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

FORM 10-Q

(Mark One)

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended: March 31, 2022

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from ________________ to ________________

Commission File Number: 0-11412

AMTECH SYSTEMS, INC.

(Exact name of registrant as specified in its charter)

Arizona (State or other jurisdiction of incorporation or organization)	86-0411215 (I.R.S. Employer Identification No.)
131 South Clark Drive, Tempe, Arizona (Address of principal executive offices)	85281 (Zip Code)

Registrant's telephone number, including area code: 480-967-5146

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.01 per share	ASYS	NASDAQ.Global Select Market

Indicate by a check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). ☒ Yes ☐ No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.:

Large Accelerated Filer	☐	Accelerated Filer	☐
Non-Accelerated Filer	☒	Smaller Reporting Company	☒
		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. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

At May 6, 2022, there were outstanding 13,888,683 shares of Common Stock.

AMTECH SYSTEMS, INC. AND SUBSIDIARIES

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Cautionary Statement Regarding Forward-Looking Statements

Unless otherwise indicated, the terms “Amtech,” the “Company,” “we,” “us” and “our” refer to Amtech Systems, Inc. together with its subsidiaries.

Our discussion and analysis in this Quarterly Report on Form 10-Q ("Quarterly Report"), our Annual Report on Form 10-K for the fiscal year ended September 30, 2021 (the “2021 Form 10-K”), our other reports that we file with the Securities and Exchange Commission (the “SEC”), our press releases and in public statements of our officers and corporate spokespersons contain “forward-looking” statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the Private Securities Litigation Reform Act of 1995. Forward-looking statements give our or our officers’ current expectations or forecasts of future events. You can identify these statements by the fact that they do not relate strictly to historical or current events. You can also identify forward-looking statements by discussions of strategy, plans or intentions of management. We have tried, wherever possible, to identify such statements by using words such as “may,” “plan,” “anticipate,” “seek,” “will,” “expect,” “intend,” “estimate,” “believe,” “continue,” “predict,” “potential,” “project,” “should,” “would,” “could,” “likely,” “future,” “target,” “forecast,” “goal,” “observe,” and “strategy” or the negative thereof or variations thereon or similar terminology relating to the uncertainty of future events or outcomes. Any expectations based on these forward-looking statements are subject to risks and uncertainties and other important factors. Some factors that could cause actual results to differ materially from those anticipated include, among others, future economic conditions, including changes in the markets in which we operate; changes in demand for our services and products; our revenue and operating performance; difficulties in successfully executing our growth initiatives; difficulties in executing on our strategic efforts with respect to our material and substrate business segment; the effects of competition in the markets in which we operate, including the adverse impact of competitive product announcements or new entrants into our markets and transfers of resources by competitors into our markets; the cyclical nature of the semiconductor industry; pricing and gross profit pressures; control of costs and expenses; risks associated with new technologies and the impact on our business; legislative, regulatory, and competitive developments in markets in which we operate; possible future claims, litigation or enforcement actions and the results of any such claim, litigation, or enforcement action; business interruptions, including those related to the COVID-19 pandemic and the cybersecurity incident that occurred in April 2021; the potential impacts of the COVID-19 pandemic, including ongoing logistical and supply chain challenges, the recent Chinese government mandated shutdown in Shanghai, and any future pandemic on our business operations, financial results and financial position; the severity, magnitude and duration of the COVID-19 pandemic, including impacts of the pandemic and of businesses’ and governments’ responses to the pandemic on our operations and personnel; the resolution of our cybersecurity incident and related costs; risks of future cybersecurity incidents; and other circumstances and risks identified in this Quarterly Report or referenced from time to time in our filings with the SEC. The occurrence of the events described, and the achievement of expected results, depend on many events, some or all of which are not predictable or within our control. These and many other factors could affect Amtech’s future operating results and financial condition and could cause actual results to differ materially from expectations based on forward-looking statements made in this document or elsewhere by Amtech or on its behalf.

You should not place undue reliance on these forward-looking statements. We cannot guarantee that any forward-looking statement will be realized, although we believe that the expectations reflected in the forward-looking statements are reasonable as of the date of this Quarterly Report. Achievement of future results is subject to events out of our control, risks, uncertainties and potentially inaccurate assumptions. The 2021 Form 10-K listed various important factors that could affect Amtech’s future operating results and financial condition and could cause actual results to differ materially from historical results and expectations based on forward-looking statements made in this document or elsewhere by Amtech or on its behalf. These factors can be found under the heading “Item 1A. Risk Factors” in our 2021 Form 10-K and investors should refer to them as well as the additional risk factors identified in this Quarterly Report. Because it is not possible to predict or identify all such factors, any such list cannot be considered a complete set of all potential risks or uncertainties.

The Company undertakes no obligation to update or publicly revise any forward-looking statement whether as a result of new information, future developments or otherwise. All subsequent written or oral forward-looking statements attributable to the Company or persons acting on its behalf are expressly qualified in their entirety by this paragraph. You are advised, however, to consult any further disclosures we make on related subjects in our subsequently filed Form 10-Q and Form 8-K reports and our other filings with the SEC. As noted above, we provide a cautionary discussion of risks, uncertainties and possibly inaccurate assumptions relevant to our business under “Item 1A. Risk Factors” of our 2021 Form 10-K. We note these factors for investors as permitted by the Private Securities Litigation Reform Act of 1995. You should understand it is not possible to predict or identify all such factors.

PART I. FINANCIAL INFORMATION

Item 1. Condensed Consolidated Financial Statements

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Condensed Consolidated Balance Sheets
(in thousands, except share data)

Assets	March 31, 2022 (Unaudited)	September 30, 2021
Current Assets		
Cash and cash equivalents	$ 27,897	$ 32,836
Restricted cash	524	—
Accounts receivable (less allowance for doubtful accounts of $225 and $188 at March 31, 2022, and September 30, 2021, respectively)	30,782	22,502
Inventories	24,393	22,075
Income taxes receivable	—	1,046
Other current assets	3,440	2,407
Total current assets	87,036	80,866
Property, Plant and Equipment - Net	13,447	14,083
Right-of-Use Assets - Net	8,441	8,646
Intangible Assets - Net	808	858
Goodwill	11,168	11,168
Deferred Income Taxes - Net	671	631
Other Assets	618	661
Total Assets	$ 122,189	$ 116,913
Liabilities and Shareholders' Equity		
Current Liabilities		
Accounts payable	$ 9,635	$ 8,229
Accrued compensation and related taxes	3,449	2,881
Accrued warranty expense	804	545
Other accrued liabilities	679	903
Current maturities of long-term debt	405	396
Current portion of long-term lease liability	563	531
Contract liabilities	5,576	1,624
Income taxes payable	294	—
Total current liabilities	21,405	15,109
Long-Term Debt	4,195	4,402
Long-Term Lease Liability	8,175	8,389
Income Taxes Payable	3,208	3,277
Other Long-Term Liabilities	48	102
Total Liabilities	37,031	31,279
Commitments and Contingencies (Note 9)		
Shareholders' Equity		
Preferred stock; 100,000,000 shares authorized; none issued	—	—
Common stock; $0.01 par value; 100,000,000 shares authorized; shares issued and outstanding: 13,887,050 and 14,304,492 at March 31, 2022 and September 30, 2021, respectively	139	143
Additional paid-in capital	123,534	126,380
Accumulated other comprehensive income	353	14
Retained deficit	(38,868)	(40,903)
Total Shareholders' Equity	85,158	85,634
Total Liabilities and Shareholders' Equity	$ 122,189	$ 116,913

The accompanying notes are an integral part of these condensed consolidated financial statements.

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Operations
(Unaudited)
(in thousands, except per share data)

	Three Months Ended March 31, 2022	Three Months Ended March 31, 2021	Six Months Ended March 31, 2022	Six Months Ended March 31, 2021
Revenues, net	$ 28,579	$ 19,790	$ 55,908	$ 37,765
Cost of sales	16,396	12,062	32,961	22,525
Gross profit	12,183	7,728	22,947	15,240
Selling, general and administrative	7,788	5,688	15,740	10,901
Research, development and engineering	1,800	1,869	3,372	3,114
Operating income	2,595	171	3,835	1,225
Interest income (expense) and other, net	30	73	(53)	(182)
Income before income tax provision	2,625	244	3,782	1,043
Income tax provision	660	490	820	570
Net income (loss)	$ 1,965	$ (246)	$ 2,962	$ 473
Income (Loss) Per Share:				
Net income (loss) per basic share	$ 0.14	$ (0.02)	$ 0.21	$ 0.03
Net income (loss) per diluted share	$ 0.14	$ (0.02)	$ 0.21	$ 0.03
Weighted average shares outstanding:				
Basic	13,979	14,151	14,118	14,121
Diluted	14,144	14,151	14,318	14,217

The accompanying notes are an integral part of these condensed consolidated financial statements.

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Comprehensive Income
(Unaudited)
(in thousands)

	Three Months Ended March 31,		Six Months Ended March 31,	
	2022	2021	2022	2021
Net income (loss)	$ 1,965	$ (246)	$ 2,962	$ 473
Foreign currency translation adjustment	102	(225)	339	370
Comprehensive income (loss)	$ 2,067	$ (471)	$ 3,301	$ 843

The accompanying notes are an integral part of these condensed consolidated financial statements.

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Shareholders’ Equity
(Unaudited)
(in thousands)

	Common Stock		Treasury Stock			Accumulated Other		Total
	Shares	**Par Value**	**Shares**	**Cost**	**Additional Paid-In Capital**	**Comprehensive Income (Loss)**	**Retained Deficit**	**Shareholders' Equity**
Balance at September 30, 2020	14,063	$ 141	—	$ —	$ 124,435	$ (646)	$ (42,411)	$ 81,519
Net income	—	—	—	—	—	—	719	719
Translation adjustment	—	—	—	—	—	595	—	595
Stock compensation expense	—	—	—	—	65	—	—	65
Stock options exercised	28	—	—	—	135	—	—	135
Balance at December 31, 2020	14,091	141	—	—	124,635	(51)	(41,692)	83,033
Net loss	—	—	—	—	—	—	(246)	(246)
Translation adjustment	—	—	—	—	—	(225)	—	(225)
Stock compensation expense	—	—	—	—	84	—	—	84
Stock options exercised	131	1	—	—	794	—	—	795
Balance at March 31, 2021	14,222	$ 142	—	$ —	$ 125,513	$ (276)	$ (41,938)	$ 83,441
Balance at September 30, 2021	14,304	$ 143	—	$ —	$ 126,380	$ 14	$ (40,903)	$ 85,634
Net income	—	—	—	—	—	—	997	997
Translation adjustment	—	—	—	—	—	237	—	237
Stock compensation expense	—	—	—	—	103	—	—	103
Repurchase of treasury stock	—	—	(291)	(2,713)	—	—	—	(2,713)
Retirement of treasury stock	(291)	(3)	291	2,713	(2,122)	—	(588)	—
Stock options exercised	12	—	—	—	69	—	—	69
Balance at December 31, 2021	14,025	140	—	—	124,430	251	(40,494)	84,327
Net income	—	—	—	—	—	—	1,965	1,965
Translation adjustment	—	—	—	—	—	102	—	102
Stock compensation expense	—	—	—	—	137	—	—	137
Repurchase of treasury stock	—	—	(143)	(1,402)	—	—	—	(1,402)
Retirement of treasury stock	(143)	(1)	143	1,402	(1,062)	—	(339)	—
Stock options exercised	5	—	—	—	29	—	—	29
Balance at March 31, 2022	13,887	$ 139	—	$ —	$ 123,534	$ 353	$ (38,868)	$ 85,158

The accompanying notes are an integral part of these condensed consolidated financial statements.

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Cash Flows
(Unaudited)
(in thousands)

	Six Months Ended March 31, 2022	Six Months Ended March 31, 2021
Operating Activities		
Net income	$ 2,962	$ 473
Adjustments to reconcile net income to net cash used in operating activities:		
Depreciation and amortization	864	644
Write-down of inventory	115	230
Non-cash stock compensation expense	240	149
Provision for allowance for doubtful accounts	41	28
Other, net	(2)	8
Changes in operating assets and liabilities:		
Accounts receivable	(8,321)	(5,485)
Inventories	(2,433)	859
Other assets	(788)	(1,132)
Accounts payable	1,407	3,122
Accrued income taxes	1,272	536
Accrued and other liabilities	331	1,232
Contract liabilities	3,951	(929)
Net cash used in operating activities	(361)	(265)
Investing Activities		
Purchases of property, plant and equipment	(125)	(433)
Acquisition, net of cash and cash equivalents acquired	—	(5,082)
Net cash used in investing activities	(125)	(5,515)
Financing Activities		
Proceeds from the exercise of stock options	98	930
Repurchase of common stock	(4,115)	—
Payments on long-term debt	(198)	(189)
Net cash (used in) provided by financing activities	(4,215)	741
Effect of Exchange Rate Changes on Cash, Cash Equivalents and Restricted Cash	286	368
Net Decrease in Cash, Cash Equivalents and Restricted Cash	(4,415)	(4,671)
Cash and Cash Equivalents, Beginning of Period	32,836	45,070
Cash, Cash Equivalents and Restricted Cash, End of Period	$ 28,421	$ 40,399
Supplemental Cash Flow Information:		
Income tax refunds (payments), net	$ 250	$ (277)
Interest paid, net of capitalized interest	$ 123	$ 109

The accompanying notes are an integral part of these condensed consolidated financial statements.

AMTECH SYSTEMS, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
THREE AND SIX MONTHS ENDED MARCH 31, 2022 AND 2021
(UNAUDITED)

1. Basis of Presentation and Significant Accounting Policies

Nature of Operations and Basis of Presentation – Amtech Systems, Inc. (the "Company," "Amtech," "we," "our" or "us") is a leading, global manufacturer of capital equipment, including thermal processing and wafer polishing, and related consumables used in fabricating semiconductor devices, such as silicon carbide ("SiC") and silicon power devices, analog and discrete devices, electronic assemblies and light-emitting diodes ("LEDs"). We sell these products to semiconductor device and module manufacturers worldwide, particularly in Asia, North America and Europe.

We serve niche markets in industries that are experiencing technological advances, and which historically have been very cyclical. Therefore, future profitability and growth depend on our ability to develop or acquire and market profitable new products and on our ability to adapt to cyclical trends.

The accompanying unaudited condensed consolidated financial statements have been prepared pursuant to the rules and regulations of the U.S. Securities and Exchange Commission (the "SEC"), and consequently do not include all disclosures normally required by accounting principles generally accepted in the United States of America ("GAAP"). In the opinion of management, the accompanying unaudited interim condensed consolidated financial statements contain all adjustments necessary, all of which are of a normal and recurring nature, to present fairly our financial position, results of operations and cash flows. Certain information and note disclosures normally included in financial statements have been condensed or omitted pursuant to the rules and regulations of the SEC. The condensed consolidated balance sheet at September 30, 2021, has been derived from the audited consolidated financial statements at that date but does not include all of the information and footnotes required by GAAP for complete financial statements. These unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in our Annual Report on Form 10-K for the fiscal year ended September 30, 2021.

Our fiscal year is from October 1 to September 30. Unless otherwise stated, references to particular years, quarters, months or periods refer to our fiscal years ending or ended September 30, and the associated quarters, months, and periods of those fiscal years.

The consolidated results of operations for the three and six months ended March 31, 2022, are not necessarily indicative of the results to be expected for the full fiscal year.

In March 2020, the outbreak of COVID-19 was recognized as a pandemic by the World Health Organization, and the outbreak became increasingly widespread, including in all of the markets in which we operate. We continue to monitor the impact of COVID-19 on all aspects of our business. We are a company operating in a critical infrastructure industry, as defined by the U.S. Department of Homeland Security. Consistent with federal guidelines and with foreign government, state and local orders to date, we have continued to operate across our footprint throughout the COVID-19 pandemic. Following the onset of COVID-19 and its negative effects on our business, most prominently reflected in our second, third and fourth quarter fiscal 2020 results, global economic conditions improved during fiscal 2021, resulting in increased demand for our products and services, which led to our earnings for fiscal 2021 substantially exceeding our fiscal 2020 results. There remain many unknowns and we continue to monitor the expected trends and related demand for our products and services and have and will continue to adjust our operations accordingly.

On March 28, 2022, the Chinese government issued a mandatory shutdown in Shanghai, the location of one of our manufacturing facilities. On May 5, 2022, we received notice that we have been cleared by the Chinese government for reopening. There are several steps and submissions required before we will be permitted to reopen, and we will be limited in the number of workers that will be allowed in the facility upon such reopening. We estimate we could be reopened in mid-May with approximately 10-15% of our work force initially allowed to return. There can be no assurance that we will be allowed to reopen in May or, if we are allowed to reopen, we will be able to remain open on a consistent basis thereafter.

Principles of Consolidation – The consolidated financial statements include the accounts of the Company and our wholly-owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates – The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Contract Liabilities – Contract liabilities are reflected in current liabilities on the Condensed Consolidated Balance Sheets as all performance obligations are expected to be satisfied within the next 12 months. Contract liabilities include customer deposits. Contract liabilities relate to payments invoiced or received in advance of completion of performance obligations under a contract. Contract liabilities are recognized as revenue upon the fulfillment of performance obligations. Contract liabilities consist of customer deposits as of March 31, 2022 and September 30, 2021. Of the $1.6 million contract liabilities recorded at September 30, 2021, $0.5 million and $1.6 million was recorded as revenue for the three and six months ended March 31, 2022, respectively.

Shipping Expense – Shipping and handling fees associated with inbound and outbound freight are expensed as incurred and included in selling, general and administrative expenses. Shipping expense was $0.6 million and $0.2 million for the three months ended March 31, 2022 and 2021, respectively, and $1.8 million and $0.3 million for the six months ended March 31, 2022 and 2021, respectively.

Debt – The recorded amounts of these financial instruments, including long-term debt and current maturities of long-term debt, have an interest rate of 4.11% and are due in September 2023. Due to the relatively short-term nature of the debt, we believe that the carrying value approximates fair value. We expect to pay off this debt in the third quarter of fiscal 2022 upon the closing of the sale of our Massachusetts manufacturing facility (see Note 12).

Concentrations of Credit Risk – Our customers consist of semiconductor manufacturers worldwide, as well as the lapping and polishing marketplace. Financial instruments that potentially subject us to significant concentrations of credit risk consist principally of cash and trade accounts receivable. Credit risk is managed by performing ongoing credit evaluations of the customers' financial condition, by requiring significant deposits where appropriate, and by actively monitoring collections. Letters of credit are required of certain customers depending on the size of the order, type of customer or its creditworthiness, and country of domicile.

As of March 31, 2022, one Semiconductor segment customer individually represented 28% of accounts receivable. As of September 30, 2021, one Semiconductor segment customer individually represented 14% of accounts receivable.

We maintain our cash and cash equivalents in multiple financial institutions. Balances in the United States, which account for approximately 77% and 83% of total cash balances as of March 31, 2022 and September 30, 2021, respectively, are primarily invested in U.S. Treasuries or are in financial institutions insured by the Federal Deposit Insurance Corporation. The remainder of our cash is maintained with financial institutions with reputable credit in China, the United Kingdom and Malaysia. We maintain cash in bank accounts in amounts which at times may exceed federally insured limits. We have not experienced any losses on such accounts.

Refer to Note 11 to Condensed Consolidated Financial Statements for information regarding major customers, foreign sales and revenue in other countries subject to fluctuation in foreign currency exchange rates.

Impact of Recently Issued Accounting Pronouncements

There were no new accounting pronouncements issued or effective as of March 31, 2022 that had or are expected to have a material impact on our consolidated financial statements.

2. Acquisition

On March 3, 2021, we acquired 100% of the issued and outstanding capital stock of Intersurface Dynamics, Inc. ("Intersurface Dynamics"), a Connecticut-based manufacturer of substrate process chemicals used in various manufacturing processes, including semiconductors, silicon and compound semiconductor wafers, and optics, for a cash purchase price of $5.3 million. The total fair value of net assets acquired was approximately $0.7 million, including $0.4 million of identifiable intangible assets consisting of customer relationships and brand name, which are amortized using the straight-line method over their estimated useful lives of ten and three years, respectively. Goodwill acquired approximated $4.5 million, which was recorded in our Material and Substrate segment. Intersurface Dynamics' results of operations are included in our Material and Substrate segment from the date of acquisition. Our historical results would not have been materially affected by the acquisition of Intersurface Dynamics.

3. Cybersecurity Incident

On April 12, 2021, we detected a data incident in which attackers acquired data and disabled some of the technology systems used by one of our subsidiaries. Upon learning of the incident, we immediately engaged external counsel and retained a team of third-party forensic, incident response, and security professionals to investigate and determine the full scope of this incident. We also notified law enforcement officials and confirmed that the incident is covered by our insurance. We completed the investigation of the data incident with assistance from our outside professionals, and indications were that the unauthorized third-party gained access to certain personal information relating to employees and their beneficiaries for some of our operations. There was no indication of any misuse of this information.

Despite this disruption, production continued in our facilities. Our previously disabled subsidiary network is now back up and running securely. Working alongside our security professionals, we were able to bring our subsidiary's systems online with enhanced security controls. We have deployed an advanced next generation anti-virus and endpoint detection and response tool, as well as Managed Detection & Response services. We remain committed to protecting the security of the personal information entrusted to us and providing high-quality products and service to our customers.

We recorded approximately $1.1 million of expense related to this incident, which was included in selling, general and administrative expenses, during the third quarter of 2021. The expense was primarily related to third-party service providers, including security professionals as well as legal and response teams. We may make additional investments in the future to further strengthen our cybersecurity. We filed an insurance claim during the fourth quarter of 2021 related to the incident. As of March 31, 2022, we have signed a final settlement agreement with our insurer resulting in total reimbursement of approximately $0.6 million, which included $0.4 million received during the quarter ended December 31, 2021 and $0.2 million received during the quarter ended March 31, 2022. No portion of the reimbursement remains outstanding as of March 31, 2022.

4. Earnings Per Share

Basic earnings per share ("EPS") is computed by dividing net income by the weighted average number of common shares outstanding for the period. Diluted EPS is computed similarly to basic EPS except that the denominator is increased to include the number of additional common shares that would have been outstanding if potentially dilutive common shares had been issued. In the case of a net loss, diluted earnings per share is calculated in the same manner as basic EPS.

For the three and six months ended March 31, 2022, options for 187,000 and 95,000 weighted average shares, respectively, were excluded from the diluted EPS calculations because they were anti-dilutive. For the three and six months ended March 31, 2021, options for 98,000 and 349,000 weighted average shares, respectively, were excluded from the diluted EPS calculations because they were anti-dilutive. These shares could become dilutive in the future.

A reconciliation of the components of the basic and diluted EPS calculations follows (in thousands, except per share amounts):

	Three Months Ended March 31, 2022	Three Months Ended March 31, 2021	Six Months Ended March 31, 2022	Six Months Ended March 31, 2021
Numerator:				
Net income (loss)	$ 1,965	$ (246)	$ 2,962	$ 473
Denominator:				
Weighted-average shares used to compute basic EPS	13,979	14,151	14,118	14,121
Common stock equivalents (1)	165	—	200	96
Weighted-average shares used to compute diluted EPS	14,144	14,151	14,318	14,217
Income (loss) per share:				
Net income (loss) per basic share	$ 0.14	$ (0.02)	$ 0.21	$ 0.03
Net income (loss) per diluted share	$ 0.14	$ (0.02)	$ 0.21	$ 0.03

(1)The number of common stock equivalents is calculated using the treasury method and the average market price during the period.

5. Inventories

The components of inventories are as follows, in thousands:

	March 31, 2022	September 30, 2021
Purchased parts and raw materials	$ 18,056	$ 16,260
Work-in-process	5,512	4,865
Finished goods	4,927	5,055
	28,495	26,180
Excess and obsolete reserves	(4,102)	(4,105)
Inventories	$ 24,393	$ 22,075

6. Leases

The following table provides information about the financial statement classification of our lease balances reported within the Condensed Consolidated Balance Sheets, in thousands:

	March 31, 2022	September 30, 2021
Assets		
Right-of-use assets - operating	$ 8,441	$ 8,646
Right-of-use assets - finance	170	174
Total right-of-use assets	$ 8,611	$ 8,820
Liabilities		
Current		
Operating lease liability	$ 496	$ 470
Finance lease liability	67	61
Total current portion of long-term lease liability	563	531
Long-term		
Operating lease liability	8,075	8,279
Finance lease liability	100	110
Total long-term lease liability	8,175	8,389
Total lease liability	$ 8,738	$ 8,920

The following table provides information about the financial statement classification of our lease expenses reported in the Condensed Consolidated Statements of Operations, in thousands:

		Three Months Ended March 31,		Six Months Ended March 31,	
Lease cost	**Classification**	**2022**	**2021**	**2022**	**2021**
Operating lease cost	Cost of sales	$ 198	$ 13	$ 395	$ 84
Operating lease cost	Selling, general and administrative expenses	86	96	170	144
Finance lease cost	Cost of sales	1	2	2	4
Finance lease cost	Selling, general and administrative expenses	19	1	35	3
Short-term lease cost	Cost of sales	—	49	—	76
Total lease cost		$ 304	$ 161	$ 602	$ 311

Future minimum lease payments under non-cancelable leases, including leases that are executed but not yet effective, as of March 31, 2022, are as follows, in thousands:

	Operating Leases	Finance Leases	Total
Remainder of 2022	$ 534	$ 53	$ 587
2023	1,063	115	1,178
2024	1,044	96	1,140
2025	1,033	48	1,081
2026	917	48	965
Thereafter	8,872	25	8,897
Total lease payments	13,463	385	13,848
Less: Interest	4,892	29	4,921
Present value of lease liabilities	$ 8,571	$ 356	$ 8,927

Operating lease payments include $6.5 million related to optional lease extension periods for multiple leases that are not yet exercisable but are reasonably certain of being exercised.

The following table provides information about the remaining lease terms and discount rates applied:

	March 31, 2022
Weighted average remaining lease term	
Operating leases	16.59 years
Finance leases	3.91 years
Weighted average discount rate	
Operating leases	4.17 %
Finance leases	4.17 %

7. Income Taxes

Our effective tax rate is generally higher than the statutory rate due to the geographic mix of profit among the foreign and domestic jurisdictions in which we operate. For the three months ended March 31, 2022 and 2021, we recorded income tax expense of $0.7 million and $0.5 million, respectively. For the six months ended March 31, 2022 and 2021, we recorded income tax expense of $0.8 million and $0.6 million, respectively. Tax expense for the six months ended March 31, 2021 includes a benefit of approximately $0.3 million related to the reversal of previously recorded uncertain tax positions. The quarterly income tax provision is calculated using an estimated annual effective tax rate, based upon expected annual income, permanent items, statutory rates and planned tax strategies in the various jurisdictions in which we operate. However, losses in certain jurisdictions and discrete items are excluded from the determination of the estimated annual effective tax rate.

GAAP requires that a valuation allowance be established when it is “more likely than not” that all or a portion of deferred tax assets will not be realized. A review of all available positive and negative evidence needs to be considered, including a company’s performance, the market environment in which the company operates and the length of carryback and carryforward periods. According to those principles, it is difficult to conclude that a valuation allowance is not needed when the negative evidence includes cumulative losses in recent years. Based on the considerations of all available evidence, we have concluded that we will maintain a full valuation allowance for all net deferred tax assets related to the carryforwards of U.S. net operating losses and foreign tax credits. We will continue to monitor our cumulative income and loss positions in the U.S. and foreign jurisdictions to determine whether full valuation allowances on net deferred tax assets are appropriate. We expect to pay minimal U.S federal cash taxes for the foreseeable future as a result of our U.S. net operating losses that are carried forward.

At March 31, 2022 and September 30, 2021, the total amount of unrecognized tax benefits was approximately $1.0 million and $0.9 million, respectively. As of March 31, 2022 and September 30, 2021, we had an accrual for potential interest and penalties of approximately $0.7 million and $0.6 million, respectively, classified with income taxes payable long-term.

8. Equity and Stock-Based Compensation

Stock-based compensation expense was immaterial in all periods presented. Stock-based compensation expense is included in selling, general and administrative expenses.

The following table summarizes our stock option activity during the six months ended March 31, 2022:

	Options	Weighted Average Exercise Price
Outstanding at beginning of period	608,269	$ 6.48
Granted	105,500	14.24
Exercised	(17,371)	5.69
Forfeited	(18,953)	6.56
Outstanding at end of period	677,445	$ 7.71
Exercisable at end of period	472,697	$ 6.69
Weighted average fair value of options granted during the period	$ 7.07	

The fair value of options was estimated at the applicable grant date using the Black-Scholes option pricing model with the following assumptions:

	Six Months Ended March 31, 2022
Risk free interest rate	1 %
Expected life	5 years
Dividend rate	— %
Volatility	57 %

2022 Stock Repurchase Plan

On February 10, 2022, our Board of Directors (“the Board”) approved a new stock repurchase program, pursuant to which we may repurchase up to $5 million of our outstanding Common Stock over a one-year period, commencing on February 16, 2022. Repurchases under the program will be made in open market transactions at prevailing market prices, in privately negotiated transactions, or by other means in compliance with the rules and regulations of the SEC; however, we have no obligation to repurchase shares and the timing, actual number, and value of shares to be repurchased is subject to management’s discretion and will depend on our stock price and other market conditions. We may, in the sole discretion of the Board, terminate the repurchase program at any time while it is in effect. Repurchased shares may be retired or kept in treasury for further issuance. During the quarter ended March 31, 2022, we repurchased 143,430 shares of our Common Stock on the open market at a total cost of approximately $1.4 million (an average price of $9.78 per share). All repurchased shares have been retired.

2021 Stock Repurchase Plan

On February 9, 2021, the Board approved a stock repurchase program, pursuant to which we may repurchase up to $4 million of our outstanding Common Stock over a one-year period, commencing on February 16, 2021. Repurchases under the program were to be made in open market transactions at prevailing market prices, in privately negotiated transactions, or by other means in compliance with the rules and regulations of the SEC; however, we had no obligation to repurchase shares and the timing, actual number, and value of shares to be repurchased was subject to management's discretion and depended on our stock price and other market conditions. We could have, in the sole discretion of the Board, terminated the repurchase program at any time while it was in effect. Repurchased shares were to be retired or kept in treasury for further issuance. During the quarter ended December 31, 2021, we repurchased 291,383 shares of our Common Stock on the open market at a total cost of approximately $2.7 million (an average price of $9.31 per share). All repurchased shares have been retired. The term of this repurchase program expired during the quarter ended March 31, 2022.

9. Commitments and Contingencies

Purchase Obligations – As of March 31, 2022, we had unrecorded purchase obligations in the amount of $21.0 million. These purchase obligations consist of outstanding purchase orders for goods and services. While the amount represents purchase agreements, the actual amounts to be paid may be less in the event that any agreements are renegotiated, canceled or terminated.

Legal Proceedings and Other Claims – From time to time, we are a party to claims and actions for matters arising out of our business operations. We regularly evaluate the status of the legal proceedings and other claims in which we are involved to assess whether a loss is probable or there is a reasonable possibility that a loss, or an additional loss, may have been incurred and determine if accruals are appropriate. If accruals are not appropriate, we further evaluate each legal proceeding to assess whether an estimate of possible loss or range of possible loss can be made for disclosure. Although the outcome of claims and litigation is inherently unpredictable, we believe that we have adequate provisions for any probable and estimable losses. It is possible, nevertheless, that our consolidated financial position, results of operations or liquidity could be materially and adversely affected in any particular period by the resolution of a claim or legal proceeding. Legal expenses related to defense, negotiations, settlements, rulings and advice of outside legal counsel are expensed as incurred.

Employment Contracts – We have employment contracts and change in control agreements with, and severance plans covering, certain officers and management employees under which severance payments would become payable in the event of specified terminations without cause or terminations under certain circumstances after a change in control. If severance payments under the current employment contracts or severance plans were to become payable, the severance payments would generally range from twelve to twenty-four months of salary.

10. Reportable Segment Information

Our two reportable segments are as follows:

Semiconductor – We design, manufacture, sell and service thermal processing equipment and related controls for use by leading semiconductor manufacturers, and in electronics, automotive and other industries.

Material and Substrate – We produce consumables and machinery for lapping (fine abrading) and polishing of materials, such as sapphire substrates, optical components, silicon wafers, numerous types of crystal materials, ceramics and metal components.

Information concerning our reportable segments is as follows, in thousands:

	Three Months Ended March 31, 2022	Three Months Ended March 31, 2021	Six Months Ended March 31, 2022	Six Months Ended March 31, 2021
Net Revenues:				
Semiconductor	$ 24,607	$ 17,119	$ 48,238	$ 32,694
Material and Substrate	3,972	2,671	7,670	5,071
	$ 28,579	$ 19,790	$ 55,908	$ 37,765
Operating income (loss):				
Semiconductor	$ 3,368	$ 1,665	$ 5,725	$ 3,862
Material and Substrate	654	(253)	835	(319)
Non-segment related	(1,427)	(1,241)	(2,725)	(2,318)
	$ 2,595	$ 171	$ 3,835	$ 1,225

	March 31, 2022	September 30, 2021
Identifiable Assets:		
Semiconductor	$ 83,024	$ 70,631
Material and Substrate	19,483	19,541
Non-segment related*	19,682	26,741
	$ 122,189	$ 116,913

* Non-segment related assets include cash, property, and other assets.

Goodwill and other long-lived assets

We review our long-lived assets, including goodwill, for impairment at least annually in our fourth quarter or whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Additional information on impairment testing of long-lived assets, intangible assets and goodwill can be found in Notes 1 and 10 of our Annual Report on Form 10-K for the year ended September 30, 2021.

11. Major Customers and Foreign Sales

During the six months ended March 31, 2022, two Semiconductor segment customers individually represented 16% and 12% of our net revenues. During the six months ended March 31, 2021, two Semiconductor segment customers individually represented 17% and 10% of our net revenues.

Our net revenues were from customers in the following geographic regions:

	Six Months Ended March 31, 2022	Six Months Ended March 31, 2021
United States	21 %	24 %
Other	9 %	3 %
Total North America	**30 %**	**27 %**
China	20 %	28 %
Malaysia	9 %	5 %
Taiwan	14 %	20 %
Other	5 %	8 %
Total Asia	**48 %**	**61 %**
Germany	6 %	3 %
Austria	9 %	1 %
Other	7 %	8 %
Total Europe	**22 %**	**12 %**
	100 %	**100 %**

12. Subsequent Events

On April 15, 2022, our subsidiary, BTU International, Inc. ("BTU"), entered into a Purchase and Sale Agreement (the "Purchase Agreement") with Rhino Capital Advisors, LLC ("Buyer") for the sale of BTU's building in Billerica, Massachusetts (the "Property"), subject to the terms and conditions contained in the Purchase Agreement. The sale price for the Property is $21.5 million, $0.5 million of which was paid as a nonrefundable deposit, with the remainder due at closing. The Purchase Agreement contains representations, warranties and covenants customary for transactions of this type. Closing is tentatively set for June 21, 2022. Closing is subject to the execution of a leaseback of the premises. Terms of the leaseback are expected to include a base rent of $1.5 million per year in an absolute triple net lease for a two-year term. Based on a June 2022 closing date, we expect to recognize a gain on this transaction of approximately $11 million to $12 million, net of tax. We believe we will be able to utilize our net operating losses from a tax perspective, subject to an 80% federal limitation. Additionally, we expect a net cash inflow of approximately $15 million to $16 million, after repayment of the existing mortgage and settlement of related sale expenses.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our "Condensed Consolidated Financial Statements" in Item 1 of this Quarterly Report on Form 10-Q ("Quarterly Report") and our consolidated financial statements and related notes included in "Item 8. Financial Statements and Supplementary Data" in our Annual Report on Form 10-K for the fiscal year ended September 30, 2021 (the "2021 Form 10-K").

Overview

We are a leading, global manufacturer of capital equipment, including thermal processing and wafer polishing, and related consumables used in fabricating semiconductor devices, such as silicon carbide ("SiC") and silicon power devices, analog and discrete devices, electronic assemblies and light-emitting diodes ("LEDs"). We sell these products to semiconductor device and module manufacturers worldwide, particularly in Asia, North America and Europe.

We operate in two reportable segments, based primarily on the industry they serve: (i) Semiconductor and (ii) Material and Substrate. In our Semiconductor segment, we supply thermal processing equipment, including solder reflow ovens, horizontal diffusion furnaces and custom high-temp belt furnaces for use by semiconductor, electronics and electro/mechanical assembly manufacturers. Our semiconductor customers are primarily manufacturers of integrated circuits and optoelectronic sensors and discrete components used in analog, power and radio frequency. In our Material and Substrate segment, we produce substrate consumables, chemicals and machinery for lapping (fine abrading) and polishing of materials, such as silicon wafers for semiconductor products, sapphire wafers for LED applications, and compound substrates, like silicon carbide wafers, for power device applications.

The semiconductor industry is cyclical, but not seasonal, and historically has experienced fluctuations. Our revenue is impacted by these broad industry trends.

Strategy

We continue to focus on our plans to profitably grow our business and have developed a strategic growth plan and a capital allocation plan that we believe will support our growth objectives. Our power semiconductor strategic growth plan leverages our experience, products and capabilities in pursuit of growth, profitability and sustainability. Our core focus areas are:

- Emerging opportunities in the SiC industry – We believe we are well-positioned to take part in this significant growth area, specifically as it relates to silicon carbide wafer capacity expansion. We are working closely with our customers to understand their SiC growth plans, needs and opportunities. We are investing in our capacity, next generation product development, and in our people. During 2021, we completed the acquisition of Intersurface Dynamics, Inc. ("Intersurface Dynamics"), which added numerous coolants and chemical products to our existing consumable and machine product lines. We believe these investments will help fuel our growth in the emerging growth SiC industry.

- 300mm Horizontal Thermal Reactor – We have a highly successful and proven 300mm horizontal diffusion solution used for power semiconductor device manufacturing applications. We have a strong foundation with the leading 300mm power chip manufacturer, and, from 2020 through the current quarter, we have received 23 system orders from top-tier customers. We believe we have a strong opportunity to continue expanding our customer base and grow revenue with our 300mm solution.

- As the largest revenue contributor to our organization, we expect our subsidiary, BTU International, Inc. ("BTU"), will continue to track semiconductor industry growth cycles for our advanced semi-packaging and surface-mount technology products, in addition to specialized custom belt furnaces used in automotive and other specialized industrial applications. We believe that our investments in product innovation will provide BTU with opportunities to grow further, especially in high growth applications of consumer and industrial electronics, Internet of Things, electric vehicles and 5G communications.

We anticipate that the required investments to achieve our revenue growth targets will be in the range of $6.0 - $8.0 million in research and development and capital expenditures, which also includes investments in management information systems and capacity expansions at existing manufacturing facilities. Additionally, we may decide to divest some or all of our real estate holdings to streamline our balance sheet and provide additional working capital for our investments and research and development needs. In April 2022, we announced that we have entered into an agreement to sell the real property where our manufacturing facility in Billerica, Massachusetts is located, subject to normal closing provisions. In connection with this sale, we will enter into a two-year leaseback of the facility. This sale-leaseback transaction is expected to result in a net cash inflow of approximately $15 million to $16 million, after repayment of the existing mortgage and settlement of related sale expenses. During the two-year leaseback period, we will conduct a search for a new manufacturing facility more in line with the needs of our Semiconductor product lines. In the fourth quarter of 2021, we completed the move of our Shanghai facility to a new location. This new location increases our capacity and allows us to streamline our manufacturing processes, thus reducing our lead times. In addition, we are evaluating our management information systems and needs in order to allow for greater efficiencies and to ensure our infrastructure can support our future growth plans. We are and will continue to closely scrutinize these planned investments, in light of the COVID-19 challenges, and we may defer some of our projects. However, as a capital equipment manufacturer, we will continue to invest in our business to fuel our future growth.

In addition to investments in our organic growth, another key aspect of our capital allocation policy is our plan to grow through acquisitions. We have the expertise and track record to identify strong acquisition targets in the semi and SiC growth environments and to execute transactions and integrations to provide for value creating, profitable growth in both the short-term and long-term. On March 3, 2021, we acquired Intersurface Dynamics, a Connecticut-based manufacturer of substrate process chemicals used in various manufacturing processes, including semiconductors, silicon and compound semiconductor wafers, and optics. As of the date of the filing of this Quarterly Report, we do not have an agreement to acquire any acquisition target.

COVID-19 Update

On March 28, 2022, the Chinese government issued a mandatory shutdown in Shanghai, the location of one of our manufacturing facilities. We estimate approximately $1.2 million of revenue was shifted to a future quarter as a result of the four lost shipping days in March. On May 5, 2022, we received notice that we have been cleared by the Chinese government for reopening. There are several steps and submissions required before we will be permitted to reopen, and we will be limited in the number of workers that will be allowed in the facility upon such reopening. We estimate we could be reopened in mid-May with approximately 10-15% of our work force initially allowed to return. There can be no assurance that we will be allowed to reopen in May or, if we are allowed to reopen, we will be able to remain open on a consistent basis thereafter. We estimate it will take at least two quarters to make up the shipments missed during the third quarter of fiscal 2022 as we work through our production, supply chain and logistics backlog.

Cybersecurity Incident

On April 12, 2021, we detected a data incident in which attackers acquired data and disabled some of the technology systems used by one of our subsidiaries. Upon learning of the incident, we immediately engaged external counsel and retained a team of third-party forensic, incident response, and security professionals to investigate and determine the full scope of this incident. We also notified law enforcement officials and confirmed that the incident is covered by our insurance. We have completed the investigation of the data incident with assistance from our outside professionals, and indications were that the unauthorized third-party gained access to certain personal information relating to employees and their beneficiaries for some of our operations. There was no indication of any misuse of this information.

Despite this disruption, production continued in our facilities. Our previously disabled subsidiary network is now back up and running securely. Working alongside our security professionals, we were able to bring our subsidiary’s systems online with enhanced security controls. We have deployed an advanced next generation anti-virus and endpoint detection and response tool, as well as Managed Detection & Response services. We remain committed to protecting the security of the personal information entrusted to us and providing high-quality products and service to our customers.

We recorded approximately $1.1 million of expense related to this incident, which is included in selling, general and administrative expenses, during the third quarter of fiscal 2021. The expense is primarily related to third-party service providers, including security professionals as well as legal and response teams. We may make additional investments in the future to further strengthen our cybersecurity. We filed an insurance claim during the fourth quarter of fiscal 2021 related to the incident. As of March 31, 2022, we have signed a final settlement agreement with our insurer resulting in total reimbursement of approximately $0.6 million, which included $0.4 million received during the quarter ended December 31, 2021 and $0.2 million received during the quarter ended March 31, 2022. No portion of the reimbursement remains outstanding as of March 31, 2022.

Segment Reporting Changes

Upon the acquisition of Intersurface Dynamics in the second quarter of 2021, we evaluated our organizational structure and concluded that we have two reportable segments following the acquisition. Our Material and Substrate segment includes our former SiC/LED segment in addition to Intersurface Dynamics from the date of acquisition.

Results of Operations

The following table sets forth certain operational data as a percentage of net revenue for the periods indicated:

	Three Months Ended March 31,		Six Months Ended March 31,	
	2022	2021	2022	2021
Net revenue	100 %	100 %	100 %	100 %
Cost of sales	57 %	61 %	59 %	60 %
Gross margin	43 %	39 %	41 %	40 %
Selling, general and administrative	27 %	29 %	28 %	29 %
Research, development and engineering	7 %	9 %	6 %	8 %
Operating income	9 %	1 %	7 %	3 %
Interest income and other, net	— %	— %	— %	— %
Income before income taxes	9 %	1 %	7 %	3 %
Income tax provision	2 %	2 %	2 %	2 %
Net income (loss)	7 %	(1)%	5 %	1 %

Net Revenue

Net revenue consists of revenue recognized upon shipment or installation of equipment. Spare parts sales are recognized upon shipment and service revenue is recognized upon completion of the service activity, which is generally ratable over the term of the service contract. Since the majority of our revenue is generated from large system sales, revenue and operating income can be significantly impacted by the timing of system shipments and system acceptances.

Our net revenue by reportable segment was as follows (dollars in thousands):

	Three Months Ended March 31,				Six Months Ended March 31,			
Segment	2022	2021	Change	% Change	2022	2021	Change	% Change
Semiconductor	$ 24,607	$ 17,119	$ 7,488	44 %	$ 48,238	$ 32,694	$ 15,544	48 %
Material and Substrate	3,972	2,671	1,301	49 %	7,670	5,071	2,599	51 %
Total net revenue	$ 28,579	$ 19,790	$ 8,789	44 %	$ 55,908	$ 37,765	$ 18,143	48 %

Total net revenue for the three months ended March 31, 2022 and 2021 was $28.6 million and $19.8 million, respectively, an increase of approximately $8.8 million or 44%. Our Semiconductor segment revenues are dependent on the expansion plans of our customers, and our results for the second quarter of fiscal 2022 reflect returning demand from our customers following the pandemic. Sales across all of our semi platforms have increased over the prior year as a result of this increasing demand. On March 28, 2022, the Chinese government issued a mandatory shutdown in Shanghai, the location of one of our manufacturing facilities. The facility remains closed through the date of this filing. We estimate approximately $1.2 million of revenue was shifted to a future quarter as a result of the four lost shipping days in March. Material and Substrate revenue increased primarily due to increased shipments of consumables as well as the addition of Intersurface Dynamics in March 2021, which accounted for approximately 8% of the revenue increase between periods. We believe there remains significant potential in the SiC industry and long-term growth in power semiconductors.

Total net revenue for the six months ended March 31, 2022 and 2021 was $55.9 million and $37.8 million, respectively, an increase of approximately $18.1 million or 48%. Revenue from the Semiconductor segment increased $15.5 million compared to the prior year period. This change is primarily attributable to higher shipments across all our semi platforms during the 2022 period resulting from increased semiconductor demand. Revenue from our Material and Substrate segment increased $2.6 million due primarily to higher machine and consumables sales in the 2022 period.

Backlog and Orders

Our backlog as of March 31, 2022 and 2021 was as follows (dollars in thousands):

Segment	March 31, 2022	2021	Change	% Change
Semiconductor	$ 50,352	$ 25,281	$ 25,071	99 %
Material and Substrate	3,214	1,253	1,961	157 %
Total backlog	$ 53,566	$ 26,534	$ 27,032	102 %

New orders booked in the three and six months ended March 31, 2022 and 2021 were as follows (dollars in thousands):

	Three Months Ended March 31,				Six Months Ended March 31,			
Segment	2022	2021	Change	% Change	2022	2021	Change	% Change
Semiconductor	$ 28,039	$ 29,651	$ (1,612)	(5)%	$ 55,848	$ 45,134	$ 10,714	24 %
Material and Substrate	5,656	2,875	2,781	97 %	9,484	5,261	4,223	80 %
Total new orders	$ 33,695	$ 32,526	$ 1,169	4 %	$ 65,332	$ 50,395	$ 14,937	30 %

As of March 31, 2022, four Semiconductor segment customers individually accounted for 24%, 14%, 12%, and 11% of our backlog. No other customer accounted for more than 10% of our backlog as of March 31, 2022. The orders included in our backlog are generally credit approved customer purchase orders believed to be firm and are generally expected to ship within the next twelve months. Because our orders are typically subject to cancellation or delay by the customer, our backlog at any particular point in time is not necessarily representative of actual sales for future periods, nor is backlog any assurance that we will realize profit from completing these orders.

Gross Profit and Gross Margin

Gross profit is the difference between net revenue and cost of goods sold. Cost of goods sold consists of purchased material, labor and overhead to manufacture equipment and spare parts and the cost of service and support to customers for installation, warranty and paid service calls. Gross margin is gross profit as a percent of net revenue. Our gross profit and gross margin by business segment were as follows (dollars in thousands):

	Three Months Ended March 31,					Six Months Ended March 31,				
Segment	2022	Gross Margin	2021	Gross Margin	Change	2022	Gross Margin	2021	Gross Margin	Change
Semiconductor	$ 10,278	42 %	$ 7,093	41 %	$ 3,185	$ 19,806	41 %	$ 14,005	43 %	$ 5,801
Material and Substrate	1,905	48 %	635	24 %	1,270	3,141	41 %	1,235	24 %	1,906
Total gross profit	$ 12,183	43 %	$ 7,728	39 %	$ 4,455	$ 22,947	41 %	$ 15,240	40 %	$ 7,707

Gross profit for the three months ended March 31, 2022 and 2021 was $12.2 million (43% of net revenue) and $7.7 million (39% of net revenue), respectively, an increase of $4.5 million. Our gross margins can be affected by capacity utilization and the type and volume of machines and consumables sold each quarter. Gross margin on products from our Semiconductor segment increased slightly compared to the three months ended March 31, 2021, as sales of higher-margin products were partially offset by increases in material and labor costs. We expect rising labor costs to continue, as the labor markets in which we operate remain competitive. Gross margin on products from our Material and Substrate segment increased compared to the three months ended March 31, 2021, due primarily to higher machine and consumables sales leading to improved utilization as well as the addition of Intersurface Dynamics in March 2021. We are experiencing increased material costs across all of our segments and expect this trend to continue through at least the end of fiscal 2022. In response to such increased costs, we continually review our pricing plans and supplier agreements, with the objective of passing these increased costs to our customers where possible; however, we continue to experience pricing pressure from our customers.

Gross profit for the six months ended March 31, 2022 and 2021 was $22.9 million (41% of net revenue) and $15.2 million (40% of net revenue), respectively, an increase of $7.7 million. Gross margin on products from our Semiconductor segment decreased slightly compared to the six months ended March 31, 2021, due primarily to increases in material and labor costs partially offset by improved utilization across our product lines. Gross margin on products from our Material and Substrate segment increased compared to the six months ended March 31, 2021, due primarily to improved capacity utilization resulting from higher machine and consumable sales slightly offset by increased material costs.

Selling, General and Administrative

Selling, general and administrative expenses ("SG&A") consists of the cost of employees, consultants and contractors, facility costs, sales commissions, shipping costs, promotional marketing expenses, legal and accounting expenses and bad debt expense.

SG&A expenses for the three months ended March 31, 2022 and 2021 were $7.8 million and $5.7 million, respectively. SG&A increased compared to the prior year quarter due primarily to $0.6 million in higher commissions on higher sales, $0.6 million in employee-related expenses, $0.4 million in higher shipping expenses driven by higher revenues and increased shipping rates, and $0.2 million in added SG&A from our acquisition of Intersurface Dynamics in March 2021.

SG&A expenses for the six months ended March 31, 2022 and 2021 were $15.7 million and $10.9 million, respectively. SG&A increased compared to the prior year period due primarily to increases in freight of approximately $1.5 million, driven by higher revenues and increased shipping rates, $1.0 million in higher commissions on higher sales, $0.7 million of additional employee-related expenses, and $0.5 million of added SG&A from our acquisition of Intersurface Dynamics in March 2021.

Research, Development and Engineering

Research, development and engineering ("RD&E") expenses consist of the cost of employees, consultants and contractors who design, engineer and develop new products and processes as well as materials and supplies used in producing prototypes. RD&E expenses may vary from period to period depending on the engineering projects in process. Expenses related to engineers working on strategic projects or sustaining engineering projects are recorded in RD&E. However, from time to time we add functionality to our products or develop new products during engineering and manufacturing to fulfill specifications in a customer's order, in which case the cost of development, along with other costs of the order, are charged to cost of goods sold. Occasionally, we receive reimbursements through governmental research and development grants which are netted against these expenses when certain conditions have been met.

RD&E expense, net of grants earned, for the three months ended March 31, 2022 and 2021 were $1.8 million and $1.9 million, respectively, and $3.4 million and $3.1 million in the six months ended March 31, 2022 and 2021. The increase during the six-month period is due to the timing of purchases related to specific strategic-development projects at our Semiconductor segment. Grants earned are immaterial in all periods presented.

Income Taxes

Our effective tax rate is generally higher than the statutory rate due to the geographic mix of profit among the foreign and domestic jurisdictions in which we operate. For the three months ended March 31, 2022 and 2021, we recorded income tax expense of $0.7 million and $0.5 million, respectively. For the six months ended March 31, 2022 and 2021, we recorded income tax expense of $0.8 million and $0.6 million, respectively. Tax expense for the six months ended March 31, 2021, includes a benefit of approximately $0.3 million related to the reversal of previously recorded uncertain tax positions. The quarterly income tax provision is calculated using an estimated annual effective tax rate, based upon expected annual income, permanent items, statutory rates and planned tax strategies in the various jurisdictions in which we operate. However, losses in certain jurisdictions and discrete items are excluded from the determination of the estimated annual effective tax rate.

Generally accepted accounting principles of the United States ("GAAP") require that a valuation allowance be established when it is “more likely than not” that all or a portion of deferred tax assets will not be realized. A review of all available positive and negative evidence needs to be considered, including a company’s performance, the market environment in which the company operates and the length of carryback and carryforward periods. According to those principles, it is difficult to conclude that a valuation allowance is not needed when the negative evidence includes cumulative losses in recent years. Based on the consideration of all available evidence, we have concluded that we will maintain a full valuation allowance for all net deferred tax assets related to the carryforwards of U.S. net operating losses and foreign tax credits. We will continue to monitor our cumulative income and loss positions in the U.S. and foreign jurisdictions to determine whether full valuation allowances on net deferred tax assets are appropriate. We expect to pay minimal U.S federal cash taxes for the foreseeable future as a result of our U.S. net operating losses that are carried forward.

Our future effective income tax rate depends on various factors, such as the amount of income (loss) in each tax jurisdiction, tax regulations governing each region, non-tax deductible expenses incurred as a percent of pre-tax income and the effectiveness of our tax planning strategies.

Liquidity and Capital Resources

The following table sets forth for the periods presented certain consolidated cash flow information (in thousands):

	Six Months Ended March 31, 2022	Six Months Ended March 31, 2021
Net cash used in operating activities	$ (361)	$ (265)
Net cash used in investing activities	(125)	(5,515)
Net cash (used in) provided by financing activities	(4,215)	741
Effect of exchange rate changes on cash, cash equivalents and restricted cash	286	368
Net decrease in cash, cash equivalents and restricted cash	(4,415)	(4,671)
Cash and cash equivalents, beginning of period	32,836	45,070
Cash, cash equivalents and restricted cash, end of period	$ 28,421	$ 40,399

Cash and Cash Flow

The decrease in cash and cash equivalents from September 30, 2021 of $4.4 million was primarily due to cash used for repurchases of our common stock. We maintain a portion of our cash and cash equivalents in Renminbis, a Chinese currency, at our operations in China; therefore, changes in the exchange rates have an impact on our cash balances. Our working capital was $65.6 million as of March 31, 2022 and $65.8 million as of September 30, 2021. The slight decrease in working capital occurred primarily due to increases in inventory balances and related accounts payable in preparation to meet our shipment schedules for the next four quarters. We expect working capital to increase in the third quarter of 2022 following the closing of the sale-leaseback of our Billerica, Massachusetts facility, resulting in a net cash inflow of approximately $15 million to $16 million, after repayment of the existing mortgage and settlement of related sale expenses. Our ratio of current assets to current liabilities was 4.1:1 as of March 31, 2022, and 5.4:1 as of September 30, 2021.

During periods of weakening demand, we typically generate cash from operating activities. Conversely, we are more likely to use operating cash flows for working capital requirements during periods of higher growth. The success of our growth strategy is dependent upon the availability of additional capital resources on terms satisfactory to management. Our sources of capital in the past have included the sale of equity securities, which includes common stock sold in private transactions and public offerings, long-term debt and customer deposits. There can be no assurance that we can raise such additional capital resources when needed or on satisfactory terms. We believe that our principal sources of liquidity discussed above are sufficient to support operations for at least the next twelve months. We have never paid dividends on our common stock.

Cash Flows from Operating Activities

Cash used in our operating activities was approximately $0.4 million for the six months ended March 31, 2022, compared to $0.3 million for the six months ended March 31, 2021. During the six months ended March 31, 2022, we increased our inventory balances in preparation for upcoming shipments scheduled through the next four quarters. Additionally, our accounts receivable increased during this period as most of our shipments occurred late in the second quarter and our customers generally have payment terms of 60-90 days. During the six months ended March 31, 2021, net income adjusted for non-cash items of $1.5 million was offset by $1.8 million of cash used in operations as a result of changes in operating assets and liabilities.

Cash Flows from Investing Activities

For the six months ended March 31, 2022 and 2021, cash used in investing activities was $0.1 million and $5.5 million, respectively. The fiscal 2022 amount consists solely of capital expenditures. The amount for the first half of fiscal 2021 includes $5.1 million net cash paid for the acquisition of IDI in addition to $0.4 million of cash used for capital expenditures. We expect capital expenditures to increase throughout fiscal 2022 as we make targeted investments in our IT systems.

Cash Flows from Financing Activities

For the six months ended March 31, 2022, $4.2 million of cash used in financing activities was comprised of $4.1 million of cash used for the repurchase of common stock and payments on long-term debt of $0.2 million partially offset by $0.1 million of proceeds received from the exercise of stock options. For the six months ended March 31, 2021, $0.7 million of cash provided by financing activities was comprised of approximately $0.9 million of proceeds received from the exercise of stock options, partially offset by payments on long-term debt of $0.2 million.

Off-Balance Sheet Arrangements

As of March 31, 2022, we had no off-balance sheet arrangements as defined in Item 303(a)(4) of Regulation S-K promulgated by the SEC that have or are reasonably likely to have a current or future effect on financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that are material to investors.

Contractual Obligations

Unrecorded purchase obligations were $21.0 million as of March 31, 2022, compared to $17.0 million as of September 30, 2021, an increase of $4.0 million. This increase is primarily attributable to investments made during the first half of fiscal 2022 for inventory required to fulfill increased orders for upcoming shipments as well as strategic inventory purchases of long-lead time items.

There were no other material changes to the contractual obligations included in "Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” of our 2021 Form 10-K.

Critical Accounting Policies

"Part I, Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Quarterly Report discusses our condensed consolidated financial statements that have been prepared in accordance with GAAP. The preparation of these condensed consolidated financial statements requires us to make estimates and assumptions that affect the reported amount of assets and liabilities at the date of the condensed consolidated financial statements, the disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements and the reported amounts of revenue and expenses during the reporting period.

On an ongoing basis, we evaluate our estimates and judgments, including those related to revenue recognition, income taxes, inventory valuation and inventory purchase commitments, and indefinite-lived assets. We base our estimates and judgments on historical experience and on various other factors that we believe to be reasonable under the circumstances. The results of these estimates and judgments form the basis for making conclusions about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

A critical accounting policy is one that is both important to the presentation of our financial position and results of operations, and requires management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. These uncertainties are discussed in Part I, Item 1A of our 2021 Form 10-K. We believe our critical accounting policies relate to the more significant judgments and estimates used in the preparation of our consolidated financial statements.

We believe the critical accounting policies discussed in the section entitled "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies" in our 2021 Form 10-K represent the most significant judgments and estimates used in the preparation of our consolidated financial statements. There have been no significant changes in our critical accounting policies during the six months ended March 31, 2022.

Impact of Recently Issued Accounting Pronouncements

For discussion of the impact of recently issued accounting pronouncements, see "Part I, Item 1. Financial Information" under "Impact of Recently Issued Accounting Pronouncements."

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As a smaller reporting company, as defined by Rule 12b-2 of the Exchange Act and in Item 10(f)(1) of Regulation S-K, we are electing scaled disclosure reporting obligations and, therefore, are not required to provide the information requested by this Item.

Item 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management, including our Chief Executive Officer ("CEO") and our Chief Financial Officer ("CFO"), has carried out an evaluation of the effectiveness of our disclosure controls and procedures as of March 31, 2022, pursuant to Exchange Act Rules 13a-15(e) and 15(d)-15(e). Disclosure controls and procedures means controls and other procedures that are designed to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to management, including the principal executive and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure. Based upon that evaluation, our CEO and CFO have concluded that as of such date, our disclosure controls and procedures in place were effective.

Changes in Internal Control Over Financial Reporting

There have not been any changes in the Company’s internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the second fiscal quarter to which this report relates that materially affected, or are reasonably likely to materially affect, the internal control over financial reporting of the Company.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

For discussion of legal proceedings, see Note 9 to our condensed consolidated financial statements under “Part I, Item 1. Financial Information” under “Commitments and Contingencies” of this Quarterly Report.

Item 1A. Risk Factors

We refer you to documents filed by us with the SEC, specifically “Item 1A. Risk Factors” in our 2021 Form 10-K, which identifies important risk factors that could materially affect our business, financial condition and future results. We also refer you to the factors and cautionary language set forth in the section entitled “Cautionary Statements Regarding Forward-Looking Statements” immediately preceding “Item 1. Condensed Consolidated Financial Statements” of this Quarterly Report. This Quarterly Report, including the accompanying condensed consolidated financial statements and related notes, should be read in conjunction with such risks and other factors for a full understanding of our operations and financial condition. The risks described in our 2021 Form 10-K and any described herein are not the only risks facing us. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition or operating results. Except as set forth below, there have been no material changes to the risk factors previously disclosed in our 2021 Form 10-K.

The extended closure of our Shanghai manufacturing facility as a result of the Chinese government’s mandatory shutdown of Shanghai may have an adverse impact on our operations, including among others, our ability to manufacture products from that location and meet customer demand and other contractual requirements, and may have an adverse impact on our business, financial condition and results of operations.

On March 28, 2022, the Chinese government issued a mandatory shutdown in Shanghai, the location of one of our manufacturing facilities. We estimate approximately $1.2 million of revenue was shifted to a future quarter as a result of the four lost shipping days in March. On May 5, 2022, we received notice that we have been cleared by the Chinese government for reopening. There are several steps and submissions required before we will be permitted to reopen, and we will be limited in the number of workers that will be allowed in the facility upon such reopening. We estimate we could be reopened in mid-May with approximately 10-15% of our work force initially allowed to return. There can be no assurance that we will be allowed to reopen in May or, if we are allowed to reopen, we will be able to remain open on a consistent basis thereafter. No assurance can be given that if we are allowed to reopen, we will be able resume production on any meaningful level if we are unable to adequately staff our operations, obtain supplies from our suppliers or otherwise ship products from the Shanghai port or receive supplies arriving at such port.

As a result of this closure, we expect our financial condition and results of operations will be materially and adversely affected in the quarter ending June 30, 2022. We cannot predict the duration or direction of the shutdown in Shanghai. If this shutdown continues, if additional shutdowns occur in the future or if we are unable to establish manufacturing alternatives, our business, financial condition and results of operations may be adversely impacted.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Issuer Purchases of Equity Securities

On February 10, 2022, the Board approved a stock repurchase program, pursuant to which the Company may repurchase up to $5 million of its outstanding Common Stock over a one-year period, commencing on February 16, 2022. Repurchases under the program will be made in open market transactions at prevailing market prices, in privately negotiated transactions, or by other means in compliance with the rules and regulations of the Securities and Exchange Commission; however, the Company has no obligation to repurchase shares and the timing, actual number, and value of shares to be repurchased is subject to management’s discretion and will depend on the Company’s stock price and other market conditions. The Company may, in the sole discretion of the Board, terminate the repurchase program at any time while it is in effect. Repurchased shares may be retired or kept in treasury for further issuance.

During the three months ended March 31, 2022, we repurchased 143,430 shares of our Common Stock on the open market, and those repurchases are reflected in the table below. All shares repurchased during the period have been retired.

Period	(a) Total Number of Shares Purchased	(b) Average Price Paid per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	(d) Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs
January 1, 2022 through January 31, 2022	—	$ —	—	$ —
February 1, 2022 through February 28, 2022	85,800	9.68	85,800	4,169,168
March 1, 2022 through March 31, 2022	57,630	9.91	57,630	3,597,775
Total	143,430	9.78	143,430	

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

EXHIBIT NO.	EXHIBIT DESCRIPTION	INCORPORATED BY REFERENCE FORM	FILE NO.	EXHIBIT NO.	FILING DATE	FILED HEREWITH
10.1	Amtech Systems, Inc. 2022 Equity Incentive Plan	S-8	333-263875	99.1	March 25, 2022	
31.1	Certification Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as Amended					X
31.2	Certification Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934, as Amended					X
32.1	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
32.2	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
101.INS	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.					X
101.SCH	Inline XBRL Taxonomy Extension Schema Document					X
101.PRE	Inline Taxonomy Presentation Linkbase Document					X
101.CAL	Inline XBRL Taxonomy Calculation Linkbase Document					X
101.LAB	Inline XBRL Taxonomy Label Linkbase Document					X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document					X
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)					X

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 thereunto duly authorized.

AMTECH SYSTEMS, INC.

By	/s/ Lisa D. Gibbs Lisa D. Gibbs Vice President and Chief Financial Officer (Principal Financial Officer and Duly Authorized Officer)	Dated:	May 11, 2022

Exhibit 31.1

AMTECH SYSTEMS, INC. AND ITS SUBSIDIARIES
CERTIFICATION PURSUANT TO RULE 13a-14(a)/15d-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, Michael Whang, certify that:

1.I have reviewed this Quarterly Report on Form 10-Q of Amtech Systems, Inc. (the “registrant”),

2.Based on my knowledge, this quarterly report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this quarterly report;

3.Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this quarterly report;

4.The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a)Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b)Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c)Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d)Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5.The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

(a)All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

(b)Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

By /s/ Michael Whang
Michael Whang
Chief Executive Officer
Amtech Systems, Inc.

Date: May 11, 2022

Exhibit 31.2

AMTECH SYSTEMS, INC. AND ITS SUBSIDIARIES
CERTIFICATION PURSUANT TO RULE 13a-14(a)/15d-14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, Lisa D. Gibbs, certify that:

1.I have reviewed this Quarterly Report on Form 10-Q of Amtech Systems, Inc. (the “registrant”),

2.Based on my knowledge, this quarterly report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this quarterly report;

3.Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this quarterly report;

4.The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a)Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b)Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c)Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d)Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5.The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

(a)All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

(b)Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

By	/s/ Lisa D. Gibbs Lisa D. Gibbs Vice President and Chief Financial Officer Amtech Systems, Inc.
Date:	May 11, 2022

Exhibit 32.1

AMTECH SYSTEMS, INC. AND ITS SUBSIDIARIES

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Amtech Systems, Inc. (the “Company”) on Form 10-Q for the period ended March 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Michael Whang, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1)The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2)The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By /s/ Michael Whang
Michael Whang
Chief Executive Officer
Amtech Systems, Inc.

Date: May 11, 2022

The foregoing certification is being furnished pursuant to 18 U.S.C. Section 1350. It is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and it is not to be incorporated by reference into any filing of the Company, regardless of any general incorporation language in such filing.

Exhibit 32.2

AMTECH SYSTEMS, INC. AND ITS SUBSIDIARIES

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Amtech Systems, Inc. (the “Company”) on Form 10-Q for the period ended March 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Lisa D. Gibbs, Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. sections 1350, as adopted pursuant to sections 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1)The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2)The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By /s/ Lisa D. Gibbs
Lisa D. Gibbs
Vice President and Chief Financial Officer
Amtech Systems, Inc.

Date: May 11, 2022

The foregoing certification is being furnished pursuant to 18 U.S.C. Section 1350. It is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and it is not to be incorporated by reference into any filing of the Company, regardless of any general incorporation language in such filing.