
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 16, 2023

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 16, 2023, 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, 2022. The Company also posted on the Investors section of its website (www.pdf.com) a management report with regard to the fourth quarter and year ended December 31, 2022. Copies of the press release and management report are attached to this report as Exhibits 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	Press Release dated February 16, 2023, regarding financial results and certain other information related to the fourth quarter and year ended December 31, 2022.
99.2	Management Report by PDF Solutions, Inc. as of February 16, 2023.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

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/ Adnan Raza
Adnan Raza
EVP, Finance, and Chief Financial Officer (principal financial and accounting officer)

Dated: February 16, 2023



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News Release

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PDF Solutions® Reports Fourth Quarter and Full Year 2022 Results

Santa Clara, CA, February 16, 2023, – PDF Solutions, Inc. (Nasdaq: PDFS), a leading provider of unified data and cloud analytics for the semiconductor ecosystem, today announced financial results for its fourth quarter and year ended December 31, 2022.

Highlights of Fourth Quarter 2022 Financial Results

- Record quarterly revenues of \$40.5 million for the fourth quarter of 2022, up 36% over last year's comparable quarter
- GAAP gross margin of 71% and Non-GAAP gross margin of 74% for the fourth quarter of 2022
- GAAP diluted earnings per share (EPS) of \$0.01 and non-GAAP diluted EPS of \$0.19 for the fourth quarter of 2022

Highlights of Full Year 2022 Financial Results

- Record total full year 2022 revenues of \$148.5 million, up 34% year over year
- GAAP gross margin of 68% and Non-GAAP gross margin of 71% for full year 2022
- GAAP diluted loss per share of \$0.09 and non-GAAP diluted EPS of \$0.60 for full year 2022
- Record backlog of \$277.7 million as of December 31, 2022, up 55% year over year

Total revenues for the fourth quarter of 2022 were \$40.5 million, compared to \$39.9 million for the third quarter of 2022 and \$29.9 million for the fourth quarter of 2021. Analytics revenue for the fourth quarter of 2022 was \$36.0 million, compared to \$32.9 million for the third quarter of 2022 and \$27.3 million for the fourth quarter of 2021. Integrated Yield Ramp revenue for the fourth quarter of 2022 was \$4.5 million, compared to \$7.0 million for the third quarter of 2022 and \$2.6 million for the fourth quarter of 2021. Total revenues for the full year 2022 and 2021 were \$148.5 million and \$111.0 million, respectively.

GAAP gross margin for the fourth quarter of 2022 was 71%, compared to 69% for the third quarter of 2022 and 61% for the fourth quarter of 2021. GAAP gross margin for the full year 2022 and 2021 was 68% and 60%, respectively.

Non-GAAP gross margin for the fourth quarter of 2022 was 74%, compared to 72% for the third quarter of 2022 and 65% for the fourth quarter of 2021. Non-GAAP gross margin for the full year 2022 and 2021 was 71% and 64%, respectively.

On a GAAP basis, net income for the fourth quarter of 2022 was \$0.5 million, or \$0.01 per diluted share, compared to a net income of \$1.4 million, or \$0.04 per diluted share, for the third quarter of 2022, and net loss of \$7.0 million, or (\$0.19) per diluted share, for the fourth quarter of 2021. On a GAAP basis, net loss for the full year 2022 was \$3.4 million, or (\$0.09) per diluted share, compared to net loss of \$21.5 million, or (\$0.58) per diluted share, for the full year 2021.

Non-GAAP net income for the fourth quarter of 2022 was \$7.4 million, or \$0.19 per diluted share, compared to a non-GAAP net income of \$7.6 million, or \$0.20 per diluted share, for the third quarter of 2022, and non-GAAP net income of \$2.8 million, or \$0.07 per diluted share, for the fourth quarter of 2021. Non-GAAP net income for the full year 2022 was \$22.9 million, or \$0.60 per diluted share, compared to non-GAAP net income of \$3.0 million, or \$0.08 per diluted share, for the full year 2021.

Cash, cash equivalents and short-term investments at December 31, 2022 were \$139.2 million, compared to \$140.2 million at December 31, 2021, a decrease of \$1.0 million. Net cash provided by operating activities was \$24.3 million for the fourth quarter of 2022. Net cash provided by operating activities was \$32.3 million for the full year 2022.

Financial Outlook and Recent Accomplishments

In spite of macroenvironment headwinds and a high revenue base from the strong performance in 2022, we expect 2023 revenue growth rate to approach mid-teens percent on a year-over-year basis, benefiting from our strong backlog.

“Thanks to all our employees, contractors, and customers for the strong 2022 performance. We are pleased with how we are positioned for 2023 and look forward to serving our customers,” said John Kibarian, CEO and President.

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. To participate on the live call, analysts and investors should pre-register at: <https://register.vevent.com/register/B14d22ed99a5804ec6a79bce8b073e8200>. Registrants will receive dial-in information and a unique passcode to access the call. We encourage participants to dial-in into the call ten minutes ahead of scheduled time. The teleconference will also be webcast simultaneously on the Company’s website at <https://ir.pdf.com/webcasts>. A replay of the conference call webcast will be available after the call on the Company’s investor relations website. 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 2022 Financial Commentary Available Online

A Management Report reviewing the Company’s fourth quarter and full year 2022 financial results will be furnished to the Securities and Exchange Commission 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.

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 gross profit and margin exclude stock-based compensation expense and the amortization of acquired technology. Non-GAAP net income excludes the effects of certain non-recurring items, expenses related to an arbitration proceeding for a disputed contract with a customer, write-downs in value of property and equipment, 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 valuation allowance for deferred tax assets. 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 expenses related to an arbitration proceeding for a disputed contract with a customer and acquisition-related costs) 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 press release and the planned conference call include forward-looking statements regarding the Company's future expected business performance and financial results, including expectations about total revenue growth and expected revenue from new bookings, that 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: continued adoption of the Company's solutions by new and existing customers; project milestones or delays and performance criteria achieved; cost and schedule of new product development; the impact of rising inflation and interest rates; the provision of technology and services prior to the execution of a final contract; the continuing impact of the coronavirus (COVID-19) on the semiconductor industry and on the Company's operations or supply and demand for the Company's products; the time required of the Company's executive management for, and the expenses related to, as well as the success of the Company's strategic growth opportunities and partnerships, including its partnership with Advantest Corporation; the Company's ability to successfully integrate acquired businesses and technologies; whether the Company can successfully convert backlog into revenue; customers' production volumes under contracts that provide Gainshare royalties; the potential for export controls that could impact the Company's sales in China; and other risks set forth in PDF Solutions' periodic public filings with the Securities and Exchange Commission, including, without limitation, its Annual Report on Form 10-K for the year ended December 31, 2021, 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. PDF Solutions has not filed its Form 10-K for the year ended December 31, 2022. As a result, all financial results described in this earnings release should be considered preliminary, and are subject to change to reflect any necessary adjustments or changes in accounting estimates, that are identified prior to the time the Company files its Form 10-K.

About PDF Solutions

PDF Solutions (NASDAQ: PDFS) provides comprehensive data solutions designed to empower organizations across the semiconductor ecosystem to improve the yield and quality of their products and operational efficiency for increased profitability. The Company's products and services are used by Fortune 500 companies across the semiconductor ecosystem to achieve smart manufacturing goals by connecting and controlling equipment, collecting data generated during manufacturing and test operations, and performing advanced analytics and machine learning to enable profitable, high-volume manufacturing.

Founded in 1991, PDF Solutions is headquartered in Santa Clara, California, with operations across North America, Europe, and Asia. The Company (directly or through one or more subsidiaries) is an active member of SEMI, INEMI, TPCA, IPC, the OPC Foundation, and DMDII. For the latest news and information about PDF Solutions or to find office locations, visit <https://www.pdf.com>.

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

	December 31,	
	2022	2021
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 119,624	\$ 27,684
Short-term investments	19,557	112,542
Accounts receivable, net	42,164	40,087
Prepaid expenses and other current assets	12,063	8,194
Total current assets	<u>193,408</u>	<u>188,507</u>
Property and equipment, net	40,174	35,295
Operating lease right-of-use assets, net	6,002	5,408
Goodwill	14,123	14,123
Intangible assets, net	18,055	21,239
Deferred tax assets, net	64	75
Other non-current assets	6,845	9,121
Total assets	<u>\$ 278,671</u>	<u>\$ 273,768</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 6,388	\$ 5,554
Accrued compensation and related benefits	16,948	9,495
Accrued and other current liabilities	5,581	3,328
Operating lease liabilities – current portion	1,412	1,758
Deferred revenues – current portion	26,019	23,691
Billings in excess of recognized revenues	1,852	—
Total current liabilities	<u>58,200</u>	<u>43,826</u>
Long-term income taxes payable	2,622	2,656
Non-current operating lease liabilities	5,932	5,258
Non-current portion of deferred revenues	1,905	2,443
Total liabilities	<u>68,659</u>	<u>54,183</u>
Stockholders' equity:		
Common stock and additional paid-in-capital	447,421	423,075
Treasury stock at cost	(133,709)	(104,705)
Accumulated deficit	(101,150)	(97,721)
Accumulated other comprehensive loss	(2,550)	(1,064)
Total stockholders' equity	<u>210,012</u>	<u>219,585</u>
Total liabilities and stockholders' equity	<u>\$ 278,671</u>	<u>\$ 273,768</u>

PDF SOLUTIONS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED)

(In thousands, except per share amounts)

	Three months ended			Year ended	
	December 31, 2022	September 30, 2022	December 31, 2021	December 31, 2022	December 31, 2021
Revenues:					
Analytics	\$ 36,058	\$ 32,879	\$ 27,250	\$ 130,480	\$ 93,415
Integrated yield ramp	4,465	6,981	2,636	18,069	17,645
Total revenues	40,523	39,860	29,886	148,549	111,060
Costs and Expenses:					
Costs of revenues	11,791	12,545	11,675	47,907	44,193
Research and development	14,360	14,303	11,218	56,126	43,780
Selling, general and administrative	12,724	12,005	9,167	45,338	37,649
Amortization of acquired intangible assets	324	318	313	1,270	1,255
Write-down in value of property and equipment	—	—	3,183	—	3,183
Interest and other expense (income), net	250	(1,511)	(292)	(2,562)	(683)
Income (loss) before income taxes	1,074	2,200	(5,378)	470	(18,317)
Income tax expense	591	815	1,622	3,899	3,171
Net income (loss)	\$ 483	\$ 1,385	\$ (7,000)	\$ (3,429)	\$ (21,488)
Net income (loss) per share:					
Basic	\$ 0.01	\$ 0.04	\$ (0.19)	\$ (0.09)	\$ (0.58)
Diluted	\$ 0.01	\$ 0.04	\$ (0.19)	\$ (0.09)	\$ (0.58)
Weighted average common shares used to calculate net income (loss) per share:					
Basic	37,379	37,226	37,348	37,309	37,138
Diluted	38,276	38,054	37,348	37,309	37,138

PDF SOLUTIONS, INC.

RECONCILIATION OF GAAP GROSS MARGIN TO NON-GAAP GROSS MARGIN (UNAUDITED)

(In thousands)

	Three months ended			Year ended	
	December 31, 2022	September 30, 2022	December 31, 2021	December 31, 2022	December 31, 2021
GAAP					
Total revenues	\$ 40,523	\$ 39,860	\$ 29,886	\$ 148,549	\$ 111,060
Costs of revenues	11,791	12,545	11,675	47,907	44,193
GAAP gross profit	\$ 28,732	\$ 27,315	\$ 18,211	\$ 100,642	\$ 66,867
GAAP gross margin	71 %	69 %	61 %	68 %	60 %
Non-GAAP					
GAAP gross profit	\$ 28,732	\$ 27,315	\$ 18,211	\$ 100,642	\$ 66,867
Adjustments to reconcile GAAP to non-GAAP gross margin:					
Stock-based compensation expense	737	854	703	2,974	2,563
Amortization of acquired technology	553	553	554	2,213	2,079
Non-GAAP gross profit	\$ 30,022	\$ 28,722	\$ 19,468	\$ 105,829	\$ 71,509
Non-GAAP gross margin	74 %	72 %	65 %	71 %	64 %

PDF SOLUTIONS, INC.

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

(In thousands, except per share amounts)

	Three months ended			Year ended	
	December 31, 2022	September 30, 2022	December 31, 2021	December 31, 2022	December 31, 2021
GAAP net income (loss)	\$ 483	\$ 1,385	\$ (7,000)	\$ (3,429)	\$ (21,488)
Adjustments to reconcile GAAP net income (loss) to non-GAAP net income:					
Stock-based compensation expense	5,088	5,136	3,457	19,649	12,931
Amortization of acquired technology under costs of revenues	553	553	554	2,213	2,079
Amortization of other acquired intangible assets	325	318	313	1,270	1,255
Expenses of arbitration (1)	852	556	757	1,895	1,951
Write-down in value of property and equipment (2)	—	—	3,183	—	3,183
Tax impact of valuation allowance for deferred tax assets and reconciling items (3)	98	(373)	1,539	1,326	3,091
Non-GAAP net income	<u>\$ 7,399</u>	<u>\$ 7,575</u>	<u>\$ 2,803</u>	<u>\$ 22,924</u>	<u>\$ 3,002</u>
GAAP net income (loss) per diluted share	<u>\$ 0.01</u>	<u>\$ 0.04</u>	<u>\$ (0.19)</u>	<u>\$ (0.09)</u>	<u>\$ (0.58)</u>
Non-GAAP net income per diluted share	<u>\$ 0.19</u>	<u>\$ 0.20</u>	<u>\$ 0.07</u>	<u>\$ 0.60</u>	<u>\$ 0.08</u>
Weighted average common shares used in GAAP net income (loss) per diluted share calculation	<u>38,276</u>	<u>38,054</u>	<u>37,348</u>	<u>37,309</u>	<u>37,138</u>
Weighted average common shares used in Non-GAAP net income per diluted share calculation	<u>38,276</u>	<u>38,054</u>	<u>38,430</u>	<u>38,130</u>	<u>37,901</u>

- (1) Represents expenses related to an arbitration proceeding over a disputed customer contract, which expenses are expected to continue until the arbitration is resolved.
- (2) Pertains to write-down in value of our first-generation of e-beam tools for Design-for-Inspection systems wherein carrying values may not be fully recoverable due to lack of market demand and future needs of our customers for these tools.
- (3) The difference between the GAAP and non-GAAP income tax provisions is primarily due to the valuation allowance on a GAAP basis and non-GAAP adjustments. For example, on a GAAP basis, the Company does not receive a deferred tax benefit for foreign tax credits or R&D credits after valuation allowance. The Company's non-GAAP tax rate and resulting non-GAAP tax expense is not calculated with a full U.S. federal or state valuation allowance due to the Company's cumulative Non-GAAP income and management's conclusion that it is more likely than not to utilize its net deferred tax assets (DTAs). Each reporting period, management evaluates the need for a valuation allowance and may place a valuation allowance against its U.S. net DTA on a non-GAAP basis if it concludes it is more likely than not that it will not be able to utilize some or all of its US DTAs on a non-GAAP basis.



**Q4 2022 and Full Year 2022
Management Report
February 16, 2023**

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- Reconciliation of GAAP Net Income (Loss) to Non-GAAP Net Income
- 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 2022 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.

PDF Solutions Reports Fourth Quarter 2022 Results

Q4 2022 Key Metrics

Revenue: \$40.5M

GAAP Gross Margin: 71%

Non-GAAP Gross Margin: 74%

GAAP Diluted EPS: \$0.01

Non-GAAP Diluted EPS: \$0.19

Operating Cash Flow: \$24.3M

Cash Used for Capital Expenditures: \$1.7M

FINANCIAL RESULTS SUMMARY

- Q4 2022 Total revenues of \$40.5M, up 2% over Q3 2022, and up 36% over Q4 2021.
- Q4 2022 Analytics revenue of \$36.1M, up 10% over Q3 2022, and up 32% over Q4 2021.
- Q4 2022 Integrated yield ramp revenue of \$4.5M, down 36% over Q3 2022 and up 69% over Q4 2021.

PDF Solutions Reports Full Year 2022 Results

Full Year 2022 Key Metrics

Revenue: \$148.5M

GAAP Gross Margin: 68%

Non-GAAP Gross Margin: 71%

GAAP Diluted loss per share: \$0.09

Non-GAAP Diluted EPS: \$0.60

Operating Cash Flow: \$32.3M

Cash Used for Capital Expenditures: \$8.4M

FINANCIAL RESULTS SUMMARY

- 2022 Total revenues of \$148.5M, up 34% over 2021.
- 2022 Analytics revenue of \$130.5M, up 40% over 2021.
- 2022 Integrated yield ramp revenue of \$18.1M, up 2% over 2021.

Key Financial & Operating Metrics – Quarterly

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

	Q4'22	Q3'22	Q2'22	Q1'22	Q4'21
Revenues	\$ 40,523	\$ 39,860	\$ 34,668	\$ 33,498	\$ 29,886
GAAP Gross Margin	71%	69%	65%	66%	61%
Non-GAAP Gross Margin	74%	72%	69%	69%	65%
Outstanding Debt	\$ -	\$ -	\$ -	\$ -	\$ -
Operating Cash Flow	\$ 24,275	\$ 1,403	\$ 3,624	\$ 2,996	\$ 416
Cash Used for Capital Expenditures (CAPEX)	\$ 1,725	\$ 2,118	\$ 2,822	\$ 1,765	\$ 1,340
\$ Shares Repurchased	\$ -	\$ -	\$ 16,693	\$ 5,778	\$ -
Weighted Average Common Shares Outstanding	37.4	37.2	37.0	37.6	37.3
Effective Tax Rate Expense	55%	37%	821%	40%	30%

Key Financial & Operating Metrics – Yearly

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

	Year Ended December 31,		
	2022	2021	2020
Revenues	\$ 148,549	\$ 111,060	\$ 88,046
GAAP Gross Margin	68%	60%	58%
Non-GAAP Gross Margin	71%	64%	63%
Outstanding Debt	\$ -	\$ -	\$ -
Operating Cash Flow	\$ 32,298	\$ 4,243	\$ 21,783
Cash Used for CAPEX	\$ 8,430	\$ 4,053	\$ 6,968
\$ Shares Repurchased	\$ 22,471	\$ 4,523	\$ -
Weighted Average Common Shares Outstanding	37.3	37.1	34.5
Effective Tax Rate Expense	830%	17%	123%

Revenue by Geographic Area – Quarterly

(Dollars in thousands)

	Q4'22	Q3'22	Q2'22	Q1'22	Q4'21
United States	\$ 19,639	\$ 18,292	\$ 17,086	\$ 17,491	\$ 15,739
% of Total	48%	46%	49%	52%	53%
China	\$ 6,280	\$ 9,555	\$ 4,539	\$ 4,120	\$ 4,202
% of Total	16%	24%	13%	12%	14%
Japan	\$ 6,814	\$ 2,818	\$ 2,794	\$ 2,607	\$ 2,554
% of Total	17%	7%	8%	8%	8%
Rest of the world	\$ 7,790	\$ 9,195	\$ 10,249	\$ 9,280	\$ 7,391
% of Total	19%	23%	30%	28%	25%
Total revenues	\$ 40,523	\$ 39,860	\$ 34,668	\$ 33,498	\$ 29,886

Revenue by Geographic Area – Yearly

(Dollars in thousands)

	Year Ended December 31,		
	2022	2021	2020
United States	\$ 72,508	\$ 50,374	\$ 36,723
% of Total	49%	45%	42%
China	\$ 24,494	\$ 14,267	\$ 13,776
% of Total	16%	13%	16%
Japan	\$ 15,033	\$ 11,097	\$ 4,762
% of Total	10%	10%	5%
Rest of the world	\$ 36,514	\$ 35,322	\$ 32,785
% of Total	25%	32%	37%
Total revenues	\$ 148,549	\$ 111,060	\$ 88,046

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 profit excludes stock-based compensation expense and the amortization of acquired technology. Non-GAAP net income (loss) excludes the effects of certain non-recurring items, expenses related to an arbitration proceeding for a disputed customer contract, acquisition related costs, write-downs in value of property and equipment, stock-based compensation expense, amortization of acquired technology and other acquired intangible assets, and their related income tax effects, as applicable, tax impact of the CARES Act, as well as adjustments for the valuation allowance for deferred tax assets. 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 expenses related to an arbitration proceeding for a disputed customer contract, and acquisition related costs) 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 Net Income (Loss) to Non-GAAP Net Income

Quarterly

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

	Q4'22	Q3'22	Q2'22	Q1'22	Q4'21
GAAP net income (loss)	\$ 483	\$ 1,385	(\$ 1,147)	(\$ 4,150)	(\$ 7,000)
Adjustments to reconcile GAAP net income (loss) to non-GAAP net income:					
Stock-based compensation expense	5,088	5,136	3,872	5,553	3,457
Amortization of acquired technology	553	553	553	553	554
Amortization of other acquired intangible assets	325	318	314	314	313
Expenses of arbitration (1)	852	556	36	451	757
Write-down in value of property and equipment (2)	—	—	—	—	3,183
Tax impact of valuation allowance for deferred tax assets and reconciling items (3)	98	(373)	664	937	1,539
Non-GAAP net income	<u>\$ 7,399</u>	<u>\$ 7,575</u>	<u>\$ 4,292</u>	<u>\$ 3,658</u>	<u>\$ 2,803</u>
GAAP net income (loss) per diluted share	<u>\$ 0.01</u>	<u>\$ 0.04</u>	<u>(\$ 0.03)</u>	<u>(\$ 0.11)</u>	<u>(\$ 0.19)</u>
Non-GAAP net income per diluted share	<u>\$ 0.19</u>	<u>\$ 0.20</u>	<u>\$ 0.11</u>	<u>\$ 0.09</u>	<u>\$ 0.07</u>
Weighted average common shares used in GAAP net income (loss) per diluted share calculation	<u>38,276</u>	<u>38,054</u>	<u>37,028</u>	<u>37,606</u>	<u>37,348</u>
Weighted average common shares used in Non-GAAP net income per diluted share calculation	<u>38,276</u>	<u>38,054</u>	<u>37,615</u>	<u>38,580</u>	<u>38,430</u>

- (1) Represents expenses related to an arbitration proceeding over a disputed customer contract, which expenses are expected to continue until the arbitration is resolved.
- (2) Pertains to write-down in value of our first-generation of e-beam tools for Design-for-Inspection systems wherein carrying values may not be fully recoverable due to lack of market demand and future needs of our customers for these tools.
- (3) The difference between the GAAP and non-GAAP income tax provisions is primarily due to the valuation allowance on a GAAP basis and non-GAAP adjustments. For example, on a GAAP basis, the Company does not receive a deferred tax benefit for foreign tax credits or R&D credits after valuation allowance. The Company's non-GAAP tax rate and resulting non-GAAP tax expense is not calculated with a full U.S. federal or state valuation allowance due to the Company's cumulative Non-GAAP income and management's conclusion that it is more likely than not to utilize its net deferred tax assets (DTAs). Each reporting period, management evaluates the need for a valuation allowance and may place a valuation allowance against its U.S. net DTA on a non-GAAP basis if it concludes it is more likely than not that it will not be able to utilize some or all of its US DTAs on a non-GAAP basis.

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

Yearly

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

	Year Ended December 31,		
	2022	2021	2020
GAAP net loss	(\$ 3,429)	(\$ 21,488)	(\$ 40,363)
Adjustments to reconcile GAAP net loss to non-GAAP net income:			
Stock-based compensation expense	19,649	12,931	12,463
Amortization of acquired technology	2,213	2,079	705
Amortization of other acquired intangible assets	1,270	1,255	741
Expenses of arbitration (1)	1,895	1,951	1,098
Write-down in value of property and equipment (2)	—	3,183	490
Acquisition-related costs (3)	—	—	752
Tax impact of the CARES Act (4)	—	—	(1,162)
Tax impact of valuation allowance for deferred tax assets and reconciling items (5)	1,326	3,091	24,471
Non-GAAP net income	\$ 22,924	\$ 3,002	(\$ 805)
GAAP net loss per diluted share	(\$ 0.09)	(\$ 0.58)	(\$ 1.17)
Non-GAAP net income per diluted share	\$ 0.60	\$ 0.08	(\$ 0.02)
Weighted average common shares used in GAAP net income (loss) per diluted share calculation	37,309	37,138	34,458
Weighted average common shares used in Non-GAAP net income per diluted share calculation	38,130	37,901	34,458

- (1) Represents expenses related to an arbitration proceeding over a disputed customer contract, which expenses are expected to continue until the arbitration is resolved.
- (2) Pertains to write-down in value of our first-generation of e-beam tools for Design-for-Inspection systems wherein carrying values may not be fully recoverable due to lack of market demand and future needs of our customers for these tools.
- (3) Represents transaction expenses related to the acquisition of Cimatrix Incorporated in the fourth quarter of 2020.
- (4) The Company recognized a discrete tax benefit recognized from the carryback of net operating losses (NOLs) under the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") enacted in March 2020. Due to the full valuation allowance against U.S. DTA recognized in the fourth quarter of 2020, there is no tax benefit from the released tax attributes. The Company does not have any NOLs on a non-GAAP basis and, therefore, it did not recognize this discrete tax benefit in calculating its non-GAAP tax expense and net income (loss).
- (5) The difference between the GAAP and non-GAAP income tax provisions is primarily due to the valuation allowance on a GAAP basis and non-GAAP adjustments. For example, on a GAAP basis, the Company does not receive a deferred tax benefit for foreign tax credits or R&D credits after valuation allowance. The Company's non-GAAP tax rate and resulting non-GAAP tax expense is not calculated with a full U.S. federal or state valuation allowance due to the Company's cumulative Non-GAAP income and management's conclusion that it is more likely than not to utilize its net DTAs. Each reporting period, management evaluates the need for a valuation allowance and may place a valuation allowance against its U.S. net DTA on a non-GAAP basis if it concludes it is more likely than not that it will not be able to utilize some or all of its US DTAs on a non-GAAP basis.

Reconciliation of GAAP to Non-GAAP Spending by Function

Quarterly

(in thousands)

	Q4'22	Q3'22	Q2'22	Q1'22	Q4'21
Cost of Revenue - GAAP	\$ 11,791	\$ 12,545	\$ 12,042	\$ 11,529	\$ 11,675
Adjustments to reconcile GAAP Cost of Revenue to Non-GAAP Cost of Revenue:					
Stock-based compensation expense	(737)	(854)	(655)	(728)	(703)
Amortization of acquired technology	(553)	(553)	(553)	(553)	(554)
Cost of Revenue - Non-GAAP	\$ 10,501	\$ 11,138	\$ 10,834	\$ 10,248	\$ 10,418
Research & Development - GAAP	\$ 14,360	\$ 14,303	\$ 13,374	\$ 14,089	\$ 11,218
Adjustments to reconcile GAAP R&D to Non-GAAP R&D:					
Stock-based compensation expense	(2,233)	(2,180)	(1,810)	(3,168)	(1,502)
Research & Development - Non-GAAP	\$ 12,127	\$ 12,123	\$ 11,564	\$ 10,921	\$ 9,716
Selling, General, & Administrative - GAAP	\$ 12,724	\$ 12,005	\$ 9,770	\$ 10,839	\$ 9,167
Adjustment to reconcile GAAP SG&A to Non-GAAP SG&A:					
Stock-based compensation expense	(2,118)	(2,102)	(1,407)	(1,657)	(1,252)
Expenses of arbitration (1)	(852)	(556)	(36)	(451)	(757)
Selling, General, & Administrative - Non-GAAP	\$ 9,754	\$ 9,347	\$ 8,327	\$ 8,731	\$ 7,158

(1) Represents expenses related to an arbitration proceeding over a disputed contract with a customer, which expenses are expected to continue until the arbitration is resolved.

Reconciliation of GAAP to Non-GAAP Spending by Function

Yearly

(in thousands)

	Year Ended December 31,		
	2022	2021	2020
Cost of Revenue - GAAP	\$ 47,907	\$ 44,193	\$ 36,765
Adjustments to reconcile GAAP Cost of Revenue to Non-GAAP Cost of Revenue:			
Stock-based compensation expense	(2,974)	(2,563)	(3,454)
Amortization of acquired technology	(2,213)	(2,079)	(705)
Cost of Revenue - Non-GAAP	\$ 42,720	\$ 39,551	\$ 32,606
Research & Development - GAAP	\$ 56,126	\$ 43,780	\$ 34,654
Adjustments to reconcile GAAP R&D to Non-GAAP R&D:			
Stock-based compensation expense	(9,391)	(5,515)	(4,800)
Write-down in value of property and equipment	—	—	(328)
Research & Development - Non-GAAP	\$ 46,735	\$ 38,265	\$ 29,526
Selling, General, & Administrative - GAAP	\$ 45,338	\$ 37,649	\$ 32,677
Adjustment to reconcile GAAP SG&A to Non-GAAP SG&A:			
Stock-based compensation expense	(7,284)	(4,853)	(4,209)
Expenses of arbitration (1)	(1,895)	(1,951)	(1,098)
Write-down in value of property and equipment	—	—	(162)
Acquisition-related costs (2)	—	—	(752)
Selling, General, & Administrative - Non-GAAP	\$ 36,159	\$ 30,845	\$ 26,456

(1) Represents expenses related to an arbitration proceeding over a disputed contract with a customer, which expenses are expected to continue until the arbitration is resolved.

(2) Represents transaction expenses related to the acquisition of Cimatrix Incorporated in the fourth quarter of 2020.