Underwriting

3,200,000 Shares of Common Stock



Atomera Incorporated is offering 3,200,000 shares of common stock on a firm commitment basis. This is an initial public offering of our common stock and there is presently no public market for our common stock. The initial public offering price is \$7.50 per share. The shares offered hereby have been approved for listing upon the Nasdaq Capital Market under the symbol "ATMR."

We have agreed to pay the underwriter a selling discount of \$1.992 million, or 8.3%, of the gross proceeds of this offering. We have also agreed to issue to the underwriter warrants to purchase shares of our common stock in an amount up to 10% of the shares of common stock sold in the public offering, with an exercise price equal to 125% of the public offering price.

We are an "emerging growth company" under the federal securities laws and will have the option to use reduced public company reporting requirements. Please see "Risk Factors" beginning on page 6 to read about certain factors you should consider before buying our securities.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

	Discounts and					
	Price to Public	C	Commissions (1)		Proceeds to Atomera	
Per Share	\$ 7.50	\$	0.6225	\$	6.8775	
Total Offering	\$ 24,000,000	\$	1,992,000	\$	22,008,000	

⁽¹⁾ Does not include our obligation to reimburse the underwriter for its expenses in an amount not to exceed \$170,000. See "Underwriting" for a description of the compensation payable to the underwriter.

The underwriter may also purchase an additional 480,000 shares of our common stock amounting to 15% of the number of shares offered to the public, within 45 days of the date of this prospectus, to cover over-allotments, if any, on the same terms set forth above.

The underwriter expects to deliver the shares on or about August 10, 2016.

National Securities Corporation

The date of this prospectus is August 5, 2016

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Neither we nor the underwriter has authorized anyone to provide any information or make any representations other than those contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. Neither we nor the underwriter takes responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of the common stock.

Through and including August 30, 2016 (the 25 th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

For investors outside of the United States: Neither we nor the underwriter has done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States are required to inform themselves about, and to observe any restrictions relating to, this offering and the distribution of this prospectus outside of the United States.

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PROSPECTUS SUMMARY

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information in this prospectus, including our financial statements and related notes, before investing in our common stock. If any of the following risks materialize, our business, financial condition, operating results and prospects could be materially and adversely affected. In that event, the price of our common stock could decline, and you could lose part or all of your investment.

On December 11, 2015, we effected a 1-for-15 reverse stock split of our common stock. All historical share amounts and share price information presented in this prospectus have been proportionally adjusted to reflect the impact of this reverse stock split.

OUR COMPANY

Overview

We are engaged in the business of developing, commercializing and licensing proprietary processes and technologies for the \$350+ billion semiconductor industry. Our lead technology, named Mears Silicon TechnologyTM, or MST *, is a thin film of reengineered silicon, typically 100 to 300 angstroms (or approximately 20 to 60 silicon atomic unit cells) thick. MST * can be applied as a transistor channel enhancement to CMOS-type transistors, the most widely used transistor type in the semiconductor industry. MST * is our proprietary and patent-protected performance enhancement technology that we believe addresses a number of key engineering challenges facing the semiconductor industry. We believe that by incorporating MST *, transistors can be smaller, with increased speed, reliability and energy efficiency. In addition, since MST * is an additive and low cost technology, it can be deployed on an industrial scale, with machines commonly used in semiconductor manufacturing. We believe that MST * can be widely incorporated into the most common types of semiconductor products, including analog, logic, optical and memory integrated circuits.

We do not intend to design or manufacture integrated circuits directly. Instead, we intend to develop and license technologies and processes that will offer the designers and manufacturers of integrated circuits a low-cost solution to the industry need for greater performance and lower power consumption.

In the mid-1980s, our founder, Dr. Robert Mears, was part of a team that re-engineered silica optical fiber to invent the erbium-doped fiber amplifier, or EDFA, a technology that increased the bandwidth of optical fiber more than 1,000 times. The invention of EDFA helped to revolutionize the development of broadband and to this day remains a key technology in the optical communications industry. Dr. Mears anticipated scaling problems for silicon semiconductors and founded Atomera Incorporated in order to address those problems for the semiconductor industry.

Over the last ten years, we have undertaken significant laboratory testing and engaged with a range of semiconductor industry and academic technology leaders to evaluate MST * performance on test chips in industrial fabrication environments. We believe this testing has demonstrated that MST * offers performance benefits beyond and in most cases additive to those provided by already successful semiconductor performance enhancement technologies, such as dual stress liners and source/drain channel stressors, such as eSiGe/eSiC, and can be implemented without significant additional cost or significant modification to the current semiconductor fabrication process.

We are now in the process of transitioning MST *technology toward commercial adoption. We are currently in the early stages of process qualification with leading integrated device manufacturers, or IDMs, and foundries. The IDMs and foundries are our intended customers and by way of the process qualification stage they test and evaluate the potential incorporation of our MST *technology into the integrated circuits they produce. We are also partnering with manufacturers of semiconductor fabrication equipment and developers of modeling tools. These parties are part of a semiconductor infrastructure supporting the industry with manufacturing capital equipment for transistor production and transistor process modeling software, and we are in discussions with certain equipment manufacturers and tool developers concerning their incorporation of our MST *technology into the equipment and tools they offer to the industry. Assuming the timely and successful completion of process and subsequent product qualification by customers and partners, we expect MST * enabled product revenue in 2017.

Private Placement of Convertible Promissory Notes

On March 17, 2015, we completed the private placement of \$14.75 million in senior secured convertible promissory notes, and on April 1, 2016 we completed the private placement of an additional \$5.96 million in senior secured convertible notes on the same terms as the promissory notes placed in March 2015. We refer to these promissory notes in this prospectus as our "convertible notes." The convertible notes bear simple interest

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at 10% per year. All interest and principal under the notes must be paid or converted into shares of our common stock on or before May 31, 2017. Pursuant to the terms of our convertible notes, all principal and accrued interest under the notes will automatically convert into shares of our common stock concurrent with the completion of this offering, at the conversion price of 50% of the initial public offering price, provided, however, in no event shall the conversion price be greater than \$7.362 nor less than \$3.681 per share. Assuming that this offering was completed on March 31, 2016 at a price of \$7.50 per share, and based on interest accrued through such date in the amount of \$2,037,377, the convertible notes would have been converted into 6,065,549 shares of our common stock.

Risks Related to Our Business

Our business is subject to numerous risks, the most significant of which are highlighted in the section entitled "Risk Factors" immediately following this prospectus summary. Some of these risks include:

- since we have a limited operating history, it is difficult for potential investors to evaluate our business;
- we are a development stage company, have not yet commenced revenue producing operations and may never achieve or maintain profitability;
- while testing of MST *-based test chips have been successful to date, qualification of a MST *-enabled integrated circuit product has not yet been demonstrated;
- the report of our independent registered public accounting firm for the year ended December 31, 2015 states that due to our recurring and expected losses and cash on-hand there is substantial doubt about our ability to continue as a going concern;
- we anticipate needing additional financing in addition to the proceeds of this offering to fully execute
 our business plan and fund operations, which additional financing may not be available on reasonable
 terms or at all;
- our proprietary technologies and processes are not yet verified on a commercial scale;
- our proprietary rights may be difficult to enforce, which could enable others to copy or use aspects of our technologies without compensating us, thereby eroding our competitive advantages and harming our business;
- we may be subject to intellectual property rights claims by third parties, which are extremely costly to
 defend, could require us to pay significant damages and could limit our ability to use certain
 technologies; and
- our success will require timely expansion of our operations and if we are unable to manage future
 expansion effectively, our business, operations and financial condition may suffer significantly,
 resulting in decreased productivity.

For further discussion of these and other risks that you should consider before making an investment in our common stock, see the section titled "Risk Factors" immediately following this prospectus summary.

Corporate Information

Atomera Incorporated was formed as a limited liability company in Delaware on April 26, 2001 under the name Nanovis LLC, which we changed to R.J. Mears, LLC on July 10, 2003. On March 14, 2007, we converted to a Delaware corporation under the name Mears Technologies, Inc. On January 12, 2016, we changed our name to Atomera Incorporated. Our offices are located at 750 University Avenue, Suite 280, Los Gatos, California and our telephone number is (408) 442-5248. Our website is *www.atomera.com*. Information contained in, or accessible through, our website does not constitute part of this prospectus and inclusions of our website address in this prospectus are inactive textual references only.

Unless otherwise indicated, the terms "Atomera," "Company," "we," "us," and "our" refer to Atomera Incorporated.

"Atomera," "MST" and "Mears" and Atomera's logo are our trademarks. This prospectus contains additional trade names, trademarks and service marks of ours and of other companies. We do not intend our use or display of other companies' trade names, trademarks, or service marks to imply a relationship with these other companies, or endorsement or sponsorship of us by these other companies. Other trademarks appearing in this prospectus are the property of their respective holders.

Emerging Growth Company

The Jumpstart Our Business Startups Act, or the JOBS Act, was enacted in April 2012 with the intention of encouraging capital formation in the United States and reducing the regulatory burden on newly public companies that qualify as "emerging growth companies." We are an emerging growth company within the meaning of the JOBS Act. As an emerging growth company, we may take advantage of certain exemptions from various public reporting requirements, including:

- the requirement that our internal control over financial reporting be attested to by our independent registered public accounting firm pursuant to Section 404 of the Sarbanes-Oxley Act of 2002;
- certain requirements related to the disclosure of executive compensation in this prospectus and in our periodic reports and proxy statements;
- the requirement that we hold a nonbinding advisory vote on executive compensation and any golden parachute payments; and
- the ability to delay compliance with new or revised financial accounting standards until private companies are required to comply with the new or revised financial accounting standard.

We may take advantage of the exemptions under the JOBS Act discussed above until we are no longer an emerging growth company. We will remain an emerging growth company until the earliest to occur of (1) the last day of the fiscal year in which we have \$1.0 billion or more in annual revenue; (2) the date we qualify as a "large accelerated filer," with at least \$700 million of equity securities held by non-affiliates; (3) the date on which we have issued, in any three-year period, more than \$1.0 billion in non-convertible debt securities; or (4) the last day of the fiscal year ending after the fifth anniversary of our initial public offering.

We may choose to take advantage of some, but not all, of the available benefits under the JOBS Act. We are choosing to irrevocably "opt out" of the extended transition periods available under the JOBS Act for complying with new or revised accounting standards, but we intend to take advantage of the other exemptions discussed above. Accordingly, the information contained herein and in our subsequent filing with the Securities and Exchange Commission may be different than the information you receive from other public companies in which you hold stock.

For certain risks related to our status as an emerging growth company, see the disclosure elsewhere in this prospectus under "Risk Factors — Risks Related to this Offering and Owning Our Common Stock — We are an 'emerging growth company' under the JOBS Act of 2012 and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our common stock less attractive to investors."

THE OFFERING

Common stock offered by us 3,200,000 shares

Common stock to be outstanding after this

offering 11,323,226 shares

Over-allotment option offered

by us 480,000 shares

Proposed Nasdaq symbol "ATMR"

Development engineering, research, business development and general

Use of proceeds working capital

The number of shares of our common stock to be outstanding after this offering is based on 1,617,313 shares of common stock outstanding as of the date of this prospectus, plus 440,364 shares of common stock to be issued as bonuses to certain officers and directors upon the completion of this offering and 6,065,549 shares common stock issuable upon conversion of our convertible notes (including accrued interest as of March 31, 2016), and excludes:

- 538,014 shares of our common stock issuable upon exercise of outstanding options granted pursuant to our 2007 Stock Incentive Plan;
- 713,795 shares of our common stock underlying options to be granted to our chief executive officer and chief financial officer upon the completion of this offering;
- 398,965 shares of our common stock issuable upon exercise of outstanding warrants;
- up to 480,000 shares issuable pursuant to the underwriter's over-allotment option;
- · shares of our common stock reserved for future grants pursuant to our 2007 Stock Incentive Plan; and
- the shares of our common stock issuable upon exercise of the underwriter's warrant.

Except as otherwise indicated, all information in this prospectus assumes:

- the automatic conversion of \$20.71 million principal amount of our convertible notes, and \$2,037,337 of accrued interest thereon as of March 31, 2016, into an aggregate of 6,065,549 shares of common stock effective upon the completion of this offering;
- no exercise of outstanding warrants or options subsequent to March 31, 2016; and
- no exercise of the underwriter's over-allotment option.

Summary Financial Data

The following tables summarize our financial data. You should read this summary financial data together with the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes that are included elsewhere in this prospectus. The financial information as of and for the fiscal years ended December 31, 2015 and 2014 are derived from the audited financial statements that are included elsewhere in this prospectus. The financial information as of March 31, 2016 and for the three months ended March 31, 2016 and 2015 is derived from our unaudited financial statements that are included elsewhere in this prospectus. The unaudited financial statements were prepared on a basis consistent with our audited financial statements and include, in management's opinion, all adjustments, consisting only of normal recurring adjustments that we consider necessary for a fair presentation of the financial information set forth in those statements. Our historical results are not necessarily indicative of the results that may be expected in the future, and our interim results are not necessarily indicative of the results to be expected for the full year or any other period.

		Year Ended	Dec	ember 31,		Three Mor Mare		
	2015 2014 2016		2015 2014		2016	6 2015		
						(unaudited)		(unaudited)
Revenues	\$		\$		\$		\$	
Net income (loss)	\$	(9,512,141)	\$	(3,817,734)	\$	(2,488,187)	\$	(2,460,749)
Net income (loss) per common share	\$	(7.55)	\$	(3.10)	\$	(1.54)	\$	(2.00)

	March 31, 2016					
	Actual	Pro Forma ⁽¹⁾	Pro Forma as Adjusted ⁽²⁾			
	(unaudited)	(unaudited)	(unaudited)			
Balance Sheet Data:						
Cash and cash equivalents	\$ 1,501,384	\$ 6,968,039	\$ 28,471,481			
Working capital (deficit)	\$ (15,604,023)	\$ 6,519,678	\$ 28,023,120			
Total assets	\$ 1,799,805	\$ 7,266,460	\$ 28,589,460			
Convertible notes	\$ 16,657,046	\$	\$			
Total stockholders' (deficit) equity	\$ (15,364,611)	\$ 6,759,090	\$ 28,082,090			

⁽¹⁾ The pro forma column reflects our issuance of additional convertible notes in the aggregate principal amount of \$5.96 million on April 1, 2016 and our receipt of net cash proceeds of \$5.47 million, and the automatic conversion of all \$20.71 million principal amount of our convertible notes and \$2.04 million of accrued interest thereon as of March 31, 2016, into an aggregate of 6,065,549 shares of common stock and reclassified into common stock and additional paid in capital.

⁽²⁾ The pro forma as adjusted column reflects all adjustments included in the pro forma column and gives effect to the sale by us of 3,200,000 shares of common stock offered by this prospectus at the initial public offering price of \$7.50 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information in this prospectus, including our consolidated financial statements and related notes, before investing in our common stock. If any of the following risks materialize, our business, financial condition, operating results and prospects could be materially and adversely affected. In that event, the price of our common stock could decline, and you could lose part or all of your investment.

Risks Relating to Our Business

Since we have not commenced revenue-producing operations, it is difficult for potential investors to evaluate our business. We have not commenced revenue-producing operations. To date, our operations have consisted of technology research and development, testing, and joint development work with leading potential customers and strategic partners. Our limited operating history makes it difficult for potential investors to evaluate our technology or prospective operations. As a development stage company, we are subject to all the risks inherent in the initial organization, financing, expenditures, complications and delays in a new business. Investors should evaluate an investment in us in light of the uncertainties encountered by developing companies in a competitive environment. There can be no assurance that our efforts will be successful or that we will ultimately be able to attain profitability.

We have a history of significant operating losses and anticipate continued operating losses for at least the near term. For the three months ended March 31, 2016 and the years ended December 31, 2015 and 2014, we have incurred net losses of \$2,488,187, \$9,512,141 and \$3,817,734, respectively, and our operations have used \$1,650,576, \$4,387,148 and \$2,593,360 of cash, respectively. As of March 31, 2016, December 31, 2015 and December 31, 2014, we had accumulated deficits of \$85,874,810, \$83,386,623 and \$73,874,482, respectively. We expect to continue to experience negative cash flows from operations until such time as we are able to secure one or more IDMs or fabless semiconductor manufacturers to qualify and license MST *and start full-scale industrial production of a device that incorporates our MST *technology and otherwise generate revenue, and control expenses, at levels that will allow us to operate on a cash flow positive basis. While management will endeavor to generate positive cash flows from the commercialization of our MST *technology, there can be no assurance that we will be successful in generating positive cash flows from operations. If we are unable to generate positive cash flow within a reasonable period of time, we may be unable to further pursue our business plan or continue operations, in which case you may lose your entire investment.

We may need additional financing to execute our business plan and fund operations, which additional financing may not be available on reasonable terms or at all. As of March 31, 2016, we had total assets of \$1,799,805 and a working capital deficit of \$15,604,022. On April 1, 2016, we received net proceeds of \$5,465,970 from our sale of additional convertible notes. We believe that we require a minimum of \$15 million of additional capital in order to fund our current business plan over, at least, the 12 months following the date of this prospectus, including the securing of one or more foundries, IDMs or fabless semiconductor manufacturers to qualify and license our MST * and start full-scale industrial production of a device that incorporates our MST * technology. We have undertaken this initial public offering of our common shares to acquire the necessary capital and through this offering we expect to receive net proceeds of approximately \$21.3 million in addition to the conversion of approximately \$22.74 million of debt to equity. However, we may require additional capital, the receipt of which there can be no assurance. In the event we require additional capital, we will endeavor to seek additional funds through various financing sources, including the private sale of our equity and debt securities, licensing fees for our technology and joint ventures with industry partners. In addition, we will consider alternatives to our current business plan that may enable to us to achieve revenue producing operations and meaningful commercial success with a smaller amount of capital. However, there can be no guarantees that such funds will be available on commercially reasonable terms, if at all. If such financing is not available on satisfactory terms, we may be unable to further pursue our business plan and we may be unable to continue operations, in which case you may lose your entire investment.

The report of our independent registered public accounting firm for the year ended December 31, 2015 states that due to our recurring and expected losses and cash on-hand there is substantial doubt about our ability to continue as a going concern.

While the preliminary testing of our MST *technology has been successful to-date, there can be no assurance that we will be able to replicate the process, along with all of the expected economic advantages, on a large commercial scale. As of the date of this prospectus, we have done technology simulation work on our MST *with universities and potential customers at nodes from 180 nanometers (nm) to 7nm. Together with leading industry research facilities and in customer manufacturing facilities, we have also built and tested test element group transistors using MST *consistently demonstrated increased speed, reliability and energy efficiency over test element group transistors without MST *while we believe that our development and testing to date has proven the effectiveness and benefits of our MST *technology, a MST *e-enabled product has not been qualified and manufactured on a commercial scale. Our plan

of operations for the 12 months following this offering will focus on securing one or more foundries, IDMs or fabless semiconductor manufacturers as a licensee-customer and start full-scale industrial production of a device that incorporates MST * technology. However, there can be no assurance that we will be able to secure the adoption of our technology by a potential customer or, if we are successful in doing so, that a MST * enabled product manufactured on a commercial scale will provide the expected performance enhancements at the projected cost

The long-term success of our business is dependent on a royalty-based business model, which is inherently risky. The long-term success of our business is dependent on future royalties paid to us by licensee-customers. Royalty payments under our licenses may be based, among other things, upon the number of silicon substrate, or wafers, onto which our MST *is deposited or a percentage of the net sales of a MST *- enabled product or a fixed quarterly amount. We will depend upon our ability to structure, negotiate and enforce agreements for the determination and payment of royalties, as well as upon our licensees' compliance with their agreements. We face risks inherent in a royalty-based business model, many of which are outside of our control, such as the following:

- the rate of adoption and incorporation of our technology by semiconductor designers and manufacturers and the manufacturers of semiconductor fabrication equipment;
- the length of the design cycle and the ability to successfully integrate our MST * technology into integrated circuits;
- the demand for products incorporating semiconductors that use our licensed technology;
- the cyclicality of supply and demand for products using our licensed technology;
- the impact of economic downturns; and
- the timing of receipt of royalty reports may not meet our revenue recognition criteria resulting in fluctuation in our results of operations.

Our revenues may be concentrated in a few customers and if we lose any of these customers, or these customers do not pay us, our revenues could be materially adversely affected. If we are able to secure the adoption of our MST *by one or more foundries, IDMs or fabless semiconductor manufacturers and commence revenue producing operations, we expect that for at least the first few years we will earn a significant amount of our revenues from a limited number of customers. Due to the concentration and ongoing consolidation within the semiconductor industry, we may also find that over the longer term our revenues are dependent on a relatively few customers. If we lose any of these customers, or these customers do not pay us, our revenues could be materially adversely affected.

It may be difficult for us to verify royalty amounts owed to us under our licensing agreements, and this may cause us to lose revenues. We will endeavor to provide that the terms of our license agreements require our licensees to document their use of our technology and report related data to us on a regular basis. We will endeavor to provide that the terms of our license agreements give us the right to audit books and records of our licensees to verify this information, however audits can be expensive, time consuming, and may not be cost justified based on our understanding of our licensees' businesses. We will endeavor to audit certain licensees to review the accuracy of the information contained in their royalty reports in an effort to decrease the likelihood that we will not receive the royalty revenues to which we are entitled under the terms of our license agreements, but we cannot give assurances that such audits will be effective to that end.

We expect that our product qualification and licensing cycle will be lengthy and costly, and our marketing, engineering and sales efforts may be unsuccessful. We expect to incur significant engineering, marketing and sales expenses prior to entering into our license agreements, generating a license fee and establishing a royalty stream from each licensee. The length of time it takes to establish a new licensing relationship, and for our customers to incorporate our technologies in their integrated circuits, can take 18 to 36 months or longer. As such, we will incur significant expenses in any particular period before any associated revenue stream begins. If our engineering, marketing and sales efforts are unsuccessful, then the expenses incurred could have an adverse effect on our financial condition, results of operations and cash flows.

Our business operations could suffer in the event of information technology systems' failures or security breaches. While we believe that we have implemented adequate security measures within our internal information technology and networking systems, our information technology systems may be subject to security breaches, damages from computer viruses, natural disasters, terrorism, and telecommunication failures. Any system failure or security breach could cause interruptions in our operations in addition to the possibility of losing proprietary information and trade secrets. To the extent that any disruption or

security breach results in inappropriate disclosure of our confidential information, our competitive position may be adversely effected and we may incur liability or additional costs to remedy the damages caused by these disruptions or security breaches.

If we fail to protect and enforce our intellectual property rights and our confidential information, our business will suffer. We rely primarily on a combination of nondisclosure agreements and other contractual provisions and patent, trade secret and copyright laws to protect our technology and intellectual property. If we fail to protect our technology and intellectual property, our licensees and others may seek to use our technology and intellectual property without the payment of license fees and royalties, which could weaken our competitive position, reduce our operating results and increase the likelihood of costly litigation. The growth of our business depends in large part on our ability to secure intellectual property rights in a timely manner, our ability to convince third parties of the applicability of our intellectual property rights to their products, and our ability to enforce our intellectual property rights. In certain instances, we attempt to obtain patent protection for portions of our technology, and our license agreements typically include both issued patents and pending patent applications. If we fail to obtain patents in a timely manner or if the patents issued to us do not cover all of the inventions disclosed in our patent applications, others could use portions of our technology and intellectual property without the payment of license fees and royalties.

We also rely on trade secret laws rather than patent laws to protect other portions of our proprietary technology. However, trade secrets can be difficult to protect. The misappropriation of our trade secrets or other proprietary information could seriously harm our business. We protect our proprietary technology and processes, in part, through confidentiality agreements with our employees, consultants, suppliers and customers. We cannot be certain that these contracts have not been and will not be breached, that we will be able to timely detect unauthorized use or transfer of our technology and intellectual property, that we will have adequate remedies for any breach, or that our trade secrets will not otherwise become known or be independently discovered by competitors. If we fail to use these mechanisms to protect our technology and intellectual property, or if a court fails to enforce our intellectual property rights, our business will suffer. We cannot be certain that these protection mechanisms can be successfully asserted in the future or will not be invalidated or challenged.

Further, the laws and enforcement regimes of certain countries do not protect our technology and intellectual property to the same extent as do the laws and enforcement regimes of the U.S. In certain jurisdictions we may be unable to protect our technology and intellectual property adequately against unauthorized use, which could adversely affect our business.

A court invalidation or limitation of our key patents could significantly harm our business. Our patent portfolio contains some patents that are particularly significant to our MST * technology and other business prospects. If any of these key patents are invalidated, or if a court limits the scope of the claims in any of these key patents, the likelihood that companies will take new licenses and that any current licensees will continue to agree to pay under their existing licenses could be significantly reduced. The resulting loss in license fees and royalties could significantly harm our business. Moreover, our stock price may fluctuate based on developments in the course of ongoing litigation.

We expect to continue to be involved in material legal proceedings in the future to enforce or protect our intellectual property rights, which could harm our business. From time to time, we identify products that we believe infringe our patents. In that event, we initially seek to license the manufacturer of the infringing products, however if the manufacturer is unwilling to enter into a license agreement, we may have to initiate litigation to enforce our patent rights against those products. As disclosed in "Our Business – Litigation", we are currently involved in a civil litigation against a manufacturer of optical communication products we believe to be infringing one of our patents. Litigation stemming from that or other disputes could harm our ability to gain new customers, who may postpone licensing decisions pending the outcome of the litigation or who may, as a result of such litigation, choose not to adopt our technologies. Such litigation may also harm our relationships with existing licensees, who may, as a result of such litigation, cease making royalty or other payments to us or challenge the validity and enforceability of our patents or the scope of our license agreements.

In addition, the costs associated with legal proceedings are typically high, relatively unpredictable and not completely within our control. These costs may be materially higher than expected, which could adversely affect our operating results and lead to volatility in the price of our common stock. Whether or not determined in our favor or ultimately settled, litigation diverts our managerial, technical, legal and financial resources from our business operations. Furthermore, an adverse decision in any of these legal actions could result in a loss of our proprietary rights, subject us to significant liabilities, require us to seek licenses from others, limit the value of our licensed technology or otherwise negatively impact our stock price or our business and consolidated financial position, results of operations and cash flows.

Even if we prevail in our legal actions, significant contingencies may exist to their settlement and final resolution, including the scope of the liability of each party, our ability to enforce judgments against the parties, the ability and willingness of the

parties to make any payments owed or agreed upon and the dismissal of the legal action by the relevant court, none of which are completely within our control. Parties that may be obligated to pay us royalties could be insolvent or decide to alter their business activities or corporate structure, which could affect our ability to collect royalties from such parties.

Our technologies may infringe on the intellectual property rights of others, which could lead to costly disputes or disruptions. The semiconductor industry is characterized by frequent allegations of intellectual property infringement. Any allegation of infringement could be time consuming and expensive to defend or resolve, result in substantial diversion of management resources, cause suspension of operations or force us to enter into royalty, license, or other agreements rather than dispute the merits of such allegation. Furthermore, third parties making such claims may be able to obtain injunctive or other equitable relief that could block our ability to further develop or commercialize some or all of our technologies, and the ability of our customers to develop or commercialize their products incorporating our technologies, in the U.S. and abroad. If patent holders or other holders of intellectual property initiate legal proceedings, we may be forced into protracted and costly litigation. We may not be successful in defending such litigation and may not be able to procure any required royalty or license agreements on acceptable terms or at all.

If we are unable to manage future expansion effectively, our business, operations and financial condition may suffer significantly, resulting in decreased productivity. If our MST *proves to be commercially valuable, it is likely that we will experience a rapid growth phase that could place a significant strain on our managerial, administrative, technical, operational and financial resources. Our organization, procedures and management may not be adequate to fully support the expansion of our operations or the efficient execution of our business strategy. If we are unable to manage future expansion effectively, our business, operations and financial condition may suffer significantly, resulting in decreased productivity.

If integrated circuits incorporating our technologies are used in defective products, we may be subject to product liability or other claims. If our MST *technology is used in defective or malfunctioning products, we could be sued for damages, especially if the defect or malfunction causes physical harm to people. While we will endeavor to carry product liability insurance and obtain indemnities from our customers, there can be no assurance that we will be able to obtain insurance at satisfactory rates or in adequate amounts or that any insurance and customer indemnities will be adequate to defend against or satisfy any claims made against us. The costs associated with legal proceedings are typically high, relatively unpredictable and not completely within our control. Even if we consider any such claim to be without merit, significant contingencies may exist, similar to those summarized in the above risk factor concerning intellectual property litigation, which could lead us to settle the claim rather than incur the cost of defense and the possibility of an adverse judgment. Product liability claims in the future, regardless of their ultimate outcome, could have a material adverse effect on our business, financial condition and reputation, and on our ability to attract and retain licensees and customers.

Risks Related to this Offering and Owning Our Common Stock

Prior to the completion of our initial public offering, there was no public trading market for our common stock.

The offering under this prospectus is an initial public offering of our common shares. Upon the completion of this offering, our common stock will commence trading on the Nasdaq Capital Market, under the symbol "ATMR." However, there can be no assurance that we will be able to successfully develop a liquid market for our common shares. The stock market in general, and early stage public companies in particular, has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of such companies. If we are unable to develop a market for our common shares, you may not be able to sell your common shares at prices you consider to be fair or at times that are convenient for you, or at all.

We are an "emerging growth company" under the JOBS Act of 2012 and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our common stock less attractive to investors. We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012 ("JOBS Act"), and we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not "emerging growth companies" including, but not limited to:

- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act;
- reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements;
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments; and
- extended transition periods available for complying with new or revised accounting standards.

We have chosen to "opt out" of the extended transition periods available for complying with new or revised accounting standards, but we intend to take advantage of all of the other benefits available under the JOBS Act, including the exemptions discussed above. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

We will remain an "emerging growth company" for up to five years, although we will lose that status sooner if our revenues exceed \$1 billion, if we issue more than \$1 billion in non-convertible debt in a three year period, or if the market value of our common stock that is held by non-affiliates exceeds \$700 million as of any June 30.

Our status as an "emerging growth company" under the JOBS Act may make it more difficult to raise capital as and when we need it. Because of the exemptions from various reporting requirements provided to us as an "emerging growth company," we may be less attractive to investors and it may be difficult for us to raise additional capital as and when we need it. Investors may be unable to compare our business with other companies in our industry if they believe that our reporting is not as transparent as other companies in our industry. If we are unable to raise additional capital as and when we need it, our financial condition and results of operations may be materially and adversely affected.

We have not paid dividends in the past and have no immediate plans to pay dividends. We plan to reinvest all of our earnings, to the extent we have earnings, to cover operating costs and otherwise become and remain competitive. We do not plan to pay any cash dividends with respect to our securities in the foreseeable future. We cannot assure you that we would, at any time, generate sufficient surplus cash that would be available for distribution to the holders of our common stock as a dividend. Therefore, you should not expect to receive cash dividends on the common stock we are offering.

We will incur significant increased costs as a result of becoming a public company that reports to the Securities and Exchange Commission and our management will be required to devote substantial time to meet compliance As a public company reporting to the Securities and Exchange Commission, we will incur significant legal, accounting and other expenses that we did not incur as a private company. We will be subject to reporting requirements of the Securities Exchange Act of 1934 and the Sarbanes-Oxley Act of 2002, as well as rules subsequently implemented by the Securities and Exchange Commission that impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. In addition, on July 21, 2010, the Dodd-Frank Wall Street Reform and Protection Act was enacted. There are significant corporate governance and executive compensationrelated provisions in the Dodd-Frank Act that are expected to increase our legal and financial compliance costs, make some activities more difficult, time-consuming or costly and may also place undue strain on our personnel, systems and resources. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. In addition, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified people to serve on our board of directors, our board committees or as executive officers.

Assuming a market for our common stock develops, shares eligible for future sale may adversely affect the market for our common stock. We and all of our officers and directors have agreed not to sell, transfer or pledge, or offer to do any of the same, directly or indirectly, any of our securities for a period of 12 months following the close of this offering. All of our other common shares outstanding prior to this offering, including the 6,065,549 common shares issuable upon conversion of our convertible notes, are subject to lock-up agreements whereby the holder has agreed not to sell, transfer or pledge, or offer to do any of the same, directly or indirectly, any of our securities for a period 180 days following the close of this offering, subject to extensions under certain circumstances of up to a total of 216 days following our IPO. On the 181 st day following the close of this offering (subject to the potential extension described above) and on every subsequent 31 st day thereafter, 15% of such holder's securities shall be released from the lock-up until the 366 th day following the close of this offering, as of which none of such holder's securities shall be subject to the lock-up. Notwithstanding the lock-up agreements, we have agreed to register for resale 6,065,549 shares of common stock expected to be issued upon conversion of our convertible notes and 395,369 shares of common stock underlying warrants that are in addition to the warrants we will issue to the underwriter in connection with this offering. Furthermore, commencing on the 90 th day following the close of this offering, certain of our stockholders may be eligible to sell all or some of their shares of common stock by means of ordinary brokerage transactions in the open market pursuant to Rule 144, promulgated under the Securities Act, subject to certain limitations. In general, pursuant to Rule 144, non-affiliate stockholders may sell freely after six months subject only to the current public information requirement (which disappears after one year). Following the 180 th day following the close of this offering, our stockholders will be eligible to begin publicly selling their shares under Rule 144.

Any substantial sale of our common stock pursuant to Rule 144 or pursuant to any resale prospectus (including sales by investors of securities acquired in connection with this offering) may have a material adverse effect on the market price of our common stock.

You will experience immediate dilution in the book value per share of the common stock you purchase. Because the price per share of our common stock being offered is substantially higher than the book value per share of our common stock, you will experience substantial dilution in the net tangible book value of the common

share of our common stock, you will experience substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on the offering price of \$7.50 per share, if you purchase shares of common stock in this offering, you will experience immediate and substantial dilution of \$5.02 per share in the net tangible book value of the common stock at March 31, 2016.

Our charter documents and Delaware law may inhibit a takeover that stockholders consider favorable. Upon the closing of this offering, provisions of our Certificate of Incorporation ("Certificate") and bylaws and applicable provisions of Delaware law may delay or discourage transactions involving an actual or potential change in control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. The provisions in our Certificate and bylaws:

- · limit who may call stockholder meetings;
- do not permit stockholders to act by written consent;
- · do not provide for cumulative voting rights; and
- provide that all vacancies may be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum.

In addition, once we become a publicly traded corporation, Section 203 of the Delaware General Corporation Law may limit our ability to engage in any business combination with a person who beneficially owns 15% or more of our outstanding voting stock unless certain conditions are satisfied. This restriction lasts for a period of three years following the share acquisition. These provisions may have the effect of entrenching our management team and may deprive you of the opportunity to sell your shares to potential acquirers at a premium over prevailing prices. This potential inability to obtain a control premium could reduce the price of our common stock.

Our bylaws designate the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain litigation that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with the Company. Our bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim against us or any our directors, officers or other employees arising pursuant to any provision of the Delaware General Corporation Law or our certificate of incorporation or bylaws, or (iv) any action asserting a claim against us or any our directors, officers or other employees governed by the internal affairs doctrine. This forum selection provision in our bylaws may limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or any our directors, officers or other employees.

Our board of directors may issue blank check preferred stock, which may affect the voting rights of our holders and could deter or delay an attempt to obtain control of us. Our board of directors is authorized, without stockholder approval, to issue preferred stock in series and to fix and state the voting rights and powers, designation, preferences and relative, participating, optional or other special rights of the shares of each such series and the qualifications, limitations and restrictions thereof. Preferred stock may rank prior to our common stock with respect to dividends rights, liquidation preferences, or both, and may have full or limited voting rights. Accordingly, issuance of shares of preferred stock could adversely affect the voting power of holders of our common stock and could have the effect of deterring or delaying an attempt to obtain control of us.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections entitled "Prospectus Summary," "Risk Factors," "Use of Proceeds," "Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Our Business," contains forward-looking statements. 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 include, but are not limited to, statements concerning the following:

- our future financial and operating results;
- our intentions, expectations and beliefs regarding anticipated growth, market penetration and trends in our business;
- the timing and success of our plan of commercialization;
- our ability to operate our royalty-based business model;
- the adequacy of the net proceeds of this offering;
- the effects of market conditions on our stock price and operating results;
- our ability to maintain our competitive technological advantages against competitors in our industry;
- our ability to have our technology solutions gain market acceptance;
- our ability to maintain, protect and enhance our intellectual property;
- the effects of increased competition in our market and our ability to compete effectively;
- · our plans to use the proceeds from this offering;
- costs associated with initiating and defending intellectual property infringement and other claims;
- our expectations concerning our relationships with potential customers, partners and other third parties;
- the attraction and retention of qualified employees and key personnel;
- future acquisitions of or investments in complementary companies or technologies; and
- our ability to comply with evolving legal standards and regulations, particularly concerning requirements for being a public company.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in "Risk Factors" and elsewhere in this prospectus. Moreover, we operate in a very competitive and rapidly changing environment, and new risks emerge from time to time. It is not possible for us to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus may not occur and actual results could differ materially and adversely from those anticipated or implied in our forward-looking statements.

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. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations, except as required by law.

You should read this prospectus and the documents that we reference in this prospectus and have filed with the Securities and Exchange Commission as exhibits to the registration statement of which this prospectus is a part with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

INDUSTRY AND MARKET DATA

This prospectus contains statistical data, estimates, and forecasts that are based on independent industry, government and non-government organization publications or other publicly available information, as well as other information based on our internal sources. Although we believe that the third-party sources referred to in this prospectus are reliable, estimates as they relate to projections involve numerous assumptions, are subject to risks and uncertainties, and are subject to change based on various factors, including those discussed under the section titled "Risk Factors" and elsewhere in this prospectus. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

Certain information in the text of this prospectus is contained in independent industry government and non-governmental organizational publications. The sources of these publications are provided below:

- IC Insights, Inc., The McClean Report 2016
- IC Insights, Inc., Integrated Circuit Market Drivers 2016
- IC Insights, Inc., Global Wafer Capacity 2015-2019
- IC Knowledge LLC, The Strategic Forecast Report 2015

OUR BUSINESS

General

We are engaged in the business of developing, commercializing and licensing proprietary processes and technologies for the \$350+ billion semiconductor industry. Our lead technology, named Mears Silicon TechnologyTM, or MST *, is a thin film of reengineered silicon, typically 100 to 300 angstroms (or approximately 20 to 60 silicon atomic unit cells) thick. MST *can be applied as a transistor channel enhancement to CMOS-type transistors, the most widely used transistor type in the semiconductor industry. MST *is our proprietary and patent protected performance enhancement technology that we believe addresses a number of key engineering challenges facing the semiconductor industry. We believe that by incorporating MST *, transistors made with CMOS technology can be smaller, with increased speed, reliability and energy efficiency. In addition, since MST *is an additive and low cost technology, it can be deployed on an industrial scale, with machines commonly used in semiconductor manufacturing. We believe that MST *can be widely incorporated into the most common types of semiconductor products, including analog, logic, optical and memory integrated circuits.

We do not intend to design or manufacture integrated circuits directly. Instead, we intend to develop and license technologies and processes that will offer the designers and manufacturers of integrated circuits a low-cost solution to the industry need for greater performance and lower power consumption.

In the mid-1980s, our founder, Dr. Robert Mears, was part of a team that re-engineered silica optical fiber to invent the erbium-doped fiber amplifier, or EDFA, a technology that increased the bandwidth of optical fiber more than 1,000 times. The invention of EDFA helped to revolutionize the development of broadband and to this day remains a key technology in the multi-hundred billion dollar optical communications industry. Dr. Mears anticipated scaling problems for silicon semiconductors and founded Atomera Incorporated in order to address those problems for the semiconductor industry.

Over the last ten years, we have undertaken significant laboratory testing and engaged with a range of semiconductor industry and academic technology leaders to evaluate MST *performance on test chips in industrial fabrication environments. We believe this testing has demonstrated that MST * offers performance benefits, including increased speed, reliability and energy efficiency, beyond and in most cases additive to those provided by already successful semiconductor performance enhancement technologies, such as dual stress liners and source/drain channel stressors, such as eSiGe/eSiC, and can be implemented without significant additional cost or significant modification to the current semiconductor fabrication process.

We are now in the process of transitioning our MST * toward commercial adoption. We are currently in the process qualification stage with leading integrated device manufacturers, or IDMs, and foundries. The IDMs and foundries are our intended initial customers and by way of the process qualification stage they test and evaluate the potential incorporation of our MST * technology into the integrated circuits they produce. We are also partnering with manufacturers of semiconductor fabrication equipment and developers of modeling tools. These parties are part of a semiconductor infrastructure supporting the industry with capital equipment for transistor production and transistor process modeling software, and we are in discussions with certain equipment manufacturers and tool developers concerning their incorporation of our MST * technology into the equipment and tools they offer to the industry. We also intend to market our MST * technology to fabless semiconductor manufacturers concerning their incorporation of MST * into the integrated circuits they design. Assuming the timely and successful completion of process and the subsequent product qualification by customers and partners, we expect revenue based on sales of MST * enabled products in 2017.

We believe that the technologies underlying MST * are part of a larger platform of reengineered materials that have potential application beyond CMOS, including:

- faster and more efficient nano-structured semiconductor materials for electronic applications;
- enhanced nano-structured materials for application in photonics;
- · improved magnetic materials for advanced memory; and
- more responsive "lead-free" piezo-electric materials (commonly used in antenna and transducers).

Industry Overview

Semiconductors, Generally

Recent years have seen a remarkable proliferation of consumer and commercial products, especially in wireless, automotive and mobile electronic devices. The growth of the Internet and cloud computing has provided people with new ways to create, store

and share information. At the same time, the increasing use of electronics in cars, buildings, appliances and other consumer products is creating a broad landscape of "smart" devices and the evolution of wearable technologies and The Internet of Things.

These developments depend, in large part, on integrated circuits, or microchips, which are sets of electronic circuits on a single chip of semiconductor material, normally silicon. It is common for a single semiconductor chip to combine many components (processor, communications, memory, custom logic, input/output) resulting in highly complex chip designs. Transistors are the building blocks of integrated circuits and the most complex semiconductor chips today contain more than a billion transistors, each of which may have features that are much less than 1/1,000 the diameter of a human hair.

The most widely used transistors in semiconductor chips today are based on the complementary metal-oxide-semiconductor, or CMOS, technology. Among its many attributes, CMOS allows for a higher density of transistors on a chip and lower power usage than non-CMOS technologies.

The Pursuit of Increased Semiconductor Performance

For years, the semiconductor industry was able to almost double the number of transistors it can pack into a single microchip about every two years, a rate of improvement commonly known as "Moore's Law." The semiconductor industry uses the term "node" to describe the minimum line width or geometry on a semiconductor chip, expressed in nanometers (nm) for today's technologies. Historically, the smaller the node, the smaller the transistors and the more closely they are packed together, producing chips that are denser and thus less costly on a per-transistor basis. Frequently, smaller nodes also correspond to an improvement in chip performance, making them the mile markers of Moore's Law, with each node marking a new generation of chip-manufacturing technology.

Until recently, the industry succeeded at maintaining the rate of improvement predicted by Moore's Law by scaling the key transistor parameters, such as shrinking feature sizes and operating voltages, thereby allowing more transistors to be packed onto a single microchip. This trend was facilitated in large part by the development of the CMOS technologies. However, a discontinuity in the rate of improvement delivered by scaling appeared a few years ago when transistor technology reached deep sub-micron levels with transistor features below 100 nanometers. The industry responded with advanced materials to supplement the ongoing geometry shrinks. Some of those materials advances included strained silicon, Silicon on Insulator and High-K/Metal Gate.

In addition, due to the popularity of mobile devices and other electronic products, there is increasing demand for integrated circuits and systems with greater functionality and performance, reduced size, and much less power consumption as key requirements.

The designers and manufacturers of integrated circuits and systems — our potential customers — are facing intense pressure to deliver innovative products at ever shorter times-to-market, as well as at lower prices. In other words, innovation in chip and system design today often hinges on "better, sooner and cheaper." We believe that the semiconductor industry has accepted that to move forward in the nano-era, progress will require adoption of new innovations that extend the scaling formula, including those based on the use of new engineered materials, a market opportunity our MST *technology seeks to address. Because shrinking geometries at the smaller nodes incurs higher capital and manufacturing costs, only limited products can take on the increased cost burden and still be economically viable. We believe cost sensitive devices will turn to engineered materials, like MST *, to solve this problem.

Disaggregation of the Industry

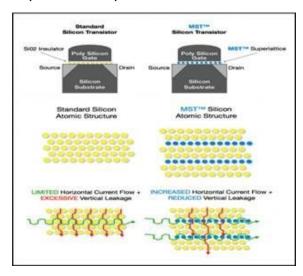
In trying to keep research and development costs manageable, while attempting to satisfy the demand for increasingly complex semiconductors, certain designers and manufacturers of integrated circuits have transitioned to an open innovation model in which competing companies and third-party providers actively collaborate to address performance issues through various alliances, joint ventures, and licensing of externally developed technology.

Historically, most semiconductor companies were vertically integrated. They designed, fabricated, packaged and tested their semiconductors using internally developed software design tools and manufacturing processes and equipment. As the cost and skills required for designing and manufacturing complex semiconductors have increased, the semiconductor industry has become disaggregated, with companies concentrating on one or more individual stages of the semiconductor development and production process. This disaggregation has fueled the growth of fabless semiconductor companies, design tool vendors, semiconductor equipment manufacturers, third-party semiconductor manufacturers (or foundries), semiconductor assembly, package and test companies, and intellectual property companies that develop and license technology to others.

While specialization has enabled greater development and manufacturing efficiency, it has also created an opportunity for IP-based companies, such as Atomera Incorporated, that develop and license technology to meet fundamental, industry-wide challenges. These intellectual property companies have been able to gain broad adoption of their technology throughout the industry by working with companies within the semiconductor supply chain to evaluate and integrate their technology. Oftentimes, the industry will share in the large up-front development cost of these technologies in exchange for a lower licensing fee or royalty. We believe this collaboration and integration benefits semiconductor companies by enabling them to bring new technology to market faster and more cost-effectively, without having to make the investment alone.

Our Initial Application of Mears Silicon Technology

The initial application of our MST *will be for CMOS integrated circuits, the most widely used type of integrated circuits in the semiconductor industry. As applied to CMOS-type transistors, MST *is a thin film of reengineered silicon, typically 100 to 300 angstroms (or approximately 20 to 60 silicon atomic cell units) thick, that functions as a transistor channel enhancement. We believe MST *has the potential to overcome the key challenges found in the implementation of next generation nano-scale semiconductor devices incorporating CMOS-type transistors, namely enhancing drive current, reducing gate leakage and reducing variability. In addition, we believe that MST *has the potential to deliver these benefits through a single technology that requires relatively minor modifications to the industry standard CMOS manufacturing flow. Consequently, we believe that by incorporating MST *, designers can make transistors with increased speed, reliability and energy efficiency, without significantly altering the current fabrication process or cost of production.



As illustrated by the accompanying diagram, MST * is a "silicon-on-silicon" solution that provides multiple benefits through a relatively simple modification to the standard CMOS manufacturing flow. MST * improvements are delivered through our proprietary and patent protected silicon band engineering approach that is based on the quantum mechanics of modern deep sub-micron devices. The MST * film creates channels that allow electrons to flow more freely in the plane of the transistor, thereby enhancing drive current, while reducing electron flow or "leakage" in the transverse direction. Our MST * film can also create more controlled doping profiles which allow dopants to be held in the desired locations, thereby reducing variability and improving production yield.

We believe we have demonstrated in simulations and on test chips that MST * provides performance enhancements, including increased speed, reliability and energy efficiency, to most CMOS type transistors equivalent to the enhancements enabled by approximately one-half to a full node of improvement depending on the device technology and application and, therefore, it enables life extension to capital equipment and wafer fabrication facilities. We believe that MST * CMOS compares favorably to other performance enhancing alternatives as follows:

• Strained Silicon and Silicon-on-Insulator, or SOI: Unlike strained silicon or SOI, we believe that MST [®] delivers in a single film multiple benefits at once and in a cost effective manner, including enhanced transistor drive current, reduced leakage, and reduced variability. Also, strained silicon tends to lose much of its effectiveness below 45nm, constraining its scalability, while the MST [®] thin film approach is expected to be scalable below 22nm. Also, based on our own research and development and third-party evaluations, we believe that MST [®] can deliver improved cost-benefit performance, in most cases in an additive manner, compared to already successful strain technologies, such as dual stress liners and SiGe.

• High-K/Metal Gate, or HKMG: Unlike HKMG, MST * is silicon-based. As a "silicon-on-silicon" solution, MST * does not require new materials or equipment, which in our opinion makes it much easier and less costly to adopt than HKMG for devices not requiring ultra-thin gate dielectrics. For devices with HKMG, we believe MST * still benefits transistor performance and variability in a similar manner to that observed in non-HKMG devices.

Because of its physical characteristics in the channel region of the transistor, we believe MST * has the further benefit of being complementary and additive to the performance enhancing technologies noted above, making MST * broadly applicable across multiple devices and process flows to meet a wide variety of customer design objectives. Given the increasingly difficult economic challenges faced by the industry while moving to more advanced technologies, we believe one of the most compelling aspect of MST * may be its cost/benefit profile. We believe that MST * will provide a lower cost of production due to our technology's potential to reduce die size while leveraging existing manufacturing tools, thereby providing chip makers with increased performance at all process nodes with significantly fewer disruptions to manufacturing processes and less incremental cost than other advanced technologies.

We believe MST * properties can improve transistor performance in a variety of device types including microprocessors; logic products; DRAM, SRAM, and other memory integrated circuits; as well as analog, radio frequency, and mixed-signal devices. We have therefore developed different MST * product options that can be applied to the critical industry segments and technology nodes. As of the date of this prospectus, we have done technology simulation work with universities and leading industry players at nodes from 180nm to 7nm. We have also simulated devices with leading industry research facilities and built and electrically verified test chips using MST * in customer manufacturing facilities which have produced results that demonstrate many of the benefits described above.

MST ® Commercialization

We do not intend to design or manufacture integrated circuits directly. Instead, we intend to develop and license technologies and processes that will offer the designers and manufacturers of integrated circuits a low-cost solution to the industry need for increased performance. Our customers and partners are expected to include:

- integrated device manufacturers, or IDMs, which are the fully integrated designers and manufacturers of integrated circuits;
- fabless semiconductor manufacturers, which are designers of integrated circuits who outsource the manufacture of their chips to third-party contract semiconductor manufacturers, or foundries;
- foundries, which manufacture integrated circuits on behalf of fabless manufacturers;
- original equipment manufacturers, or OEMs, that manufacture the epitaxial, or EPI, machines used to
 deposit semiconductor layers, such as the MST *onto the base silicon wafer; and
- electronic design automation companies, which make tools used throughout the industry to simulate performance of semiconductor products using different materials, design structures and process technologies.

We intend to generate revenue through licensing arrangements whereby foundries and IDMs pay us a license fee for their use of MST *technology in the manufacture of silicon wafers as well as a royalty for each silicon wafer or device that incorporates our MST *technology. We also intend to enter into licensing arrangements with fabless semiconductor manufacturers pursuant to which we will charge them a royalty for each device they sell that incorporates our MST® technology. The IDMs and fabless semiconductor manufacturers are the primary beneficiaries of our commercialization activities, as they are producers and distributors of the integrated circuits onto which we will endeavor to incorporate our MST *technology. The foundries and OEMs also play an important role in our commercialization strategy in that these parties have traditionally sought to provide new technologies to their customers, which in the case of the foundries are the fabless semiconductor manufacturers and in the case of the OEMs are the IDMs and foundries that purchase EPI machines.

In the semiconductor industry, new technologies are vetted thoroughly and carefully by early adopters but, once proven, tend to be adopted broadly by the industry and, wherever possible, exploited for several generations until their full potential is reached. Before introducing a new technology into its fabrication process, the customer will conduct a formal and rigorous multi-step product qualification, which can range from 18 to 36 months. Major qualification steps typically include:

process qualification — the integration of process steps or process segments to deliver the expected
electrical results from test chips that provide the specification data base for design of integrated circuits;

- wafer level reliability qualification demonstration of reliability indices under accelerated test condition
 that allow extraction of acceleration factors and life time predictions of specific process components for a
 given technology; and
- product qualification the qualification of packaged and fully functional integrated circuit devices including reliability performance.

We believe that our success is dependent upon the adoption of our MST * technology by at least one IDM, foundry, or fabless semiconductor manufacturer. MST * is currently undergoing process qualification by potential customers, including foundries and IDM manufacturers. Subject to process and subsequent product qualifications that demonstrate, in commercial scale production, the enhancements we believe our MST* technology offers, including increased speed, reliability and energy efficiency, we expect to license our MST * technology to the customer. We are also engaged at different stages of customer development with other potential customers.

We are also undergoing process development and equipment certification with OEMs. If we meet the development and certification requirements of the OEMs, we believe they will promote the incorporation of our MST ** technology in the OEM's EPI machines as an option to their standard offering. By doing so, we believe they will simultaneously stimulate additional sales of their capital equipment and encourage more customers to adopt MST **

We market our MST *technology directly to the semiconductor industry through our significant industry contacts and relationships. We also sponsor academic research and participate in industry conferences and associations. In certain foreign jurisdictions, we engage sales representatives to pursue and assist us in establishing relationships with local customers.

Competition

Our lead product, MST *, is a proprietary and patent protected performance enhancement technology that we believe addresses a number of key engineering challenges facing the semiconductor industry. We compete with IDMs, OEMs, foundries, fabless manufacturers of semiconductors and semiconductor IP licensing companies, for the development and commercialization of technologies that improve the performance of semiconductors. Historically, when a new fabrication process proves to be a low-cost improvement to the standard fabrication process, and is additive, rather than in place of other performance technologies, it has been successfully adopted industry-wide. Good examples of such advances have been strained silicon, such as SiGe. We believe that MST * has the potential to be one of these low-cost additive technologies, in which case MST * would not be subject to significant direct competition from other technologies.

Research and Development

We are focused on designing and developing engineered semiconductor material technologies and processes for the semiconductor and other industries. We believe that our success depends in part on our ability to achieve the following in a cost-effective and timely manner:

- develop new technologies that meet the changing needs of the semiconductor industry;
- improve our existing technologies to enable growth into new application areas; and
- expand our intellectual property portfolio.

Our research and development is conducted internally, however we work closely with third parties in the semiconductor industry to evaluate and qualify our technology for incorporation into semiconductor products and fabrication equipment. During the 2015 and 2014 fiscal years, we incurred research and development expenses of \$2,022,133 and \$1,853,091, respectively. During the three month periods ended March 31, 2016 and 2015, we incurred research and development expenses of \$945,891 and \$519,452, respectively.

Intellectual Property Rights

We regard the protection of our technologies and intellectual property rights as an important element of our business operations and crucial to our success. We rely primarily on a combination of patent laws, trade secrets, confidentiality procedures, and contractual provisions to protect our proprietary technology. We require our employees, consultants, and advisors to enter into confidentiality agreements. These agreements provide that all confidential information developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except under specific circumstances. In the case of our employees and certain consultants, the agreements provide that all of the technology that is conceived by the individual during the course of employment is our exclusive property. The development of our technology and many of our processes are dependent upon the knowledge, experience, and skills of key scientific and technical personnel.

We have been issued a significant number of patents, with more than 50 patents granted in the U.S. and more than 50 abroad. Our core patents relating to MST * cover materials, physical structures and manufacturing processes. Our core patents relating to MST * were filed beginning on August 22, 2003 and have grant dates beginning on December 14, 2004. Our MST patent portfolio begins to expire commencing August 22, 2023. While we believe our core patents adequately block competitors from using our MST * without our approval, there can be no assurance that one or more of our core patents may not survive a legal challenge to their scope, validity, or enforceability, or provide significant protection for us. The failure of our patents, or the failure of trade secret laws, to adequately protect our technology, might make it easier for our competitors to offer similar products or technologies. In addition, patents may not issue from any of our current or any future applications.

We also hold registered trademarks in the United States for the mark "MST" and in China for the mark "Mears". We have applied with the U.S. Patent and Trademark Office for the registration of the mark "Atomera" in the United States.

We have entered into an Exclusive License and Collaboration Agreement dated March 3, 2010 with K2 Energy Limited, an energy resource company located in Sydney, Australia, pursuant to which we have granted K2 Energy an exclusive, world-wide, royalty bearing license to commercialize our MST * in the field of photovoltaic devices and all solar energy applications. The license agreement is for a term co-terminus with the licensed patents and requires K2 Energy to pay us royalties in the amount of 50% of all net revenue derived by K2 Energy under our license, with net revenue generally defined as gross revenue less all costs associated with the production and sale of the licensed product. As part of the license agreement, K2 Energy made a \$1 million investment in our Company and funded \$2.7 million of research into the solar applications of our technology.

We have also entered into a License Agreement dated December 22, 2006 with ASM International, NV, a semiconductor OEM located in Almere, The Netherlands, pursuant to which ASM has granted to us a non-exclusive, worldwide license to make, and sublicense others to make, semiconductor devices using certain ASM patents. The ASM license restricts us and our sublicensees from using the ASM licensed rights in the manufacture of EPI machines or any other machines used to manufacture semiconductors. The ASM license is coterminous with patents licensed by ASM, which expires on January 8, 2019, and requires us to pay ASM a royalty of 5% of net royalty revenue, generally defined as gross royalty revenue less certain customer offsets and credits, from the sale of any product incorporating the ASM licensed patents not manufactured on ASM equipment and a royalty of 2.5% of net revenue from the sale of any product incorporating ASM licensed patents manufactured on ASM equipment. As of the date of this prospectus, all semiconductor devices incorporating our MST * technology manufactured prior to January 8, 2019 will be subject to the ASM license royalty.

Employees

As of the date of this prospectus, we employ 12 people on a full-time basis, including our four executive officers, seven technical staff and one general and administrative employee.

Property

Our executive offices are presently located in a 3,396 square foot facility in Los Gatos, California pursuant to a two-year lease, expiring on January 31, 2018, at the rate of \$12,395 per month, which will increase to \$13,074 per month commencing February 1, 2017.

We also lease approximately 1,730 square feet in Wellesley Hills, Massachusetts from which we conduct certain research activities. The Wellesley Hills facilities are occupied pursuant to a one-year lease expiring November 30, 2016 at a lease rate of \$4.613 per month.

Litigation

Except as described below, there are no pending legal proceedings to which we or our properties are subject.

In May 2013, we initiated a civil action in U.S. federal court against Finisar Corporation, a Sunnyvale, California based manufacturer of optical communication products, alleging that Finisar's manufacture and sale of certain products infringe on U.S. Patent No. 6,141,361 owned by us. Mears Technologies, Inc. v. Finisar Corporation, No. 2:13-cv-00376 (E.D. Tex.). On December 30, 2014, the court entered an order granting summary judgment in favor of Finisar on the issue of whether Finisar is infringing our patents, and on December 14, 2015 the final judgment was entered and we agreed to pay approximately \$47,000 for costs related to the lawsuit, which we paid in January 2016. We have filed an appeal of that judgment with the United States Court of Appeals for the Federal Circuit.

Following the trial court's entry of the December 2014 order granting summary judgment in favor of Finisar, in January 2015 Finisar filed a motion with the court to recover from us its attorney's fees and costs. The court denied Finisar's motion for reimbursement of fees and costs in December 2015. In January 2016, Finisar filed an appeal of the trial court's denial of its motion for fees and costs with the United States Court of Appeals for the Federal Circuit. As of the date of this prospectus, we are unable to predict the outcome of our appeal of the judgment in Finisar's favor.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

General

We are engaged in the business of developing, commercializing and licensing proprietary processes and technologies for the \$350+ billion semiconductor industry. We were organized as a Delaware limited liability company under the name Nanovis LLC on November 26, 2001. On March 13, 2007, we converted to a Delaware corporation under the name Mears Technologies, Inc. On January 12, 2016, we changed our name to Atomera Incorporated.

Since our formation, we have focused our efforts on the research, development, patent protection, and commercialization of our processes and technologies, including our proprietary and patent-protected MST * performance enhancement technology. We have undertaken significant laboratory testing and engaged with a range of semiconductor industry technology leaders to evaluate and characterize MST * performance in industrial fabrication environments. We believe that this testing has demonstrated that MST * -enabled transistors can be made smaller and with increased speed, reliability and energy efficiency. In addition, we believe that this testing shows that MST * can be deployed on a low-cost, industrial scale using machines already employed in semiconductor manufacturing.

On March 17, 2015, we completed the private placement of \$14.75 million in senior secured convertible promissory notes and on April 1, 2016 we completed the private placement of an additional \$5.96 million in senior secured convertible notes on the same terms as the promissory notes placed in March 2015. We refer to these promissory notes in this prospectus as our "convertible notes." We issued the March 2015 convertible notes for cash consideration of \$7.4 million and the exchange for previously issued promissory notes that at the time of exchange had principal and accrued interest in the aggregate amount of \$7.35 million. As a result, we have issued and outstanding convertible notes in the aggregate principal amount of \$20,708,433, with accrued and unpaid interest as of March 31, 2016 in the amount of \$2,037,377.

Interest on our convertible notes accrues on the unpaid principal at the rate of 10% per year, except during any event of default under the convertible notes in which case the interest rate shall be 12% per year. All principal and interest under the convertible notes are due and payable on May 31, 2017. All principal and interest under the convertible notes are convertible into shares of common stock as follows:

- Upon the consummation of an initial public offering by us, all principal and interest shall automatically convert at 50% of the IPO price, provided, however, in no event shall the conversion price be greater than \$7.362 nor less than \$3.681 per share;
- In the event of a subsequent private placement approved by the holders of 50% or more of the aggregate principal amount of all convertible notes, all principal and interest shall automatically convert at 50% of the offer price in the subsequent private placement, provided, however, in no event shall the conversion price be greater than \$7.362 nor less than \$3.681 per share; and
- Until the 10 hday prior to the consummation of an IPO by us, a holder of a convertible note, at its option, may convert at a conversion price of \$7.362 per share.

Pursuant to the terms of our convertible notes, all principal and accrued interest under the notes will automatically convert into 6,065,549 shares of our common stock, at the conversion price of \$3.75 per share, upon the completion of this offering.

During O ctober 2015, we conducted a recapitalization of our outstanding options and warrants to purchase shares of our common stock. Pursuant to the recapitalization, we offered all holders of our options and warrants as of December 31, 2014 a one-time opportunity to exchange their options and warrants for shares of our common stock at a ratio of two options or warrants for one share of common stock regardless of exercise price. The offer resulted in 166,230 options and 601,861 warrants converting to a total of 384,045 shares of common stock. In connection with the recapitalization, we incurred a one-time non-cash charge of \$2,088,542 in the fourth quarter of 2015 relating to our loss on the exchange of the options and warrants for the common stock.

On December 11, 2015, we effected a 1-for-15 reverse stock split of our common stock. All historical share amounts and share price information presented in this prospectus have been proportionally adjusted to reflect the impact of this reverse stock split.

Plan of Operations

Our plan of operations for the 12 months following the completion of this offering will focus on securing one or more foundries, IDMs or fabless semiconductor manufacturers to qualify and license our MST * technology and start full-scale industrial production of a device that incorporates our MST * technology. We will also continue our research into new applications and materials. We intend to develop marketing tools to expand our potential customer base. These tools will include process and product simulation models which will help potential customers understand the benefits of MST * and how to implement it in their factories, as well as more comprehensive data showing the improvements that MST * can bring to specific classes of semiconductor devices. During the 12 months following this offering, we expect to hire up to six additional employees, including four additional development engineers and two additional business development and sales persons in order to support the increased marketing and qualification of our MST * technology to a wider set of customers and markets. We also intend to expand our patent portfolio through additional patent applications, both US and foreign.

Results of Operations

We have not commenced revenue-producing operations. To date, our operations have focused on the research, development, patent protection, and commercialization of our processes and technologies, including our proprietary and patent-protected MST * performance enhancement technology, and the development of our business plan. For the fiscal years ended December 31, 2015 and 2014, we incurred \$2,022,133 and \$1,853,091, respectively, of research and development expense related to ongoing efforts to evaluate and qualify our technology. Other expenses for the 2015 fiscal year were \$4,020,270, consisting of \$2,088,542 loss on the exchange of our warrants and options into shares of common stock and \$1,931,728 of interest expense on our convertible notes. During the prior year period, other expenses consisted of \$560,310 of interest expense related to our convertible note financing. We also incurred during our 2015 fiscal year \$3,441,149 of general and administrative expense, consisting primarily of \$1,435,977 of consulting expense, \$1,015,848 of which represents the estimated fair value of the warrant issued to Liquid Patent Advisors for advisory services performed in 2015, \$699,094 of legal expense and \$308,442 of payroll expense. During the prior year period, we incurred \$1,402,879 of general and administrative expense, consisting primarily of \$509,197 of legal fees, \$385,613 of consulting expense and \$191,480 of payroll expense. We incurred a net loss of \$9,512,141 for the fiscal year ended December 31, 2015 and a net loss of \$3,817,734 for the prior year period.

For the three month periods ended March 31, 2016 and 2015, we incurred \$945,891 and \$519,452, respectively, of research and development expense related to ongoing efforts to evaluate and qualify our technology. During the three months ended March 31, 2016, we incurred \$861,119 of general and administrative expense, consisting of \$433,860 of payroll expense and \$288,423 of professional services for legal, audit and tax. Payroll expense for the three months ended March 31, 2016 includes \$187,500 in bonus expense in connection with the settlement of a loan to an officer as described further in " *Management-Related Party Transactions*." During the prior year period, we incurred \$1,698,781 of general administrative expense, consisting of \$1,113,737 of consulting expense (of which \$1,015,848 represented the fair value of the warrant granted to Liquid Patent Advisors), \$222,743 of legal expense and \$54,390 of payroll expense. Other expenses for the three months ended March 31, 2016 and 2015 included \$562,167 and \$232,869, respectively, of interest expense, net of interest income, relating to our convertible note financing. We incurred a net loss of \$2,488,187 for the three months ended March 31, 2016 and a net loss of \$2,460,749 for the prior year period.

Financial Condition

As of March 31, 2016, we had total assets of \$1,799,805 and a working capital deficit of \$15,604,022. The assets and working capital deficit do not include our placement of \$5.96 million of convertible notes which closed on April 1, 2016 or our receipt of net cash proceeds of \$5.47 million from the sale of such notes. We believe that the net proceeds of this offering, combined with the net proceeds of our placement of convertible notes on April 1, 2016 and the conversion of approximately \$22.74 million of debt to equity concurrent with the close of this offering, will be sufficient to fund our presently forecasted working capital requirements over, at least, the 12 months following the date of this prospectus, including securing one or more foundries, IDMs or fabless semiconductor manufacturers to qualify and license our MST *technology and start full-scale industrial production of a device that incorporates our MST *technology. However, we may require additional capital in order to get to full-scale industrial production of a device that incorporates our MST *technology the receipt of which there can be no assurance. In the event we require additional capital over and above the \$21.3 million net proceeds of this offering, we will endeavor to acquire additional funds through various financing sources, including follow-on equity offerings, debt financing, licensing fees for our technology and joint ventures with industry partners. In addition, we will consider alternatives to our current business plan that may enable to us to achieve revenue producing operations and meaningful commercial success with a smaller amount of capital. However, there can be no guarantees that such funds will be available on commercially reasonable terms, if at all, If such financing is not available on satisfactory terms, we may be unable to further pursue our business plan and we may be unable to continue operations.

The report of our independent registered public accounting firm for the year ended December 31, 2015 states that due to our recurring and expected losses and cash on-hand there is substantial doubt about our ability to continue as a going concern.

Off Balance Sheet Transactions

We do not have any off-balance sheet transactions.

MANAGEMENT

Set forth below are our directors and officers:

Name	Age	Position
John Gerber	54	Chairman of the Board
Scott Bibaud	53	Chief Executive Officer, President and Director
Erwin Trautmann	68	Executive Vice President of Strategic Business Development and Director
Dr. Robert Mears	55	Chief Technology Officer
Francis Laurencio	47	Chief Financial and Accounting Officer
C. Rinn Cleavelin, Ph.D.	73	Director
Rolf Stadheim	76	Director

John Gerber has served as a member of our board of directors since 2007 and chairman of the board since 2011. For the past five years, Mr. Gerber has served as managing partner of Four Points, a specialty investment group with more than \$1.8 billion of investment and capital transaction experience across 40 real estate and venture capital investments. He has diversified experience in corporate and project management, project and venture finance and development. Mr. Gerber has a BSE degree magna cum laude from Princeton University and a masters degree from Harvard University.

Mr. Gerber has experience as a director of multiple companies and has extensive investing experience, in addition to significant leadership and strategic planning skills. As a result of these and other professional experiences, our board of directors has concluded that Mr. Gerber is qualified to serve as a director.

Scott Bibaud has served as our president, chief executive officer and a director since October 2015. Mr. Bibaud has been active in the semiconductor industry for over twenty years. From June 2012 to August 2015, he was senior vice president and general manager of Altera's Communications and Broadcast Division. Prior to that, he was executive vice president and general manager of the mobile platforms group at Broadcom from June 2000 to May 2011. Mr. Bibaud received a B.S. degree in electrical engineering from Rensselaer Polytechnic Institute and an MBA from Harvard University.

Mr. Bibaud has extensive experience in and knowledge of the semiconductor industry. As a result of these and other professional experiences, our board of directors has concluded that Mr. Bibaud is qualified to serve as a director.

Erwin Trautmann has served as our executive vice president of strategic business development since October 2015, and from September 2011 to October 2015 he served as our chief executive officer. Mr. Trautmann has also served as a member of our board of directors since September 2011. Mr. Trautmann has held executive positions at several Fortune 500 companies. From November 1999 to December 2005, Mr. Trautmann served as a senior vice president for KLA-Tencor, where he was most recently responsible for the global service and support division. From April 1980 to October 1998, Mr. Trautmann held various executive level positions with Texas Instruments, including program manager responsible for the technology development and global fan-out of major design nodes, vice president of global product engineering and vice president of global quality and reliability. During a short tenure at Micron Technologies, from October 1998 to July 1999, Mr. Trautmann supported the integration of Texas Instruments' world-wide product engineering team into Micron Technologies. Mr. Trautmann received a Dipl. Engr. (FH) in chemical technology from Fachochschule Mannheim, Germany.

Mr. Trautmann has extensive experience in and knowledge of the semiconductor industry. As a result of these and other professional experiences, our board of directors has concluded that Mr. Trautmann is qualified to serve as a director.

Dr. Robert Mears is the founder of our company and has served as our chief technology officer since inception. Dr. Mears also served as our president from inception to October 2015. Dr. Mears co-developed a transformative technology for long-distance optical networks in the late 1980's and has authored or co-authored approximately 150 publications and numerous patents. He is an Emeritus Fellow of Pembroke College, Cambridge, England.

Francis Laurencio has served as our chief financial officer since February 2016. Prior to joining Atomera, Mr. Laurencio served as chief financial officer of Sycomp, A Technology Company Inc. from February 2013 to July 2015 and as general counsel to Sycomp from July 2015 to January 2016. Mr. Laurencio also served as chief financial officer of Orbis Global, Inc. from January 2012 to December 2012 and chief financial officer of Smapper Technologies, Inc. from December 2009 to December 2011. Mr. Laurencio holds an A.B., degree from Princeton University and a J.D. from New York University School of Law.

C. Rinn Cleavelin, Ph.D. has served as a member of our board of directors since December 2009. From July 2002 to November 2007, Dr. Cleavelin served as manager for devices and manufacturing for external research and development for Texas Instruments. From January 2000 to June 2002, Dr. Cleavelin served as chief operating officer of International SEMATECH, where he was responsible for all technical programs and the advanced technology development facility. Previously, Dr. Cleavelin served as director of front end processing at International SEMATECH from 1998 to 2000. Since November 2007, Dr. Cleavelin has engaged in consulting activities on behalf of Atomera and other companies in the semiconductor industry. Dr. Cleavelin has a Ph.D. in Physics from Texas Tech University.

Dr. Cleavelin has extensive experience in and knowledge of the semiconductor industry. As a result of these and other professional experiences, our board of directors has concluded that Dr. Cleavelin is qualified to serve as a director.

Rolf Stadheim has served as a member of our board of directors since June 2010. Mr. Stadheim is founder and managing partner of Stadheim & Grear, Ltd., a Chicago, Illinois law firm founded by Mr. Stadheim in 1990 specializing in intellectual property law. Mr. Stadheim received his undergraduate degree from the University of Wisconsin and his law degree from the University of Chicago.

Mr. Stadheim has extensive experience in and knowledge of intellectual property law, including licensing and litigation of infringement claims in the semiconductor industry. As a result of these and other professional experiences, our board of directors has concluded that Mr. Stadheim is qualified to serve as a director.

Board Composition

Our board of directors may establish the authorized number of directors from time to time by resolution. Our board of directors currently consists of five members, two of whom qualify as independent under the Nasdaq Stock Market rules.

Nasdaq Stock Market Rule 5615(b) requires a majority of a listed company's board of directors be comprised of independent directors under the Nasdaq Stock Market Rules within one year of the completion of this offering. Our board of directors has determined that neither John Gerber nor C. Rinn Cleavelin, Ph.D. has a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each is "independent" as that term is defined under the applicable rules and regulations of the SEC and the listing requirements and rules of the Nasdaq Stock Market. In making this determination, our board of directors considered the current and prior relationships Mr. Gerber and Dr. Cleavelin have with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including their beneficial ownership of our capital stock. We intend to appoint additional independent directors to our board so that a majority of our directors are independent, as required under applicable Nasdaq Stock Market rules, within one year of the completion of this offering.

Committees of the Board of Directors

Our board of directors has established an audit committee, a compensation committee, and a nominating and corporate governance committee. The phase-in rules contained in Rule 5615(b) of Nasdaq's Stock Market Rules (and in Rule 10A-3(b)(1)(iv)(A) of the Exchange Act with respect to audit committees) provide that a company listing in connection with its initial public offering will be permitted to phase-in its compliance with the committee composition requirements as follows: (1) one member must satisfy the independence requirement at the time of listing; (2) a majority of members must satisfy the independence requirement within 90 days of listing; and (3) all members must satisfy the independence requirement within one year of listing. We intend to rely on Nasdaq's phase-in rules for meeting the independence requirements for our audit committee.

Our board of directors may establish other committees to facilitate the management of our business. The composition and functions of each committee are described below. Members serve on these committees until their resignation or until otherwise determined by our board of directors.

Audit Committee

Our audit committee consists of John Gerber, C. Rinn Cleavelin and Rolf Stadheim, with Mr. Gerber serving as Chairperson. Each member of our audit committee meets the financial literacy requirements of the Nasdaq Stock Market listing standards and Mr. Gerber is an audit committee financial expert within the meaning of Item 407(d) of Regulation S-K under the Securities Act of 1933. Our audit committee will, among other things:

select a qualified firm to serve as the independent registered public accounting firm to audit our financial

- statements:
- discuss the scope and results of the audit with the independent registered public accounting firm, and review, with management and the independent registered public accounting firm, our interim and yearend operating results:
- develop procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- review our policies on risk assessment and risk management;
- review related-party transactions; and
- approve (or, as permitted, pre-approve) all audit and all permissible nonaudit services, other than de minimis nonaudit services, to be performed by the independent registered public accounting firm.

Our audit committee operates under a written charter that satisfies the applicable rules of the SEC and the listing standards of the Nasdaq Stock Market, except for such provisions requiring that all members be independent. We intend to appoint one more independent director to our audit committee, at which time Mr. Stadheim shall resign from the committee, in order to achieve compliance with the Nasdaq Stock Market Rules and Rule 10A-3 under the Exchange Act relating to audit committee composition within the timeline allowed for under Nasdaq Stock Market Rule 5615(b) and Rule 10A-3(b)(1)(iv)(A) under the Exchange Act.

Compensation Committee

Our compensation committee consists of Dr. Cleavelin and Mr. Gerber, with Dr. Cleavelin serving as Chairperson. The composition of our compensation committee meets the requirements for independence under Nasdaq Stock Market listing standards and SEC rules and regulations. Each member of the compensation committee is also a nonemployee director, as defined pursuant to Rule 16b-3 promulgated under the Exchange Act, and an outside director, as defined pursuant to Section 162(m) of the Internal Revenue Code of 1986, as amended, or the Code. The purpose of our compensation committee is to discharge the responsibilities of our board of directors relating to compensation of our executive officers. Our compensation committee will, among other things:

- review, approve and determine the compensation of our executive officers;
- administer our stock and equity incentive plans;
- make recommendations to our board of directors regarding the establishment and terms of incentive compensation and equity plans; and
- establish and review general policies relating to compensation and benefits of our employees.

Our compensation committee operates under a written charter that satisfies the applicable rules of the SEC and the listing standards of the Nasdaq Stock Market.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee consists of Mr. Gerber and Dr. Cleavelin, with Mr. Gerber serving as Chairperson. The composition of our nominating and corporate governance committee meets the requirements for independence under Nasdaq Stock Market listing standards and SEC rules and regulations. Our nominating and corporate governance committee will, among other things:

- identify, evaluate and make recommendations to our board of directors regarding nominees for election to our board of directors and its committees;
- evaluate the performance of our board of directors and of individual directors;
- consider and make recommendations to our board of directors regarding the composition of our board of directors and its committees;
- review developments in corporate governance practices;
- evaluate the adequacy of our corporate governance practices and reporting; and
- develop and make recommendations to our board of directors regarding corporate governance guidelines and matters.

The nominating and corporate governance committee operates under a written charter that satisfies the applicable listing requirements and rules of the Nasdaq Stock Market.

Compensation Committee Interlocks and Insider Participation

None of our independent directors is currently or has been at any time one of our officers or employees. None of our executive officers currently serves, or has served during the last year, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors.

Executive Compensation

Summary Compensation Table

The following table sets forth the compensation awarded to, earned by or paid to, our chief executive officer and our other two highest paid executive officers for the years ended December 31, 2015 and 2014. In reviewing the table, please note that:

- Mr. Trautmann served as our chief executive officer from September 2011 to October 2015;
- Mr. Bibaud, our current chief executive officer, commenced his employment with us in October 2015;
 and
- Ron Cope served as our chief operating officer from September 2011 to June 2016.

					All Oth	ıer		
Year		Salary	Op	tion Awards ⁽¹⁾	Compens	sation		Total
2015	\$	62,600	\$	719,003		_	\$	781,603
2014		_		_		_		_
2015	\$	228,000	\$	110,679		_	\$	338,679
2014	\$	207,000		_		_	\$	207,000
2015	\$	220,000	\$	41,070		_	\$	261,070
2014	\$	220,000		_	\$	1,780(2)	\$	221,780
2015	\$	156,000	\$	93,170		_	\$	249,170
2014	\$	135,000		_		—	\$	135,000
	2015 2014 2015 2014 2015 2014 2015	2015 \$ 2014 \$ 2015 \$ 2014 \$ 2015 \$ 2014 \$ 2015 \$ 2014 \$	2015 \$ 62,600 2014 —— 2015 \$ 228,000 2014 \$ 207,000 2015 \$ 220,000 2014 \$ 220,000 2015 \$ 156,000	2015 \$ 62,600 \$ 2014 — 2015 \$ 228,000 \$ 2014 \$ 207,000 2015 \$ 220,000 \$ 2014 \$ 220,000 \$ 2015 \$ 156,000 \$	2015 \$ 62,600 \$ 719,003 2014 — — — — — — — — — — — — — — — — — — —	Year Salary Option Awards (1) Compens 2015 \$ 62,600 \$ 719,003 - 2014 - - - 2015 \$ 228,000 \$ 110,679 - 2014 \$ 207,000 - - 2014 \$ 220,000 \$ 41,070 - 2015 \$ 156,000 \$ 93,170	Year Salary Option Awards (1) Compensation 2015 \$ 62,600 \$ 719,003 — 2014 — — — 2015 \$ 228,000 \$ 110,679 — 2014 \$ 207,000 — — 2015 \$ 220,000 \$ 41,070 — 2014 \$ 220,000 — \$ 1,780(2) 2015 \$ 156,000 \$ 93,170 —	2015 \$ 62,600 \$ 719,003 — \$ 2014 — — — \$ 2015 \$ 228,000 \$ 110,679 — \$ 2014 \$ 207,000 — — \$ 2015 \$ 220,000 \$ 41,070 — \$ 2014 \$ 220,000 — \$ 1,780(2) \$ 2015 \$ 156,000 \$ 93,170 — \$

⁽¹⁾ The dollar amounts in the Option Awards column reflect the values of options as of the grant date in accordance with ASC 718, Compensation-Stock Compensation and, therefore, do not necessarily reflect actual benefits received by the individuals. Assumptions used in the calculation of these amounts are included in Note 11 to our audited financial statements.

(2) Reflects payment by us of life insurance premiums for the benefit of Dr. Mears.

Narrative Disclosure to Summary Compensation Table

Bibaud Employment Agreement

We entered into an employment agreement with Mr. Bibaud, our chief executive officer, in October 2015. Pursuant to the employment agreement, we compensate Mr. Bibaud at the annual rate of \$250,000. Upon the completion of this offering, Mr. Bibaud's employment agreement entitles him to a \$250,000 incentive bonus and an increase in base salary to \$300,000. Mr. Bibaud is eligible to receive an annual bonus of up to 50% of his base salary based on performance criteria set by our compensation committee and is also eligible for participation in long-term incentive compensation plans. Mr. Bibaud's employment agreement entitles him to reasonable and customary health insurance and other benefits, at our expense, and a severance payment in the amount of eighteen months of his base salary in the event of an involuntary termination of his employment.

In connection with his employment agreement, we granted Mr. Bibaud options to purchase 303,002 shares of our common stock at an exercise price of \$5.70 per share. 138,515 of Mr. Bibaud's options vest and become exercisable subject to the conversion of all principal and accrued interest under our convertible notes into shares of our common stock on or before May 31, 2017 and, in addition to the performance vesting condition, all of the 303,002 options vest and first become exercisable over a four-year period commencing on the first anniversary of the date of grant. Upon the completion of this offering, Mr. Bibaud is entitled to receive additional stock options, or the gross up options, to purchase 552,341 shares of our common stock which, together with the options discussed above, will represent 6.3% of the outstanding shares of our common stock on a fully-diluted basis after giving effect to this offering and the related stock issuances, at a strike price of the public offering price of this offering. The initial vesting date of the gross up options vest on the later of the one year anniversary of the date of Mr. Bibaud's employment or the completion of this offering. A portion of the gross up options equal to the product of .25 times a fraction, the denominator of which is 12 and the numerator of which is the lesser of 12 and the number of 30-day periods, or portions thereof, or the variable number, between the date of Mr. Bibaud's employment and the initial vesting date of the gross up options will vest on such date, with the remainder vesting in equal monthly installments over 48 months less the variable number. Mr. Bibaud's options were and will be granted pursuant to our 2007 Stock Incentive Plan.

Additional Executive Employment Agreements

In January 2016, we entered into employment agreements with three other executive officers, Erwin Trautmann, Dr. Robert Mears and Ron Cope. Pursuant to those employment agreements, we compensate Mr. Trautmann with an annual salary of \$250,000 and compensate Dr. Mears and compensated Mr. Cope with annual salaries of \$220,000 each. Each officer is or was eligible for an annual

bonus of up to a certain percentage amount of their annual salary (30% for Mr. Trautmann and 15% each for Dr. Mears and Mr. Cope) based on performance criteria set by the compensation committee of our board of directors and to otherwise participate in all other plans that we may establish from to time to time. The employment agreements entitle each officer to reasonable and customary health insurance and other benefits, at our expense, and a severance payment in the amount of six months of their then annual salary and related benefits in the event of our termination of their employment without cause or their resignation for good reason.

In connection with our execution of the employment agreement with Dr. Mears, effective as of January 13, 2016 we awarded Dr. Mears a bonus in the amount of \$187,500, payable in the form of our cancellation of a note payable to us by Dr. Mears in the outstanding principal amount of \$187,500.

In connection with the relocation of our corporate offices from Wellesley Hills, Massachusetts to Los Gatos, California, our board of directors elected to eliminate the position of chief operating officer and dismiss Ron Cope effective as of June 30, 2016. Pursuant to the terms of his employment agreement, Mr. Cope will receive six months severance from the effective date of termination.

In February 2016, we entered into an employment agreement with Francis Laurencio. Pursuant to that employment agreement, we compensate Mr. Laurencio with an annual salary of \$225,000. Mr. Laurencio is eligible for an annual bonus of up to 30% of his annual salary based on performance criteria set by the compensation committee of our board of directors and to otherwise participate in all other plans that we may establish from to time to time. The employment agreement entitles Mr. Laurencio to reasonable and customary health insurance and other benefits, at our expense, and a severance payment in the amount of six months of his then annual salary and related benefits in the event of our termination of his employment without cause or his resignation for good reason.

In connection with his employment agreement, we granted Mr. Laurencio options to purchase 21,834 shares of our common stock at an exercise price of \$5.70 per share. 5,661 of Mr. Laurencio's options vest and become exercisable subject to the conversion of all principal and accrued interest under our convertible notes into shares of our common stock on or before May 31, 2017 and, in addition to the performance vesting condition, all of the 21,834 options vest and first become exercisable over a four-year period commencing on the first anniversary of the date of grant. Upon the completion of our IPO, Mr. Laurencio is entitled to receive additional stock options, or the gross up options, to purchase 161,454 shares of our common stock which, together with the options discussed above, will represent 1.35% of the outstanding shares of our common stock on a fully-diluted basis after giving effect to the IPO and the related stock issuances, at a strike price of the IPO price. The initial vesting date of the gross up options vest on the later of the one year anniversary of the date of Laurencio's employment or the completion of the IPO. A portion of the gross up options equal to the product of .25 times a fraction, the denominator of which is 12 and the numerator of which is the lesser of 12 and the number of 30-day periods, or portions thereof, or the variable number, between the date of Mr. Laurencio's employment and the initial vesting date of the gross up options will vest on such date, with the remainder vesting in equal monthly installments over 48 months less the variable number. Laurencio's options were and will be granted pursuant to our 2007 Stock Incentive Plan.

The employment agreements with our executive officers were unanimously approved by our full board of directors. No officer or employee of our company was involved in the board's deliberation over the employment agreements of our executive officers, other than those directors who also serve as officers of our company, Scott Bibaud and Erwin Trautmann.

Management Share Bonuses

In September 2015, we have agreed to provide incentive bonuses to certain of our officers and directors contingent upon the completion of this offering on a sale of the Company and each individual's continued engagement with us as an officer or director, as applicable, until the completion of either event; provided, in the case of an IPO, that we receive net proceeds of at least \$15 million and realize a post-offering valuation of our company of at least \$50 million, and that the officer or director remains in service to us through the close of the offering, except in cases where we terminate the officer without cause or the officer resigns for good reason. In June 2016, we dismissed Ron Cope, our former chief operating officer, without cause, and Mr. Cope remains eligible to receive the management share bonus. In July 2016, we reached an agreement with the recipients of the share bonuses to cancel their aforementioned share bonuses in return for our agreement to grant each recipient, upon the close of this offering, shares of our restricted common stock pursuant to a restricted stock agreement. The restricted stock agreements provided that we issue to each of the recipients shares of our common stock, in the share amounts set forth below, and that all shares remain subject to forfeiture, until the prescribed vesting date, in the event the recipient fails to remain in service to us for any reason other than our termination without cause or the recipient's termination for good reason. The restricted stock agreements provide that 15% of the share award will vest upon the six month anniversary of the date of grant and that 15% of the share award will vest on each monthly anniversary of the initial vesting date until the award is fully vested on the one year anniversary of the date of grant. The restricted common shares will be granted under our 2007 Stock Incentive Plan and will be subject to required tax withholding. The recipients and their respective share amounts are as follows:

Name	Sha	re Amount
John Gerber	\$	200,000
Erwin Trautmann	\$	133,603

Ron Cope	\$ 79,158
Dr. Robert Mears	\$ 20,798
C. Rinn Cleavelin, Ph.D.	\$ 6,805

Compensation of Directors

We do not compensate any of our executive directors for their service as a director and we have not adopted any policies or plans with regard to the compensation of our independent directors. However, we reimburse our independent directors for their reasonable expenses incurred in connection with attending meetings of our board of directors. We have engaged a member of our board, C. Rinn Cleavelin, Ph.D., to provide consulting services to us from time to time. We have paid Dr. Cleavelin consulting fees of \$10,000 during each of fiscal years 2014 and 2015.

Related Party Transactions

On January 14, 2005, we entered into a loan transaction with Dr. Robert Mears pursuant to which we loaned Dr. Mears \$187,500. Pursuant to the loan agreements, the loan to Dr. Mears bore interest at the rate of 3.67% per year and required the payment of interest only until the loan maturity date, at which time all principal and accrued interest was payable. The loan was secured by shares of our common stock owned by Dr. Mears. In December 2015, we agreed to extend the term of Dr. Mears' loan to January 14, 2019, subject to acceleration in the event of the sale of our Company or our liquidation, bankruptcy or like event. Effective as of January 13, 2016, we awarded Dr. Mears with a bonus in the amount of \$187,500, payable in the form of our cancellation of the outstanding principal amount under the note in the amount of \$187,500. As of the date of the award, there was accrued and unpaid interest under the note in the amount of \$7,050, which Dr. Mears remains obligated to pay. In return for the cancellation of the principal amount under the note, Dr. Mears was required to reimburse us for withholding taxes payable by us, in the amount of \$13,998, in connection with the \$187,500 award.

Between 2013 and 2016, we conducted private placements of our convertible promissory notes. Certain of our officers and directors participated in the placements and purchased convertible notes in the

aggregate principal amount of \$3,347,607, representing 16.2% of the convertibles notes sold by us, including notes in the principal amount of \$625,331 purchased by John Gerber, \$985,115 purchased by Rolf Stadheim, \$25,000 purchased by Scott Bibaud, \$1,278,536 purchased by K2 Energy Limited, an entity controlled by a former director, Samuel Gazal, and \$433,625 purchased by a former director, Rosalie Stahl.

A member of our board of directors, Rolf Stadheim, is a partner of a law firm that serves as legal counsel to our company in connection with our civil action against Finisar Corporation. See, "Our Business- Litigation." Pursuant to our agreement with Mr. Stadheim's firm, the law firm is responsible for paying all of our out-of-pocket costs and expenses associated with the Finisar litigation incurred after the date of this prospectus, including any claims by Finisar for the reimbursement of its fees and costs involved in the action. During fiscal 2014 and 2015, the law firm billed us approximately \$19,700 and \$236,600, respectively. During fiscal 2014 and 2015, we paid \$-0- and \$277,580, respectively, to the law firm. We owed the law firm \$1,310 as of March 31, 2016.

In April 2009, we acquired the rights to several US and foreign patents relating to optical communication technologies from our founder, Dr Robert Mears, and three other co-inventors, none of whom are affiliated with us. The inventions covered by the assigned patents had been developed by Dr. Mears and his co-inventors prior to Dr. Mears's founding of our company's business. Pursuant to the patent assignment agreement, we are required to pay to Dr. Mears and the three other co-inventors 10% each of all revenue derived by us from the assigned patents. The assigned patents do not relate to our core MST *technology, however they are the subject of certain litigation initiated by us against Finisar Corporation discussed in "Our Business — Litigation".

Except as set forth above, we have not entered into any transactions with any of our directors, officers, beneficial owners of five percent or more of our common shares, any immediate family members of the foregoing or entities of which any of the foregoing are also officers or directors or in which they have a material financial interest, other than the compensatory arrangements described elsewhere in this prospectus. We have adopted a policy that any transactions with directors, officers, beneficial owners of five percent or more of our common stock, any immediate family members of the foregoing or entities of which any of the foregoing are also officers or directors or in which they have a financial interest, will only be on terms consistent with industry standards and approved by a majority of the disinterested directors of our board.

Limitation of Liability of Directors and Indemnification of Directors and Officers

The Delaware General Corporation Law provides that corporations may include a provision in their certificate of incorporation relieving directors of monetary liability for breach of their fiduciary duty as directors, provided that such provision shall not eliminate or limit the liability of a director (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) for unlawful payment of a dividend or unlawful stock purchase or redemption, or (iv) for any transaction from which the director derived an improper personal benefit. Our certificate of incorporation provides that directors are not liable to us or our stockholders for monetary damages for breach of their fiduciary duty as directors to the fullest extent permitted by Delaware law. In addition to the foregoing, our certificate of incorporation provides that we may indemnify directors and officers to the fullest extent permitted by law.

The above provisions in our certificate of incorporation may have the effect of reducing the likelihood of derivative litigation against directors and may discourage or deter stockholders or management from bringing a lawsuit against directors for breach of their fiduciary duty, even though such an action, if successful, might otherwise have benefited us and our stockholders. However, we believe that the foregoing provisions are necessary to attract and retain qualified persons as directors.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information regarding the beneficial ownership of our common stock as of the date of this prospectus by:

- each person who is known by us to be the beneficial owner of more than five percent (5%) of our issued and outstanding shares of common stock;
- · each of our directors and executive officers; and
- all directors and executive officers as a group.

The beneficial ownership of each person was calculated based on 8,123,226 shares of common stock issued and outstanding prior to the offering, including 1,617,313 shares issued and outstanding as of the date of this prospectus, our issuance of 440,364 shares of common stock as bonuses to certain members of management upon completion of this offering and 6,065,549 shares issuable upon the conversion of our outstanding convertible notes (including \$2,037,337 of accrued interest as of March 31, 2016). The SEC has defined "beneficial ownership" to mean more than ownership in the usual sense. For example, a person has beneficial ownership of a share not only if he owns it, but also if he has the power (solely or shared) to vote, sell or otherwise dispose of the share. Beneficial ownership also includes the number of shares that a person has the right to acquire within 60 days of the date of this prospectus, pursuant to the exercise of options or warrants or the conversion of notes, debentures or other indebtedness. Two or more persons might count as beneficial owners of the same share. Unless otherwise indicated, the address for each reporting person is 750 University, Suite 280, Los Gatos, California 95032.

Name of Director or Executive Officer	Number of Shares	Percentage Owned Prior to Offering (1)	Percentage Owned After Offering ⁽²⁾
John Gerber	404,052(3)	% 5.0	3.6%
Scott Bibaud	$6,666_{(4)}$	*	*
Erwin Trautmann	195,369(5)	2.4%	1.7%
Dr. Robert Mears	66,933(6)	*	*
Francis Laurencio	(7)	_	_
C. Rinn Cleavelin, Ph.D.	13,355(8)	*	*
Rolf Stadheim	292,341 ₍₉₎	3.6%	2.6%
Directors and executive officers as a group	978,716	12.0%	8.6%

^{*} Less than 1%.

Name and Address of 5% + Holders	Number of Shares	Percentage Owned Prior to Offering (1)	Percentage Owned After Offering ⁽²⁾
Vulpes Innovative Technologies Investment Company Pte			·
Ltd.			
One George Street			
Floor 07, Unit 03			
Singapore, 049145	673,777(10)	8.3%	6.0%
K2 Energy Limited			
Level 2, 27 Macquarie Place			
Sydney NSW 2000	508,838(11)	6.3%	4.5%

¹ Assumes the issuance of 6,065,549 shares of our common stock upon the conversion of our convertible notes and 440,364 shares of common stock as bonuses to certain members of management.

² Assumes the sale of 3,200,000 shares of our common stock in the present offering.

Includes 366,755 shares of our common stock to be issued upon the completion of this offering, including 166,755 shares issuable upon conversion of convertible notes in the principal amount of \$625,332 and 200,000 shares issuable as a bonus.

- Includes 6,666 shares of our common stock issuable upon conversion of a convertible note in the principal amount of \$25,000. Does not include 303,002 shares of common stock underlying an outstanding option subject to vesting or an additional option to be granted to Mr. Bibaud upon the completion of this offering to purchase 552,341 shares of common stock which, along with the aforementioned option, will entitle him to purchase 6.3% of our shares of common stock outstanding upon the completion of this offering, calculated on a fully-diluted basis.
- 5 Includes 133,603 shares of our common stock to be issued upon the completion of this offering as a management bonus.
- 6 Includes 20,798 shares of our common stock to be issued upon the completion of this offering as a management bonus.
- Does not include 21,834 shares of common stock underlying an outstanding option subject to vesting or an additional option to be granted to Mr. Laurencio upon the completion of this offering to purchase 161,454 shares of common stock which, along with the aforementioned option, will entitle him to purchase 1.35% of our shares of common stock outstanding upon the completion of this offering, calculated on a fully-diluted basis.
- 8 Includes 6,805 shares of our common stock to be issued upon the completion of this offering as a management bonus.
- Includes 262,697 shares of our common stock to be issued upon the completion of this offering pursuant to the conversion of a convertible note in the principal amount of \$985,115.
- 10 Includes 431,238 shares of our common stock to be issued upon the completion of this offering pursuant to the conversion of convertible notes in the principal amount of \$1,617,143.
- 11 Includes 340,943 shares of our common stock to be issued upon the completion of this offering pursuant to the conversion of a convertible note in the principal amount of \$1,278,536.

ESTIMATED USE OF PROCEEDS

After the payment of underwriting discounts of 8.3% on the sale of the shares offered hereby and estimated offering expenses of \$685,000, the net proceeds of this offering will be approximately \$21,323,000. We intend to apply the estimated net proceeds of the offering as follows:

	Amount	Percent
Development engineering	\$ 13,817,304	64.8%
Business development, sales and marketing	\$ 3,326,388	15.6%
Research	\$ 1,513,933	7.1%
Working Capital	\$ 2,665,375	12.5%
Total Net Proceeds	\$ 21,323,000	100%

We intend to apply approximately \$13.8 million of the net proceeds of this offering towards development engineering, which will consist primarily of our further development and qualification of MST * and the evaluation, testing and engineering involved in the formal product qualification process undertaken by our potential customers. As our marketing and business development efforts lead to a significant indication of interest on the part of a potential customer, we will engage in development engineering for purposes of characterizing our solution to the goals and needs of the customer, and work with customer to tune our MST * to their unique production process and equipment.

We intend to apply approximately \$3.3 million of the net proceeds of this offering towards business development, marketing and sales. In the initial stages of our marketing and business development, we expect to spend a significant amount of time and capital in defining the benefits of MST * for each target customer, including simulation, modeling, data collection, marketing costs, market research, partnership development, and business development efforts.

We intend to apply approximately \$1.5 million of the net proceeds of this offering towards research spending, including long-term investigation into additional advanced materials and techniques for our platform, efforts with our academic and scientific partners, and maintenance of our patent portfolio.

The net proceeds allocated towards working capital will be applied towards our costs of facilities, information technology, public company related costs, including accounting and legal, along with normal recurring general and administrative expenses.

Our estimated use of proceeds is based on our current assumptions and estimates concerning the costs and timelines of securing one or more IDMs or fabless semiconductor manufacturers to qualify and license MST * technology and start full-scale industrial production of a device that incorporates our MST * technology. If our assumptions or estimates prove to be inaccurate, we may require additional funds in order to carry out the activities described above. In addition, the expected allocation of net proceeds set forth above represents our best estimates based upon our present plans and our assumptions regarding industry conditions and our anticipated future revenues and expenditures. We may find it necessary to reallocate some of the proceeds within the above-described categories or to use portions thereof for other purposes in order to carry out our business plan if those assumptions change.

If the underwriter exercises its right to purchase additional 480,000 shares of common stock to cover overallotments, we may receive up to an additional \$3,301,200, after deducting \$298,800 for underwriting discounts. We intend to apply any net proceeds from the exercise of the overallotment option to working capital. Pending the uses described above, we intend to invest the net proceeds from this offering in short-term, investment-grade interest-bearing securities such as money market accounts, certificates of deposit, commercial paper, and guaranteed obligations of the U.S. government.

CAPITALIZATION

The following table sets forth our capitalization as of March 31, 2016 on:

- an actual basis;
- a pro forma basis, giving effect to our issuance of additional convertible notes in the aggregate principal amount of \$5.96 million on April 1, 2016 and our receipt of net cash proceeds of \$5.47 million and the automatic conversion of all \$20.71 million principal amount, net, of our convertible notes, and \$2,037,337 of accrued interest thereon as of March 31, 2016, into 6,065,549 shares of common stock, effective immediately upon the consummation of this offering as if such conversion had occurred on March 31, 2016; and
- a pro forma as adjusted basis to reflect, in addition, our sale of 3,200,000 shares of common stock in this offering at the initial public offering price of \$7.50 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

You should read the information in this table together with our consolidated financial statements and related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere in this prospectus.

	As of March 31, 2016					
		Actual (1) Pro l		Forma ⁽²⁾	Pro Forma As Adjusted	
Convertible notes, net	\$	16,657,046	\$	_	\$	
Stockholders' (deficit) equity:						
Common stock, \$0.001 par value, 47,500,000 shares authorized, 1,617,313 shares issued and outstanding, actual; 7,682,862 shares issued and outstanding, pro forma; 11,323,226 shares issued and outstanding, pro forma as adjusted Preferred stock, \$0.001 par value, 2,500,000 shares authorized, no shares issued and outstanding		1,617		7,683		11,323
Additional paid-in capital		70,508,581	0	2 240 225		111567605
• •				3,248,325		114,567,685
Accumulated earnings (deficit)		(85,874,809)	(8	6,496,918)		(86,496,918)
Total stockholders' (deficit) equity		(15,364,611)		6,759,090		28,082,090
Total capitalization	\$	1,292,435		6,759,090		28,082,090

⁽¹⁾ Our convertible notes consist of \$14,750,000 of principal and \$2,037,377 of accrued interest, net of debt discount representing the unamortized commissions and warrant value.

(2) The pro forma column reflects (i) our issuance of additional convertible notes in the aggregate principal amount of \$5.96 million on April 1, 2016 and our receipt of net cash proceeds of \$5.47 million and the automatic conversion of all \$20.71 million principal amount and \$2,037,337 of accrued interest thereon as of March 31, 2016, into an aggregate of 6,065,549 shares of common stock and reclassified to common stock and additional paid in capital and (ii) our issuance of 440,364 shares of common stock issuable as bonuses to certain members of management upon completion of this offering.

The number of shares of our common stock to be outstanding after this offering is based on 1,617,313 shares of our common stock outstanding as of the date of this prospectus, plus 440,364 shares of common stock issuable as bonuses to certain members of management upon completion of this offering and 6,065,549 shares common stock issuable upon conversion of our convertible notes as of March 31, 2016, and excludes:

- 538,014 shares of our common stock issuable upon exercise of outstanding options granted pursuant to our 2007 Stock Incentive Plan;
- 713,795 shares of our common stock underlying options to be granted to our chief executive officer and chief financial officer upon the completion of this offering;
- 398,965 shares of our common stock issuable upon exercise of outstanding warrants;
- up to 480,000 shares issuable pursuant to the underwriter's over-allotment option;
- · shares of our common stock reserved for future grants pursuant to our 2007 Stock Incentive Plan; and
- the shares of our common stock issuable upon exercise of the underwriter's warrant.

DILUTION

If you invest in our common stock, your interest will be diluted to the extent of the difference between the amount per share paid by purchasers of shares of common stock in this offering and the pro forma as adjusted net tangible book value per share of common stock immediately after the completion of this offering.

As of March 31, 2016, our pro forma net tangible book value was approximately \$6,759,090, or \$0.88 per share of common stock. Our pro forma net tangible book value per share represents the amount of our total tangible assets reduced by the amount of our total liabilities and divided by the total number of shares of our common stock outstanding as of March 31, 2016, assuming (i) our issuance of additional convertible notes in the aggregate principal amount of \$5.96 million on April 1, 2016 and our receipt of net cash proceeds of \$5.47 million and the conversion of approximately \$22.74 million of indebtedness relating to our convertible notes and related interest into 6,065,549 shares of common stock the resulting elimination of the derivative liability related to the debt effective upon the completion of this offering and (ii) our issuance of 440,364 shares of common stock as bonuses to certain members of management upon completion of this offering.

After giving effect to our sale in this offering of 3,200,000 shares of our common stock, at the initial public offering price of \$7.50 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of March 31, 2016 would have been approximately \$28,019,090, or \$2.47 per share of our common stock. This represents an immediate increase in pro forma as adjusted net tangible book value of \$1.59 per share to our existing stockholders and an immediate dilution of \$4.93 per share to investors purchasing shares in this offering.

The following table illustrates this dilution:

Initial public offering price per share		\$ 7.50
Pro forma net tangible book value per share as of March 31, 2016, before giving effect to this offering	\$ 0.88	
Increase in pro forma net tangible book value per share attributable to new investors purchasing shares in this offering	 1.60	
Pro forma as adjusted net tangible book value per share, after giving effect to this offering		\$ 2.48
Dilution per share to new investors purchasing shares in this offering		\$ 5.02

If the underwriter exercises its over-allotment option in full, the pro forma as adjusted net tangible book value per share of our common stock would be \$2.66 per share, and the dilution per share to new investors purchasing shares in this offering would be \$4.84 per share.

The following table summarizes, on a pro forma as adjusted basis as of March 31, 2016 after giving effect to (i) our issuance of additional convertible notes in the aggregate principal amount of \$5.96 million on April 1, 2016 and our receipt of net cash proceeds of \$5.47 million and the automatic conversion of approximately \$22.74 million principal amount of indebtedness related to our convertible notes into shares of common stock and (ii) completion of this offering at the initial public offering price of \$7.50 per share, the difference between existing stockholders and new investors with respect to the number of shares of common stock purchased from us, the total consideration paid to us and the average price per share paid, before deducting underwriting discounts and commissions and estimated offering expenses:

	Shares Pu	rchased	Total Consideration			Average Price	
	Number	Percent	Amount	Percent	1	Per Share	
Existing stockholders	8,123,226	71.7%	\$ 81,731,612	77.3%	\$	10.06	
New public investors	3,200,000	28.3%	24,000,000	22.7 %	\$	7.50	
Total	11,323,226	100.0%	\$ 105,731,612	100.0%			

To the extent that our outstanding warrants are exercised, investors will experience further dilution.

Except as otherwise indicated, the above discussion and tables assume no exercise of the underwriter's over-allotment option. If the underwriter exercises its over-allotment option in full, our existing stockholders would own 68.8% and our new investors would own 31.2% of the total number of shares of our common stock outstanding upon the completion of this offering.

The number of shares of our common stock held by existing stockholders is based on 1,617,313 shares of common stock outstanding as of the date of this prospectus, plus 440,364 shares of common stock to be issued as bonuses to certain members of management upon completion of this offering and 6,065,549 shares common stock issuable upon conversion of our convertible notes (including accrued interest as of March 31, 2016) and excludes:

- 538,014 shares of our common stock issuable upon exercise of outstanding options granted pursuant to our 2007 Stock Incentive Plan;
- 713,795 shares of our common stock underlying options to be granted to our chief executive officer and chief financial officer upon the completion of this offering;
- 398,965 shares of our common stock issuable upon exercise of outstanding warrants;
- up to 480,000 shares issuable pursuant to the underwriter's over-allotment option;
- shares of our common stock reserved for future grants pursuant to our 2007 Stock Incentive Plan; and
- the shares of our common stock issuable upon exercise of the underwriter's warrant.

DESCRIPTION OF SECURITIES

Common Stock

We are authorized to issue 47,500,000 shares of \$0.001 par value common stock. As of the date of this prospectus, there are 1,617,313 shares of our common stock issued and outstanding. Except as described below, there are no other agreements or outstanding options, warrants or similar rights that entitle their holder to acquire from us any of our equity securities.

Holders of shares of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders generally. Stockholders are entitled to receive such dividends as may be declared from time to time by the board of directors out of funds legally available therefore, and in the event of liquidation, dissolution or winding up of the company to share ratably in all assets remaining after payment of liabilities. The holders of shares of common stock have no preemptive, conversion, subscription rights or cumulative voting rights.

Record Holders

As of the date of this prospectus, our outstanding shares of common stock were held of record by approximately 278 stockholders.

Preferred Stock

We are authorized to issue 2,500,000 shares of preferred stock. Our board of directors is authorized to issue from time to time, without stockholder authorization, in one or more designated series or classes, any or all of the authorized but unissued shares of preferred stock with such dividend, redemption, conversion and exchange provisions as may be provided in the particular series. Any series of preferred stock may possess voting, dividend, liquidation and redemption rights superior to that of the common stock. The rights of the holders of common stock will be subject to and may be adversely affected by the rights of the holders of any preferred stock that may be issued in the future. Issuance of a new series of preferred stock, while providing desirable flexibility in connection with possible acquisition and other corporate purposes, could make it more difficult for a third party to acquire, or discourage a third party from acquiring, a majority of the outstanding voting stock of our company. As of the date of this prospectus, no class or series of preferred stock has been designated and no shares of preferred stock are issued.

Dividends

We do not anticipate the payment of cash dividends on our common stock in the foreseeable future.

Senior Secured Convertible Promissory Notes

On March 17, 2015, we completed the private placement of \$14.75 million of senior secured convertible promissory notes, and on April 1, 2016 we completed the private placement of an additional \$5.96 million in senior secured convertible notes on the same terms as the promissory notes placed in March 2015. We refer to these promissory notes in this prospectus as our "convertible notes". The interest accrues on the unpaid principal amount under the convertible notes at the rate of 10% per year, except during any event of default under the convertible notes in which case the interest rate shall be 12% per year. All principal and interest under the convertible notes are due and payable on May 31, 2017. All principal and interest under the convertible into shares of common stock as follows:

- Upon the consummation of an initial public offering by us, all principal and interest shall automatically convert at 50% of the IPO price, provided, however, in no event shall the conversion price be greater than \$7.362 nor less than \$3.681 per share;
- In the event of a subsequent private placement approved by the holders of 50% or more of the aggregate principal amount of all convertible notes, all principal and interest shall automatically convert at 50% of the offer price in the subsequent private placement, provided, however, in no event shall the conversion price be greater than \$7.362 nor less than \$3.681 per share; and
- Until the 10 th day prior to the consummation of an IPO by us, a holder of the convertible note, at its option, may convert at a conversion price of \$7.362 per share.

We granted to the holders of the convertible notes one-time demand registration rights exercisable by the holders of 50% or more of the aggregate principal amount of all notes and certain piggyback registration rights. However, the note holders have agreed that in connection with the present offering not to sell, transfer or pledge, or offering to do any of the same, directly or

indirectly, any of our securities for a period 180 days following the close of this offering, subject to extensions under certain circumstances of up to a total of 216 days following this offering. On the 181 st day following the close of this offering (subject to the potential extension described above) and on every subsequent 31 st day thereafter, 15% of such holder's securities shall be released from the lock-up until the 366 th day following the close of this offering, as of which none of such holder's securities shall be subject to the lock-up.

We have issued and outstanding convertible promissory notes in the aggregate principal amount of \$20.71 million, with accrued and unpaid interest as of March 31, 2016 in the amount of approximately \$2,037,337. Pursuant to the terms of our convertible notes, all principal and accrued interest under the notes will automatically convert into shares of our common stock, at the conversion price of \$3.75 per share.

Management Share Bonuses

In September 2015, we agreed to provide incentive bonuses to certain of our officers and directors contingent upon the completion of this offering or a sale of the Company and each individual's continued engagement with us as an officer or director, as applicable, until the completion of either event; provided that, in the case of an IPO, we receive net proceeds of at least \$15 million and realize a post-offering valuation of our Company of at least \$50 million, and that the officer or director remains in service to us through the close of the offering, except in cases where we terminate the officer without cause or the officer resigns for good reason. In June 2016, we dismissed Ron Cope, our former chief operating officer, without cause, and Mr. Cope remains eligible to receive the management share bonus. In July 2016, we reached an agreement with the recipients of the share bonuses to cancel their aforementioned share bonuses in return for our agreement to grant each recipient, upon the close of this offering, shares of our restricted common stock pursuant to a restricted stock agreement. The restricted stock agreements provided that we issue to each of the recipients shares of our common stock, in the share amounts set forth below, and that all shares remain subject to forfeiture, until the prescribed vesting date, in the event the recipient fails to remain in service to us for any reason other than our termination without cause or the recipient's termination for good reason. The restricted stock agreements provide that 15% of the share award will vest upon the six month anniversary of the date of grant and that 15% of the share award will vest on each monthly anniversary of the initial vesting date until the award is fully vested on the one year anniversary of the date of grant. The restricted common shares will be granted under our 2007 Stock Incentive plan and each incentive bonus will be subject to required tax withholding. The recipients and their share amounts are as follows:

Name	Share Amount
John Gerber	200,000
Erwin Trautmann	133,603
Ron Cope	79,158
Dr. Robert Mears	20,798
Rinn Cleavelin, Ph.D.	6,805

2007 Stock Incentive Plan

We have adopted our 2007 Stock Incentive Plan providing for the grant of non-qualified stock options and incentive stock options to purchase shares of our common stock and for the grant of restricted and unrestricted share grants. We currently have reserved 613,333 shares of our common stock under the plan; however, upon completion of this offering the number of shares reserved for issuance under the plan shall increase to 20% of our outstanding shares of common stock calculated on a fully diluted basis. The purpose of the plan is to provide eligible participants with an opportunity to acquire an ownership interest in our company. All officers, directors, employees and consultants to our company are eligible to participate under the plan. The plan provides that options may not be granted at an exercise price less than the fair market value of our common shares on the date of grant. As of the date of this prospectus, we have outstanding options to purchase an aggregate of 538,014 shares of our common stock at an average exercise price of \$6.98 per share, exclusive of certain gross-up options to purchase 612,280 shares of common stock to be granted to our chief executive officer and chief financial officer upon completion of this offering.

Warrants

Upon the completion of this offering, we will have outstanding the following warrants to purchase shares of our common stock:

- warrants to purchase 3,596 shares of our common stock at an average exercise price of \$33.75 per share, which warrants were issued in connection with past equity financings;
- warrants to purchase 198,767 shares of our common stock, of which warrants to purchase 188,829 are
 exercisable at \$0.87 per share and warrants to purchase 9,938 shares are exercisable at \$0.15 per share.
 The warrants were issued on February 9, 2015 to Liquid Patent Advisors, LLC (formerly known as
 Liquid Patent Consulting, LLC) as consideration for consulting services, (some of which warrants were
 subsequently transferred by Liquid Patent Advisors, LLC to other persons;

- warrants to purchase 196,602 shares of our common stock issued to National Securities Corporation on March 17, 2015 as placement agent compensation in connection with our March 2015 placement of convertible notes, which equals 10% of our common stock issuable upon conversion of convertible notes in the original principal amount of \$7,372,557, sold in the placement by National Securities, at an exercise price equal to the note conversion price of \$3.75 per share (some of which warrants were subsequently transferred by National Securities Corporation to other persons); and
- the underwriter's warrant to purchase a number of shares of our common stock equal to 10% of the number of shares of common stock sold in this offering, including the over-allotment, at an exercise price equal to 125% of the price of the common stock sold in this offering.

The warrants contain provisions for the adjustment of the exercise price and the number of shares issuable upon the exercise of the warrants in the event of certain stock dividends, stock splits, reorganizations, reclassifications and consolidations. The holders of the shares issuable upon exercise of the warrants issued to Liquid Patent Advisors, LLC and National Securities Corporation are entitled to registration rights with respect to such shares as described in greater detail under the heading "Registration Rights" below.

Registration Rights

Following the completion of this offering, certain holders of an aggregate of 6,577,659 shares of our common stock, or their permitted transferees, are entitled to rights with respect to the registration under the Securities Act of their shares of common stock, including demand registration rights and piggyback registration rights. These rights are provided under the terms of two registration rights agreements between us and the holders of our capital stock. In any registration made pursuant to these agreements, all fees, costs and expenses of the registrations will be borne by us, and all selling expenses, including estimated underwriting discounts and selling commissions, will be borne by the holders of the shares being registered.

In connection with our March 2015 and April 2016 convertible note financings, in which we issued \$20.71 million principal amount of our convertible notes, which notes will automatically convert into an aggregate of 6,065,549 shares of our common stock effective upon the completion of this offering. We entered into a registration rights agreement with the convertible note purchasers pursuant to which we will be required, upon the written request at any time more than 180 days after the completion of this offering by the holders of at least 50% of the shares that are entitled to registration rights under the agreement, to register, as soon as practicable, all or a portion of these shares for public resale. We are required to effect only one registration pursuant to this provision of the registration rights agreement. These demand registration rights terminate as to each investor when their shares subject to the registration rights agreement may be sold by the investor pursuant to Rule 144 under the Securities Act without regard to both the volume limitations for sales as provided in Rule 144.

In connection with our issuance to Liquid Patent Advisors, LLC of warrants to purchase 198,767 shares of our common stock and our issuance to National Securities Corporation of warrants to purchase 196,602 shares of our common stock in connection with the March 2015 private placement of convertible notes, we entered into a registration rights agreement with Liquid Patent Advisors, LLC and National Securities Corporation pursuant to which we will be required, upon the written request at any time more than 180 days after the completion of this offering by the holders of at least 50% of the shares that are entitled to registration rights under that agreement and the registration rights agreement entered into with the convertible note investors, as a group, to register, as soon as practicable, all or a portion of these shares for public resale. We are required to effect only one registration pursuant to this provision of the registration rights agreement. These demand registration rights terminate as to each stockholder when their shares subject to the registration rights agreement may be sold by the investor pursuant to Rule 144 under the Securities Act without regard to both the volume limitations for sales as provided in Rule 144.

In addition, the two above-mentioned registration rights agreements each contain piggyback registration rights with respect our capital stock held by these investors. These piggyback registration rights terminate with respect to each stockholder when their shares subject to the registration rights agreement may be sold by the stockholder pursuant to Rule 144 under the Securities Act without regard to both the volume limitations for sales as provided in Rule 144.

If we register any of our securities for our own account, after the completion of this offering, the holders of these shares are entitled to include their shares in the registration. Both we and the underwriters of any underwritten offering have the right to limit the number of shares registered by these holders for marketing reasons, subject to limitations set forth in the respective agreements with these investors.

Anti-Takeover Effects of Certain Provisions of Delaware Law and Our Charter Documents

The following is a summary of certain provisions of Delaware law, our Certificate of Incorporation and our bylaws. This summary does not purport to be complete and is qualified in its entirety by reference to the corporate law of Delaware and our Certificate of Incorporation and bylaws.

Effect of Delaware Anti-Takeover Statute. We are subject to Section 203 of the Delaware General Corporation Law, an anti-takeover law. In general, Section 203 prohibits a Delaware corporation from engaging in any business combination (as defined below) with any interested stockholder (as defined below) for a period of three years following the date that the stockholder became an interested stockholder, unless:

- prior to that date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares of voting stock outstanding (but not the voting stock owned by the interested stockholder) those shares owned by persons who are directors and officers and by excluding employee stock plans in which employee participants do not have the right to determine whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to that date, the business combination is approved by the board of directors of the
 corporation and authorized at an annual or special meeting of stockholders, and not by written consent,
 by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the
 interested stockholder.

Section 203 defines "business combination" to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to limited exceptions, any transaction involving the corporation that has the effect of increasing
 the proportionate share of the stock of any class or series of the corporation beneficially owned by the
 interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation, or who beneficially owns 15% or more of the outstanding voting stock of the corporation at any time within a three-year period immediately prior to the date of determining whether such person is an interested stockholder, and any entity or person affiliated with or controlling or controlled by any of these entities or persons.

Our Charter Documents. Our charter documents include provisions that may have the effect of discouraging, delaying or preventing a change in control or an unsolicited acquisition proposal that a stockholder might consider favorable, including a proposal that might result in the payment of a premium over the market price for the shares held by our stockholders. Certain of these provisions are summarized in the following paragraphs.

Effects of authorized but unissued common stock. One of the effects of the existence of authorized but unissued common stock may be to enable our board of directors to make more difficult or to discourage an attempt to obtain control of our Company by means of a merger, tender offer, proxy contest or otherwise, and thereby to protect the continuity of management. If, in the due exercise of its fiduciary obligations, the board of directors were to determine that a takeover proposal was not in our best interest, such shares could be issued by the board of directors without stockholder approval in one or more transactions that might prevent or render more difficult or costly the completion of the takeover transaction by diluting the voting or other rights

of the proposed acquirer or insurgent stockholder group, by putting a substantial voting block in institutional or other hands that might undertake to support the position of the incumbent board of directors, by effecting an acquisition that might complicate or preclude the takeover, or otherwise.

Effects of authorized but unissued preferred stock Our board of directors is authorized, without stockholder approval, to issue preferred stock in series and to fix and state the voting rights and powers, designation, preferences and relative, participating, optional or other special rights of the shares of each such series and the qualifications, limitations and restrictions thereof. Preferred stock may rank prior to our common stock with respect to dividends rights, liquidation preferences, or both, and may have full or limited voting rights. Accordingly, issuance of shares of preferred stock could adversely affect the voting power of holders of our common stock and could have the effect of deterring or delaying an attempt to obtain control of us.

Cumulative Voting. Our Certificate of Incorporation does not provide for cumulative voting in the election of directors, which would allow holders of less than a majority of the stock to elect some directors.

Vacancies. Our Certificate of Incorporation provides that all vacancies may be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum.

Special Meeting of Stockholders and Stockholder Action by Written Consent. A special meeting of stockholders may only be called by our president, board of directors or such officers or other persons as our board may designate at any time and for any purpose or purposes as shall be stated in the notice of the meeting. Our charter documents do not allow stockholders to take action by written consent. Therefore, stockholders, without the assistance of management, will be unable to propose a vote on any transaction that would delay, defer or prevent a change of control, even if the transaction were in the best interests of our stockholders.

Forum Selection. Our bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law or our certificate of incorporation or bylaws, or (iv) any action asserting a claim governed by the internal affairs doctrine.

Transfer Agent and Registrar

Upon the closing of this offering, the transfer agent and registrar for our common stock will be VStock Transfer, LLC, located at 18 Lafayette Place, Woodmere, New York 11598.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for shares of our common stock. Future sales of substantial amounts of shares of common stock, including shares issued upon the exercise of outstanding warrants and options, in the public market after this offering, or the possibility of these sales occurring, could adversely affect the prevailing market price for our common stock or impair our ability to raise equity capital.

Upon the completion of this offering, a total of 11,323,226 shares of common stock will be outstanding, assuming (i) the automatic conversion of all outstanding convertible notes into 6,065,549 shares of common stock in connection with the completion of this offering and (ii) our issuance of 440,364 shares of common stock as bonuses to certain members of management upon completion of this offering. All 3,200,000 shares of common stock sold in this offering by us, plus any shares sold upon exercise of the underwriter's over-allotment option, will be freely tradable in the public market without restriction or further registration under the Securities Act, unless these shares are held by "affiliates," as that term is defined in Rule 144 under the Securities Act.

The remaining 8,123,226 shares of common stock will be "restricted securities," as that term is defined in Rule 144 under the Securities Act. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rules 144 or 701 under the Securities Act, which are summarized below.

Subject to the lock-up agreements described below and the provisions of Rules 144 and 701 under the Securities Act, these restricted securities will begin to be available for sale in the public market beginning more than 180 days after the date of this prospectus.

Rule 144

In general, under Rule 144 as currently in effect, once we have been subject to public company reporting requirements for at least 90 days, a person who is not deemed to have been one of our affiliates for purposes of the Securities Act at any time during the 90 days preceding a sale and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than our affiliates, is entitled to sell such shares without complying with the manner of sale, volume limitation, or notice provisions of Rule 144, subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than our affiliates, then such person is entitled to sell such shares without complying with any of the requirements of Rule 144.

In general, under Rule 144, as currently in effect, our affiliates or persons selling shares on behalf of our affiliates are entitled to sell upon expiration of the lock-up agreements described below, within any three-month period beginning 90 days after the date of this prospectus, a number of shares that does not exceed the greater of:

- 1% of the number of shares of common stock then outstanding; or
- the average weekly trading volume of the common stock during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us.

Rule 701

Rule 701 generally allows a stockholder who purchased shares of our common stock pursuant to a written compensatory plan or contract and who is not deemed to have been one of our affiliates during the immediately preceding 90 days to sell these shares in reliance upon Rule 144, but without being required to comply with the public information, holding period, volume limitation, or notice provisions of Rule 144. Rule 701 also permits our affiliates to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. However, all holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling such shares pursuant to Rule 701.

Lock-Up Agreements

We and all of our directors and officers have agreed in connection with the present offering, that, without the prior written consent of National Securities Corporation, not to sell, transfer or pledge, or offer to do any of the same, directly or indirectly, any of our securities for a period of 12 months following the close of this offering. The holders of substantially all of our other common stock or securities exercisable for or convertible into our common stock outstanding immediately prior to this offering have agreed in connection with the present

offering, that, without the prior written consent of National Securities Corporation, not to sell, transfer or pledge, or offer to do any of the same, directly or indirectly, any of our securities for a period 180 days following the close of this offering, subject to extensions under certain circumstances of up to a total of 216 days following this offering. On the 181 st day following the close of this offering (subject to the potential extension described above) and on every subsequent 31 st day thereafter, 15% of such holder's securities shall be released from the lock-up until the 366 st day following the close of this offering, as of which none of such holder's securities shall be subject to the lock-up.

In connection with our issuance of warrants to purchase shares of our common stock to Liquid Patent Advisors, LLC and National Securities Corporation, including the underwriter warrant to be issued to National Securities upon the completion of this offering, Liquid Patent Advisors and National Securities have agreed not to sell, transfer or pledge, or offering to do any of the same, directly or indirectly, the share of common stock issuable upon exercise of such warrants for a period of 12 months following the close of this offering

Registration Statements on Form S-8

We intend to file a registration statement on Form S-8 under the Securities Act to register all of the shares of common stock to be issued or reserved for issuance under our 2007 Stock Incentive plan. Shares covered by this registration statement will be eligible for sale in the public market, upon the expiration or release from the terms of the lock-up agreements and subject to vesting of such shares.

UNDERWRITING

We are offering the shares of common stock described in this prospectus through the underwriter, National Securities Corporation, which is acting as lead managing underwriter of the offering. National Securities Corporation has rendered advisory services to us in the past and has acted as our placement agent in connection with the placements of our senior secured convertible promissory notes in March 2015 and April 2016.

We have agreed to enter into an underwriting agreement with the underwriter prior to the closing of this offering. Subject to the terms and conditions of the underwriting agreement, we will agree to sell to the underwriter, and the underwriter will agree to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus, as it may be supplemented, shares of common stock.

The underwriter is committed to purchase all of the common shares offered by us, other than those covered by the option to purchase additional shares described below, if they purchase any shares. The underwriting agreement provides that the underwriter's obligations to purchase shares of our common stock are subject to conditions contained in the underwriting agreement. A copy of the underwriting agreement has been filed as an exhibit to the registration statement of which this prospectus forms a part.

We have been advised by the underwriter that the underwriter proposes to offer shares of our common stock directly to the public at the public offering price set forth on the cover page of this prospectus and to certain dealers that are members of the Financial Industry Regulatory Authority, or FINRA. Any securities sold by the underwriter to such securities dealers will be sold at the public offering price less a selling concession not in excess of \$0.31 per share. After the public offering of the shares, the offering price and other selling terms may be changed by the underwriter.

None of our securities included in this offering may be offered or sold, directly or indirectly, nor may this prospectus and any other offering material or advertisements in connection with the offer and sales of any of our common stock, be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons who receive this prospectus are advised to inform themselves about and to observe any restrictions relating to this offering of our common stock and the distribution of this prospectus. This prospectus is neither an offer to sell nor a solicitation of any offer to buy any of our common stock included in this offering in any jurisdiction where that would not be permitted or legal.

The underwriter has advised us that it does not intend to confirm sales to any accounts over which they exercise discretionary authority.

Underwriting Discount and Expenses

The following table summarizes the underwriting discount and commission to be paid to the underwriter by us.

	ithout Over- Allotment	With Over- Allotment
Public offering price	\$ 7.50	\$ 7.50
Underwriting discount to be paid to the underwriter	\$ 1,992,000	\$ 2,290,800
Net proceeds, before other expenses	\$ 22,008,000	\$ 25,309,200

In addition to the discount set forth in the above table, we have agreed to issue to the underwriter and its designees a warrant to purchase up to 10% of the shares of common stock sold in this offering. The terms of the underwriter's warrant are more fully described in this section under the caption, "Underwriter Warrant."

We estimate the total expenses payable by us for this offering to be approximately \$2.68 million, which amount includes (i) the underwriting discount of \$1.992 million (approximately \$2.290 million if the underwriter's overallotment option is exercised in full), (ii) a non-accountable expense in the amount of \$170,000 being paid by us to the underwriter, and (iii) other estimated company expenses of approximately \$515,000, which includes legal, accounting, printing costs and various fees associated with the registration and listing of our shares.

Over-Allotment Option

We have granted to the underwriter an option, exercisable not later than 45 days after the date of this prospectus, to purchase up to an additional 480,000 shares of our common stock (up to 15% of the shares firmly committed in this offering) at

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the public offering price, less the underwriting discount, set forth on the cover page of this prospectus. The underwriter may exercise the option solely to cover over-allotments, if any, made in connection with this offering. If any additional shares of our common stock are purchased pursuant to the over-allotment option, the underwriter will offer these additional shares of our common stock on the same terms as those on which the other shares of common stock are being offered hereby.

Determination of Offering Price

There is no current market for our common stock. Our underwriter, National Securities Corporation, is not obligated to make a market in our securities, and even if it chooses to make a market, can discontinue at any time without notice. Neither we nor the underwriter can provide any assurance that an active and liquid trading market in our securities will develop or, if developed, that the market will continue.

The public offering price of the shares offered by this prospectus has been determined by negotiation between us and the underwriter. Among the factors considered in determining the public offering price of the shares were:

- · our history and our prospects;
- the industry in which we operate;
- our past and present operating results;
- the previous experience of our executive officers; and
- the general condition of the securities markets at the time of this offering.

The offering price stated on the cover page of this prospectus should not be considered an indication of the actual value of the shares. Upon the commencement of trading, the price of our shares will be subject to change as a result of market conditions and other factors, and we cannot assure you that the shares can be resold at or above the public offering price.

Underwriter Warrant

We have agreed to issue to National Securities Corporation and its designees a warrant to purchase shares of our common stock (up to 10% of the shares of common stock sold in this offering). This warrant is exercisable at \$9.375 per share (125% of the price of the common stock sold in this offering), commencing 12 months after the effective date of this offering and expiring five years from the effective date of this offering. The warrant and the shares of common stock underlying the warrant have been deemed compensation by FINRA and are therefore subject to a 180 day lock-up pursuant to Rule 5110(g)(1) of FINRA. National Securities Corporation (or permitted assignees under the Rule) will not sell, transfer, assign, pledge, or hypothecate this warrant or the securities underlying this warrant, nor will it engage in any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of this warrant or the underlying securities for a period of 12 months from the effective date of the offering.

Pursuant to our engagement agreement with Liquid Patent Advisors, LLC, on February 9, 2015, we issued to Liquid Patent Advisors, LLC a warrant to purchase 198,767 shares of our common stock, of which warrants to purchase 188,829 are exercisable at \$0.87 per share and warrants to purchase 9,339 shares are exercisable at \$0.15 per share, over a five year term. The warrants were issued in consideration of Liquid Patent Advisors' provision of services relating to the design, development and implementation of our intellectual property. The warrants include customary anti-dilution and net issuance provisions. The warrants also provide its holders with certain demand and piggyback registration rights. The principals of Liquid Patent Advisors hold investment banking positions with National Securities Corporation.

Lock-Up Agreements

In connection with our issuance of warrants to purchase shares of our common stock to Liquid Patent Advisors, LLC and National Securities Corporation, including the underwriter warrant to be issued to National Securities upon the completion of this offering, Liquid Patent Advisors and National Securities have agreed not to sell, transfer or pledge, or offering to do any of the same, directly or indirectly, the share of common stock issuable upon exercise of such warrants for a period of 12 months days following the close of this offering. We and all of our directors and officers have agreed in connection with the present offering, that, without the prior written consent of National Securities Corporation, not to sell, transfer or pledge, or offer to do any of the same, directly or indirectly, any of our securities for a period of 12 months following the close of this offering. The holders of substantially all of our other common stock or securities exercisable for or convertible into our common stock outstanding immediately prior to this offering

have agreed in connection with the present offering, that, without the prior written consent of National Securities Corporation, not to sell, transfer or pledge, or offer to do any of the same, directly or indirectly, any of our securities for a period 180 days following the close of this offering, subject to extensions under certain circumstances of up to a total of 216 days following this offering. On the 181 st day following the close of this offering (subject to the potential extension described above) and on every subsequent 31 st day thereafter, 15% of such holder's securities shall be released from the lock-up until the 366 st day following the close of this offering, as of which none of such holder's securities shall be subject to the lock-up.

The number of shares of common stock outstanding upon the completion of this offering subject to the 180-day lock-up totals 7,144,510 shares, and the number of shares underlying options and warrants subject to the 180-day lock-up totals 125,229. The number of shares of common stock outstanding upon completion of this offering subject to the 12 month lock-up totals 978,716 shares and the number of shares underlying options and warrants subject to the 12-month lock-up totals 808,154 shares plus the number of shares issuable upon exercise of the warrant issuable to the underwriter in connection with this offering.

Other than in respect of the warrants issued or to be issued to Liquid Patent Advisors, LLC and National Securities Corporation, the underwriter may consent to an early release from the lock-up period if, in its opinion, the market for the common stock would not be adversely impacted by sales and in cases of a financial emergency of an officer, director or other stockholder. We are unaware of any security holder who intends to ask for consent to dispose of any of our equity securities during the relevant lock-up periods.

Indemnification

We will agree to indemnify the underwriter against certain liabilities, including certain liabilities arising under the Securities Act, and to contribute to payments that the underwriter may be required to make for these liabilities.

Short Positions and Penalty Bids

The underwriter may engage in over-allotment, syndicate covering transactions, and penalty bids or purchases for the purpose of pegging, fixing or maintaining the price of the common stock, in accordance with Regulation M under the Exchange Act.

- Over-allotment involves sales by the underwriter of shares in excess of the number of shares the underwriter is obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by an underwriter is not greater than the number of shares that it may purchase in the over-allotment option. In a naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. The underwriter may close out any short position by either exercising its over-allotment option and/or purchasing shares in the open market.
- Syndicate covering transactions involve purchases of the common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriter will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which it may purchase shares through the over-allotment option. If an underwriter sells more shares than could be covered by the over-allotment option, a naked short position, the position can only be closed out by buying shares in the open market. A naked short position is more likely to be created if an underwriter is concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering.
- Penalty bids permit an underwriter to reclaim a selling concession from a syndicate member when the shares originally sold by the syndicate member are purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of the common stock. As a result, the price of the common stock may be higher than the price that might otherwise exist in the open market. These transactions may be effected on the NASDAQ Capital Market, and if commenced, they may be discontinued at any time.

Neither we nor the underwriter make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the common stock. In addition, neither we nor the underwriter make any representation that the underwriter will engage in these transactions or that any transaction, once commenced, will not be discontinued without notice.

Electronic Distribution

A prospectus in electronic format may be made available on the Internet sites or through other online services maintained by the underwriter, or by its affiliates. In those cases, prospective investors may view offering terms online and, depending upon the underwriter, prospective investors may be allowed to place orders online. The underwriter may agree with us to allocate a specific number of shares for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriter on the same basis as other allocations.

Other than the prospectus in electronic format, the information on the underwriter's website and any information contained in any other website maintained by the underwriter is not part of the prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or the underwriter in its capacity as underwriter and should not be relied upon by investors.

The underwriter's compensation in connection with this offering is limited to the fees and expenses described above under "Underwriting Discount and Expenses."

LEGAL MATTERS

Greenberg Traurig, LLP, Irvine, California, will pass upon the validity of the shares of common stock offered by this prospectus and certain other legal matters. Golenbock Eiseman Assor Bell & Peskoe LLP, New York, New York, is legal counsel to National Securities Corporation.

EXPERTS

The financial statements of Atomera Incorporated as of and for the fiscal years ended December 31, 2015 and 2014 included in this prospectus have been audited by Marcum LLP, independent registered public accounting firm as set forth in their report. We have included these financial statements in this prospectus in reliance upon the report of Marcum LLP, given on their authority as experts in accounting and auditing. The report of Marcum LLP, also included in this prospectus, for the fiscal years ended December 31, 2015 and 2014 includes an explanatory paragraph as to the Company's ability to continue as a going concern.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act that registers the shares of our common stock to be sold in this offering. Our SEC filings are and will become available to the public over the Internet at the SEC's website at www.sec.gov. You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street N.E., Washington, D.C. 20549. You can also obtain copies of the documents upon the payment of a duplicating fee to the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities.

This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. Some items are omitted in accordance with the rules and regulations of the SEC. You should review the information and exhibits included in the registration statement for further information about us and the securities we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

ATOMERA INCORPORATED

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Atomera Incorporated

We have audited the accompanying balance sheets of Atomera Incorporated (the "Company") (formerly known as Mears Technologies, Inc.) as of December 31, 2015 and 2014, and the related statements of operations, changes in stockholders' deficit and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Atomera Incorporated, as of December 31, 2015 and 2014, and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As more fully described in Note 2, the Company has a significant accumulated deficit, working capital deficit, incurred significant net losses and needs to raise additional funds to meet its obligations and sustain its operations. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are described in Note 2. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ Marcum LLP

New York, NY June 17, 2016

ATOMERA INCORPORATED BALANCE SHEETS December 31, 2015 and 2014

		2015		2014
<u>ASSETS</u>				
Commant aggreta				
Current assets:	¢	3,196,943	\$	20,980
Restricted investment	Ф	15,000	Ψ	15,000
Prepaid expenses and other current assets		48,137		24,131
Total current assets		3,260,080	_	60,111
Total Carrent assets		3,200,000		00,111
Property and equipment, net		15,533		21,239
Deferred offering costs		144,669		· -
	_			
Total assets	\$	3,420,282	\$	81,350
	_		-	
LIABILITIES AND STOCKHOLDERS' DEFICIT				
Current liabilities:				
Accounts payable	\$	301,517	\$	630,934
Accrued expenses		144,642		143,754
Senior secured convertible promissory notes payable, net		16,094,877		<u>-</u>
Total current liabilities		16,541,036		774,688
Convertible promissory notes payable				6,608,045
Total liabilities		16,541,036	_	7,382,733
Commitments and contingencies (Notes 6 and 14)				
Stockholders' deficit:				
Preferred stock, \$0.001 par value, authorized 2,500,000 shares; none issued and				
outstanding at December 31, 2015 and 2014				
Common stock, \$0.001 par value, authorized 47,500,000 shares; issued and		-		-
outstanding 1,617,313 and 1,233,268 shares at				
December 31, 2015 and 2014, respectively		1,617		1,233
Additional paid-in capital		70,451,752		66,759,366
Subscription receivable		(187,500)		(187,500)
Accumulated deficit	(83,386,623)		73,874,482)
Total stockholders' deficit		13,120,754)		(7,301,383)
Total liabilities and stockholders' deficit	\$	3,420,282	\$	81,350
	÷	, -,	÷	,

ATOMERA INCORPORATED STATEMENTS OF OPERATIONS Years Ended December 31, 2015 and 2014

	2015	2014
OPERATING EXPENSES:		
Research and development	\$ 2,022,133	\$ 1,853,091
General and administrative	3,441,149	1,402,879
Selling and marketing	35,661	9,392
Total operating expenses	5,498,943	3,265,362
Loss from operations	(5,498,943)	(3,265,362)
OTHER INCOME (EXPENSE):		
Interest income	7,072	7,088
Interest expense	(1,931,728)	(560,310)
Loss on settlement of options and warrants	(2,088,542)	-
Other income		850
Total other expense, net	(4,013,198)	(552,372)
Net Loss	\$ (9,512,141)	\$ (3,817,734)
Net loss per common share, basic and diluted	\$ (7.55)	\$ (3.10)
Weighted average number of common shares outstanding, basic and diluted	1,259,567	1,233,268

ATOMERA INCORPORATED STATEMENTS OF STOCKHOLDERS' DEFICIT Years Ended December 31, 2015 and 2014

	Preferi	red Stock	Common	n Stock	Additional Paid-in	Subscription	Accumulated	Total Stockholders'
	Shares	Amount	Shares	Amount	<u>Capital</u>	Receivable	<u>Deficit</u>	Deficit
Balance, January 1, 2014	-	\$ -	1,233,268	\$ 1,233	\$ 66,681,041	\$ (187,500)	\$ (70,056,748)	\$ (3,561,974)
Stock-based compensation	-	-	-	-	78,325	-	-	78,325
Net loss							(3,817,734)	(3,817,734)
Balance, December 31, 2014	-	-	1,233,268	1,233	66,759,366	(187,500)	(73,874,482)	(7,301,383)
Issuance of common stock warrants	-	-	-	-	1,172,335	-	-	1,172,335
Issuance of common stock for the settlement of options and warrants	_	-	384,045	384	2,088,158	_	-	2,088,542
Stock-based compensation	-	-	-	-	431,893	-	-	431,893
Net loss							(9,512,141)	(9,512,141)
Balance, December 31, 2015		<u>\$</u> -	1,617,313	\$ 1,617	\$ 70,451,752	\$ (187,500)	\$ (83,386,623)	\$ (13,120,754)

ATOMERA INCORPORATED STATEMENTS OF CASH FLOWS Years Ended December 31, 2015 and 2014

	2015	2014
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	\$ (9,512,141)	\$ (3,817,734)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	9,517	5,460
Non-cash warrant fair value for services rendered	1,015,848	-
Non-cash interest expense	1,931,728	558,766
Non-cash loss on option and warrant settlement	2,088,542	-
Stock-based compensation	431,893	78,325
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(24,006)	11,904
Accounts payable	(329,417)	491,185
Accrued expenses	888	78,734
Net cash used in operating activities	(4,387,148)	(2,593,360)
CASH FLOWS FROM INVESTING ACTIVITIES		
Acquisition of property and equipment	(3,811)	(26,512)
Net cash used in investing activities	(3,811)	(26,512)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from convertible promissory notes payable	1,096,560	1,576,002
Net proceeds from senior secured convertible promissory notes payable	6,615,031	-
Proceeds from bridge loan notes payable	-	738,147
Payments on bridge loan notes payable	-	(5,482)
Payment of offering costs	(144,669)	-
Net cash provided by financing activities	7,566,922	2,308,667
Net increase (decrease) in cash	3,175,963	(311,205)
	-,,.	(- ,)
Cash at beginning of year	20,980	332,185
	20,500	22,100
Cash at end of year	\$ 3,196,943	\$ 20,980
Cubit at the O. Juni	9 3,170,743	20,700

See Note 15 for supplemental cash flow information.

ATOMERA INCORPORATED NOTES TO THE FINANCIAL STATEMENTS Years Ended December 31, 2015 and 2014

1. NATURE OF OPERATIONS

Atomera Incorporated (the "Company") (formerly known as MEARS Technologies, Inc.) was incorporated in the state of Delaware in March 2007 under the name MEARS Technologies, Inc. and is engaged in the development, commercialization and licensing of proprietary processes and technologies for the semiconductor industry. On January 12, 2016, the Company changed its name to Atomera Incorporated.

The Company is in the development stage, having not yet started planned principal operations, and is devoting substantially all of its efforts toward technology research and development.

2. LIQUIDITY, GOING CONCERN AND MANAGEMENT PLANS

At December 31, 2015, the Company had cash of approximately \$3.2 million and a working capital deficit of approximately \$13.3 million. The Company has incurred recurring operating losses and at December 31, 2015 had an accumulated deficit of approximately \$83.4 million. The Company has primarily financed operations through the sale of equity and debt securities. In March 2015, the Company raised financing of approximately \$7.4 million through the issuance of senior secured convertible notes. Because of recurring and expected future losses and its cash on hand, there is a substantial doubt about the Company's ability to continue as a going concern.

The Company believes that it requires a minimum of \$15 million of capital in order to fund its current business plans and start full-scale industrial production of a device that incorporates the Company's technology. The Company also believes that the net proceeds of its presently proposed initial public offering will be sufficient to fund its presently forecasted working capital requirements over, at least, the 12 months following the close of the offering. The Company endeavors to acquire additional funds through various financing sources, including private placement of its equity and debt securities, initial public offering of its equity securities, licensing fees for its technology and joint ventures with industry partners. In addition, the Company will consider alternatives to its current business plans that may enable the Company to achieve revenue producing operations and meaningful commercial success with a smaller amount of capital. However, there can be no assurance that such financing will be available on terms favorable to the Company, if at all. The Company's ability to continue as a going concern is dependent upon its ability to (1) obtain additional financing as may be required, (2) generate sufficient cash flow to meet its obligations on a timely basis and (3) ultimately attain profitability. The accompanying financial statements do not include any adjustments relating to the recoverability and classification of asset carrying amounts or the amount and classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

3. REVERSE STOCK SPLIT

On December 8, 2015, the Company's Board of Directors approved a 1-for-15 reverse split of the Company's common stock. The reverse stock split became effective on December 11, 2015. Upon the effectiveness of the reverse stock split, (i) every 15 shares of outstanding common stock were combined into one share of common stock, (ii) the number of shares of common stock into which each outstanding option or warrant to purchase common stock is exercisable was proportionally decreased and (iii) the exercise price of each outstanding option or warrant to purchase common stock was proportionately increased. The authorized common and preferred stock shares decreased to 47.5 million and 2.5 million, respectively. The par value remained the same. All share and per share amounts have been retroactively restated to reflect the reverse stock split in the accompanying financial statements and notes.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying financial statements reflect the application of certain significant accounting policies as described below:

Development Stage

The Company has early adopted as permitted authoritative guidance under ASU No. 2014-10, allowing for the elimination of inception-to-date information and certain disclosures for development stage companies.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires the Company's management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Significant estimates include the fair value of stock-based compensation and warrants, valuation allowance against deferred tax assets and related disclosures. Actual results could differ from those estimates.

Restricted Investment

The Company's restricted investment consists of a certificate of deposit held as collateral to secure borrowing limits for certain corporate credit cards. The Company is required to maintain this deposit for as long as it retains possession of the credit cards. The certificate of deposit matures on April 5, 2017. The carrying value of this certificate of deposit approximates the fair value.

Deferred Offering Costs

The Company complies with the requirements of the ASC 340, *Other Assets and Deferred Costs*. Deferred offering costs of \$144,669 consist principally of legal, accounting, and filing fees incurred through the balance sheet date that are related to the proposed offering and that will be charged to capital upon the receipt of the capital raised or charged to expense if the proposed offering is not completed.

Income Taxes

In accordance with authoritative guidance, deferred tax assets and liabilities are recorded for temporary differences between the financial reporting and tax bases of assets and liabilities using the current enacted tax rate expected to be in effect when the differences are expected to reverse. A valuation allowance is recorded on deferred tax assets unless realization is considered more likely than not.

The Company evaluates its tax positions taken or expected to be taken in the course of preparing the Company's tax returns to determine whether the tax positions are "more-likely-than-not" of being sustained by the applicable tax authority. Tax positions not deemed to meet the "more-likely-than-not" threshold are not recorded as a tax benefit or expense in the current year. The Company recognizes interest and penalties, if any, related to uncertain tax positions in interest expense. No interest and penalties related to uncertain tax positions were accrued at December 31, 2015.

The Company follows authoritative guidance which requires the evaluation of existing tax positions. Management has analyzed all open tax years, as defined by the statute of limitations, for all major jurisdictions, which includes federal and certain states, the principal state being Massachusetts. Open tax years are those that are open for examination by taxing authorities.

Fair Value of Financial Instruments

Authoritative guidance requires disclosure of the fair value of financial instruments. The Company's financial instruments consist of cash, certificate of deposits, accounts payable, accrued expenses and bridge loan notes payable, the carrying amounts of which approximate their estimated fair values primarily due to the short-term nature of the instruments or based on information obtained from market sources and management estimates. The Company measures the fair value of certain of its financial assets and liabilities on a recurring basis. A fair value hierarchy is used to rank the quality and reliability of the information used to determine fair values. Financial assets and liabilities carried at fair value which is not equivalent to cost will be classified and disclosed in one of the following three categories:

Level 1 – Quoted prices (unadjusted) in active markets for identical assets and liabilities.

Level 2 – Inputs other than Level 1 that are observable, either directly or indirectly, such as unadjusted quoted prices for similar assets and liabilities, unadjusted quoted prices in the markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

Debt Discounts

Debt discounts are amortized to interest expense using the straight-line method, which approximates the interest rate method, over the earlier of the term of the related debt or their earliest date of redemption.

Concentrations of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash.

The Company maintains its operating accounts in a single financial institution. The balances are insured by the U.S. Federal Deposit Insurance Corporation ("FDIC") up to specified limits. The Company's cash is maintained in checking accounts with reputable financial institutions that may at times exceed amount covered by FDIC limits. The Company has not experienced any realized losses on the Company's deposits of cash.

Research and Development Costs

In accordance with authoritative guidance, the Company charges research and development costs to operations as incurred. Research and development costs consist of personnel costs for the design, development, testing and enhancement of the Company's technology, and certain other allocated costs, such as depreciation and other facilities related expenditures.

Property and Equipment

Items capitalized as property and equipment are stated at cost. Maintenance and routine repairs are charged to operations when incurred, while betterments and renewals are capitalized. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the respective assets starting when the asset is placed in service.

Common Stock Warrants

The Company classifies as equity any warrants that (i) require physical settlement or net-share settlement or (ii) provide the Company with a choice of net-cash settlement or settlement in its own shares (physical settlement or net-share settlement). The Company classifies as assets or liabilities any contracts that (i) require net-cash settlement (including a requirement to net cash settle the contract if an event occurs and if that event is outside the Company's control), (ii) gives the counterparty a choice of net-cash settlement or settlement in shares (physical settlement or net-share settlement) or (iii) that contain reset provisions that do not qualify for the scope exception. The Company assesses classification of its common stock warrants and other freestanding derivatives at each reporting date to determine whether a change in classification between assets and liabilities is required. The Company's freestanding derivatives consist of warrants to purchase common stock that were issued in connection with its notes payable. The Company evaluated these warrants to assess their proper classification and determined that the common stock warrants meet the criteria for equity classification in the balance sheet. Such warrants are measured at fair value, which the Company determines using the Black-Scholes-Merton option-pricing model.

Stock-Based Compensation

The Company computes stock-based compensation in accordance with authoritative guidance. The Company uses the Black-Scholes-Merton option-pricing model to determine the fair value of its stock options. The Black-Scholes-Merton option-pricing model includes various assumptions, including the fair market value of the common stock of the Company, expected life of stock options, the expected volatility and the expected risk-free interest rate, among others. These assumptions reflect the Company's best estimates, but they involve inherent uncertainties based on market conditions generally outside the control of the Company.

As a result, if other assumptions had been used, stock-based compensation cost, as determined in accordance with authoritative guidance, could have been materially impacted. Furthermore, if the Company uses different assumptions on future grants, stock-based compensation cost could be materially affected in future periods.

The Company has a stock-based compensation plan under which stock options are granted to employees, consultants and directors. All grants are approved by the Company's Board of Directors. Grants to employees generally vest over a two- to four-year period. Additionally, the Company from time to time grants options that vest based on performance conditions or that vest immediately upon grant. The Company's stock options expire no later than ten years after the grant date.

The Company accounts for the fair value of equity instruments issued to non-employees using either the fair value of the services received or the fair value of the equity instrument, whichever is considered more reliable. The Company utilizes the Black-Scholes-Merton option-pricing model to measure the fair value of options issued to non-employees.

The Company recorded \$189,365 and \$78,325 of compensation expense related to stock options awarded to employees for the years ended December 31, 2015 and 2014, respectively. In addition, the Company recorded \$242,528 of compensation expense related to stock options awarded to non-employees for the year ended December 31, 2015. There was no compensation expense related to stock options awarded to non-employees for the year ended December 31, 2014.

Basic and Diluted Net Loss per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of shares outstanding for the period. Diluted net loss per share is computed by dividing the net loss by the weighted-average number of shares and dilutive share equivalents outstanding for the period, determined using the treasury-stock and if-converted methods. Since the Company has had net losses for all periods presented, all potentially dilutive securities are anti-dilutive. Accordingly, basic and diluted net loss per share are equal.

The following potential common stock equivalents were not included in the calculation of diluted net loss per common share because their inclusion would be anti-dilutive at December 31:

	2015	2014
Stock Options	511,245	181,492
Warrants	302,751	605,702
Conversion of Promissory Notes	2,230,323	897,588
	3,044,319	1,684,782

Recent Accounting Pronouncements

In June 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standard Update ("ASU") No. 2014-12, *Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period*. ASU 2014-12 requires that a performance target that affects vesting and could be achieved after the requisite service period be treated as a performance condition. ASU 2014-12 is effective for the Company in its first quarter of 2016 with early adoption permitted. The Company does not expect its pending adoption of ASU 2014-12 to have a material impact on its financial statements and disclosures.

In August 2014, the FASB issued ASU No. 2014-15, *Disclosure of Uncertainties About an Entity's Ability to Continue as a Going Concern*. The new standard provides guidance around management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2016. Early adoption is permitted. The adoption of this standard is not expected to have a material impact on the Company's financial statements.

In April 2015, the FASB issued ASU No. 2015-03, *Interest—Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs*, which requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of the related debt liability, consistent with debt discounts. ASU 2015-03 is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2015. Early adoption is permitted. The Company does not expect that the adoption of ASU 2015-03 will have a material effect on its financial statements.

In November 2015, the FASB issued ASU No. 2015-17, *Balance Sheet Classification of Deferred Taxes*. The standard amends the current requirement for organizations to present deferred tax liabilities and assets as current and noncurrent in a classified balance sheet. Instead, companies will now be required to classify all deferred tax assets and liabilities as noncurrent. The ASU is effective for fiscal years, and interim periods within those years, beginning after December 15, 2016, with early adoption permitted. The Company does not expect that the adoption of ASU 2015-17 will have a material effect on its financial statements.

In January 2016, the FASB issued ASU No. 2016-01, Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities , which addresses certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. This guidance will be effective in the first quarter of fiscal year 2019 and early adoption is not permitted. The Company is currently evaluating the impact that this guidance will have on its financial statements.

The Company has considered all other recently issued accounting pronouncements and does not believe the adoption of such pronouncements will have a material impact on its financial statements.

5. PROPERTY AND EQUIPMENT

Property and equipment consisted of the following:

2015		2014
\$ 38,894	\$	35,083
4,716		4,716
184,461		184,461
16,699		16,699
824		824
245,594		241,783
(230,061)		(220,544)
\$ 15,533	\$	21,239
\$	\$ 38,894 4,716 184,461 16,699 824 245,594 (230,061)	\$ 38,894 \$ 4,716 184,461 16,699 824 245,594 (230,061)

Depreciation and amortization expense relating to property and equipment was \$9,517 and \$5,460 for the years ended December 31, 2015 and 2014, respectively.

During the year ended December 31, 2014, the Company disposed of fully depreciated computer equipment with a cost of \$422,645, software with a cost of \$20,726, lab equipment with a cost of \$8,874 and furniture and fixtures with a cost of \$4,395.

6. COMMITMENTS AND CONTINGENCIES

Operating Leases

The Company had an operating lease agreement for the use of 4,400 square feet of office space in Newton, Massachusetts as its corporate headquarters. The lease commenced on January 31, 2011 and was amended and extended various times through December 31, 2014, the termination date.

On November 5, 2014, the Company entered a new lease agreement for the use of 1,730 square feet of office space in Wellesley Hills, Massachusetts. The lease with monthly payments of \$4,613 commenced on December 1, 2014 and was amended to expire on November 30, 2016.

On January 19, 2016, the Company entered into a real estate lease agreement for a 3,396 square foot office facility in Los Gatos, California as its new corporate headquarters. The lease commenced on February 1, 2016 and expires on January 31, 2018. The lease rate is \$12,395 per month, which will increase to \$13,074 per month commencing February 1, 2017.

Rent expense was \$55,360 and \$92,613 during the years ended December 31, 2015 and 2014, respectively.

Approximate future minimum lease payments required under the operating leases are as follows:

Years ending December 31,	 Amount		
2016	\$ 187,000		
2017	156,200		
2018	 13,100		
Total	\$ 356,300		

Incentive Bonus

During September 2015 and amended in December 2015, the Board of Directors resolved to pay an incentive bonus to certain directors and officers contingent upon the Company being listed on the NASDAQ stock exchange before May 31, 2016, an initial public offering (IPO) with net proceeds of at least \$15 million and a post-IPO valuation of at least \$50 million and that the officers and directors remain in service with the Company through the close of the IPO. If these circumstances are met, a total bonus of \$1,651,369 will be paid to employees in the form of common stock, convertible at the greater of the IPO price to the public or \$3.681 per share.

Officer Compensation

During October 2015, the Company entered into an employment agreement with an officer. The agreement calls for an annual base salary of \$250,000 and a bonus of up to 50% of his base salary. Upon completion of an IPO, the officer is entitled to an increase in his annual base salary to \$300,000 and a \$250,000 incentive bonus. In the event of involuntary termination, the officer is entitled to 18 months of severance pay.

7. NOTES PAYABLE

As of January 1, 2014, the Company had outstanding notes payable (the "Bridge Loan Notes"), substantially all of which were issued to existing investors, totaling \$3,740,612 including accrued interest of approximately \$486,000. These notes were issued in 2012 and 2013 in the aggregate principal amount of \$1,584,243 and \$1,671,876, respectively, and accrued interest at 8% and 18%, respectively. The Company also issued a warrant to purchase 93,878 shares of common stock in connection with the 2012 notes (Note 10). The initial maturity dates of these notes had been previously extended to May 31, 2014.

From March 5, 2014 through May 9, 2014, the Company issued Bridge Loan Promissory Notes with certain investors in the aggregate principal amount of \$738,147 (the "2014 Bridge Loan Notes"). The 2014 Bridge Loan Notes had a maturity date of April 30, 2014 or May 31, 2014. The 2014 Bridge Loan Notes were extendable. The notes accrued interest at 18% per annum. The 2014 Bridge Loan Notes were subordinate to the preceding Bridge Loan Notes. The 2014 Bridge Loan Notes due April 30, 2014 had their initial maturity dates extended to May 31, 2014.

On May 31, 2014, the outstanding principal and accrued interest for the Bridge Loan Notes and the 2014 Bridge Loan Notes were exchanged for 2014 Unsecured Convertible Promissory Notes. The total converted principal and accrued interest was \$4,676,664. The 2014 Unsecured Convertible Promissory Notes were due on May 31, 2016. The notes accrued interest at the rate of 10% per annum. Effective upon the closing of a firm commitment underwritten public offering of at least \$15 million, all of the outstanding principal and accrued interest would automatically be converted into shares of common stock at a conversion price equal to the lower of the Discounted Price Per Share, the Convertible Note Price Per Share or the Pre-IPO Price Per Share, as defined in the agreement. Until the 10 th day prior to the consummation of an IPO, a holder of a convertible note, at its option, could convert at a conversion price of \$7.362 per share. The Company determined there was no beneficial conversion feature.

From June 6, 2014 through December 15, 2014, the Company issued for cash consideration additional 2014 Unsecured Convertible Promissory Notes under the same terms as specified in the preceding paragraph, with certain investors in the aggregate principal amount of \$1,576,002. Accrued interest associated with the 2014 Unsecured Convertible Promissory Notes was approximately \$355,400 as of December 31, 2014 and was included in the balance outstanding in the accompanying balance sheets.

From January 9, 2015 through February 5, 2015, the Company issued additional 2014 Unsecured Convertible Promissory Notes with certain investors in the aggregate principal amount of \$1,096,560, of which \$596,560 was from existing investors.

On March 17, 2015, the Company issued Senior Secured Convertible Notes ("Secured Notes") to certain investors under which the Company borrowed \$7,400,774, of which \$28,217 was from existing investors. The Company paid brokerage commissions to National Securities Corporation ("NSC") of approximately \$785,700. The brokerage commissions are being amortized as interest expense over the life of the loan. During the year ended December 31, 2015, the Company recognized interest expense of approximately \$514,900 related to the brokerage commissions. The Company also issued a warrant to NSC in connection with this financing (Note 10). The aggregate unamortized balance of the brokerage commissions and warrant value at December 31, 2015 is classified as debt discount of \$324,760.

In addition on March 17, 2015, the Company exchanged all of the existing 2014 Unsecured Convertible Promissory Notes for Secured Notes with an aggregate principal balance of \$7,349,226. During 2015, the interest expense on the 2014 Unsecured Convertible Promissory Notes was approximately \$144,000 and total accrued interest on the 2014 Unsecured Convertible Promissory Notes was \$499,000 at March 17, 2015. The total closing represented \$14,750,000. The Secured Notes are due on May 31, 2016 and accrue interest at a rate of 10% per annum, except in any event of default in which case the interest rate shall be 12% per annum. The Secured Notes automatically convert to common stock in the event of an IPO of the Company and are optionally convertible upon a subsequent placement of equity other than an IPO or at the discretion of the note holder. Based on the method of conversion, the Secured Notes are converted into common stock at the Conversion Price, as defined in the agreement. Accrued interest associated with the Secured Notes was approximately \$1,670,000 as of December 31, 2015 and was included in the balance outstanding in the accompanying balance sheet.

At December 31, 2015, the senior secured convertible promissory notes payable consisted of the following:

Senior Notes	\$ 14,750,000
Accrued interest	1,669,637
Debt Discount	(324,760)
Senior secured convertible promissory notes	
payable, net	\$ 16,094,877

8. RELATED PARTY TRANSACTIONS

Through 2014, the Company raised additional financing through notes payable, substantially all of which were issued to existing investors (Note 7). Certain of the Company's officers and directors participated in the placements and purchased convertible notes in the aggregate principal amount of \$3,317,607, representing 22.5% of the convertible notes sold by the Company. During 2014, substantially all interest expense was related to these notes payable to existing investors. During 2015, the Company issued notes payable to existing investors in the amount of \$624,777. During 2015, the interest expense on the 2014 Unsecured Convertible Promissory Notes and the Secured Notes with existing investors totaled approximately \$655,000.

On January 14, 2005, the Company executed a Secured Promissory Note (the "Promissory Note") with an officer of the Company. Under the Promissory Note, the officer borrowed \$187,500 from the Company, which is classified as a subscription receivable in the accompanying balance sheet. The Promissory Note bears interest at a fixed rate of 3.76% per annum, with interest-only payments due annually through the maturity date of January 14, 2014. The Promissory Note is collateralized by common stock owned by the officer. The Promissory Note is a full recourse obligation such that the Company may pursue all remedies available to it in the event of nonpayment. The Promissory Note matured on January 14, 2014 and was not paid.

During December 2015, the Company extended the term of the Promissory Note to the earliest of (i) January 14, 2019, (ii) five business days following written notice by the Company to the officer of the occurrence of a Capital Event, as defined, (iii) five business days following written notice to the officer that (A) the Company has ceased operations in the ordinary course of business, or (B) the Company has dissolved, or (iv) the earlier of any date on which (A) the Company has commenced liquidation, or (B) a receiver, conservator or similar officer has been appointed, the Company has made an assignment for the benefit of creditors, or entered into an arrangement with its creditors or any proceeding under any bankruptcy or insolvency law, provided however that in the case of any involuntary proceeding, the Promissory Note shall only become due and payable sixty days after the commencement of the involuntary proceeding and only if the Company has not obtained a dismissal of such proceeding. The Promissory Note was cancelled effective January 13, 2016 (Note 16).

During both 2015 and 2014, a director, who is also a shareholder of the Company, was paid \$10,000 for his work as a consultant for the Company.

During 2015 and 2014, a law firm, a partner of which serves on our board and is a shareholder, billed the Company approximately \$19,700 and \$236,600, respectively. Included in current liabilities at December 31, 2015 and 2014 is approximately \$1,300 and \$259,000, respectively, owed to this law firm.

9. STOCKHOLDERS' EQUITY

As of December 31, 2015 the Company has reserved 916,084 shares of common stock for stock options and warrants.

During October 2015, the Company offered all option holders as of December 31, 2014 a one-time opportunity to exchange their options for shares of restricted common stock in a ratio of two options for one share of restricted common stock regardless of exercise price. The offer resulted in 166,230 options converting to 83,115 shares of restricted common stock on December 7, 2015. The Company recorded a loss of \$427,695 on this exchange based on the incremental increase in value of the options after the exchange compared to before the exchange.

During October 2015, the Company offered all warrant holders as of December 31, 2014 a one-time opportunity to exchange their warrants for shares of common stock in a ratio of two warrants for one share of common stock regardless of exercise price. The offer resulted in 601,861 warrants converting to 300,930 shares of common stock on December 7, 2015. The Company recorded a loss of \$1,660,847 on this exchange based on the incremental increase in value of the warrants after the exchange compared to before the exchange.

10. WARRANTS

Prior to 2014, the Company had outstanding warrants to purchase 605,702 shares of common stock at \$33.75 per share and of these warrants, 428,082 were set to expire June 15, 2016, 83,742 were set to expire November 14, 2016 and 93,878 were set to expire through May 2022. During December 2015, 601,861 of these warrants were exchanged for 300,930 shares of common stock (Note 9). Of the remaining 3,841 warrants, 1,574 expire June 15, 2016, 1,541 expire November 14, 2016 and 726 expire May 21, 2022.

On February 9, 2015, the Company issued a five year warrant to purchase 198,767 shares of common stock at \$0.15 per share to Liquid Patent Advisors, LLC (formerly known as Liquid Patent Consulting, LLC) ("LPC"). The warrant represented consideration for business, strategic and intellectual property development to be performed during 2015. The fair value of the warrant on the grant date was estimated using the Black-Scholes-Merton option pricing model with a common stock value of \$5.25 per share, a contractual life of 5 years, a dividend yield of 0%, a volatility of 43.9% and an assumed risk free interest rate of 1.49%. The fair value of the warrant was determined to be \$1,015,848 and was recorded as consulting expense and is included in general and administrative expenses in the statement of operations. During July 2015, the exercise price within this warrant to purchase 188,829 shares of common stock was modified to an exercise price of \$0.87 per share. The modification resulted in a decrease in the fair value of the warrant; such decrease is not recognized under authoritative guidance.

On March 17, 2015, the Company issued a five year warrant to purchase 100,143 shares of common stock at \$7.362 per share to NSC as additional consideration for serving as placement agent in connection with the sale of the Secured Notes in the principal amount of \$7,400,774 (Note 7). Upon conversion of the Secured Notes, the number of warrant shares is adjusted to 10% of the common stock shares issued in the conversion and the exercise price is adjusted to the Conversion Price. The fair value of the warrants on the grant date was estimated using the Black-Scholes-Merton option pricing model with a common stock fair value of \$5.25 per share, a contractual life of 5 years, a dividend yield of 0%, a volatility of 43.9% and an assumed risk free interest rate of 1.56%. The relative fair value of the warrants was determined to be \$156,487 and will be amortized as interest expense over the life of the loan. During the year ended December 31, 2015, the Company recognized approximately \$102,600 of interest expense related to these warrants.

In determining the fair value for warrants, the expected life of the Company's options was determined using the contractual life. The methodology in determining all other inputs to calculate the fair value utilizing the Black-Scholes-Merton option pricing model is the same as the stock option methodology described in Note 11 for stock options.

A summary of warrant activity for the years ended December 31, 2015 and 2014 is as follows:

			Weighted-	Weighted-
		Range of	Average	Average
	Number of	Exercise	Exercise	Remaining
	Shares	Prices	Prices	Life
Outstanding at January 1, 2014	605,702	\$33.75	\$ 33.75	3.4
Outstanding at December 31, 2014	605,702	\$33.75	\$ 33.75	2.4
Issued	298,910	\$0.15 - \$7.36	\$ 3.02	4.1
Exchanged	(601,861)	\$33.75	\$ 33.75	
Outstanding at December 31, 2015	302,751	\$0.15 - \$33.75	\$ 3.41	4.1

The warrants outstanding at December 31, 2015 had an aggregate intrinsic value of approximately \$967,200.

11. STOCK OPTION PLAN

The Company granted options under an Employee Option Plan (the "Old Plan"), which authorized the granting of options to employees, directors and consultants to purchase common stock. Option grants are no longer authorized under the Old Plan which had 1,370 vested options remained outstanding at December 31, 2014 and no vested options outstanding at December 31, 2015.

On March 14, 2007, the Company's stockholders approved the 2007 Equity Incentive Plan (the "2007 Plan"). Generally, stock options vest and become exercisable over a two to four-year period from the date of grant; however during 2015 certain options granted provided for immediate vesting or were milestone based. Stock options expire no later than ten years after the grant date. In addition, non-vested shares that are released from or reacquired by the Company from outstanding awards under the 2007 Plan become available for grant under the 2007 Plan and may be reissued as new awards. The 2007 Plan is authorized to issue up to 613,333 shares as of December 31, 2015.

A summary of the activity under the Old and the 2007 Plans for the years ended December 31, 2015 and 2014 is as follows:

		Range of	Weighted- Average	Weighted- Average Remaining Contractual
	Number of	Exercise	Exercise	Term
	Shares	Prices	Prices	(In Years)
Outstanding at January 1, 2014	188,257	\$2.55 - \$187.50	\$ 36.75	7.3
Cancelled	(6,765)	\$59.10 - \$187.50	\$ 65.40	
Outstanding at December 31, 2014	181,492	\$2.55 - \$187.50	\$ 35.70	6.5
Exercisable at December 31, 2014	178,159	\$2.55 - \$187.50	\$ 35.70	6.4
Non-vested at December 31, 2014	3,333	\$33.75	\$ 33.75	7.2
Vested and expected to vest at				
December 31, 2014	181,333	\$2.55 - \$187.50	\$ 35.70	6.5
	Number of	Range of Exercise	Weighted- Average Exercise	Weighted- Average Remaining Contractual Term
0 4 4 1' 4 D 1 21 2014	Shares	Prices	Prices	(In Years)
Outstanding at December 31, 2014 Granted	181,492 519,498	\$2.55 - \$187.50 \$5.70 - \$6.60		6.5 9.5
Cancelled	(23,515)			9.3
Exchanged (Note 9)	(166,230)			
Outstanding at December 31, 2015	511,245	\$5.70 - \$59.10		9.4
Exercisable at December 31, 2015	199,544	\$6.60 - \$59.10		8.8
Non-vested at December 31, 2015	311,701	\$5.70 - \$6.60	\$ 5.70	9.8
Vested and expected to vest at			<u>-</u>	
December 31, 2015	496,376	\$5.70 - \$59.10	\$ 7.09	9.4

The total number of options available for future grant was 102,088 and 159,379 as of December 31, 2015 and 2014, respectively.

A summary of the status of the Company's non-vested stock options as of December 31, 2015 and 2014 and changes during the years then ended is as follows:

Non-vested at December 31, 2013	6,833
Vested	(3,500)
Non-vested at December 31, 2014	3,333
Granted	519,498
Vested	(187,782)
Forfeited	(21,682)
Exchanged	(1,666)
Non-vested at December 31, 2015	311,701

The following table summarizes the stock-based compensation expense recorded in the Company's results of operations during the years ended December 31:

 2015		2014	
\$ 294,797	\$	-	
 137,096		78,325	
\$ 431,893	\$	78,325	
\$	\$ 294,797 137,096	\$ 294,797 \$ 137,096	

The Company records compensation expense for employee awards with graded vesting using the straight-line method. The Company records compensation expense for non-employee awards with graded vesting using the accelerated expense attribution method. The Company recognizes compensation expense over the requisite service period applicable to each individual award, which generally equals the vesting term. Estimated prospective forfeitures are incorporated in the determination of compensation cost to be recognized. The Company applied an expected forfeiture rate of 4.77% to non-vested stock options for which expense was recognized. The options outstanding at December 31, 2015 had no intrinsic value in the aggregate.

The Company estimates the fair value of each option award using the Black-Scholes-Merton option pricing model.

The fair values of options granted during the year ended December 31, 2015 were calculated using the following assumptions:

Weighted average grant date fair value	\$2.14
Assumptions:	
Expected volatility	43.94%
Weighted average expected term (in years)	5.4
Risk-free interest rate	1.31% - 1.75%
Expected dividend yield	0%

The risk-free interest rate was obtained from U.S. Treasury rates for the applicable periods. The Company's expected volatility was based upon the historical volatility for industry peers and used an average of those volatilities. The expected life of the Company's options was determined using the simplified method as a result of limited historical data regarding the Company's activity. The dividend yield considers that the Company has not historically paid dividends, and does not expect to pay dividends in the foreseeable future.

The fair value of the common stock was determined by the board of directors based on a variety of factors, including valuations prepared by third parties, the Company's financial position, the status of development efforts within the Company, the current climate in the marketplace and the prospects of a liquidity event, among others.

As of December 31, 2015, there was approximately \$673,000 of total unrecognized compensation expense related to non-vested share-based compensation arrangements that are expected to vest. This cost is expected to be recognized over a weighted-average period of 3.79 years. No options were granted during the year ended December 31, 2014.

12. 401(K) PLAN

During 2002, the Company established a plan under Section 401(k) of the Internal Revenue Code (the 401(k) Plan). The 401(k) Plan covers substantially all of its employees who have attained 18 years of age. Employees may elect to contribute part of their annual compensation to the 401(k) Plan, up to the maximum deferral allowance for individuals by the Internal Revenue Service under Code Section 401(k), and the Company may make a matching contribution. During 2015 and 2014, there were no matching contributions made by the Company.

13. INCOME TAXES

The Company had no income tax expense due to operating losses incurred for the year ended December 31, 2015. The Company accounts for income taxes in accordance with authoritative guidance. Under authoritative guidance, a deferred tax asset or liability is recorded for all temporary differences between book and tax reporting of assets and liabilities. A deferred tax valuation allowance is required if it is more likely than not that all or a portion of any deferred tax asset will not be realized. The Company provided a full valuation allowance at December 31, 2015. The valuation allowance increased by approximately \$3,158,000 from December 31, 2014.

At December 31, 2015, the Company had net operating loss carryforwards of approximately \$25,018,000 and \$8,038,000 to offset future federal and state income taxes, respectively, if any. These carryforwards expire for federal purposes beginning in 2028 and began to expire for state purposes in 2017. The future utilization of these net operating loss carryforwards may be subject to limitation in the event of a change in ownership as described in Internal Revenue Code Section 382. Due to the fact that the Company believes that it is more likely than not that the Company's net deferred tax assets will not be realized, the Company has provided a full valuation allowance against its net deferred tax assets.

A reconciliation of the expected income tax benefit to actual follows:

	2015	2014
Computed "expected" US tax benefit at federal statutory rate	\$ (3,234,128)	\$ (1,298,030)
Change resulting from:		
State and local income tax, net of federal income tax		
benefit	(452,569)	72,577
Valuation allowance	3,158,286	1,274,843
Non-deductible items	566,405	1,577
Change in research & development credits	(37,994)	(50,967)
Income tax expense (benefit)	\$ -	\$ -

The approximate effect of each type of temporary difference is as follows:

Deferred tax assets:	2015	2014	
Net operating loss carryforwards	\$ 8,981,824	\$	8,153,320
Research and development credit	986,971		929,688
Stock and warrant based compensation	2,724,699		1,942,259
Accrued expense	672,032		141,955
Capitalized start-up expenses	11,129,683		10,164,901
Property and equipment	1,628		6,409
Section 1231 loss carryforwards	27,277		27,296
Alternative minimum tax credits	11,771		11,771
Total deferred tax assets	24,535,885		21,377,599
Valuation allowance	(24,535,885)		(21,377,599)
Net deferred tax asset	\$ -	\$	-

Upon the adoption, and at December 31, 2015, the Company did not have any material uncertain tax positions. No interest and penalties related to uncertain tax positions were accrued at December 31, 2015.

14. LEGAL MATTER

During May 2013, the Company brought a lawsuit against another company (the "Defendant") alleging patent infringement. During December 2014, the court entered an order granting summary judgment in favor the Defendant on the issue of whether Defendant is infringing the Company's patents, and on December 14, 2015, a final judgment was entered and the Company agreed to pay the Defendant approximately \$47,000 for costs related to the lawsuit; such amount is included in accrued expenses at December 31, 2015 in the accompanying balance sheets. In January 2015, Defendant filed a motion with the court to recover from the Company its attorney's fees and costs. The court denied Defendant's motion for reimbursement of fees and costs in December 2015.

Other

The Company is subject to various legal claims arising in the normal course of business. Based on the information currently available, it is the opinion of management that the ultimate resolution of pending and threatened legal proceedings will not have a material adverse effect on the Company's financial position or the results of future operations.

15. SUPPLEMENTAL CASH FLOW INFORMATION

The accompanying statement of cash flows for the year ended December 31, 2015 excludes the effect of \$156,487 of non-cash financing activities related to the NSC warrant, which was recorded as a debt discount on the Secured Notes.

The accompanying statement of cash flows for the year ended December 31, 2015 excludes the effect of \$7,349,226 of non-cash financing activities related to the exchange of unsecured convertible promissory notes for Secured Notes (Note 7).

The accompanying statement of cash flows for the year ended December 31, 2014 excludes the effect of \$4,676,664 of non-cash financing activity related to the exchange of bridge loans for unsecured convertible promissory notes upon maturity.

Net cash flows from operating activities as reported in the accompanying statements of cash flows for the year ended December 31, 2014 reflect cash payments for interest of \$1,544. There were no cash payments for interest for the year ended December 31, 2015.

16. SUBSEQUENT EVENTS

Effective as of January 13, 2016, the Company awarded an officer a bonus in the amount of \$187,500, payable in the form of the Company's cancellation of the outstanding principal amount of \$187,500 under a Promissory Note made by the officer in favor of the Company (see Note 8). As of the date of the award, there was accrued and unpaid interest under the Promissory Note in the amount of \$7,050, which the officer repaid during January 2016. In return for the cancellation of the principal amount under the Promissory Note, the officer was required to reimburse the Company for withholding taxes payable by the Company, in the amount of \$13,998, in connection with the \$187,500 award.

In January 2016 the Company filed an appeal with the United States Court of Appeals for the Federal Circuit of the trial court's judgment in favor of the Defendant in the patent infringement lawsuit described in Note 14 and in the same month the Defendant filed an appeal with the United States Court of Appeals for the Federal Circuit of the trial court's denial of their motion to recover attorney's fees and costs.

In January 2016, the Company entered into employment agreements with three officers. The agreements call for an annual base salary of \$250,000 and a bonus of up to 30% of base salary for one officer and annual base salaries of \$220,000 and a bonus of up to 15% of base salary for the other two officers. In the event of involuntary termination, each officer is entitled to six months of severance pay. In June 2016, the Company terminated one of the officers effective as of June 30, 2016.

During January 2016, the Company issued 2,742 stock options to various directors, officers and employees at an exercise price of \$5.70. These options vested immediately.

During January 2016, the Company entered into a standby letter of credit for \$37,186 related to the real estate lease agreement for its new corporate headquarters in Los Gatos, California (Note 6).

In February 2016, the Company entered into an employment agreement with an officer. The agreement calls for an annual base salary of \$225,000 and a bonus of up to 30% of base salary. In the event of involuntary termination, the officer is entitled to six months of severance pay.

During February 2016, the Company issued 27,495 stock options with an exercise price of \$5.70. These options vest as follows: one-fourth on the first anniversary of the grant date, then ratably over the next 36 months.

During February 2016, the Company extended the period for the Company to complete an IPO and be listed on the NASDAQ stock exchange under the incentive bonus agreements (Note 6) to May 31, 2017.

During February 2016, the Company entered into an agreement with another company ("the Evaluator") whereby the Company's technology will be tested by the Evaluator for possible inclusion in future products. There is no revenue associated with this agreement.

During March 2016, the maturity date of the Secured Notes (Note 7) was extended to May 31, 2017. All other terms of the Secured Notes remained the same.

During April 2016, the Company issued additional Secured Notes with certain investors in the aggregate principal amount of \$5,958,433, of which \$2,630,820 is from existing investors. These notes have the same terms as the previous Secured Notes (Note 7) and mature on May 31, 2017. NSC acted as placement agent and the Company paid NSC a brokerage commission in the amount of ten percent of the proceeds from the Secured Notes placed by NSC, or \$437,778, and issued to NSC a warrant to purchase ten percent of the common shares issuable upon conversion of Secured Notes in the principal amount of \$4,377,781 at an exercise price equal to the conversion price of the Secured Notes. In June 2016, and prior to any exercise of the warrant, NSC elected to cancel the warrant in full and for no consideration.

During April 2016, the Board of Directors of the Company resolved that upon the completion of an IPO the 2007 Stock Incentive Plan shall be amended to increase common shares issuable thereunder to 20% of the total issued and outstanding shares of Common Stock on a fully-diluted basis immediately after the IPO.

Atomera Incorporated Condensed Balance Sheets

	March 31, 2016	December 31, 2015
	(Unaudited)	
<u>ASSETS</u>		
Current Assets:		
Cash	\$ 1,501,384	
Restricted Investment	15,000	15,000
Prepaid expenses and other current assets	44,009	48,137
Total current assets	1,560,393	3,260,080
Property and equipment, net	21,784	15,533
Deferred offering costs	180,442	144,669
Security Deposit	37,186	-
Total assets	\$ 1,799,805	\$ 3,420,282
		
LIABILITIES AND STOCKHOLDERS' DEFICIT		
EMBIETTES II. VD STOCKHOEDERS DEFTET		
Current liabilities:		
Accounts payable	\$ 408,028	\$ 301,517
Accrued expenses	99,342	144,642
Senior secured convertible promissory notes payable, net	16,657,046	16,094,877
and a state of the state of the property of the	10,007,010	10,00 1,077
Total liabilities	17,164,416	16,541,036
Total Habilities	17,104,410	10,541,050
Stockholders' deficit:		
Preferred stock, \$0.001 par value, authorized 2,500,000 shares; none issued and		
outstanding at March 31, 2016 and December 31, 2015	_	_
Common stock, \$0.001 par value, authorized 47,500,000 shares; issued and		
outstanding 1,617,313 shares at March 31, 2016 and December 31, 2015,		
respectively	1,617	1,617
Additional paid-in capital	70,508,581	70,451,752
Subscription receivable	70,500,561	(187,500)
Accumulated deficit	(85,874,809)	(83,386,623)
Total stockholders' deficit	(15,364,611)	
1 Oldi Silvenioidels delivit	(13,304,011)	(13,120,754)
Total liabilities and stockholders' deficit	A 1.700.005	Ф. 2.120.202
i otal habilities and stockholders acheit	\$ 1,799,805	\$ 3,420,282

Atomera Incorporated Condensed Statements of Operations (Unaudited) For the Three months ended March 31,

	2016	2015
OPERATING EXPENSES	·	
Research and development	\$ 945,891	\$ 519,452
General and administrative	861,119	1,698,781
Selling and marketing	119,015	11,394
Total operating expenses	1,926,025	2,229,627
Loss from operations	(1,926,025)	(2,229,627)
OTHER INCOME (EXPENSE)		
Interest expense, net	(562,161)	(231,122)
Net Loss	\$ (2,488,186)	\$ (2,460,749)
Net loss per common share, basic and diluted	\$ (1.54)	\$ (2.00)
Weighted average number of common shares outstanding, basic and dilulted	1,617,313	1,233,268

Atomera Incorporated Condensed Statement of Stockholders' Deficit For the Three Months Ended March 31, 2016 (Unaudited)

	Prefer	red Stock	Commo	n Stock	Additional Paid-in	Subscription	Accumulated	Total Stockholders'
	Shares	Amount	Shares	Amount	Capital	Receivable	Deficit	Deficit
Balance, January 1, 2016		\$ -	1,617,313	\$ 1,617	\$70,451,752	\$ (187,500)	\$ (83,386,623)	\$ (13,120,754)
Compensation in exchange for settlement of subcription receivable						187,500	_	187,500
	_	_	_	_	_	187,500	_	187,500
Stock-based compensation	-	-	-	-	56,829	-	-	56,829
Net loss							(2,488,186)	(2,488,186)
Balance, March 31, 2016		<u>\$</u> _	1,617,313	\$ 1,617	\$70,508,581	<u>\$</u> -	<u>\$ (85,874,809)</u>	<u>\$ (15,364,611)</u>

Atomera Incorporated Condensed Statements of Cash Flows (Unaudited) For the Three Months Ended March 31,

	2016	2015
CASH FLOWS FROM OPERATING ACTIVITIES		
Net Loss	\$ (2,488,186)	\$ (2,460,749)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	2,961	2,209
Non-cash warrant fair value for services rendered	-	1,015,848
Non-cash interest expense	562,168	232,869
Stock-based compensation	56,829	313,176
Compensation in exchange for settlement of subscription receivable	187,500	
Changes in operating assets and liabilities	-	
Prepaid expenses and security deposit	(33,058)	(26,851)
Accounts payable	106,511	6,141
Accrued expenses	(45,300)	(49,051)
Net cash used in operating activities	(1,650,576)	(966,408)
NET CASH USED IN INVESTING ACTIVITIES		
Acquisition of property and equipment	(9,210)	(2,170)
Net cash used in investing activities	(9,210)	(2,170)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from unsecurred convertible promissory notes payable	-	1,096,560
		6 61 5 001
Net proceeds from senior secured convertible promissory notes payable	-	6,615,031
Payment of offering costs	(35,773)	
Net cash (used in) / provided by financing activities	(35,773)	7,711,591
	Φ (1 (05 550)	Ф. 6742.012
Net (decrease) / increase in cash	\$ (1,695,559)	\$ 6,743,013
Cash at beginning of period	3,196,943	20,980
Cash at end of period	\$ 1,501,384	\$ 6,763,993

See Note 8 for supplemental cash flow information.

Periods Ended March 31, 2016 and 2015 (unaudited)

1. NATURE OF OPERATIONS

Atomera Incorporated (the Company) (formerly known as MEARS Technologies, Inc.) was incorporated in the state of Delaware in March 2007 under the name MEARS Technologies, Inc. and is engaged in the development, commercialization and licensing of proprietary processes and technologies for the semiconductor industry. On January 12, 2016, the Company changed its name to Atomera Incorporated.

The Company is in the development stage, having not yet started planned principal operations, and is devoting substantially all of its efforts toward technology research and development.

2. LIQUI DITY, GOING CONCERN AND MANAGEMENT PLANS

At March 31, 2016 the Company had cash of approximately \$1.5 million and a working capital deficit of approximately \$15.6 million. The Company has incurred recurring operating losses and at March 31, 2016 had an accumulated deficit of approximately \$85.9 million. The Company has primarily financed operations through the sale of equity and debt securities. Because of recurring and expected future losses and its cash balance on hand, there is a substantial doubt about the Company's ability to continue as a going concern.

The Company believes that it requires a minimum of \$15 million of capital over the next 12 months from the date of filing this report in order to fund its current business plans and start full-scale industrial production of a device that incorporates the Company's technology. The Company endeavors to acquire additional funds through various financing sources, including private placement of its equity and debt securities, initial public offering of its equity securities, licensing fees for its technology and joint ventures with industry partners. In addition, the Company will consider alternatives to its current business plans that may enable the Company to achieve revenue producing operations and meaningful commercial success with a smaller amount of capital. However, there can be no assurance that such financing will be available on terms favorable to the Company, if at all. The Company's ability to continue as a going concern is dependent upon its ability to (1) obtain additional financing as may be required, (2) generate sufficient cash flow to meet its obligations on a timely basis and (3) ultimately attain profitability. The financial statements do not include any adjustments relating to the recoverability and classification of asset carrying amounts or the amount and classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

Periods Ended March 31, 2016 and 2015 (unaudited)

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying condensed financial statements reflect the application of certain significant accounting policies as described in this note and elsewhere in this prospectus.

Basis of Presentation

The accompanying condensed financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) for interim financial information and the rules and regulations of the SEC. Accordingly, since they are interim financial statements, the accompanying condensed financial statements do not include all of the information and notes required by GAAP for annual financial statements, but reflect all adjustments consisting of normal, recurring adjustments, that are necessary for a fair presentation of the financial position, results of operations and cash flows for the interim periods presented. In the opinion of the Company's management, all adjustments, consisting of only normal and recurring adjustments, necessary for a fair presentation of the Company's financial position and the results of operations for the periods presented have been included. Interim results are not necessarily indicative of results for a full year. The condensed financial statements and notes should be read in conjunction with the financial statements and notes for the year ended December 31, 2015 which are included elsewhere in this prospectus.

Deferred Offering Costs

The Company complies with the requirements of the ASC 340, *Other Assets and Deferred Costs*. Deferred offering costs of \$180,442 consist principally of legal, accounting, and filing fees incurred through the balance sheet date that are related to the proposed offering and that will be charged to capital upon the receipt of the capital raised or charged to expense if the proposed offering is not completed.

Common Stock Warrants

The Company classifies as equity any warrants that (i) require physical settlement or net-share settlement or (ii) provide the Company with a choice of net-cash settlement or settlement in its own shares (physical settlement or net-share settlement). The Company classifies as assets or liabilities any contracts that (i) require net-cash settlement (including a requirement to net cash settle the contract if an event occurs and if that event is outside the Company's control), (ii) gives the counterparty a choice of net-cash settlement or settlement in shares (physical settlement or net-share settlement) or (iii) that contain reset provisions that do not qualify for the scope exception. The Company assesses classification of its common stock warrants and other freestanding derivatives at each reporting date to determine whether a change in classification between assets and liabilities is required. The Company's freestanding derivatives consist of warrants to purchase common stock that were issued in connection with its notes payable. The Company evaluated these warrants to assess their proper classification and determined that the common stock warrants meet the criteria for equity classification in the balance sheet. Such warrants are measured at fair value, which the Company determines using the Black-Scholes-Merton option-pricing model.

Periods Ended March 31, 2016 and 2015 (unaudited)

Stock-Based Compensation

The Company computes stock-based compensation in accordance with authoritative guidance. The Company uses the Black-Scholes-Merton option-pricing model to determine the fair value of its stock options. The Black-Scholes-Merton option-pricing model includes various assumptions, including the fair market value of the common stock of the Company, expected life of stock options, the expected volatility and the expected risk-free interest rate, among others. These assumptions reflect the Company's best estimates, but they involve inherent uncertainties based on market conditions generally outside the control of the Company.

As a result, if other assumptions had been used, stock-based compensation cost, as determined in accordance with authoritative guidance, could have been materially impacted. Furthermore, if the Company uses different assumptions on future grants, stock-based compensation cost could be materially affected in future periods.

The Company accounts for the fair value of equity instruments issued to non-employees using either the fair value of the services received or the fair value of the equity instrument, whichever is considered more reliable. The Company utilizes the Black-Scholes-Merton option-pricing model to measure the fair value of options issued to non-employees.

The Company recorded \$56,829 and \$313,176 of compensation expense related to stock options awarded for the three months ended March 31, 2016 and 2015, respectively.

Use of Estimates

The preparation of condensed financial statements in conformity with GAAP requires the Company's management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Significant estimates include the fair value of stockbased compensation and warrants, valuation allowance against deferred tax assets and related disclosures. Actual results could differ from those estimates.

Basic and Diluted Net Loss per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of shares outstanding for the period . Diluted net loss per share is computed by dividing the net loss by the weighted-average number of shares and dilutive share equivalents outstanding for the period, determined using the treasury-stock and if-converted methods. Since the Company has had net losses for all periods presented, all potentially dilutive securities are anti-dilutive. Accordingly, basic and diluted net loss per share are equal.

Periods Ended March 31, 2016 and 2015 (unaudited)

The following potential common stock equivalents were not included in the calculation of diluted net loss per common share because the inclusion thereof would be anti-dilutive:

	March 31, 2016	March 31, 2015
Stock Options	538,014	387,955
Warrants	302,751	302,751
Conversion of Notes Payable	2,280,274	2,079,372
	3,121,039	2,770,078

Recent Accounting Pronouncements Adopted

In April 2015, the FASB issued ASU No. 2015-03, *Interest—Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs*, which requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of the related debt liability, consistent with debt discounts. ASU 2015-03 is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2015. The application of ASU 2015-03 did not have a material effect on the condensed financial statements.

Other Recently Issued Accounting Pronouncements

The Company has considered all recently issued accounting pronouncements and is in the process of evaluating the potential impact of these recent accounting pronouncements on its condensed financial statements.

4. NOTES PAYABLE

From January 9, 2015 through February 5, 2015, the Company issued promissory notes to certain investors in the aggregate principal amount of \$1,096,560, of which \$596,560 was from existing investors.

Periods Ended March 31, 2016 and 2015 (unaudited)

On March 17, 2015, the Company issued Senior Secured Convertible Notes ("Secured Notes") to certain investors under which the Company borrowed \$7,400,774, of which \$28,217 was from existing investors. The Company paid brokerage commissions to National Securities Corporation ("NSC") of \$785,700. The brokerage commissions are being amortized as interest expense over the life of the loan. During the three months ended March 31, 2016, the Company recognized interest expense of \$194,428 related to the brokerage commissions which is included in interest expenses in the condensed statements of operations. The Company also issued a warrant to NSC in connection with this financing. The aggregate unamortized balance of the brokerage commissions and warrant value at March 31, 2016 is classified as debt discount of \$130,331.

In addition, on March 17, 2015, the Company exchanged all of its existing Unsecured Convertible Promissory Notes for Secured Notes with an aggregate principal balance of \$7,349,226. During the three months ended March 31, 2015, the interest expense on the Unsecured Convertible Promissory Notes was approximately \$144,000 and total accrued interest on the 2014 Unsecured Convertible Promissory Notes was approximately \$499,000 at March 17, 2015. The total closing represented \$14,750,000. The Secured Notes are due on May 31, 2016 and accrue interest at a rate of 10% per annum, except in any event of default in which case the interest rate shall be 12% per annum. During March 2016, the maturity date of the Secured Notes was extended to May 31, 2017. All other terms of the Secured Notes remained the same. The Secured Notes automatically convert to common stock in the event of an IPO of the Company and are optionally convertible upon a subsequent placement of equity other than an IPO or at the discretion of the note holder. Based on the method of conversion, the Secured Notes are converted into common stock at the Conversion Price, as defined in the agreement. As of March 31, 2016, accrued interest associated with the Secured Notes was \$2,037,377 and was included in the balance outstanding in the accompanying condensed balance sheet.

As of the date of this prospectus, the Company is in compliance with all covenants of the Secured Notes.

At March 31, 2016, the Secured Notes payable consisted of the following:

Senior Notes	\$ 14,750,000
Accrued interest	2,037,377
Debt Discount	(130,331)
Senior secured convertible promissory notes payable, net	\$ 16,657,046

Periods Ended March 31, 2016 and 2015 (unaudited)

5. RELATED PARTY TRANSACTIONS

On January 14, 2005, the Company executed a Secured Promissory Note (the Promissory Note) with an officer of the Company. Under the Promissory Note, the officer borrowed \$187,500 from the Company. The Promissory Note bore interest at a fixed rate of 3.76% per annum, with interest-only payments due annually through the maturity date of January 14, 2014. In December 2015, the Company agreed to extend the term of the note to January 14, 2019, subject to acceleration in the event of the sale of the sale or liquidation of the Company, bankruptcy or like event. Effective January 2016 the Company cancelled the outstanding principal of the note in the amount of \$187,500. The cancellation of this note was recognized as a bonus to the officer and included in general and administrative expenses in the accompanying condensed statement of operations for the three month period ended March 31, 2016. As of the date of the cancellation of the Promissory Note, there was accrued and unpaid interest under the note in the amount of \$7,050, which amount has been repaid by the officer. In return for the cancellation of the note, the officer was required to reimburse the Company for withholding taxes payable by the Company, in the amount of \$13,998.

During the three month periods ended March 31, 2016 and 2015, a director, who is also a shareholder of the Company, was paid \$3,000 and \$4,000, respectively, for his work as a consultant for the Company.

A director and shareholder of the Company is a partner of a law firm that serves as legal counsel for the Company. During the three months ended March 31, 2016 and 2015, this law firm billed the Company \$0 and \$18,104, respectively. Included in current liabilities on the accompanying condensed balance sheets at March 31, 2016 and December 31, 2015, is \$1,310 and \$1,310, respectively owed to this law firm.

6. WARRANTS

The Company had no warrant activity in the three months ended March 31, 2016. As of March 31, 2016, warrants to purchase an aggregate of 302,751 shares of common stock were outstanding with a weighted average exercise price of \$23.58 per share and have weighed average remaining life of 2.6 years.

The warrants outstanding at March 31, 2016 had an aggregate intrinsic value of \$967,200.

Periods Ended March 31, 2016 and 2015 (unaudited)

STOCK OPTION PLAN

7.

A summary of the activity under the Employee Stock Option Plan and 2007 Equity Incentive Plan for the three months ended March 31, 2016 is as follows:

				Weighted-
				Average
		V	Veighted-	Remaining
			Average	Contractual
	Number of]	Exercise	Term
	Shares		Prices	(In Years)
Outstanding at January 1, 2016	511,245	\$	7.05	9.4
Granted	26,776	\$	5.70	9.9
Cancelled	(7)	\$	5.70	-
Outstanding at March 31, 2016	538,014	\$	6.98	9.2
Exercisable at March 31, 2016	202,280	\$	6.15	8.6
Vested and expected to vest at March 31, 2016	527,788	\$	5.81	9.1
		_		

During the three months ended March 31, 2016, the Company granted options under its Employee Stock Option Plan to purchase 26,776 shares of its common stock to its employees. The fair value of these options granted was \$70,649.

The total number of options available for grant was 75,312 as of March 31, 2016.

The following table summarizes the stock-based compensation expense recorded in the Company's results of operations during the three months ended March 31, 2016 and 2015:

		Three Months Ended					
	_	2016		2016 20		2015	
General and administrative	\$	47,816	\$	236,429			
Research and development		9,013		76,747			
	\$	56,829	\$	313,176			

The Company records compensation expense for employee awards with graded vesting using the straight-line method. The Company records compensation expense for nonemployee awards with graded vesting using the accelerated expense attribution method. The Company recognizes compensation expense over the requisite service period applicable to each individual award, which generally equals the vesting term. Estimated prospective forfeitures are incorporated in the determination of compensation cost to be recognized. The Company applied an expected forfeiture rate of 4.77% to non-vested stock options for which expense was recognized during the periods ended March 31, 2016 and 2015.

Periods Ended March 31, 2016 and 2015 (unaudited)

The Company estimates the fair value of each option award using the Black-Scholes-Merton option pricing model.

The fair values of options granted during the three months ended March 31, 2016 were calculated using the following assumptions:

Assumptions:	
Expected volatility	46.54%
Weighted average expected term (in years)	6.12
Risk-free interest rate	1.62%
Expected dividend yield	0%

The risk-free interest rate was obtained from U.S. Treasury rates for the applicable periods. The Company's expected volatility was based upon the historical volatility for industry peers and used an average of those volatilities. The expected life of the Company's options was determined using the simplified method as a result of limited historical data regarding the Company's activity. The dividend yield considers that the Company has not historically paid dividends, and does not expect to pay dividends in the foreseeable future.

The fair value of the common stock was determined by the board of directors based on a variety of factors, including valuations prepared by third parties, the Company's financial position, the status of development efforts within the Company, the current climate in the marketplace and the prospects of a liquidity event, among others.

As of March 31, 2016, there was approximately \$684,000 of total unrecognized compensation expense related to non-vested share-based compensation arrangements that are expected to vest. This cost is expected to be recognized over a weighted-average period of 3.5 years.

8. COMMITMENTS AND CONTINGENCIES

Incentive Bonus

During September 2015, the Board of Directors resolved to pay an incentive bonus to certain directors and officers contingent upon the Company being listed on the NASDAQ stock exchange before May 31, 2016 (subsequently extended to May 31, 2017 by the Board of Directors during February 2016) in connection with an initial public offering (IPO) with net proceeds of at least \$15 million and a post-IPO valuation of at least \$50 million and that the directors and officers continue to be in service with the Company until the IPO is closed. If these circumstances are met, a total bonus of \$1,651,369 will be paid to employees in the form of common stock, convertible at the greater of the IPO price to the public or \$3.681 per share. These incentive agreements also provide that an officer or director may continue to be eligible for the incentive bonus if their service with the Company terminates without cause or the officer or director resigns with good reason.

Periods Ended March 31, 2016 and 2015 (unaudited)

Litigation

In May 2013, the Company initiated a civil action in U.S. federal court against another company (the "Defendant"), alleging patent infringement. During December 2014, the court entered an order granting summary judgment in favor of the Defendant on the issue of whether the Defendant is infringing on the Company's patents, and on December 14, 2015 a final judgment was entered and the Company agreed to pay the Defendant approximately \$47,000 for costs related to the lawsuit, which was paid in January 2016. In January 2015, the Defendant filed a motion with the court to recover from the Company its attorney's fees and costs. The court denied the Defendant's motion for reimbursement of fees and costs in December 2015.

In January 2016 the Company filed an appeal with the United States Court of Appeals for the Federal Circuit of the trial court's judgment in favor of the Defendant and in the same month the Defendant filed an appeal with the United States Court of Appeals for the Federal Circuit of the trial court's denial of their motion to recover attorney's fees and costs. The Defendant has not asserted any amount of fees or costs it is seeking on appeal.

Operating Leases

On November 5, 2014, the Company entered a lease agreement for the use of 1,730 square feet of office space in Wellesley Hills, Massachusetts. The lease with monthly payments of \$4,613 commenced on December 1, 2014 and expires on November 30, 2016.

On January 19, 2016, the Company entered into a real estate lease agreement for a 3,396 square foot office facility in Los Gatos, California as its new corporate headquarters. The lease commenced on February 1, 2016 and expires on January 31, 2018. The lease rate is \$12,395 per month, which will increase to \$13,074 per month commencing February 1, 2017.

Rent expense was \$39,606 and \$13,840 during the three months ended March 31, 2016 and 2015, respectively.

Periods Ended March 31, 2016 and 2015 (unaudited)

Approximate future minimum lease payments required under the operating leases are as follows:

Years ending December 31,	 Amount
Remaining period in 2016	\$ 148,500
2017	156,200
2018	13,100
Total	\$ 317,800

Officer Compensation

In January 2016, the Company entered into employment agreements with three officers. The agreements call for an annual base salary of \$250,000 and a bonus of up to 30% of base salary for one officer and annual base salaries of \$220,000 and a bonus of up to 15% of base salary for the other two officers. In the event of involuntary termination, each officer is entitled to six months of severance pay. In June 2016, the Company terminated one of the officers effective as of June 30, 2016.

In February 2016, the Company entered into an employment agreement with an officer. The agreement calls for an annual base salary of \$225,000 and a bonus of up to 30% of base salary. In the event of involuntary termination, the officer is entitled to six months of severance pay.

9. SUPPLEMENTAL CASH FLOW INFORMATION

The accompanying condensed statement of cash flows for the three months ended March 31, 2015 excludes the effect of \$7,349,226 of non-cash financing activities related to the exchange of unsecured convertible promissory notes for Secured Notes (Note 4).

10. SUBSEQUENT EVENTS

During April 2016, the Company issued additional Secured Notes with certain investors in the aggregate principal amount of \$5,958,433, of which \$2,630,820 is from existing investors. These notes have the same terms as the previous Secured Notes (Note 4) and mature on May 31, 2017. NSC acted as placement agent and the Company paid NSC a brokerage commission in the amount of ten percent of the proceeds from the Secured Notes placed by NSC, or \$437,778, and issued to NSC a warrant to purchase ten percent of the common shares issuable upon conversion of Secured Notes in the principal amount of \$4,377,781 at an exercise price equal to the conversion price of the Secured Notes. In June 2016, and prior to any exercise of the warrant, NSC elected to cancel the warrant in full and for no consideration.

During April 2016, the Board of Directors of the Company resolved that upon the completion of an IPO the 2007 Stock Incentive Plan shall be amended to increase common shares issuable thereunder to 20% of the total issued and outstanding shares of Common Stock on a fully-diluted basis immediately after the IPO.

In July 2016, the Company and certain officers and directors with whom the Company had agreed to grant certain incentive share bonuses (Note 8) agreed to cancel the share bonuses in return for the Company's agreement to grant each recipient, upon the close of the Company's initial public offering, shares of the Company's restricted common stock pursuant to restricted stock agreements. The restricted stock agreements provided that the Company will issue to the recipients an aggregate of 440,364 shares of the Company's common stock and that all shares remain subject to forfeiture, until the prescribed vesting date, in the event the recipient fails to remain in service to the Company for any reason other than the Company's termination without cause or the recipient's resignation for good reason. The restricted stock agreements provide that 15% of the share award will vest upon the six month anniversary of the date of grant and that 15% of the share award will vest on each monthly anniversary of the initial vesting date until the award is fully vested on the one year anniversary of the date of grant.

3,200,000 Shares of Common Stock

Atomera Incorporated

PROSPECTUS

National Securities Corporation