

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

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

M/A-COM TECHNOLOGY SOLUTIONS HOLDINGS, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

27-0306875
(I.R.S. Employer
Identification Number)

100 Chelmsford Street
Lowell, MA 01851
(Address of principal executive offices, including zip code)

MINDSPEED TECHNOLOGIES, INC. 2013 EQUITY INCENTIVE PLAN
MINDSPEED TECHNOLOGIES, INC. 2003 LONG-TERM INCENTIVES PLAN
MINDSPEED TECHNOLOGIES, INC. DIRECTORS STOCK PLAN
MINDSPEED TECHNOLOGIES, INC. INDUCEMENT INCENTIVE PLAN
INDUCEMENT GRANTS
(Full title of the plans)

John Croteau
President and Chief Executive Officer
M/A-COM Technology Solutions Holdings, Inc.
100 Chelmsford Street
Lowell, MA 01851
(978) 656-2500
(Name, address and telephone number, including area code, of agent for service)

Copy to:

Jason Day
Perkins Coie LLP
1900 Sixteenth Street, Suite 1400
Denver, CO 80202-5255
(303) 291-2300

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. (Check one):

Large accelerated filer Accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company) 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, \$0.001 par value per share, under the:				
Mindspeed Technologies, Inc. 2013 Equity Incentive Plan				
<i>Stock Options</i>	3,228	\$14.85(2)	\$47,935.80	\$6.17
<i>Other Equity Awards</i>	188,959	\$15.34(3)	\$2,898,631.06	\$373.34
Mindspeed Technologies, Inc. 2003 Long-Term Incentives Plan				
<i>Stock Options</i>	357,530	\$22.33(2)	\$7,983,644.90	\$1,028.29
<i>Other Equity Awards</i>	87,253	\$15.34(3)	\$1,338,461.02	\$172.39
Mindspeed Technologies, Inc. Directors Stock Plan				
<i>Stock Options</i>	54,227	\$40.64(2)	\$2,203,785.28	\$283.85
Mindspeed Technologies, Inc. Inducement Incentive Plan				
<i>Other Equity Awards</i>	7,557	\$15.34(3)	\$115,924.38	\$14.93

Inducement Grants				
<i>Stock Options</i>	27,451	\$22.07(2)	\$605,843.57	\$78.04
<i>Other Equity Awards</i>	1,211	\$15.34(3)	\$18,576.74	\$2.40
Total	727,416		\$15,212,802.75	\$1,959.41

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement also covers any additional shares of the registrant's common stock that may become issuable under the plans as a result of any future stock splits, stock dividends or similar adjustments of the registrant's outstanding common stock.
- (2) Computed in accordance with Rule 457(h)(1) under the Securities Act upon the basis of the weighted-average exercise price of the outstanding stock options.
- (3) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457 under the Securities Act and represents the average of the high sales price and the low sales price for the registrant's common stock as reported by the NASDAQ Global Select Market on December 20, 2013.

PART II
INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by the registrant with the Securities and Exchange Commission (the "Commission") are hereby incorporated by reference in this registration statement:

(a) the Annual Report on Form 10-K for the fiscal year ended September 27, 2013 filed by the registrant on December 5, 2013, which contains the registrant's audited financial statements for the latest fiscal year for which such statements have been filed;

(b) the Current Reports on Form 8-K filed by the registrant on September 30, 2013, November 5, 2013, November 20, 2013, December 16, 2013 and December 18, 2013; and

(c) the description of the registrant's common stock contained in the registrant's registration statement on Form 8-A, filed on March 9, 2012, pursuant to Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including any amendment or report filed for the purpose of updating such description.

All documents filed by the registrant pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date hereof, and prior to the filing of a post-effective amendment that indicates that all the securities offered hereby have been sold or that deregisters the securities offered hereby then remaining unsold, shall also be deemed to be incorporated by reference into this registration statement and to be a part hereof from the date of filing of such documents; *provided, however*, that documents or information deemed to have been furnished and not filed in accordance with the rules of the Commission shall not be deemed incorporated by reference in this registration statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law (the "DGCL") provides, in effect, that any person made a party to any action by reason of the fact that he is or was a director, officer, employee or agent of us may and, in some cases, must be indemnified by us against, in the case of a non-derivative action, judgments, fines, amounts paid in settlement and reasonable expenses (including attorneys' fees) incurred by him as a result of such action and in the case of a derivative action, against expenses (including attorneys' fees), if in either type of action he acted in good faith and in a manner he reasonably believed to be in or not opposed to our best interests. This indemnification does not apply, in a derivative action, to matters as to which it is adjudged that the director, officer, employee or agent is liable to us, unless upon court order it is determined that, despite such adjudication of liability, but in view of all the circumstances of the case, he is fairly and reasonably entitled to indemnity for expenses and, in a non-derivative action, to any criminal proceeding in which such person had no reasonable cause to believe his conduct was unlawful.

The registrant's certificate of incorporation provides that no director shall be liable to the registrant or its stockholders for monetary damages for breach of fiduciary duty as a director to the fullest extent permitted by the DGCL. The registrant's bylaws require it to indemnify its directors and officers to the fullest extent permitted by Delaware law. The registrant has entered into indemnification agreements with all of its directors and executive officers and has purchased directors' and officers' liability insurance.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

<u>Exhibit Number</u>	<u>Description of Document</u>
10.1	Mindspeed Technologies, Inc. 2013 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by Mindspeed Technologies, Inc. on February 12, 2013 (No. 001-31650)).
10.2	Mindspeed Technologies, Inc. 2003 Long-Term Incentives Plan (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by Mindspeed Technologies, Inc. on April 8, 2011 (No. 001-31650)).
10.3	Mindspeed Technologies, Inc. Directors Stock Plan (incorporated by reference to Exhibit 10.31 to the Annual Report on Form 10-K for the fiscal year ended October 1, 2010 filed by Mindspeed Technologies, Inc. on November 22, 2010 (No. 001-31650)).
10.4	Mindspeed Technologies, Inc. Inducement Incentive Plan (incorporated by reference to Exhibit 4.10 to the Registration Statement on Form S-8 filed by Mindspeed Technologies, Inc. on April 5, 2012 (No. 333-180593)).
10.5	Form of Grant Letter and Mindspeed Technologies, Inc. Non-Qualified Stock Option Award Agreement (incorporated by reference to Exhibit 4.12 to the Registration Statement on Form S-8 filed by Mindspeed Technologies, Inc. on April 2, 2010 (No. 333-165875)).
10.6	Form of Grant Letter and Mindspeed Technologies, Inc. Restricted Stock Award Agreement (incorporated by reference to Exhibit 4.13 to the Registration Statement on Form S-8 filed by Mindspeed Technologies, Inc. on April 2, 2010 (No. 333-165875)).
5.1+	Opinion of Perkins Coie LLP regarding legality of the common stock being registered.
23.1+	Consent of Deloitte & Touche LLP.
23.2+	Consent of Perkins Coie LLP (included in opinion filed as Exhibit 5.1).
24.1+	Power of Attorney (see signature page).

+ Filed herewith.

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:

(a) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(b) To reflect in the prospectus any facts or events arising after the effective date of this 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 this registration statement; and

(c) To include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in this registration statement;

provided, however, that paragraphs (1)(a) and (1)(b) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in 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 this 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 15(d) of 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 this 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 of expenses incurred or paid by a director, officer or controlling person of 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 for 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 Lowell, State of Massachusetts, on December 26, 2013.

**M/A-COM TECHNOLOGY SOLUTIONS HOLDINGS,
INC.**

By: /s/ John Croteau

Name: John Croteau

Title: President and Chief Executive Officer

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints John Croteau and Clay Simpson or any of them, as his or her attorneys-in-fact, with the power of substitution, for him or her in any and all capacities, to sign any amendments to this registration statement, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that said attorneys-in-fact, or their substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities indicated below on December 26, 2013.

<u>Signature</u>	<u>Title</u>
<u>/s/ John Croteau</u> John Croteau	President, Chief Executive Officer and Director (Principal Executive Officer)
<u>/s/ Conrad Gagnon</u> Conrad Gagnon	Chief Financial Officer (Principal Financial and Accounting Officer)
<u>/s/ John Ocampo</u> John Ocampo	Chairman of the Board
<u>/s/ Susan Ocampo</u> Susan Ocampo	Director
<u>/s/ Charles Bland</u> Charles Bland	Director
<u>/s/ Peter Chung</u> Peter Chung	Director
<u>/s/ Mark Edelstone</u> Mark Edelstone	Director
<u>/s/ Gil Van Lunsen</u> Gil Van Lunsen	Director

EXHIBIT INDEX

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1900 Sixteenth Street, Suite 1400
Denver, Colorado 80202-5255
PHONE: 303.291.2300
FAX: 303.291.2400
www.perkinscoie.com

December 26, 2013

M/A-COM Technology Solutions Holdings, Inc.
100 Chelmsford Street
Lowell, Massachusetts 01851

Re: Registration Statement on Form S-8 of Shares of Common Stock, par value \$0.001 per share, of M/A-COM Technology Solutions Holdings, Inc.

Ladies and Gentlemen:

We have acted as counsel to you in connection with the preparation of a Registration Statement on Form S-8 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Act"), which you are filing with the Securities and Exchange Commission (the "Commission") with respect to (a) up to 192,187 shares (the "2013 Plan Shares") of common stock, par value \$0.001 per share ("Common Stock"), of M/A COM Technology Solutions Holdings, Inc. (the "Company"), which may be issued under the 2013 Equity Incentive Plan (the "2013 Plan") of Mindspeed Technologies, Inc., a wholly-owned subsidiary of the Company ("Mindspeed"); (b) up to 444,783 shares of Common Stock (the "LTIP Shares"), which may be issued under the Mindspeed 2003 Long-Term Incentives Plan (the "LTIP"); (c) up to 54,227 shares of Common Stock (the "Directors Stock Plan Shares"), which may be issued under the Mindspeed Directors Stock Plan (the "Directors Stock Plan"); (d) up to 7,557 shares of Common Stock (the "Inducement Plan Shares"), which may be issued under the Mindspeed Inducement Incentive Plan (the "Inducement Plan"); and (e) up to 28,662 shares of Common Stock (the "Inducement Grant Shares"), which may be issued pursuant to certain inducement grants (the "Inducement Grants"). The 2013 Plan, the LTIP, the Directors Stock Plan, the Inducement Plan and the Inducement Grants are collectively referred to herein as the "Plans," and the 2013 Plan Shares, the LTIP Shares, the Directors Stock Plan Shares, the Inducement Plan Shares and the Inducement Grant Shares are collectively referred to herein as the "Shares."

We have examined the Registration Statement and such documents and records of the Company as we have deemed necessary for the purpose of this opinion. In giving this opinion, we are assuming the authenticity of all instruments presented to us as originals, the conformity with originals of all instruments presented to us as copies and the genuineness of all signatures.

Based upon and subject to the foregoing, we are of the opinion that any Shares that may be issued pursuant to the Plans have been duly authorized and that, upon the due execution by the Company of any certificates representing such Shares, the registration by its registrar of such Shares and the sale thereof by the Company in accordance with the terms of the applicable Plan, and the receipt of consideration therefor in accordance with the terms of such Plan, such Shares will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement. In giving such consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Act.

Very truly yours,

/s/ PERKINS COIE LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our report relating to the consolidated financial statements of M/A-COM Technology Solutions Holdings, Inc. (the "Company") dated December 4, 2013 appearing in the Annual Report on Form 10-K of the Company for the year ended September 27, 2013.

/s/ DELOITTE & TOUCHE LLP

Boston, MA
December 26, 2013