
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-Q**

(Mark One)

- ☒ Quarterly Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the quarterly period ended June 28, 2020 or
- ☐ Transition Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the transition period from _____ to _____

**Commission File Number 001-34218
COGNEX CORPORATION**

(Exact name of registrant as specified in its charter)

Massachusetts

(State or other jurisdiction of
incorporation or organization)

04-2713778

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

**One Vision Drive
Natick, Massachusetts 01760-2059
(508) 650-3000**

(Address, including zip code, and telephone number, including area code, of principal executive offices)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$.002 per share	CGNX	The 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 for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes ☒ No ☐

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ☐ No ☒

As of June 28, 2020, there were 173,047,292 shares of Common Stock, \$.002 par value per share, of the registrant outstanding.

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PART I: FINANCIAL INFORMATION
ITEM 1: FINANCIAL STATEMENTS

COGNEX CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share amounts)

	Three-months Ended		Six-months Ended	
	June 28, 2020	June 30, 2019	June 28, 2020	June 30, 2019
	(unaudited)		(unaudited)	
Revenue	\$ 169,097	\$ 199,047	\$ 336,332	\$ 372,531
Cost of revenue	50,320	50,967	91,520	97,251
Gross margin	118,777	148,080	244,812	275,280
Research, development, and engineering expenses	30,397	28,079	66,343	58,321
Selling, general, and administrative expenses	60,153	68,245	129,291	135,056
Restructuring charges (Note 16)	14,798	—	14,798	—
Intangible asset impairment charges (Note 8)	19,571	—	19,571	—
Operating income (loss)	(6,142)	51,756	14,809	81,903
Foreign currency gain (loss)	336	140	(2,667)	(108)
Investment income	3,291	5,223	8,520	10,128
Other income (expense)	203	(144)	20	783
Income (loss) before income tax expense (benefit)	(2,312)	56,975	20,682	92,706
Income tax expense (benefit)	(1,170)	8,226	1,347	10,853
Net income (loss)	\$ (1,142)	\$ 48,749	\$ 19,335	\$ 81,853
Net income (loss) per weighted-average common and common-equivalent share:				
Basic	\$ (0.01)	\$ 0.28	\$ 0.11	\$ 0.48
Diluted	\$ (0.01)	\$ 0.28	\$ 0.11	\$ 0.47
Weighted-average common and common-equivalent shares outstanding:				
Basic	172,283	171,318	172,345	171,209
Diluted	172,283	175,448	175,499	175,528
Cash dividends per common share	\$ 0.055	\$ 0.050	\$ 0.110	\$ 0.100

The accompanying notes are an integral part of these consolidated financial statements.

COGNEX CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands)

	Three-months Ended		Six-months Ended	
	June 28, 2020	June 30, 2019	June 28, 2020	June 30, 2019
	(unaudited)		(unaudited)	
Net income (loss)	\$ (1,142)	\$ 48,749	\$ 19,335	\$ 81,853
Other comprehensive income, net of tax:				
Available-for-sale investments:				
Net unrealized gain (loss), net of tax of (\$836) and \$239 in the three-month periods and net of tax of (\$1,788) and \$507 in the six-month periods, respectively	12,451	2,311	8,590	4,562
Reclassification of credit (recovery) loss on investments into current operations	(85)	—	75	—
Reclassification of net realized (gain) loss into current operations	(955)	(382)	(2,805)	(422)
Net change related to available-for-sale investments	11,411	1,929	5,860	4,140
Foreign currency translation adjustments:				
Foreign currency translation adjustments	1,903	(663)	(5,462)	(445)
Net change related to foreign currency translation adjustments	1,903	(663)	(5,462)	(445)
Other comprehensive income, net of tax	13,314	1,266	398	3,695
Total comprehensive income	\$ 12,172	\$ 50,015	\$ 19,733	\$ 85,548

The accompanying notes are an integral part of these consolidated financial statements.

COGNEX CORPORATION
CONSOLIDATED BALANCE SHEETS
(In thousands)

	June 28, 2020 (unaudited)	December 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 286,021	\$ 171,431
Current investments, amortized cost of \$141,874 and \$235,610 in 2020 and 2019, respectively, allowance for expected credit losses of \$0 in 2020 and 2019	143,084	240,470
Accounts receivable, less reserves of \$2,235 and \$1,821 in 2020 and 2019, respectively	111,671	103,447
Unbilled revenue	978	4,782
Inventories	52,953	60,261
Prepaid expenses and other current assets	51,768	26,840
Total current assets	646,475	607,231
Non-current investments, amortized cost of \$461,948 and \$431,633 in 2020 and 2019, respectively, allowance for expected credit losses of \$75 and \$0 in 2020 and 2019, respectively	467,087	433,452
Property, plant, and equipment, net	83,936	89,443
Operating lease assets	25,819	17,522
Goodwill	242,436	243,445
Intangible assets, net	17,337	39,490
Deferred income taxes	443,732	449,519
Other assets	8,042	5,833
Total assets	\$ 1,934,864	\$ 1,885,935
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 17,999	\$ 17,866
Accrued expenses	66,264	52,199
Accrued income taxes	5,952	30,333
Deferred revenue and customer deposits	46,738	14,432
Operating lease liabilities	7,628	5,647
Total current liabilities	144,581	120,477
Non-current operating lease liabilities	21,208	12,326
Deferred income taxes	326,295	332,344
Reserve for income taxes	12,302	11,563
Non-current accrued income taxes	48,915	51,113
Other liabilities	5,085	2,402
Total liabilities	558,386	530,225
Shareholders' equity:		
Preferred stock, \$.01 par value – Authorized: 400 shares in 2020 and 2019, respectively, no shares issued and outstanding	—	—
Common stock, \$.002 par value – Authorized: 300,000 shares in 2020 and 2019, respectively, issued and outstanding: 173,047 and 172,440 shares in 2020 and 2019, respectively	346	345
Additional paid-in capital	710,412	639,372
Retained earnings	702,597	753,268
Accumulated other comprehensive loss, net of tax	(36,877)	(37,275)
Total shareholders' equity	1,376,478	1,355,710
Total liabilities and shareholders' equity	\$ 1,934,864	\$ 1,885,935

The accompanying notes are an integral part of these consolidated financial statements.

COGNEX CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Six-months Ended	
	June 28, 2020	June 30, 2019
	(unaudited)	
Cash flows from operating activities:		
Net income	\$ 19,335	\$ 81,853
Adjustments to reconcile net income to net cash provided by operating activities:		
Stock-based compensation expense	22,808	23,248
Depreciation of property, plant, and equipment	11,162	10,537
Amortization of intangible assets	2,582	1,538
Intangible asset impairment charges	19,571	—
Excess and obsolete inventory charges	8,783	1,713
Operating lease asset impairment charges	2,534	—
Amortization of discounts or premiums on investments	328	(342)
Realized gain on sale of investments	(2,805)	(422)
Credit loss on investments	75	—
Revaluation of contingent consideration	(114)	(863)
Change in deferred income taxes	1,395	(1,311)
Change in operating assets and liabilities:		
Accounts receivable	(8,957)	11,383
Unbilled revenue	3,804	(1,989)
Inventories	(1,664)	8,681
Prepaid expenses and other current assets	(25,461)	(463)
Accounts payable	143	(4,528)
Accrued expenses	15,806	(12,270)
Accrued income taxes	(25,411)	(4,000)
Deferred revenue and customer deposits	32,586	8,575
Other	2,520	(1,190)
Net cash provided by operating activities	79,020	120,150
Cash flows from investing activities:		
Purchases of investments	(317,540)	(664,896)
Maturities and sales of investments	387,765	587,175
Purchases of property, plant, and equipment	(6,985)	(8,969)
Net cash provided by (used in) investing activities	63,240	(86,690)
Cash flows from financing activities:		
Issuance of common stock under stock plans	48,235	26,417
Repurchase of common stock	(51,036)	(61,690)
Payment of dividends	(18,972)	(17,146)
Payment of contingent consideration	(1,039)	—
Net cash provided by (used in) financing activities	(22,812)	(52,419)
Effect of foreign exchange rate changes on cash and cash equivalents	(4,858)	(149)
Net change in cash and cash equivalents	114,590	(19,108)
Cash and cash equivalents at beginning of period	171,431	108,212
Cash and cash equivalents at end of period	\$ 286,021	\$ 89,104

The accompanying notes are an integral part of these consolidated financial statements.

COGNEX CORPORATION
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(In thousands)

	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Shareholders' Equity
	Shares	Par Value				
Balance as of March 29, 2020	171,688	\$ 344	\$ 664,132	\$ 713,208	\$ (50,191)	\$ 1,327,493
Issuance of common stock under stock plans	1,359	2	38,262	—	—	38,264
Repurchase of common stock	—	—	—	—	—	—
Stock-based compensation expense	—	—	8,018	—	—	8,018
Payment of dividends	—	—	—	(9,469)	—	(9,469)
Net income (loss)	—	—	—	(1,142)	—	(1,142)
Net unrealized gain (loss) on available-for-sale investments, net of tax of (\$836)	—	—	—	—	12,451	12,451
Reclassification of credit (recovery) loss on investments	—	—	—	—	(85)	(85)
Reclassification of net realized (gain) loss on the sale of available-for-sale investments	—	—	—	—	(955)	(955)
Foreign currency translation adjustment	—	—	—	—	1,903	1,903
Balance as of June 28, 2020 (unaudited)	<u>173,047</u>	<u>\$ 346</u>	<u>\$ 710,412</u>	<u>\$ 702,597</u>	<u>\$ (36,877)</u>	<u>\$ 1,376,478</u>

	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Shareholders' Equity
	Shares	Par Value				
Balance as of March 31, 2019	171,537	\$ 343	\$ 555,834	\$ 670,754	\$ (38,072)	\$ 1,188,859
Issuance of common stock under stock plans	522	1	12,070	—	—	12,071
Repurchase of common stock	(1,398)	(3)	—	(61,687)	—	(61,690)
Stock-based compensation expense	—	—	10,967	—	—	10,967
Payment of dividends	—	—	—	(8,582)	—	(8,582)
Net income	—	—	—	48,749	—	48,749
Net unrealized gain (loss) on available-for-sale investments, net of tax of \$239	—	—	—	—	2,311	2,311
Reclassification of net realized (gain) loss on the sale of available-for-sale investments	—	—	—	—	(382)	(382)
Foreign currency translation adjustment	—	—	—	—	(663)	(663)
Balance as of June 30, 2019 (unaudited)	<u>170,661</u>	<u>\$ 341</u>	<u>\$ 578,871</u>	<u>\$ 649,234</u>	<u>\$ (36,806)</u>	<u>\$ 1,191,640</u>

The accompanying notes are an integral part of these consolidated financial statements.

COGNEX CORPORATION
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(In thousands)

	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Shareholders' Equity
	Shares	Par Value				
Balance as of December 31, 2019	172,440	\$ 345	\$ 639,372	\$ 753,268	\$ (37,275)	\$ 1,355,710
Issuance of common stock under stock plans	1,822	3	48,232	—	—	48,235
Repurchase of common stock	(1,215)	(2)	—	(51,034)	—	(51,036)
Stock-based compensation expense	—	—	22,808	—	—	22,808
Payment of dividends	—	—	—	(18,972)	—	(18,972)
Net income	—	—	—	19,335	—	19,335
Net unrealized gain (loss) on available-for-sale investments, net of tax of (\$1,788)	—	—	—	—	8,590	8,590
Reclassification of credit loss on investments	—	—	—	—	75	75
Reclassification of net realized (gain) loss on the sale of available-for-sale investments	—	—	—	—	(2,805)	(2,805)
Foreign currency translation adjustment	—	—	—	—	(5,462)	(5,462)
Balance as of June 28, 2020 (unaudited)	<u>173,047</u>	<u>\$ 346</u>	<u>\$ 710,412</u>	<u>\$ 702,597</u>	<u>\$ (36,877)</u>	<u>\$ 1,376,478</u>

	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Shareholders' Equity
	Shares	Par Value				
Balance as of December 31, 2018	170,820	\$ 342	\$ 529,208	\$ 646,214	\$ (40,501)	\$ 1,135,263
Issuance of common stock under stock plans	1,239	2	26,415	—	—	26,417
Repurchase of common stock	(1,398)	(3)	—	(61,687)	—	(61,690)
Stock-based compensation expense	—	—	23,248	—	—	23,248
Payment of dividends	—	—	—	(17,146)	—	(17,146)
Net income	—	—	—	81,853	—	81,853
Net unrealized gain (loss) on available-for-sale investments, net of tax of \$507	—	—	—	—	4,562	4,562
Reclassification of net realized (gain) loss on the sale of available-for-sale investments	—	—	—	—	(422)	(422)
Foreign currency translation adjustment	—	—	—	—	(445)	(445)
Balance as of June 30, 2019 (unaudited)	<u>170,661</u>	<u>\$ 341</u>	<u>\$ 578,871</u>	<u>\$ 649,234</u>	<u>\$ (36,806)</u>	<u>\$ 1,191,640</u>

The accompanying notes are an integral part of these consolidated financial statements.

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

NOTE 1: Summary of Significant Accounting Policies

As permitted by the rules of the Securities and Exchange Commission applicable to Quarterly Reports on Form 10-Q, these notes are condensed and do not contain all disclosures required by generally accepted accounting principles (GAAP). As a result of the adoption of ASU 2016-13 "Measurement of Credit Losses on Financial Instruments," Cognex Corporation (the "Company") has provided new disclosures related to credit losses in this Quarterly Report on Form 10-Q. Reference should be made to the consolidated financial statements and related notes included in the Company's Annual Report on Form 10-K for the year ended December 31, 2019 for a full description of other significant accounting policies.

In the opinion of the management of the Company, the accompanying consolidated unaudited financial statements contain all adjustments, consisting of normal, recurring adjustments, excess and obsolete inventory charges (Note 5), intangible asset impairment charges (Note 8), restructuring charges (Note 16), and financial statement reclassifications necessary to present fairly the Company's financial position as of June 28, 2020, and the results of its operations for the three-month and six-month periods ended June 28, 2020 and June 30, 2019, and changes in shareholders' equity, comprehensive income, and cash flows for the periods presented.

The results disclosed in the Consolidated Statements of Operations for the three-month and six-month periods ended June 28, 2020 are not necessarily indicative of the results to be expected for the full year.

Cash, Cash Equivalents, and Investments

Money market instruments, as well as certificates of deposit and debt securities with original maturities of three months or less, are classified as cash equivalents and are stated at amortized cost. Certificates of deposit and debt securities with original maturities greater than three months and remaining maturities of one year or less are classified as current investments. Debt securities with remaining maturities greater than one year are classified as non-current investments. It is the Company's policy to invest in debt securities with effective maturities that do not exceed ten years.

Debt securities with original maturities greater than three months are designated as available-for-sale and are reported at fair value, with unrealized gains and losses, net of tax and credit losses, recorded in shareholders' equity as other comprehensive income (loss). Realized gains and losses are included in current operations, along with the amortization of the discount or premium on debt securities arising at acquisition, and are calculated using the specific identification method. The Company's limited partnership interest is accounted for using the cost method because the Company's investment is less than 5% of the partnership and the Company has no influence over the partnership's operating and financial policies. The carrying value of this investment has been reduced to zero, and therefore, distributions are recorded as investment income as they occur.

Management monitors the carrying value of its investments in debt securities compared to their fair value to determine whether a credit loss or other type of impairment has occurred. If the fair value of a debt security is less than its amortized cost, the Company assesses whether the decline has resulted from a credit loss or other factors. In assessing whether a credit loss exists, the Company compares the present value of the cash flows expected to be collected from the security with the amortized cost basis of the security. If the present value of the cash flows expected to be collected is less than the amortized cost basis of the security, then a credit loss exists and an allowance for credit losses is recorded. The allowance for credit losses is limited by the amount that the fair value is less than the amortized cost basis of the security. Credit losses on impaired securities continue to be measured in subsequent periods, using the present value of expected future cash flows, and changes in the expected credit losses are recorded in current operations. Credit losses and recoveries are included in "Other income (expense)" on the Consolidated Statement of Operations. When developing an estimate of the expected credit losses, the Company considers all available information relevant to assessing the collectability of cash flows. This information includes internal and external factors, historical and current events, reasonable and supportable forecasts including management's expectations of future economic conditions, the type of security, the credit rating of the security, the size of the loss position, as well as other relevant information.

An impairment is recognized as a write-down if (i) the Company has the intent to sell the security or (ii) it is more likely than not that the Company will be required to sell the security before recovery of the entire amortized cost basis. If impairment is considered upon condition (i) or (ii) described above, the debt security's amortized cost basis is written-down to its fair value and the impairment is recognized in current operations. Subsequent increases in the fair value of the debt securities after the write-down are included in shareholders' equity as other comprehensive income. The differences between the new amortized cost basis and the cash flows expected to be collected are accreted as interest income.

Unrealized losses, that have not been recorded through an allowance for credit losses or write-down of the debt security, are recorded in shareholders' equity as other comprehensive loss, net of the applicable taxes.

Accounts Receivable

The Company extends credit with various payment terms to customers based upon an evaluation of their financial condition. Accounts that are outstanding longer than the payment terms are considered to be past due. The Company establishes an allowance against accounts receivable for potential credit losses and records bad debt expense in current operations when it determines receivables are at risk for collection based upon the length of time the receivable has been outstanding, the customer's current ability to pay its obligations to the Company, general economic and industry conditions, and reasonable forecasts about the future, as well as various other factors. Receivables are written off against this allowance in the period they are determined to be uncollectible and payments subsequently received on previously written-off receivables are recorded as a reversal of the bad debt expense. Credit losses are included in "Selling, general, and administrative expenses" on the Consolidated Statement of Operations.

NOTE 2: New Pronouncements

Accounting Standards Update (ASU) 2019-12, "Simplifying the Accounting for Income Taxes"

ASU 2019-12 applies to all entities within the scope of Topic 740, Income Taxes. The amendments in this ASU simplify the accounting for income taxes by removing the following exceptions: 1) exception to the incremental approach for intraperiod tax allocation when there is a loss from continuing operations and income or a gain from other items; 2) exception to the requirement to recognize a deferred tax liability for equity method investments when a foreign subsidiary becomes an equity method investment; 3) exception to the ability not to recognize a deferred tax liability for a foreign subsidiary when a foreign equity method investment becomes a subsidiary; and 4) exception to the general methodology for calculating income taxes in an interim period when a year-to-date loss exceeds the anticipated loss for the year. The amendments in this ASU also simplify the accounting for income taxes by doing the following: 1) requiring that an entity recognize a franchise tax that is partially based on income as an income-based tax and account for any incremental amount incurred as a non-income-based tax; 2) requiring that an entity evaluate when a step up in the tax basis of goodwill should be considered part of the business combination in which the book goodwill was originally recognized and when it should be considered a separate transaction; 3) specifying that an entity is not required to allocate the consolidated amount of current and deferred tax expense to a legal entity that is not subject to tax in its separate financial statements; and 4) requiring that an entity reflect the effect of an enacted change in tax laws or rates in the annual effective tax rate computation in the interim period that included the enacted date. The amendments in this ASU are effective for public companies for annual periods, and interim periods within those annual periods, beginning after December 15, 2020. Early adoption is permitted; however, an entity that elects to early adopt the amendments must adopt all the amendments in the same period. The amendments in this ASU related to separate financial statements of legal entities that are not subject to tax should be applied on a retrospective basis for all periods presented. The amendments related to changes in ownership of foreign equity method investments or foreign subsidiaries should be applied on a modified retrospective basis through a cumulative-effect adjustment to retained earnings as of the beginning of the fiscal year of adoption. The amendments related to franchise taxes that are partially based on income should be applied on either a retrospective basis for all periods presented or a modified retrospective basis through a cumulative-effect adjustment to retained earnings as of the beginning of the fiscal year of adoption. All other amendments should be applied on a prospective basis. Management does not expect ASU 2019-12 to have a material impact on the Company's consolidated financial statements and disclosures.

Accounting Standards Update (ASU) 2020-04, "Reference Rate Reform (Topic 848)"

The amendments in this ASU apply to all entities that have contracts, hedging relationships, and other transactions that reference LIBOR or another reference rate expected to be discontinued because of reference rate reform. The amendments in this ASU provide optional expedients and exceptions for applying generally accepted accounting principles (GAAP) to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. The expedients and exceptions provided by the amendments do not apply to contract modifications made and hedging relationships entered into or evaluated after December 31, 2022, except for hedging relationships existing as of December 31, 2022, that an entity has elected certain optional expedients for and that are retained through the end of the hedging relationship. The amendments in this ASU are effective for all entities as of March 12, 2020 through December 31, 2022. Management does not expect ASU 2020-04 to have a material impact on the Company's consolidated financial statements and disclosures.

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

NOTE 3: Fair Value Measurements

Financial Assets and Liabilities that are Measured at Fair Value on a Recurring Basis

The following table summarizes the financial assets and liabilities required to be measured at fair value on a recurring basis as of June 28, 2020 (in thousands):

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)
Assets:			
Money market instruments	\$ 50,222	\$ —	\$ —
Corporate bonds	—	236,660	
Treasury bills	—	230,692	—
Asset-backed securities	—	91,610	—
Sovereign bonds	—	27,517	—
Agency bonds	—	22,054	—
Municipal bonds	—	1,638	
Economic hedge forward contracts	—	46	—
Liabilities:			
Economic hedge forward contracts	—	458	—
Contingent consideration liabilities	—	—	—

The Company's money market instruments are reported at fair value based upon the daily market price for identical assets in active markets, and are therefore classified as Level 1.

The Company's debt securities and forward contracts are reported at fair value based upon model-driven valuations in which all significant inputs are observable or can be derived from or corroborated by observable market data for substantially the full term of the asset or liability, and are therefore classified as Level 2. Management is responsible for estimating the fair value of these financial assets and liabilities, and in doing so, considers valuations provided by a large, third-party pricing service. For debt securities, this service maintains regular contact with market makers, brokers, dealers, and analysts to gather information on market movement, direction, trends, and other specific data. They use this information to structure yield curves for various types of debt securities and arrive at the daily valuations. The Company's forward contracts are typically traded or executed in over-the-counter markets with a high degree of pricing transparency. The market participants are generally large commercial banks.

The Company recorded gross credit losses and gross credit recoveries on debt securities totaling \$0 and \$85,000, respectively, for the three-month period ended June 28, 2020, and \$160,000 and \$85,000, respectively, for the six-month period ended June 28, 2020. No credit losses or recoveries on debt securities were recorded for the three-month or six-month periods ended June 30, 2019. Credit losses and recoveries are included in "Other income (expense)" on the Consolidated Statements of Operations.

The Company's contingent consideration liabilities are reported at fair value based upon probability-adjusted present values of the consideration expected to be paid using significant inputs that are not observable in the market, and are therefore classified as Level 3. Key assumptions used in these estimates include probability assessments with respect to the likelihood of achieving certain revenue milestones. The fair values of these contingent consideration liabilities were calculated using discount rates consistent with the level of risk of achievement, and are remeasured each reporting period.

The fair value of the contingent consideration liability related to the Company's acquisition of Chiaro Technologies, LLC was \$1,153,000 as of December 31, 2019. During the three-month period ended June 28, 2020, the Company paid out \$1,039,000 based upon the revenue levels achieved, with the remaining \$114,000 recorded as a fair value adjustment in "Other income (expense)" on the Consolidated Statements of Operations.

The fair value of the contingent consideration liability related to the Company's acquisition of GVi Ventures, Inc. was written down to zero as of December 31, 2019 resulting from a lower level of revenue in the Americas' automotive industry, and the balance remains at zero as of June 28, 2020. The undiscounted potential outcomes related to future contingent consideration range from \$0 to \$2,500,000 based upon certain revenue levels over the next two years.

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

Non-financial Assets that are Measured at Fair Value on a Non-recurring Basis

Non-financial assets, such as property, plant and equipment, operating lease assets, goodwill, and intangible assets, are required to be measured at fair value only when an impairment loss is recognized. The Company evaluates these long-lived assets for impairment whenever events or changes in circumstances, referred to as "triggering events," indicate the carrying value may not be recoverable. Our business has been adversely and materially impacted by deteriorating global economic conditions resulting from the COVID-19 pandemic. The significant decline in business levels triggered a review of long-lived assets for potential impairment as of May 26, 2020, which resulted in operating lease asset impairment charges of \$2,534,000 (refer to Notes 6 and 16) that are included in "Restructuring charges" on the Consolidated Statements of Operations, and intangible asset impairment charges of \$19,571,000 (refer to Note 8). These fair value measurements are based upon the present values of future cash flows using significant inputs that are not observable in the market, and are therefore classified as Level 3.

NOTE 4: Cash, Cash Equivalents, and Investments

Cash, cash equivalents, and investments consisted of the following (in thousands):

	June 28, 2020	December 31, 2019
Cash	\$ 235,799	\$ 155,498
Money market instruments	50,222	15,933
Cash and cash equivalents	286,021	171,431
Asset-backed securities	50,311	66,680
Corporate bonds	42,248	65,624
Treasury bills	34,018	92,914
Sovereign bonds	14,869	6,294
Municipal bonds	1,638	4,630
Certificate of deposit	—	4,328
Current investments	143,084	240,470
Treasury bills	196,674	216,334
Corporate bonds	194,412	146,474
Asset-backed securities	41,299	46,403
Agency bonds	22,054	5,914
Sovereign bonds	12,648	16,005
Municipal bonds	—	2,322
Non-current investments	467,087	433,452
	\$ 896,192	\$ 845,353

Asset-backed securities consist of debt securities collateralized by pools of receivables or loans with credit enhancement; corporate bonds consist of debt securities issued by both domestic and foreign companies; treasury bills consist of debt securities issued by the U.S. government; sovereign bonds consist of direct debt issued by foreign governments; municipal bonds consist of debt securities issued by state and local government entities; certificates of deposit are time deposits held by financial institutions with a fixed interest rate; and agency bonds consist of domestic or foreign obligations of government agencies and government-sponsored enterprises that have government backing. All securities are denominated in U.S. Dollars, with the exception of the certificate of deposit held as of December 31, 2019 that was denominated in Korean Won.

Accrued interest receivable is recorded in "Prepaid expenses and other current assets" on the Consolidated Balance Sheet and amounted to \$1,958,000 and \$2,874,000 as of June 28, 2020 and December 31, 2019, respectively.

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

On January 1, 2020, the Company adopted Accounting Standards Update (ASU) 2016-13, "Measurement of Credit Losses on Financial Instruments," using the modified-retrospective approach, which requires the Company to apply the standard on a prospective basis with a cumulative-effect adjustment to retained earnings as of the beginning of the period in which the guidance is effective. The Company did not record an adjustment to retained earnings, as there were no debt securities with credit losses as of the adoption date.

The following table summarizes the Company's available-for-sale investments as of June 28, 2020 (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Current:				
Asset-backed securities	\$ 49,899	\$ 412	\$ —	\$ 50,311
Corporate bonds	42,065	221	(38)	42,248
Treasury bills	33,480	538	—	34,018
Sovereign bonds	14,787	82	—	14,869
Municipal bonds	1,643	—	(5)	1,638
Non-current:				
Treasury bills	194,330	2,345	(1)	196,674
Corporate bonds	192,233	2,513	(334)	194,412
Asset-backed securities	40,817	484	(2)	41,299
Agency bonds	22,035	37	(18)	22,054
Sovereign bonds	12,533	115	—	12,648
	<u>\$ 603,822</u>	<u>\$ 6,747</u>	<u>\$ (398)</u>	<u>\$ 610,171</u>

The following table summarizes the Company's gross unrealized losses and fair values for available-for-sale investments in an unrealized loss position as of June 28, 2020 (in thousands):

	Unrealized Loss Position For:					
	Less than 12 Months		12 Months or Greater		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Corporate bonds	\$ 49,525	\$ (363)	\$ 1,181	\$ (9)	\$ 50,706	\$ (372)
Treasury bills	12,962	(1)	—	—	12,962	(1)
Asset-backed securities	5,749	(1)	260	(1)	6,009	(2)
Agency bonds	3,128	(2)	2,784	(16)	5,912	(18)
Municipal bonds	1,293	(5)	—	—	1,293	(5)
	<u>\$ 72,657</u>	<u>\$ (372)</u>	<u>\$ 4,225</u>	<u>\$ (26)</u>	<u>\$ 76,882</u>	<u>\$ (398)</u>

The Company recorded gross credit losses and gross credit recoveries on debt securities totaling \$0 and \$85,000, respectively, for the three-month period ended June 28, 2020, and \$160,000 and \$85,000, respectively, for the six-month period ended June 28, 2020. No credit losses or recoveries on debt securities were recorded for the three-month or six-month periods ended June 30, 2019. Credit losses and recoveries are included in "Other income (expense)" on the Consolidated Statements of Operations.

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

The following table summarizes the allowance for credit losses activity for the six-month period ended June 28, 2020 (in thousands):

Balance as of December 31, 2019	\$	—
Increases to the allowance for credit losses		160
Decreases to the allowance for credit losses		(85)
Write-offs		—
Balance as of June 28, 2020	\$	75

The Company recorded gross realized gains and gross realized losses on the sale of debt securities totaling \$962,000 and \$7,000, respectively, for the three-month period ended June 28, 2020, and \$394,000 and \$12,000, respectively, for the three-month period ended June 30, 2019. The Company recorded gross realized gains and gross realized losses on the sale of debt securities totaling \$2,826,000 and \$21,000, respectively, for the six-month period ended June 28, 2020, and \$458,000 and \$36,000, respectively, for the six-month period ended June 30, 2019. These gains and losses are included in "Investment income" on the Consolidated Statements of Operations. Prior to the sale of these securities, unrealized gains and losses for these debt securities, net of tax, are recorded in shareholders' equity as accumulated other comprehensive loss.

The following table presents the effective maturity dates of the Company's available-for-sale investments as of June 28, 2020 (in thousands):

	<1 year	1-2 Years	2-3 Years	3-4 Years	4-5 Years	Total
Corporate bonds	\$ 42,248	\$ 81,987	\$ 102,034	\$ 10,391	\$ —	\$ 236,660
Treasury bills	34,018	138,612	58,062	—	—	230,692
Asset-backed securities	50,311	13,750	23,308	—	4,241	91,610
Sovereign bonds	14,869	9,218	3,430	—	—	27,517
Agency bonds	—	—	22,054	—	—	22,054
Municipal bonds	1,638	—	—	—	—	1,638
	\$ 143,084	\$ 243,567	\$ 208,888	\$ 10,391	\$ 4,241	\$ 610,171

NOTE 5: Inventories

Inventories consisted of the following (in thousands):

	June 28, 2020	December 31, 2019
Raw materials	\$ 20,736	\$ 27,285
Work-in-process	4,111	5,503
Finished goods	28,106	27,473
	\$ 52,953	\$ 60,261

The Company recorded provisions for excess and obsolete inventories of \$7,718,000 and \$8,783,000 for the three-month and six-month periods ended June 28, 2020, respectively, which reduced the carrying value of the inventories to their net realizable value. The charges for the three-month period ended June 28, 2020 were due to lower projected sales of excess inventories as a result of deteriorating global economic conditions from the COVID-19 pandemic.

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

NOTE 6: Leases

The Company's leases are primarily leased properties across different worldwide locations where the Company conducts its operations. All of these leases are classified as operating leases. Certain leases may contain options to extend or terminate the lease at the Company's sole discretion. There were no options to extend or terminate that were included in the determination of the lease term for the leases outstanding as of June 28, 2020. Certain leases contain leasehold improvement incentives, retirement obligations, escalating clauses, rent holidays, and variable payments tied to a consumer price index. There were no restrictions or covenants for the leases outstanding as of June 28, 2020.

The total operating lease expense for the three-month periods ended June 28, 2020 and June 30, 2019 was \$2,147,000 and \$1,742,000, respectively. The total operating lease cash payments for the three-month periods ended June 28, 2020 and June 30, 2019 were \$2,091,000 and \$1,669,000, respectively. The total lease expense for leases with a term of twelve months or less for which the Company elected not to recognize a lease asset or lease liability was \$23,000 and \$64,000 for the three-month periods ended June 28, 2020 and June 30, 2019, respectively.

The total operating lease expense for the six-month periods ended June 28, 2020 and June 30, 2019 was \$4,053,000 and \$3,227,000, respectively. The total operating lease cash payments for the six-month periods ended June 28, 2020 and June 30, 2019 were \$3,954,000 and \$3,070,000, respectively. The total lease expense for leases with a term of twelve months or less for which the Company elected not to recognize a lease asset or lease liability was \$62,000 and \$233,000 for the six-month periods ended June 28, 2020 and June 30, 2019, respectively.

Future operating lease cash payments are as follows (in thousands):

Year Ended December 31,	Amount
Remainder of fiscal 2020	\$ 4,335
2021	8,340
2022	6,169
2023	4,973
2024	2,391
2025	1,322
Thereafter	4,462
	\$ 31,992

The discounted present value of the future lease cash payments resulted in a lease liability of \$28,836,000 and \$17,973,000 as of June 28, 2020 and December 31, 2019, respectively. The Company did not have any leases that had not yet commenced but that created significant rights and obligations as of June 28, 2020 or June 30, 2019.

The weighted-average discount rate was 4.1% and 4.8% for the leases outstanding as of June 28, 2020 and June 30, 2019, respectively. The weighted-average remaining lease term was 5.3 and 3.6 years for the leases outstanding as of June 28, 2020 and June 30, 2019, respectively.

As part of the Company's restructuring plan (refer to Note 16), management closed ten leased offices as of June 28, 2020 prior to the end of their lease terms. The carrying value of the lease assets associated with these ten offices has been reduced to zero as of June 28, 2020, resulting in operating lease asset impairment charges of \$2,534,000 for the three-month period ended June 28, 2020 that are included in "Restructuring charges" on the Consolidated Statements of Operations. Management is currently negotiating early contract terminations for the remaining lease liability obligations associated with these abandoned offices.

The Company owns a building adjacent to its corporate headquarters that was partially occupied by a tenant for a portion of the current year. This lease was terminated prior to the end of its lease term during the three-month period ended June 28, 2020. Rental income was \$0 and \$81,000 for the three-month periods ended June 28, 2020 and June 30, 2019, respectively, and \$77,000 and \$158,000 for the six-month periods ended June 28, 2020 and June 30, 2019, respectively. The Company is now fully occupying this building for its operations.

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

NOTE 7: Goodwill

The changes in the carrying value of goodwill were as follows (in thousands):

Balance as of December 31, 2019	\$ 243,445
Foreign exchange rate changes	(1,009)
Balance as of June 28, 2020	<u><u>\$ 242,436</u></u>

The significant decline in business levels resulting from the COVID-19 pandemic triggered a review of long-lived assets, including goodwill, for potential impairment during the three-month period ended June 28, 2020. Based upon this assessment, management concluded that the reporting unit fair value was not less than its carrying value, and therefore no goodwill impairment charge was recognized for the three-month and six-month periods ended June 28, 2020. Factors that management considered in this assessment included macroeconomic conditions, industry and market conditions, overall financial performance (both current and projected), changes in management or strategy, changes in the composition or carrying value of net assets, and market capitalization.

NOTE 8: Intangible Assets

Amortized intangible assets consisted of the following (in thousands):

	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Distribution networks	\$ 38,060	\$ 38,060	\$ —
Completed technologies	21,917	11,035	10,882
Customer relationships	10,578	6,795	3,783
In-process technologies	2,300	—	2,300
Non-compete agreements	710	409	301
Trademarks	110	39	71
Balance as of June 28, 2020	<u><u>\$ 73,675</u></u>	<u><u>\$ 56,338</u></u>	<u><u>\$ 17,337</u></u>

	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Distribution networks	\$ 38,060	\$ 38,060	\$ —
Completed technologies	31,987	9,160	22,827
Customer relationships	14,407	6,402	8,005
In-process technologies	8,200	—	8,200
Non-compete agreements	710	350	360
Trademarks	110	12	98
Balance as of December 31, 2019	<u><u>\$ 93,474</u></u>	<u><u>\$ 53,984</u></u>	<u><u>\$ 39,490</u></u>

The significant decline in business levels resulting from the COVID-19 pandemic triggered a review of long-lived assets, including intangible assets, for potential impairment during the three-month period ended June 28, 2020. For finite-lived intangible assets that are subject to amortization, the Company follows a two-step process for impairment testing. In step one, known as the recoverability test, the carrying value of the asset is compared to the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. If the sum of the undiscounted future cash flows is less than the carrying value, the asset is not recoverable and step two is performed. In step two, the impairment charge is measured as the amount by which the carrying value of the asset exceeds its fair value. For indefinite-lived intangible assets that are not subject to amortization, the fair value of the asset is measured and an impairment charge is recorded as the amount by which the carrying value of the asset exceeds its fair value.

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

Based upon this assessment, management concluded that certain of the Company's finite-lived intangible assets failed the recoverability test, and recorded impairment charges for these assets equal to the amount by which their carrying value exceeded their fair value. The Company also measured the fair value and recorded an impairment charge for its indefinite-lived intangible asset related to in-process technologies. The fair values were established, with the assistance of an outside valuation advisor, using the income approach based upon a discounted cash flow model that estimated future revenue streams and expenses attributable to those revenue streams provided by management.

This review resulted in intangible asset impairment charges totaling \$19,571,000 for the three-month period ended June 28, 2020, primarily related to lower projected cash flows from the technologies and customer relationships acquired from Sualab Co. Ltd. ("Sualab") as a result of the deteriorating global economic conditions from the COVID-19 pandemic. Completed technologies, in-process technologies, and customer relationships acquired from Sualab were impaired in the amounts of \$10,070,000, \$5,900,000, and \$3,382,000, respectively. In addition, customer relationships acquired from EnShape GmbH that had a gross carrying value of \$447,000 and accumulated amortization of \$228,000 on the measurement date were reduced to zero, resulting in an impairment charge of \$219,000.

As of June 28, 2020, estimated future amortization expense related to intangible assets was as follows (in thousands):

Year Ended December 31,	Amount
Remainder of fiscal 2020	\$ 1,686
2021	3,272
2022	2,902
2023	2,211
2024	1,697
2025	1,374
Thereafter	1,895
	\$ 15,037

In-process technology is an indefinite-lived intangible asset until the technology is finalized, at which point it is amortized over its estimated useful life.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

NOTE 9: Warranty Obligations

The Company records the estimated cost of fulfilling product warranties at the time of sale based upon historical costs to fulfill claims. Obligations may also be recorded subsequent to the time of sale whenever specific events or changes in circumstances impacting product quality become known that would not have been taken into account using historical data. While we engage in extensive product quality programs and processes, including actively monitoring and evaluating the quality of our component suppliers and third-party contract manufacturers, the Company's warranty obligation is affected by product failure rates, material usage, and service delivery costs incurred in correcting a product failure. An adverse change in any of these factors may result in the need for additional warranty provisions. Warranty obligations are included in "Accrued expenses" on the Consolidated Balance Sheets.

The changes in the warranty obligation were as follows (in thousands):

Balance as of December 31, 2019	\$	4,713
Provisions for warranties issued during the period		1,493
Fulfillment of warranty obligations		(927)
Balance as of June 28, 2020	\$	<u>5,279</u>

NOTE 10: Derivative Instruments

The Company's foreign currency risk management strategy is principally designed to mitigate the potential financial impact of changes in the value of transactions and balances denominated in foreign currencies resulting from changes in foreign currency exchange rates. Currently, the Company enters into economic hedges to manage this risk. The economic hedges utilize foreign currency forward contracts with maturities of up to 45 days to manage the exposure to fluctuations in foreign currency exchange rates arising primarily from foreign-denominated receivables and payables. The gains and losses on these derivatives are intended to be offset by the changes in the fair value of the assets and liabilities being hedged. These economic hedges are not designated as hedging instruments for hedge accounting treatment.

The Company had the following outstanding forward contracts (in thousands):

Currency	June 28, 2020		December 31, 2019	
	Notional Value	USD Equivalent	Notional Value	USD Equivalent
<i>Derivatives Not Designated as Hedging Instruments:</i>				
Korean Won	138,690,000	\$ 115,604	161,951,500	\$ 139,688
Euro	50,000	56,137	18,000	20,249
Mexican Peso	184,700	8,051	80,000	4,223
Japanese Yen	600,000	5,587	575,000	5,291
Hungarian Forint	1,085,000	3,443	870,000	2,962
British Pound	1,940	2,406	2,700	3,569
Taiwanese Dollar	42,765	1,455	37,450	1,256
Canadian Dollar	1,130	827	1,300	1,000
Singapore Dollar	1,090	784	845	628

Information regarding the fair value of the outstanding forward contracts was as follows (in thousands):

Asset Derivatives					Liability Derivatives					
Balance Sheet Location	Fair Value				Balance Sheet Location	Fair Value				
	June 28, 2020		December 31, 2019			June 28, 2020		December 31, 2019		
Derivatives Not Designated as Hedging Instruments:										
Economic hedge forward contracts	Prepaid expenses and other current assets					Accrued expenses				
	\$	46	\$	857		\$	458	\$	23	

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

The following table presents the gross activity for all derivative assets and liabilities which were presented on a net basis on the Consolidated Balance Sheets due to the right of offset with each counterparty (in thousands):

Asset Derivatives			Liability Derivatives		
	June 28, 2020	December 31, 2019		June 28, 2020	December 31, 2019
Gross amounts of recognized assets	\$ 46	\$ 857	Gross amounts of recognized liabilities	\$ 458	\$ 23
Gross amounts offset	—	—	Gross amounts offset	—	—
Net amount of assets presented	<u>\$ 46</u>	<u>\$ 857</u>	Net amount of liabilities presented	<u>\$ 458</u>	<u>\$ 23</u>

Information regarding the effect of derivative instruments on the consolidated financial statements was as follows (in thousands):

Location in Financial Statements		Three-months Ended		Six-months Ended	
		June 28, 2020	June 30, 2019	June 28, 2020	June 30, 2019
<i>Derivatives Not Designated as Hedging Instruments:</i>					
Gains (losses) recognized in current operations	Foreign currency gain (loss)	<u>\$ 60</u>	<u>\$ (439)</u>	<u>\$ (8,180)</u>	<u>\$ 66</u>

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

NOTE 11: Revenue Recognition

The following table summarizes disaggregated revenue information by geographic area based upon the customer's country of domicile (in thousands):

	Three-months Ended		Six-months Ended	
	June 28, 2020	June 30, 2019	June 28, 2020	June 30, 2019
Americas	\$ 68,966	\$ 77,408	\$ 129,214	\$ 142,178
Europe	35,987	59,620	84,569	119,158
Greater China	31,898	35,816	58,301	58,632
Other Asia	32,246	26,203	64,248	52,563
	<u>\$ 169,097</u>	<u>\$ 199,047</u>	<u>\$ 336,332</u>	<u>\$ 372,531</u>

The following table summarizes disaggregated revenue information by revenue type (in thousands):

	Three-months Ended		Six-months Ended	
	June 28, 2020	June 30, 2019	June 28, 2020	June 30, 2019
Standard products and services	\$ 158,807	\$ 173,368	\$ 311,662	\$ 334,420
Application-specific customer solutions	10,290	25,679	24,670	38,111
	<u>\$ 169,097</u>	<u>\$ 199,047</u>	<u>\$ 336,332</u>	<u>\$ 372,531</u>

Costs to Fulfill a Contract

Costs to fulfill a contract are included in "Prepaid expenses and other current assets" on the Consolidated Balance Sheet and amounted to \$10,888,000 and \$3,963,000 as of June 28, 2020 and December 31, 2019, respectively.

Accounts Receivable, Contract Assets, and Contract Liabilities

Accounts receivable represent amounts billed and currently due from customers which are reported at their net estimated realizable value. The Company maintains an allowance against its accounts receivable for potential credit losses. Contract assets consist of unbilled revenue which arises when revenue is recognized in advance of billing for certain application-specific customer solutions contracts. Contract liabilities consist of deferred revenue and customer deposits which arise when amounts are billed to or collected from customers in advance of revenue recognition.

On January 1, 2020, the Company adopted Accounting Standards Update (ASU) 2016-13, "Measurement of Credit Losses on Financial Instruments," using the modified-retrospective approach, which requires the Company to apply the standard on a prospective basis with a cumulative-effect adjustment to retained earnings as of the beginning of the period in which the guidance is effective. The Company did not record an adjustment to retained earnings as this ASU did not have a material impact on the Company's consolidated allowance for credit losses.

The Company recorded credit losses on accounts receivable of \$300,000 and \$600,000 for the three-month and six-month periods ended June 28, 2020, respectively. The Company recorded credit losses on accounts receivable of \$90,000 for the three-month and six-month periods ended June 30, 2019. The Company's estimate of expected credit losses takes into account the deteriorating global economic conditions from the COVID-19 pandemic.

The following table summarizes the allowance for credit losses activity for the six-month period ended June 28, 2020 (in thousands):

Balance as of December 31, 2019	\$	530
Increases to the allowance for credit losses		600
Write-offs		(186)
Foreign exchange rate changes		1
Balance as of June 28, 2020	<u>\$</u>	<u>945</u>

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

The following table summarizes the deferred revenue and customer deposits activity for the six-month period ended June 28, 2020 (in thousands):

Balance as of December 31, 2019	\$	14,432
Increases to deferred revenue and customer deposits		57,904
Recognition of revenue		(25,493)
Foreign exchange rate changes		(105)
Balance as of June 28, 2020	\$	46,738

As a practical expedient, the Company has elected not to disclose the aggregate amount of the transaction price allocated to unsatisfied performance obligations, as our contracts have an original expected duration of less than one year.

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

NOTE 12: Stock-Based Compensation Expense

Stock Plans

The Company's stock-based awards that result in compensation expense consist of stock options and restricted stock units ("RSUs"). As of June 28, 2020, the Company had 16,335,000 shares available for grant under its stock plans. Stock options are granted with an exercise price equal to the market value of the Company's common stock at the grant date and generally vest over four or five years based upon continuous service and expire ten years from the grant date. RSUs generally vest upon three years of continuous employment or incrementally over such three-year period. Participants are not entitled to dividends on RSUs.

Stock Options

The following table summarizes the Company's stock option activity for the six-month period ended June 28, 2020:

	Shares (in thousands)	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding as of December 31, 2019	12,899	\$ 37.95		
Granted	975	51.58		
Exercised	(1,822)	26.47		
Forfeited or expired	(421)	50.28		
Outstanding as of June 28, 2020	<u>11,631</u>	<u>\$ 40.45</u>	<u>6.98</u>	<u>\$ 212,847</u>
Exercisable as of June 28, 2020	<u>5,331</u>	<u>\$ 31.59</u>	<u>5.81</u>	<u>\$ 144,694</u>
Options vested or expected to vest as of June 28, 2020 (1)	<u>10,683</u>	<u>\$ 39.58</u>	<u>6.85</u>	<u>\$ 204,795</u>

(1) In addition to the vested options, the Company expects a portion of the unvested options to vest at some point in the future. Options expected to vest are calculated by applying an estimated forfeiture rate to the unvested options.

The fair values of stock options granted in each period presented were estimated using the following weighted-average assumptions:

	Three-months Ended		Six-months Ended	
	June 28, 2020	June 30, 2019	June 28, 2020	June 30, 2019
Risk-free rate	1.6 %	2.7 %	1.6	2.7 %
Expected dividend yield	0.43 %	0.39 %	0.43 %	0.39 %
Expected volatility	37 %	37 %	37 %	37 %
Expected term (in years)	6.0	5.2	6.0	5.3

Risk-free rate

The risk-free rate was based upon a treasury instrument whose term was consistent with the contractual term of the option.

Expected dividend yield

Generally, the current dividend yield is calculated by annualizing the cash dividend declared by the Company's Board of Directors and dividing that result by the closing stock price on the grant date.

Expected volatility

The expected volatility was based upon a combination of historical volatility of the Company's common stock over the contractual term of the option and implied volatility for traded options of the Company's stock.

Expected term

The expected term was derived from the binomial lattice model from the impact of events that trigger exercises over time.

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

The weighted-average grant-date fair values of stock options granted during the three-month periods ended June 28, 2020 and June 30, 2019 were \$19.13 and \$18.68, respectively. The weighted-average grant-date fair values of stock options granted during the six-month periods ended June 28, 2020 and June 30, 2019 were \$18.52 and \$18.59, respectively.

The total intrinsic values of stock options exercised for the three-month periods ended June 28, 2020 and June 30, 2019 were \$39,359,000 and \$14,220,000, respectively. The total intrinsic values of stock options exercised for the six-month periods ended June 28, 2020 and June 30, 2019 were \$53,814,000 and \$36,799,000, respectively. The total fair values of stock options vested for the three-month periods ended June 28, 2020 and June 30, 2019 were \$1,287,000 and \$887,000, respectively. The total fair values of stock options vested for the six-month periods ended June 28, 2020 and June 30, 2019 were \$37,951,000 and \$30,859,000, respectively.

Restricted Stock Units (RSUs)

The following table summarizes the Company's RSUs activity for the six-month period ended June 28, 2020:

	Shares (in thousands)	Weighted-Average Grant Date Fair Value
Nonvested as of December 31, 2019	150	\$ 48.63
Granted	432	51.53
Vested	—	—
Forfeited or expired	(21)	50.54
Nonvested as of June 28, 2020	561	\$ 50.79

The weighted-average grant-date fair values of RSUs granted during the three-month and six-month periods ended June 28, 2020 were \$56.97 and \$51.53, respectively. There were no RSUs that vested during the three-month and six-month periods ended June 28, 2020. There were no RSUs granted or vested during the three-month and six-month periods ended June 30, 2019.

Stock-Based Compensation Expense

The Company stratifies its employee population into two groups: one consisting of senior management and another consisting of all other employees. The Company currently applies an estimated annual forfeiture rate of 7% to all stock-based awards for senior management and a rate of 12% for all other employees. Each year during the first quarter, the Company revises its forfeiture rate. This resulted in an increase to compensation expense of \$1,787,000 in 2020 and a decrease to compensation expense of \$499,000 in 2019.

As of June 28, 2020, total unrecognized compensation expense related to non-vested equity awards, including stock options and RSUs, was \$65,128,000, which is expected to be recognized over a weighted-average period of 2.0 years.

The total stock-based compensation expense and the related income tax benefit recognized for the three-month period ended June 28, 2020 were \$8,018,000, which includes credits of \$1,401,000 relating to grants cancelled as a result of the Company's workforce reduction, and \$1,277,000, respectively, and for the three-month period ended June 30, 2019 were \$10,967,000 and \$1,813,000, respectively. The total stock-based compensation expense and the related income tax benefit recognized for the six-month period ended June 28, 2020 were \$22,808,000 and \$3,841,000, respectively, and for the six-month period ended June 30, 2019 were \$23,248,000 and \$4,035,000, respectively. No compensation expense was capitalized as of June 28, 2020 or December 31, 2019.

The following table presents the stock-based compensation expense by caption for each period presented on the Consolidated Statements of Operations (in thousands):

	Three-months Ended		Six-months Ended	
	June 28, 2020	June 30, 2019	June 28, 2020	June 30, 2019
Cost of revenue	\$ 363	\$ 329	\$ 717	\$ 780
Research, development, and engineering	2,401	3,550	7,767	8,017
Selling, general, and administrative	5,254	7,088	14,324	14,451
	\$ 8,018	\$ 10,967	\$ 22,808	\$ 23,248

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

NOTE 13: Stock Repurchase Program

In October 2018, the Company's Board of Directors authorized the repurchase of \$200,000,000 of the Company's common stock. As of June 28, 2020, the Company repurchased 2,816,000 shares at a cost of \$121,348,000 under this program, including 1,215,000 shares at a cost of \$51,036,000 during the three-month period ended March 29, 2020, leaving a remaining balance of \$78,652,000. No shares were repurchased during the three-month period ended June 28, 2020. On March 12, 2020, the Company's Board of Directors authorized the repurchase of an additional \$200,000,000 of the Company's common stock. Purchases under this March 2020 program will commence upon completion of the October 2018 program. The Company may repurchase shares under these programs in future periods depending upon a variety of factors, including, among other things, the impact of dilution from employee equity awards, stock price, share availability, and cash requirements. The Company is authorized to make repurchases of its common stock through open market purchases, pursuant to Rule 10b5-1 trading plans, or in privately negotiated transactions.

NOTE 14: Income Taxes

A reconciliation of the United States federal statutory corporate tax rate to the Company's income tax expense, or effective tax rate, was as follows:

	Three-months Ended		Six-months Ended	
	June 28, 2020	June 30, 2019	June 28, 2020	June 30, 2019
Income tax expense (benefit) at U.S. federal statutory corporate tax rate	(21) %	21 %	21 %	21 %
State income taxes, net of federal benefit	(1) %	1 %	1 %	1 %
Foreign tax rate differential	5 %	(7) %	(5) %	(7) %
Tax credit	2 %	(1) %	(2) %	(1) %
Discrete tax benefit related to stock options	(191) %	(2) %	(29) %	(4) %
Discrete tax expense related to tax return filings	141 %	— %	17 %	— %
Tax rate adjustment	18 %	— %	— %	— %
Other	(4) %	2 %	4 %	2 %
Income tax expense	(51) %	14 %	7 %	12 %

The Company is tax resident in numerous jurisdictions around the world and has identified its major tax jurisdictions as the United States, Ireland, and China. The statutory tax rate is 12.5% in Ireland and 25% in China, compared to the U.S. federal statutory corporate tax rate of 21%. These differences resulted in a favorable impact to the effective tax rate of 5 percentage points for both the three-month and six-month periods ended June 28, 2020, and 7 percentage points for the same periods in 2019. Management has determined that earnings from its legal entity in China will be indefinitely reinvested to provide local funding for growth, and that earnings from all other jurisdictions will not be indefinitely reinvested.

The Company recorded discrete tax benefits arising from the difference between the deduction for tax purposes and the compensation cost recognized for financial reporting purposes from stock exercises that resulted in a favorable impact to the effective tax rate of 191 and 29 percentage points for the three-month and six-month periods ended June 28, 2020, respectively, and 2 and 4 percentage points for the same periods in 2019. In addition, the Company recorded discrete tax expenses related to the final true-up of the prior year tax accrual upon filing the related tax return that resulted in an unfavorable impact to the effective tax rate of 141 and 17 percentage points for the three-month and six-month periods ended June 28, 2020, respectively.

Excluding the impact of these discrete items, the Company's effective tax rate was a benefit of 1% of pre-tax loss and an expense of 19% of pre-tax income for the three-month and six-month periods in 2020, respectively, compared to an expense of 17% and 16% of pre-tax income for the same periods in 2019. The increase in the effective tax rate, excluding the impact of discrete items, for the six-month period from 16% in 2019 to 19% in 2020 was due to more of the Company's profits being earned and taxed in higher tax jurisdictions. This adjustment to the effective tax rate resulted in an 18 percentage-point impact on the effective tax rate for the three-month period ended June 28, 2020.

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During the six-month period ended June 28, 2020, the Company recorded a \$710,000 increase in reserves for income taxes, net of deferred tax benefit. Estimated interest and penalties included in these amounts totaled \$283,000 for the six-month period ended June 28, 2020.

The Company's reserve for income taxes, including gross interest and penalties, was \$13,330,000 as of June 28, 2020, which included \$12,302,000 classified as a non-current liability and \$1,028,000 recorded as an increase to a non-current deferred tax liability. The amount of gross interest and penalties included in these balances was \$1,301,000. If the Company's tax positions were sustained or the statutes of limitations related to certain positions expired, these reserves would be released and income tax expense would be reduced in a future period.

The Company has defined its major tax jurisdictions as the United States, Ireland, and China, and within the United States, Massachusetts. Within the United States, the tax years 2016 through 2019 remain open to examination by the Internal Revenue Service ("IRS") and various state tax authorities. The tax years 2015 through 2019 remain open to examination by various taxing authorities in other jurisdictions in which the Company operates. The Company has recently been notified that it is under audit by the IRS for the tax year 2017. Management believes the Company is adequately reserved for this audit.

NOTE 15: Weighted-Average Shares

Weighted-average shares were calculated as follows (in thousands):

	Three-months Ended		Six-months Ended	
	June 28, 2020	June 30, 2019	June 28, 2020	June 30, 2019
Basic weighted-average common shares outstanding	172,283	171,318	172,345	171,209
Effect of dilutive equity awards	—	4,130	3,154	4,319
Weighted-average common and common-equivalent shares outstanding	172,283	175,448	175,499	175,528

Stock options to purchase 5,801,000 and 6,328,000 shares of common stock, on a weighted-average basis, were outstanding during the three-month and six-month periods ended June 28, 2020, respectively, and 6,113,000 and 5,503,000 for the same periods in 2019, but were not included in the calculation of dilutive net income per share because they were anti-dilutive. Restricted stock units totaling 27,000 and 14,000 shares of common stock, on a weighted-average basis, were outstanding during the three-month and six-month periods ended June 28, 2020. Additionally, because the Company recorded a cumulative net loss during the three-month period ended June 28, 2020, potential common stock equivalents of 3,120,000 were not included in the calculation of diluted net loss per share for this period. There were no anti-dilutive restricted stock units outstanding, on a weighted-average basis, during the three-month and six-month periods ended June 30, 2019, respectively.

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

NOTE 16: Restructuring Charges

On May 26, 2020, the Company's Board of Directors approved a restructuring plan intended to reduce the Company's operating costs, optimize its business model, and address the impact of the COVID-19 pandemic. The restructuring plan included a global workforce reduction of approximately 8% and office closures.

The Company estimates the total restructuring charges from these actions to be approximately \$16,445,000, of which \$14,798,000 has been recorded in the three-month period ended June 28, 2020 and included in "Restructuring charges" on the Consolidated Statements of Operations. The remaining charges are expected to be recognized during the second half of 2020. The following table summarizes the restructuring charges (in thousands):

	Total Amount Expected to be Incurred	Incurred in the Three- months Ended June 28, 2020
One-time termination benefits	\$ 11,387	\$ 10,386
Contract termination costs	3,995	3,995
Other associated costs	1,063	417
	<u>\$ 16,445</u>	<u>\$ 14,798</u>

One-time termination benefits include severance, health insurance, and outplacement services for 181 employees who were either terminated or have been notified that they will be terminated at a future date. For employees not required to render service beyond a minimum retention period, the one-time termination benefits were recognized in the three-month period ended June 28, 2020. Otherwise, these benefits, including retention bonuses for selected employees, are being recognized over the service period, which is not expected to exceed the fourth quarter of 2020.

Contract termination costs include remaining lease liability obligations and operating lease asset impairments for offices closed prior to the end of the contractual lease term. These costs also include the write-off of leasehold improvements and other equipment related to these abandoned offices that had no alternative use. These contract termination costs were recognized in the three-month period ended June 28, 2020 when the Company ceased using the property for economic benefit. Other associated costs primarily include legal fees related to the employee termination actions, which are being recognized when the services are performed.

The following table summarizes the activity in the Company's restructuring reserve, which is included in "Accrued expenses" on the Consolidated Balance Sheets (in thousands):

	One-time Termination Benefits	Contract Termination Costs	Other Associated Costs	Total
Balance as of December 31, 2019	\$ —	\$ —	\$ —	\$ —
Restructuring charges	10,386	3,995	417	14,798
Cash payments	(4,654)	(26)	(9)	(4,689)
Non-cash restructuring charges	—	(3,145)	—	(3,145)
Foreign exchange rate changes	60	5	7	72
Balance as of June 28, 2020	<u>\$ 5,792</u>	<u>\$ 829</u>	<u>\$ 415</u>	<u>\$ 7,036</u>

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

NOTE 17: Subsequent Events

On July 29, 2020, the Company's Board of Directors declared a cash dividend of \$0.055 per share. The dividend is payable on August 28, 2020 to all shareholders of record as of the close of business on August 14, 2020.

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

Forward-Looking Statements

Certain statements made in this report, as well as oral statements made by the Company from time to time, constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Readers can identify these forward-looking statements by our use of the words "expects," "anticipates," "estimates," "believes," "projects," "intends," "plans," "will," "may," "shall," "could," "should," and similar words and other statements of a similar sense. These statements are based upon our current estimates and expectations as to prospective events and circumstances, which may or may not be in our control and as to which there can be no firm assurances given. These forward-looking statements, which include statements regarding business and market trends, future financial performance, the expected impact of the COVID-19 pandemic on our business and results of operations, customer order rates and timing of related revenue, future product mix, restructuring and other cost savings initiatives, research and development activities, investments, liquidity, strategic plans, and estimated tax benefits and expenses and other tax matters, involve known and unknown risks and uncertainties that could cause actual results to differ materially from those projected. Such risks and uncertainties include: (1) the impact, duration and severity of the COVID-19 pandemic; (2) current and future conditions in the global economy, including the impact of the COVID-19 pandemic and the imposition of tariffs or export controls; (3) the loss of, or curtailment of purchases by, a large customer; (4) the reliance on revenue from the consumer electronics or automotive industries; (5) the inability to penetrate the logistics industry and other new markets; (6) the inability to achieve significant international revenue; (7) fluctuations in foreign currency exchange rates and the use of derivative instruments; (8) information security breaches or business system disruptions; (9) the inability to attract and retain skilled employees; (10) the failure to effectively manage our growth; (11) the reliance upon key suppliers to manufacture and deliver critical components for our products; (12) the failure to effectively manage product transitions or accurately forecast customer demand; (13) the inability to design and manufacture high-quality products; (14) the technological obsolescence of current products and the inability to develop new products; (15) the failure to properly manage the distribution of products and services; (16) the inability to protect our proprietary technology and intellectual property; (17) our involvement in time-consuming and costly litigation; (18) the impact of competitive pressures; (19) the challenges in integrating and achieving expected results from acquired businesses, including the recent acquisition of Sualab; (20) potential impairment charges with respect to our investments or for acquired intangible assets or goodwill; (21) exposure to additional tax liabilities; and (22) potential disruptions to our business due to restructuring activities and the failure of such activities to generate the anticipated cost savings. The foregoing list should not be construed as exhaustive and we encourage readers to refer to the detailed discussion of risk factors included in Part I - Item 1A of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2019, as updated by Part II - Item 1A of this Quarterly Report on Form 10-Q. The Company cautions readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date made. The Company disclaims any obligation to subsequently revise forward-looking statements to reflect the occurrence of anticipated or unanticipated events or circumstances after the date such statements are made.

Executive Overview

Cognex Corporation is a leading worldwide provider of machine vision products that capture and analyze visual information in order to automate manufacturing and distribution tasks where vision is required. In addition to product revenue derived from the sale of machine vision products, the Company also generates revenue by providing maintenance and support, consulting, and training services to its customers; however, service revenue accounted for less than 10% of total revenue for all periods presented.

Cognex machine vision is used to automate manufacturing and distribution processes in a variety of industries, where the technology is widely recognized as an important component of automated production and quality assurance. Virtually every manufacturer can achieve better quality and manufacturing efficiency by using machine vision, and therefore, Cognex products are used by a broad base of customers across a variety of industries, including consumer electronics, automotive, consumer products, food and beverage, pharmaceuticals, and medical devices. Cognex products are also used to automate distribution processes in the logistics industry, including for applications in retail distribution and ecommerce to scan, track, and sort goods through distribution centers.

Revenue for the second quarter of 2020 totaled \$169,097,000, representing a decrease of 15% from the second quarter of 2019. Our business has been adversely and materially impacted by deteriorating global economic conditions resulting from the COVID-19 pandemic. This impact was most notable in the automotive industry, our largest market, for which revenue continued to decline from the first quarter of 2020 and was significantly lower than

the second quarter of 2019. Gross margin was 70% for the second quarter of 2020 compared to 74% for the second quarter of 2019 due to higher provisions for excess and obsolete inventories as a result of the deteriorating business conditions.

Operating expenses increased by 30% from the second quarter of 2019. In order to more closely align our cost structure to the lower level of business, we implemented a variety of cost-cutting measures in the second quarter, including a workforce reduction and office closures, and recorded restructuring charges of \$14,798,000 from these actions. The significant decline in business levels also triggered a review of long-lived assets that resulted in intangible asset impairment charges of \$19,571,000. Excluding these charges, operating expenses decreased by 6% from the second quarter of 2019 due primarily to lower travel expenses resulting from COVID-19 restrictions.

As a result of the lower revenue level and charges related to excess inventories, restructuring actions, and intangible asset impairments, we reported an operating loss of 4% of revenue in the second quarter of 2020 compared to an operating profit of 26% of revenue in the second quarter of 2019. We reported a net loss of 1% of revenue in the second quarter of 2020, or \$0.01 per share, compared to a net profit of 24% of revenue in the second quarter of 2019, or \$0.28 per share.

Results of Operations

As foreign currency exchange rates are a factor in understanding period-to-period comparisons, we believe the presentation of results on a constant-currency basis in addition to reported results helps improve investors' ability to understand our operating results and evaluate our performance in comparison to prior periods. We also use results on a constant-currency basis as one measure to evaluate our performance. Constant-currency information compares results between periods as if exchange rates had remained constant period-over-period. We generally refer to such amounts calculated on a constant-currency basis as excluding the impact of foreign currency exchange rate changes. Results on a constant-currency basis are not in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP) and should be considered in addition to, and not as a substitute for, results prepared in accordance with U.S. GAAP.

Revenue

Revenue decreased by \$29,950,000, or 15%, for the three-month period and decreased by \$36,199,000, or 10%, for the six-month period. Changes in foreign currency exchange rates did not have a material impact on revenue.

Deteriorating global economic conditions resulting from the COVID-19 pandemic, which had a modest impact on our business in the first quarter of 2020, had a more significant impact in the second quarter, as we noted lower demand for our products in certain industries, additional disruptions to our supply chain, longer customer delivery times, and further shutdowns of customer facilities. This impact was most notable in the automotive industry, for which revenue declined from the first quarter of 2020 and was significantly lower than the prior year for both the three-month and six-month periods. Revenue in the logistics industry increased from the first quarter of 2020 and was higher than the prior year for both the three-month and six-month periods driven by higher demand from ecommerce customers. This was partially offset, however, by lower demand from retail distribution customers and delays in revenue recognition related to customer facility access for on-site installations caused by COVID-19 conditions. The timing of revenue recognition also impacted revenue in the electronics industry, which was lower than the prior year for the three-month period and relatively flat for the six-month period.

From a geographic perspective, revenue from customers based in the Americas decreased by 11% for the three-month period and 9% for the six-month period with the most significant decrease coming from the automotive industry. Revenue from customers based in Europe decreased by 40% for the three-month period and 29% for the six-month period also due to lower sales in the automotive industry, as well as in the electronics industry. Revenue from customers based in Greater China decreased by 11% for the three-month period due to lower sales from the automotive industry and were relatively flat for the six-month period, as lower revenue in the automotive industry was offset by higher revenue in the electronics industry. Revenue from other countries in Asia increased by 23% for the three-month period and 22% for the six-month period due to higher sales from the electronics industry.

As of the date of this report, we expect revenue for the third quarter of 2020 to be higher than both the second quarter of 2020 and the third quarter of 2019 due to anticipated higher revenue in the electronics industry. We expect COVID-19 to continue to adversely impact our revenue in the third quarter of 2020 as compared to the prior year outside of electronics, logistics ecommerce, and a few smaller industries, with the most notable adverse impact expected in the automotive industry. It is difficult for us to quantify this impact due to many factors beyond our control and knowledge, including changing governmental regulations and the scope and duration of social distancing and commerce restrictions, including access to customer facilities for on-site installations.

Gross Margin

Gross margin as a percentage of revenue was 70% and 73% for the three-month and six-month periods in 2020, respectively, compared to 74% for both periods in 2019. The decrease in the gross margin percentage was due to higher provisions for excess and obsolete inventories, which totaled \$7,718,000 and \$8,783,000 for the three-month and six-month periods ended June 28, 2020, respectively, compared to \$933,000 and \$1,713,000 for the same periods in 2019. The higher level of provisions recorded in the three-month period ended June 28, 2020 was due to lower projected sales of excess inventories as a result of the deteriorating global economic conditions from the COVID-19 pandemic. Gross margin as a percentage of revenue would be relatively consistent for all periods presented excluding the provisions for excess and obsolete inventories.

As of the date of this report, we expect gross margin as a percentage of revenue for the third quarter of 2020 to be similar to the percentage reported in the first half of 2019. Although we expect provisions for excess and obsolete inventory to be lower than the second quarter of 2020, we expect a greater percentage of revenue from application-specific customer solutions, which have relatively lower margins.

Operating Expenses

Research, development, and engineering (RD&E) expenses increased by \$2,318,000, or 8%, for the three-month period and \$8,022,000, or 14%, for the six-month period as detailed in the table below (in thousands).

	Three-month period	Six-month period
RD&E expenses in 2019	\$ 28,079	\$ 58,321
Personnel-related costs	1,405	3,033
Acquisition deferred compensation	1,310	2,620
Incentive compensation	1,601	2,549
Travel expense	(671)	(771)
Stock expense	(1,130)	(172)
Other	(197)	763
RD&E expenses in 2020	<u>\$ 30,397</u>	<u>\$ 66,343</u>

RD&E expenses increased due to higher personnel-related costs primarily from headcount additions related to a team of deep learning engineers from the Company's acquisition of Sualab in the fourth quarter of 2019. The consideration for this acquisition included deferred payments that are being recorded as compensation expense over four years from the closing date, which accounted for an additional increase in RD&E expense of \$1,310,000 for the three-month period and \$2,620,000 for the six-month period. In addition, the Company recorded higher incentive compensation accruals for annual plans with relevant performance goals for 2020. We will continue to monitor the achievement of these performance goals for the remainder of the year due to the impact of COVID-19 on our business, among other factors, which may result in adjustments to our incentive compensation accruals in future quarters.

These increases were partially offset by lower travel expenses resulting from COVID-19 restrictions. We expect these restrictions to continue in the third quarter of 2020. The Company also recorded lower stock expense as a result of a lower total value of awards granted in 2020 as compared to 2019, as well as the impact on the timing of stock expense recognition from a shift in our compensation practices toward the granting of restricted stock units with cliff vesting. In addition, credits were recorded to stock expense in the second quarter of 2020 for awards cancelled as a result of a workforce reduction.

RD&E expenses as a percentage of revenue were 18% and 20% for the three-month and six-month periods in 2020, respectively, compared to 14% and 16% for the same periods in 2019. We believe that a continued commitment to RD&E activities is essential in order to maintain or achieve product leadership with our existing products and to provide innovative new product offerings, as well as to provide engineering support for large customers. In addition, we consider our ability to accelerate time to market for new products to be critical to our revenue growth. Therefore, we expect to continue to make significant RD&E investments in the future, and currently intend to continue our product development plans during periods of lower revenue levels.

Selling, General, and Administrative Expenses

Selling, general, and administrative (SG&A) expenses decreased by \$8,092,000, or 12%, for the three-month period and \$5,765,000, or 4%, for the six-month period as detailed in the table below (in thousands).

	Three-month period	Six-month period
SG&A expenses in 2019	\$ 68,245	\$ 135,056
Travel expense	(4,843)	(6,588)
Foreign currency exchange rate changes	(1,074)	(1,857)
Marketing programs	(949)	(1,231)
Contract labor	(636)	(1,126)
Stock expense	(1,810)	(25)
Incentive compensation	2,654	3,783
Other	(1,434)	1,279
SG&A expenses in 2020	<u>\$ 60,153</u>	<u>\$ 129,291</u>

SG&A expenses decreased due to lower travel expenses resulting from COVID-19 restrictions. We expect these restrictions to continue in the third quarter of 2020. Foreign currency exchange rate changes also resulted in a lower level of SG&A expenses in 2020, as costs denominated in foreign currencies were translated to U.S. Dollars at a lower rate due to a relatively stronger U.S. Dollar. In addition, the Company reduced spending on marketing programs and contract labor in response to the lower business levels. The Company also recorded lower stock expense as a result of a lower total value of awards granted in 2020 as compared to 2019, as well as the impact on the timing of stock expense recognition from a shift in our compensation practices toward the granting of restricted stock units with cliff vesting. In addition, credits were recorded to stock expense in the second quarter of 2020 for awards cancelled as a result of a workforce reduction.

These decreases were partially offset by higher incentive compensation accruals for annual plans with relevant performance goals for 2020. We will continue to monitor the achievement of these performance goals for the remainder of the year due to the impact of COVID-19 on our business, among other factors, which may result in adjustments to our incentive compensation accruals in future quarters.

Restructuring Charges

On May 26, 2020, the Company's Board of Directors approved a restructuring plan intended to reduce the Company's operating costs, optimize its business model, and address the impact of the COVID-19 pandemic. The restructuring plan included a global workforce reduction of approximately 8% and office closures. The Company estimates the total restructuring charges from these actions to be approximately \$16,445,000, of which \$14,798,000 has been recorded in the second quarter. The remaining charges of approximately \$1,647,000 are expected to be recognized during the second half of 2020, primarily in the third quarter.

The actions described above, together with actions already taken to reduce the Company's overall costs, were designed to generate an aggregate annualized cost savings of approximately \$25,000,000 versus the Company's original planned cost structure. Management does not believe these cost-saving measures will impair the Company's ability to conduct its key business functions.

Intangible Asset Impairment Charges

The significant decline in business levels triggered a review of long-lived assets for potential impairment in the second quarter of 2020. This review resulted in intangible asset impairment charges totaling \$19,571,000 recorded in the second quarter, primarily related to lower projected cash flows from the technologies and customer relationships acquired from Sualab as a result of the deteriorating global economic conditions from the COVID-19 pandemic.

Non-operating Income (Expense)

The Company recorded foreign currency gains of \$336,000 and foreign currency losses of \$2,667,000 for the three-month and six-month periods in 2020, respectively, compared to foreign currency gains of \$140,000 and foreign currency losses of \$108,000 for the same periods in 2019. Foreign currency gains and losses result primarily from the revaluation and settlement of accounts receivable, accounts payable, and intercompany balances that are reported in one currency and collected in another. The higher level of foreign currency losses for the six-month period in 2020 was primarily related to the revaluation of an intercompany balance that was created by the migration of acquired intellectual property from one subsidiary to another in the fourth quarter of 2019. This intercompany balance is expected to be settled in the third quarter of 2020.

Investment income decreased by \$1,932,000, or 37%, for the three-month period and \$1,608,000, or 16%, for the six-month period. The decrease was due to lower yields on the Company's portfolio of debt securities and a lower average invested balance.

The Company recorded other income of \$203,000 and \$20,000 for the three-month and six-month periods in 2020, respectively, compared to other expense of \$144,000 and other income of \$783,000 for the same periods in 2019. Other income (expense) includes fair value adjustments of contingent consideration liabilities arising from business acquisitions. The Company recorded a \$1,060,000 decrease in the fair value of its GVI contingent consideration liability in the first quarter of 2019, resulting from a lower level of revenue in the Americas' automotive industry.

Income Tax Expense

The Company's effective tax rate was a benefit of 51% of pre-tax loss and an expense of 7% of pre-tax income for the three-month and six-month periods in 2020, respectively, compared to an expense of 14% and 12% of pre-tax income for the same periods in 2019.

The effective tax rate included a decrease in tax expense of \$4,413,000 and \$6,093,000 for the three-month and six-month periods in 2020, respectively, and \$1,248,000 and \$3,978,000 for the same periods in 2019, primarily from the excess tax benefit arising from the difference between the deduction for tax purposes and the compensation cost recognized for financial reporting purposes from stock exercises. The Company cannot predict the level of stock option exercises by employees in future periods.

Other discrete tax items included an increase in tax expense of \$3,267,000 and \$3,509,000 for the three-month and six-month periods in 2020, respectively, primarily from the final true-up of the prior year's tax accrual upon filing the related tax return.

Excluding the impact of these discrete items, the Company's effective tax rate was a benefit of 1% of pre-tax loss and an expense of 19% of pre-tax income for the three-month and six-month periods in 2020, respectively, compared to an expense of 17% and 16% of pre-tax income for the same periods in 2019. The increase in the effective tax rate, excluding the impact of discrete items, for the six-month period from 16% in 2019 to 19% in 2020 was due to more of the Company's profits being earned and taxed in higher tax jurisdictions. This adjustment to the effective tax rate resulted in an 18 percentage-point impact on the effective tax rate for the three-month period ended June 28, 2020.

Liquidity and Capital Resources

The Company has historically been able to generate positive cash flow from operations, which has funded its operating activities and other cash requirements and has resulted in an accumulated cash and investment balance of \$896,192,000 as of June 28, 2020. The Company has established guidelines relative to credit ratings, diversification, and maturities of its investments that maintain liquidity.

The Company's cash requirements for the six-month period ended June 28, 2020 were primarily met with positive cash flows from operations. Cash requirements consisted of operating activities, the repurchase of common stock, the payment of dividends, and capital expenditures. Capital expenditures for the six-month period ended June 28, 2020 totaled \$6,985,000 and consisted primarily of computer hardware and software, manufacturing test equipment related to new product introductions, and improvements made to the Company's headquarters building in Natick, Massachusetts and various leased facilities. The Company intends to continue to invest in capital projects in the second half of 2020 despite the current lower business levels, particularly related to its management information systems, which we believe are important to support our longer-term growth objectives.

Our business has been adversely and materially impacted by deteriorating global economic conditions resulting from the COVID-19 pandemic. In order to more closely align our cost structure to the lower level of business, we implemented a variety of cost-cutting measures in the second quarter of 2020, including a workforce reduction and

office closures. The Company estimates the total restructuring charges from these actions to be approximately \$16,445,000, of which \$3,145,000 represents non-cash charges, \$4,689,000 was paid in the second quarter of 2020, and the remainder is expected to be paid out in the second half of 2020, primarily in the third quarter.

In October 2018, the Company's Board of Directors authorized the repurchase of \$200,000,000 of the Company's common stock. As of June 28, 2020, the Company repurchased 2,816,000 shares at a cost of \$121,348,000 under this program, including 1,215,000 shares at a cost of \$51,036,000 in the first quarter of 2020, leaving a remaining balance of \$78,652,000. No shares were repurchased during the second quarter of 2020. On March 12, 2020 the Company's Board of Directors authorized the repurchase of an additional \$200,000,000 of the Company's common stock. Purchases under this March 2020 program will commence upon completion of the October 2018 program. The Company may repurchase shares under these programs in future periods depending on a variety of factors, including, among other things, the impact of dilution from employee equity awards, stock price, share availability, and cash requirements. The Company is authorized to make repurchases of its common stock through open market purchases, pursuant to Rule 10b5-1 trading plans, or in privately negotiated transactions.

The Company's Board of Directors declared and paid cash dividends of \$0.050 per share in the first, second, and third quarters of 2019. The dividend was increased to \$0.055 per share in the fourth quarter of 2019, the first quarter of 2020, and the second quarter of 2020. Total dividends paid amounted to \$18,972,000 for the six-month period ended June 28, 2020. Future dividends will be declared at the discretion of the Company's Board of Directors and will depend upon such factors as the Board deems relevant including, among other things, the Company's ability to generate positive cash flows from operations.

The Company believes that its existing cash and investment balances, together with cash flow from operations, will be sufficient to meet its operating, investing, and financing activities for the next twelve months. As of June 28, 2020, the Company had \$896,192,000 in cash and investments. In addition, the Company has no long-term debt and does not anticipate needing debt financing in the near future. We believe that our strong cash position has put us in a relatively good position to maintain our liquidity during downturns in our business related to COVID-19 and with respect to our longer-term liquidity needs.

New Pronouncements

Refer to Part I - Note 2 within this Form 10-Q, for a full description of recently issued accounting pronouncements including the expected dates of adoption and the expected impact on the financial position and results of operations of the Company.

ITEM 3: QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

There have been no material changes to the Company's exposures to market risk since December 31, 2019.

ITEM 4: CONTROLS AND PROCEDURES

As required by Rules 13a-15 and 15d-15 of the Securities Exchange Act of 1934, the Company has evaluated, with the participation of management, including the Chief Executive Officer and the Chief Financial Officer, the effectiveness of its disclosure controls and procedures (as defined in such rules) as of the end of the period covered by this report. Based on such evaluation, the Chief Executive Officer and Chief Financial Officer concluded that such disclosure controls and procedures were effective as of that date. From time to time, the Company reviews its disclosure controls and procedures, and may from time to time make changes aimed at enhancing their effectiveness and to ensure that the Company's systems evolve with its business.

There was no change in the Company's internal control over financial reporting that occurred during the quarter ended June 28, 2020 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. We have considered the impact of COVID-19 on our internal controls over financial reporting. Personnel constraints related to working from home have made our ability to execute certain controls more challenging; however, we have enhanced existing monitoring controls in an effort to ensure we continue to have effective internal controls during this time.

PART II: OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

Various claims and legal proceedings generally incidental to the normal course of business are pending or threatened on behalf of or against the Company. While we cannot predict the outcome of these matters, we believe that any liability arising from them will not have a material adverse effect on our financial position, liquidity, or results of operations.

ITEM 1A. RISK FACTORS

For a complete list of factors that could affect the Company's business, results of operations, and financial condition, see the risk factors discussion provided in Part I—Item 1A of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2019. The following information updates, and should be read in conjunction with, Part I - Item 1A of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

Our business has been, and is expected to continue to be, adversely affected by the recent COVID-19 pandemic.

The COVID-19 (also referred to as "coronavirus") outbreak, which was first reported in China in the beginning of 2020, developed into a global pandemic in March 2020. The COVID-19 outbreak had a modest adverse impact on our business in the first quarter of 2020, primarily near the end of the quarter. This impact expanded and accelerated into the second quarter, as we noted lower demand for our products in certain industries, additional disruptions to our supply chain, longer customer delivery times, higher delivery costs, and further shutdowns of customer facilities.

We face several risks and uncertainties related to the impact of COVID-19 on our business. It is difficult for us to quantify the duration and severity of this impact due to many factors beyond our control and knowledge, including changing governmental regulations and the scope and duration of social distancing and commercial restrictions. These risks and uncertainties include, among others:

- our customers may further delay or cancel orders for our products,
- additional customer facilities may be shut down for extended periods of time, resulting in our inability to deliver products, perform on-site services, or make on-site sales visits,
- our customers may not have sufficient cash flow or access to financing to purchase our products,
- our customers may not pay us within agreed upon terms or may default on their payments altogether,
- our vendors may be unable to fulfill their delivery obligations to us within acceptable lead times for extended periods of time, which may force us to seek alternative sources of supply at higher costs,
- our contract manufacturers may experience interruptions that result in delivery delays and higher costs for our products,
- we may experience manufacturing delays and higher costs in the event of a supply disruption from a single-source vendor,
- we may experience extended customer delivery times and higher delivery costs,
- our distribution centers in Natick, Massachusetts and Cork, Ireland may be forced to operate with a significantly reduced workforce or be forced to shut down altogether due to government regulations or health concerns,
- our online sales and marketing efforts may be less effective than face-to-face activities, resulting in fewer customer acquisitions and lower sales from new products,
- challenges involved in working from home may delay certain of our new product introductions,
- lower demand for our products may result in charges for excess and obsolete inventory if we are unable to sell inventory that is either already on hand or committed to purchase,
- lower cash flows may result in impairment charges for acquired intangible assets or goodwill,
- our investment portfolio of debt securities may be exposed to material credit losses, and
- a decline in our stock price may make stock-based awards a less attractive form of compensation and a less attractive form of retention for our employees.

These risks and uncertainties could have a material adverse effect on the continuity of our business and our results of operations and financial condition. The impact of COVID-19 also may exacerbate other risks discussed in Part I - Item 1A of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2019, any of which could have a material adverse effect on our business, results of operations and financial condition. This situation is continuously changing and additional impacts on our business may arise of which we are not currently aware.

Our restructuring activities may result in disruption to our business and may not generate the anticipated cost savings.

In May 2020, our Board of Directors approved a restructuring plan intended to reduce our operating costs, optimize our business model, and address the impact of the COVID-19 pandemic. These actions, which include workforce reductions and office closures, were designed to generate an aggregate annualized cost savings of approximately \$25,000,000 versus our original planned cost structure. Our ability to achieve the anticipated cost savings and other benefits from these actions within the expected timeframe is subject to many estimates and assumptions. These estimates and assumptions are subject to significant economic, competitive and other uncertainties, many of which are beyond our control. If these estimates and assumptions are incorrect, if we experience delays, or if other unforeseen events occur, our business and results of operations could be adversely affected. In addition, although we currently expect to continue to make investments in strategic areas, these restructuring actions may nevertheless negatively impact programs we believe are important to the long-term success of our company, such as the ability to accelerate time to market for new products. In addition, our ability to provide a high level of service to our customers may be negatively impacted by these actions, particularly in regions where we have downsized our operations.

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

The following table sets forth information with respect to purchases by the Company of shares of its common stock during the three-month period ended June 28, 2020:

	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (1)
March 30, 2020 - April 26, 2020	—	\$ —	—	\$ 278,652,000
April 27, 2020 - May 24, 2020	—	—	—	278,652,000
May 25, 2020 - June 28, 2020	—	—	—	278,652,000
Total	—	\$ —	—	\$ 278,652,000

(1) In October 2018, the Company's Board of Directors authorized the repurchase of \$200,000,000 of the Company's common stock. Purchases under this program commenced in October 2018. On March 12, 2020, the Company's Board of Directors authorized the repurchase of an additional \$200,000,000 of the Company's common stock. This new authorization will commence once the Company completes the October 2018 program, with repurchases subject to market conditions and other relevant factors. The Company is authorized to make repurchases of its common stock through open market purchases, pursuant to Rule 10b5-1 trading plans, or in privately negotiated transactions.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

<u>Exhibit Number</u>	
31.1	Certification of Principal Executive Officer pursuant to Rule 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934*
31.2	Certification of Principal Financial Officer pursuant to Rule 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934*
32.1	Certification of Principal Executive Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**
32.2	Certification of Principal Financial Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**
101.SCH	Inline XBRL Taxonomy Extension Schema Document*
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document*
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document*
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document*
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document*
104	Cover Page Interactive Data File (formatted as Inline XBRL with applicable taxonomy extension information contained in Exhibits 101.*)
* Filed herewith	
** Furnished herewith	

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.

Date: July 29, 2020

COGNEX CORPORATION

By: /s/ Robert J. Willett

Robert J. Willett

President and Chief Executive Officer

(Principal Executive Officer)

By: /s/ Paul D. Todgham

Paul D. Todgham

Senior Vice President of Finance and Chief Financial Officer

(Principal Financial Officer)

CERTIFICATION

I, Robert J. Willett, certify that:

1 I have reviewed this quarterly report on Form 10-Q of Cognex 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: July 29, 2020

By: /s/ Robert J. Willett

Robert J. Willett

President and Chief Executive Officer

(Principal Executive Officer)

CERTIFICATION

I, Paul D. Todgham, certify that:

1 I have reviewed this quarterly report on Form 10-Q of Cognex 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: July 29, 2020

By: /s/ Paul D. Todgham

Paul D. Todgham

Senior Vice President of Finance and Chief Financial Officer
(Principal Financial Officer)

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

The undersigned officer of Cognex Corporation (the "Company") hereby certifies to his knowledge that the Company's quarterly report on Form 10-Q for the quarterly period ended June 28, 2020 (the "Report"), as filed with the Securities and Exchange Commission on the date hereof, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended, and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: July 29, 2020

By: /s/ Robert J. Willett

Robert J. Willett

President and Chief Executive Officer

(Principal Executive Officer)

* This certification shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section, nor shall it be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.

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

The undersigned officer of Cognex Corporation (the "Company") hereby certifies to his knowledge that the Company's quarterly report on Form 10-Q for the quarterly period ended June 28, 2020 (the "Report"), as filed with the Securities and Exchange Commission on the date hereof, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended, and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: July 29, 2020

By: /s/ Paul D. Todgham

Paul D. Todgham

Senior Vice President of Finance and Chief Financial Officer

(Principal Financial Officer)

* This certification shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section, nor shall it be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.