

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

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of Earliest Event Reported): February 13, 2020

PDF SOLUTIONS, INC.

(Exact name of registrant as specified in its charter)

000-31311

(Commission File Number)

Delaware
(State or Other Jurisdiction of Incorporation)

25-1701361
(I.R.S. Employer Identification No.)

2858 De La Cruz Boulevard
Santa Clara, CA 95050

(Address of principal executive offices, with zip code)

(408) 280-7900

(Registrant's telephone number, including area code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.00015 par value	PDFS	The NASDAQ Stock Market LLC

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 or Rule 12b-2 of the Securities Exchange Act of 1934.

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.

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Item 2.02. Results of Operations and Financial Condition.

On February 13, 2020 PDF Solutions (the “Company”) issued a press release regarding its financial results and certain other information related to the fourth quarter and year ended December 31, 2019. The Company also posted on the Investor Relations section of its website (www.pdf.com) a management report with regard to the quarter and year ended December 31, 2019. Copies of the press release and management report are attached to this report as Exhibit 99.1 and 99.2, respectively. Information on the website is not, and will not be deemed, a part of this report or incorporated into any other filings the Company makes with the Securities and Exchange Commission.

The information in this Item 2.02, including Exhibits 99.1 and 99.2, is being furnished and shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liabilities under that Section, and shall not be deemed incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
99.1	<u>Press Release dated February 13, 2020, regarding financial results and certain other information related to the fourth quarter and year ended December 31, 2019.</u>
99.2	<u>Management Report by PDF Solutions, Inc. as of February 13, 2020.</u>

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 hereunto duly authorized.

PDF SOLUTIONS, INC.
(Registrant)

By: /s/ Christine Russell
Christine Russell
EVP, Finance, and Chief Financial Officer
(principal financial and accounting officer)

Dated: February 13, 2020

News Release

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PDF Solutions® Reports Fourth Quarter and Full Year 2019 Results

New Reporting Line Items Commence With These Results

Business Highlights

- **Analytics revenue grew by 29% for full year 2019 year-over-year**
- **Analytics accounted for 58% of total 2019 full year revenues**
- **GAAP gross margins expanded to 61% from 50% year-over-year**
- **Non-GAAP gross margins expanded to 65% from 55% year-over-year**
- **Operating activities generated \$24.6 million in cash during the full year 2019**
- **Cash and cash equivalents of \$97.6 million at the end of 2019**

SANTA CLARA, Calif. — Thursday, February 13, 2020 — PDF Solutions, Inc. (“PDF Solutions” or the “Company”) (NASDAQ: PDFS), a leading provider of differentiated data and analytics solutions to the semiconductor and electronics industries, today announced financial results for its fourth quarter and full year ended December 31, 2019. The Company also announced that it is commencing reporting revenue in two components: Analytics and Integrated Yield Ramp. Integrated Yield Ramp revenue comprises revenue from the Company’s engagements that include performance incentives based on customers’ yield achievement, such as Gainshare royalty. Analytics revenue comprises all other revenue, including from the Company’s Exensio® software platform, Design-for-Inspection™ solution (DFI™), and Characterization Vehicle® solutions. Prior periods have been reclassified to conform to the new revenue presentation.

Highlights of Fourth Quarter and Full Year 2019 Financial Results

Total revenues for the fourth quarter of 2019 were \$22.6 million, compared to \$21.9 million for the third quarter of 2019 and \$19.7 million for the fourth quarter of 2018. Analytics revenue for the fourth quarter of 2019 was \$13.5 million, compared to \$12.7 million for the third quarter of 2019 and \$10.3 million for the fourth quarter of 2018. Integrated Yield Ramp revenue for the fourth quarter of 2019 was \$9.1 million, compared to \$9.2 million for the third quarter of 2019 and \$9.4 million for the fourth quarter of 2018.

Total revenues for the full year 2019 year were essentially flat versus 2018. Analytics revenue for the full year 2019 grew by 29% compared to 2018, while Integrated Yield Ramp revenue for the full year declined by 24% compared to 2018. For the fourth quarter and the full year 2019, Analytics revenue comprised 60% and 58% of total revenues, respectively.

PDF Solutions® Reports Fourth Quarter and Full Year 2019 Results

Fourth quarter 2019 GAAP gross margin of 60% showed an improvement from 51% in the fourth quarter of 2018. GAAP gross margin for the full year 2019 and 2018 was 61% and 50%, respectively. Non-GAAP gross margin for the fourth quarter of 2019 and 2018 was 64% and 55%, respectively. Non-GAAP gross margin for the full year 2019 and 2018 was 65% and 55%, respectively.

On a GAAP basis, net loss for the fourth quarter of 2019 was \$1.3 million, or (\$0.04) per basic and diluted share, compared to net loss of \$0.7 million, or (\$0.02) per basic and diluted share, for the third quarter of 2019, and compared to net loss of \$3.1 million, or (\$0.10) per basic and diluted share, for the fourth quarter of 2018. On a GAAP basis, net loss for the full year 2019 was \$5.4 million, or (\$0.17) per basic and diluted share, compared to net loss of \$7.7 million, or (\$0.24) per basic and diluted share, for the full year 2018.

Non-GAAP net income for the fourth quarter of 2019 was \$1.1 million, or \$0.03 per diluted share, compared to net income of \$1.6 million, or \$0.05 per diluted share, for the third quarter of 2019, and compared to net loss of \$0.4 million, or (\$0.01) per diluted share, for the fourth quarter of 2018. Non-GAAP net income for the full year 2019, was \$4.5 million, or \$0.14 per diluted share, compared to non-GAAP net income of \$2.8 million, or \$0.09 per diluted share, for the full year 2018.

Cash and cash equivalents at December 31, 2019 were \$97.6 million, compared to \$96.1 million at December 31, 2018, an increase of \$1.5 million. Operating activities generated \$24.6 million in cash during the year ended December 31, 2019, in part due to the collection of a significant amount of long-outstanding accounts receivables during the third quarter of 2019.

Conference Call

As previously announced, PDF Solutions will discuss these results on a live conference call beginning at 2:00 p.m. Pacific Time/5:00 p.m. Eastern Time today. The call will be simultaneously web cast on PDF Solutions' website at <http://ir.pdf.com/webcasts>. A replay of the web cast will be available at the same website address beginning approximately two hours after completion of the live call. A copy of this press release, including the disclosure and reconciliation of certain non-GAAP financial measures to the comparable GAAP measures, which non-GAAP measures may be used periodically by PDF Solutions' management when discussing financial results with investors and analysts, will also be available on PDF Solutions' website at <http://www.pdf.com/press-releases> following the date of this release.

Fourth Quarter and Full Year 2019 Financial Commentary Available Online

A Management Report reviewing the Company's fourth quarter and full year 2019 financial results will be furnished to the SEC on Form 8-K and published on the Company's website at <http://ir.pdf.com/financial-reports>. Analysts and investors are encouraged to review this commentary prior to participating in the conference call webcast.

Information Regarding Use of Non-GAAP Financial Measures

In addition to providing results that are determined in accordance with Generally Accepted Accounting Principles in the United States of America (GAAP), PDF Solutions also provides certain non-GAAP financial measures. Non-GAAP net income (loss) excludes the effects of non-recurring items (including adjustment to contingent consideration related to acquisition, write-down in value of property and equipment, restructuring charges and severance payments), stock-based compensation expense, amortization of acquired technology and other acquired intangible assets, and their related income tax effects, as applicable, as well as adjustments for the non-cash portion of income taxes. These non-GAAP financial measures are used by management internally to measure the Company's profitability and performance. PDF Solutions' management believes that these non-GAAP measures provide useful supplemental information to investors regarding the Company's ongoing operations in light of the fact that none of these categories of expense has a current effect on the future uses of cash (with the exception of certain non-recurring items) nor do they impact the generation of current or future revenues. These non-GAAP results should not be considered an alternative to, or a substitute for, GAAP financial information, and may differ from similarly titled non-GAAP measures used by other companies. In particular, these non-GAAP financial measures are not a substitute for GAAP measures of income or loss as a measure of performance, or to cash flows from operating, investing and financing activities as a measure of liquidity. Since management uses these non-GAAP financial measures internally to measure profitability and performance, PDF Solutions has included these non-GAAP measures to give investors an opportunity to see the Company's financial results as viewed by management. A reconciliation of the comparable GAAP financial measures to the non-GAAP financial measures is provided at the end of the Company's financial statements presented below.

Forward-Looking Statements

The statements planned to be made on the planned conference call regarding the Company's future expected business performance and financial results are forward looking and are subject to future events and circumstances. Actual results could differ materially from those expressed in these forward-looking statements. Risks and uncertainties that could cause results to differ materially include risks associated with: customers' production volumes under contracts that provide Gainshare royalties, cost and schedule of new product development; continued adoption of the Company's solutions by new and existing customers; project milestones or delays and performance criteria achieved; the provision of technology and services prior to the execution of a final contract, the potential impact of the coronavirus on our operations in China or demand for our products by customers in China; and other risks set forth in PDF Solutions' periodic public filings with the Securities and Exchange Commission, including, without limitation, its Annual Reports on Form 10-K, most recently filed for the year ended December 31, 2018, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K and amendments to such reports. The forward-looking statements made in the conference call are made as of the date hereof, and PDF Solutions does not assume any obligation to update such statements nor the reasons why actual results could differ materially from those projected in such statements. The Company has not filed its Form 10-K for the year ended December 31, 2019. As a result, all financial results described in this earnings release should be considered preliminary, and are subject to change to reflect the completion of our audit and any necessary adjustments or changes in accounting estimates that are identified prior to the time the Company files the Form 10-K.

About PDF Solutions

PDF Solutions (NASDAQ: PDFS) offers an end-to-end analytics platform that empowers engineers and data scientists across the semiconductor ecosystem to rapidly improve the yield, quality, and profitability of their products. By combining industry-leading data analytics and professional services with exclusive, differentiated product data generated during the manufacturing process, PDF Solutions is delivering on the promise of Industry 4.0 today by transforming how the ecosystem collects, analyzes, and shares data. Key Fortune 500 organizations around the world rely on PDF Solutions to remove the data barriers that encumber and constrain new product introductions and to deliver the machine learning insights that drive efficient and profitable high-volume manufacturing.

Headquartered in Santa Clara, California, PDF Solutions also operates worldwide in Canada, China, France, Germany, Italy, Japan, Korea, and Taiwan. For the Company's latest news and information, visit <http://www.pdf.com/>.

Characterization Vehicle, Design-for-Inspection, DFI, Exensio, PDF Solutions, and the PDF Solutions logo are trademarks or registered trademarks of PDF Solutions, Inc. or its subsidiaries.

PDF SOLUTIONS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)
(In thousands)

	December 31,	
	2019	2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 97,605	\$ 96,089
Accounts receivable, net	40,651	51,570
Prepaid expenses and other current assets	9,320	9,562
Total current assets	147,576	157,221
Property and equipment, net	40,798	35,681
Operating lease right-of-use assets, net	7,609	—
Goodwill	2,293	1,923
Intangible assets, net	6,221	5,064
Deferred tax assets	25,327	19,044
Other non-current assets	9,720	6,972
Total assets	<u>\$ 239,544</u>	<u>\$ 225,905</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 7,636	\$ 2,454
Accrued compensation and related benefits	5,072	4,727
Accrued and other current liabilities	1,665	3,235
Operating lease liabilities - current portion	1,867	—
Deferred revenues - current portion	10,639	8,477
Billings in excess of recognized revenues	1,117	635
Total current liabilities	27,996	19,528
Long-term income taxes payable	5,368	3,751
Non-current operating lease liabilities	7,677	—
Other non-current liabilities	2,346	2,831
Total liabilities	43,387	26,110
Stockholders' equity:		
Common stock and additional paid-in-capital	325,202	310,665
Treasury stock at cost	(91,695)	(79,142)
Accumulated deficit	(35,870)	(30,452)
Accumulated other comprehensive loss	(1,480)	(1,276)
Total stockholders' equity	196,157	199,795
Total liabilities and stockholders' equity	<u>\$ 239,544</u>	<u>\$ 225,905</u>

PDF SOLUTIONS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED) (1)
(In thousands, except per share amounts)

	Three months ended			Year ended	
	December 31, 2019	September 30, 2019	December 31, 2018	December 31, 2019	December 31, 2018
Revenues:					
Analytics	\$ 13,527	\$ 12,691	\$ 10,351	\$ 49,627	\$ 38,502
Integrated yield ramp	9,035	9,223	9,374	35,958	47,292
Total revenues	<u>22,562</u>	<u>21,914</u>	<u>19,725</u>	<u>85,585</u>	<u>85,794</u>
Costs and Expenses:					
Costs of revenues	9,059	8,715	9,721	33,474	42,803
Research and development	8,754	8,435	6,898	32,747	27,998
Selling, general and administrative	6,359	5,990	6,133	26,299	23,934
Amortization of other acquired intangible assets	173	174	109	609	435
Restructuring charges	—	—	576	92	576
Interest and other expense (income), net	31	(202)	(210)	(276)	(493)
Loss before income taxes	(1,814)	(1,198)	(3,502)	(7,360)	(9,459)
Income tax benefit	(484)	(511)	(388)	(1,942)	(1,743)
Net loss	<u>\$ (1,330)</u>	<u>\$ (687)</u>	<u>\$ (3,114)</u>	<u>\$ (5,418)</u>	<u>\$ (7,716)</u>
Net loss per share:					
Basic	<u>\$ (0.04)</u>	<u>\$ (0.02)</u>	<u>\$ (0.10)</u>	<u>\$ (0.17)</u>	<u>\$ (0.24)</u>
Diluted	<u>\$ (0.04)</u>	<u>\$ (0.02)</u>	<u>\$ (0.10)</u>	<u>\$ (0.17)</u>	<u>\$ (0.24)</u>
Weighted average common shares:					
Basic	32,429	32,392	32,306	32,411	32,169
Diluted	32,429	32,392	32,306	32,411	32,169

(1) In the fourth quarter of fiscal 2019, in order to improve the transparency of our revenue reporting, the Company updated its Condensed Consolidated Statements of Operations to change its historical presentation of revenue categories. The Company now presents revenues in the following categories: Analytics and Integrated yield ramp. Integrated yield ramp comprises revenue from the Company's engagements that include performance incentives based on customers' yield achievement, such as Gainshare royalty. Analytics comprises all other revenue, including from the Company's Exensio® software platform, Design-for-Inspection™ solution (DFI™), and Characterization Vehicle® solutions. Prior periods Condensed Consolidated Statements of Operations have been reclassified to conform to the new revenue presentation. The change in presentation of revenue does not change the Company's total revenues, or total cost of revenues.

PDF SOLUTIONS, INC.

RECONCILIATION OF GAAP TO NON-GAAP NET INCOME (LOSS) (UNAUDITED)

(In thousands, except per share amounts)

	Three months ended			Year ended	
	December 31, 2019	September 30, 2019	December 31, 2018	December 31, 2019	December 31, 2018
GAAP net loss	\$ (1,330)	\$ (687)	\$ (3,114)	\$ (5,418)	\$ (7,716)
Adjustments to reconcile GAAP net loss to non-GAAP net income (loss):					
Stock-based compensation expense	2,782	2,732	2,470	11,423	10,295
Amortization of acquired technology	143	144	144	574	575
Amortization of other acquired intangible assets	173	174	109	609	435
Restructuring charges and severance payments	—	—	576	92	907
Adjustment to contingent consideration related to acquisition	—	30	90	30	90
Write-down in value of property and equipment	—	—	227	—	227
Tax impact of adjustments	(700)	(805)	(868)	(2,785)	(1,992)
Non-GAAP net income (loss)	<u>\$ 1,068</u>	<u>\$ 1,588</u>	<u>\$ (366)</u>	<u>\$ 4,525</u>	<u>\$ 2,821</u>
GAAP net loss per diluted share	<u>\$ (0.04)</u>	<u>\$ (0.02)</u>	<u>\$ (0.10)</u>	<u>\$ (0.17)</u>	<u>\$ (0.24)</u>
Non-GAAP net income (loss) per diluted share	<u>\$ 0.03</u>	<u>\$ 0.05</u>	<u>\$ (0.01)</u>	<u>\$ 0.14</u>	<u>\$ 0.09</u>
Shares used in diluted shares calculation	<u>33,414</u>	<u>32,997</u>	<u>32,476</u>	<u>33,122</u>	<u>32,466</u>



2019 Q4
Management Report

February 13, 2020



■ 2019 Q4 Results

- Overview
- Revenue Detail
- Key Financial & Operating Metrics

■ 2019 Q4 Non-GAAP Results

- Reconciliation of GAAP to Non-GAAP Net Income (Loss)
- Reconciliation of GAAP to Non-GAAP Spending by Function

■ Related Information

The following commentary is provided by management and should be referenced in conjunction with PDF Solutions' fourth quarter and full year 2019 financial results press release available on its Investor Relations website at <http://www.pdf.com/financial-news>. These remarks represent management's current views of the Company's financial and operational performance and are provided to give investors and analysts further insight into its performance in advance of the earnings call webcast. The Company disclaims any duty to update this information for future events.

Q4 2019 Key Metrics

Revenue: \$22.6M

GAAP Gross margin: 60%

Non-GAAP Gross margin: 64%

GAAP EPS: (\$0.04)

Non-GAAP EPS: \$0.03

Operating Cash Flow: \$1.6M

Capital Expenditures: \$3.7M

FINANCIAL RESULTS SUMMARY

- Total revenues for the fourth quarter of 2019 were \$22.6 million, up 3% from \$21.9 million the third quarter of 2019, and up 15% from \$19.7 million for the fourth quarter of 2018.
- Analytics revenue for the fourth quarter of 2019 was \$13.5 million, up 6% from \$12.7 million for the third quarter of 2019, and up 31% from \$10.3 million for the fourth quarter of 2018.
- Integrated yield ramp revenue for the fourth quarter of 2019 was \$9.1 million, down 1% from \$9.2 million for the third quarter of 2019, and down 3% from \$9.4 million for the fourth quarter of 2018.

Revenue Detail – Quarterly Q4 2018 Through Q4 2019

Revenue by Type

	<u>Q4'18</u>	<u>Q1'19</u>	<u>Q2'19</u>	<u>Q3'19</u>	<u>Q4'19</u>
Analytics revenue	\$10,351	\$11,434	\$11,974	\$12,691	\$13,527
% of Total	52%	56%	58%	58%	60%
Integrated yield ramp revenue	\$9,374	\$9,107	\$8,593	\$9,223	\$9,035
% of Total	48%	44%	42%	42%	40%
Total revenues	\$19,725	\$20,541	\$20,568	\$21,914	\$22,562
GAAP Gross Margin	51%	62%	62%	60%	60%
Non-GAAP Gross Margin	55%	67%	67%	64%	64%

Revenue by Geography

	<u>Q4'18</u>	<u>Q1'19</u>	<u>Q2'19</u>	<u>Q3'19</u>	<u>Q4'19</u>
North America (US/Canada)	\$6.8M	\$9.3M	\$8.7M	\$7.4M	\$11.0
% of Total	34%	45%	42%	34%	49%
Europe	\$3.1M	\$3.6M	\$3.1M	\$3.3M	\$3.4
% of Total	16%	18%	15%	15%	15%
APAC	\$9.8M	\$7.6M	\$8.8M	\$11.2M	\$8.2
% of Total	50%	37%	43%	51%	36%
Total revenues	\$19.7M	\$20.5M	\$20.6M	\$21.9M	\$22.6

Key Financial & Operating Metrics - Quarterly Q4 2018 Through Q4 2019

Key Financial & Operating Metrics

(in thousands, except share data, which is in millions, and percentages)

	<u>Q4'18</u>	<u>Q1'19</u>	<u>Q2'19</u>	<u>Q3'19</u>	<u>Q4'19</u>
Revenues	\$19,725	\$20,541	\$20,568	\$21,914	\$22,562
GAAP Gross Margin	51%	62%	62%	60%	60%
Non-GAAP Gross Margin	55%	67%	67%	64%	64%
Outstanding Debt	\$0	\$0	\$0	\$0	\$0
Operating Cash Flow	\$4,295	(\$151)	\$5,117	\$18,045	\$1,579
Capital Expenditures (CAPEX)	\$4,369	\$2,357	\$1,697	\$2,837	\$3,711
\$ Shares Repurchased	\$0	\$3,916	\$3,790	\$1,932	\$0
Weighted Average Common Shares Outstanding	32.3	32.5	32.3	32.4	32.4
Effective Tax Rate	11%	4%	54%	43%	27%



GAAP / Non-GAAP Presentation

In addition to providing results that are determined in accordance with Generally Accepted Accounting Principles in the United States of America (GAAP), the Company also provides certain non-GAAP financial measures. Non-GAAP gross margin and Non-GAAP net income (loss) exclude the effects of non-recurring items (including adjustment to contingent consideration related to acquisition, write-down in value of property and equipment, restructuring charges and severance payments), stock-based compensation expenses, amortization of acquired technology and other acquired intangible assets, and their related income tax effects, as applicable, as well as adjustments for the non-cash portion of income taxes. These non-GAAP financial measures are used by management internally to measure the Company's profitability and performance. PDF Solutions' management believes that these non-GAAP measures provide useful supplemental measures to investors regarding the Company's ongoing operations in light of the fact that none of these categories of expense has a current effect on the future uses of cash (with the exception of certain non-recurring items) nor do they impact the generation of current or future revenues. These non-GAAP results should not be considered an alternative to, or a substitute for, GAAP financial information, and may be different from similarly titled non-GAAP measures used by other companies. In particular, these non-GAAP financial measures are not a substitute for GAAP measures of income or loss as a measure of performance, or to cash flows from operating, investing and financing activities as a measure of liquidity. Management uses these non-GAAP financial measures internally to measure profitability and performance; these non-GAAP measures are presented here to give investors an opportunity to see the Company's financial results as viewed by management. A detailed reconciliation of the adjustments made to comparable GAAP measures is included herein.



Reconciliation of GAAP to Non-GAAP Net Income (Loss)

(in thousands, except for shares and per share amounts)

	Q4'18	Q1'19	Q2'19	Q3'19	Q4'19
GAAP net loss	\$ (3,114)	\$ (2,691)	\$ (710)	\$ (687)	\$ (1,330)
Adjustments to reconcile GAAP net loss to non-GAAP net income (loss):					
Stock-based compensation expense	2,470	3,476	2,434	2,732	2,782
Amortization of acquired technology	144	144	143	144	143
Amortization of other acquired intangible assets	109	108	154	174	173
Restructuring charges and severance payment	576	92	—	—	—
Write-down in value of property and equipment	227	—	—	—	—
Adjustment to contingent consideration related to acquisition	90	—	—	30	—
Tax impact of adjustments	(868)	(287)	(993)	(805)	(700)
Non-GAAP net income (loss)	\$ (366)	\$ 842	\$ 1,028	\$ 1,588	\$ 1,068
GAAP net loss per diluted share	\$ (0.10)	\$ (0.08)	\$ (0.02)	\$ (0.02)	\$ (0.04)
Non-GAAP net income (loss) per diluted share	\$ (0.01)	\$ 0.03	\$ 0.03	\$ 0.05	\$ 0.03
Shares used in diluted shares calculation	32,476	33,022	33,055	32,997	33,414

Reconciliation of GAAP to Non-GAAP Spending by Function

(in thousands)

	Q4'18	Q1'19	Q2'19	Q3'19	Q4'19
Cost of Revenue - GAAP	\$ 9,721	\$ 7,867	\$ 7,832	\$ 8,715	\$ 9,059
Adjustments to reconcile GAAP Cost of Revenue to non-GAAP Cost of Revenue:					
Stock-based compensation expense	(786)	(860)	(799)	(745)	(782)
Amortization of acquired technology	(144)	(144)	(143)	(144)	(143)
Cost of Revenue - Non-GAAP	\$ 8,791	\$ 6,863	\$ 6,890	\$ 7,826	\$ 8,134
Research & Development - GAAP	\$ 6,898	\$ 8,246	\$ 7,312	\$ 8,435	\$ 8,754
Adjustments to reconcile GAAP R&D to non-GAAP R&D:					
Stock-based compensation expense	(811)	(1,718)	(901)	(1,062)	(1,083)
Write-down in value of property and equipment	(227)	—	—	—	—
Adjustment to contingent consideration related to acquisition	(90)	—	—	(30)	—
Research & Development - Non-GAAP	\$ 5,770	\$ 6,528	\$ 6,411	\$ 7,343	\$ 7,671
Selling, General, & Administrative - GAAP	\$ 6,133	\$ 7,011	\$ 6,940	\$ 5,990	\$ 6,359
Adjustment to reconcile GAAP SG&A to non-GAAP SG&A:					
Stock-based compensation expense	(873)	(898)	(734)	(925)	(917)
Selling, General, & Administrative - Non-GAAP	\$ 5,260	\$ 6,113	\$ 6,206	\$ 5,065	\$ 5,442