross margin percentage than our other products, are expected to represent a proportionately larger percentage of our total revenue in the second quarter of 2022, when compared to the first quarter of 2022.

Our markets are highly price competitive, particularly in the electronics assembly and SMT markets. As a result, we have experienced continual pressure on our gross margins. We compensate for the pressure to reduce the price of our products by introducing new products with more features and improved performance and through manufacturing cost reduction programs. Sales of many products that we have recently introduced or are about to introduce, including our SQ3000+ Multi-Function system, WX3000 system for semiconductor wafer and advanced packaging inspection and metrology, next generation 3D MRS sensors and semiconductor sensors (consisting primarily of our WaferSense line of products) have, or are expected to have, more favorable gross margins than many of our existing products. Our next generation 3D MRS sensor and system products are being designed for more complex and demanding inspection and metrology applications in the SMT and semiconductor markets. Sales prices and gross profit margins for these applications tend to be higher than margins for products sold in the general purpose SMT market. However, the gross margin percentage for our 3D MX3000 system for inspection of memory modules is lower than our current total gross margin percentage due to the significant costs for material handling and automation required for this product. Our total gross margin percentage would most likely be negatively impacted in the future if sales of our 3D MX3000 become a larger share of our total revenue mix.

The Covid-19 pandemic has caused disruptions in the global supply chain, including shortages of raw materials, parts and labor, and shipping and logistics issues, including delays in ocean freight and port congestion. Increases in the cost of components, labor and freight could negatively impact our gross margins in the future if we are unable to recover these costs by charging more for the products we sell. Supply chain disruptions are expected to continue for the foreseeable future and may increase if the Covid-19 pandemic worsens or continues for an extended period of time.

Operating Expenses

R&D expenses were \$2.9 million or 12% of revenues in the three months ended March 31, 2022, compared to \$2.8 million or 16% of revenues in the three months ended March 31, 2021. The increase in R&D expenses in the three months ended March 31, 2022 was mainly due to higher compensation costs for new and existing R&D employees, and consulting services for ongoing R&D projects. Current R&D expenditures are primarily focused on development of 3D MRS sensor and system products, including enhancements to existing products and development of next generation products, and continued R&D work on new and next generation WaferSense products.

Selling, general and administrative ("S,G&A") expenses were \$4.7 million or 19% of revenues in the three months ended March 31, 2022, compared to \$3.9 million or 22% of revenues in the three months ended March 31, 2021. The increase in S,G&A expenses in the three months ended March 31, 2022 was due to higher compensation costs for new and existing S,G&A employees, higher third party channel commissions resulting from the 37% year-over-year increase in our revenues, and higher spending for trade shows.

Total operating expenses in the second quarter of 2022 are forecasted to increase by a few percentage points when compared to the level in the first quarter of 2022.

Interest Income and Other

Interest income and other includes interest earned on investments and gains and losses associated with foreign currency transactions, primarily intercompany financing transactions associated with our international subsidiaries. We recognized gains from foreign currency transactions of \$54,000 in the three months ended March 31, 2022, compared to losses from foreign currency transactions of \$57,000 in the three months ended March 31, 2021.

Income Taxes

We recorded income tax expense of \$458,000 in the three months ended March 31, 2022, compared to income tax expense of \$311,000 in the three months ended March 31, 2021. Income tax expense in the three months ended March 31, 2022 reflected an effective tax rate of 11%, compared to an effective tax rate of 18% in the three months ended March 31, 2021. The reduction in the effective income tax rate in the three months ended March 31, 2022, when compared to the three months ended March 31, 2021, was mainly due to enhanced benefits from Foreign Derived Intangible Income (FDII) and Global Intangible Low-Taxed Income (GILTI), resulting from a change in U.S. income tax law requiring capitalization and subsequent amortization of U.S. based R&D expenditures over five years and foreign based R&D expenditures over 15 years. This change increased the income which is eligible for the FDII and GILTI benefits. The change in the treatment of R&D expenditures for income tax purposes is expected to have a favorable impact on our effective tax rate in 2022, but will most likely increase the amount of cash we expend for income taxes in the short term, particularly in 2023 and later years. On a recurring basis, our effective income tax rate is favorably impacted by the U.S. federal R&D tax credit, foreign tax credit, FDII and GILTI.

Liquidity and Capital Resources

Our cash and cash equivalents decreased by \$3.5 million in the three months ended March 31, 2022. Cash provided by operating activities of \$766,000, proceeds of \$3.2 million from maturities of marketable securities and proceeds of \$183,000 from stock option exercises, were more than offset by purchases of marketable securities totaling \$7.1 million and purchases of fixed assets and capitalized patent costs totaling \$520,000. Our cash and cash equivalents fluctuate in part because of sales and maturities of marketable securities and investment of cash balances in marketable securities, and from other sources of cash. Accordingly, we believe the combined balances of cash and marketable securities provide a more reliable indication of our available liquidity than cash balances alone. Combined balances of cash and marketable securities decreased by approximately \$100,000 to \$38.2 million as of March 31, 2022, from \$38.3 million as of December 31, 2021.

Operating activities provided \$766,000 of cash in the three months ended March 31, 2022. The amount of cash provided by operations was favorably impacted by our net income of \$3.6 million. Net income was affected by non-cash items totaling \$1.1 million for depreciation and amortization, non-cash operating lease expense, provision for doubtful accounts, deferred taxes, non-cash gains from foreign currency transactions, share-based compensation costs and an unrealized loss on our available-for-sale equity security. Changes in operating assets and liabilities providing cash included an increase in accounts payable of \$2.1 million and an increase in advance customer payments of \$486,000. Changes in operating assets and liabilities using cash included an increase in accounts receivable of \$2.5 million, an increase in inventories of \$2.6 million, an increase in prepaid expenses and other assets of \$363,000, a decrease in accrued expenses of \$798,000 and a decrease in operating lease liabilities of \$203,000. Increases in accounts payable and inventories at March 31, 2022 were due to planned purchases of raw materials to meet anticipated customer demand. Advance customer payments were up due to an increase in deposits for equipment prior to transfer of control. Accounts receivable increased due to higher sales in the first quarter of 2022 when compared to the fourth quarter of 2021. The increase in prepaid expenses and other assets was due to higher balances of refundable goods and services tax. The decrease in accrued expenses was mainly due to payment of 2021 bonus accruals in the first quarter of 2022. The decrease in operating lease liabilities was due to monthly rental payments for facility leases.

Investing activities used \$4.4 million of cash in the three months ended March 31, 2022. Changes in the level of investment in marketable securities, resulting from purchases and maturities of those securities, used \$3.9 million of cash in the three months ended March 31, 2022. We used \$520,000 of cash in the three months ended March 31, 2022 for the purchase of fixed assets and capitalized patent costs.

Financing activities provided \$182,000 of cash in the three months ended March 31, 2022 from the exercise of employee stock options.

At March 31, 2022, we did not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities. These entities are established by some companies for the purpose of establishing off-balance sheet arrangements or for other contractually narrow or limited purposes.

We believe that on-hand cash, cash equivalents and marketable securities, coupled with anticipated future cash flow from operations, will be adequate to fund our cash flow needs for the foreseeable future.

Critical Accounting Policies and Estimates

Our discussion and analysis of financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles for interim financial statements. The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate these estimates, including estimates related to revenue recognition, bad debts, warranty obligations, inventory valuation, intangible assets, and income taxes. We base these estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Our actual results may differ from these estimates under different assumptions or conditions. See our Annual Report on Form 10-K for the year December 31, 2021 for additional discussion regarding critical accounting policies and estimates, and the judgements we believe have the most effect on our reported financial position and results of operations.

ITEM 3 – QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

ITEM 4 – CONTROLS AND PROCEDURES

a. Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934 (the “Exchange Act”). Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective in ensuring that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in applicable rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, in a manner that allows timely decisions regarding required disclosure.

b. There was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) that occurred during the period covered by this quarterly report that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1 – LEGAL PROCEEDINGS

None.

ITEM 1A – RISK FACTORS

In addition to the other information set forth in this report, you should carefully consider the risk factors discussed in Part I “Item 1A. Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2021. The risks identified in these risk factors could materially affect our business, financial condition or future results.

ITEM 2 – UNREGISTERED SALES OF EQUITY SECURITIES, USE OF PROCEEDS AND ISSUER PURCHASES OF EQUITY SECURITIES

We withhold common shares to cover employee tax withholding obligations from the exercise of stock options. In the three months ended March 31, 2022, we withheld 29 shares to satisfy employee tax withholding requirements of \$1,100.

ITEM 3 – DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4 – MINE SAFETY DISCLOSURES

None.

ITEM 5 – OTHER INFORMATION

None.

ITEM 6 – EXHIBITS

- 31.1: [Certification of Chief Executive Officer pursuant to Rule 15d-14\(a\) \(17 CFR 240.15d-14\(a\)\) and Section 302 of the Sarbanes Oxley Act of 2002](#)
- 31.2: [Certification of Chief Financial Officer pursuant to Rule 15d-14\(a\) \(17 CFR 240.15d-14\(a\)\) and Section 302 of the Sarbanes Oxley Act of 2002](#)
- 32: [Certification of Chief Executive Officer and Chief Financial Officer Pursuant to Section 906 of the Sarbanes Oxley Act of 2002](#)
- 101: Financial statements formatted in Inline Extensible Business Reporting Language: (i) the Condensed Consolidated Balance Sheets, (ii) the Condensed Consolidated Statements of Income, (iii) the Condensed Consolidated Statements of Comprehensive Income, (iv) the Condensed Consolidated Statements of Cash Flows and (v) the Notes to the Interim Condensed Consolidated Financial Statements

SIGNATURES

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

CYBEROPTICS CORPORATION

/s/ Subodh Kulkarni

By Subodh Kulkarni, President and Chief Executive Officer
(Principal Executive Officer and Duly Authorized Officer)

/s/ Jeffrey A. Bertelsen

By Jeffrey A. Bertelsen, Vice President, Chief Financial
Officer and Chief Operating Officer
(Principal Accounting Officer and Duly Authorized Officer)

Dated: May 6, 2022

I, Subodh Kulkarni, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CyberOptics Corporation.
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the 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: May 6, 2022

/s/ Subodh Kulkarni

Signature

Name: Subodh Kulkarni

Title: President and Chief Executive Officer

I, Jeffrey A. Bertelsen, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of CyberOptics Corporation.
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the 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: May 6, 2022

/s/ Jeffrey A. Bertelsen

Signature

Name: Jeffrey A. Bertelsen

Title: Vice President, Chief Financial Officer and Chief
Operating Officer

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

In connection with the Quarterly Report of CyberOptics Corporation (the “Company”) on Form 10-Q for the period ended March 31, 2022 as filed with the Securities and Exchange Commission on or about the date hereof (the “Report”), the undersigned, Subodh Kulkarni, Chief Executive Officer of the Company, and Jeffrey A. Bertelsen, Chief Financial Officer of the Company, each certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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.

/s/ Subodh Kulkarni

Subodh Kulkarni

President and Chief Executive Officer

May 6, 2022

/s/ Jeffrey A. Bertelsen

Jeffrey A. Bertelsen

Vice President, Chief Financial Officer and Chief Operating Officer

May 6, 2022

END OF FILING