Aug 27, 2020

Cadence Design Systems (CDNS)

$112.67 (As of 08/26/20)

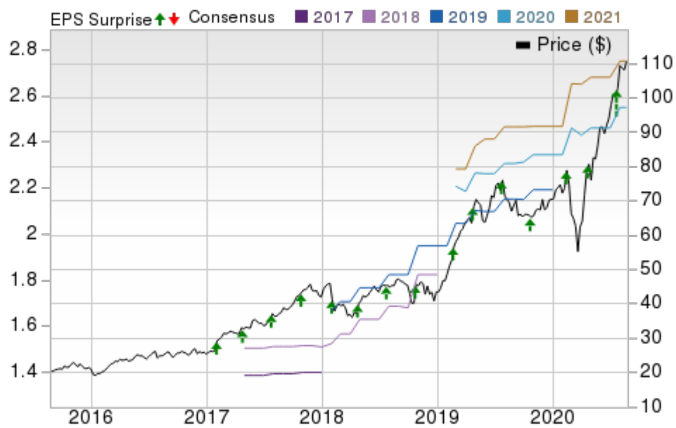
Price Target (6-12 Months): **$118.00**

Long Term: 6-12 Months	**Zacks Recommendation:** (Since: 03/22/20) Prior Recommendation: Outperform	**Neutral**
Short Term: 1-3 Months	**Zacks Rank:** (1-5)	**2-Buy**
	Zacks Style Scores:	VGM:D
	Value: D | Growth: B | Momentum: D	

Summary

Cadence is benefiting from robust adoption of its digital and signoff, IP solutions, and an ever expanding customer base. Moreover, frequent launch of products is expected to aid the company in sustaining top line growth. Additionally, strength in semiconductor end-market favors growth prospects of the company. Further, collaborations with Microsoft Azure, Amazon Web Services and Google Cloud platform are a positive. Also, higher investments on emerging trends like IoT, AR/VR and autonomous vehicle sub-systems present significant growth opportunity. The company improved its 2020 guidance despite coronavirus-related headwinds. Notably, shares of the company have outperformed the industry on a year-to-date basis. However, sluggishness across automotive domain is likely to dampen growth. Also, stiff competition in simulation market remains a woe.

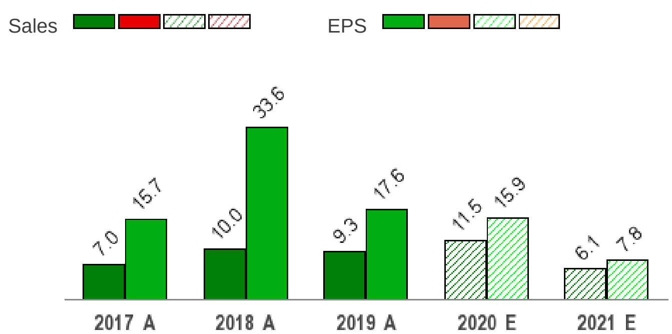
Price, Consensus & Surprise



Data Overview

52 Week High-Low	$113.97 - $51.39
20 Day Average Volume (sh)	1,344,023
Market Cap	$31.4 B
YTD Price Change	62.4%
Beta	1.12
Dividend / Div Yld	$0.00 / 0.0%
Industry	Computer - Software
Zacks Industry Rank	Top 25% (64 out of 252)
Last EPS Surprise	26.9%
Last Sales Surprise	7.8%
EPS F1 Est- 4 week change	0.0%
Expected Report Date	10/19/2020
Earnings ESP	0.0%
P/E TTM	48.2
P/E F1	44.2
PEG F1	3.5
P/S TTM	12.9

Sales and EPS Growth Rates (Y/Y %)



Sales Estimates (millions of $)

	Q1	Q2	Q3	Q4	Annual*
2021	677 E	678 E	690 E	702 E	2,764 E
2020	618 A	638 A	641 E	708 E	2,605 E
2019	577 A	580 A	580 A	600 A	2,336 A

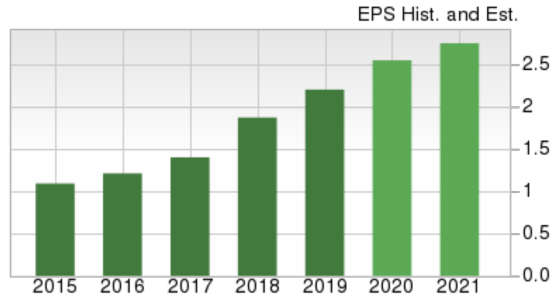
EPS Estimates

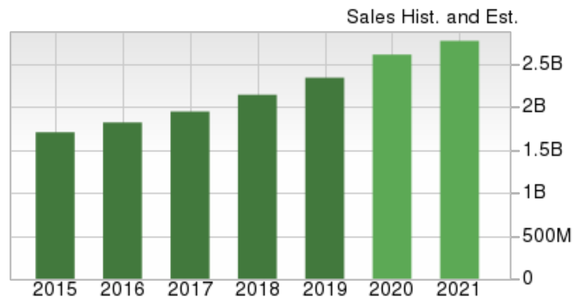
	Q1	Q2	Q3	Q4	Annual*
2021	$0.66 E	$0.67 E	$0.69 E	$0.71 E	$2.75 E
2020	$0.60 A	$0.66 A	$0.61 E	$0.69 E	$2.55 E
2019	$0.54 A	$0.57 A	$0.54 A	$0.54 A	$2.20 A

*Quarterly figures may not add up to annual.

The data in the charts and tables, including the Zacks Consensus EPS and Sales estimates, is as of 08/26/2020. The reports text is as of 08/27/2020.

Overview





Based in San Jose, CA, Cadence Design Systems Inc. (CDNS) offers products and tools that help customers to design electronic products. Through System Design Enablement (SDE) strategy the company offers software, hardware, services and reusable IC design blocks (IPs) to electronic systems and semiconductor customers.

Cadence's core electronic design automation (EDA) software and services enable engineers to develop different types of ICs. Its design IP's are directly integrated into the ICs.

Moreover, System Connect tools and services are used for the design, analysis and verification of PCBs. Further, System Integration solutions aid in designing and analyzing systems as well as verifying system functionality.

Cadence reported revenues of $2.34 billion in 2019.

The major product lines are as follows:

Functional verification products (23% of total 2019 revenues) comprise four primary verification engines – JasperGold formal verification platform, Xcelium parallel simulation platform, Palladium Z1 enterprise emulation platform and Protium S1 FPGA-based prototyping platform.

Digital IC Design and Signoff (30%) offerings include Genus synthesis, Stratus high-level synthesis, Joules RTL power and Modus test solutions. Innovus implementation system is the company's physical implementation offering. Tempus timing and Voltus power analysis, Quantus QRC extraction solutions, Physical Verification System and DFM are the signoff solutions.

Custom IC design (25%) includes the Virtuoso custom design platform. Virtuoso Advanced Node, Virtuoso Electrically Aware Design (EAD) and Spectre XPS FastSPICE Simulator are new products in the segment.

System Interconnect and Analysis segment (9%) offers Allegro system interconnect design platform, Sigrity analysis tools and OrCAD solution.

Under the IP segment (13%), Cadence offers Tensilica DSPs, vertically targeted subsystems for audio/voice, baseband and vision/imaging applications, controllers and physical interfaces (PHYs) for standard protocols and analog IP.

In 2019, the company derived 46% of revenues from Americas, while the balance 54% came from its international operations.

Reasons To Buy:

- Expanding product portfolio as well as frequent product launches is a key catalyst. The company is focusing on providing end-to-end solutions, which rapidly reduces the time required to introduce a semiconductor product in the market. The company is experiencing strong demand for its software – particularly verification and digital design products – from customers providing datacenter servers, networking products and smartphones that continuous to invest in new design concepts and projects. We also believe that increasing investments on emerging trends like Internet-of-things (IoT), augmented and virtual reality (AR/VR) and autonomous vehicle sub-systems presents significant growth opportunity for the company in the long haul.

Cadence is well positioned for growth driven by expanding product portfolio, strong demand for products from existing and emerging markets, and solid recurring revenues that enhances visibility.

- Cadence ended 2019 with backlog of $3.6 billion. The company continues to invest heavily in verification and digital design products, which is helping it to launch products that address the ever-growing needs of electronics and semiconductor companies. We believe that the launch of new products like Protium X1, Spectre X, Smart JasperGold and Tensilica Vision Q7 and Xcelium, which have already been selected by new customers like NVIDIA, Xilinx and Mellanox, will boost top-line growth. Solid adoption continues for Palladium Z1 on the back of strong demand for growing hardware capacity is notable.

- We believe that increasing spending by enterprises on emerging categories like Internet-of-Things (IoT) and AR/VR presents significant growth opportunity for Cadence. Market research firm IDC estimates global IoT spending to witness a CAGR of 11.3% between 2020 and 2024. Moreover, the firm estimates AR/VR spending to see a CAGR of 76.9% over 2019-2024. This presents significant growth opportunity for semiconductor chip makers as well as electronics sensor developers. We note that these two industries comprise the majority of customer base for Cadence. We believe that the company's expanding product portfolio will help it to win frequent orders as well as new customers from these emerging markets going ahead.Autonomous vehicle is a notable growth market for Cadence. The company has won orders from well-known companies like Intel's MobilEye and Infineon who are developing advanced driver assistance systems (ADAS) related technologies. The company has placed a dedicated team to look after automotive ventures, which reflects the growing importance of the end-market for Cadence. This is a prudent step considering the significant growth prospect of the ADAS market, which is estimated to be worth $83 billion by 2030, according to data from MarketAndMarkets.

- We also note that the company is focused on developing its footprint in the aerospace and defense segment. Apart from having a dedicated team for the sector, Cadence has expanded systems business through partnerships with established sector players like Northrop Grumman, BAE Systems and GE Aviation. We believe that these partnerships will help in driving the company's market position in the long run.

- Cadence had a net cash position of $843.6 million as of Jun 27, 2020 compared with $600.1 million as of Mar 28, 2020. During the second quarter, the company generated $345.1 million in cash from operations, up from $217.7 million reported in the previous quarter. The increasing liquidity and cash flow trend reflect that the company is making investments in the right direction. Moreover, total debt to total capital of 23.6% is much lower than the industry's figure of 43.7%. Further, times interest earned of 27.5X is much higher than the industry's figure of 17.6X. The strong cash balance can aid the company to pursue strategic acquisitions and other investments in growth initiatives. Moreover, strong cash flows help Cadence to continue shareholder friendly initiatives of share repurchase. Notably, lower number of outstanding shares helps the bottom line. In the second quarter, the company repurchased shares worth approximately $75 million and expects to buyback an additional $75 million of shares in the third quarter.

Reasons To Sell:

Reducing semiconductor budgets on EDA software, intensifying competition, headwinds pertaining to currency exposure and high indebtedness are major headwinds for Cadence.

- Semiconductor research & development budgets have contracted in recent years and may continue reducing the amount spent on EDA software. Moreover, the EDA industry faces pricing problems from direct discounting, extension of payment terms, and/or the lowered value of a deal. Further, the coronavirus outbreak has led to global supply chain disruptions and shutdown of factories, which is impacting the demand for EDA software and tools. These are significant headwinds for Cadence in the long haul.
- Cadence faces stiff competition from other EDA companies like Synopsys, ANSYS and Siemens AG (post the acquisition of Mentor Graphics). Intensifying competition negatively impacts pricing power, which keeps margins under pressure. Moreover, in order to remain competitive the company has increased spending on research & development (particularly on verification and digital design products) in the last 12-months, which is likely to limit operating margin expansion.
- The company generates a significant portion of its revenues (54% in 2019) from the International market. Hence, we expect adverse foreign currency exchange rates to impede revenue growth in the near term owing to fluctuation in the U.S. dollar as against the Japanese Yen, Euro and other foreign currencies.
- Acquisitions have also affected its balance sheet, as a high level of goodwill and intangible assets adds to the risk of investing in the company. Notably, the company's goodwill and intangible assets totaled $1.021 billion or 25.5% of total assets as of Jun 27, 2020.
- We note that the Cadence currently has a trailing 12-month Price/Book (P/B) ratio of 13.92X. This level compares unfavorably to some extent with what the industry saw over the last year. Additionally, the ratio is higher than the average level of 12.09X and is in line with the high end of the valuation range in this period. Consequently, valuation looks slightly stretched from a P/B perspective.

Last Earnings Report

Cadence Tops Q2 Earnings Estimates, Raises 2020 View

Quarter Ending	06/2020
Report Date	Jul 20, 2020
Sales Surprise	7.75%
EPS Surprise	26.92%
Quarterly EPS	0.66
Annual EPS (TTM)	2.34

Cadence Design Systems, Inc. reported second-quarter 2020 non-GAAP earnings of 66 cents per share, which beat the Zacks Consensus Estimate by 26.9%. Also, the bottom line increased 15.8% year over year.

Revenues of $638.4 million increased 10% on a year-over-year basis.

The upside was driven by robust adoption of the company's digital & signoff and IP solutions as well as expanding customer base. Moreover, better-than-expected demand for Tensilica products and the Cadence Verification Suite that includes Xcelium, Palladium, Jasper, and Protium drove revenues.

Quarter Details

Product & Maintenance revenues (94.2% of total revenues) of $601.4 million increased 9.7% year over year.

Services revenues (5.8%) of $37.1 million increased 14.4% from the year-ago quarter's reported figure.

Geographically, Americas, China, Other Asia, Europe, Middle East and Africa (EMEA), and Japan contributed 44%, 12%, 19%, 18% and 7%, respectively, to total revenues.

Product-wise, Functional Verification, Digital IC & Signoff, Custom IC Design & Simulation, Systems Interconnect & Analysis, and IP contributed 24%, 28%, 24%, 10% and 14% to total revenues, respectively.

Cadence Digital Full Flow saw robust traction in the second quarter, with 10 new full flow wins. Cadence also expanded its partnership with Micron (MU) during the quarter to ramp up the development of the latter's next-gen products. Moreover, the Cadence Verification Suite witnessed solid adoption in the mobile, networking and medical end markets.

Meanwhile, total non-GAAP costs and expenses increased 7.5% year over year to $414.6 million.

Non-GAAP operating margin was 35%, which expanded 100 basis points (bps) on a year-over-year basis.

Balance Sheet & Cash Flow

As of Jun 27, 2020, the company had cash and cash equivalents of approximately $1.19 billion compared with $946.3 million as on Mar 28.

Moreover, the company's long-term debt came in at $346.4 million as of Jun 27, 2020, compared with $346.2 million as of Mar 28.

The company generated operating cash flow of $345.1 million in the reported quarter compared with prior-quarter's figure of $217.7 million.

The company repurchased shares worth approximately $75 million in the second quarter.

Q3 Guidance

For third-quarter 2020, Cadence expects total revenues in the range of $630-$650 million.

Management guided non-GAAP earnings in the range of 59-61 cents per share.

Non-GAAP operating margin for third-quarter 2020 is expected at 32%.

Raises 2020 View

Despite taking into account the export limitations for certain Chinese customers as well uncertainties stemming from the COVID-19 pandemic, Cadence raised its guidance for 2020 due to strong continued demand for the company's innovative solutions.

Notably, revenues are now projected in the range of $2.585-$2.615 billion compared with the previous range of $2.545-$2.585 billion.

Non-GAAP earnings are now expected in the range of $2.50-$2.56 per share compared with the previous range of $2.40-$2.50.

Further, non-GAAP operating margin for 2020 is now expected to be 33%. Earlier, it was expected in the range of 32-33%. Operating cash flow is anticipated in the range of $810-$840 compared with the previous range of $775-$825 million.

Recent News

On Aug 25, Cadence rolled out its full flow and custom tool suite for TSMC 3 nanometer (nm) process technology.

On Aug 24, Cadence unveiled UltraLink D2D PHY IP for TSMC's 7 nm FinFET (Fin Field Effect Transistor) process technology.

On Aug 18, Cadence announced that Nuvoton selected its enterprise emulation verification platform, Palladium Z1, to ramp up the designing and development of its microcontroller units.

On Jul 23, Cadence announced that its millimeter wave (mmWave) reference flow secured certification for United Microelectronics Corporation's 28HPC+ process technology. This will aid customers to access integrated RF design flow solution and reduce time to market.

On Jun 15, Cadence announced its collaboration with TSMC and Microsoft to aid customers accelerate the timing signoff by leveraging TSMC technology on the Microsoft Azure cloud with the Cadence CloudBurst Platform.

On Jun 9, Cadence announced that its digital full flow solution has been successfully used by Efinix to complete the first wave of its Trion family of field programmable gate arrays (FPGAs), which are used in edge compute, AI/ML and vision processing applications.

On Jun 1, Cadence announced that the Cadence Clarity 3D Solver has been adopted by Ambarella for the design of next-generation AI vision processors.

Valuation

Cadence Design Systems' shares have increased 62.4% in the year-to-date period and 68.6% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Computer & Technology sector are up 37.7% and 28.6% in the year-to-date period, respectively. Over the past year, the Zacks sub-industry and sector are up 54.5% and 46.6%, respectively.
The S&P 500 index is up 8.1% in the year-to-date period and 20.9% in the past year.

The stock is currently trading at 42.09X forward 12-month earnings, which compares to 35.19X for the Zacks sub-industry, 27.86X for the Zacks sector and 23.37X for the S&P 500 index.

Over the past five years, the stock has traded as high as 60.48X and as low as 23.78X, with a 5-year median of 39.74X. Our Neutral recommendation indicates that the stock will perform in line with the market. Our $118 price target reflects 44.05X forward 12-month earnings.

The table below shows summary valuation data for CDNS

Valuation Multiples - CDNS

		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	42.06	35.19	27.86	23.37
	5-Year High	60.48	35.19	27.86	23.37
	5-Year Low	23.78	18.62	16.72	15.25
	5-Year Median	39.74	25.13	19.6	17.58
P/S F12M	Current	11.59	8.16	4.34	3.81
	5-Year High	11.59	8.16	4.34	3.81
	5-Year Low	3.14	3.88	2.32	2.53
	5-Year Median	5.52	5.63	3.14	3.05
EV/Sales TTM	Current	12.55	9.1	5.05	3.42
	5-Year High	12.55	9.1	5.05	3.46
	5-Year Low	3.05	3.26	2.59	2.15
	5-Year Median	5.79	5.85	3.64	2.88

As of 08/26/2020

Industry Analysis **Zacks Industry Rank:** Top 25% (64 out of 252)

Top Peers

Company (Ticker)	Rec	Rank
Aspen Technology, Inc. **(AZPN)**	Outperform	1
Autodesk, Inc. **(ADSK)**	Neutral	2
ANSYS, Inc. **(ANSS)**	Neutral	2
Citrix Systems, Inc. **(CTXS)**	Neutral	3
Konami Corp. **(KNMCY)**	Neutral	3
Nuance Communications, Inc. **(NUAN)**	Neutral	3
Open Text Corporation **(OTEX)**	Neutral	4
Synopsys, Inc. **(SNPS)**	Neutral	3

Industry Comparison Industry: Computer - Software

Industry Peers

	CDNS	X Industry	S&P 500	KNMCY	NUAN	OTEX
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	2	-	-	3	3	4
VGM Score	D	-	-	C	D	A
Market Cap	31.41 B	1.75 B	23.69 B	5.06 B	8.49 B	12.31 B
# of Analysts	6	3	14	2	5	3
Dividend Yield	0.00%	0.00%	1.65%	0.22%	0.42%	1.54%
Value Score	D	-	-	B	D	C
Cash/Price	0.04	0.07	0.07	0.25	0.04	0.14
EV/EBITDA	49.18	17.85	13.37	NA	32.21	13.55
PEG Ratio	3.48	2.57	3.04	NA	7.32	NA
Price/Book (P/B)	13.92	6.88	3.17	2.04	7.36	3.07
Price/Cash Flow (P/CF)	28.34	23.52	12.78	11.82	22.66	9.34
P/E (F1)	43.35	35.59	21.63	24.52	36.60	15.16
Price/Sales (P/S)	12.90	4.87	2.50	2.10	5.32	3.96
Earnings Yield	2.26%	2.63%	4.44%	4.07%	2.73%	6.60%
Debt/Equity	0.15	0.24	0.75	0.04	1.42	0.89
Cash Flow ($/share)	3.98	1.17	6.94	3.16	1.33	4.85
Growth Score	B	-	-	C	D	A
Hist. EPS Growth (3-5 yrs)	33.78%	9.39%	10.41%	25.75%	-3.97%	-6.70%
Proj. EPS Growth (F1/F0)	15.76%	10.00%	-4.92%	14.66%	-27.89%	3.35%
Curr. Cash Flow Growth	138.95%	6.56%	5.22%	-1.62%	-36.12%	73.17%
Hist. Cash Flow Growth (3-5 yrs)	24.55%	9.63%	8.50%	10.65%	-0.89%	14.62%
Current Ratio	1.42	1.51	1.34	1.94	1.28	1.25
Debt/Capital	13.31%	28.91%	44.18%	3.53%	58.63%	47.22%
Net Margin	41.74%	6.61%	10.25%	7.61%	10.02%	7.53%
Return on Equity	50.84%	10.54%	14.66%	7.32%	12.30%	10.54%
Sales/Assets	0.71	0.60	0.50	0.64	0.39	0.33
Proj. Sales Growth (F1/F0)	11.49%	2.07%	-1.45%	-14.89%	-21.61%	1.35%
Momentum Score	D	-	-	D	C	C
Daily Price Chg	1.27%	0.00%	-0.18%	3.29%	2.89%	2.10%
1 Week Price Chg	2.38%	0.61%	-1.45%	0.00%	-0.84%	1.81%
4 Week Price Chg	6.32%	4.02%	2.10%	16.44%	9.12%	0.71%
12 Week Price Chg	21.20%	7.48%	3.61%	4.47%	31.32%	3.90%
52 Week Price Chg	68.62%	34.42%	3.61%	-13.85%	81.24%	17.55%
20 Day Average Volume	1,344,023	132,381	1,883,291	209	3,396,976	576,872
(F1) EPS Est 1 week change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(F1) EPS Est 4 week change	0.00%	0.00%	0.93%	0.00%	5.00%	-1.02%
(F1) EPS Est 12 week change	16.77%	2.64%	3.41%	-21.39%	5.78%	-1.02%
(Q1) EPS Est Mthly Chg	0.00%	0.00%	0.00%	NA	-36.17%	NA

Zacks Stock Rating System

We offer two rating systems that take into account investors' holding horizons: Zacks Rank and Zacks Recommendation. Each provides valuable insights into the future profitability of the stock and can be used separately or in combination with each other depending on your investment style.

Zacks Recommendation

The Zacks Recommendation aims to predict performance over the next 6 to 12 months. The foundation for the quantitatively determined Zacks Recommendation is trends in the company's estimate revisions and earnings outlook. The Zacks Recommendation is broken down into 3 Levels; Outperform, Neutral and Underperform. Unlike many Wall Street firms, we have an excellent balance between the number of Outperform and Neutral recommendations. Our team of 70 analysts are fully versed in the benefits of earnings estimate revisions and how that is harnessed through the Zacks quantitative rating system. But we have given our analysts the ability to override the Zacks Recommendation for the 1200 stocks that they follow. The reason for the analyst over-rides is that there are often factors such as valuation, industry conditions and management effectiveness that a trained investment professional can spot better than a quantitative model.

Zacks Rank

The Zacks Rank is our short-term rating system that is most effective over the one- to three-month holding horizon. The underlying driver for the quantitatively-determined Zacks Rank is the same as the Zacks Recommendation, and reflects trends in earnings estimate revisions.

Zacks Style Scores

The Zacks Style Score is as a complementary indicator to the Zacks rating system, giving investors a way to focus on the highest rated stocks that best fit their own stock picking preferences.

Academic research has proven that stocks with the best Value, Growth and Momentum characteristics outperform the market. The Zacks Style Scores rate stocks on each of these individual styles and assigns a rating of A, B, C, D and F. We also produce the VGM Score (V for Value, G for Growth and M for Momentum), which combines the weighted average of the individual Style Scores into one score. This is perfectly suited for those who want their stocks to have the best scores across the board.

Value Score	D
Growth Score	B
Momentum Score	D
VGM Score	D

As an investor, you want to buy stocks with the highest probability of success. That means buying stocks with a Zacks Recommendation of Outperform, which also has a Style Score of an A or a B.

Disclosures

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