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: December 31, 2021

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 February 9, 2022, there were outstanding 14,030,192 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, our 2021 Annual Report on 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, 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 Annual Report on Form 10-K that we filed with the SEC for the year ended September 30, 2021 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 Annual Report on 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 Annual Report on 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	December 31, 2021 (Unaudited)	September 30, 2021
Current Assets		
Cash and cash equivalents	$ 32,188	$ 32,836
Restricted cash	526	—
Accounts receivable (less allowance for doubtful accounts of $147 and $188 at December 31, 2021, and September 30, 2021, respectively)	25,204	22,502
Inventories	24,115	22,075
Income taxes receivable	4	1,046
Other current assets	2,721	2,407
Total current assets	84,758	80,866
Property, Plant and Equipment - Net	13,768	14,083
Right-of-Use Assets - Net	8,573	8,646
Intangible Assets - Net	833	858
Goodwill	11,168	11,168
Deferred Income Taxes - Net	671	631
Other Assets	624	661
Total Assets	$ 120,395	$ 116,913
Liabilities and Shareholders' Equity		
Current Liabilities		
Accounts payable	$ 10,227	$ 8,229
Accrued compensation and related taxes	3,176	2,881
Accrued warranty expense	717	545
Other accrued liabilities	709	903
Current maturities of long-term debt	401	396
Current portion of long-term lease liability	550	531
Contract liabilities	4,446	1,624
Total current liabilities	20,226	15,109
Long-Term Debt	4,299	4,402
Long-Term Lease Liability	8,300	8,389
Income Taxes Payable	3,203	3,277
Other Long-Term Liabilities	40	102
Total Liabilities	36,068	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: 14,025,192 and 14,304,492 at December 31, 2021 and September 30, 2021, respectively	140	143
Additional paid-in capital	124,430	126,380
Accumulated other comprehensive income	251	14
Retained deficit	(40,494)	(40,903)
Total Shareholders' Equity	84,327	85,634
Total Liabilities and Shareholders' Equity	$ 120,395	$ 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 December 31, 2021		2020	
Revenues, net	$	27,329	$	17,975
Cost of sales		16,565		10,463
Gross profit		10,764		7,512
Selling, general and administrative		7,952		5,213
Research, development and engineering		1,572		1,245
Operating income		1,240		1,054
Interest expense and other, net		(83)		(255)
Income before income tax provision		1,157		799
Income tax provision		160		80
Net income	$	997	$	719
Income Per Share:				
Net income per basic share	$	0.07	$	0.05
Net income per diluted share	$	0.07	$	0.05
Weighted average shares outstanding:				
Basic		14,254		14,072
Diluted		14,485		14,117

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 December 31, 2021	Three Months Ended December 31, 2020
Net income	$ 997	$ 719
Foreign currency translation adjustment	237	595
Comprehensive income	$ 1,234	$ 1,314

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				
	Shares	Par Value	Shares	Cost	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Deficit	Total 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
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

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)

	Three Months Ended December 31, 2021	2020
Operating Activities		
Net income	$ 997	$ 719
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	430	325
Write-down of inventory	120	48
Non-cash share-based compensation expense	103	65
(Reversal of) provision for allowance for doubtful accounts	(19)	5
Other, net	—	3
Changes in operating assets and liabilities:		
Accounts receivable	(2,683)	(2,702)
Inventories	(2,161)	613
Other assets	(207)	20
Accounts payable	1,979	738
Accrued income taxes	968	34
Accrued and other liabilities	140	304
Contract liabilities	2,822	(68)
Net cash provided by operating activities	2,489	104
Investing Activities		
Purchases of property, plant and equipment	(45)	(198)
Net cash used in investing activities	(45)	(198)
Financing Activities		
Proceeds from the exercise of stock options	69	135
Repurchase of common stock	(2,713)	—
Payments on long-term debt	(97)	(93)
Net cash (used in) provided by financing activities	(2,741)	42
Effect of Exchange Rate Changes on Cash, Cash Equivalents and Restricted Cash	175	596
Net (Decrease) Increase in Cash, Cash Equivalents and Restricted Cash	(122)	544
Cash and Cash Equivalents, Beginning of Period	32,836	45,070
Cash, Cash Equivalents and Restricted Cash, End of Period	$ 32,714	$ 45,614
Supplemental Cash Flow Information:		
Income tax refunds (payments), net	$ 629	$ (142)
Interest paid, net of capitalized interest	$ 75	$ 56

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 MONTHS ENDED DECEMBER 31, 2021 AND 2020
(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. 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 generally accepted accounting principles 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 months ended December 31, 2021, 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.

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 accounting principles generally accepted in the United States of America 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 and deferred profit, if any. 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 December 31, 2021 and September 30, 2021. Of the $1.6 million contract liabilities recorded at September 30, 2021, $1.2 million was recorded as revenue for the three months ended December 31, 2021.

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 $1.2 million and $0.1 million for the three months ended December 31, 2021 and 2020, 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.

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 December 31, 2021, one Semiconductor segment customer individually represented 23% of accounts receivable. As of September 30, 2021, one Semiconductor 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 84% and 83% of total cash balances as of December 31, 2021 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 December 31, 2021 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 is included in selling, general and administrative expenses, during the third quarter of 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 2021 related to the incident. Disputes over the extent of insurance coverage for claims are not uncommon, and there is a time lag between the initial incurrence of costs and the receipt of any insurance proceeds. There is no guarantee that we will be fully reimbursed for all expenses incurred. As of December 31, 2021, we have received a reimbursement of approximately $0.4 million, and in January 2022, we received an additional reimbursement of approximately $0.2 million. Reimbursement discussions with our insurance carrier are ongoing.

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 months ended December 31, 2021 and 2020, options for 47,000 and 471,000 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 December 31, 2021	2020
Numerator:		
Net income	$ 997	$ 719
Denominator:		
Weighted-average shares used to compute basic EPS	14,254	14,072
Common stock equivalents (1)	231	45
Weighted-average shares used to compute diluted EPS	14,485	14,117
Income per share:		
Net income per basic share	$ 0.07	$ 0.05
Net income per diluted share	$ 0.07	$ 0.05

(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:

	December 31, 2021	September 30, 2021
Purchased parts and raw materials	$ 17,056	$ 16,260
Work-in-process	5,396	4,865
Finished goods	5,793	5,055
	28,245	26,180
Excess and obsolete reserves	(4,130)	(4,105)
Inventories	$ 24,115	$ 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:

	December 31, 2021	September 30, 2021
Assets		
Right-of-use assets - operating	$ 8,573	$ 8,646
Right-of-use assets - finance	151	174
Total right-of-use assets	$ 8,724	$ 8,820
Liabilities		
Current		
Operating lease liability	$ 492	$ 470
Finance lease liability	58	61
Total current portion of long-term lease liability	550	531
Long-term		
Operating lease liability	8,197	8,279
Finance lease liability	103	110
Total long-term lease liability	8,300	8,389
Total lease liability	$ 8,850	$ 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:

Lease cost	Classification	Three Months Ended December 31, 2021	2020
Operating lease cost	Cost of sales	$ 197	$ 71
Operating lease cost	Selling, general and administrative expenses	84	48
Finance lease cost	Cost of sales	1	2
Finance lease cost	Selling, general and administrative expenses	16	2
Short-term lease cost	Cost of sales	—	27
Total lease cost		$ 298	$ 150

Future minimum lease payments under non-cancelable leases, including leases that are executed but not yet effective, as of December 31, 2021, are as follows, in thousands:

	Operating leases	Finance Leases	Total
Remainder of 2022	$ 811	$ 56	$ 867
2023	1,062	66	1,128
2024	1,043	47	1,090
2025	1,031	—	1,031
2026	915	—	915
Thereafter	8,862	—	8,862
Total lease payments	13,724	169	13,893
Less: Interest	5,035	8	5,043
Present value of lease liabilities	$ 8,689	$ 161	$ 8,850

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:

	December 31, 2021
Weighted average remaining lease term	
Operating leases	16.73 years
Finance leases	2.54 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 December 31, 2021 and 2020, we recorded income tax expense of $0.2 million and $0.1 million, respectively. Tax expense for the three months ended December 31, 2020, 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 treated separately.

Generally accepted accounting principles 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. 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.

We classify all of our uncertain tax positions as income taxes payable long-term. At December 31, 2021 and September 30, 2021, the total amount of unrecognized tax benefits was approximately $1.0 million and $0.9 million, respectively. Income taxes payable long-term includes other items, primarily withholding taxes, that are not due until the related intercompany service fees are paid.

We classify interest and penalties related to unrecognized tax benefits as income tax expense. As of December 31, 2021 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.

Amtech and one or more of its subsidiaries file income tax returns in China and other foreign jurisdictions, as well as in the U.S. and various states in the U.S. We have not signed any agreements with the Internal Revenue Service, any state or foreign jurisdiction to extend the statute of limitations for any fiscal year. As such, the number of open years is the number of years dictated by statute in each of the respective taxing jurisdictions, which generally is from 3 to 5 years.

8. Equity and Stock-Based Compensation

Stock-based compensation expense was $0.1 million in each of the three months ended December 31, 2021 and 2020. Stock-based compensation expense is included in selling, general and administrative expenses.

The following table summarizes our stock option activity during the three months ended December 31, 2021:

	Options	Weighted Average Exercise Price
Outstanding at beginning of period	608,269	$ 6.48
Granted	81,500	15.43
Exercised	(12,083)	5.77
Forfeited	(18,953)	6.56
Outstanding at end of period	658,733	$ 7.60
Exercisable at end of period	465,319	$ 6.66
Weighted average fair value of options granted during the period	$ 7.65	

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

	Three Months Ended December 31, 2021
Risk free interest rate	1 %
Expected life	5 years
Dividend rate	— %
Volatility	57 %

2021 Stock Repurchase Plan

On February 9, 2021, our Board of Directors (“the Board”) approved a new 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 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 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.

2020 Stock Repurchase Plan

On February 4, 2020, 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 10, 2020. 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 March 31, 2020, we repurchased 366,000 shares of our Common Stock on the open market at a total cost of approximately $2.0 million (an average price of $5.46 per share). All shares repurchased have been retired. The term of this repurchase program expired as of the quarter ended March 31, 2021.

9. Commitments and Contingencies

Purchase Obligations – As of December 31, 2021, we had unrecorded purchase obligations in the amount of $14.3 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 thirty-six months of salary.

10. Reportable Segment Information

Upon the acquisition of Intersurface Dynamics in the second quarter of 2021 (see Note 2), we evaluated our organizational structure and concluded that we have two reportable segments following the acquisition. 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. Our Material and Substrate segment includes our former SiC/LED segment in addition to Intersurface Dynamics, as they sell complementary products to a similar market.

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

	Three Months Ended December 31, 2021	2020
Net Revenues:		
Semiconductor	$ 23,631	$ 15,575
Material and Substrate	3,698	2,400
	$ 27,329	$ 17,975
Operating income (loss):		
Semiconductor	$ 2,357	$ 2,197
Material and Substrate	181	(66)
Non-segment related	(1,298)	(1,077)
	$ 1,240	$ 1,054

	December 31, 2021	September 30, 2021
Identifiable Assets:		
Semiconductor	$ 77,718	$ 70,631
Material and Substrate	19,142	19,541
Non-segment related*	23,535	26,741
	$ 120,395	$ 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 three months ended December 31, 2021, one Semiconductor customer individually represented 20% of our net revenues. During the three months ended December 31, 2020, three Semiconductor customers individually represented 16%, 15% and 13% of our net revenues.

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

	Three Months Ended December 31, 2021	2020
United States	18 %	19 %
Other	9 %	1 %
Total North America	**27 %**	**20 %**
China	20 %	24 %
Malaysia	9 %	3 %
Taiwan	9 %	32 %
Other	9 %	9 %
Total Asia	**47 %**	**68 %**
Germany	10 %	2 %
Austria	8 %	1 %
Other	8 %	9 %
Total Europe	**26 %**	**12 %**
	100 %	**100 %**

12. Subsequent Events

On February 10, 2022, the Board approved a 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 Securities and Exchange Commission; 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.

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.

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 business 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 ("O-S-D") components used in analog, power and radio frequency ("RF"). 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 semi industry growth cycles for our advanced semi-packaging and SMT 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, IoT, electric vehicles ("EV") 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 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 on Form 10-Q, we do not have an agreement to acquire any acquisition target.

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. Disputes over the extent of insurance coverage for claims are not uncommon, and there is a time lag between the initial incurrence of costs and the receipt of any insurance proceeds. There is no guarantee that we will be fully reimbursed for all expenses incurred. As of December 31, 2021, we have received a reimbursement of approximately $0.4 million, and in January 2022, we received an additional reimbursement of approximately $0.2 million. Reimbursement discussions with our insurance carrier are ongoing.

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 December 31, 2021	2020
Net revenue	100 %	100 %
Cost of sales	61 %	58 %
Gross margin	39 %	42 %
Selling, general and administrative	29 %	29 %
Research, development and engineering	5 %	7 %
Operating income	5 %	6 %
Interest expense and other, net	— %	(1)%
Income before income taxes	5 %	5 %
Income tax provision	1 %	1 %
Net income	4 %	4 %

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):

Segment	Three Months Ended December 31, 2021	2020	Incr (Decr)	% Change
Semiconductor	$ 23,631	$ 15,575	$ 8,056	52 %
Material and Substrate	3,698	2,400	1,298	54 %
Total net revenue	$ 27,329	$ 17,975	$ 9,354	52 %

Total net revenue for the quarters ended December 31, 2021 and 2020 was $27.3 million and $18.0 million, respectively, an increase of approximately $9.4 million or 52%. Our Semiconductor segment revenues are dependent on the expansion plans of our customers, and our results through the third quarter of 2021 were negatively impacted by the uncertainty in the global economy due primarily to the impact of the COVID-19 pandemic, as well as lingering trade tensions between the U.S. and China. Sales across all our semi platforms have increased over the prior year. Material and Substrate revenue increased primarily due to the addition of Intersurface Dynamics in March 2021, which accounted for approximately 26% of the revenue increase between periods. The remaining increase is due to higher machine and machine-related consumables sales between periods. The recovery in our Material and Substrate segment continues to be slower than expected, as most of our customers were negatively affected by COVID-19 and delayed their expansion plans; however, we are experiencing strong lead generation and are prepared to expand our product line to include two new machines in 2022. We believe there remains significant potential in the SiC industry and long-term growth in power semiconductors.

Backlog and Orders

Our backlog as of December 31, 2021 and 2020 was as follows (dollars in thousands):

Segment	December 31, 2021	2020	Incr (Decr)	% Change
Semiconductor	$ 46,921	$ 12,750	$ 34,171	268 %
Material and Substrate	1,531	1,049	482	46 %
Total backlog	$ 48,452	$ 13,799	$ 34,653	251 %

New orders booked in the three months ended December 31, 2021 and 2020 were as follows (dollars in thousands):

Segment	Three Months Ended December 31, 2021	2020	Incr (Decr)	% Change
Semiconductor	$ 27,809	$ 15,483	$ 12,326	80 %
Material and Substrate	3,828	2,386	1,442	60 %
Total new orders	$ 31,637	$ 17,869	$ 13,768	77 %

As of December 31, 2021, three Semiconductor customers individually accounted for 23%, 16% and 14% of our backlog. No other customer accounted for more than 10% of our backlog as of December 31, 2021. 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 December 31,				
Segment	2021	Gross Margin	2020	Gross Margin	Incr (Decr)
Semiconductor	$ 9,528	40 %	$ 6,912	44 %	$ 2,616
Material and Substrate	1,236	33 %	600	25 %	636
Total gross profit	$ 10,764	39 %	$ 7,512	42 %	$ 3,252

Gross profit for the three months ended December 31, 2021 and 2020 was $10.8 million (39% of net revenue) and $7.5 million (42% of net revenue), respectively, an increase of $3.3 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 decreased compared to the three months ended December 31, 2020, due primarily to increased sales of lower-margin equipment as well as 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 December 31, 2020, due primarily to the addition of Intersurface Dynamics as well as higher machine and consumables sales leading to improved utilization. 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.

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 for the three months ended December 31, 2021 and 2020 were $8.0 million and $5.2 million, respectively. SG&A increased compared to the prior year quarter due primarily to increases in freight of approximately $1.1 million, driven by higher revenues and increased shipping rates, $0.4 million in higher commissions on higher sales, $0.3 million in added SG&A from our acquisition of Intersurface Dynamics in March 2021, as well as $0.4 million for IT and ERP consulting expenses, legal expenses and increased travel. Additionally, the fiscal 2022 period includes increases in labor, which we expect to continue as the labor market in each of our locations remains competitive.

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 December 31, 2021 and 2020 were $1.6 million and $1.2 million, respectively. The increase in RD&E expenses is due to the timing of purchases related to specific strategic-development projects. We expect these strategic projects to be completed during fiscal 2022. 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 December 31, 2021 and 2020, we recorded income tax expense of $0.2 million and $0.1 million, respectively. Tax expense for the three months ended December 31, 2020, 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 treated separately.

Generally accepted accounting principles 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. 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.

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):

	Three Months Ended December 31, 2021	2020
Net cash provided by operating activities	$ 2,489	$ 104
Net cash used in investing activities	(45)	(198)
Net cash (used in) provided by financing activities	(2,741)	42
Effect of exchange rate changes on cash, cash equivalents and restricted cash	175	596
Net (decrease) increase in cash, cash equivalents and restricted cash	(122)	544
Cash and cash equivalents, beginning of period	32,836	45,070
Cash, cash equivalents and restricted cash, end of period	$ 32,714	$ 45,614

Cash and Cash Flow

The slight decrease in cash and cash equivalents from September 30, 2021 of $0.1 million was primarily due to cash used for repurchases of our common stock, mostly offset by cash generated by operations. We maintain a portion of our cash and cash equivalents in Renminbis, a Chinese currency, at our Chinese operations; therefore, changes in the exchange rates have an impact on our cash balances. Our working capital was $64.5 million as of December 31, 2021 and $65.8 million as of September 30, 2021. The 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 three quarters, as well as an increase in accounts receivable due to higher shipments late in the first quarter of fiscal 2022. Our ratio of current assets to current liabilities was 4.2:1 as of December 31, 2021, 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 provided by our operating activities was approximately $2.5 million for the three months ended December 31, 2021, compared to $0.1 million for the three months ended December 31, 2020. During the three months ended December 31, 2021, we increased our inventory balances in preparation for upcoming shipments scheduled for the second, third and fourth quarters of fiscal 2022. Additionally, our accounts receivable increased during this period as most of our shipments occurred late in the first quarter and our customers generally have payment terms of 60-90 days. During the three months ended December 31, 2020, net income adjusted for non-cash items of $1.2 million was mostly offset by $1.1 million of cash used in operations as a result of changes in operating assets and liabilities.

Cash Flows from Investing Activities

For the three months ended December 31, 2021 and 2020, cash used in investing activities was less than $0.1 million and $0.2 million, respectively. The fiscal 2022 and 2021 amounts consist solely of 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 three months ended December 31, 2021, $2.7 million of cash used in financing activities was comprised of $2.7 million of cash used for the repurchase of common stock and payments on long-term debt of $97,000 partially offset by $69,000 of proceeds received from the exercise of stock options. For the three months ended December 31, 2020, $42,000 of cash provided by financing activities was comprised of approximately $135,000 of proceeds received from the exercise of stock options, which was mostly offset by payments on long-term debt of $93,000.

Off-Balance Sheet Arrangements

As of December 31, 2021, 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 $14.3 million as of December 31, 2021, compared to $17.0 million as of September 30, 2021, a decrease of $2.7 million. This decrease is primarily attributable to investments made during the first quarter of fiscal 2022 for inventory required to fulfill increased orders for our diffusion furnaces, which were not replaced with new purchase orders.

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 Annual Report on Form 10-K for the year ended September 30, 2021.

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 accounting principles generally accepted in the United States of America. 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 Annual Report on Form 10-K for the year ended September 30, 2021. 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 Annual Report on Form 10-K for the fiscal year ended September 30, 2021 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 three months ended December 31, 2021.

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 December 31, 2021, 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 first 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 Annual Report on Form 10-K for the fiscal year ended September 30, 2021 (the “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 on Form 10-Q. This Quarterly Report on Form 10-Q, 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 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. There have been no material changes to the risk factors previously disclosed in our 2021 Form 10-K.

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

Issuer Purchases of Equity Securities

On February 9, 2021, the Board approved a stock repurchase program, pursuant to which the Company may repurchase up to $4 million of its outstanding Common Stock over a one-year period, commencing on February 16, 2021. 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 December 31, 2021, we repurchased 291,383 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
October 1, 2021 through October 31, 2021	—	$ —	—	$ 4,000,000
November 1, 2021 through November 30, 2021	—	—	—	4,000,000
December 1, 2021 through December 31, 2021	291,383	9.31	291,383	1,287,316
Total	291,383	9.31	291,383	

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
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:	February 14, 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:	February 14, 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: February 14, 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 December 31, 2021, 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: February 14, 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 December 31, 2021, 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: February 14, 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.