

CADENCE REPORTS FOURTH QUARTER AND FISCAL YEAR 2017

CADENCE DESIGN SYSTEMS, INC.

CFO COMMENTARY

January 31, 2018

Q4 2017 Key Takeaways

- Strong, consistent financial results for Q4 with key metrics meeting or exceeding expectations.
- Double digit revenue growth for digital, custom/analog and IP product groups for fiscal 2017.
- Repurchased \$50 million of Cadence shares in Q4.

FY 2018 Outlook *

(ASC Topic 606 Basis)

- Revenue: \$2.015 - \$2.055 billion.
- GAAP operating margin: approximately 15%.
- Non-GAAP operating margin: approximately 27%.
- GAAP EPS: \$0.80 - \$0.90.
- Non-GAAP EPS \$1.50 - \$1.60.
- Operating cash flow: \$480 - \$530 million.
- Expect to repurchase approximately \$50 million of Cadence shares per quarter in 2018.

Q1 2018 Outlook *

(ASC Topic 606 Basis)

- Revenue : \$500 - \$510 million.
- GAAP operating margin: approximately 14%.
- Non-GAAP operating margin: approximately 26%.
- GAAP EPS: \$0.20 - \$0.22.
- Non-GAAP EPS: \$0.36 - \$0.38.

FY 2018 Implied Outlook *

(ASC Topic 605 Basis)

- Revenue: \$2.055 - \$2.095 billion.
- GAAP operating margin: approximately 16.5%.
- Non-GAAP operating margin: approximately 28.4%.
- GAAP EPS: \$0.93 - \$1.03.
- Non-GAAP EPS: \$1.62 - \$1.72.
- Operating cash flow: \$480 - \$530 million.
- Expect to repurchase approximately \$50 million of Cadence shares per quarter in 2018.

Q4 2017 KEY METRICS

- Revenue \$502 million, +7% y/y.
- GAAP operating margin 16%.
- Non-GAAP operating margin 30%.
- GAAP EPS \$(0.05).
- Non-GAAP EPS \$0.39, +15% y/y.
- Operating cash flow \$127 million.

FY 2017 KEY METRICS

- Revenue \$1.943 billion, +7% y/y.
- GAAP operating margin 17%.
- Non-GAAP operating margin 27.5%.
- GAAP EPS \$0.73.
- Non-GAAP EPS \$1.40, +16% y/y.
- Operating cash flow \$471 million.

* As required by the new standard, Cadence will report revenue under both methods for the 2018 transition year. Cadence expects the difference between revenue under the new and old standard to gradually decline over time and be de minimis within two years.

Financial Results Webcast

Our Q4 2018 financial results webcast will begin January 31, 2018 at 2:00 p.m. (Pacific). The webcast may be accessed at cadence.com/cadence/investor_relations. An archive of the webcast will be available on January 31, 2018 until 5:00 p.m. (Pacific) on March 16, 2018.

Fiscal Year 2018 Financial Outlook

	ASC 605 FY 2017A	ASC 605 FY 2018E	ASC 606 FY 2018E
Revenue Recognized Over Time	~90%	~90%	~90%
Total Revenue (\$ Billion)	\$1.943	\$2.055 - \$2.095	\$2.015 - \$2.055
Y/Y Growth	7%	6% - 8%	
Revenue from Beginning Backlog	~70%	~70%	~70%
GAAP Operating Margin	16.7%	~16.5%	~15%
Non-GAAP Operating Margin	27.5%	~28.4%	~27%
GAAP Other Income & Exp (\$ Million)	\$(8.9)	(\$30) - (\$20)	(\$30) - (\$20)
Non-GAAP Other Income & Exp (\$ Million)	\$(24.6)	(\$30) - (\$20)	(\$30) - (\$20)
GAAP Tax Rate	35%	12% - 13%	12% - 13%
Non-GAAP Tax Rate	23%	16%	16%
Weighted Average Diluted Shares Outstanding (Million)	280.2	280 - 286	280 - 286
GAAP EPS	\$0.73	\$0.93 - \$1.03	\$0.80 - \$0.90
Y/Y Growth	4%	27% - 41%	
Non-GAAP EPS	\$1.40	\$1.62 - \$1.72	\$1.50 - \$1.60
Y/Y Growth	16%	16% - 23%	
Cash Flow from Operations (\$ Million)	\$470.7	\$480 - \$530	\$480 - \$530
DSO	36	~35	~40
Capital Expenditures (\$ Million)	\$57.9	~\$60	~\$60

First Quarter 2018 Financial Outlook

	ASC 605 Q1 2017A	ASC 605 Q4 2017A	ASC 606 Q1 2018E
Total Revenue (\$ Million)	\$476.9	\$501.7	\$500 - \$510
Q/Q Growth	2%	3%	
Y/Y Growth	6%	7%	
GAAP Operating Margin	17%	16%	~14%
Non-GAAP Operating Margin	26%	30%	~26%
GAAP EPS	\$0.25	\$(0.05)	\$0.20 - \$0.22
Q/Q Growth	79%	(117)%	
Y/Y Growth	47%	(136)%	
Non-GAAP EPS	\$0.32	\$0.39	\$0.36 - \$0.38
Q/Q Growth	(6)%	11%	
Y/Y Growth	14%	15%	

Fourth Quarter and Fiscal Year Financial Results

Backlog

(In Billions)	2014	2015	2016	2017
Backlog	\$2.1	\$2.3	\$2.5	\$2.7

Revenue

(In Thousands)	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
Product & Maintenance	\$436,694	\$451,407	\$443,847	\$451,229	\$467,504
Services	32,286	25,504	35,154	34,169	34,218
Total Revenue	\$468,980	\$476,911	\$479,001	\$485,398	\$501,722
Y/Y Growth	6%	6%	6%	9%	7%

(In Thousands)	2014	2015	2016	2017
Product & Maintenance	\$1,479,151	\$1,578,944	\$1,683,771	\$1,813,987
Services	101,781	123,147	132,312	129,045
Total Revenue	\$1,580,932	\$1,702,091	\$1,816,083	\$1,943,032
Y/Y Growth	8%	8%	7%	7%

Revenue Mix by Geography

(% of Total Revenue)	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
Americas	48%	45%	45%	45%	44%
Asia	25%	26%	28%	27%	28%
Europe, Middle East and Africa	19%	20%	19%	19%	20%
Japan	8%	9%	8%	9%	8%
Total	100%	100%	100%	100%	100%

(% of Total Revenue)	2014	2015	2016	2017
Americas	45%	47%	48%	44%
Asia	23%	24%	24%	27%
Europe, Middle East and Africa	21%	19%	19%	20%
Japan	11%	10%	9%	9%
Total	100%	100%	100%	100%

Revenue Mix by Product Group

(% of Total Revenue)	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
Functional Verification	25%	23%	23%	21%	23%
Digital IC Design and Signoff	30%	29%	30%	30%	29%
Custom IC Design	25%	26%	26%	28%	26%
System Interconnect and Analysis	9%	10%	10%	10%	10%
IP	11%	12%	11%	11%	12%
Total	100%	100%	100%	100%	100%

(% of Total Revenue)	2014	2015	2016	2017
Functional Verification	22%	23%	25%	22%
Digital IC Design and Signoff	29%	28%	29%	29%
Custom IC Design	27%	26%	25%	27%
System Interconnect and Analysis	11%	11%	10%	10%
IP	11%	12%	11%	12%
Total	100%	100%	100%	100%

Total Costs and Expenses

(In Thousands)	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
Total GAAP Costs & Expenses	\$415,863	\$397,309	\$396,311	\$405,013	\$420,444
Y/Y Growth	16%	2%	3%	7%	1%
Total Non-GAAP Costs & Expenses	\$343,839	\$354,601	\$350,647	\$351,787	\$351,503
Y/Y Growth	9%	6%	4%	6%	2%

(In Thousands)	2014	2015	2016	2017
Total GAAP Costs & Expenses	\$1,374,288	\$1,416,661	\$1,571,182	\$1,619,077
Y/Y Growth	8%	3%	11%	3%
Total Non-GAAP Costs & Expenses	\$1,180,469	\$1,247,039	\$1,347,519	\$1,408,538
Y/Y Growth	7%	6%	8%	5%

Operating Margin

	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
GAAP Operating Margin	11.3%	16.7%	17.3%	16.6%	16.2%
Non-GAAP Operating Margin	26.7%	25.6%	26.8%	27.5%	29.9%

	2014	2015	2016	2017
GAAP Operating Margin	13.1%	16.8%	13.5%	16.7%
Non-GAAP Operating Margin	25.3%	26.7%	25.8%	27.5%

Earnings (Loss) Per Share

	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
GAAP Net Income (Loss) Per Share	\$0.14	\$0.25	\$0.25	\$0.29	\$(0.05)
Y/Y Growth	(46)%	47%	47%	26%	(136)%
Non-GAAP Net Income Per Share	\$0.34	\$0.32	\$0.34	\$0.35	\$0.39
Y/Y Growth	10%	14%	17%	17%	15%

	2014	2015	2016	2017
GAAP Net Income Per Share	\$0.52	\$0.81	\$0.70	\$0.73
Y/Y Growth	(7)%	56%	(14)%	4%
Non-GAAP Net Income Per Share	\$0.94	\$1.09	\$1.21	\$1.40
Y/Y Growth	9%	16%	11%	16%

Total DSO

	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
DSO	33	37	31	34	36

Balance Sheet and Cash Review

Cash Flow from Operating Activities

<i>(In Thousands)</i>	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
Net Cash from Operating Activities	\$196,862	\$92,430	\$162,140	\$89,314	\$126,856

<i>(In Thousands)</i>	2014	2015	2016	2017
Net Cash from Operating Activities	\$316,722	\$378,200	\$444,879	\$470,740

Capital Expenditures

<i>(In Thousands)</i>	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
Capital Expenditures	\$11,260	\$14,843	\$12,645	\$12,188	\$18,225

<i>(In Thousands)</i>	2014	2015	2016	2017
Capital Expenditures	\$39,810	\$44,808	\$53,712	\$57,901

Cash and Short-Term Investments

<i>(In Thousands)</i>	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
Cash and Short-Term Investments	\$468,289	\$547,607	\$659,227	\$682,419	\$692,542

- Approximately 20 percent of our cash and short-term investments were in the U.S. at quarter-end.

<i>(In Thousands)</i>	2014	2015	2016	2017
Cash and Short-Term Investments	\$1,022,606	\$711,184	\$468,289	\$692,542

Stock Repurchase

<i>(In Thousands, Except Share Price)</i>	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
Share Repurchase	\$240,093	—	—	\$50,013	\$50,012
Number of Shares	9,315	—	—	1,331	1,164
Average Share Price	\$25.77	—	—	\$37.58	\$42.97

<i>(In Thousands, Except Share Price)</i>	2014	2015	2016	2017
Share Repurchase	\$100,117	\$333,189	\$960,289	\$100,025
Number of Shares	5,856	16,255	40,493	2,495
Average Share Price	\$17.10	\$20.50	\$23.71	\$40.09

Employees

	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
Headcount	7,094	7,101	7,190	7,233	7,214

	2014	2015	2016	2017
Headcount	6,106	6,664	7,094	7,214

Forward Looking Statements

The statements in this CFO Commentary contain forward-looking statements based on current expectations or beliefs and preliminary assumptions about future events that are subject to factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. These forward-looking statements are subject to a number of risks, uncertainties and other factors, many of which are outside Cadence's control, including, among others: (i) Cadence's ability to compete successfully in the electronic design automation product and the commercial electronic design and methodology services industries; (ii) the success of Cadence's efforts to improve operational efficiency and growth; (iii) the mix of products and services sold and the timing of significant orders for Cadence's products; (iv) change in customer demands, including those resulting from consolidation among Cadence's customers and the possibility that the restructurings and other efforts to improve operational efficiency of Cadence's customers could result in delays in purchases of Cadence's products and services; (v) economic and industry conditions in regions in which Cadence does business; (vi) fluctuations in rates of exchange between the U.S. dollar and the currencies of other countries in which Cadence does business; (vii) capital expenditure requirements, legislative or regulatory requirements, changes in tax laws, interest rates and Cadence's ability to access capital and debt markets; (viii) the acquisition of other companies or technologies or the failure to successfully integrate and operate these companies or technologies Cadence acquires, including the potential inability to retain customers, key employees or vendors; (ix) the effects of Cadence's efforts to improve operational efficiency in its business, including strategic, customer and supplier relationships, and its ability to retain key employees; (x) events that affect cash flow, liquidity, reserves or settlement assumptions Cadence may take from time to time with respect to accounts receivable, taxes and tax examinations, litigation or other matters; and (xi) the effects of any litigation or other proceedings to which Cadence is or may become a party. In addition, the actual timing and amount of Cadence's repurchase of its common stock under the existing authorization will be subject to business and market conditions, corporate and regulatory requirements, acquisition opportunities and other factors.

For a detailed discussion of these and other cautionary statements related to Cadence's business, please refer to Cadence's filings with the U.S. Securities and Exchange Commission, which include Cadence's most recent reports on Form 10-K and Form 10-Q, including Cadence's future filings.

GAAP to Non-GAAP Reconciliation

Non-GAAP financial measures should not be considered as a substitute for or superior to measures of financial performance prepared in accordance with GAAP. Investors are encouraged to review the reconciliation of non-GAAP financial measures contained within this CFO Commentary with their most directly comparable GAAP financial results. Investors are also encouraged to look at the GAAP results as the best measure of financial performance. See our earnings press release issued today for further discussion of our non-GAAP financial measures, as well as the reconciliation provided in the Appendix to this CFO Commentary.

Cadence's management uses non-GAAP net income because it excludes items that are generally not directly related to the performance of the company's core business operations and therefore provides supplemental information to Cadence's management and investors regarding the performance of the business operations, facilitates comparisons to the historical operating results and allows the review of Cadence's business from the same perspective as Cadence's management, including forecasting and budgeting.

Cadence's non-GAAP net income for the fourth quarter of 2017 excludes the effect of the transition tax expense and income tax expense related to the reduction in value of the deferred tax assets caused by the U.S. corporate tax rate reduction. Cadence management believes it is useful to exclude these tax expenses since it does not expect these tax expenses to be recorded frequently.

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APPENDIX

Reconciliation of GAAP to Non-GAAP Financial Measures (Unaudited)

Reconciliation of GAAP Total Expenses to Non-GAAP Total Expenses

<i>(In Thousands)</i>	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017
GAAP total costs and expenses	\$415,863	\$397,309	\$396,311	\$405,013	\$420,444
Reconciling items to non-GAAP total costs & expenses					
Amortization of acquired intangibles	(14,474)	(14,434)	(14,704)	(13,618)	(13,741)
Stock-based compensation expense	(29,231)	(27,436)	(30,482)	(36,090)	(36,015)
Non-qualified deferred compensation expenses	(544)	(1,269)	(756)	(2,825)	(1,295)
Restructuring and other (charges) credits	(26,342)	1,788	929	55	(12,178)
Acquisition and integration-related costs	(1,433)	(1,357)	(651)	(748)	(5,712)
Non-GAAP total costs and expenses†	<u>\$343,839</u>	<u>\$354,601</u>	<u>\$350,647</u>	<u>\$351,787</u>	<u>\$351,503</u>

† The non-GAAP measures presented in the table above should not be considered a substitute for financial results and measures determined or calculated in accordance with GAAP.

Reconciliation of GAAP Operating Margin as Percent of Total Revenue to Non-GAAP Operating Margin as Percent of Total Revenue

	ASC 605 Q4 2016	ASC 605 Q1 2017	ASC 605 Q2 2017	ASC 605 Q3 2017	ASC 605 Q4 2017	ASC 606 Q1 2018E
GAAP operating margin as percent of total revenue	11%	17%	17%	17%	16%	~14%
Reconciling items to non-GAAP operating margin as a percent of total revenue						
Amortization of acquired intangibles	3%	3%	3%	3%	3%	3%
Stock-based compensation expense	6%	6%	7%	7%	7%	8%
Non-qualified deferred compensation expenses	0%	0%	0%	1%	0%	0%
Restructuring and other charges (credits)	6%	0%	0%	0%	3%	0%
Acquisition and integration-related costs	1%	0%	0%	0%	1%	1%
Non-GAAP operating margin as percent of total revenue†	<u>27%</u>	<u>26%</u>	<u>27%</u>	<u>28%</u>	<u>30%</u>	<u>~26%</u>

† The non-GAAP measures presented in the table above should not be considered a substitute for financial results and measures determined or calculated in accordance with GAAP.

	ASC 605 2016	ASC 605 2017	ASC 606 2018E
GAAP operating margin as percent of total revenue	13%	17%	~15%
Reconciling items to non-GAAP operating margin as a percent of total revenue			
Amortization of acquired intangibles	4%	3%	3%
Stock-based compensation expense	6%	7%	8%
Non-qualified deferred compensation expenses	0%	0%	0%
Restructuring and other charges	2%	1%	0%
Acquisition and integration-related costs	1%	0%	1%
Non-GAAP operating margin as percent of total revenue†	<u>26%</u>	<u>28%</u>	<u>~27%</u>

† The non-GAAP measures presented in the table above should not be considered a substitute for financial results and measures determined or calculated in accordance with GAAP.

Reconciliation of GAAP Diluted Net Income (Loss) Per Share to Non-GAAP Diluted Net Income Per Share

(In Thousands, Except Per Share Data)	ASC 605	ASC 605	ASC 605	ASC 605	ASC 605	ASC 606
	Q4 2016	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018E
Diluted net income (loss) per share on a GAAP basis	\$0.14	\$0.25	\$0.25	\$0.29	\$(0.05)	\$0.20 - \$0.22
Amortization of acquired intangibles	0.05	0.05	0.05	0.05	0.05	0.05
Stock-based compensation expense	0.10	0.10	0.11	0.13	0.13	0.14
Non-qualified deferred compensation expenses	—	—	—	0.01	—	—
Restructuring and other charges (credits)	0.09	(0.01)	—	—	0.04	—
Acquisition and integration-related costs	0.01	—	—	—	0.02	0.03
Other income or expense related to investments and non-qualified deferred compensation plan assets *	—	—	—	(0.04)	(0.01)	—
Income tax related to transition tax	—	—	—	—	0.24	—
Income tax related to tax rate change	—	—	—	—	0.09	—
Income tax effect of non-GAAP adjustments	(0.05)	(0.07)	(0.07)	(0.09)	(0.12)	(0.06)
Diluted net income per share on a non-GAAP basis †	<u>\$0.34</u>	<u>\$0.32</u>	<u>\$0.34</u>	<u>\$0.35</u>	<u>\$0.39</u>	<u>\$0.36 - \$0.38</u>
Shares used in calculation of diluted net income (loss) per share - GAAP **	278,917	277,736	279,526	281,400	273,157	
Shares used in calculation of diluted net income per share - non-GAAP **	278,917	277,736	279,526	281,400	282,206	

† The non-GAAP measures presented in the table above should not be considered a substitute for financial results and measures determined or calculated in accordance with GAAP.

* Includes, as applicable, equity in losses or income from investments, write-down of investments, gains or losses on non-qualified deferred compensation plan assets recorded in other income or expense.

** Shares used in the calculation of GAAP net income (loss) per share are expected to be the same as shares used in the calculation of non-GAAP net income per share, except when the company reports a GAAP net loss and non-GAAP net income, or GAAP net income and a non-GAAP net loss.

Reconciliation of GAAP Diluted Net Income Per Share to Non-GAAP Diluted Net Income Per Share

<i>(In Thousands, Except Per Share Data)</i>	ASC 605 2014	ASC 605 2015	ASC 605 2016	ASC 605 2017	ASC 606 2018E
Diluted net income per share on a GAAP basis	\$0.52	\$0.81	\$0.70	\$0.73	\$0.80 - \$0.90
Amortization of acquired intangibles	0.20	0.21	0.21	0.20	0.19
Stock-based compensation expense	0.27	0.30	0.37	0.46	0.59
Non-qualified deferred compensation expenses (credits)	0.01	—	0.01	0.02	—
Restructuring and other charges	0.03	0.01	0.14	0.03	—
Acquisition and integration-related costs	0.08	0.03	0.04	0.03	0.09
Special charges *	0.04	—	—	—	—
Amortization of debt discount on convertible notes	0.06	0.02	—	—	—
Other income or expense related to investments and non-qualified deferred compensation plan assets **	(0.01)	(0.01)	(0.02)	(0.05)	—
Income tax related to transition tax	—	—	—	0.24	—
Income tax related to tax rate change	—	—	—	0.09	—
Income tax effect of non-GAAP adjustments	(0.26)	(0.28)	(0.24)	(0.35)	(0.17)
Diluted net income per share on a non-GAAP basis †	<u>\$0.94</u>	<u>\$1.09</u>	<u>\$1.21</u>	<u>\$1.40</u>	<u>\$1.50 - \$1.60</u>
Shares used in calculation of diluted net income per share - GAAP ***	306,775	312,302	291,256	280,221	280 - 286M
Shares used in calculation of diluted net income per share - non-GAAP ***	306,775	312,302	291,256	280,221	280 - 286M

† The non-GAAP measures presented in the table above should not be considered a substitute for financial results and measures determined or calculated in accordance with GAAP.

* Comprised of costs related to a voluntary retirement program and executive severance costs.

** Includes, as applicable, equity in losses or income from investments, write-down of investments, gains or losses on non-qualified deferred compensation plan assets recorded in other income or expense.

*** Shares used in the calculation of GAAP net income per share are expected to be the same as shares used in the calculation of non-GAAP net income per share, except when the company reports a GAAP net loss and non-GAAP net income, or GAAP net income and a non-GAAP net loss.

Reconciliation of GAAP Total Other Income and Expense to Non-GAAP Total Other Income and Expense

(In Millions)	ASC 605 FY 2017A	ASC 606 FY 2018E
GAAP total other income and expense	\$(8.9)	\$(30) - \$(20)
Reconciling items to non-GAAP total income and expense		
Other income or expense related to investments and non-qualified deferred compensation plan assets*	(15.7)	—
Non-GAAP total other income and expense†	<u>\$(24.6)</u>	<u>\$(30) - \$(20)</u>

† The non-GAAP measures presented in the table above should not be considered a substitute for financial results and measures determined or calculated in accordance with GAAP.

* Includes, as applicable, equity in losses or income from investments, write-down of investments, gains or losses on non-qualified deferred compensation plan assets recorded in other income or expense.