

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

FORM 10-Q

Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the quarterly period ended September 30, 2021

or

Transition Report Pursuant Section 13 or 15(d) of the Securities Exchange Act of 1934

For the transition period from _____ to _____

Commission file number 001-36467

RESONANT INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

45-4320930
(I.R.S. Employer
Identification No.)

10900 Stonelake Blvd, Suite 100, Office 02-130
Austin, Texas 78759

(Address of principal executive offices, zip code)

(805) 308-9803

(Registrant's telephone number, including area code)

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Stock, \$0.001 par value	RESN	The NASDAQ Stock Market LLC

Indicate by 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 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

Non-accelerated filer

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

As of November 8, 2021, the issuer had 65,710,592 shares of common stock issued and outstanding.

RESONANT INC.

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PART I: FINANCIAL INFORMATION

Item 1. Financial Statements

RESONANT INC.
Condensed Consolidated Balance Sheets
(In thousands, except share data)
(Unaudited)

	September 30, 2021	December 31, 2020
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 15,346	\$ 24,968
Accounts receivable	4,261	208
Prepaid expenses and other current assets	487	511
TOTAL CURRENT ASSETS	20,094	25,687
PROPERTY AND EQUIPMENT		
Property and equipment	5,370	4,892
Less: Accumulated depreciation and amortization	(3,944)	(3,309)
PROPERTY AND EQUIPMENT, NET	1,426	1,583
OTHER NONCURRENT ASSETS		
Intangibles, net	2,776	2,119
Restricted cash	55	105
Goodwill	861	911
Operating lease right-of-use assets	1,544	2,012
Finance lease right-of-use asset	170	201
Other assets	50	112
TOTAL OTHER NONCURRENT ASSETS	5,456	5,460
TOTAL ASSETS	\$ 26,976	\$ 32,730
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	\$ 1,280	\$ 982
Accrued expenses	299	449
Accrued salaries and payroll related expenses	2,894	1,970
Deferred revenue, current	1,358	1,721
Operating lease liabilities, current	571	699
Financing lease liabilities, current	40	30
TOTAL CURRENT LIABILITIES	6,442	5,851
LONG-TERM LIABILITIES		
Deferred revenue	3,088	62
Operating lease liabilities, net of current portion	1,209	1,589
Financing lease liability, net of current portion	145	175
TOTAL LIABILITIES	10,884	7,677
Commitments and contingencies (Note 10)		
STOCKHOLDERS' EQUITY		
Common stock, \$0.001 par value, 100,000,000 authorized and 63,182,642 outstanding as of September 30, 2021 and 59,128,356 outstanding as of December 31, 2020	63	59
Preferred stock, \$0.001 par value, 3,000,000 authorized and none outstanding as of September 30, 2021 and December 31, 2020	—	—
Additional paid-in capital	193,777	175,813
Accumulated other comprehensive income	34	87
Accumulated deficit	(177,782)	(150,906)
TOTAL STOCKHOLDERS' EQUITY	16,092	25,053
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 26,976	\$ 32,730

See Accompanying Notes to Condensed Consolidated Financial Statements

RESONANT INC.
Condensed Consolidated Statements of Comprehensive Loss
(In thousands, except share data)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
REVENUES	\$ 425	\$ 1,405	\$ 1,647	\$ 2,553
OPERATING EXPENSES				
Research and development	5,857	4,413	17,093	14,720
Sales, marketing and administration	3,547	3,055	11,419	9,170
TOTAL OPERATING EXPENSES	<u>9,404</u>	<u>7,468</u>	<u>28,512</u>	<u>23,890</u>
NET OPERATING LOSS	<u>(8,979)</u>	<u>(6,063)</u>	<u>(26,865)</u>	<u>(21,337)</u>
OTHER INCOME (EXPENSE)				
Interest and investment income (expense)	(3)	1	(9)	65
Other expense	(1)	(1)	(1)	(10)
TOTAL OTHER INCOME (EXPENSE), NET	<u>(4)</u>	<u>—</u>	<u>(10)</u>	<u>55</u>
LOSS BEFORE INCOME TAXES	<u>(8,983)</u>	<u>(6,063)</u>	<u>(26,875)</u>	<u>(21,282)</u>
Provision for income taxes	1	—	1	1
NET LOSS	<u>\$ (8,984)</u>	<u>\$ (6,063)</u>	<u>\$ (26,876)</u>	<u>\$ (21,283)</u>
Foreign currency translation adjustment, net of tax	(10)	27	(53)	44
COMPREHENSIVE LOSS	<u>\$ (8,994)</u>	<u>\$ (6,036)</u>	<u>\$ (26,929)</u>	<u>\$ (21,239)</u>
NET LOSS PER SHARE - BASIC AND DILUTED	<u>\$ (0.14)</u>	<u>\$ (0.11)</u>	<u>\$ (0.45)</u>	<u>\$ (0.43)</u>
Weighted average shares outstanding — basic and diluted	<u>63,087,230</u>	<u>53,243,854</u>	<u>60,310,433</u>	<u>50,004,688</u>

See Accompanying Notes to Condensed Consolidated Financial Statements

RESONANT INC.
Condensed Consolidated Statements of Stockholders' Equity
(In thousands)
(Unaudited)

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Total Stockholders' Equity
	Shares	Amount				
Balance, January 1, 2021	59,128	\$ 59	\$ 175,813	\$ (150,906)	\$ 87	\$ 25,053
Vesting of restricted stock units	195	—	—	—	—	—
Stock-based compensation	—	—	1,694	—	—	1,694
Sale of common stock net of offering costs	774	1	4,093	—	—	4,094
Exercise of stock options	104	—	291	—	—	291
Net loss	—	—	—	(8,823)	—	(8,823)
Foreign currency translation adjustments, net of tax	—	—	—	—	(62)	(62)
Balance, March 31, 2021	60,201	\$ 60	\$ 181,891	\$ (159,729)	\$ 25	\$ 22,247
Vesting of restricted stock units	464	—	—	—	—	—
Stock-based compensation	—	—	2,230	—	—	2,230
Sale of common stock net of offering costs	2,295	3	7,803	—	—	7,806
Net loss	—	—	—	(9,069)	—	(9,069)
Foreign currency translation adjustments, net of tax	—	—	—	—	19	19
Balance, June 30, 2021	62,960	\$ 63	\$ 191,924	\$ (168,798)	\$ 44	\$ 23,233
Vesting of restricted stock units	222	—	—	—	—	—
Stock-based compensation	—	—	1,852	—	—	1,852
Exercise of stock options	1	—	1	—	—	1
Net loss	—	—	—	(8,984)	—	(8,984)
Foreign currency translation adjustments, net of tax	—	—	—	—	(10)	(10)
Balance, September 30, 2021	63,183	\$ 63	\$ 193,777	\$ (177,782)	\$ 34	\$ 16,092

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Total Stockholders' Equity
	Shares	Amount				
Balance, January 1, 2020	33,156	\$ 33	\$ 132,214	\$ (122,492)	\$ 1	\$ 9,756
Vesting of restricted stock units	378	—	—	—	—	—
Stock-based compensation	—	—	1,338	—	—	1,338
Sale of common stock, net of offering costs	19,167	19	26,441	—	—	26,460
Net loss	—	—	—	(8,005)	—	(8,005)
Foreign currency translation adjustment, net of tax	—	—	—	—	9	9
Balance, March 31, 2020	52,701	\$ 52	\$ 159,993	\$ (130,497)	\$ 10	\$ 29,558
Vesting of restricted stock units	405	1	—	—	—	1
Stock-based compensation	—	—	1,625	—	—	1,625
Additional offering costs in connection with February sale of common stock	—	—	(50)	—	—	(50)
Exercise of warrants	7	—	—	—	—	—
Net loss	—	—	—	(7,215)	—	(7,215)
Foreign currency translation adjustments, net of tax	—	—	—	—	8	8
Balance, June 30, 2020	53,113	\$ 53	\$ 161,568	\$ (137,712)	\$ 18	\$ 23,927
Vesting of restricted stock units	281	\$ —	\$ —	\$ —	\$ —	\$ —
Stock-based compensation	—	—	1,388	—	—	1,388
Exercise of stock options	2	—	3	—	—	3
Net loss	—	—	—	(6,063)	—	(6,063)
Foreign currency translation adjustments, net of tax	—	—	—	—	27	27
Balance, September 30, 2020	53,396	\$ 53	\$ 162,959	\$ (143,775)	\$ 45	\$ 19,282

See Accompanying Notes to Condensed Consolidated Financial Statements

RESONANT INC.
Condensed Consolidated Statements of Cash Flows
(In thousands)
(Unaudited)

	Nine Months Ended September 30,	
	2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES		
Net Loss	\$ (26,876)	\$ (21,283)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	697	747
Stock-based compensation	6,232	4,463
Patent write-off	61	47
Operating lease right-of-use asset amortization	468	447
Finance lease right-of-use asset amortization	11	—
Changes in assets and liabilities:		
Accounts Receivable	(4,053)	(329)
Prepaid expenses and other current assets	24	(156)
Other assets	62	(44)
Accounts payable	464	(107)
Accrued expenses	(129)	(51)
Accrued salaries and payroll related expenses	468	50
Operating lease liabilities	(508)	(454)
Deferred revenue	2,663	647
Net cash used in operating activities	<u>(20,416)</u>	<u>(16,023)</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of property and equipment	(553)	(451)
Expenditures for patents	(895)	(549)
Net cash used in investing activities	<u>(1,448)</u>	<u>(1,000)</u>
CASH FLOWS FROM FINANCING ACTIVITIES		
Gross proceeds from sale of common stock	12,303	28,750
Offering costs in connection with sale of common stock	(403)	(2,340)
Proceeds from exercise of stock options	292	3
Net cash provided by financing activities	<u>12,192</u>	<u>26,413</u>
NET INCREASE (DECREASE) IN CASH, CASH EQUIVALENTS AND RESTRICTED CASH	(9,672)	9,390
CASH, CASH EQUIVALENTS AND RESTRICTED CASH — Beginning of period	25,073	10,838
CASH, CASH EQUIVALENTS AND RESTRICTED CASH — End of period	<u>\$ 15,401</u>	<u>\$ 20,228</u>
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION		
Taxes Paid	\$ 1	\$ 1
SUPPLEMENTAL DISCLOSURE OF NON-CASH ACTIVITIES		
Common stock issued in settlement of accrued salaries and payroll related expenses	\$ 456	\$ 363
Property and equipment included in accounts payable	\$ 183	\$ 131
Property and equipment included in accrued expenses	\$ 47	\$ 239
Patents included in accounts payable	\$ 112	\$ 110
Finance lease included in accounts payable	\$ 4	\$ —

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The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the Condensed Consolidated Balance Sheets to the total of the same such amounts shown above:

	<u>September 30, 2021</u>	<u>December 31, 2020</u>
Cash and cash equivalents	\$ 15,346	\$ 24,968
Restricted cash	55	105
Total cash, cash equivalents and restricted cash	<u>\$ 15,401</u>	<u>\$ 25,073</u>

See Accompanying Notes to Condensed Consolidated Financial Statements

RESONANT INC.
Notes to Condensed Consolidated Financial Statements

NOTE 1—ORGANIZATION AND DESCRIPTION OF BUSINESS

Overview

Resonant Inc. is a late-stage development company located in Austin, Texas, with offices in Goleta, California, Burlingame, California, and Anyang, South Korea. We were incorporated in Delaware in January 2012 as a wholly owned subsidiary of Superconductor Technologies Inc., or STI. Resonant LLC, a limited liability company, was formed in California in May 2012. We changed our form of ownership from a limited liability company to a corporation in an exchange transaction in June 2013, when we commenced business. We are the successor of Resonant LLC. We completed our initial public offering, or IPO, on May 29, 2014. On July 6, 2016 we acquired all of the issued and outstanding capital stock of GVR Trade S.A, or GVR. GVR, located in Switzerland, is a wholly owned subsidiary of Resonant Inc. The Company operates in one market and segment, the radio frequency design industry.

The innovative software platform we continue to develop is based on fundamentally new technology, that we call WaveX™, to configure and connect resonators, the building blocks of radio frequency (RF) filters. Currently, we are leveraging WaveX™ to develop designs targeted for either the Surface Acoustic Wave (SAW) or Temperature Compensated, Surface Acoustic Wave (TC-SAW) manufacturing processes. We also enabled WaveX™ for Bulk Acoustic Wave (BAW) designs, which has resulted in our invention of a novel resonator structure based on a combination of interdigital transducer (IDT) and piezoelectric layer, XBAR®, which exhibits performance parameters suitable for 5G, 5-7GHz WiFi and Ultra Wideband applications - high frequency operation, large bandwidth and high power reliability.

Using WaveX™ we have developed an IP portfolio of more than 385 patents filed or issued, with more than 235 filed or issued targeting XBAR®, 5G and high frequency WiFi applications. In addition, with continued requirements for increasing numbers of filter designs our innovative software platform addresses the need for increased designer efficiency, reduced time to market and lower unit costs in the designs of filters for radio frequency, or RF Front-Ends for the mobile device, Customer Premise Equipment (CPE) and Infrastructure industries. The RF Front-End, or RFFE, is the circuitry responsible for analog signal processing and is located between the device's antenna and its digital circuitry. Filters are a critical component of the RFFE used to select desired radio frequency signals and reject unwanted signals.

We believe licensing our designs is the most direct and effective means of validating our IP and IP related libraries and demonstrating the power and accuracy of our WaveX™ multi-physics electronic design automation (EDA) platform. Our target customers make part, or all of, the RFFE. We intend to retain ownership of our intellectual property (IP), trade secrets and designs, and we expect to be compensated through license fees and royalties either prepaid at contract inception or based on sales of RFFE filters that incorporate our IP, trade secrets and designs.

Capital Resources and Liquidity

As of September 30, 2021, our accumulated deficit totaled \$177.8 million. In the nine months ended September 30, 2021 our net loss totaled \$26.9 million and we used \$21.9 million of cash for operating activities, the purchase of property and equipment and expenditures for patents. To date we have not generated significant revenues to enable profitability. We expect to continue to incur significant losses. These factors raise substantial doubt regarding our ability to continue as a going concern. At September 30, 2021 we had cash and cash equivalents of \$15.3 million and accounts receivable of \$4.3 million. Subsequent to September 30, 2021, but prior to the publication of the financial statements on this Form 10-Q, we raised \$6.1 million of cash from sales of common stock using our At-The-Market Equity Offering Sales Agreement. In the absence of additional customer contracts, we believe these cash resources, along with anticipated cash generated from existing customer contracts, will provide sufficient funding into the fourth quarter of 2022. We are subject to the risks and uncertainties associated with a new business. We also have been impacted by the COVID-19 pandemic which has added additional risks and uncertainties. Our continuance as a going concern is dependent on our future profitability. We are actively pursuing expanding our technology portfolio, increasing our revenue opportunities by completing deliverables under current customer contracts and entering into new customer contracts, and efficiently managing operations and exploring cost saving opportunities. We may not be successful in these efforts. We may need to seek to raise additional capital from the sale of equity securities or incurrence of indebtedness. There can be no assurance that additional financing will be available to us on acceptable terms, or at all in which case we might be forced to make substantial reductions in our operating expenses which could adversely affect our ability to implement our business plan and ultimately our viability as a company. Even if available, such capital may be dilutive to existing stockholders. The accompanying condensed consolidated financial statements have been prepared on a going concern basis which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. The condensed

consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of this uncertainty.

NOTE 2—SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Use of Estimates—The accompanying unaudited condensed consolidated financial statements were prepared in accordance with accounting principles generally accepted in the United States (“GAAP”) for interim financial information. Certain information and disclosures normally included in consolidated financial statements prepared in accordance with GAAP have been condensed or omitted. Accordingly, these condensed consolidated financial statements should be read in conjunction with our audited consolidated financial statements and the related notes included in our Annual Report for the year ended December 31, 2020 filed with the SEC on March 12, 2021. The year-end condensed balance sheet was derived from our audited consolidated financial statements. Our unaudited interim condensed consolidated financial statements include, in the opinion of management, all adjustments, consisting of normal and recurring items, necessary for the fair statement of the condensed consolidated financial statements. The operating results for the three and nine months ended September 30, 2021 are not necessarily indicative of the results expected for the full year ending December 31, 2021. Significant estimates made in preparing these financial statements include (a) assumptions to calculate the fair values of financial instruments, warrants and equity instruments and other liabilities and the deferred tax asset valuation allowance; (b) the useful lives for depreciable and amortizable assets and (c) the estimated efforts to be expended, as well as our ability to achieve milestones, in connection with our revenue contracts. On an ongoing basis, we evaluate our estimates and judgments compared to historical experience and expected trends. Additionally, the global economic effects resulting from the COVID-19 pandemic may cause changes to estimates that would have a material impact on our financial statements, particularly with respect to timing of revenue recognition due to delays in meeting our performance obligations and collectability of our accounts receivable. As of the date of issuance of these financial statements, our results have not been significantly impacted by the COVID-19 pandemic; however, we continue to monitor the situation.

Consolidation—The accompanying financial statements include the accounts of the Company and its wholly-owned subsidiary, GVR Trade, S.A. All significant intercompany balances and transactions have been eliminated.

Cash and Cash Equivalents—We consider all liquid instruments purchased with a maturity of three months or less to be cash equivalents.

Concentration of Credit Risk—We maintain bank accounts at one U.S. financial institution. The U.S. bank accounts are insured by the Federal Deposit Insurance Corporation (FDIC) for up to \$250,000 per account owner. GVR Trade S.A., our wholly owned Swiss-based subsidiary maintains checking accounts at one major national financial institution. Additionally, we maintain a checking account with a very minimal balance at one bank in South Korea, which is used to fund payroll and rent in South Korea. Management believes we are not exposed to significant credit risk due to the financial position of the depository institutions in which our deposits are held.

Restricted Cash—Restricted cash consists of a pledged mutual fund account which is held as collateral against a letter of credit issued in May 2018 in connection with the lease of our offices in Goleta, California. The letter of credit was reissued in November 2020 due to a change in the property owner. No changes were made to the terms of the letter of credit. The balance as of September 30, 2021 and December 31, 2020 was \$55,000 and \$105,000, respectively. The terms of the letter of credit allow for a step-down of \$50,000 annually upon performance of certain events, primarily no late or defaulted payments. See also Note 8- Leases, for further details.

Fair Value of Financial Instruments—We measure certain financial assets and liabilities at fair value based on the exit price notion, or price that would be received for an asset or paid to transfer a liability, in an orderly transaction between the market participants at the measurement date. The carrying amounts of our financial instruments, including cash equivalents, restricted cash, accounts payable, and accrued liabilities, approximate fair value due to their short maturities.

Accounts Receivable—Trade accounts receivable are stated net of allowances for doubtful accounts. Management estimates the allowance for doubtful accounts based on review and analysis of specific customer balances that may not be collectible, customer payment history and any other customer-specific information that may impact ability to collect the receivable. Accounts are considered for write-off when they become past due and when it is determined that the probability of collection is remote. There was no allowance for doubtful accounts at September 30, 2021 or December 31, 2020.

Property and Equipment—Property and equipment consists of leasehold improvements associated with our corporate offices, software purchased during the normal course of business, equipment and office furniture and fixtures, all of which are recorded at cost. Depreciation and amortization is recorded using the straight-line method over the respective useful lives of the assets ranging from two to five years. Leasehold improvements are amortized over the shorter of lease term or useful life.

Long-lived assets are reviewed for impairment whenever events or circumstances indicate that the carrying amount of these assets may not be recoverable.

Intangibles, net—Intangible assets are recorded at cost and amortized over the useful life. In the case of business combinations, intangible assets are recorded at fair value. At September 30, 2021 and December 31, 2020, intangible assets, net includes patents and a domain name and other intangible assets purchased as part of our acquisition of GVR, including customer relationships, technology and a trademark. We capitalize certain patent filing costs up to the point of issuance and then amortize the costs over the life of the patent. Costs associated with maintenance or renewal of existing patents are expensed as incurred. Intangible assets are reviewed for impairment whenever events or circumstances indicate that the carrying amount of these assets may not be recoverable. In certain cases, patents may expire or be abandoned as they no longer have a probable economic value. In such cases we write off the capitalized patent costs as patent abandonment costs which are included in research and development expenses.

Goodwill—Goodwill represents the difference between the price paid to acquire GVR and the fair value of the assets acquired, net of assumed liabilities. We review goodwill for impairment annually and whenever events or circumstances indicate that the carrying amount of these assets may not be recoverable.

Revenue Recognition—Revenue is recognized upon the transfer of control of promised goods or services to the customers, generally over time, in an amount that reflects the consideration we expect to receive in exchange for those products or services. Revenue consists primarily of the recognized portion of upfront, non-refundable, prepaid royalties received in connection with filter design projects with customers. Our performance obligation is to design a licensable filter in accordance with customer specifications. The license of the completed design is considered part of this performance obligation as the design and licensing of the filter are highly interdependent. We recognize revenue from our design services based on efforts expended to date. At the end of each reporting period, we reassess our measure of progress and adjust revenue when appropriate. We record the expenses related to these projects in the periods incurred and they are generally included in research and development expense.

In most cases, upfront non-refundable payments related to design development are recognized over a period of 12 months to 18 months as that is the amount of time it generally takes to develop a design; however, the actual amount of time depends on the complexity of the filter being designed. Additionally, some of our contracts are multi-year development contracts which would include a longer period of revenue recognition. Contracts generally include non-refundable fees, or prepaid royalties, and may include milestone payments based upon the successful completion of certain deliverables. Milestone payments represent variable consideration, and we use the "most likely amount" approach to determine the amount we ultimately expect to receive.

Upon completion of design services, our customers retain a license over the completed design. The license will typically last for a minimum of two years, and in many cases for the life of the design. Some contracts also include royalties that are sales-based, and we recognize royalty revenue upon shipment, by our customer, of products that include our licensed design. Payment is generally due within 30 days.

We apply the exemptions available in ASC Topic 606, *Revenue from Contracts with Customers*, or ASC 606, to not disclose information about 1) remaining performance obligations that have original expected durations of one year or less and 2) variable consideration that is a sales-based or usage-based royalty.

Research and Development—Costs and expenses that can be clearly identified as research and development are charged to expense as incurred in accordance with ASC Topic 730-10, *Research and Development*.

Operating Leases—We lease office space and research facilities under operating leases. Certain lease agreements contain free or escalating rent payment provisions.

We determine if an arrangement is a lease at lease inception. Operating leases are included in right-of-use ("ROU") lease assets, other current liabilities (current portion of lease obligations), and long term lease obligations on our balance sheets. ROU lease assets represent our right to use an underlying asset for the lease term and lease obligations represent our obligation to make lease payments arising from the lease. Operating ROU lease assets and obligations are recognized at the commencement date based on the present value of lease payments over the lease term. As most of our leases do not provide an implicit rate, we use an incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. The ROU lease asset also includes any lease payments made and excludes lease incentives. We evaluate renewal options at lease inception and on an ongoing basis and include renewal options which we are reasonably certain to exercise in our expected lease term when classifying leases and measuring lease liabilities. We allocate the consideration between lease and nonlease components and exclude nonlease components from our recognized lease assets and liabilities.

Minimum lease payments, including scheduled rent increases, are recognized as lease expenses on a straight-line basis over the applicable lease term. We recognize lease expenses within research and development and sales, marketing and administration expenses on a straight-line basis over the lease term.

We are not party to any leases for which we are the lessor.

Finance Lease—The finance lease asset represents our right to use an underlying asset for the lease term and the finance lease liability represents the present value of lease payments not yet paid. Interest expense on the finance lease is recorded over the lease term and is presented in interest expense, based on the effective interest method. The right of use asset is amortized over the term of the related lease.

Stock-Based Compensation—We account for stock options in accordance with ASC Topic 718, *Compensation-Stock Compensation*. We use the Black-Scholes option valuation model for estimating fair value at the date of grant.

We account for restricted stock units issued at fair value, based on the market price of our stock on the date of grant. Compensation expense is recognized over the period during which the recipient renders the required services to the Company generally using the straight-line single option method.

We recognize compensation expense for restricted stock units with market conditions using a graded vesting model, based on the probability of the market condition being met.

In the case of award modifications, we account for the modification in accordance with ASU No. 2017-09, *Compensation-Stock Compensation (Topic 718): Scope of Modification Accounting*, whereby we recognize the effect of the modification in the period the award is modified.

Stock-based compensation expense is included in research and development expenses and general and administrative expenses.

Earnings Per Share, or EPS—EPS is computed in accordance with ASC Topic 260, *Earnings per Share*, and is calculated using the weighted average number of common shares outstanding during each period. Diluted EPS assumes the conversion, exercise or issuance of all potential common stock equivalents unless the effect is to reduce a loss or increase the income per share. Potential common shares consist of the incremental common shares issuable upon the exercise of stock options, the exercise of warrants and the vesting of restricted stock unit awards.

Income Taxes—We account for income taxes in accordance with ASC Topic 740, *Income Taxes*, or ASC 740, which requires the recognition of deferred tax assets and liabilities for the future consequences of events that have been recognized in our condensed consolidated financial statements or tax returns. The measurement of the deferred items is based on enacted tax laws. In the event the future consequences of differences between financial reporting bases and the tax bases of our assets and liabilities result in a deferred tax asset, ASC 740 requires an evaluation of the probability of being able to realize the future benefits indicated by such asset. A valuation allowance related to a deferred tax asset is recorded when it is more likely than not that some portion or the entire deferred tax asset will not be realized. As part of the process of preparing our consolidated financial statements, we are required to estimate our income tax expense in each of the jurisdictions in which we operate. We also assess temporary differences resulting from differing treatment of items for tax and accounting differences. We record a valuation allowance to reduce the deferred tax assets to the amount of future tax benefit that is more likely than not to be realized.

Foreign Currency Translation—The Swiss Franc has been determined to be the functional currency for the net assets of our Swiss-based subsidiary. We translate the assets and liabilities to U.S. dollars at each reporting period using exchange rates in effect at the balance sheet date and record the effects of the foreign currency translation in accumulated other comprehensive loss in shareholders' equity. We translate the income and expenses to U.S. dollars at each reporting period using the average exchange rate in effect for the period and record the effects of the foreign currency translation as other comprehensive income (loss) in the condensed consolidated statements of comprehensive loss. Gains and losses resulting from foreign currency transactions are included in net loss in the condensed consolidated statements of comprehensive loss.

Recent Accounting Pronouncements

Credit Losses—In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments- Credit Losses (Topic 326)*. In April and November 2019, and February 2020, the FASB issued implementation amendments to the June 2016 ASU (collectively, the amended guidance). The amended guidance replaced the current incurred loss methodology for credit losses with a current expected credit loss ("CECL") model, which requires the measurement of all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. The amended guidance expanded the information that an entity must consider in developing its expected credit loss estimates.

Additionally, the updates amended the accounting for credit losses for purchased financial assets with a more-than-significant amount of credit deterioration since origination. The amended guidance requires enhanced disclosures to help investors and other financial statement users better understand significant estimates and judgments used in estimated credit losses. Early adoption is permitted. The guidance is effective for us in January 2023. We have no plan to early adopt the guidance and are currently evaluating the impact, which we believe will be immaterial to our condensed consolidated financial statements.

With the exception of the new standards discussed above, there have been no other new accounting pronouncements that have significance, or potential significance, to our condensed consolidated financial statements.

NOTE 3—REVENUE RECOGNITION

We record contract assets and contract liabilities in connection with revenue recognized for filter design projects.

Contract Assets - Contract assets, other than accounts receivable, consist of unbilled revenue and generally arise when revenue is recognized ahead of invoicing the customer. Contract asset balances, if any, are included in prepaid expenses and other current assets in our condensed consolidated balance sheets. We had no contract assets during each of the nine months ended September 30, 2021 and 2020.

Contract Liabilities - Our contract liabilities consist of deferred revenue, which represents the revenue associated with remaining performance obligations within our customer contracts. We classify contract liabilities as current or long-term based on the expected timing of the remaining performance obligations. Customer deposits and deferred revenue are separately stated in our condensed consolidated balance sheets.

Summary of changes in contract liabilities for the nine months ended September 30, 2021 and 2020 (in thousands):

	Nine Months Ended September 30,	
	2021	2020
Contract liabilities, beginning	\$ 1,783	\$ 1,731
Recognition of revenue included in beginning of year contract liabilities	(1,365)	(1,679)
Contract liabilities, net of revenue recognized on contracts during the period	4,028	2,326
Contract liabilities, ending	\$ 4,446	\$ 2,378

We derive a substantial majority of our revenue from a single customer. Effective September 30, 2019 we entered into a collaboration and license agreement with Murata Manufacturing Co., Ltd. Pursuant to the collaboration agreement, we have agreed with Murata to collaborate on the development of proprietary circuit designs using our XBAR® technology, and we licensed to Murata rights for products in four specific radio frequencies, or bands. Murata has agreed to pay us up to an aggregate of \$9.0 million of total consideration in the form of pre-paid royalties for the licensed designs and certain other intellectual property developed in the collaboration, payable in installments over a multi-year development period, with each installment conditional upon our achievement of certain milestones and deliverables acceptable to Murata in its discretion. Murata may terminate the collaboration agreement at any time upon thirty (30) days prior written notice to us.

Murata's rights to our XBAR® technology are exclusive for a period of 30 months, through March 2022, during which period we may not grant to any third party the right to develop, make, have made, use, sell, offer for sale or import any filter or resonator produced through the use of the XBAR® technology for use in mobile communication devices.

Under the collaboration agreement, the first payment of \$2.0 million was a non-refundable upfront payment received in October 2019 and the second payment of \$2.5 million was collected in September 2020 upon the achievement of the second milestone.

On September 30, 2021, we entered into Addendum 1 to the collaboration agreement with Murata ("Addendum 1"), which amends and supplements the collaboration agreement to provide for the development of XBAR®-based designs for up to four additional bands. For rights to these additional bands, Murata has agreed to pay us a \$4.0 million non-refundable upfront payment and up to an aggregate of between \$8.0 million and \$36.0 million in pre-paid royalties and other fees, with the amount of the aggregate payments determined based on the complexity of the filter designs selected for development. The future payments will be made in two installments per band over a multi-year development period, with each installment conditional upon our achievement of certain milestones and deliverables acceptable to Murata in its discretion. Murata retains the right to terminate the collaboration agreement and Addendum 1 at any time upon thirty (30) days prior written notice to us. As of

September 30, 2021, the \$4.0 million non-refundable upfront payment for the Addendum is included in accounts receivable and deferred revenue as the payment was not yet received.

In accordance with the guidance of ASC 606, we are required to evaluate the variable consideration within the contracts, primarily the milestone payments, and assess the likelihood of achievement in determining our transaction price. Additionally, we must assess whether the variable consideration is constrained and whether recording such variable revenue may result in a significant reversal of revenue due to uncertainties. We continue to evaluate variable consideration for inclusion in the transaction price, and ultimately the revenue recognized, at each reporting period. We recognize revenue for the Murata contract over the estimated design development period, based on the level of effort expended over total expected costs, as the services are performed. For the periods ended September 30, 2021 and 2020, we have determined that some of the milestone payments due upon achievement of certain performance criteria are constrained and are thus not included in the transaction price. Therefore, revenue related to those milestone payments has not been recognized. Revenue recognition related to each milestone payment will commence once the constraint is lifted. Consequently, revenue recognition related to the Murata contract will vary from quarter to quarter. During each of the nine months ended September 30, 2021 and 2020, we recognized \$1.2 million and \$2.3 million, respectively, of revenue related to the collaboration and license agreement. During each of the three months ended September 30, 2021 and 2020, we recognized \$0.2 million and \$1.2 million, respectively, of revenue related to the collaboration and license agreement.

NOTE 4—INTANGIBLE ASSETS, NET

Intangible assets include patent filing costs and other assets (domain name and other intangibles purchased from GVR, including customer relationships, technology and a trademark). Some of the patents were acquired from Superconductor Technologies Inc. as a result of an asset contribution and were recorded at their carryover basis of \$216,000 and are being amortized over the remaining useful life of less than 2 years as of September 30, 2021. Intangibles acquired as part of the purchase of GVR were initially recorded at their fair value and have been fully amortized. Patent filing costs related to issued patents are amortized over the estimated life of the patent, 12 to 20 years, once they are approved by their respective regulatory agency. The domain name is being amortized over the approximate useful life of 10 years.

Intangible assets, net, consists of the following as of September 30, 2021 and December 31, 2020 (in thousands):

	September 30, 2021	December 31, 2020
Cost:		
Patents	\$ 2,988	\$ 2,399
Other ⁽¹⁾	280	291
	3,268	2,690
Less: Accumulated amortization	(492)	(571)
Intangible assets, net	\$ 2,776	\$ 2,119

(1) Includes the impact of foreign currency translation. The total impact at September 30, 2021 and December 31, 2020 was zero and \$17,000, respectively.

During the three and nine months ended September 30, 2021, we wrote off \$48,000 and \$61,000, respectively, of patents we abandoned. During the three and nine months ended September 30, 2020, we wrote off \$39,000 and \$47,000, respectively, of patents we abandoned. The write-offs are included in research and development expense.

Amortization of intangible assets was \$18,000 and \$60,000 for the three and nine months ended September 30, 2021, respectively. Amortization of intangible assets was \$24,000 and \$72,000 for the three and nine months ended

September 30, 2020, respectively. The following table summarizes the estimated remaining amortization expense relating to the intangible assets as of September 30, 2021 (in thousands):

October 1, 2021-December 31, 2021	\$	20
2022		73
2023		71
2024		70
2025		70
2026		70
2027 and thereafter		661
Total amortization expense	\$	<u>1,035</u>

NOTE 5—WARRANTS

From time to time, we have issued warrants to purchase shares of common stock. These warrants were issued in connection with financing transactions or in exchange for consulting services. Our warrants were subject to standard anti-dilution provisions applicable to shares of our common stock. All of the warrants issued have been either exercised, cancelled, or expired as of December 31, 2020 and no warrants have been issued in 2021.

A roll-forward of warrant share activity from January 1, 2020 to September 30, 2020 is shown in the following table:

	Exercise Price	Expiration Date	Issued and Outstanding Warrants as of January 1, 2020	Warrants Exercised/ Expired	Issued and Outstanding Warrants as of September 30, 2020
Consulting Warrants	\$0.01	6/17/2020	6,667	(6,667)	(1)
Financing Warrants	\$3.35	6/17/2020	62,530	(62,530)	(2)
Private Placement Warrants - September 2017	\$4.85	9/28/2020	1,966,319	(1,966,319)	(3)
Placement Agent Warrants	\$4.85	9/28/2020	98,846	(98,846)	(4)
			<u>2,134,362</u>	<u>(2,134,362)</u>	<u>—</u>

- (1) During the nine months ended September 30, 2020, there were 6,667 warrants that were exercised through a cashless exercise which netted 6,640 shares being issued.
- (2) During the nine months ended September 30, 2020, there were 62,530 warrants that expired.
- (3) During the nine months ended September 30, 2020, there were 5,319 warrants that were cancelled and 1,961,000 warrants that expired.
- (4) During the nine months ended September 30, 2020, there were 98,846 warrants that expired.

NOTE 6—STOCKHOLDERS' EQUITY AND LOSS PER SHARE

Common Stock

Pursuant to our amended and restated certificate of incorporation, we are authorized to issue 100,000,000 shares of common stock. Holders of our common stock are entitled to dividends as and when declared by the Board of Directors, subject to rights and holders of all classes of stock outstanding having priority rights to dividends. There have been no dividends declared to date. Each share of common stock is entitled to one vote.

On February 6, 2020, we entered into an underwriting agreement relating to an underwritten public offering of 6,666,667 shares of the Company's common stock, \$0.001 par value, at an offering price to the public of \$1.50 per share. Pursuant to the underwriting agreement, the Company granted the underwriters a 30-day option to purchase up to an additional 2,500,000 shares of common stock on the same terms and conditions. The underwriters exercised their option with respect to an additional 2,500,000 shares on February 10, 2020. We consummated the sale of an aggregate of 19,166,667 shares of our common stock, including the 2,500,000 shares subject to the underwriters' over-allotment option, on February 11, 2020. We received gross proceeds of approximately \$28.8 million, including \$201,000 for 134,000 shares purchased by Park City Capital,

a significant shareholder. Net proceeds were approximately \$26.4 million after deducting the underwriting discount and expenses paid by us.

On August 14, 2020, we entered into an At-The-Market Equity Offering Sales Agreement pursuant to which we may offer and sell shares of our common stock from time to time (the "ATM equity program"). We initially registered the offer and sale of up to \$25.0 million of our common stock under the ATM equity program using our existing shelf registration statement on Form S-3 that we filed with the Securities and Exchange Commission ("SEC") in November 2018 and an additional registration statement on Form S-3 that we filed with the SEC in August 2020 in order to increase the number of shares of common stock available for sale under the November 2018 registration statement. As of December 31, 2020, we sold an aggregate of 4,609,701 shares of common stock under the ATM equity program, at an average price of \$4.48 per share, for gross proceeds of \$11.4 million and net proceeds of \$11.0 million, after deducting commissions and other offering expenses. During the nine months ended September 30, 2021, we sold an aggregate of 3,068,370 shares of common stock under the ATM equity program, at an average price of \$4.01 per share, for gross proceeds of \$12.3 million and net proceeds of \$11.9 million, after deducting commissions and other offering expenses. As of September 30, 2021, we had \$1.3 million of common stock available for sale under the ATM equity program and these registration statements.

In May 2021, we filed a universal shelf registration statement on Form S-3 permitting us to sell, in one or more public offerings, shares of our common stock, shares of preferred stock or debt securities, or any combination of such securities and warrants to purchase securities, for proceeds in an aggregate amount of up to \$100.0 million. Concurrent with our filing of the May 2021 universal shelf registration statement, we filed a prospectus supplement to that registration statement to provide for the offer and sale of up to an additional \$50.0 million of our common stock under the ATM equity program. As of September 30, 2021, we have not sold any shares of common stock or other securities using the May 2021 shelf registration statement.

Preferred Stock

Pursuant to our amended and restated certificate of incorporation, we are authorized to issue 3,000,000 shares of preferred stock. The Board of Directors has the authority, without action by our stockholders, to designate and issue shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. To-date, no preferred shares have been issued.

Loss Per Share

The following table presents the number of shares excluded from the calculation of diluted net loss per share attributable to common stockholders for the periods below:

	Nine Months Ended September 30,	
	2021	2020
Common stock options	958,356	1,152,552
Non-vested restricted stock unit awards	4,455,994	3,552,143
Total shares excluded from net loss per share attributable to common stockholders	5,414,350	4,704,695

NOTE 7— STOCK-BASED COMPENSATION

2014 Omnibus Incentive Plan

In January 2014, our board of directors approved the 2014 Omnibus Incentive Plan and amended and restated the plan in March 2014. Our stockholders approved the Amended and Restated 2014 Omnibus Incentive Plan, or the 2014 Plan, in March 2014. Our 2014 Plan initially permitted for the issuance of equity-based instruments covering up to a total of 1,400,000 shares of common stock. Our board of directors and stockholders approved an increase of 1,300,000 shares in June 2016, an increase of 3,250,000 shares in June 2017, an increase of 4,000,000 shares in June 2019, and an increase of 5,000,000 shares in June 2020, bringing the total shares allowed under the plan to 14,950,000. As of September 30, 2021 there were 3,510,309 shares available to award under the 2014 Plan.

The table below represents stock option award activity for the nine months ended September 30, 2021:

	Outstanding	Exercisable
January 1, 2021	1,140,975	955,302
Granted	5,000	57,770
Exercised	(105,098)	(105,098)
Cancelled or expired	(82,521)	(65,347)
September 30, 2021	958,356	842,627

The weighted-average exercise price as of September 30, 2021 for stock options outstanding and stock options exercisable was \$1.60 and \$4.82, respectively.

The table below represents restricted stock activity for the nine months ended September 30, 2021:

	Number of Restricted Share Units
Outstanding at January 1, 2021	3,038,785
Granted	2,508,442
Vested	(880,818)
Forfeited	(210,415)
Outstanding at September 30, 2021	4,455,994

Total stock-based compensation recorded in the condensed consolidated statements of comprehensive loss is allocated as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Research and development	\$ 1,059	\$ 645	\$ 3,116	\$ 2,163
Sales, marketing and administration	869	828	3,116	2,300
Total stock-based compensation	\$ 1,928	\$ 1,473	\$ 6,232	\$ 4,463

NOTE 8— LEASES

We lease facilities under two non-cancelable operating leases. The leases expire between January 2022 and November 2024 and include renewal provisions for two to five years, provisions which require us to pay taxes, insurance, maintenance costs or provisions for minimum rent increases. We also lease facilities and equipment under short-term agreements for a period of 12 months or less and recognize the payments straight-line over the lease term. All of the information presented below, with the exception of total lease costs, relates to our two non-cancelable operating leases and a finance lease.

On May 1, 2020 we entered into an amendment for one of our non-cancelable facilities operating leases, under which certain rent payments were deferred and the term of the lease was extended by three months to November 30, 2024. The base rent was deferred for three months and the deferred amount will be repaid over the remaining balance of the modified lease term. In addition, operating expenses were deferred for three months with the deferred amount due upon the annual true-up of operating expenses, which occurred in April 2021. As a result of the lease amendment, we recorded additional ROU assets, and related lease liabilities, of \$115,000.

One facility lease requires us to maintain a cash security deposit of \$50,000 and also a \$55,000 letter of credit in favor of the lessor. The letter of credit was originally for \$200,000 at lease inception and steps down \$50,000 at each anniversary date if there have been no monetary defaults. The letter of credit is secured by a pledge in favor of the issuing bank of a mutual fund account which is classified as restricted cash in our balance sheet.

Lease renewal options are at our discretion. No renewal options have been recognized in our right-of-use assets and lease liabilities as of September 30, 2021. Our lease agreements do not require material variable minimum lease payments, residual value guarantees or restrictive covenants.

In December 2020, we entered into a lease for lab equipment. The lease is for 60 months and bears an interest rate of 5.99%. After evaluation of the lease under ASU No. 2016-02, *Leases (Topic 842)*, we determined the lease to be a finance lease. We recorded a right-of-use asset and lease liability of \$04,000 upon inception of the lease.

The Company's weighted average remaining lease term and weighted average discount rate as of September 30, 2021 is shown below:

Weighted average remaining term (years)	
Operating leases	3.05
Finance lease	4.17
Weighted average discount rate (%)	
Operating leases	4.75 %
Finance lease	5.99 %

Minimum future maturities of lease liabilities recognized on the condensed consolidated balances sheets as of September 30, 2021 (in thousands):

	Operating Leases	Finance Lease
October 1, 2021 - December 31, 2021	\$ 197	\$ 13
2022	586	50
2023	584	50
2024	544	50
2025	—	46
Total minimum lease payments	\$ 1,911	\$ 209
Less: imputed interest	(131)	(24)
Total lease liabilities	\$ 1,780	\$ 185

Operating lease costs were \$308,000 for the three months ended September 30, 2021, of which \$203,000 and \$105,000 are included in research and development expenses and sales, marketing and administration expenses, respectively. Operating lease costs were \$278,000 for the three months ended September 30, 2020, of which \$196,000 and \$82,000 are included in research and development expenses and sales, marketing and administration expenses, respectively.

Operating lease costs were \$909,000 for the nine months ended September 30, 2021, of which \$600,000 and \$309,000 are included in research and development expenses and sales, marketing and administrative expenses, respectively. Operating lease costs were \$840,000 for the nine months ended September 30, 2020, of which \$608,000 and \$232,000 are included in research and development expenses and sales, marketing and administrative expenses, respectively.

Cash paid for amounts included in the measurement of operating lease liabilities were \$80,000 and \$422,000 for the nine months ended September 30, 2021 and 2020, respectively, which is included in operating activities in the condensed consolidated statements of cash flows.

Finance lease amortization for the three and nine months ended September 30, 2021 was \$0,000 and \$30,000, respectively, and is included in research and development expenses. There was no finance lease amortization for the three and nine months ended September 30, 2020 as the lease was not in effect during that period.

NOTE 9—RELATED PARTY TRANSACTIONS

In August 2019, we entered into a consulting agreement with a member of our board of directors. Under the agreement, the board member would provide technical advisory services for cash payments totaling \$50,000 paid in twelve equal monthly installments as well as an award of restricted stock units equal in value to \$00,000 as of the grant date. In the event the board member continues to perform services in subsequent years, the Company will issue new grants equal to no less than \$100,000 worth of restricted stock units in January of each additional year with such grants vesting at the end of each year so long as the services are still being provided. The agreement is cancelable at any time by either the Company or the board member. Services have continued to be provided since inception of the agreement. During the three months ended September 30, 2021, we recorded expenses of \$38,000 in connection with the consulting agreement, of which \$12,500 is included in research and development expenses and \$25,500 is included in general and administrative expenses. During the nine months ended September 30, 2021, we recorded expenses of \$112,000, of which \$37,500 is included in research and development expenses and \$74,500 is included in general and administrative expenses. During the three months ended September 30, 2020, we recorded expenses of \$7,500 in connection with the consulting agreement, of which \$12,500 is included in research and development expenses and \$25,000 is included in general and administrative expenses. During the

nine months ended September 30, 2020, we recorded expenses of \$10,000 in connection with the consulting agreement, of which \$38,000 is included in research and development expenses and \$72,000 is included in general and administrative expenses. As of September 30, 2021, there was \$1,000 due to the board member under this consulting agreement.

NOTE 10— COMMITMENTS AND CONTINGENCIES

Legal Proceedings—We are not party to any legal proceedings. We may, from time to time, be party to litigation and subject to claims incident to the ordinary course of business. As our growth continues, we may become party to an increasing number of litigation matters and claims. The outcome of litigation and claims cannot be predicted with certainty, and the resolution of any future matters could materially affect our future financial position, results of operations or cash flows.

Legal fees and other costs associated with legal proceedings are expensed as incurred. We assess, in conjunction with our legal counsel, the need to record a liability for litigation and contingencies. Litigation accruals are recorded when and if it is determined that a loss related matter is both probable and reasonably estimable. Material loss contingencies that are reasonably possible of occurrence, if any, are subject to disclosure. We evaluate developments in legal proceedings and other matters on a quarterly basis. As of September 30, 2021 and 2020, there was no litigation or contingency with at least a reasonable possibility of a material loss. No losses have been recorded during the three and nine months ended September 30, 2021 and 2020, respectively, with respect to litigation or loss contingencies.

Intellectual Property Indemnities—We indemnify certain customers and manufacturers against liability arising from third-party claims of intellectual property rights infringement related to our products. These indemnities may appear in license agreements, development agreements and manufacturing agreements, may not be limited in amount or duration and generally survive the expiration date of the contract. Given that the amount of any potential liabilities related to such indemnities cannot be determined until an infringement claim has been made, we are unable to determine the maximum amount of losses that we could incur related to such indemnifications.

Director and Officer Indemnities and Contractual Guarantees—We have entered into indemnification agreements with our directors and executive officers, which require us to indemnify such individuals to the fullest extent permitted by Delaware law. Our indemnification obligations under such agreements are not limited in amount or duration. Certain costs incurred in connection with such indemnifications may be recovered under certain circumstances under various insurance policies. Given that the amount of any potential liabilities related to such indemnities cannot be determined until a lawsuit has been filed, we are unable to determine the maximum amount of losses that we could incur relating to such indemnities.

We have also entered into severance and change in control agreements with certain of our executives. These agreements provide for the payment of specific compensation benefits to such executives upon the termination of their employment with us.

Guarantees and Indemnities—In the normal course of business, we are occasionally required to undertake indemnification for which we may be required to make future payments under specific circumstances. We review our exposure under such obligations no less than annually, or more frequently as required. The amount of any potential liabilities related to such obligations cannot be accurately determined until a formal claim is filed. Historically, any such amounts that become payable have not had a material negative effect on our business, financial condition or results of operations. We maintain general and product liability insurance which may provide a source of recovery to us in the event of an indemnification claim.

NOTE 11— SEGMENTS AND GEOGRAPHIC INFORMATION

We operate in a single segment to design radio frequency filters. In making operating decisions, the Chief Operating Decision Maker, our Chief Executive Officer, primarily considers consolidated financial performance and allocates resources accordingly.

The table below presents our revenue by geographic area (in thousands) and is categorized based on the location of the customer.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2021	2020	2021	2020
Japan	\$ 226	\$ 1,248	\$ 1,168	\$ 2,271
China	95	150	270	257
Other	104	7	209	25
Total revenue	<u>\$ 425</u>	<u>\$ 1,405</u>	<u>\$ 1,647</u>	<u>\$ 2,553</u>

NOTE 12 - SUBSEQUENT EVENTS***Common Stock***

We sold an aggregate of 2,524,200 shares of common stock under our ATM equity program between October 1, 2021 and November 10, 2021, at an average price of \$2.50 per share, for gross proceeds of \$6.3 million and net proceeds of \$6.1 million, after deducting commissions and other offering expenses. As of November 10, 2021, we had \$45.0 million available to be sold under our ATM equity program.

Sublease

Effective as of October 6, 2021, we entered into a Sublease Agreement with Sonim Technologies, Inc. for approximately 8,416 square feet of office space in San Mateo, California to serve as a replacement to our current satellite office for employees residing in the San Francisco Bay area. The rent under the sublease is \$12,500 per month, and the term will commence on January 17, 2022 and expire on January 31, 2023. We have an option to renew the sublease for an additional one-year term for rent of \$13,250 per month. Alan Howe, a member of our board of directors, is a director of Sonim Technologies, and Robert Tirva, a member of our board of directors, is an executive officer of Sonim Technologies.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. The words "believe," "may," "will," "potentially," "estimate," "continue," "anticipate," "intend," "could," "would," "project," "plan," "expect" and similar expressions that convey uncertainty of future events or outcomes are intended to identify forward-looking statements. These forward-looking statements speak only as of the date of this Form 10-Q and are subject to uncertainties, assumptions and business and economic risks. As such, our actual results could differ materially from those set forth in the forward-looking statements as a result of the factors referenced in the subsection "Risk Factors" set forth in Part II, Item 1A of this Report and Part I, Item 1A of our Annual Report, and similar discussions in our other reports filed with the Securities and Exchange Commission. You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances described in the forward-looking statements will be achieved or occur. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this Form 10-Q to conform these statements to actual results or to changes in our expectations, except as required by law.

The following discussion should be read in conjunction with our unaudited condensed consolidated financial statements and notes thereto appearing elsewhere in this Quarterly Report on Form 10-Q with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

Overview

We are a late-stage development company that develops technology for the RF front-end market. Our focus is on continuing to create innovative technology, engage new customers, expand the number of license contracts for filter designs and build the necessary infrastructure to support anticipated growth.

We plan to continue to develop IP associated with high frequency/wide bandwidth filters (XBAR[®]-based filters), to expand our IP and trade secret libraries, and further the development of our WaveX[™] multi-physics EDA platform. While we remain a filter design licensing company, we are also investigating the potential of licensing part or all of our WaveX[™] software design suite and certain patents to potential customers in the RFFE industry. During the third quarter of 2019, we completed an investment and commercial agreement with Murata Manufacturing Co., Ltd., the first collaboration agreement leveraging our XBAR[®] IP. During the third quarter of 2021, we expanded the commercial agreement to include designs for additional RF bands. In all licensing arrangements with our customers we intend to retain ownership of our technology, software, designs and related improvements. Our goal is to establish and leverage alliances with new and existing customers, who will help grow the market for our designs by integrating them with their own proprietary technology and products, or by using our software products for their own designs, thus combining their own particular strengths with ours to provide an extensive array of solutions. We continue to expand our foundry program, which allows fabless companies to enter into the filter business quickly and efficiently. It is through this foundry program that we expect to engage with OEM's and Independent Design House's (IDH's) directly to provide a significant cost and time to market advantage.

Our costs include employee salaries and benefits, compensation paid to consultants, capital costs for research and other equipment, costs associated with development activities including travel and administration, legal expenses, sales and marketing costs, general and administration expenses, and other costs associated with a late-stage development, publicly-traded technology company. We continue to add employees, as needed, to support the development of our WaveX[™] platform, applications and system test, research and development, as well as sales, marketing and administration functions, to support our efforts.

The amounts that we actually spend for any specific purpose may vary significantly and will depend on a number of factors including, but not limited to, our expected cash resources, the pace of progress of our commercialization and development efforts, actual needs with respect to product testing, research and development, market conditions, and changes in or revisions to our marketing strategies. In addition, we may invest in complementary products, technologies or businesses.

Recent Developments

COVID-19-- The ongoing COVID-19 pandemic has negatively impacted the United States, Asia and Europe, the major markets in which we operate. Although we have seen improvements in the United States, the major markets in which we operate continue to experience COVID-19 cases and recurring shutdowns. The pandemic's ultimate impact on our operations and financial performance depends in part on many factors not within our control and that vary by region, including, without limitation, restrictive governmental and business actions that continue to be taken in response (including travel restrictions and other workforce limitations).

Restrictions on travel and the imposition of stay-at-home or work remote conditions have impacted our operations and those of our clients. While we have not experienced major disruptions, clients have requested engagement deferrals and our employees' ability to deliver our products and services has been impacted. We continue to actively communicate with and listen to our customers to best ensure that we are responding to their needs in the current environment with innovative solutions that will not only be beneficial now but also over the long-term. However, our ability to interact with customers has been impacted by the current environment. For example, we believe that our inability to meet in-person with current or prospective customers, as well as the cancellation or postponement of Company-sponsored events or third-party events at which our products are featured, may have a negative impact on our business.

If restrictions continue for an extended period of time, we may, among other issues, experience delays in product development, a decreased ability to support our customers, further disruptions in sales and marketing activities and an overall lack of productivity. Similarly, significant outbreaks, continued travel restrictions, stay-at-home or work remote conditions, or other restrictions may impact our customers' ability to manufacture or deliver raw materials or provide key components or services, which could result in delays in the demand from our customers to produce designs. The pandemic may also impact the expansion of current and/or the roll out of new services which could impact our customers' demand for their products, which could reduce their demand for our products or services. While we don't know and cannot quantify specific impacts, we expect we may be negatively affected if we encounter delays in our product development efforts, reductions in demand due to disruptions in the operations of our customers or their end customers, disruptions in local and global economies, volatility in the global financial markets, overall reductions in demand, or other COVID-19 ramifications.

Results of Operations

Comparison of the Three and Nine Months Ended September 30, 2021 and 2020

Revenues. Revenues consist primarily of the recognized portion of the transaction price associated with our contracts from customers recognized over time as the obligations under the terms of the contract are satisfied. Generally, the transaction price includes both upfront and milestone payments which we expect to receive in exchange for providing services. Revenues also include royalties from shipments of our licensed designs. For the three months ended September 30, 2021 and 2020, we recognized a total of \$0.4 million and \$1.4 million, respectively, of revenue. For the nine months ended September 30, 2021 and 2020, we recognized a total of \$1.6 million and \$2.6 million, respectively, of revenue. The decreases in revenue are the result of non-linear revenue recognition associated with our design development agreements. In the three and nine months ended September 30, 2020 we recognized a significant amount of revenue when we received a \$2.5 million milestone payment. We derive a substantial majority of our revenues from a single customer. Additionally, during 2021, there have been nominal increases in our sales-based royalty revenue. We have recorded \$4.4 million of deferred revenue as of September 30, 2021, which we expect to recognize over the remainder of the contracts.

Research and Development. These expenses relate to direct engineering and other costs associated with the development and commercialization of our technology, including the development of filter designs for our customers and consist primarily of the compensation costs of employees and consultants, including stock-based compensation, and to a lesser extent, development related costs for facilities, equipment, software and supplies. We also include the costs for our intellectual property development program under research and development. This program focuses on patent strategy and invention extraction.

Research and development expenses increased \$1.5 million from \$4.4 million in the third quarter of 2020 to \$5.9 million in the third quarter of 2021 and increased \$2.4 million, from \$14.7 million in the nine months ended September 30, 2020 to \$17.1 million in the nine months ended September 30, 2021. The increases in the three and nine month periods were primarily a result of increased costs related to development of our WaveX™ and XBAR® technology, increases in compensation expenses as a result of increased headcount and increased costs associated with expanding our patent portfolio. For the remainder of the year we expect research and development expenses to increase due to higher development costs and additional headcount.

Sales, Marketing and Administration Expenses. These expenses relate to our sales and marketing efforts and our back-office support and include compensation costs of employees and consultants, including stock-based compensation. They also include expenses for facilities, travel expenses, telecommunications, investor relations, insurance and professional fees.

Sales, marketing and administration expenses were \$3.5 million for the third quarter of 2021 compared to \$3.1 million in the third quarter of 2020, and \$11.4 million for the nine months ended September 30, 2021 compared to \$9.2 million for the nine months ended September 30, 2020. The increase for the three month period is primarily related to increased compensation expenses for employees and consultants. The increase for the nine month period was primarily related to increased compensation expenses for employee and consultants of \$1.4 million, costs related to the filing of our universal shelf registration statement of \$0.1 million and other increased operating expenses, including insurance, legal, accounting and

marketing of \$0.7 million. We anticipate that our sales, marketing and administration expenses will remain consistent with the current quarter.

Interest and Investment Income (Expense). Interest and investment expense for the three and nine months ended September 30, 2021 was \$3,000 and \$9,000, respectively. Interest and investment income for the three and nine months ended September 30, 2020 was \$1,000 and \$65,000, respectively. The income in 2020 represented interest income on our cash and investment balances while the expense in 2021 represented interest expense recorded in connection with a finance lease for equipment.

Income Taxes. We have earned minimal revenues and are currently operating at a loss. In the three and nine months ended September 30, 2021 and 2020, our only tax liability was for minimum taxes in the states where we conduct business.

Liquidity and Capital Resources

Financing Activities

We have earned minimal revenues since inception. Our operations have been funded with initial capital contributions and proceeds from the sale of equity securities and debt.

As of September 30, 2021, we have raised aggregate gross proceeds of \$149.6 million through the use of loans and convertible debt, and sales of equity pursuant to our initial public offering, secondary underwritten offerings, an at-the-market equity program, private placement financings, and the exercise of stock options and warrants.

We had current assets of \$20.1 million and current liabilities of \$6.4 million at September 30, 2021, resulting in working capital of \$13.7 million. This compares to working capital of \$14.7 million at September 30, 2020 and \$19.8 million at December 31, 2020. The change in working capital is primarily the result of cash used in our normal business operations, offset by proceeds from the issuance of equity securities.

As of September 30, 2021, our accumulated deficit totaled \$177.8 million. In the nine months ended September 30, 2021 our net loss totaled \$26.9 million and we used \$21.9 million of cash for operating activities, the purchase of property and equipment and expenditures for patents. To date we have not generated significant revenues to enable profitability. We expect to continue to incur significant losses. These factors raise substantial doubt regarding our ability to continue as a going concern. At September 30, 2021 we had cash and cash equivalents of \$15.3 million and accounts receivable of \$4.3 million. Subsequent to September 30, 2021, but prior to the publication of the financial statements on this Form 10-Q, we raised \$6.1 million of cash from sales of common stock using our At-The-Market Equity Offering Sales Agreement. In the absence of additional customer contracts, we believe these cash resources, along with anticipated cash generated from existing customer contracts, will provide sufficient funding into the fourth quarter of 2022. We are subject to the risks and uncertainties associated with a new business. We also have been impacted by the COVID-19 pandemic which has added additional risks and uncertainties. Our continuance as a going concern is dependent on our future profitability. We are actively pursuing expanding our technology portfolio, increasing our revenue opportunities by completing deliverables under current customer contracts and entering into new customer contracts, and efficiently managing operations and exploring cost saving opportunities. We may not be successful in these efforts. We may need to seek to raise additional capital from the sale of equity securities or incurrence of indebtedness. There can be no assurance that additional financing will be available to us on acceptable terms, or at all, in which case we might be forced to make substantial reductions in our operating expenses which could adversely affect our ability to implement our business plan and ultimately our viability as a company. Even if available, such capital may be dilutive to existing stockholders. The accompanying condensed consolidated financial statements have been prepared on a going concern basis which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. The condensed consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of this uncertainty.

Cash Flow Analysis

Operating activities used cash of \$20.4 million in the first nine months of 2021 and \$16.0 million in the first nine months of 2020. The increase is primarily the result of our higher net loss and working capital changes, partially offset by higher non-cash expenses.

Investing activities used cash of \$1.4 million in the first nine months of 2021 and \$1.0 million in the first nine months of 2020 as a result of purchases of property and equipment and expenditures for patents.

Financing activities provided cash of \$12.2 million in the first nine months of 2021 as a result of the net proceeds from our at-the-market equity program and exercises of stock options. Financing activities provided cash of \$26.4 million in

the first nine months of 2020 as a result of the net proceeds from the underwritten sale of equity securities completed in February 2020.

Off-Balance Sheet Transactions

We do not have any off-balance sheet arrangements.

Critical Accounting Policies and Estimates

Our discussion and analysis of financial condition and results of operations is based upon our condensed consolidated financial statements, which have been prepared in conformity with accounting principles generally accepted in the United States of America. Certain accounting policies and estimates are particularly important to the understanding of our financial position and results of operations and require the application of significant judgment by our management or can be materially affected by changes from period to period in economic factors or conditions that are outside of our control. As a result, they are subject to an inherent degree of uncertainty. In applying these policies, our management uses their judgment to determine the appropriate assumptions to be used in the determination of certain estimates. Those estimates are based on our historical operations, our future business plans and projected financial results, the terms of existing contracts, our observance of trends in the industry, information provided by our customers and information available from other outside sources, as appropriate. While the nature of the COVID 19 situation is dynamic, we have considered its impact when developing our estimates and assumptions. Actual results and outcomes may differ from management's estimates and assumptions.

A description of our critical accounting policies that represent the more significant judgments and estimates used in the preparation of our financial statements was provided in the Management's Discussion and Analysis of Financial Condition and Results of Operations section of our Annual Report on Form 10-K for the year ended December 31, 2020. There have been no changes to our critical accounting policies and estimates described in the Annual Report on Form 10-K for the year ended December 31, 2020 that have had a material impact on our condensed consolidated financial statements and related notes.

Recently Issued and Adopted Accounting Pronouncements

Recent accounting pronouncements are detailed in Note 2 to our condensed consolidated financial statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Not Applicable

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

The phrase “disclosure controls and procedures” refers to controls and procedures designed to ensure that information required to be disclosed in our reports filed or submitted under the Securities Exchange Act of 1934, as amended, or the Exchange Act, such as this Quarterly Report on Form 10-Q, is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the U.S. Securities and Exchange Commission, or SEC. Disclosure controls and procedures are also designed to ensure that such information is accumulated and communicated to our management, including our chief executive officer, or CEO, and chief financial officer, or CFO, as appropriate to allow timely decision regarding required disclosure.

Our management, with the participation of our CEO and CFO, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), as of September 30, 2021, the end of the period covered by this Quarterly Report on Form 10-Q. Based on such evaluation, our CEO and CFO have concluded that as of September 30, 2021, our disclosure controls and procedures were designed at a reasonable assurance level and were effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the rules and forms of the SEC, and that such information is accumulated and communicated to our management, including our CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Controls over Financial Reporting

There was no change in our internal control over financial reporting identified in management’s evaluation pursuant to Rules 13a-15(d) or 15d-15(d) of the Exchange Act during the quarter ended September 30, 2021 that materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

PART II: OTHER INFORMATION**Item 1. Legal Proceedings**

We are not party to any legal proceedings. We may, from time to time, be party to litigation and subject to claims incident to the ordinary course of business. As our product offerings continue to develop, we may become party to an increasing number of litigation matters and claims. The outcome of litigation and claims cannot be predicted with certainty, and the resolution of any future matters could materially affect our future financial position, results of operations or cash flows.

Item 1A. Risk Factors

This Quarterly Report on Form 10-Q contains forward-looking statements, which are subject to a variety of risks and uncertainties. Other actual results could differ materially from those anticipated in those forward-looking statements as a result of various factors, including those set forth in the risk factors relating to our business and common stock contained in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2020. There have been no material changes to such risk factors during the period ended September 30, 2021.

Item 5. Other Information

On November 9, 2021, the Compensation Committee of our Board of Directors approved quarterly bonus awards to our executive officers pursuant to our 2021 Incentive Bonus Program for their performance during the third quarter of 2021. The bonus awards were paid in the form of restricted stock units for shares of our common stock in the amounts set forth below. The restricted stock units vest in full on November 16, 2021.

Executive Officers	Number of RSU Shares
Neal Fenzi	10,317
Dylan Kelly	10,328
Martin McDermut	11,918
Lisa Wolf	10,598

Item 6. Exhibits

Exhibit Number	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File Number	Exhibit	Filing Date	
3.1.1	Amended and Restated Certificate of Incorporation of the Registrant	8-K	001-36467	3.1	6/5/2014	
3.1.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Registrant	8-K	001-36467	3.1	6/12/2019	
3.2	Amended and Restated Bylaws of the Registrant	8-K	001-36467	3.2	6/5/2014	
10.1*	Addendum 1 to Collaboration and License Agreement, dated as of September 30, 2021, between Resonant Inc. and Murata Manufacturing Co., Ltd.					X
10.2	Sublease Agreement, dated as of September 10, 2021, between Resonant Inc. and Sonim Technologies, Inc.					X
31.1	Certification of Principal Executive Officer Pursuant to Securities Exchange Act Rules 13a-14(a) and 15d-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
31.2	Certification of Principal Financial Officer Pursuant to Securities Exchange Act Rules 13a-14(a) and 15d-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
32.1#	Certification of Principal Executive Officer and Principal Financial Officer 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.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document					X

* Portions of this exhibit have been omitted pursuant to Rule 601(b)(10)(iv) of Regulation S-K.

The information in this exhibit is furnished and deemed not filed with the Securities and Exchange Commission for purposes of section 18 of the Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of Resonant Inc. under the Securities Act of 1933, as amended, or the Exchange Act of 1934, as amended, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

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.

Date: November 10, 2021

Resonant Inc.

By: /s/ Martin S. McDermut
Martin S. McDermut
Chief Financial Officer

CERTAIN IDENTIFIED INFORMATION HAS BEEN EXCLUDED FROM THE EXHIBIT BECAUSE IT IS BOTH NOT MATERIAL AND WOULD LIKELY CAUSE COMPETITIVE HARM TO THE REGISTRANT IF PUBLICLY DISCLOSED. OMISSIONS ARE DESIGNATED AS [***].

**ADDENDUM 1 TO
COLLABORATION AND LICENSE AGREEMENT**

This Addendum 1 to Collaboration and License Agreement (this “Addendum”) is entered into and made effective as of September 30, 2021 (the “Addendum Effective Date”) by Resonant Inc., a Delaware corporation (“Resonant”), and Murata Manufacturing Co., Ltd., a Japanese company (“MMC”), on behalf of itself and its Affiliates (collectively, “Murata”). Resonant and Murata are each a “Party” and collectively, the “Parties.”

All capitalized terms herein unless defined in this Addendum shall have the same definitions as set forth in the Collaboration Agreement (as defined below).

- A. Resonant and Murata have entered into that certain Collaboration and License Agreement, dated as of September 30, 2019 (the “Collaboration Agreement”), which contemplates the development and license of technology to be incorporated in Licensed Products for Selected Bands [***], [***], [***] and [***].
- B. Resonant and Murata desire to add to the Collaboration Agreement, the development and license of technology to be incorporated in and used by Licensed Products for up to four (4) additional Selected Bands to be mutually agreed to by the Parties, as more fully set forth herein (the “Additional Band(s)”)

NOW, THEREFORE, in consideration of the terms and conditions contained herein, and for other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, and intending to be legally bound, the Parties hereby agree as follows:

1. Definitions.

a. The following terms shall have the following meanings when used in this Addendum:

- i. “Committee” means the committee comprised of representatives of the Parties formed pursuant to the Collaboration Agreement.
- ii. “Completion” with respect to each Additional Band means the completion of the first Part Number for the Licensed Product for such Additional Band, with such completion to occur when agreed upon in writing (including but not limited to minutes, note, memo, emails or other documentation) by the Committee.
- iii. “New Technology” means a modification or improvement to the current Gen 1 XBAR technology resulting in the need for a new process qualification.
- iv. “Relative Technical Value” means either RTV0.5, RTV1.0, RTV2.0 or RTV 2.5.
- v. “RTV0.5” means [***].
- vi. “RTV1” means [***].
- vii. “RTV2” means [***].
-

viii. "RTV2.5" means [***].

2. Selection of Additional Bands.

- a. Following the Addendum Effective Date, the Parties will cooperate in good faith to identify the Additional Band(s) in accordance with this Section 2 to be the subject of the development of Deliverables pursuant to the Collaboration Agreement, each of which shall be mutually acceptable to the Parties (such acceptance not to be unreasonably withheld, conditioned or delayed). The Parties agree that, for purposes of counting each Additional Band hereunder, a single band may operate with multiple radio frequency bands, such as in a diplexer, and that such band shall nonetheless count as a single band hereunder. When the Parties have mutually agreed on the selection of each Additional Band, Resonant shall collaborate in the development of Deliverables pursuant to the applicable SOW as agreed under Section 2.b below, and prepare and deliver the Deliverables for the Additional Band and/or [***] for each of the Additional Band to Murata according to the milestone schedule set forth in the applicable SOW.
- b. The Parties shall, with respect to the Additional Bands:
- i. on or before [***], agree on the selection of the first (1st) Additional Band, and the terms of a SOW for the development of Deliverables for such band;
 - ii. on or before [***], agree on the selection of the second (2nd) Additional Band and the terms of a SOW for the development of Deliverables for such band;
 - iii. on or before [***], agree on the selection of the third (3rd) Additional Band and the terms of a SOW for the development of Deliverables for such band; and
 - iv. on or before [***], agree on the selection of the fourth (4th) Additional Band and the terms of a SOW for the development of Deliverables for such band.

In addition, the Parties agree to use their commercially reasonable efforts to enter into additional SOWs for the development of Deliverables for all Part Numbers for each of the Additional Band if Murata requests; provided that each SOW for a [***] for an Additional Band must be entered into no later than [***] months following the date of Completion of the SOW for such Additional Band.

- c. Each Additional Band that is identified in a SOW that is executed by the Parties within the time periods set forth in this Section 2 shall constitute a Selected Band within the meaning of the Collaboration Agreement. When fully executed by the Parties, each SOW for an Additional Band shall be incorporated in and made a part of the Collaboration Agreement as a SOW thereunder. If the Parties do not enter into the first SOW for a specific Additional Band within the relevant time period set forth in this Section 2, the Parties shall discuss in good faith to determine a reasonable time frame for entering into such SOW, not to exceed [***] from the original scheduled date for such SOW as set forth in this Section 2.
3. Development Timeline for Additional Bands: New Technology. The Parties agree that the detailed timeline for development and completion of Deliverables for each Additional Band will be agreed upon by the Committee following execution of the SOW for such Additional Band. If Resonant recommends New Technology for an Additional Band, Resonant will provide to Murata a probe measurement of an example filter response so that Murata can validate the New Technology's potential. An example of a New Technology probe measurement is the original [***] probe measurement Resonant provided to Murata in 2019 to initiate the Collaboration Agreement.
4. Payments. Murata shall make the following payments to Resonant:

- a. Up-Front Payment. Within fifteen (15) working days from the date of Resonant's invoice, which shall not be issued prior to the Addendum Effective Date, Murata shall pay to Resonant a non-refundable, fully paid up fee of \$4,000,000 (the "Up-Front Payment") by wire of immediately available funds, as a one-time pre-payment of royalties in connection with Murata's sales of Licensed Products for the Additional Band(s). Of the Up-Front Payment, \$1,000,000 shall be credited against the Total Project Price for each of the four (4) Additional Bands, as shown on Exhibit A attached hereto.
- b. Milestone Payments. For each Additional Band, Murata shall pay to Resonant a non-refundable, fully paid-up fee in an amount equal to the "Total Milestone Amount" that corresponds to the Relative Technical Value of such Additional Band as set forth in Exhibit A attached hereto (which Relative Technical Value shall be agreed to by the Parties at the time of execution of the applicable SOW). The Total Milestone Amount corresponding to an Additional Band shall be paid in two (2) installments, as follows:
 - i. Fifty percent (50%) of the Total Milestone Amount shall become payable upon the execution by the Parties of the SOW for such Selected Band; and
 - ii. Fifty percent (50%) of the Total Milestone Amount shall become payable upon Completion of such Selected Band.

All installment payments of a Total Milestone Amount shall be made within fifteen (15) working days from the date of Resonant's invoice for such installment, which invoice shall not be issued prior to execution of the SOW or Completion, as applicable, by wire of immediately available funds, and shall constitute a one-time pre-payment of royalties in connection with Murata's sales of Licensed Products for the applicable Selected Band.

5. All terms of the Collaboration Agreement, as amended hereby with respect to the Additional Bands contemplated by this Addendum, shall apply to the Additional Bands as Selected Bands and all SOWs and Deliverables related thereto, and shall otherwise continue in full force and effect as set forth under the Collaboration Agreement.
6. This Addendum, including all attached exhibits and schedules, is the entire agreement between the Parties with respect to the subject matters hereof and supersedes all prior written or oral agreements between the Parties relating to the same subject matter. This Addendum may be executed in several counterparts that together shall be originals and constitute one and the same instrument.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties have, through their duly authorized representatives, executed this Addendum on the dates below their signatures, but both Parties nevertheless agree that this Agreement shall be deemed valid and effective as of the Addendum Effective Date.

Resonant Inc.

Murata Manufacturing Co., Ltd.

By: /s/ George Holmes

By: /s/ Takaki Murata

Name: George Holmes, CEO

Name: Takaki Murata

Title: CEO

Title: Director

Date: 2021-09-30

Date: 2021-10-01

EXHIBIT A
TO
ADDENDUM 1 TO COLLABORATION AND LICENSE AGREEMENT

Pricing for Additional Bands

SUBLEASE AGREEMENT

This Sublease Agreement (“**Sublease**”) is dated as of September 10, 2021 (the “**Effective Date**”), for reference purposes only, by and between SONIM TECHNOLOGIES, INC., a Delaware corporation (“**Sublandlord**”), having an address of 6500 River Place Blvd., Building 7, Suite 250 Austin, TX 78730 U.S.A., and RESONANT, INC., a Delaware corporation (“**Subtenant**”), having an address of 10900 Stonelake Blvd., Building 2, Suite 100, Office 02-130, Austin, TX 78759 . This Sublease shall be effective as of the date set forth in Section 2 below.

RECITALS

A. Sublandlord currently leases those certain premises commonly known as 1875 S. Grant Street, San Mateo, CA 94402 (“**Building**”), consisting of approximately 8,416 rentable square feet located on seventh floor of the Building and commonly known as Suites 750 and 770 (“**Master Premises**”), from BCSP Crossroads Property LLC, a Delaware limited liability company (“**Master Landlord**”), pursuant to the terms and conditions of that certain Lease Agreement dated May 25, 2006, as amended by that certain First Amendment of Lease dated June 11, 2007, Second Amendment of Lease dated May 8, 2008, Third Amendment of Lease dated July 24, 2009, Fourth Amendment of Lease dated July 23, 2010, Fifth Amendment of Lease dated August 8, 2011, Sixth Amendment of Lease dated March 26, 2012 (“**Sixth Amendment**”), Seventh Amendment of Lease dated July 11, 2012, Eighth Amendment to Lease dated August 8, 2013, Ninth Amendment of Lease dated February 5, 2014, Tenth Amendment of Lease dated January 26, 2016, Eleventh Amendment to Office Lease dated April 26, 2017 (“**Eleventh Amendment**”), and Twelfth Amendment to Lease Agreement (“**Twelfth Amendment**”) dated June 27, 2018 (collectively, the “**Master Lease**”). A copy of the Master Lease is attached hereto as Exhibit A. Capitalized terms used but not defined herein shall have the meanings set forth in the Master Lease.

B. Sublandlord desires to sublease to Subtenant a portion of the Master Premises and Subtenant desires to sublease from Sublandlord a portion of the Master Premises, pursuant to the terms and conditions of this Sublease, the portion of the Master Premises (the “**Subleased Premises**”) indicated in Exhibit B.

AGREEMENT

Now, Therefore, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, Sublandlord and Subtenant hereby agree as follows:

1. Subleased Premises and Common Areas. Sublandlord hereby subleases to Subtenant the Subleased Premises, and Subtenant hereby subleases the Subleased Premises from Sublandlord, pursuant to the terms and conditions of this Sublease. Subtenant acknowledges that the Subleased Premises are in good condition and without need of repair, having made all investigations and tests it has deemed necessary or desirable in order to establish its own complete satisfaction with the condition of the Subleased Premises. Subtenant shall accept the Subleased Premises in their condition existing as of the Effective Date, subject to all applicable

zoning, municipal, county and state laws, ordinances, regulations governing the use of the Subleased Premises and any covenants or restrictions of record. Subtenant shall accept the Subleased Premises in its "AS IS" and "WHERE IS" condition, and Sublandlord makes no representation or warranty regarding the Subleased Premises. Subject to the terms of the Master Lease, Subtenant shall have access to the Subleased Premises on a twenty-four (24) hours a day, seven (7) days a week, three hundred sixty five (365) days a year basis.

2. Effective Date; Master Landlord's Consent Required. This Sublease shall not become effective or binding upon Sublandlord until the date an executed copy of Master Landlord's written consent to this Sublease ("**Consent**") is executed and delivered to Sublandlord and Subtenant. Sublandlord hereby disclaims any representation or warranty, whether express or implied, to Subtenant that Sublandlord will obtain the Consent, but Sublandlord shall use good faith efforts to request the same in accordance with the provisions of the Master Lease and Subtenant shall reasonably cooperate with Sublandlord in its efforts to obtain the same (including, without limitation, providing a list of Hazardous Materials as required under Section 43.F of the Master Lease as promptly as possible). Subtenant agrees promptly to provide any reasonable financial or other information requested by Master Landlord pursuant to the Master Lease. Each party agrees promptly to execute and deliver the Consent in a form acceptable to Master Landlord, Sublandlord and Subtenant. If the Consent is not received within sixty (60) days of the full execution and delivery hereof, either party by notice to the other given prior to the receipt of the Consent, may terminate this Sublease, in which case Sublandlord shall promptly return to Subtenant all sums theretofore paid by Subtenant hereunder. Subtenant waives any claim against Master Landlord arising out of any failure or refusal by Master Landlord to grant consent to this Sublease.

3. Term. The term of this Sublease (the "**Initial Term**") shall commence on the later of (a) January 17, 2022, and (b) Sublandlord's receipt of the fully executed Consent (the "**Commencement Date**") and shall expire on January 31, 2023 (the "**Expiration Date**"), unless earlier terminated or extended pursuant to the terms of this Sublease. Subtenant has the right to request an extension of the Initial Term for an additional 12 months (the "**Extension Term**") during which time Subtenant's Rent shall be increased as set forth in Section 5.1 below. Subtenant shall provide notice of its election of such Extension Period at least 180 days prior to the Expiration Date. The Initial Term and Extension Term are collectively referred to herein as the "**Term**".

4. Reserved.

5. Rent. Sublandlord shall be responsible for the timely payment of Rent under the Master Lease during the Term. Subtenant shall pay to Sublandlord the following as Sublease rent hereunder:

5.1 Sublease Term Rent; Rent Commencement Date. Beginning on the later of the Commencement Date and February 1, 2022, and continuing during the Term of this Sublease, Subtenant shall pay to Sublandlord, as sublease rent ("**Rent**"), in lawful money of the United States of America, without any deduction, offset, prior notice or demand, in advance on the first date of each month of the Term from Commencement Date through the Expiration Date,

the following amounts (with no Rent due for the period from the Commencement Date through January 31, 2022):

<u>Period</u>	<u>Monthly Rent</u>
February 1, 2022 – January 31, 2023	\$12,500
February 1, 2023 – January 31, 2024	\$13,250

5.2 Taxes. Subtenant shall pay all taxes applicable to Subtenant’s personal property or any other taxes that are otherwise Sublandlord’s responsibility, as tenant, under the Master Lease.

5.3 Late Charges. Notwithstanding any other provision of this Sublease Agreement, if Subtenant is in default in the payment of Rent, Subtenant agrees to pay Sublandlord, in addition to the delinquent rental due, a late fee charge for each rental payment in default ten (10) days. Said late charge shall equal five percent (5%) of each rental payment so in default.

5.4 Sublease Rent. All monetary obligations of Subtenant to Sublandlord under the terms of this Sublease (including, without limitation, Rent and Late Charges) are deemed to be rent (“**Sublease Rent**”). Sublease Rent shall be payable, without any deduction, offset, prior notice or demand (except as otherwise expressly provided herein), in lawful money of the United States to Sublandlord by ACH or wire transfer to an account that Sublandlord may designate in writing. Rent payable for any partial month during the Term shall be prorated on a daily basis based on the actual number of days in such month.

6. Reserved.

7. Furniture, Fixtures and Equipment. Subtenant shall have the right to use, during the Term, all cubicle stations, office and conference room furniture and chairs, data wiring, televisions (within the conference room only), monitors, phone systems and kitchen appliances existing within the Subleased Premises as of the Effective Date (the “**FF&E**”) at no additional cost to Subtenant. For the sake of clarity, FF&E does not include internet service. The FF&E is provided in its “AS IS, WHERE IS” condition, without representation or warranty whatsoever. If Subtenant elects upon its execution of this Sublease not to use some or all of the FF&E, Sublandlord, at its sole cost, shall promptly remove such FF&E from the Subleased Premises. Subtenant shall permit Sublandlord access to remove any such FF&E during the Term upon at least twenty-four (24) hours prior written notice and during normal business hours. From and after the Commencement Date, Subtenant shall be solely responsible, at Subtenant’s sole cost and expense, for maintenance, repair, operation, and replacement, from time to time, of the FF&E. Subtenant shall leave all FF&E in the Subleased Premises upon the expiration of the Term or the earlier termination of this Lease in substantially the same condition as received, excepting normal wear and tear.

8. Master Lease.

8.1 Sublease Subordinate to Select Provisions of Master Lease; Covenants of Subtenant and Sublandlord. Except as otherwise provided in this Sublease, this Sublease is in all respects subject and subordinate to the following terms and provisions contained in the Master Lease, which terms and provisions are incorporated as provided below and made a part hereof as if set forth at length; provided, however, that: (a) each reference to “Lease” shall be deemed a reference to this Sublease, and each reference to the “Premises” or “New Premises” shall be deemed a reference to the Subleased Premises hereunder; (b) each reference to the “Term”, “Commencement Date”, or “Expiration Date” shall be deemed reference to the Term of this Sublease or the Commencement Date or Expiration Date hereunder, as applicable; (c) each reference to “Landlord” shall be deemed a reference to Master Landlord and Sublandlord, except as expressly set forth herein or as context may require; (d) with respect to any obligation of Subtenant to be performed under this Sublease, wherever the Master Lease grants to “Tenant” a specified number of days to perform its obligations under the Master Lease, except as otherwise provided herein, Subtenant shall have three (3) fewer days to perform the obligation, including, without limitation, cure any defaults; (e) each reference to “Tenant” shall be deemed a reference to Subtenant, except as expressly set forth herein; (f) with respect to any approval or consent required to be obtained from Master Landlord under the Master Lease, such approval or consent must be obtained from both Master Landlord and Sublandlord, and the approval of Sublandlord may be withheld if Master Landlord’s approval or consent is not obtained; (g) in any case where “Tenant” is to indemnify, release or waive claims against “Landlord”, such indemnity, release or waiver shall be deemed to run from Subtenant to both Master Landlord and Sublandlord; (h) Subtenant shall pay all consent and review fees set forth in the Master Lease to both Master Landlord and Sublandlord; (i) in any case where “Tenant” is to execute and deliver certain documents or notices to “Landlord”; and (j) except as expressly provided herein, none of the Amendments shall apply to Subtenant herein, such obligation shall be deemed to run from Subtenant to both Master Landlord and Sublandlord:

(a) **Use; Compliance.** Sections 1 and 17 of the Master Lease are incorporated herein by reference. Master Landlord and Sublandlord agree, that Subtenant has no responsibility to perform any ADA compliance as of the date hereof and shall not have any responsibility therefore unless attributable to the particular use of the Premises by Subtenant.

(b) **Rules and Regulations.** Section 5 of the Master Lease and the Rules and Regulations attached to the Master Lease (as may be updated from time to time by Master Landlord) is incorporated herein by reference.

(c) **Parking.** Section 6 of the Master Lease is incorporated herein by reference as amended by the Sixth Amendment, and Subtenant shall reimburse Sublandlord for any costs or expenses incurred by Sublandlord relating to parking during the Term. Subtenant shall have all rights of Sublandlord to use of parking under the Master Lease. Subtenant’s use of parking is subject at all times to Master Landlord’s requirements relating to same.

(d) **Reserved.**

(e) **Reserved.**

(f) **Acceptance and Surrender of Premises.** Section 8 of the Master Lease is incorporated herein by reference as amended by Section 4.2 of the Twelfth Amendment, except for the phrase “the Tenant Work Letter and” in such Section 4.2. Subtenant shall have no responsibility for Sublandlord’s alterations or additions, including any obligation to restore the Premises at the end of the Term with respect to any such alterations or additions.

(g) **Alterations; Liens.** Sections 9 and 18 of the Master Lease are incorporated herein by reference.

(h) **Reserved.** Section 11 of the Master Lease is incorporated herein by reference.

(i) **Subtenant’s Insurance.** Sections 13 and 14 of the Master Lease are incorporated herein by reference and Subtenant shall obtain the insurance coverages required, with the additional requirement that all applicable policies of insurance also name Sublandlord as an additional insured thereunder.

(j) **Property Insurance.** Section 15 of the Master Lease, as amended by Section 7 of the Eleventh Amendment, is incorporated herein by reference and Subtenant shall obtain the insurance coverages required, with the additional requirement that all applicable policies of insurance also name Sublandlord as an additional insured thereunder, except that references to “Landlord” therein shall mean Master Landlord only.

(k) **Indemnification.** Section 16 of the Master Lease is incorporated herein by reference.

(l) **Assignment and Subletting.** Section 19 of the Master Lease is incorporated herein by reference. Subtenant shall not assign or sublet the Subleased Premises without the prior written consent of (i) Master Landlord, which may be granted or withheld as set forth in Section 19 of the Master Lease, and (ii) Sublandlord, which consent shall not be unreasonably withheld. All fees and expenses payable to Master Landlord or Sublandlord in connection with any such transfer shall be paid by Subtenant in each instance.

(m) **Subordination and Mortgages.** Section 20 of the Master Lease is incorporated herein by reference, except that references to “Landlord” therein shall mean Master Landlord only.

(n) **Entry to Subleased Premises.** Section 21 of the Master Lease is incorporated herein by reference.

(o) **Bankruptcy and Default; Abandonment.** Sections 22 and 23 of the Master Lease, as amended by Section 8 of the Eleventh Amendment, are incorporated herein by reference.

(p) **Destruction.** Section 24 of the Master Lease is incorporated herein by reference, except that references to “Landlord” therein shall be deemed references to Master

Landlord only. Subtenant shall have rights to rental abatements or to terminate this Sublease only under the same circumstances and to the extent that Sublandlord, as "Tenant" under the Master Lease, is entitled to such rights under the Master Lease, and may cause Sublandlord to exercise such right at the same times and in the same manner as Sublandlord may do so under such section.

(q) Condemnation. Section 25 of the Master Lease is incorporated herein by reference, except that references to "Landlord" therein shall be deemed references to Master Landlord only. Subtenant shall have rights to rental abatements or to terminate this Sublease only under the same circumstances and to the extent that Sublandlord, as "Tenant" under the Master Lease, is entitled to such rights under the Master Lease, and may cause Sublandlord to exercise such right at the same times and in the same manner as Sublandlord may do so under such section.

(r) Sale or Conveyance by Master Landlord; Attornment. Sections 26 and 27 of the Master Lease are incorporated herein by reference, except that references to "Landlord" therein shall mean Master Landlord only.

(s) Holding Over. Any holding over by Subtenant after expiration or other termination of the Term of this Sublease, the same shall not constitute a renewal or extension of this Sublease or give Subtenant any rights in or to the Subleased Premises except as expressly provided in this Sublease. In the event that Subtenant does not surrender the Subleased Premises by the expiration or earlier termination of the Term of this Sublease, Subtenant shall indemnify, defend, protect and hold harmless Sublandlord from and against all loss and liability resulting from Subtenant's delay in surrendering the Subleased Premises and pay Sublandlord holdover rent in an amount equal to one hundred fifty percent (150%) of the monthly Rent payable during the last month of the Term of the Sublease immediately prior to such holding over.

(t) Estoppel and Financial Statements. Sections 29 and 42 of the Master Lease are incorporated herein by reference.

(u) Construction Changes. Section 30 of the Master Lease is incorporated herein by reference, except that references to "Landlord" therein shall mean Master Landlord only.

(v) Right of Landlords to Perform. Section 31 of the Master Lease is incorporated herein by reference.

(w) Attorney's Fees. Section 32 of the Master Lease is incorporated herein by reference.

(x) Default by Sublandlord. Section 36 of the Master Lease is incorporated herein by reference, except that all references to "day" or "days" shall be deemed a reference to business days.

(y) **Signs.** Section 41 of the Master Lease is incorporated herein by reference, except that all signage shall be installed at Subtenant's sole cost (unless Master Landlord agrees otherwise), and Subtenant shall be responsible to remove all signage at Subtenant's sole cost at the expiration or earlier termination of the Term.

(z) **Hazardous Materials.** Section 43 of the Master Lease is incorporated herein by reference. Sublandlord represents and warrants to Subtenant that there are no Hazardous Materials on the Subleased Premises on the date hereof in violation of the Master Lease.

(aa) **Substitution of Other Premises.** Section 6 of the Eleventh Amendment is incorporated herein by reference; provided that Sublandlord agrees to exercise such rights to substitute the Subleased Premises only to the extent that the Master Landlord substitutes the Master Premises under the Master Lease.

(ab) **Certified Access Specialist Disclosure.** Section 8 of the Twelfth Amendment is incorporated herein by reference.

(ac) **Miscellaneous.** Sections 33, 34, 35, 37, 39 and 44 of the Master Lease are incorporated herein by reference.

Except as set forth above, the provisions of the Master Lease and the Amendments thereto are not incorporated into this Sublease. Subtenant shall have no right to any extension, renewal or expansion rights (including rights of first offer) of Sublandlord under the Master Lease. Neither party shall take any action or do or permit to be done anything which: (i) is or may be prohibited under the Master Lease; (ii) might result in a violation of or default under any of the terms, covenants, conditions or provisions of the Master Lease or any other instrument to which this Sublease is subordinate (and Sublandlord shall comply with all of the terms of the Master Lease to the extent Sublandlord remains obligated thereunder or to the extent that Subtenant cannot directly comply with such obligations (provided Subtenant is not in default hereunder)); or (iii) would result in any additional cost or other liability to Sublandlord or Subtenant respectively.

Sublandlord shall neither do nor permit anything to be done which would cause the Master Lease to be terminated or forfeited by reason of any right of termination or forfeiture reserved or vested in "Landlord" under the Master Lease. Sublandlord will not amend, alter or modify any of the provisions of the Master Lease which may result in an increase in Subtenant's obligations or a decrease in Subtenant's rights under this Sublease, or surrender or terminate the Master Lease without, in each instance, Subtenant's consent in Subtenant's sole and absolute discretion.

8.2 Sublandlord Not Responsible for Representations and Covenants of Master Landlord under Master Lease.

Sublandlord shall not be deemed to have made any representation made by Master Landlord in any of the provisions of the Master Lease. Moreover, during the Term of this Sublease, Subtenant acknowledges and agrees that Sublandlord shall not be responsible for Master Landlord covenants and obligations under the Master Lease, subject to

Sublandlord's obligations which accrued prior to the date of this Sublease and as otherwise expressly set forth herein. Notwithstanding anything to the contrary in this Sublease and without limiting the generality of the foregoing two (2) sentences, Sublandlord shall not be obligated (a) to provide any of the services or utilities that Master Landlord has agreed in the Master Lease to provide, (b) to make any of the repairs or restorations that Master Landlord has agreed in the Master Lease to make, (c) to comply with any laws or requirements of public authorities with which Master Landlord has agreed in the Master Lease to comply, (d) to comply with any insurance provisions of the Master Lease with which Master Landlord has agreed in the Master Lease to comply, or (e) to take any action with respect to the operation, administration or control of the Complex or any of the Common Areas that Master Landlord has agreed in the Master Lease to take, and Sublandlord shall have no liability to Subtenant on account of any failure of Master Landlord to do so, or on account of any failure by Master Landlord to observe or perform any of the terms, covenants or conditions of the Master Lease required to be observed or performed by Master Landlord, provided that in the event that Subtenant determines in good faith that Master Landlord has not performed its obligations under the Master Lease, then upon receipt of written notice from Subtenant and for a period of time not to exceed thirty (30) days, Sublandlord shall be obligated to use commercially reasonable efforts to cause such breaches, defaults or failures of Master Landlord under the Master Lease to be resolved or otherwise settled; provided, further however: (1) Sublandlord shall not have any obligation to incur out-of-pocket expenses in connection with its covenants under this Section 8.2 and (2) Sublandlord shall not have any obligation to commence litigation or other dispute resolution proceedings to cause Master Landlord to comply with the Master Lease. If Sublandlord shall be entitled to any abatement of rent by reason of any failure on the part of Master Landlord to perform its obligations or to provide services to the Subleased Premises, Subtenant shall be entitled to an abatement of rent payable to Sublandlord to the extent such abatement is actually made. As long as this Sublease is in full force and effect, Subtenant shall be entitled, with respect to the Subleased Premises, to the benefit of Master Landlord's obligations and agreements under the Master Lease to furnish utilities and other services to the Subleased Premises and to repair and maintain the common areas, roof, building systems and all other obligations of Master Landlord under the Master Lease.

9. Indemnity. Subtenant shall indemnify Sublandlord, its officers, directors, shareholders, agents and employees (collectively "**Sublandlord's Indemnified Parties**") against, and hold Sublandlord, and Sublandlord's Indemnified Parties harmless from, any and all demands, claims, causes of action, fines, penalties, damages (excluding all consequential damages, except for any consequential damages incurred by Master Landlord which may be asserted against Sublandlord), losses, liabilities, judgments, and expenses (including, without limitation, reasonable attorneys' fees and court costs) incurred in connection with, or arising from: (a) the use or occupancy of the Subleased Premises by Subtenant or any persons claiming under Subtenant; (b) any activity, work, or thing done, permitted or suffered by Subtenant in or about the Subleased Premises; (c) any acts, omissions, or negligence of Subtenant or any person claiming under Subtenant, or the contractors, agents, employees, invitees, or visitors of Subtenant or any such person as it relates to this Sublease or the Subleased Premises; (d) any breach, violation, or nonperformance by Subtenant or any person claiming under Subtenant or the employees, agents, contractors, invitees, or visitors of Subtenant or any such person of any

term, covenant, or provision of this Sublease or any law, ordinance, or governmental requirement of any kind for which the Subtenant is obligated to comply under this Sublease; (e) any injury or damage to the person, property or business of Sublandlord, its employees, agents, contractors, invitees, visitors, or any other person entering upon the Subleased Premises; and (f) Subtenant's failure to comply with the surrender provisions of this Sublease at the expiration or earlier termination of the Term, except to the extent any of the foregoing in clauses (a) through (f) above results from the actions or omissions of Sublandlord or any Sublandlord's Indemnified Parties. If any action or proceeding is brought against Sublandlord, or any Sublandlord's Indemnified Parties by reason of any such claim, Subtenant, upon notice from Sublandlord, shall defend the claim at Subtenant's expense with counsel reasonably satisfactory to Sublandlord.

Notwithstanding anything contained in this Sublease to the contrary, Subtenant shall not be responsible for (i) any default of Sublandlord, its agents, employees or contractors under the Master Lease unless attributable to any act or omission of or any default under this Sublease or the Master Lease by Subtenant, its agents, employees, contractors, invitees or anyone claiming by, through or under Subtenant (collectively, the "**Subtenant Parties**"), (ii) conditions at the Subleased Premises, for which the obligation to maintain and repair resides with Master Landlord under the Master Lease and/or which existed as of the Commencement Date, (iii) any violations of law resulting from such existing conditions described by (ii) above, (iv) the payment of any charges, fees and other costs imposed by Master Landlord on Sublandlord as a result of Sublandlord's default under the Master Lease (unless due to any act or omission of or any default under this Sublease or the Master Lease by any Subtenant Party), and (v) making payment of any sums either to Master Landlord or Sublandlord in satisfaction of any charges accruing under the Master Lease (whether denominated as rent, rental, additional rent or otherwise) for any period prior or subsequent to the Term of this Sublease and any holdover.

10. Sublandlord's Right to Cure Subtenant Default. Upon a default by Subtenant, Sublandlord may, without waiving or releasing any obligation of Subtenant hereunder and without waiving any rights or remedies at law or otherwise, make such payment or perform such act. All reasonable sums so paid or incurred by Sublandlord, together with interest thereon, from the date such sums were paid or incurred, at the annual rate equal to 10% per annum or the highest rate permitted by law, whichever is less, shall be payable to Sublandlord on demand as additional Sublease Rent.

11. Notices. Any notice, request, demand, consent, approval, or other communication required or permitted under this Sublease shall be in writing. All notices shall be addressed to the addresses set forth in the introductory paragraph of this Sublease, or such other address as the parties may notify each other from time to time, and shall be delivered via the methods set forth in, and shall be deemed given and/or received pursuant to the provisions of, Section 34 of the Master Lease. The parties agree that courtesy copies of any notices shall be sent via email to the email address(es) provided for such party in the introductory paragraph of this Sublease.

12. Time Is of the Essence. Time is of the essence with respect to the performance of every provision of this Sublease in which time of performance is a factor.

13. Attorneys' Fees. If any action or proceeding is instituted by Sublandlord or Subtenant to construe, interpret or enforce the provisions of this Sublease, the prevailing party shall be entitled to the reimbursement of its reasonable attorneys' fees and costs incurred in connection with such proceeding by the non-prevailing party.

14. No Brokers. Sublandlord and Subtenant mutually acknowledge and agree that neither Sublandlord and Subtenant have had any dealings with any real estate brokers or agents in connection with the negotiation of this Sublease Agreement which has resulted in any obligation to pay a leasing commission. Subtenant shall not be responsible for any Broker Fees for which Master Landlord or Sublandlord have responsibility under the Master Lease.

15. Counterparts. This Sublease may be executed in duplicate counterparts, each of which shall be deemed an original hereof. Electronically transmitted signatures shall be deemed originals.

16. Entire Agreement/Modification. This Sublease, including the Exhibits, contains all of the agreements of the parties hereto with respect to any matter covered or mentioned in this Sublease, and no prior agreement or understanding or letter or proposal pertaining to any such matters shall be effective for any purpose. This Sublease may only be modified by a writing signed by Sublandlord and Subtenant. No provisions of this Sublease may be amended or added to, whether by conduct, oral or written communication, or otherwise, except by an agreement in writing signed by the parties hereto or their respective successors-in-interest.

17. Interpretation. The title and section headings are not a part of this Sublease and shall have no effect upon the construction or interpretation of any part of this Sublease. Unless stated otherwise, references to sections and subsections are to those in this Sublease. This Sublease shall be strictly construed neither against Sublandlord nor Subtenant.

18. Authority. Subtenant hereby represents and warrants that Subtenant is a duly formed and existing entity qualified to do business in the State of California and that Subtenant has full right and authority to execute and deliver this Sublease and that each person executing this Sublease on behalf of Subtenant is authorized to do so. Sublandlord hereby represents and warrants that Sublandlord has full right and authority to execute and deliver this Sublease and that each person executing this Sublease on behalf of Sublandlord is authorized to do so.

19. OFAC. Subtenant, and all beneficial owners of Subtenant, are currently (a) in compliance with and shall at all times during the Term remain in compliance with the regulations of the Office of Foreign Assets Control ("**OFAC**") of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the "**OFAC Rules**"), (b) not listed on, and shall not during the term of this Sublease be listed on, the Specially Designated Nationals and Blocked Persons List maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing statute, executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

20. Warranties. Sublandlord represents and warrants to Subtenant that (i) a true, correct and complete copy of the Master Lease (excluding redacted terms not relevant to Subtenant) is attached hereto as Exhibit A, (ii) the Master Lease is in full force and effect, (iii) to the best of Sublandlord's knowledge, Sublandlord is not in default under the Master Lease, (iv) Sublandlord has not received any notice of default under the Master Lease, and (v) to the best of Sublandlord's knowledge, the Master Landlord is not in default under the Master Lease.

21. Consequential Damages. Notwithstanding any provision of this Sublease to the contrary, in no event shall Sublandlord or Subtenant be liable hereunder or under the Master Lease for any consequential, special or indirect damages or damages in the nature of lost profits; provided, however, that this waiver of consequential damages shall not apply with respect to liabilities of Subtenant relating to either (a) a holdover by Subtenant, or (b) any violation of environmental requirements of the Sublease or the Master Lease, or any environmental liabilities or violations of environmental laws for which Subtenant is otherwise liable.

[signature page follows]

IN WITNESS WHEREOF, Sublandlord and Subtenant have executed this Sublease as of the date first above written.

SUBLANDLORD:

SUBTENANT:

SONIM TECHNOLOGIES, INC.

RESONANT, INC.

By: /s/ Robert Tirva
Name: Robert Tirva
Title: President, CFO and COO

By: /s/ Martin S. McDermut
Name: Martin S. McDermut
Title: Chief Financial Officer

[Signature Page to Sublease]

EXHIBITS

The following Exhibits to the Sublease Agreement have been omitted from this filing:

Exhibit A -- Master Lease Agreement

Exhibit B -- Subleased Premises

Exhibits

**Certification of Principal Executive Officer Pursuant To
Exchange Act Rules 13a-14(a) and 15d-14(a),
As Adopted Pursuant To
Section 302 of Sarbanes-Oxley Act of 2002**

I, George B. Holmes, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Resonant Inc.;
2. Based on my knowledge, this 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 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 report;
4. The registrant's other certifying officer(s) 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 (the registrant's fourth fiscal quarter in the case of an annual report) 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(s) 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.

Date: November 10, 2021

/s/ George B. Holmes

George B. Holmes
Chief Executive Officer
(Principal Executive Officer)

**Certification of Principal Financial Officer Pursuant To
Exchange Act Rules 13a-14(a) and 15d-14(a),
As Adopted Pursuant To
Section 302 of Sarbanes-Oxley Act of 2002**

I, Martin S. McDermut, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Resonant Inc.;
2. Based on my knowledge, this 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 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 report;
4. The registrant's other certifying officer(s) 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 (the registrant's fourth fiscal quarter in the case of an annual report) 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(s) 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.

Date: November 10, 2021

/s/ Martin S. McDermut

Martin S. McDermut
Chief Financial Officer
(Principal Financial Officer)

**Certifications of Principal Executive Officer and Principal Financial Officer
Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant To
Section 906 of the Sarbanes-Oxley Act of 2002**

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. 1350), George B. Holmes, Chief Executive Officer (Principal Executive Officer) and Martin S. McDermut, Chief Financial Officer (Principal Financial Officer) of Resonant Inc. (the "Company"), hereby certifies that, to the best of his knowledge:

1. Our Quarterly Report on Form 10-Q for the quarter ended September 30, 2021, to which this Certification is attached as Exhibit 32.1 (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.

Date: November 10, 2021

/s/ George B. Holmes

George B. Holmes
Chief Executive Officer
(Principal Executive Officer)

/s/ Martin S. McDermut

Martin S. McDermut
Chief Financial Officer
(Principal Financial Officer)