
**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 15, 2024

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 15, 2024, 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, 2023. 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, 2023. 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 15, 2024, regarding financial results and certain other information related to the fourth quarter and year ended December 31, 2023.
99.2	Management Report by PDF Solutions, Inc. as of February 15, 2024.
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 15, 2024



2858 De La Cruz Boulevard, Santa Clara CA 95050 USA
+1.408.280.7900 www.pdf.com

News Release

Company Contacts:

Adnan Raza
Chief Financial Officer
Tel: (408) 516-0237
Email: adnan.raza@pdf.com

Sonia Segovia
Investor Relations
Tel: (408) 938-6491
Email: sonia.segovia@pdf.com

PDF Solutions® Reports Fourth Quarter and Full Year 2023 Results

Santa Clara, CA, February 15, 2024, – PDF Solutions, Inc. (Nasdaq: PDFS), a leading provider of comprehensive data solutions for the semiconductor ecosystem, today announced financial results for its fourth quarter and year ended December 31, 2023.

Financial Highlights of Fourth Quarter 2023

- Analytics revenues of \$39.1 million, up 9% over last year's comparable quarter
- Quarterly revenues of \$41.1 million, up slightly over last year's comparable quarter
- GAAP gross margin of 68% and Non-GAAP gross margin of 72%
- GAAP diluted earnings per share of \$0.02 and non-GAAP diluted earnings per share of \$0.15

Financial Highlights of Full Year 2023

- Analytics revenues of \$152.1 million, up 17% over last year
- Record total full year revenues of \$165.8 million, up 12% over last year
- GAAP gross margin of 69% and Non-GAAP gross margin of 73%
- GAAP diluted earnings per share of \$0.08 and non-GAAP diluted earnings per share of \$0.73
- Cash, cash equivalents and short-term investments of \$135.5 million

Total revenues for the fourth quarter of 2023 were \$41.1 million, compared to \$42.4 million for the third quarter of 2023 and \$40.5 million for the fourth quarter of 2022. Analytics revenue for the fourth quarter of 2023 was \$39.1 million, compared to \$39.5 million for the third quarter of 2023 and \$36.1 million for the fourth quarter of 2022. Integrated Yield Ramp revenue for the fourth quarter of 2023 was \$2.0 million, compared to \$2.9 million for the third quarter of 2023 and \$4.5 million for the fourth quarter of 2022. Total revenues for the full year 2023 and 2022 were \$165.8 million and \$148.5 million, respectively.

GAAP gross margin for the fourth quarter of 2023 was 68%, compared to 66% for the third quarter of 2023 and 71% for the fourth quarter of 2022. GAAP gross margin for the full year 2023 and 2022 was 69% and 68%, respectively.

Non-GAAP gross margin for the fourth quarter of 2023 was 72%, compared to 70% for the third quarter of 2023 and 74% for the fourth quarter of 2022. Non-GAAP gross margin for the full year 2023 and 2022 was 73% and 71%, respectively.

On a GAAP basis, net income for the fourth quarter of 2023 was \$0.9 million, or \$0.02 per diluted share, compared to a net loss of \$5.0 million, or (\$0.13) per diluted share, for the third quarter of 2023, and a net income of \$0.5 million, or \$0.01 per diluted share, for the fourth quarter of 2022. On a GAAP basis, net income for the full year 2023 was \$3.1 million, or \$0.08 per diluted share, compared to a net loss of \$3.4 million, or (\$0.09) per diluted share, for the full year 2022.

Non-GAAP net income for the fourth quarter of 2023 was \$5.7 million, or \$0.15 per diluted share, compared to a non-GAAP net income of \$8.0 million, or \$0.20 per diluted share, for the third quarter of 2023, and non-GAAP net income of \$7.4 million, or \$0.19 per diluted share, for the fourth quarter of 2022. Non-GAAP net income for the full year 2023 was \$28.5 million, or \$0.73 per diluted share, compared to a non-GAAP net income of \$22.9 million, or \$0.60 per diluted share, for the full year 2022.

Cash, cash equivalents and short-term investments as of December 31, 2023 were \$135.5 million.

Financial Outlook

The Company's outlook for the year reflects both the short-term weakness in the semiconductor industry and the strength of our pipeline, bolstered by the macro trends of distributed manufacturing, energy electrification, and AI, which can drive significant growth. As a result, management expects revenue for the first half of 2024 to be flat over the comparable period of the prior year and for revenue for the second half of the year to grow by 20% over the comparable period of the prior year.

"Thanks to all our employees, contractors, and customers for the strong 2023 performance. Despite the macroenvironment, we are pleased with how we are positioned for 2024 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/BI866d4f79f40f459e872fa6cec8a6dc7a>. Registrants will receive dial-in information and a unique passcode to access the call. We encourage participants to dial into the call ten minutes ahead of the 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 2023 Financial Commentary Available Online

A Management Report reviewing the Company's fourth quarter and full year 2023 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 stock-based compensation expense, amortization of acquired technology and other acquired intangible assets, and the effects of certain non-recurring items, such as expenses related to an arbitration proceeding for a disputed contract with a customer, acquisition-related costs, proceeds from the sale of previously written-off property and equipment, 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 condensed consolidated 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 for 2024, 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, but are not limited to, risks associated with: expectations about the effectiveness of our business and technology strategies; expectations and integration concerns regarding recent and future acquisitions; current semiconductor industry trends; expectations of 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 global economic trends and rising inflation and interest rates; supply chain disruptions; the success of the Company’s strategic growth opportunities and partnerships; customers’ production volumes under contracts that provide Gainshare royalties; possible impacts from the evolving trade regulatory environment and geopolitical tensions; 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, 2022, 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, 2023. 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 and electronics 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 and electronics 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,	
	2023	2022
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 98,978	\$ 119,624
Short-term investments	36,544	19,557
Accounts receivable, net	44,904	42,164
Prepaid expenses and other current assets	17,422	12,063
Total current assets	197,848	193,408
Property and equipment, net	37,338	40,174
Operating lease right-of-use assets, net	4,926	6,002
Goodwill	15,029	14,123
Intangible assets, net	15,620	18,055
Deferred tax assets, net	157	64
Other non-current assets	19,218	6,845
Total assets	<u>\$ 290,136</u>	<u>\$ 278,671</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 2,561	\$ 6,388
Accrued compensation and related benefits	14,800	16,948
Accrued and other current liabilities	4,633	5,581
Operating lease liabilities – current portion	1,529	1,412
Deferred revenues – current portion	25,750	26,019
Billings in excess of recognized revenues	1,570	1,852
Total current liabilities	50,843	58,200
Long-term income taxes	2,972	2,622
Non-current operating lease liabilities	4,657	5,932
Other non-current liabilities	2,718	1,905
Total liabilities	61,190	68,659
Stockholders' equity:		
Common stock and additional paid-in capital	473,301	447,421
Treasury stock at cost	(143,923)	(133,709)
Accumulated deficit	(98,045)	(101,150)
Accumulated other comprehensive loss	(2,387)	(2,550)
Total stockholders' equity	228,946	210,012
Total liabilities and stockholders' equity	<u>\$ 290,136</u>	<u>\$ 278,671</u>

PDF SOLUTIONS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED)

(In thousands, except per share amounts)

	Three months ended			Year ended	
	December 31, 2023	September 30, 2023	December 31, 2022	December 31, 2023	December 31, 2022
Revenues:					
Analytics	\$ 39,128	\$ 39,497	\$ 36,058	\$ 152,085	\$ 130,480
Integrated yield ramp	1,997	2,853	4,465	13,750	18,069
Total revenues	<u>41,125</u>	<u>42,350</u>	<u>40,523</u>	<u>165,835</u>	<u>148,549</u>
Costs and Expenses:					
Costs of revenues	13,194	14,282	11,791	51,749	47,907
Research and development	12,308	13,113	14,360	50,736	56,126
Selling, general, and administrative	16,194	15,611	12,724	62,216	45,338
Amortization of acquired intangible assets	306	328	324	1,285	1,270
Interest and other expense (income), net	(1,020)	(2,018)	250	(5,020)	(2,562)
Income before income taxes	143	1,034	1,074	4,869	470
Income tax benefit (expense)	744	(6,006)	(591)	(1,764)	(3,899)
Net income (loss)	<u>\$ 887</u>	<u>\$ (4,972)</u>	<u>\$ 483</u>	<u>\$ 3,105</u>	<u>\$ (3,429)</u>
Net income (loss) per share:					
Basic	<u>\$ 0.02</u>	<u>\$ (0.13)</u>	<u>\$ 0.01</u>	<u>\$ 0.08</u>	<u>\$ (0.09)</u>
Diluted	<u>\$ 0.02</u>	<u>\$ (0.13)</u>	<u>\$ 0.01</u>	<u>\$ 0.08</u>	<u>\$ (0.09)</u>
Weighted average common shares used to calculate net income (loss) per share:					
Basic	<u>38,269</u>	<u>38,187</u>	<u>37,379</u>	<u>38,015</u>	<u>37,309</u>
Diluted	<u>38,814</u>	<u>38,187</u>	<u>38,276</u>	<u>38,937</u>	<u>37,309</u>

PDF SOLUTIONS, INC.

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

(In thousands)

	Three months ended			Year ended	
	December 31, 2023	September 30, 2023	December 31, 2022	December 31, 2023	December 31, 2022
GAAP					
Total revenues	\$ 41,125	\$ 42,350	\$ 40,523	\$ 165,835	\$ 148,549
Costs of revenues	13,194	14,282	11,791	51,749	47,907
GAAP gross profit	\$ 27,931	\$ 28,068	\$ 28,732	\$ 114,086	\$ 100,642
GAAP gross margin	68 %	66 %	71 %	69 %	68 %
Non-GAAP					
GAAP gross profit	\$ 27,931	\$ 28,068	\$ 28,732	\$ 114,086	\$ 100,642
Adjustments to reconcile GAAP to non-GAAP gross margin:					
Stock-based compensation expense	1,147	1,120	737	4,169	2,974
Amortization of acquired technology	586	574	553	2,266	2,213
Non-GAAP gross profit	\$ 29,664	\$ 29,762	\$ 30,022	\$ 120,521	\$ 105,829
Non-GAAP gross margin	72 %	70 %	74 %	73 %	71 %

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, 2023	September 30, 2023	December 31, 2022	December 31, 2023	December 31, 2022
GAAP net income (loss)	\$ 887	\$ (4,972)	\$ 483	\$ 3,105	\$ (3,429)
Adjustments to reconcile GAAP net income (loss) to non-GAAP net income:					
Stock-based compensation expense	5,923	5,999	5,088	21,484	19,649
Amortization of acquired technology under costs of revenues	586	574	553	2,266	2,213
Amortization of other acquired intangible assets	306	328	325	1,285	1,270
Expenses of arbitration (1)	75	226	852	2,600	1,895
Acquisition-related costs (2)	—	33	—	209	—
Proceeds from the sale of previously written-off property and equipment	—	(105)	—	(105)	—
Tax impact of valuation allowance for deferred tax assets and reconciling items (3)	(2,060)	5,904	98	(2,374)	1,326
Non-GAAP net income	\$ 5,717	\$ 7,987	\$ 7,399	\$ 28,470	\$ 22,924
GAAP net income (loss) per diluted share	\$ 0.02	\$ (0.13)	\$ 0.01	\$ 0.08	\$ (0.09)
Non-GAAP net income per diluted share	\$ 0.15	\$ 0.20	\$ 0.19	\$ 0.73	\$ 0.60
Weighted average common shares used in GAAP net income (loss) per diluted share calculation	38,814	38,187	38,276	38,937	37,309
Weighted average common shares used in non-GAAP net income per diluted share calculation	38,814	38,992	38,276	38,937	38,130

- (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) Acquisition-related costs are incremental expenses related to business or asset acquisition transaction(s). These expenses may include consulting, legal and other fees. For the year ended December 31, 2023, the charges were related to the acquisition of Lantern Machinery Analytics, Inc.
- (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 research and development credits after the 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 DTAs 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 U.S. DTAs on a non-GAAP basis.



**Q4 2023 and Full Year 2023
Management Report
February 15, 2024**

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■ Related Information

The following commentary is provided by management and should be referenced in conjunction with PDF Solutions' Fourth Quarter and Full Year 2023 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 2023 Results

Q4 2023 Key Metrics

Revenue: \$41.1M

GAAP Gross Margin: 68%

Non-GAAP Gross Margin: 72%

GAAP Diluted EPS: \$0.02

Non-GAAP Diluted EPS: \$0.15

Operating Cash Flow: \$2.0M

Cash Used for Capital Expenditures: \$2.4M

FINANCIAL RESULTS SUMMARY

- Q4 2023 Total revenues of \$41.1M, down 3% over Q3 2023, and up 1% over Q4 2022.
- Q4 2023 Analytics revenue of \$39.1M, down 1% over Q3 2023, and up 9% over Q4 2022.
- Q4 2023 Integrated yield ramp revenue of \$2.0M, down 30% over Q3 2023, and down 55% over Q4 2022.

PDF Solutions Reports Full Year 2023 Results

Full Year 2023 Key Metrics

Revenue: \$165.8M

GAAP Gross Margin: 69%

Non-GAAP Gross Margin: 73%

GAAP Diluted EPS: \$0.08

Non-GAAP Diluted EPS: \$0.73

Operating Cash Flow: \$14.6M

Cash Used for Capital Expenditures:
\$11.3M

FINANCIAL RESULTS SUMMARY

- 2023 Total revenues of \$165.8M, up 12% over 2022.
- 2023 Analytics revenue of \$152.1M, up 17% over 2022.
- 2023 Integrated yield ramp revenue of \$13.8M, down 24% over 2022.

Key Financial & Operating Metrics – Quarterly

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

	Q4'23	Q3'23	Q2'23	Q1'23	Q4'22
Revenues	\$ 41,125	\$ 42,350	\$ 41,601	\$ 40,759	\$ 40,523
GAAP Gross Margin	68%	66%	70%	71%	71%
Non-GAAP Gross Margin	72%	70%	74%	75%	74%
Outstanding Debt	\$ -	\$ -	\$ -	\$ -	\$ -
Operating Cash Flow	\$ 2,029	\$ 19,186	(\$ 5,633)	(\$ 982)	\$ 24,275
Cash Used for Capital Expenditures (CAPEX)	\$ 2,408	\$ 2,916	\$ 3,099	\$ 2,902	\$ 1,725
\$ Shares Repurchased	\$ -	\$ 743	\$ -	\$ -	\$ -
Weighted Average Common Shares Outstanding	38.3	38.2	37.9	37.7	37.4
Effective Tax Rate Expense (Benefit)	(520)%	581%	(132)%	52%	55%

Key Financial & Operating Metrics – Yearly

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

	Year Ended December 31,		
	2023	2022	2021
Revenues	\$ 165,835	\$ 148,549	\$ 111,060
GAAP Gross Margin	69%	68%	60%
Non-GAAP Gross Margin	73%	71%	64%
Outstanding Debt	\$ -	\$ -	\$ -
Operating Cash Flow	\$ 14,600	\$ 32,298	\$ 4,243
Cash Used for CAPEX	\$ 11,325	\$ 8,430	\$ 4,053
\$ Shares Repurchased	\$ 743	\$ 22,471	\$ 4,523
Weighted Average Common Shares Outstanding	38.0	37.3	37.1
Effective Tax Rate Expense	36%	830%	17%

Revenue by Geographic Area – Quarterly

(Dollars in thousands)

	Q4'23	Q3'23	Q2'23	Q1'23	Q4'22
United States	\$ 22,708	\$ 24,477	\$ 22,339	\$ 23,274	\$ 20,756
% of Total	55%	58%	54%	57%	51%
China	\$ 4,562	\$ 7,549	\$ 7,421	\$ 6,956	\$ 6,280
% of Total	11%	18%	18%	17%	16%
Japan	\$ 2,460	\$ 3,135	\$ 2,593	\$ 2,277	\$ 5,697
% of Total	6%	7%	6%	6%	14%
Rest of the world	\$ 11,395	\$ 7,189	\$ 9,248	\$ 8,252	\$ 7,790
% of Total	28%	17%	22%	20%	19%
Total revenues	\$ 41,125	\$ 42,350	\$ 41,601	\$ 40,759	\$ 40,523

Revenue by Geographic Area – Yearly

(Dollars in thousands)

	Year Ended December 31,		
	2023	2022	2021
United States	\$ 92,798	\$ 73,625	\$ 50,374
% of Total	56%	50%	45%
China	\$ 26,488	\$ 24,494	\$ 14,267
% of Total	16%	16%	13%
Japan	\$ 10,465	\$ 13,916	\$ 11,097
% of Total	6%	9%	10%
Rest of the world	\$ 36,084	\$ 36,514	\$ 35,322
% of Total	22%	25%	32%
Total revenues	\$ 165,835	\$ 148,549	\$ 111,060

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 excludes stock-based compensation expense, amortization of acquired technology and other acquired intangible assets and the effects of certain non-recurring items, such as expenses related to an arbitration proceeding for a disputed contract with a customer, acquisition-related costs, proceeds from the sale of previously written-off property and equipment, 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 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 per share amounts)

	Q4'23	Q3'23	Q2'23	Q1'23	Q4'22
GAAP net income (loss)	\$ 887	(\$ 4,972)	\$ 6,835	\$ 355	\$ 483
Adjustments to reconcile GAAP net income (loss) to non-GAAP net income:					
Stock-based compensation expense	5,923	5,999	4,678	4,884	5,088
Amortization of acquired technology	586	574	553	553	553
Amortization of other acquired intangible assets	306	328	326	325	325
Expenses of arbitration (1)	75	226	166	2,133	852
Acquisition-related costs (2)	—	33	176	—	—
Proceeds from the sale of previously written-off property and equipment	—	(105)	—	—	—
Tax impact of valuation allowance for deferred tax assets and reconciling items (3)	(2,060)	5,904	(5,238)	(980)	98
Non-GAAP net income	\$ 5,717	\$ 7,987	\$ 7,496	\$ 7,270	\$ 7,399
GAAP net income (loss) per diluted share	\$ 0.02	(\$ 0.13)	\$ 0.17	\$ 0.01	\$ 0.01
Non-GAAP net income per diluted share	\$ 0.15	\$ 0.20	\$ 0.19	\$ 0.19	\$ 0.19
Weighted average common shares used in GAAP net income (loss) per diluted share calculation	38,814	38,187	39,076	38,859	38,276
Weighted average common shares used in Non-GAAP net income per diluted share calculation	38,814	38,992	39,076	38,859	38,276

- Represents expenses related to an arbitration proceeding over a disputed customer contract, which expenses are expected to continue until the arbitration is resolved.
- Acquisition-related costs are incremental expenses related to a business or asset acquisition transaction(s). These expenses may include consulting, legal and other fees. For the three months ended September 30, 2023, and June 30, 2023, the charges were related to the acquisition of Lantern Machinery Analytics, Inc.
- 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 research and development credits after the 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 DTAs 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 Income (Loss) to Non-GAAP Net Income

Yearly

(in thousands, except for per share amounts)

	Year Ended December 31,		
	2023	2022	2021
GAAP net income (loss)	\$ 3,105	(\$ 3,429)	(\$ 21,488)
Adjustments to reconcile GAAP net income (loss) to non-GAAP net income:			
Stock-based compensation expense	21,484	19,649	12,931
Amortization of acquired technology	2,266	2,213	2,079
Amortization of other acquired intangible assets	1,285	1,270	1,255
Expenses of arbitration (1)	2,600	1,895	1,951
Write-down in value of property and equipment (2)	—	—	3,183
Acquisition-related costs (3)	209	—	—
Proceeds from the sale of previously written-off property and equipment	(105)	—	—
Tax impact of valuation allowance for deferred tax assets and reconciling items (4)	(2,374)	1,326	3,091
Non-GAAP net income	\$ 28,470	\$ 22,924	\$ 3,002
GAAP net income (loss) per diluted share	\$ 0.08	(\$ 0.09)	(\$ 0.58)
Non-GAAP net income per diluted share	\$ 0.73	\$ 0.60	\$ 0.08
Weighted average common shares used in GAAP net income (loss) per diluted share calculation	38,937	37,309	37,138
Weighted average common shares used in Non-GAAP net income per diluted share calculation	38,937	38,130	37,901

- (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) Acquisition-related costs are incremental expenses related to the business or asset acquisition transaction(s). These expenses may include consulting, legal and other fees. For the year ended December 31, 2023, the charges were related to the acquisition of Lantern Machinery Analytics, Inc.
- (4) 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 research and development credits after the 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 DTAs 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)

	Q4'23	Q3'23	Q2'23	Q1'23	Q4'22
Cost of Revenue - GAAP	\$ 13,194	\$ 14,282	\$ 12,369	\$ 11,904	\$ 11,791
Adjustments to reconcile GAAP Cost of Revenue to Non-GAAP Cost of Revenue:					
Stock-based compensation expense	(1,147)	(1,120)	(938)	(964)	(737)
Amortization of acquired technology	(586)	(574)	(553)	(553)	(553)
Cost of Revenue - Non-GAAP	\$ 11,461	\$ 12,588	\$ 10,878	\$ 10,387	\$ 10,501
Research & Development - GAAP	\$ 12,308	\$ 13,113	\$ 12,264	\$ 13,051	\$ 14,360
Adjustments to reconcile GAAP R&D to Non-GAAP R&D:					
Stock-based compensation expense	(2,102)	(2,196)	(1,619)	(1,794)	(2,233)
Research & Development - Non-GAAP	\$ 10,206	\$ 10,917	\$ 10,645	\$ 11,257	\$ 12,127
Selling, General, & Administrative - GAAP	\$ 16,194	\$ 15,611	\$ 14,766	\$ 15,645	\$ 12,724
Adjustment to reconcile GAAP SG&A to Non-GAAP SG&A:					
Stock-based compensation expense	(2,674)	(2,683)	(2,121)	(2,126)	(2,118)
Expenses of arbitration (1)	(75)	(226)	(166)	(2,133)	(852)
Acquisition-related costs (2)	-	(33)	(176)	—	—
Selling, General, & Administrative - Non-GAAP	\$ 13,445	\$ 12,669	\$ 12,303	\$ 11,386	\$ 9,754

(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) Acquisition-related costs are incremental expenses related to a business or asset acquisition transaction(s). These expenses may include consulting, legal and other fees. For the three months ended September 30, 2023, and June 30, 2023, the charges were related to the acquisition of Lantern Machinery Analytics, Inc.

Reconciliation of GAAP to Non-GAAP Spending by Function

Yearly

(in thousands)

	Year Ended December 31,		
	2023	2022	2021
Cost of Revenue - GAAP	\$ 51,749	\$ 47,907	\$ 44,193
Adjustments to reconcile GAAP Cost of Revenue to Non-GAAP Cost of Revenue:			
Stock-based compensation expense	(4,169)	(2,974)	(2,563)
Amortization of acquired technology	(2,266)	(2,213)	(2,079)
Cost of Revenue - Non-GAAP	\$ 45,314	\$ 42,720	\$ 39,551
Research & Development - GAAP	\$ 50,736	\$ 56,126	\$ 43,780
Adjustments to reconcile GAAP R&D to Non-GAAP R&D:			
Stock-based compensation expense	(7,711)	(9,391)	(5,515)
Research & Development - Non-GAAP	\$ 43,025	\$ 46,735	\$ 38,265
Selling, General, & Administrative - GAAP	\$ 62,216	\$ 45,338	\$ 37,649
Adjustment to reconcile GAAP SG&A to Non-GAAP SG&A:			
Stock-based compensation expense	(9,604)	(7,284)	(4,853)
Expenses of arbitration (1)	(2,600)	(1,895)	(1,951)
Acquisition-related costs (2)	(209)	—	—
Selling, General, & Administrative - Non-GAAP	\$ 49,803	\$ 36,159	\$ 30,845

(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) Acquisition-related costs are incremental expenses related to a business or asset acquisition transaction(s). These expenses may include consulting, legal and other fees. For the year ended December 31, 2023, the charges were related to the acquisition of Lantern Machinery Analytics, Inc.