



**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

- (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 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.
- (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 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

	<i>(in thousands)</i>				
	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.