

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

(Mark One)

- ☒ Quarterly Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the quarterly period ended September 29, 2019 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 September 29, 2019, there were 170,897,294 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		Nine-months Ended	
	September 29, 2019	September 30, 2018	September 29, 2019	September 30, 2018
	(unaudited)		(unaudited)	
Revenue	\$ 183,325	\$ 232,221	\$ 555,856	\$ 613,052
Cost of revenue	47,632	58,860	144,883	153,227
Gross margin	135,693	173,361	410,973	459,825
Research, development, and engineering expenses	28,115	29,700	86,436	87,664
Selling, general, and administrative expenses	64,486	65,817	199,542	196,266
Operating income	43,092	77,844	124,995	175,895
Foreign currency gain (loss)	(1,295)	(379)	(1,403)	(708)
Investment income	5,114	3,937	15,242	10,736
Other income (expense)	456	(129)	1,239	(98)
Income before income tax expense	47,367	81,273	140,073	185,825
Income tax expense	5,682	837	16,535	11,976
Net income	\$ 41,685	\$ 80,436	\$ 123,538	\$ 173,849
Net income per weighted-average common and common-equivalent share:				
Basic	\$ 0.24	\$ 0.47	\$ 0.72	\$ 1.01
Diluted	\$ 0.24	\$ 0.45	\$ 0.71	\$ 0.98
Weighted-average common and common-equivalent shares outstanding:				
Basic	170,744	172,189	171,053	172,613
Diluted	174,449	177,245	175,164	178,021
Cash dividends per common share	\$ 0.050	\$ 0.045	\$ 0.150	\$ 0.135

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

COGNEX CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In thousands)

	Three-months Ended		Nine-months Ended	
	September 29, 2019	September 30, 2018	September 29, 2019	September 30, 2018
	(unaudited)		(unaudited)	
Net income	\$ 41,685	\$ 80,436	\$ 123,538	\$ 173,849
Other comprehensive income (loss), net of tax:				
Available-for-sale investments:				
Net unrealized gain (loss), net of tax of (\$5) and \$24 in the three-month periods and net of tax of \$502 and (\$82) in the nine-month periods, respectively	265	522	4,827	(180)
Reclassification of net realized (gain) loss into current operations	(294)	(266)	(716)	(535)
Net change related to available-for-sale investments	(29)	256	4,111	(715)
Foreign currency translation adjustments:				
Foreign currency translation adjustments	(1,099)	(1,881)	(1,544)	(5,078)
Net change related to foreign currency translation adjustments	(1,099)	(1,881)	(1,544)	(5,078)
Other comprehensive income (loss), net of tax	(1,128)	(1,625)	2,567	(5,793)
Total comprehensive income	\$ 40,557	\$ 78,811	\$ 126,105	\$ 168,056

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

COGNEX CORPORATION
CONSOLIDATED BALANCE SHEETS
(In thousands)

	September 29, 2019 (unaudited)	December 31, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 121,701	\$ 108,212
Current investments	292,072	427,348
Accounts receivable, less reserves of \$1,874 and \$1,646 in 2019 and 2018, respectively	107,407	119,172
Unbilled revenue	11,210	8,312
Inventories	65,264	83,282
Prepaid expenses and other current assets	28,127	34,000
Total current assets	625,781	780,326
Non-current investments	504,641	262,039
Property, plant, and equipment, net	88,429	91,396
Operating lease assets	15,806	—
Goodwill	113,208	113,208
Intangible assets, net	7,994	10,113
Deferred income taxes	29,273	28,660
Other assets	5,320	3,925
Total assets	\$ 1,390,452	\$ 1,289,667
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 12,766	\$ 16,230
Accrued expenses	48,561	60,220
Accrued income taxes	4,012	5,062
Deferred revenue and customer deposits	10,431	9,845
Operating lease liabilities	5,445	—
Total current liabilities	81,215	91,357
Non-current operating lease liabilities	10,722	—
Deferred income taxes	289	962
Reserve for income taxes	7,151	7,106
Non-current accrued income taxes	51,113	51,113
Other liabilities	744	3,866
Total liabilities	151,234	154,404
Shareholders' equity:		
Preferred stock, \$.01 par value – Authorized: 400 shares in 2019 and 2018, respectively, no shares issued and outstanding	—	—
Common stock, \$.002 par value – Authorized: 300,000 shares in 2019 and 2018, respectively, issued and outstanding: 170,897 and 170,820 shares in 2019 and 2018, respectively	342	342
Additional paid-in capital	594,427	529,208
Retained earnings	682,383	646,214
Accumulated other comprehensive loss, net of tax	(37,934)	(40,501)
Total shareholders' equity	1,239,218	1,135,263
Total liabilities and shareholders' equity	\$ 1,390,452	\$ 1,289,667

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

COGNEX CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Nine-months Ended	
	September 29, 2019	September 30, 2018
	(unaudited)	
Cash flows from operating activities:		
Net income	\$ 123,538	\$ 173,849
Adjustments to reconcile net income to net cash provided by operating activities:		
Stock-based compensation expense	33,442	31,339
Depreciation of property, plant, and equipment	15,800	13,474
Amortization of intangible assets	2,119	2,307
Amortization of discounts or premiums on investments	(563)	123
Realized (gain) loss on sale of investments	(716)	(535)
Revaluation of contingent consideration	(1,401)	(50)
Change in deferred income taxes	(1,805)	175
Change in operating assets and liabilities:		
Accounts receivable	11,387	(18,136)
Unbilled revenue	(2,900)	(6,542)
Inventories	18,019	(27,699)
Prepaid expenses and other current assets	5,827	(3,437)
Accounts payable	(3,398)	(1,182)
Accrued expenses	(11,827)	2,266
Accrued income taxes	(1,043)	(17,497)
Deferred revenue and customer deposits	698	4,841
Other	(1,863)	(1,604)
Net cash provided by operating activities	185,314	151,692
Cash flows from investing activities:		
Purchases of investments	(883,363)	(616,047)
Maturities and sales of investments	781,929	635,119
Purchases of property, plant, and equipment	(13,518)	(27,356)
Net cash provided by (used in) investing activities	(114,952)	(8,284)
Cash flows from financing activities:		
Issuance of common stock under stock plans	31,780	25,882
Repurchase of common stock	(61,690)	(142,262)
Payment of dividends	(25,682)	(23,283)
Payment of contingent consideration	—	(1,000)
Net cash provided by (used in) financing activities	(55,592)	(140,663)
Effect of foreign exchange rate changes on cash and cash equivalents	(1,281)	(1,956)
Net change in cash and cash equivalents	13,489	789
Cash and cash equivalents at beginning of period	108,212	106,582
Cash and cash equivalents at end of period	\$ 121,701	\$ 107,371

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 June 30, 2019	170,661	\$ 341	\$ 578,871	\$ 649,234	\$ (36,806)	\$ 1,191,640
Issuance of common stock under stock plans	236	1	5,362	—	—	5,363
Stock-based compensation expense	—	—	10,194	—	—	10,194
Payment of dividends	—	—	—	(8,536)	—	(8,536)
Net income	—	—	—	41,685	—	41,685
Net unrealized gain (loss) on available-for-sale investments, net of tax of (\$5)	—	—	—	—	265	265
Reclassification of net realized (gain) loss on the sale of available-for-sale investments	—	—	—	—	(294)	(294)
Foreign currency translation adjustment	—	—	—	—	(1,099)	(1,099)
Balance as of September 29, 2019 (unaudited)	<u>170,897</u>	<u>\$ 342</u>	<u>\$ 594,427</u>	<u>\$ 682,383</u>	<u>\$ (37,934)</u>	<u>\$ 1,239,218</u>

	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Shareholders' Equity
	Shares	Par Value				
Balance as of July 1, 2018	172,032	\$ 344	\$ 498,343	\$ 619,212	\$ (38,767)	\$ 1,079,132
Issuance of common stock under stock plans	553	1	11,070	—	—	11,071
Repurchase of common stock	(394)	—	—	(20,954)	—	(20,954)
Stock-based compensation expense	—	—	9,143	—	—	9,143
Payment of dividends	—	—	—	(7,759)	—	(7,759)
Net income	—	—	—	80,436	—	80,436
Net unrealized gain (loss) on available-for-sale investments, net of tax of \$24	—	—	—	—	522	522
Reclassification of net realized (gain) loss on the sale of available-for-sale investments	—	—	—	—	(266)	(266)
Foreign currency translation adjustment	—	—	—	—	(1,881)	(1,881)
Balance as of September 30, 2018 (unaudited)	<u>172,191</u>	<u>\$ 345</u>	<u>\$ 518,556</u>	<u>\$ 670,935</u>	<u>\$ (40,392)</u>	<u>\$ 1,149,444</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, 2018	170,820	\$ 342	\$ 529,208	\$ 646,214	\$ (40,501)	\$ 1,135,263
Issuance of common stock under stock plans	1,475	3	31,777	—	—	31,780
Repurchase of common stock	(1,398)	(3)	—	(61,687)	—	(61,690)
Stock-based compensation expense	—	—	33,442	—	—	33,442
Payment of dividends	—	—	—	(25,682)	—	(25,682)
Net income	—	—	—	123,538	—	123,538
Net unrealized gain (loss) on available-for-sale investments, net of tax of \$502	—	—	—	—	4,827	4,827
Reclassification of net realized (gain) loss on the sale of available-for-sale investments	—	—	—	—	(716)	(716)
Foreign currency translation adjustment	—	—	—	—	(1,544)	(1,544)
Balance as of September 29, 2019 (unaudited)	<u>170,897</u>	<u>\$ 342</u>	<u>\$ 594,427</u>	<u>\$ 682,383</u>	<u>\$ (37,934)</u>	<u>\$ 1,239,218</u>

	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Shareholders' Equity
	Shares	Par Value				
Balance as of December 31, 2017	173,507	\$ 347	\$ 461,338	\$ 668,587	\$ (34,599)	\$ 1,095,673
Issuance of common stock under stock plans	1,434	3	25,879	—	—	25,882
Repurchase of common stock	(2,750)	(5)	—	(142,257)	—	(142,262)
Stock-based compensation expense	—	—	31,339	—	—	31,339
Payment of dividends	—	—	—	(23,283)	—	(23,283)
Adjustment as a result of the adoption of ASU 2016-06 "Income Taxes - Intra-Entity Transfers Other than Inventory"	—	—	—	(5,961)	—	(5,961)
Net income	—	—	—	173,849	—	173,849
Net unrealized gain (loss) on available-for-sale investments, net of tax of (\$82)	—	—	—	—	(180)	(180)
Reclassification of net realized (gain) loss on the sale of available-for-sale investments	—	—	—	—	(535)	(535)
Foreign currency translation adjustment	—	—	—	—	(5,078)	(5,078)
Balance as of September 30, 2018 (unaudited)	<u>172,191</u>	<u>\$ 345</u>	<u>\$ 518,556</u>	<u>\$ 670,935</u>	<u>\$ (40,392)</u>	<u>\$ 1,149,444</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 ASC 842 "Leases," Cognex Corporation (the "Company") has provided new disclosures related to leases 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, 2018 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, and financial statement reclassifications necessary to present fairly the Company's financial position as of September 29, 2019, and the results of its operations for the three-month and nine-month periods ended September 29, 2019 and September 30, 2018, 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 nine-month periods ended September 29, 2019 are not necessarily indicative of the results to be expected for the full year.

Leases

The Company accounts for leases in accordance with Accounting Standard Codification (ASC) 842, "Leases." The core principle of ASC 842 is that a lessee should recognize on the balance sheet the assets and liabilities that arise from leases.

At inception of a contract, the Company determines whether that contract is or contains a lease. The Company determines whether a contract contains a lease by assessing whether there is an identified asset and whether the contract conveys the right to control the use of the identified asset for a period of time in exchange for consideration. The Company has control of the asset if it has the right to direct the use of the asset and obtains substantially all of the economic benefits from the use of the asset throughout the period of use.

As a practical expedient, the Company does not recognize a lease asset or lease liability for leases with a lease term of 12 months or less. In the determination of the lease term, the Company considers the existence of extension or termination options and the probability of those options being exercised.

Lease contracts may include lease components and non-lease components, such as common area maintenance and utilities for property leases. As a practical expedient, the Company accounts for the non-lease components together with the lease components as a single lease component for all of its leases.

The Company classifies a lease as a finance lease when it meets any of the following criteria at the lease commencement date: a) the lease transfers ownership of the underlying asset to the Company by the end of the lease term; b) the lease grants the Company an option to purchase the underlying asset that the Company is reasonably certain to exercise; c) the lease term is for the major part of the remaining economic life of the underlying asset (the Company considers a major part to be 75% or more of the remaining economic life of the underlying asset); d) the present value of the sum of the lease payments and any residual value guaranteed by the Company equals or exceeds substantially all of the fair value of the underlying asset (the Company considers substantially all the fair value to be 90% or more of the fair value of the underlying asset amount); or e) the underlying asset is of such a specialized nature that it is expected to have no alternative use to the lessor at the end of the lease term. When none of the criteria above are met, the Company classifies the lease as an operating lease.

On the lease commencement date, the Company records a lease asset and lease liability on the balance sheet. The lease asset consists of: 1) the amount of the initial lease liability; 2) any lease payments made to the lessor at or before the lease commencement date, minus any lease incentives received; and 3) any initial direct cost incurred by the Company. Initial direct costs are incremental costs of a lease that would not have been incurred if the lease had not been obtained and are capitalized as part of the lease asset.

The lease liability equals the present value of the future cash payments discounted using the Company's incremental borrowing rate. The Company's incremental borrowing rate is the rate of interest that the Company would have to pay to borrow an amount equal to the lease payments over a similar term, which is the three-month London Interbank Offered Rate (LIBOR) plus a 2.5% credit risk spread.

Operating lease expense equals the total cash payments recognized on a straight-line basis over the lease term. The amortization of the lease asset is calculated as the straight-line lease expense less the accretion of the interest on the lease liability each period. The lease liability is reduced by the cash payment less the interest each period.

NOTE 2: New Pronouncements

Accounting Standards Update (ASU) 2016-13, "Financial Instruments - Measurement of Credit Losses"

ASU 2016-13 applies to all reporting entities holding financial assets that are not accounted for at fair value through net income (debt securities). The amendments in this ASU eliminate the probable initial recognition threshold to recognize a credit loss under current U.S. GAAP and, instead, reflect an entity's current estimate of all expected credit losses. In addition, this ASU broadens the information an entity must consider in developing the credit loss estimate, including the use of reasonable and supportable forecasted information. The amendments in this ASU require that credit losses on available-for-sale debt securities be presented as an allowance rather than as a write-down and an entity will be able to record reversals of credit losses in current period net income. For public companies, the guidance in ASU 2016-13 is effective for annual periods beginning after December 15, 2019, and interim periods within those annual periods. This ASU should be applied through a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. As of the date of this report, management is in the process of completing the implementation of this ASU, including finalizing the internal credit losses policy and the related processes, internal control, and disclosures. Management does not expect ASU 2016-13 to have a material impact on the Company's financial statements and disclosures.

Accounting Standards Update (ASU) 2017-08, "Receivables - Nonrefundable Fees and Other Costs - Premium Amortization on Purchased Callable Debt Securities"

ASU 2017-08 applies to all reporting entities that hold investments in callable debt securities that have an amortized cost basis in excess of the amount that is repayable by the issuer at the earliest call date (that is, at a premium). The amendments in this ASU shorten the amortization period for certain callable debt securities held at a premium. Specifically, the amendments require the premium to be amortized to the earliest call date. The amendments do not require an accounting change for securities held at a discount; the discount continues to be amortized to maturity. Under current GAAP, premiums and discounts on callable debt securities generally are amortized to the maturity date. If that callable debt security is subsequently called, the entity records a loss equal to the unamortized premium. The amendments in this ASU more closely align the amortization period of premiums and discounts to expectations incorporated in market pricing on the underlying securities. For public companies, the amendments in ASU 2017-08 are effective for annual periods beginning after December 15, 2019 and interim reporting periods within annual years beginning after December 15, 2020. This ASU should be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption, and, in the period of adoption, the entity is required to provide disclosures about the change in accounting principle. Early adoption is permitted, including adoption in an interim period. Management does not expect ASU 2017-08 to have a material impact on the Company's financial statements and disclosures.

Accounting Standards Update (ASU) 2018-15, "Intangibles - Goodwill and Other - Internal-Use Software"

ASU 2018-15 applies to entities that are a customer in a hosting arrangement that is a service contract. The amendments in this ASU align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. Accordingly, the amendments in this ASU require an entity in a hosting arrangement that is a service contract to follow the guidance in Subtopic 350-40 to determine which implementation costs to capitalize as an asset related to the service contract and which costs to expense. Further, it requires the entity to expense the capitalized implementation costs over the term of the hosting arrangement. In addition, it requires the presentation of the expenses related to the capitalized implementation costs in the same line item in the statement of income as the fees associated with the hosting element of the arrangement and the classification of the payments for the capitalized implementation costs in the statement of cash flows in the same manner as the payments made for the fees associated with the hosting element. The amendments in this ASU are effective for public entities for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years, with early adoption permitted. Management does not expect ASU 2018-15 to have a material impact on the Company's 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 September 29, 2019 (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	\$ 16,081	\$ —	\$ —
Treasury bills	—	362,069	—
Corporate bonds	—	255,207	—
Asset-backed securities	—	146,392	—
Sovereign bonds	—	22,300	—
Agency bonds	—	5,905	—
Municipal bonds	—	4,840	—
Economic hedge forward contracts	—	19	—
Liabilities:			
Economic hedge forward contracts	—	70	—
Contingent consideration liabilities	—	—	1,153

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 did not record an other-than-temporary impairment of these financial assets during the three-month or nine-month periods ended September 29, 2019 and September 30, 2018.

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 with changes in fair value recorded in "Other income (expense)" on the Consolidated Statements of Operations.

The following table summarizes the activity for the Company's liability measured at fair value using Level 3 inputs for the nine-month period ended September 29, 2019 (in thousands):

Balance as of December 31, 2018	\$ 2,554
Fair value adjustment to GVi contingent consideration	(1,646)
Fair value adjustment to Chiaro contingent consideration	245
Balance as of September 29, 2019	<u><u>\$ 1,153</u></u>

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

Non-financial assets such as property, plant and equipment, goodwill, and intangible assets are required to be measured at fair value only when an impairment loss is recognized. The Company did not record an impairment charge related to these assets during the three-month or nine-month periods ended September 29, 2019 and September 30, 2018.

COGNEX CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

NOTE 4: Cash, Cash Equivalents, and Investments

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

	September 29, 2019	December 31, 2018
Cash	\$ 105,620	\$ 104,655
Money market instruments	16,081	3,557
Cash and cash equivalents	121,701	108,212
Treasury bills	105,454	198,477
Asset-backed securities	89,576	78,407
Corporate bonds	87,209	137,871
Sovereign bonds	6,300	8,101
Municipal bonds	3,533	4,492
Current investments	292,072	427,348
Treasury bills	256,615	32,760
Corporate bonds	167,998	162,566
Asset-backed securities	56,816	53,631
Sovereign bonds	16,000	6,316
Agency bonds	5,905	5,921
Municipal bonds	1,307	845
Non-current investments	504,641	262,039
	\$ 918,414	\$ 797,599

Treasury bills consist of debt securities issued by the U.S. government; 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; sovereign bonds consist of direct debt issued by foreign governments; municipal bonds consist of debt securities issued by state and local government entities; 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.

The following table summarizes the Company's available-for-sale investments as of September 29, 2019 (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Current:				
Treasury bills	\$ 105,254	\$ 212	\$ (12)	\$ 105,454
Asset-backed securities	89,226	359	(9)	89,576
Corporate bonds	86,990	222	(3)	87,209
Sovereign bonds	6,286	14	—	6,300
Municipal bonds	3,535	—	(2)	3,533
Non-current:				
Treasury bills	255,441	1,253	(79)	256,615
Corporate bonds	167,464	584	(50)	167,998
Asset-backed securities	56,636	195	(15)	56,816
Sovereign bonds	15,969	43	(12)	16,000
Agency bonds	5,930	—	(25)	5,905
Municipal bonds	1,300	7	—	1,307
	\$ 794,031	\$ 2,889	\$ (207)	\$ 796,713

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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 September 29, 2019 (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
Treasury bills	\$ 108,863	\$ (91)	\$ —	\$ —	\$ 108,863	\$ (91)
Corporate bonds	23,263	(17)	20,713	(36)	43,976	(53)
Asset-backed securities	11,149	(15)	8,093	(9)	19,242	(24)
Sovereign bonds	11,558	(12)	—	—	11,558	(12)
Agency bonds	5,905	(25)	—	—	5,905	(25)
Municipal bonds	—	—	343	(2)	343	(2)
	<u>\$ 160,738</u>	<u>\$ (160)</u>	<u>\$ 29,149</u>	<u>\$ (47)</u>	<u>\$ 189,887</u>	<u>\$ (207)</u>

As of September 29, 2019, the Company did not recognize any other-than-temporary impairment of these investments. In its evaluation, management considered the type of security, the credit rating of the security, the length of time the security has been in a loss position, the size of the loss position, the Company's intent and ability to hold the security to expected recovery of value, and other meaningful information. The Company does not intend to sell, and is unlikely to be required to sell, any of these available-for-sale investments before their effective maturity or market price recovery.

The Company recorded gross realized gains and gross realized losses on the sale of debt securities totaling \$361,000 and \$67,000, respectively, during the three-month period ended September 29, 2019 and \$283,000 and \$17,000, respectively, during the three-month period ended September 30, 2018. The Company recorded gross realized gains and gross realized losses on the sale of debt securities totaling \$818,000 and \$103,000, respectively, during the nine-month period ended September 29, 2019 and \$646,000 and \$111,000, respectively, during the nine-month period ended September 30, 2018. 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 September 29, 2019 (in thousands):

	<1 year	1-2 Years	2-3 Years	3-4 Years	4-5 Years	Total
Treasury bills	\$ 105,454	\$ 188,398	\$ 68,217	\$ —	\$ —	\$ 362,069
Corporate bonds	87,209	115,941	47,842	1,348	2,867	255,207
Asset-backed securities	89,576	21,425	26,142	7,633	1,616	146,392
Sovereign bonds	6,300	16,000	—	—	—	22,300
Agency bonds	—	—	5,905	—	—	5,905
Municipal bonds	3,533	—	1,307	—	—	4,840
	<u>\$ 292,072</u>	<u>\$ 341,764</u>	<u>\$ 149,413</u>	<u>\$ 8,981</u>	<u>\$ 4,483</u>	<u>\$ 796,713</u>

NOTE 5: Inventories

Inventories consisted of the following (in thousands):

	September 29, 2019	December 31, 2018
Raw materials	\$ 30,283	\$ 42,738
Work-in-process	4,848	3,435
Finished goods	30,133	37,109
	<u>\$ 65,264</u>	<u>\$ 83,282</u>

NOTE 6: Leases

On January 1, 2019, the Company adopted Accounting Standards Codification (ASC) 842, "Leases," using the transition method of adoption, which allowed the Company to apply the standard on a prospective basis with a cumulative-effect adjustment to the opening balance sheet as of the adoption date. Accordingly, the Company recorded lease assets

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of \$17,522,000, current lease liabilities of \$4,736,000, and non-current lease liabilities of \$12,669,000 on its Consolidated Balance Sheet as of January 1, 2019.

As part of the adoption, the Company elected a practical expedient package to be applied to all of its leases upon transition, and as a result, the Company did not reassess: 1) whether any expired or existing contracts contain leases; 2) the lease classification for any expired or existing leases; and 3) the accounting for initial direct costs for any existing 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 September 29, 2019. 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 September 29, 2019.

The total operating lease expense for the three-month and nine-month periods ended September 29, 2019 was \$1,749,000 and \$4,976,000, respectively. The total operating lease cash payments for the three-month and nine-month periods ended September 29, 2019 was \$1,708,000 and \$4,778,000, 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 \$22,000 and \$255,000 for the three-month and nine-month periods ended September 29, 2019, respectively.

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

<u>Year Ended December 31,</u>	Amount
Remainder of fiscal 2019	\$ 1,650
2020	5,628
2021	4,314
2022	2,831
2023	1,988
2024	831
Thereafter	309
	<u>\$ 17,551</u>

The discounted present value of the future lease cash payments resulted in a lease liability of \$16,167,000 as of September 29, 2019.

The weighted-average discount rate was 4.8% for the leases outstanding as of September 29, 2019. The weighted-average remaining lease term was 3.6 years for the leases outstanding as of September 29, 2019. The Company did not have any leases that have not yet commenced but that create significant rights and obligations as of September 29, 2019.

The Company owns a building adjacent to its corporate headquarters that is partially occupied with a tenant who has a lease agreement that will expire in 2022. Rental income was \$76,000 and \$77,000 for the three-month period ended September 29, 2019 and September 30, 2018, respectively. Rental income was \$234,000 and \$236,000 for the nine-month period ended September 29, 2019 and September 30, 2018, respectively.

Future minimum rental receipts under non-cancelable lease agreements are as follows (in thousands):

<u>Year Ended December 31,</u>	Amount
Remainder of fiscal 2019	\$ 77
2020	307
2021	307
2022	307
	<u>\$ 998</u>

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NOTE 7: 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	13,687	8,261	5,426
Customer relationships	8,607	6,101	2,506
Non-compete agreements	370	308	62
Balance as of September 29, 2019	\$ 60,724	\$ 52,730	\$ 7,994

	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Distribution networks	\$ 38,060	\$ 38,060	\$ —
Completed technologies	13,687	6,619	7,068
Customer relationships	8,607	5,716	2,891
Non-compete agreements	370	216	154
Balance as of December 31, 2018	\$ 60,724	\$ 50,611	\$ 10,113

As of September 29, 2019, estimated future amortization expense related to intangible assets is as follows (in thousands):

Year Ended December 31,	Amount
Remainder of fiscal 2019	\$ 582
2020	2,185
2021	2,017
2022	1,691
2023	989
2024	422
Thereafter	108
	\$ 7,994

NOTE 8: 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 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, 2018	\$ 4,743
Provisions for warranties issued during the period	3,301
Fulfillment of warranty obligations	(2,770)
Balance as of September 29, 2019	\$ 5,274

NOTE 9: 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

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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	September 29, 2019		December 31, 2018	
	Notional Value	USD Equivalent	Notional Value	USD Equivalent
<i>Derivatives Not Designated as Hedging Instruments:</i>				
Euro	18,000	\$ 19,697	23,000	\$ 26,330
Japanese Yen	600,000	5,563	380,000	3,459
Mexican Peso	90,000	4,560	—	—
British Pound	2,550	3,149	2,500	3,204
Korean Won	3,660,000	3,053	3,125,000	2,808
Hungarian Forint	840,000	2,739	750,000	2,685
Taiwanese Dollar	45,700	1,478	55,000	1,807
Canadian Dollar	1,100	830	990	726
Singapore Dollar	—	—	700	514

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

Asset Derivatives				Liability Derivatives			
Balance		Fair Value		Balance		Fair Value	
Sheet Location		September 29, 2019	December 31, 2018	Sheet Location		September 29, 2019	December 31, 2018
<i>Derivatives Not Designated as Hedging Instruments:</i>							
Economic hedge forward contracts	Prepaid expenses and other current assets	\$ 19	\$ 1	Accrued expenses	\$ 70	\$ 106	

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		
	September 29, 2019	December 31, 2018		September 29, 2019	December 31, 2018
Gross amounts of recognized assets	\$ 19	\$ 1	Gross amounts of recognized liabilities	\$ 70	\$ 106
Gross amounts offset	—	—	Gross amounts offset	—	—
Net amount of assets presented	\$ 19	\$ 1	Net amount of liabilities presented	\$ 70	\$ 106

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

	Location in Financial Statements	Three-months Ended		Nine-months Ended	
		September 29, 2019	September 30, 2018	September 29, 2019	September 30, 2018
<i>Derivatives Not Designated as Hedging Instruments:</i>					
Gains (losses) recognized in current operations	Foreign currency gain (loss)	\$ 469	\$ 299	\$ 535	\$ (366)

NOTE 10: 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		Nine-months Ended	
	September 29, 2019	September 30, 2018	September 29, 2019	September 30, 2018
Americas	\$ 65,253	\$ 57,020	\$ 208,909	\$ 187,991
Europe	64,209	118,810	182,747	245,437
Greater China	27,854	31,068	86,446	99,402
Other Asia	26,009	25,323	77,754	80,222
	\$ 183,325	\$ 232,221	\$ 555,856	\$ 613,052

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

	Three-months Ended		Nine-months Ended	
	September 29, 2019	September 30, 2018	September 29, 2019	September 30, 2018
Standard products and services	\$ 139,887	\$ 150,993	\$ 473,610	\$ 493,019
Application-specific customer solutions	43,438	81,228	82,246	120,033
	\$ 183,325	\$ 232,221	\$ 555,856	\$ 613,052

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 \$4,792,000 and \$3,514,000 as of September 29, 2019 and December 31, 2018, 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 reserves against its accounts receivable for potential credit losses. Credit losses recognized on accounts receivable were immaterial for the three-month and nine-month periods ended September 29, 2019 and September 30, 2018, respectively. 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.

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The following table summarizes the deferred revenue and customer deposits activity for the nine-month period ended September 29, 2019 (in thousands):

Balance as of December 31, 2018	\$	9,845
Increases to deferred revenue and customer deposits		37,351
Recognition of revenue		(36,517)
Foreign exchange rate changes		(248)
Balance as of September 29, 2019	\$	10,431

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.

NOTE 11: Stock-Based Compensation Expense

The Company's share-based payments that result in compensation expense consist of stock option grants and restricted stock units (RSUs). As of September 29, 2019, the Company had 17,350,152 shares available for grant. 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 nine-month period ended September 29, 2019:

	Shares (in thousands)	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding as of December 31, 2018	13,789	\$ 31.73		
Granted	2,879	51.22		
Exercised	(1,475)	21.53		
Forfeited or expired	(726)	41.79		
Outstanding as of September 29, 2019	14,467	\$ 36.14	7.19	\$ 203,774
Exercisable as of September 29, 2019	5,714	\$ 25.33	5.73	\$ 134,913
Options vested or expected to vest as of September 29, 2019 (1)	13,116	\$ 34.90	7.04	\$ 199,066

(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		Nine-months Ended	
	September 29, 2019	September 30, 2018	September 29, 2019	September 30, 2018
Risk-free rate	2.7%	2.9%	2.7%	2.9%
Expected dividend yield	0.39%	0.32%	0.39%	0.32%
Expected volatility	37%	39%	37%	39%
Expected term (in years)	5.1	5.4	5.2	5.3

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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.

The weighted-average grant-date fair values of stock options granted during the three-month periods ended September 29, 2019 and September 30, 2018 were \$18.42 and \$22.52, respectively. The weighted-average grant-date fair values of stock options granted during the nine-month periods ended September 29, 2019 and September 30, 2018 were \$18.58 and \$21.70, respectively.

The total intrinsic values of stock options exercised for the three-month periods ended September 29, 2019 and September 30, 2018 were \$5,746,000 and \$17,985,000, respectively. The total intrinsic values of stock options exercised for the nine-month periods ended September 29, 2019 and September 30, 2018 were \$42,545,000 and \$50,975,000, respectively. The total fair values of stock options vested for the three-month periods ended September 29, 2019 and September 30, 2018 were \$1,213,000 and \$997,000, respectively. The total fair values of stock options vested for the nine-month periods ended September 29, 2019 and September 30, 2018 were \$32,072,000 and \$27,557,000, respectively.

Restricted Stock Units (RSUs)

The fair values of RSUs granted were determined based upon the market value of the Company's common stock at the time of grant. The initial cost was then amortized over the period of vesting until the restrictions lapsed.

The following table summarizes the Company's RSUs activity for the nine-month period ended September 29, 2019:

	Shares (in thousands)	Weighted-Average Grant Date Fair Value
Nonvested as of December 31, 2018	—	\$ —
Granted	75	45.20
Vested	—	—
Forfeited or expired	—	—
Nonvested as of September 29, 2019	<u>75</u>	<u>\$ 45.20</u>

The weighted-average grant-date fair values of RSUs granted during the three-month and nine-month periods ended September 29, 2019 were \$45.20. There were no RSUs vested for the three or nine-month periods ended September 29, 2019. There were no RSUs granted or vested in 2018.

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 9% to all equity awards for senior management and a rate of 12% for all other employees. Each year during the first quarter, the Company revises its estimated forfeiture rate. This resulted in a decrease to compensation expense of \$499,000 in 2019 and an increase to compensation expense of \$1,283,000 in 2018.

As of September 29, 2019, total unrecognized compensation expense related to non-vested stock awards, including stock options and RSUs, was \$59,708,000, which is expected to be recognized over a weighted-average period of 1.60 years.

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The total stock-based compensation expense and the related income tax benefit recognized for the three-month period ended September 29, 2019 were \$10,194,000 and \$1,804,000, respectively, and for the three-month period ended September 30, 2018 were \$9,143,000 and \$1,654,000, respectively. The total stock-based compensation expense and the related income tax benefit recognized for the nine-month period ended September 29, 2019 were \$33,442,000 and \$5,839,000, respectively, and for the nine-month period ended September 30, 2018 were \$31,339,000 and \$5,608,000, respectively. No compensation expense was capitalized as of September 29, 2019 or December 31, 2018.

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		Nine-months Ended	
	September 29, 2019	September 30, 2018	September 29, 2019	September 30, 2018
Cost of revenue	\$ 334	\$ 544	\$ 1,114	\$ 1,898
Research, development, and engineering	3,616	3,197	11,633	11,166
Selling, general, and administrative	6,244	5,402	20,695	18,275
	<u>\$ 10,194</u>	<u>\$ 9,143</u>	<u>\$ 33,442</u>	<u>\$ 31,339</u>

NOTE 12: 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 September 29, 2019, the Company repurchased 1,601,000 shares at a cost of \$70,312,000 under this program, including 1,398,000 shares at a cost of \$61,690,000 during the nine-month period ended September 29, 2019. The Company may repurchase shares under this program in future periods, up to the remaining balance of \$129,688,000, depending upon a variety of factors, including, among other things, the impact of dilution from employee stock options, stock price, share availability, and cash requirements.

NOTE 13: 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		Nine-months Ended	
	September 29, 2019	September 30, 2018	September 29, 2019	September 30, 2018
Income tax expense 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	(7)%	(7)%	(7)%	(7)%
Tax credit	(1)%	— %	(1)%	— %
Discrete tax benefit related to Tax Act 2017	— %	(9)%	— %	(4)%
Discrete tax benefit related to stock options	(1)%	(4)%	(3)%	(5)%
Other discrete tax events	(3)%	(2)%	(1)%	(1)%
Other	2 %	1 %	2 %	1 %
Income tax expense	<u>12 %</u>	<u>1 %</u>	<u>12 %</u>	<u>6 %</u>

Management has determined that earnings from its legal entity in China will be indefinitely reinvested to provide sufficient local funding for growth, and that earnings from all other jurisdictions will not be indefinitely reinvested. The Company is tax resident in numerous jurisdictions around the world and has identified its major tax jurisdictions as the United

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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%. International rights to certain of the Company's intellectual property are held by a subsidiary whose legal jurisdiction does not tax this income, resulting in a foreign effective tax rate that is lower than the above mentioned statutory rates, although the reduced taxes overseas have been partially offset by changes in U.S. tax law. These differences resulted in a decrease in the effective tax rate by 7 percentage points for all periods presented.

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 option exercises resulted in a decrease in the effective tax rate by 1 and 4 percentage points for the three-month periods ended September 29, 2019 and September 30, 2018, respectively, and a decrease in the effective tax rate by 3 and 5 percentage points for the nine-month periods ended September 29, 2019 and September 30, 2018, respectively.

During the nine-month period ended September 29, 2019, the Company recorded a \$37,000 increase in reserves for income taxes, net of deferred tax benefit. Estimated interest and penalties included in these amounts totaled \$50,000 for the nine-month period ended September 29, 2019.

The Company's reserve for income taxes, including gross interest and penalties, was \$8,179,000 as of September 29, 2019, which included \$7,151,000 classified as a non-current liability and \$1,028,000 recorded as a reduction to non-current deferred tax assets. The amount of gross interest and penalties included in these balances was \$918,000. 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. As a result of the expiration of certain statutes of limitations, there is a potential that a portion of these reserves could be released, which would decrease income tax expense by approximately \$1,300,000 to \$1,400,000 over the next twelve months.

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 2018 remain open to examination by the Internal Revenue Service and various state tax authorities. The tax years 2015 through 2018 remain open to examination by various taxing authorities in other jurisdictions in which the Company operates.

NOTE 14: Weighted-Average Shares

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

	Three-months Ended		Nine-months Ended	
	September 29, 2019	September 30, 2018	September 29, 2019	September 30, 2018
Basic weighted-average common shares outstanding	170,744	172,189	171,053	172,613
Effect of dilutive equity awards	3,705	5,056	4,111	5,408
Weighted-average common and common-equivalent shares outstanding	174,449	177,245	175,164	178,021

Equity awards to purchase 6,078,000 and 5,695,000 shares of common stock, on a weighted-average basis, were outstanding during the three-month and nine-month periods ended September 29, 2019, respectively, and 2,796,000 and 2,353,000 for the same periods in 2018, but were not included in the calculation of dilutive net income per share because they were anti-dilutive.

NOTE 15: Subsequent Events

On October 16, 2019, the Company acquired Sualab Co., Ltd. (Sualab), a provider of deep learning-based vision software for industrial image analysis based in Korea for approximately \$195 million. The total consideration included cash payments of approximately \$171 million upon closing. The remaining consideration consists of deferred payments of approximately \$24 million that may become payable on the fourth anniversary date of the closing, contingent upon the continued employment of key talent, and will be recorded as compensation expense over this four-year period. Given the timing of this acquisition, the Company is in the process of completing the purchase price allocation for the \$171 million of consideration that is not related to employment. Transaction costs incurred to date were not material and were expensed as incurred. The financial results of Sualab prior to the acquisition date are not material to the consolidated financial results of the Company.

On October 28, 2019, the Company's Board of Directors declared a cash dividend of \$0.055 per share. The dividend is payable on November 29, 2019 to all shareholders of record as of the close of business on November 15, 2019.

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, customer order rates and timing of related revenue, expected areas of growth, emerging markets, future product mix, research and development activities, investments, 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 loss of a large customer; (2) current and future conditions in the global economy, including the imposition of tariffs or export controls; (3) the reliance on revenue from the consumer electronics or automotive industries; (4) the inability to penetrate new markets; (5) the inability to achieve significant international revenue; (6) fluctuations in foreign currency exchange rates and the use of derivative instruments; (7) information security breaches or business system disruptions; (8) the inability to attract and retain skilled employees; (9) the failure to effectively manage our growth; (10) the reliance upon key suppliers to manufacture and deliver critical components for our products; (11) the failure to effectively manage product transitions or accurately forecast customer demand; (12) the inability to design and manufacture high-quality products; (13) the technological obsolescence of current products and the inability to develop new products; (14) the failure to properly manage the distribution of products and services; (15) the inability to protect our proprietary technology and intellectual property; (16) our involvement in time-consuming and costly litigation; (17) the impact of competitive pressures; (18) the challenges in integrating and achieving expected results from acquired businesses, including the recent acquisition of Sualab; (19) potential impairment charges with respect to our investments or for acquired intangible assets or goodwill; and (20) exposure to additional tax liabilities. 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, 2018. 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 tasks, primarily in manufacturing processes, 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 primarily 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 for applications in retail distribution and ecommerce to scan, track, and sort goods through distribution centers.

Revenue for the third quarter of 2019 totaled \$183,325,000, representing a decrease of 21% from the third quarter of 2018 driven by significantly lower revenue in the consumer electronics industry. Gross margin as a percentage of revenue declined to 74% for the third quarter of 2019 from 75% for the third quarter of 2018 due primarily to the impact of the lower sales volume. Operating expenses in the third quarter of 2019 decreased by 3% over the third quarter of 2018 due principally to lower expenses related to incentive compensation plans. Operating income was 24% of revenue in the third quarter of 2019 compared to 34% of revenue in the third quarter of 2018; net income was 23% of revenue in the third quarter of 2019 compared to 35% of revenue in the third quarter of 2018; and net income per diluted share was \$0.24 in the third quarter of 2019 compared to \$0.45 in the third quarter of 2018.

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 \$48,896,000, or 21%, for the three-month period and decreased by \$57,196,000, or 9%, for the nine-month period. Changes in foreign currency exchange rates did not have a material impact on revenue for either period presented.

The decrease in revenue for both periods was driven by significantly lower revenue in the consumer electronics industry, primarily related to smartphone manufacturing. Delays and reductions in capital spending from customers in a variety of other factory automation industries, including the automotive industry, also contributed to the decrease in revenue. These decreases were only partially offset by strong sales in the logistics industry.

Sales to customers based in the Americas increased by 14% for the three-month period and 11% for the nine-month period driven by higher sales in the logistics industry, partially offset by lower sales in the automotive industry. Sales to customers based in Europe decreased by 46% for the three-month period and 26% for the nine-month period driven by lower sales in the consumer electronics industry, and to a lesser extent, the automotive industry. Sales to customers based in Greater China decreased by 10% for the three-month period and 13% for the nine-month period due to lower sales across a variety of industries. The decline would have been larger in Greater China, and less extreme in Europe, if not for procurement changes made by certain consumer electronics customers, shifting their purchases to China from Europe. Sales to customers based in other regions in Asia were relatively flat for both periods.

As of the date of this report, we expect revenue for the fourth quarter of 2019 to be lower than both the third quarter of 2019 and the fourth quarter of 2018. The sequential decrease is anticipated to come primarily from lower sales in the consumer electronics industry due to the seasonal timing of this business, while the decrease from the prior year is anticipated to come from a broad base of customers in a variety of industries, particularly in China and Europe. While the Company experienced strong sales in the logistics industry in the third quarter of 2019 over the prior year, we expect logistics revenue to be lower in the fourth quarter of 2019 compared to the prior year due primarily to a major customer delaying delivery of large orders for new sites.

Gross Margin

Gross margin as a percentage of revenue was 74% for both the three-month and nine-month periods in 2019 compared to 75% for the same periods in 2018. The decline in the gross margin percentage was due primarily to the unfavorable absorption of manufacturing overhead costs over the lower level of revenue.

As of the date of this report, we expect gross margin as a percentage of revenue for the fourth quarter of 2019 to be relatively consistent with the gross margin reported in the third quarter of 2019.

Operating Expenses

Research, development, and engineering (RD&E) expenses decreased by \$1,585,000, or 5%, for the three-month period and \$1,228,000, or 1%, for the nine-month period as detailed in the table below (in thousands).

	Three-month period	Nine-month period
RD&E expenses in 2018	\$ 29,700	\$ 87,664
Personnel-related costs	898	3,096
Incentive compensation plans	(2,302)	(3,646)
Foreign currency exchange rate changes	(310)	(1,576)
Other	129	898
RD&E expenses in 2019	<u>\$ 28,115</u>	<u>\$ 86,436</u>

RD&E expenses decreased due to lower expenses related to incentive compensation plans resulting from lower levels of achievement on performance plans that were set at the beginning of the year. Changes in foreign currency exchange rates also resulted in a lower level of expenses, as costs denominated in foreign currencies were translated to U.S. Dollars at a lower rate. These decreases were offset by higher personnel-related costs resulting primarily from headcount additions to support new product initiatives.

RD&E expenses as a percentage of revenue were 15% and 16% for the three-month and nine-month periods in 2019, respectively, compared to 13% and 14% for the same periods in 2018. 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. Furthermore, the acquisition of Sualab on October 16, 2019 is anticipated to result in a higher level of RD&E investment in future periods, as the majority of operating expenses from this acquisition are expected to be classified as RD&E expenses. Accordingly, we expect RD&E expenses as a percentage of revenue to be higher in the fourth quarter of 2019 than the percentage reported for the nine-month period ended September 29, 2019.

Selling, General, and Administrative Expenses

Selling, general, and administrative (SG&A) expenses decreased by \$1,331,000, or 2%, for the three-month period and increased by \$3,276,000, or 2%, for the nine-month period as detailed in the table below (in thousands).

	Three-month period	Nine-month period
SG&A expenses in 2018	\$ 65,817	\$ 196,266
Personnel-related costs	4,813	18,691
Incentive compensation plans	(3,762)	(6,859)
Foreign currency exchange rate changes	(806)	(4,422)
ERP project costs	(1,586)	(4,253)
Other	10	119
SG&A expenses in 2019	<u>\$ 64,486</u>	<u>\$ 199,542</u>

SG&A expenses decreased due to lower expenses related to incentive compensation plans resulting from lower levels of achievement on performance plans that were set at the beginning of the year. Expenses were also lower due to project costs incurred in 2018 related to the Company's new Enterprise Resource Planning (ERP) system. This system was placed into service during the third quarter of 2018, and therefore, similar costs were not incurred in 2019. Changes in foreign currency exchange rates also resulted in a lower level of expenses, as costs denominated in foreign currencies were translated to U.S. Dollars at a lower rate. These decreases were offset by higher personnel-related costs resulting primarily from headcount additions, principally sales personnel. In addition to salaries and fringe benefits, these personnel-related costs included sales commissions and travel expenses related to the additional headcount.

Non-operating Income (Expense)

The Company recorded foreign currency losses of \$1,295,000 and \$1,403,000 for the three-month and nine-month periods in 2019, respectively, compared to \$379,000 and \$708,000 for the same periods in 2018. 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. A higher level of foreign currency losses was recorded in the third quarter of 2019 from the revaluation of intercompany payables denominated in U.S. Dollars on the company's China entity.

Investment income increased by \$1,177,000, or 30%, for the three-month period and \$4,506,000, or 42%, for the nine-month period. The increase was due to higher yields on the Company's portfolio of debt securities, and to a lesser extent additional funds available for investment.

The Company recorded other income of \$456,000 and \$1,239,000 for the three-month and nine-month periods in 2019, respectively, compared to other expense of \$129,000 and \$98,000 for the same periods in 2018. Other income (expense) includes fair value adjustments of contingent consideration liabilities arising from business acquisitions. A higher level of fair value adjustments to income was recorded in 2019 related to the Company's GVI acquisition resulting from a lower level of revenue in the Americas' automotive industry.

Income Tax Expense

The Company's effective tax rate was 12% of pre-tax income for the three-month and nine-month periods in 2019, respectively, compared to 1% and 6% for the same periods in 2018.

The effective tax rate included a decrease in tax expense of \$569,000 and \$4,547,000 for the three-month and nine-month periods in 2019, respectively, and \$2,811,000 and \$8,400,000 for the same periods in 2018 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 option exercises. The Company cannot predict the level of stock option exercises by employees in future periods.

In addition, the effective tax rate included a decrease in tax expense of \$1,327,000 for the three-month period and \$1,330,000 for the nine-month period in 2019, respectively, consisting primarily of the expiration of the statutes of limitations for certain reserves for income tax uncertainties.

Excluding the impact of these discrete tax events, the Company's effective tax rate was 16% of pre-tax income for all periods presented.

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%. International rights to certain of the Company's intellectual property are held by a subsidiary whose legal jurisdiction does not tax this income, resulting in a foreign effective tax rate lower than the above mentioned statutory rates, although the reduced taxes overseas have been partially offset by changes in U.S. tax law.

The European Union has initiated a series of tax reform legislation over the past few years regarding hybrid tax structures. The Company plans to make changes to its tax structure in the fourth quarter of 2019 as a result of this legislation. Management is currently evaluating the financial impact of these changes and expects to record a discrete tax benefit of between \$100 million and \$125 million in the fourth quarter of 2019. Management also expects its current effective tax rate excluding discrete items of 16% to increase slightly in future years as a result of this change.

On October 16, 2019, the Company acquired Sualab, a provider of deep learning-based vision software for industrial image analysis based in Korea for approximately \$195 million. The Company plans to migrate acquired intellectual property to certain subsidiaries in the fourth quarter of 2019. Management is currently evaluating the financial impact of this migration and expects to record a discrete tax expense of between \$27 million and \$33 million in the fourth quarter of 2019.

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 \$918,414,000 as of September 29, 2019. The Company has established guidelines relative to credit ratings, diversification, and maturities of its investments that maintain liquidity.

The Company's cash requirements during the nine months ended September 29, 2019 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. Operating cash inflows included a reduction in accounts receivable from the collection of a significant amount due from a material customer in the consumer electronics industry, as well as a reduction in inventory levels. Operating cash outflows included the payment of company bonuses that were earned and accrued in 2018.

Capital expenditures during the nine months ended September 29, 2019 totaled \$13,518,000 and consisted 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.

In October 2018, the Company's Board of Directors authorized the repurchase of \$200,000,000 of the Company's common stock. As of September 29, 2019, the Company repurchased 1,601,000 shares at a cost of \$70,312,000 under this program, including 1,398,000 shares at a cost of \$61,690,000 during the nine months ended September 29, 2019. The Company may repurchase shares under this program in future periods, up to the remaining balance of \$129,688,000, depending on a variety of factors, including, among other things, the impact of dilution from employee stock options, stock price, share availability, and cash requirements.

The Company's Board of Directors declared and paid a cash dividend of \$0.05 per share in each quarter of 2019, amounting to \$25,682,000 in the aggregate for the nine-month period ended September 29, 2019. 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.

On October 16, 2019, the Company acquired Sualab for total cash consideration of approximately \$171 million upon closing and deferred payments of approximately \$24 million that may become payable on the fourth anniversary date of the closing. The Company plans to migrate acquired intellectual property to certain subsidiaries in the fourth quarter of 2019, which is expected to result in a foreign tax payment of between \$35 million to \$37 million payable in early 2020.

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 September 29, 2019, the Company had \$918,414,000 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 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, 2018.

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 Principal Financial & Accounting 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 Principal Financial & Accounting 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 the financial reporting that occurred during the quarter ended September 29, 2019 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

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 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, 2018.

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 September 29, 2019:

	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
July 1 - July 28, 2019	—	\$ —	—	\$ 129,688,000
July 29 - August 25, 2019	—	—	—	129,688,000
August 26 - September 29, 2019	—	—	—	129,688,000
Total	—	\$ —	—	\$ 129,688,000

(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.

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	<u>Certification of Principal Executive Officer pursuant to Rule 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934*</u>
31.2	<u>Certification of Principal Financial Officer pursuant to Rule 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934*</u>
32.1	<u>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**</u>
32.2	<u>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**</u>
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: October 28, 2019

COGNEX CORPORATION

By: /s/ Robert J. Willett

Robert J. Willett

President and Chief Executive Officer

(Principal Executive Officer)

By: /s/ Laura A. MacDonald

Laura A. MacDonald

Vice President and Corporate Controller

(Principal Financial and Accounting 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: October 28, 2019

By: /s/ Robert J. Willett

Robert J. Willett

President and Chief Executive Officer

(Principal Executive Officer)

CERTIFICATION

I, Laura MacDonald, 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: October 28, 2019

By: /s/ Laura A. MacDonald

Laura A. MacDonald

Vice President and Corporate Controller

(Principal Financial and Accounting 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 September 29, 2019 (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: October 28, 2019

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 her knowledge that the Company's quarterly report on Form 10-Q for the quarterly period ended September 29, 2019 (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: October 28, 2019

By: /s/ Laura A. MacDonald

Laura A. MacDonald

Vice President and Corporate Controller

(Principal Financial and Accounting 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.