

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

FORM S-8
REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933

Atomera Incorporated

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

30-050586

(I.R.S. Employer
Identification No.)

750 University Avenue, Suite 280

Los Gatos, California

(Address of Principal Executive Offices)

95032

(Zip Code)

2007 Stock Incentive Plan

(Full title of the plan)

Daniel K. Donahue

Greenberg Traurig, LLP

3161 Michelson Drive, Suite 1000

Irvine, California 92612

(949) 732-6500

(Name and address of agent for service)

(949) 732-6500

(Telephone number, including area code, of agent for service)

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock	3,199,447 shares	\$ 7.89(2)	\$ 25,243,636 (2)	\$ 2,542.04

(1) In addition, pursuant to Rule 416(c) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement includes an indeterminate number of additional shares which may be offered and sold as a result of anti-dilution provisions described in the above-referenced plan.

(2) Estimated solely for the purpose of calculating the amount of the registration fee and calculated pursuant to Rule 457(h)(1) and Rule 457(c) under the Securities Act.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Item 1. Plan Information

Atomera Incorporated (the "Company") has adopted its 2007 Stock Incentive Plan, as amended ("Plan"). The maximum number of shares of common stock of the Company that are available for issuance under the Plan is 3,199,447 shares. This Registration Statement on Form S-8 is filed with the Securities and Exchange Commission ("Commission") for the purposes of registering the 3,199,447 shares of the Company's common stock issuable under the Plan.

The document(s) containing the information specified in Part I of Form S-8 will be sent or given to participants in the Plan as specified by Rule 428(b)(1) under the Securities Act of 1933, as amended (the "Securities Act"). Such documents are not being filed with the Commission, but constitute, along with the documents incorporated by reference into this Registration Statement, a prospectus that meets the requirements of Section 10(a) of the Securities Act.

Item 2. Registrant Information and Employee Plan Annual Information

The Company will furnish without charge to each person to whom the prospectus is delivered, upon the written or oral request of such person, a copy of any and all of the documents incorporated by reference in Item 3 of Part II of this Registration Statement and incorporated by reference in the Section 10(a) prospectus, other than exhibits to such documents (unless such exhibits are specifically incorporated by reference to the information that is incorporated). Written requests should be made to Investor Relations of Atomera Incorporated at 750 University Avenue, Suite 280, Los Gatos, CA 95032 or to the email address at investor@atomera.com.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Certain Documents by Reference

The following documents filed by the Company with the Commission are incorporated by reference into this Registration Statement:

- (a) The Company's prospectus filed on August 8, 2016 pursuant to Rule 424(b) under the Securities Act relating to the Registration Statement on Form S-1 (File No. 333-212353), which contains audited financial statements for the Registrant's latest fiscal year for which such statements have been filed.
- (b) The description of the Company's common stock in its Form 8-A12B, which was filed on August 2, 2016, and any amendments or reports filed for the purpose of updating this description; and
- (c) All reports and other documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act prior to the filing of a post-effective amendment which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold.

Item 4. Description of Securities

Not applicable.

Item 5. Interests of Named Experts and Counsel

The validity of the issuance of the shares of the Company's common stock offered by this Registration Statement has been passed upon by Greenberg Traurig, LLP, Irvine, California .

Item 6. Indemnification of Directors and Officers

Section 145 of the General Corporation Law of the State of Delaware (the “DGCL”) permits a Delaware corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person’s conduct was unlawful.

In the case of an action by or in the right of the corporation, Section 145 of the DGCL permits a Delaware corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys’ fees) actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses that the Court of Chancery or such other court shall deem proper.

Section 145 of the DGCL also permits a Delaware corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person’s status as such, whether or not the corporation would have the power to indemnify such person against such liability under Section 145 of the DGCL.

Article Sixth of the Company’s Amended and Restated Certificate of Incorporation states that to the fullest extent permitted by the DGCL the Company’s directors shall not be personally liable to the Company or to its stockholders for monetary damages for breach of fiduciary duty as a director. If the DGCL is amended after the date hereof to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of the Company’s directors shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

Article Seventh of the Company’s Amended and Restated Certificate of Incorporation requires the Company, to the fullest extent permitted by applicable law, to provide indemnification of (and advancement of expenses to) its directors and officers, and authorizes the Company, to the fullest extent permitted by applicable law, to provide indemnification of (and advancement of expenses to) to other employees and agents (and any other persons to which the DGCL permits the Company to provide indemnification) through bylaw provisions, agreements with such directors, officers, employees, agents or other persons, vote of stockholders or disinterested directors or otherwise, subject only to limits created by the DGCL with respect to actions for breach of duty to our corporation, our stockholders and others.

Article Seventh of the Company’s Amended and Restated Certificate of Incorporation provides that the Company shall, to the maximum extent and in the manner permitted by the DGCL, indemnify each of its directors and officers against expenses (including attorneys’ fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was a director of the Company. Article Seventh of the Company’s Amended and Restated Certificate of Incorporation also provides that the Company may, to the maximum extent and in the manner permitted by the DGCL, indemnify each of its employees, officers and agents against expenses (including attorneys’ fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an employee, officer or agent of the Company. The right to indemnification conferred by Article Seventh includes the right to be paid by the Company the expenses incurred in defending any action or proceeding for which indemnification is required or permitted following authorization thereof by the board of directors shall be paid in advance of the final disposition of such action or proceeding upon receipt of an undertaking by or on behalf of the indemnified party to repay such amount if it shall ultimately be determined by final judicial decision from which there is no further right to appeal that the indemnified party is not entitled to be indemnified as authorized in Article Seventh of the Company’s Amended and Restated Certificate of Incorporation.

The Company may maintain insurance, at its expense, to protect the Company and any of its directors, officers, employees or agents against any such expense, liability or loss, whether or not we have the power to indemnify such person.

Insofar as indemnification for liabilities arising under the Securities Act, may be permitted to the Company's directors, officers or persons controlling the Company pursuant to the provisions contained in the Company's Amended and Restated Certificate of Incorporation, Bylaws, the DGCL or otherwise, the Company has been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable. If a claim for indemnification against such liabilities, other than the payment by the Company of expenses incurred or paid by one of its directors, officers or controlling persons in the successful defense of any action, suit, or proceeding, is asserted by such director, officer or controlling person, the Company will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by the Company is against public policy as expressed in the Securities Act and will be governed by the final adjudication of this issue.

Item 7. Exemption from Registration Claimed

Not applicable.

Item 8. Exhibits.

<u>Exhibit No.</u>	<u>Description of Exhibits</u>	
<u>Exhibit No.</u>	<u>Description</u>	<u>Method of Filing</u>
5.1	Opinion and Consent of Greenberg Traurig, LLP	Filed electronically herewith
23.1	Consent of Marcum LLP	Filed electronically herewith
23.4	Consent of Greenberg Traurig, LLP	Included in Exhibit 5.1
24.1	Power of Attorney	Included on the signature page to this registration statement
99.1	Atomera Incorporated 2007 Stock Incentive Plan	Incorporated by reference from the Company's Registration Statement on Form S-1 filed on June 30, 2016

Item 9. Undertakings.

- (a) The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended (the “Securities Act”).
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) under the Securities Act if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the “Calculation of Registration Fee” table in the effective registration statement.
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
 - (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant’s annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”) (and where applicable, each filing of an employee benefit plan’s annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act, and is therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements of filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Los Gatos, California on August 11, 2016.

ATOMERA INCORPORATED

By: /s/ Scott A. Bibaud

Scott A. Bibaud
Chief Executive Officer

POWER OF ATTORNEY

Each person whose signature appears below hereby constitutes and appoints Scott A. Bibaud and Francis Laurencio, and each of them, as such person's true and lawful attorney-in-fact and agent, each with full powers of substitution and re-substitution, for such person and in such person's name, place and stead, in any and all capacities, to sign any or all amendments (including post effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent or his or her substitute or substitutes, may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed on August 11, 2016 by the following persons in the capacities indicated.

<u>Signature</u>	<u>Title</u>
<u>John Gerber</u>	Chairman of the Board
<u>/s/ Scott A. Bibaud</u> Scott A. Bibaud	President, Chief Executive Officer and Director (Principal Executive Officer)
<u>/s/ Francis Laurencio</u> Francis Laurencio	Chief Financial Officer and Director (Principal Financial and Accounting Officer)
<u>/s/ Erwin Trautmann</u> Erwin Trautmann	Director
<u>/s/ C. Rinn Cleavelin, Ph.D.</u> C. Rinn Cleavelin, Ph.D.	Director
<u>/s/ Rolf Stadheim</u> Rolf Stadheim	Director

INDEX TO EXHIBITS

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GREENBERG TRAUIG, LLP
3161 Michelson Drive, Suite 1000
Irvine, CA 92612

August 11, 2016

Atomera Incorporated
750 University Avenue, Suite 280
Los Gatos, California 95032

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as counsel to Atomera Incorporated (the "Company") in connection with its Registration Statement on Form S-8, as may be amended and supplemented from time to time (the "Registration Statement"), filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended, in connection with the registration by the Company of 3,199,447 shares (the "Shares") of common stock, \$0.001 par value per share (the "Common Stock"), of the Company issuable under the Company's 2007 Stock Incentive Plan.

For purposes of rendering this opinion, we have examined originals or copies of such documents and records as we have deemed appropriate. In conducting such examination, we have assumed the genuineness of all signatures and the authenticity of all documents submitted to us as originals and conformity to original documents of all documents submitted to us as copies.

Based upon and subject to the foregoing and the effect, if any, of the matters discussed below, after having given due regard to such issues of law as we deemed relevant, we are of the opinion that the Shares, when issued, delivered and paid for in accordance with the relevant plan and the terms of the individual option agreements and stock agreements, as applicable, will be legally issued, fully paid and non-assessable.

We are furnishing this opinion to the Company solely in connection with the Registration Statement. This opinion may not be relied on by, nor copies delivered to, any other person or entity without our prior written consent. Notwithstanding the preceding sentence we hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to its use as part of the Registration Statement.

Very truly yours,

/s/ GREENBERG TRAUIG, LLP

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in this Registration Statement of Atomera Incorporated (f/k/a Mears Technologies, Inc.) on Form S-8 of our report, which includes an explanatory paragraph as to the Company's ability to continue as a going concern, dated June 17, 2016, with respect to our audits of the financial statements of Atomera Incorporated as of December 31, 2015 and 2014 and for the years then ended, which report appears in the Company's prospectus filed on August 8, 2016 pursuant to rule 424(b) under the Securities Act relating to the Registration Statement on Form S-1 (File No. 333-212353), which is incorporated by reference in this Registration Statement.

/s/ Marcum LLP

Marcum LLP

New York, NY

August 11, 2016
