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

**FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

MACOM 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
(978) 656-2500**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**John Croteau
President and Chief Executive Officer
MACOM Technology Solutions Holdings, Inc.
100 Chelmsford Street
Lowell, MA 01851
(978) 656-2500**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

With a copy to:

**Ambra Roth
MACOM Technology Solutions Holdings, Inc.
100 Chelmsford Street
Lowell, MA 01851
(978) 656-2500**

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this Registration Statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box:

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, please check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Unit (1)	Proposed Maximum Aggregate Offering Price (1)	Amount of Registration Fee (2)
Common Stock, par value \$0.001 per share	—	—	—	—
Preferred Stock, par value \$0.001 per share	—	—	—	—
Debt Securities	—	—	—	—
Depository Shares	—	—	—	—
Warrants	—	—	—	—
Purchase Contracts	—	—	—	—
Units	—	—	—	—

- (1) Omitted pursuant to General Instruction II(E) of Form S-3 under the Securities Act of 1933, as amended (the "Securities Act"). An indeterminate amount of the securities of each identified class is being registered as may from time to time be offered hereunder at indeterminate prices, along with an indeterminate number of securities that may be issued upon exercise, settlement, exchange or conversion of securities offered or sold hereunder or that are represented by depository shares. Separate consideration may or may not be received for securities that are issuable upon conversion, exercise or exchange of other securities.
- (2) In accordance with Rules 456(b) and 457(r) under the Securities Act, the registrant is deferring payment of all registration fees with respect to these securities.
-
-

PROSPECTUS



MACOM TECHNOLOGY SOLUTIONS HOLDINGS, INC.

Common Stock
Preferred Stock
Debt Securities
Depository Shares
Warrants
Purchase Contracts
Units

We or any selling stockholder may offer and sell the securities described in this prospectus from time to time in one or more offerings. This prospectus describes some of the general terms of these securities. The specific terms of the securities, including their offering prices, will be contained in one or more supplements to this prospectus. You should read this prospectus and any prospectus supplement carefully before you invest. The securities may be sold to or through one or more underwriters, dealers or agents, or directly to investors, on a continuous or delayed basis. See “Plan of Distribution.”

The common stock of MACOM Technology Solutions Holdings, Inc. is listed on the Nasdaq Global Select Market under the symbol “MTSI.”

Investing in our securities involves risks. See “[Risk Factors](#)” on page 2 of this prospectus, and any applicable prospectus supplement, and in the documents which are incorporated by reference herein.

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

The date of this prospectus is June 8, 2018.

TABLE OF CONTENTS

	<u>Page</u>
ABOUT THIS PROSPECTUS	1
RISK FACTORS	2
CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS	3
OUR COMPANY	4
RATIO OF EARNINGS TO FIXED CHARGES	5
USE OF PROCEEDS	6
DESCRIPTION OF CAPITAL STOCK	7
DESCRIPTION OF DEBT SECURITIES	12
DESCRIPTION OF DEPOSITARY SHARES	14
DESCRIPTION OF WARRANTS	17
DESCRIPTION OF PURCHASE CONTRACTS	19
DESCRIPTION OF UNITS	20
SELLING STOCKHOLDERS	21
PLAN OF DISTRIBUTION	22
WHERE YOU CAN FIND MORE INFORMATION	24
INFORMATION INCORPORATED BY REFERENCE	25
LEGAL MATTERS	26
EXPERTS	26

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 under the Securities Act of 1933, as amended (the “Securities Act”), that we filed with the Securities and Exchange Commission (the “SEC”) using the “shelf” registration process as a “well-known seasoned issuer” as defined in Rule 405 under the Securities Act. Under this shelf registration process, we and/or the selling stockholders may offer and sell any combination of the securities described in this prospectus in one or more offerings from time to time.

This prospectus provides you with a general description of the securities we and/or the selling stockholders may offer. Each time we and/or a selling stockholder offers the securities described in this prospectus, we and/or the selling stockholder will provide you with a prospectus supplement that will contain specific information about the terms of that offering and the securities being offered at that time. The prospectus supplement may also add, update or change information contained in this prospectus.

This prospectus does not include all of the information that is in the registration statement. We omitted certain parts of the registration statement from this prospectus as permitted by the SEC. We refer you to the registration statement and its exhibits for additional information about us and the securities that may be sold under this prospectus. You should carefully read both this prospectus and any prospectus supplement together with the additional information described under the headings “Where You Can Find More Information” and “Information Incorporated By Reference” before you make an investment decision.

You should rely only on the information contained in or incorporated by reference into this prospectus or any accompanying prospectus supplement. Neither we nor any selling stockholder have authorized anyone to provide you with other information, and we take no responsibility for, and cannot provide assurance as to the reliability of, any other information that others may give you. This document may only be used where it is legal to sell these securities. You should not assume that the information contained in this prospectus, or in any prospectus supplement, is accurate as of any date other than the date of the document containing the information regardless of the time of delivery of the prospectus or prospectus supplement or any sale of the securities.

Any statement made in this prospectus or in a document incorporated or deemed to be incorporated by reference in this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in a prospectus supplement or in any other subsequently filed document that is also incorporated or deemed to be incorporated by reference in this prospectus modifies or supersedes that statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus. See “Information Incorporated By Reference.”

This prospectus and any accompanying prospectus supplements may include trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included in this prospectus or any accompanying prospectus supplement are the property of their respective owners.

Unless the context otherwise indicates, references in this prospectus to the “company,” “we,” “us” and “our” are to MACOM Technology Solutions Holdings, Inc. and its subsidiaries. The term “you” refers to a prospective investor. This prospectus and the accompanying prospectus supplement, if any, do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor do this prospectus and the accompanying prospectus supplement constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction.

RISK FACTORS

An investment in our securities involves risks. Before deciding to purchase any of our securities, you should carefully consider the risks described in Part I, “Item 1A. Risk Factors” in the company’s Annual Report on Form 10-K for the fiscal year ended September 29, 2017, as may be amended or updated in the company’s Quarterly Reports on Form 10-Q, which are incorporated by reference in this prospectus, as well as the sections entitled “Risk Factors” in any prospectus supplement. Each of the risks described in these sections and documents could materially and adversely affect our business, financial condition, results of operations and prospects, and could result in a loss of your investment. Additional risks and uncertainties not known to us or that we deem immaterial may also impair our business, financial condition, results of operations, cash flows and prospects.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein contain certain forward-looking statements, including statements regarding our business outlook, strategy, plans, expectations, estimates and objectives for future operations, and our future results of operations and financial position. Forward-looking statements include all statements that are not historical facts and generally may be identified by terms such as “anticipates,” “believes,” “could,” “continue,” “estimates,” “expects,” “intends,” “may,” “plans,” “potential,” “predicts,” “projects,” “seeks,” “should,” “targets,” “will,” “would,” or similar expressions or variations or the negatives of those terms. The accompanying prospectus supplement may also contain these types of forward-looking statements.

Forward-looking statements are neither historical facts nor assurances about future performance. Instead, they are based only on our current beliefs, expectations and assumptions. Because forward-looking statements relate to the future, such statements involve inherent risks, changes and uncertainties that are difficult to predict and many of which are outside of our control. A number of important factors could cause actual results and outcomes to differ materially and adversely from those expressed or implied by our forward-looking statements. We urge you to consider the risks and uncertainties in Part I, “Item 1A. Risk Factors” in the company’s Annual Report on Form 10-K for the fiscal year ended September 29, 2017, as may be amended or updated in the company’s Quarterly Reports on Form 10-Q and the other documents filed by us with the SEC. We caution readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date made. Except as required by law, we undertake no obligation to revise or update our forward-looking statements to reflect any event or circumstance that may arise after the date they are made.

OUR COMPANY

We are a leading provider of high-performance analog semiconductor solutions that enable next-generation Internet applications, the cloud connected apps economy and the modern, networked battlefield across the radio frequency (“RF”), microwave, millimeterwave and lightwave spectrum. Our technology enables next-generation radars for air traffic control and weather forecasting, as well as mission success on the modern networked battlefield. We help our customers, including some of the world’s leading communications infrastructure and aerospace and defense companies, solve complex challenges in areas including network capacity, signal coverage, energy efficiency and field reliability, utilizing our best-in-class team and broad portfolio of analog RF, microwave, millimeterwave and photonic semiconductor solutions.

We design and manufacture differentiated, high-value products for customers who demand high performance, quality and reliability. We offer a broad portfolio of over 5,000 standard and custom devices, which include integrated circuits, multi-chip modules, power pallets and transistors, diodes, amplifiers, switches and switch limiters, passive and active components and complete subsystems, across more than 60 product lines serving over 6,500 end customers in three primary markets. Our semiconductor products are electronic components that our customers incorporate into their larger electronic systems, such as, point-to-point wireless backhaul radios, high density networks, active antenna arrays, radar, magnetic resonance imaging systems and unmanned aerial vehicles. Our primary markets are: Telecom, which includes carrier infrastructure, wired broadband and cellular backhaul, and cellular infrastructure; Datacenter which includes optical and photonic components and solutions for Cloud service provider and enterprise applications; and Industrial and Defense, which includes military and commercial radar, RF jammers, electronic countermeasures and communication data links; and Multi-market components spanning industrial, medical, test and measurement and scientific applications.

We were incorporated under the laws of the State of Delaware in March 2009. The address of our principal executive offices is 100 Chelmsford Street, Lowell, Massachusetts 01851, and our telephone number is (978) 656-2500. Our website address is www.macom.com. The information on our website is not incorporated by reference in this prospectus or any prospectus supplement and you should not consider it a part of this prospectus or any accompanying prospectus supplement.

RATIO OF EARNINGS TO FIXED CHARGES

The following table sets forth consolidated ratio of earnings to fixed charges for each of the last five fiscal years and for the six months ended March 30, 2018.

	Fiscal Year					Six months ended
	2013	2014	2015	2016	2017	March 30, 2018
Ratio of earnings to fixed charges (1)	2.3x	(1.8)x (2)	0.3x (2)	(0.0)x (2)	(0.5)x (2)	(1.0)x (2)

- (1) For purposes of calculating the ratio of earnings to fixed charges, earnings available for fixed charges consists of income (loss) from continuing operations before income tax plus fixed charges less earnings from non-controlling interests. Fixed charges include interest expense and the portion of operating rental expense that management believes is representative of the appropriate interest component of rental expense. The portion of total rental expense that represents the interest factor is estimated to be 33.3%.
- (2) The ratio coverage for fiscal year 2014, 2015, 2016, 2017 and the six months ended March 30, 2018 was less than 1:1. We would have needed to generate additional earnings of approximately \$40.9 million, \$15.4 million, \$21.6 million, \$49.5 million and \$34.1 million in fiscal year 2014, 2015, 2016, 2017 and the six months ended March 30, 2018, respectively, to achieve a coverage ratio of 1:1 during these periods.

USE OF PROCEEDS

Unless otherwise indicated in the applicable prospectus supplement, we intend to use the net proceeds from the sale of any securities offered by us under this prospectus for general corporate purposes, which may include repayment or refinancing of debt, acquisitions, working capital, capital expenditures, and repurchases or redemptions of securities. We will retain broad discretion over the allocation of net proceeds from the sale of any securities offered by us. Unless otherwise set forth in a prospectus supplement, we will not receive any proceeds from the sale of securities by any selling stockholder.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock is intended as a summary only. This description is based upon, and is qualified by reference to, our Fifth Amended and Restated Certificate of Incorporation, which we refer to as our certificate of incorporation, our Third Amended and Restated Bylaws, which we refer to as our bylaws, and applicable provisions of Delaware General Corporation Law (the “DGCL”). This summary is not complete. You should read our certificate of incorporation and bylaws, which are filed as exhibits to the registration statement of which this prospectus forms a part, for the provisions that are important to you.

Our authorized capital stock consists of 300,000,000 shares of common stock, par value \$0.001 per share, and 10,000,000 shares of preferred stock, par value \$0.001 per share. As of May 22, 2018, 65,137,025 shares of common stock were outstanding and no shares of preferred stock were outstanding.

Common Stock

Voting Rights. The holders of common stock are entitled to one vote per share on all matters to be voted on by the common stockholders. The holders of common stock are not entitled to cumulative voting in the election of directors. Therefore, holders of a majority of the shares voting for the election of directors can elect all directors.

Dividend Rights. Subject to preferences of any outstanding shares of preferred stock, the holders of common stock are entitled to receive ratably any dividends our board of directors may declare out of funds legally available for the payment of dividends.

Liquidation Rights. If we are liquidated, dissolved or wound up, the holders of common stock are entitled to share pro rata in all assets remaining after payment of, or provision for, our liabilities and liquidation preferences of any outstanding shares of preferred stock.

Rights and Preferences. Holders of common stock have no pre-emptive rights or rights to convert their common stock into any other securities. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and non-assessable.

Preferred Stock

Pursuant to our certificate of incorporation, our board of directors has the authority, without further action by the stockholders, to issue up to 10,000,000 shares of preferred stock, par value \$0.001 per share, from time to time in one or more series. Our board of directors also has the authority to fix the designations, voting powers, preferences, and relative, participating, optional or other special rights, and the qualifications, limitations or restrictions of, any series of preferred stock, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation preferences, any or all of which may be greater than the rights of the common stock. Our board of directors, without stockholder approval, can issue preferred stock with voting, conversion or other rights that could adversely affect the voting power and other rights of the holders of common stock. The issuance of preferred stock may decrease the market price of our common stock.

Pre-emptive Rights

Under the DGCL a stockholder is not entitled to pre-emptive rights to subscribe for additional issuances of common stock or any other class or series of common stock or any security convertible into such stock in proportion to the shares that are owned unless there is a provision to the contrary in the certificate of incorporation. Our certificate of incorporation does not provide that our stockholders are entitled to pre-emptive rights.

Registration Rights

We are party to a Second Amended and Restated Investor Rights Agreement with certain holders of our capital stock and warrants (as amended, the “Second Amended and Restated Investor Rights Agreement”), which provides for rights relating to the registration of the shares of our common stock held by them and issuable to them upon exercise of the warrants held by them. These securities are referred to as “registrable securities.”

Specifically, the Second Amended and Restated Investor Rights Agreement provides for, subject to certain conditions, (i) a limited number of demand registration rights, which require us to effect a registration of registrable securities with the SEC upon a written request from certain holders of registrable securities; (ii) unlimited shelf demand registration rights after we are eligible to use a registration statement on Form S-3 upon request from the holders of at least five percent (5%) of the outstanding registrable securities; and (iii) piggyback registration rights, subject to certain conditions, which may require us to register registrable securities if we propose to register any of our equity securities for sale to the public (whether for our account or the account of any stockholder).

In connection with any registration effected pursuant to the terms of the Second Amended and Restated Investor Rights Agreement, we will be required to pay for all of the fees and expenses incurred in connection with such registration, including registration fees, filing fees and printing fees. However, the underwriting discounts and commissions payable in respect of registrable securities included in any registration will be paid by the persons including such registrable securities in any such registration. We have also agreed to indemnify the holders of registrable securities against losses, claims, actions, damages, liabilities and expenses under certain circumstances with respect to each registration effected pursuant to the Second Amended and Restated Investor Rights Agreement subject to limited exceptions.

Pursuant to an amendment to the second amended and restated investor rights agreement entered into on June 6, 2018, only John and Susan Ocampo and their affiliates, the funds affiliated with Summit Partners, L.P. and Mainsail Partners II, L.P. are entitled to registration rights in connection with the registration statement of which this prospectus forms a part.

Anti-Takeover Effects of Certain Provisions of Our Fifth Amended and Restated Articles of Incorporation, Third Amended and Restated Bylaws and the DGCL

Provisions of our certificate of incorporation, our bylaws and the DGCL could have the effect of delaying or preventing a third party from acquiring us, even if the acquisition would benefit our stockholders. These provisions may delay, defer or prevent a tender offer or takeover attempt of our company that a stockholder might consider in the stockholder’s best interest, including those attempts that might result in a premium over the market price for the shares held by our stockholders. These provisions are intended to enhance the likelihood of continuity and stability in the composition of our board of directors and in the policies formulated by our board of directors and to reduce our vulnerability to an unsolicited proposal for a takeover that does not contemplate the acquisition of all of our outstanding shares, or an unsolicited proposal for our restructuring or sale of all or part of our business.

Authorized but Unissued Shares of Common Stock and Preferred Stock

Our authorized but unissued shares of common stock and preferred stock are available for our board of directors to issue without stockholder approval. As noted above, our board of directors, without stockholder approval, has the authority under our certificate of incorporation to issue preferred stock with rights superior to the rights of the holders of common stock. As a result, preferred stock could be issued quickly, could adversely affect the rights of holders of common stock and could be issued with terms calculated to delay or prevent a change of control or make removal of management more difficult. We may use the additional authorized shares of common or preferred stock for a variety of corporate purposes, including future public offerings to raise

additional capital, corporate acquisitions and employee benefit plans. The existence of our authorized but unissued shares of common stock and preferred stock could render more difficult or discourage an attempt to obtain control of our company by means of a proxy contest, tender offer, merger or other transaction.

Classified Board; Election and Removal of Directors

Our certificate of incorporation provides for the division of our board of directors into three classes, as nearly as equal in number as possible, with the directors in each class serving for three-year terms, and one class being elected each year by our stockholders. Our directors can be removed only for cause and, subject to specified exceptions, vacancies on our board of directors may be filled only by the affirmative vote of a majority of the directors then in office. Further, only our board of directors may change the size of our board of directors. Because this system of electing, appointing and removing directors generally makes it more difficult for stockholders to replace a majority of our board of directors, it may discourage a third party from initiating a tender offer or otherwise attempting to gain control of our company, and may maintain the incumbency of our board of directors.

Stockholder Action; Special Meetings of Stockholders

Our certificate of incorporation and bylaws provide that no action shall be taken by the stockholders except at an annual or special meeting of the stockholders called in accordance with our bylaws and no action shall be taken by the stockholders by written consent.

Our certificate of incorporation also provides that special meetings of our stockholders may be called only by the majority of our board of directors or by the chairman of our board of directors.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

Our bylaws provide that stockholders seeking to bring business before a meeting of stockholders, or to nominate candidates for election as directors at a meeting of stockholders, must provide us with timely written notice of their proposal. Our bylaws also specify requirements as to the form and content of a stockholder's notice. These provisions may preclude stockholders from bringing matters before an annual meeting of stockholders or from making nominations for directors at an annual meeting of stockholders.

Amendment to our Certificate of Incorporation and Bylaws

Our certificate of incorporation may generally be amended by a majority of our stockholders, except with respect to provisions regarding our board of directors, stockholder meetings and amendments to our certificate of incorporation and bylaws, which may only be amended upon approval of holders of at least sixty six and two thirds percent (66-2/3%) of our outstanding voting stock. In addition, the approval of at least eighty percent (80%) of our outstanding voting stock is required to amend the provisions of Article VI of our certificate of incorporation with respect to limitation of director liability, indemnification of directors and officers and renunciation of corporate opportunities. Our bylaws may generally be amended by our board of directors or by our stockholders upon approval of holders of at least sixty six and two thirds percent (66-2/3%) of our outstanding voting stock.

Delaware Anti-Takeover Statute

We are subject to the provisions of Section 203 of the DGCL, an anti-takeover law. Subject to exceptions, the statute prohibits a publicly-held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three (3) years after the date of the transaction in which the person became an interested stockholder, unless:

- prior to such date, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

Table of Contents

- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least eighty-five percent (85%) of the voting stock of the corporation outstanding at the time the transaction commenced (excluding for purposes of determining the number of shares outstanding, those shares owned by (1) persons who are directors and also officers and (2) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer); or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders and not by written consent, by the affirmative vote of at least sixty six and two thirds percent (66-2/3%) of the outstanding voting stock which is not owned by the interested stockholder.

For purposes of Section 203 of the DGCL, a “business combination” includes a merger, asset sale or other transaction resulting in a financial benefit to the interested stockholder, with an “interested stockholder” being defined as a person who, together with affiliates and associates, owns, or within three (3) years prior to the date of determination whether the person is an “interested stockholder,” did own, fifteen percent (15%) or more of the corporation’s voting stock. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our board of directors does not approve in advance.

Corporate Opportunities

Our certificate of incorporation provides that we expressly renounce any interest or expectancy in any corporate opportunity and that there shall be no expectation that such corporate opportunity be offered to us or our affiliates, if such opportunity is one that an “Institutional Investor” (as defined below) has acquired knowledge of or is otherwise pursuing, such that as a result of such renunciation, the corporate opportunity shall belong to such Institutional Investor. The renunciation does not apply to any interest or expectancy we may have in any corporate opportunity that is expressly offered to any of our directors or officers in his or her capacity as a director or officer of us. An “Institutional Investor” is defined as (i) GaAs Labs, LLC and its affiliated companies, or (ii) Summit Partners, L.P. and its affiliated companies, in each case including each of their respective directors, officers, employees and agents.

Exclusive Forum

Our certificate of incorporation and bylaws provide that 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 a fiduciary duty owed by any director or officer of our company to us or our stockholders, (iii) any action asserting a claim against us arising pursuant to the DGCL or our certificate of incorporation or our bylaws or (iv) any action asserting a claim against us that is governed by the internal affairs doctrine. Although we have included a choice of forum clause in our certificate of incorporation, it is possible that a court could rule that such clause is inapplicable or unenforceable. Our bylaws provide that any person or entity purchasing or otherwise acquiring an interest in our capital stock is deemed to have notice of and to have consented to the exclusive forum provisions described in this paragraph.

Our bylaws further provide that any person or entity holding or otherwise acquiring an interest in our capital stock is deemed to have (i) consented and submitted to personal jurisdiction of the courts located within the State of Delaware in connection with any action described in the paragraph above (an “Action”), (ii) waived any objection to the exercise of personal jurisdiction over such stockholder in the courts located within the State of Delaware, (iii) waived any argument relating to the inconvenience of the forums described in (i) and (ii) of this paragraph with respect to any Action, (iv) agreed not to commence any Action other than before a court within the State of Delaware nor to make any attempt to cause the transfer or removal of any such Action to any court other than a court within the State of Delaware, and (v) consented to having service of process made upon such

[Table of Contents](#)

stockholder by service upon such stockholder's counsel as agent for such stockholder in the event that such stockholder brings an Action in a court other than a court within the State of Delaware.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC.

Listing

Our common stock is listed on the Nasdaq Global Select Market under the symbol "MTSI."

DESCRIPTION OF DEBT SECURITIES

We may issue debt securities from time to time under this prospectus. We will set forth in an accompanying prospectus supplement a description of the debt securities that may be offered under this prospectus. The applicable prospectus supplement and other offering material relating to such offering will describe the specific terms relating to the series of debt securities being offered, including a description of the material terms of the indenture (and any supplemental indentures) governing such series. These terms may include the following:

- the title of the series of the offered debt securities;
- the price or prices at which the offered debt securities will be issued;
- any limit on the aggregate principal amount of the offered debt securities;
- the date or dates on which the principal of the offered debt securities will be payable;
- the rate or rates (which may be fixed or variable) per year at which the offered debt securities will bear interest, if any, or the method of determining the rate or rates and the date or dates from which interest, if any, will accrue;
- if the amount of principal, premium or interest with respect to the offered debt securities of the series may be determined with reference to an index or pursuant to a formula, the manner in which these amounts will be determined;
- the date or dates on which interest, if any, on the offered debt securities will be payable and the regular record dates for the payment thereof;
- the place or places, if any, in addition to or instead of the corporate trust office of the trustee, where the principal, premium and interest with respect to the offered debt securities will be payable;
- the period or periods, if any, within which, the price or prices of which, and the terms and conditions upon which the offered debt securities may be redeemed, in whole or in part, pursuant to optional redemption provisions;
- the terms on which we would be required to redeem or purchase the offered debt securities pursuant to any sinking fund or similar provision, and the period or periods within which, the price or prices at which and the terms and conditions on which the offered debt securities will be so redeemed and purchased in whole or in part;
- the denominations in which the offered debt securities will be issued, if other than denominations of \$2,000 and integral multiples of \$1,000;
- the form of the offered debt securities and whether the offered debt securities are to be issued in whole or in part in the form of one or more global securities and, if so, the identity of the depositary for the global security or securities;
- the portion of the principal amount of the offered debt securities that is payable on the declaration of acceleration of the maturity, if other than their principal amount;
- if other than U.S. dollars, the currency or currencies in which the offered debt securities will be denominated and payable, and the holders' rights, if any, to elect payment in a foreign currency or a foreign currency unit other than that in which the offered debt securities are otherwise payable;
- whether the offered debt securities will be issued with guarantees and, if so, the terms of any guarantee of the payment of principal and interest with respect to the offered debt securities;
- any addition to, or modification or deletion of, any event of default or any covenant specified in the indenture;
- whether the offered debt securities will be convertible or exchangeable into other securities, and if so, the terms and conditions upon which the offered debt securities will be convertible or exchangeable;

[Table of Contents](#)

- whether the offered debt securities will be senior or subordinated debt securities;
- any trustees, authenticating or paying agents, transfer agents or registrars or other agents with respect to the offered debt securities; and
- any other specific terms of the offered debt securities.

DESCRIPTION OF DEPOSITARY SHARES

General

We may, at our option, elect to offer fractional shares of preferred stock, which we call depositary shares, rather than full shares of preferred stock. If we do, we will issue to the public receipts, called depositary receipts, for depositary shares, each of which will represent a fraction, to be described in the applicable prospectus supplement, of a share of a particular series of preferred stock. Unless otherwise provided in the prospectus supplement, each owner of a depositary share will be entitled, in proportion to the applicable fractional interest in a share of preferred stock represented by the depositary share, to all the rights and preferences of the preferred stock represented by the depositary share. Those rights include dividend, voting, redemption, conversion and liquidation rights.

The shares of preferred stock underlying the depositary shares will be deposited with a bank or trust company selected by us to act as depositary under a deposit agreement between us, the depositary and the holders of the depositary receipts. The depositary will be the transfer agent, registrar and dividend disbursing agent for the depositary shares.

The depositary shares will be evidenced by depositary receipts issued pursuant to the deposit agreement. Holders of depositary receipts agree to be bound by the deposit agreement, which requires holders to take certain actions such as filing proof of residence and paying certain charges.

The summary of terms of the depositary shares contained in this prospectus is not complete and is subject to, and is qualified in its entirety by, all provisions of the applicable deposit agreement, our certificate of incorporation and the certificate of designation for the applicable series of preferred stock that are, or will be, filed with the SEC.

Dividends and Other Distributions

The depositary will distribute all cash dividends or other cash distributions, if any, received in respect of the preferred stock underlying the depositary shares to the record holders of depositary shares in proportion to the numbers of depositary shares owned by those holders on the relevant record date. The relevant record date for depositary shares will be the same date as the record date for the underlying preferred stock.

If there is a distribution other than in cash, the depositary will distribute property (including securities) received by it to the record holders of depositary shares, unless the depositary determines that it is not feasible to make the distribution. If this occurs, the depositary may, with our approval, adopt another method for the distribution, including selling the property and distributing the net proceeds from the sale to the holders.

Liquidation Preference

If a series of preferred stock underlying the depositary shares has a liquidation preference, in the event of the voluntary or involuntary liquidation, dissolution or winding up of us, holders of depositary shares will be entitled to receive the fraction of the liquidation preference accorded each share of the applicable series of preferred stock, as set forth in the applicable prospectus supplement.

Withdrawal of Stock

Unless the related depositary shares have been previously called for redemption, upon surrender of the depositary receipts at the office of the depositary, the holder of the depositary shares will be entitled to delivery, at the office of the depositary or upon his or her order, of the number of whole shares of the preferred stock and any money or other property represented by the depositary shares. If the depositary receipts delivered by the

[Table of Contents](#)

holder evidence a number of depositary shares in excess of the number of depositary shares representing the number of whole shares of preferred stock to be withdrawn, the depositary will deliver to the holder at the same time a new depositary receipt evidencing the excess number of depositary shares. In no event will the depositary deliver fractional shares of preferred stock upon surrender of depositary receipts. Holders of preferred stock thus withdrawn may not thereafter deposit those shares under the deposit agreement or receive depositary receipts evidencing depositary shares therefor.

Redemption of Depositary Shares

Whenever we redeem shares of preferred stock held by the depositary, the depositary will redeem as of the same redemption date the number of depositary shares representing shares of the preferred stock so redeemed, so long as we have paid in full to the depositary the redemption price of the preferred stock to be redeemed plus an amount equal to any accumulated and unpaid dividends on the preferred stock to the date fixed for redemption. The redemption price per depositary share will be equal to the redemption price and any other amounts per share payable on the preferred stock multiplied by the fraction of a share of preferred stock represented by one depositary share. If less than all the depositary shares are to be redeemed, the depositary shares to be redeemed will be selected by lot or pro rata or by any other equitable method as may be determined by the depositary.

After the date fixed for redemption, depositary shares called for redemption will no longer be deemed to be outstanding and all rights of the holders of depositary shares will cease, except the right to receive the monies payable upon redemption and any money or other property to which the holders of the depositary shares were entitled upon redemption upon surrender to the depositary of the depositary receipts evidencing the depositary shares.

Voting the Preferred Stock

Upon receipt of notice of any meeting at which the holders of the preferred stock are entitled to vote, the depositary will mail the information contained in the notice of meeting to the record holders of the depositary receipts relating to that preferred stock. The record date for the depositary receipts relating to the preferred stock will be the same date as the record date for the preferred stock. Each record holder of the depositary shares on the record date will be entitled to instruct the depositary as to the exercise of the voting rights pertaining to the number of shares of preferred stock represented by that holder's depositary shares. The depositary will endeavor, insofar as practicable, to vote the number of shares of preferred stock represented by the depositary shares in accordance with those instructions, and we will agree to take all action that may be deemed necessary by the depositary in order to enable the depositary to do so. The depositary will not vote any shares of preferred stock except to the extent it receives specific instructions from the holders of depositary shares representing that number of shares of preferred stock.

Charges of Depositary

We will pay all transfer and other taxes and governmental charges arising solely from the existence of the depositary arrangements. We will pay charges of the depositary in connection with the initial deposit of the preferred stock and any redemption of the preferred stock. Holders of depositary receipts will pay transfer, income and other taxes and governmental charges and such other charges (including those in connection with the receipt and distribution of dividends, the sale or exercise of rights, the withdrawal of the preferred stock and the transferring, splitting or grouping of depositary receipts) as are expressly provided in the deposit agreement to be for their accounts. If these charges have not been paid by the holders of depositary receipts, the depositary may refuse to transfer depositary shares, withhold dividends and distributions and sell the depositary shares evidenced by the depositary receipt.

Amendment and Termination of the Deposit Agreement

The form of depositary receipt evidencing the depositary shares and any provision of the deposit agreement may be amended by agreement between us and the depositary. However, any amendment that materially and

[Table of Contents](#)

adversely alters the rights of the holders of depositary shares, other than fee changes, will not be effective unless the amendment has been approved by the holders of a majority of the outstanding depositary shares. The deposit agreement may be terminated by the depositary or us only if:

- all outstanding depositary shares have been redeemed; or
- there has been a final distribution of the preferred stock in connection with our dissolution and such distribution has been made to all the holders of depositary shares.

Resignation and Removal of Depositary

The depositary may resign at any time by delivering to us notice of its election to do so, and we may remove the depositary at any time. Any resignation or removal of the depositary will take effect upon our appointment of a successor depositary and its acceptance of such appointment. The successor depositary must be appointed within 60 days after delivery of the notice of resignation or removal and must be a bank or trust company having its principal office in the United States and having the requisite combined capital and surplus as set forth in the applicable agreement.

Notices

The depositary will forward to holders of depositary receipts all notices, reports and other communications, including proxy solicitation materials received from us, that are delivered to the depositary and that we are required to furnish to the holders of the preferred stock. In addition, the depositary will make available for inspection by holders of depositary receipts at the principal office of the depositary, and at such other places as it may from time to time deem advisable, any reports and communications we deliver to the depositary as the holder of preferred stock.

Limitation of Liability

Neither we nor the depositary will be liable if either we or it is prevented or delayed by law or any circumstance beyond its control in performing its obligations. Our obligations and those of the depositary will be limited to performance in good faith of our and their duties thereunder. We and the depositary will not be obligated to prosecute or defend any legal proceeding in respect of any depositary shares or preferred stock unless satisfactory indemnity is furnished. We and the depositary may rely upon written advice of counsel or accountants, on information provided by persons presenting preferred stock for deposit, holders of depositary receipts or other persons believed to be competent to give such information and on documents believed to be genuine and to have been signed or presented by the proper party or parties.

DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of debt securities, common stock, preferred stock or other securities. Warrants may be issued independently or together with debt securities, common stock, preferred stock or other securities offered by any prospectus supplement and may be attached to or separate from any such offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent, all as will be set forth in the prospectus supplement relating to the particular issue of warrants. The warrant agent will act solely as our agent in connection with the warrants and will not assume any obligation or relationship of agency or trust for or with any holders of warrants or beneficial owners of warrants. The summary of the terms of the warrants contained in this prospectus is not complete and is subject to, and is qualified in its entirety to, all provisions of the applicable warrant agreement.

Reference is made to the prospectus supplement relating to the particular issue of warrants offered pursuant to such prospectus supplement for the terms of and information relating to such warrants, including, where applicable:

- the specific designation and aggregate number of, and the offering price at which we will issue, the warrants;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- the date on which the right to exercise the warrants will begin and the date on which that right will expire or, if you may not continuously exercise the warrants throughout that period, the specific date or dates on which you may exercise the warrants;
- whether the warrants are to be sold separately or with other securities as parts of units;
- whether the warrants will be issued in definitive or global form or in any combination of these forms, although, in any case, the form of a warrant included in a unit will correspond to the form of the unit and of any security included in that unit;
- any applicable material U.S. federal income tax consequences;
- the identity of the warrant agent for the warrants and of any other depositaries, execution or paying agents, transfer agents, registrars or other agents;
- the proposed listing, if any, of the warrants or any securities purchasable upon exercise of the warrants on any securities exchange;
- the designation and terms of any equity securities purchasable upon exercise of the warrants;
- the designation, aggregate principal amount, currency and terms of any debt securities that may be purchased upon exercise of the warrants;
- if applicable, the designation and terms of the debt securities, preferred stock, depositary shares or common stock with which the warrants are issued and the number of warrants issued with each security;
- if applicable, the date from and after which any warrants issued as part of a unit and the related debt securities, preferred stock, depositary shares or common stock will be separately transferable;
- the number of shares of preferred stock, the number of depositary shares or the number of shares of common stock purchasable upon exercise of a warrant and the price at which those shares may be purchased;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- information with respect to book-entry procedures, if any;
- the antidilution provisions of, and other provisions for changes to or adjustment in the exercise price of, the warrants, if any;

[Table of Contents](#)

- any redemption or call provisions; and
- any additional terms of the warrants, including terms, procedures and limitations relating to the exchange or exercise of the warrants.

Transfer Agent and Registrar

The transfer agent and registrar for any warrants will be set forth in the applicable prospectus supplement.

DESCRIPTION OF PURCHASE CONTRACTS

We may issue, from time to time, purchase contracts, including contracts obligating holders to purchase from us and us to sell to the holders, a specified principal amount of debt securities, shares of common stock or preferred stock, or any of the other securities that we may sell under this prospectus at a future date or dates. The consideration payable upon settlement of the purchase contracts may be fixed at the time the purchase contracts are issued or may be determined by a specific reference to a formula set forth in the purchase contracts. The purchase contracts may be issued separately or as part of units consisting of a purchase contract and other securities or obligations issued by us or third parties, including United States treasury securities, securing the holders' obligations to purchase the relevant securities under the purchase contracts. The purchase contracts may require us to make periodic payments to the holders of the purchase contracts or units or vice versa, and the payments may be unsecured or prefunded on some basis. The purchase contracts may require holders to secure their obligations under the purchase contracts. The summary of the terms of the purchase contracts contained in this prospectus is not complete and is subject to, and is qualified in its entirety by, all provisions of the applicable purchase contracts.

The prospectus supplement related to any particular purchase contracts will describe, among other things, the material terms of the purchase contracts and of the securities being sold pursuant to such purchase contracts, a discussion, if appropriate, of any special United States federal income tax considerations applicable to the purchase contracts and any material provisions governing the purchase contracts that differ from those described above. The description in the prospectus supplement will not necessarily be complete and will be qualified in its entirety by reference to the purchase contracts, and, if applicable, collateral arrangements and depositary arrangements, relating to the purchase contracts.

DESCRIPTION OF UNITS

We may, from time to time, issue units comprised of one or more of the other securities that may be offered under this prospectus, in any combination. Each unit may also include debt obligations of third parties, such as U.S. Treasury securities. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately at any time, or at any time before a specified date or other specific circumstances occur. The summary of the terms of the units contained in this prospectus is not complete and is subject to, and is qualified in its entirety by, all provisions of the applicable unit agreements.

Any prospectus supplement related to any particular units will describe, among other things:

- the designation and material terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any material provisions relating to the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units;
- if appropriate, any special United States federal income tax considerations applicable to the units;
- whether the units will be issued in fully registered or global forms; and
- any material provisions of the governing unit agreement that differ from those described above.

The applicable provisions described in this section, as well as those described under “Description of Capital Stock,” “Description of Debt Securities,” “Description of Depositary Shares,” “Description of Warrants” and “Description of Purchase Contracts,” will apply to each unit and to each security included in each unit, respectively.

SELLING STOCKHOLDERS

Selling stockholders may from time to time offer and sell our securities pursuant to this prospectus and any applicable prospectus supplement. Selling stockholders are persons or entities that, directly or indirectly, have acquired or from time to time acquire, our securities. Such selling stockholders may be parties to registration rights agreements with us, or we otherwise may have agreed or agree to register their securities for resale.

The applicable prospectus supplement will set forth the name of each of the selling stockholders and the number of securities beneficially owned by such selling stockholders that are covered by such prospectus supplement. The applicable prospectus supplement will also disclose whether any of the selling stockholders has held any position or office with, has been employed by or otherwise has had a material relationship with us during the three years prior to the date of the applicable prospectus supplement.

PLAN OF DISTRIBUTION

We and/or the selling stockholders may sell the securities being offered hereby:

- directly to purchasers;
- through agents;
- through dealers;
- through underwriters;
- through a combination of any of the above methods of sale; or
- through any other methods described in a prospectus supplement.

In each prospectus supplement, we will identify the specific plan of distribution, including the name or names of any direct purchasers, agents, dealers, underwriters and, if applicable, their compensation, the purchase price, the net proceeds to us or the selling stockholders, the public offering price, and any discounts, commissions or concessions allowed or reallocated or paid to dealers.

The distribution of securities may be effected, from time to time, in one or more transactions, including block transactions and transactions on the Nasdaq Stock Market or any other organized market where the securities may be traded. The securities may be sold at a fixed price or prices, which may be changed from time to time, or at market prices prevailing at the time of sale, at prices relating to the prevailing market prices or at negotiated prices. The consideration may be cash or another form negotiated by the parties. Agents, underwriters or broker-dealers may be paid compensation for offering and selling the securities. That compensation may be in the form of discounts, concessions or commissions to be received from us or from the purchasers of the securities.

Offers to purchase the securities may be solicited directly by us or any selling stockholder or by agents designated by us or any selling stockholder from time to time. We will, in the prospectus supplement relating to an offering, name any agent that could be viewed as an “underwriter” under the Securities Act and describe any commissions we or any selling stockholder must pay. Any such agent will be acting on a best efforts basis for the period of its appointment or, if indicated in the applicable prospectus supplement, on a firm commitment basis.

If a dealer is utilized in the sale of the securities in respect of which this prospectus is delivered, we and any selling stockholder will sell the securities to the dealer, as principal. The dealer, which may be deemed to be an “underwriter” as that term is defined in the Securities Act, may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale. Dealer trading may take place in certain of the securities, including securities not listed on any securities exchange.

If an underwriter or underwriters are utilized in the sale, we and any selling stockholder will execute an underwriting agreement with the underwriters at the time of sale to them and the names of the underwriters will be set forth in the applicable prospectus supplement, which will be used by the underwriters to make resales of the securities in respect of which this prospectus is delivered to the public. The obligations of underwriters to purchase securities will be subject to certain conditions precedent and the underwriters will be obligated to purchase all of the securities of a series if any are purchased.

We or a selling stockholder may directly solicit offers to purchase the securities and we or a selling stockholder may make sales of securities directly to institutional investors or others. These persons may be deemed to be “underwriters” within the meaning of the Securities Act with respect to any resale of the securities. To the extent required, the prospectus supplement will describe the terms of any such sales, including the terms of any bidding or auction process, if used.

[Table of Contents](#)

Underwriters, dealers, agents and other persons may be entitled, under agreements that may be entered into with us, to indemnification against certain civil liabilities, including liabilities under the Securities Act, or to contribution from us or the selling stockholders with respect to payments that the underwriters, dealers or agents may be required to make in respect thereof. Underwriters, dealers and agents may be customers of, engage in transactions with, or perform services for us or the selling stockholders in the ordinary course of business. We and the selling stockholders may also use underwriters, dealers or agents with whom we or such selling stockholders have a material relationship. We and the selling stockholders will describe the nature of any such relationship in the applicable prospectus supplement.

Any person participating in the distribution of common stock registered under the registration statement that includes this prospectus will be subject to applicable provisions of the Exchange Act, and the applicable SEC rules and regulations, including, among others, Regulation M, which may limit the timing of purchases and sales of our common stock by any such person. Furthermore, Regulation M may restrict the ability of any person engaged in the distribution of our common stock to engage in market-making activities with respect to our common stock. These restrictions may affect the marketability of our common stock and the ability of any person or entity to engage in market-making activities with respect to our common stock.

In order to facilitate the offering of the securities, any underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the securities or any other securities the prices of which may be used to determine payments on such securities. Specifically, any underwriters may overallocate in connection with the offering, creating a short position for their own accounts. In addition, to cover overallocations or to stabilize the price of the securities or of any such other securities, the underwriters may bid for, and purchase, the securities or any such other securities in the open market. Finally, in any offering of the securities through a syndicate of underwriters, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the securities in the offering if the syndicate repurchases previously distributed securities in transactions to cover syndicate short positions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of the securities above independent market levels. Any such underwriters are not required to engage in these activities and may end any of these activities at any time.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available over the Internet at the SEC's web site at www.sec.gov. You may also read and copy any document we file with the SEC at their Public Reference Room located at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330 for more information. Information contained on our website is not part of this prospectus.

We have filed with the SEC a registration statement on Form S-3, relating to the securities covered by this prospectus. This prospectus is part of the registration statement and does not contain all the information in the registration statement. Whenever a reference is made in this prospectus to a contract or other document of ours or one of our subsidiaries, the reference is only a summary and you should refer to the exhibits that are part of the registration statement for a copy of the contract or other document. You may review a copy of the registration statement and all of its exhibits at the SEC's public reference room in Washington, DC, as well as through the SEC's website.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to “incorporate by reference” the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus and any accompanying prospectus supplement, and later information filed with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and all documents subsequently filed with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), prior to the termination of the offering under this prospectus and any prospectus supplement (other than information deemed furnished and not filed in accordance with SEC rules, including Items 2.02 and 7.01 of Form 8-K):

- Annual Report on Form 10-K for the fiscal year ended September 29, 2017 filed with the SEC on November 15, 2017 (including the portions of our definitive proxy statement for our 2018 annual meeting of shareholders incorporated by reference therein), as amended by Amendment No. 1 on Form 10-K/A filed with the SEC on April 23, 2018;
- Quarterly Reports on Form 10-Q for the fiscal quarter ended December 29, 2017 filed with the SEC on February 7, 2018 and for the fiscal quarter ended March 30, 2018 filed with the SEC on May 3, 2018;
- Current Reports on Form 8-K filed with the SEC on October 10, 2017, October 27, 2017 (solely with respect to the information reported under Item 1.01, Item 2.01 and Item 9.01), March 6, 2018 and May 15, 2018; and
- The description of our common stock contained in the Registration Statement on Form 8-A filed with the SEC on March 9, 2012, including any amendments or reports filed for the purpose of updating such description.

You may request a copy of these filings (other than an exhibit to a filing unless that exhibit is specifically incorporated by reference into that filing) at no cost, by writing to or telephoning us at the following address:

MACOM Technology Solutions Holdings, Inc.
100 Chelmsford Street
Lowell, MA 01851
Attention: Investor Relations
(978) 656-2500

Our filings with the SEC are also available at no cost on our website at www.macom.com. The information on our website is not incorporated by reference in this prospectus or any prospectus supplement and you should not consider it a part of this prospectus or any accompanying prospectus supplement.

LEGAL MATTERS

Unless the applicable prospectus supplement indicates otherwise, the validity of the securities offered by this prospectus will be passed upon for us by Ropes & Gray LLP, Boston, Massachusetts. The validity of any securities will be passed upon for any underwriters or agents by counsel that we will name in the applicable prospectus supplement.

EXPERTS

The consolidated financial statements of MACOM Technology Solutions Holdings, Inc. incorporated in this prospectus by reference from the company's Annual Report on Form 10-K for the fiscal year ended September 29, 2017 have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference. Such financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

Our estimated expenses in connection with the issuance and distribution of the securities being registered are set forth in the following table.

SEC Registration Fee	\$ *
Legal Fees and Expenses	**
Trustee Fees and Expenses	**
Accounting Fees and Expenses	**
Printing Expenses	**
Nasdaq and Other Listing Fees	**
Miscellaneous	**
Total	<u>\$ **</u>

* In accordance with Rules 456(b) and 457(r) under the Securities Act, the registrant is deferring payment of the registration fee for the securities offered by this prospectus.

** These fees are calculated based on the securities offered and the number of issuances and accordingly cannot be estimated at this time.

Item 15. Indemnification of Directors and Officers

Section 145 of the DGCL authorizes a corporation to indemnify its directors, officers, employees and agents against expenses (including attorney's fees), judgments, fines and amounts paid in settlement reasonably incurred, provided they act in good faith and in a manner reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal proceeding, had no reasonable cause to believe their conduct was unlawful, although in the case of proceedings brought by or on behalf of the corporation, such indemnification is limited to expenses and is not permitted if the individual is adjudged liable to the corporation (unless the Delaware Court of Chancery or the court in which such proceeding was brought determines otherwise in accordance with the DGCL).

Section 102 of the DGCL authorizes a corporation to limit or eliminate its directors' liability to the corporation or its stockholders for monetary damages for breaches of fiduciary duties, other than for (1) breaches of the duty of loyalty, (2) acts or omissions not in good faith or that involve intentional misconduct or knowing violations of law, (3) unlawful payments of dividends, stock purchases or redemptions or (4) transactions from which a director derives an improper personal benefit.

Our certificate of incorporation contains provisions protecting our directors and officers to the fullest extent permitted by Sections 102 and 145 of the DGCL. Our bylaws provide similar protection under Section 145 of the DGCL for our directors and officers.

Section 145 of the DGCL also authorizes a corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation against certain liabilities asserted against and incurred by such person in any such capacity, or arising out of such person's status as such. We have obtained liability insurance covering our directors and officers for claims asserted against them or incurred by them in such capacity.

We have also entered into agreements to indemnify our directors and certain of our officers to the maximum extent allowed under Delaware law. These agreements, among other things, indemnify our directors for certain expenses (including attorneys' fees), judgments, fines and settlement amounts reasonably incurred by such person in any action or proceeding, including any action by or in our right, on account of any services undertaken by such person on behalf of the company or that person's status as a member of our board or directors.

Table of Contents

Item 16. Exhibits

The following exhibits are filed as part of this registration statement:

<u>Exhibit No.</u>	<u>Document</u>
1.1*	Form of Underwriting Agreement.
3.1	Fifth Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to our Current Report on Form 8-K filed on June 2, 2016).
3.2	Third Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to our Current Report on Form 8-K filed on June 2, 2016).
4.1	Specimen of Common Stock Certificate (incorporated by reference to Exhibit 4.1 to Amendment No. 4 to our Registration Statement on Form S-1 (File No. 333-175934) filed on November 23, 2011).
4.2*	Specimen Preferred Stock Certificate and Form of Certificate of Designation of Preferred Stock.
4.3	Second Amended and Restated Investor Rights Agreement, dated February 28, 2012 (incorporated by reference to Exhibit 4.2 to Amendment No. 6 to our Registration Statement on Form S-1 (File No. 333-175934) filed on February 28, 2012).
4.4	First Amendment to the Second Amended and Restated Investor Rights Agreement, dated May 20, 2013 (incorporated by reference to Exhibit 4.5 to our Registration Statement on Form S-3 (File No. 333-188728) filed on May 21, 2013).
4.5	Second Amendment to the Second Amended and Restated Investor Rights Agreement, dated February 2, 2015 (incorporated by reference to Exhibit 4.5 to our Registration Statement on Form S-3 ASR (File No. 333-201827) filed on February 2, 2015).
4.6†	Third Amendment to the Second Amended and Restated Investor Rights Agreement, dated June 6, 2018.
4.7*	Form of Indenture.
4.8*	Form of Note.
4.9*	Form of Deposit Agreement.
4.10*	Form of Warrant Agreement.
4.11*	Form of Purchase Contract.
4.12*	Form of Unit Agreement.
5.1†	Opinion of Ropes & Gray LLP.
12.1†	Calculation of Ratio of Earnings to Fixed Charges.
23.1†	Consent of Deloitte & Touche LLP.
23.2†	Consent of Ropes & Gray LLP (included in Exhibit 5.1).
24.1†	Power of Attorney (included on the signature page hereof).
25.1**	Form T-1 Statement of Eligibility under the Trust Indenture Act of 1939, as amended, of the Trustee under the Indenture.

† Filed herewith.

* To be filed, if necessary, subsequent to the effectiveness of this registration statement by an amendment to this registration statement or incorporated by reference pursuant to a Current Report on Form 8-K in connection with an offering of securities.

** To be filed separately pursuant to Section 305(b)(2) of the Trust Indenture Act of 1939, as amended.

Item 17. 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;
 - (ii) 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. 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) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
 - (iii) 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 (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) 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, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of 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 the 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.
- (4) That, for the purpose of determining liability under the Securities Act to any purchaser:
 - (i) each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (ii) each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by

Table of Contents

reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

- (5) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
- (i) any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (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 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) The undersigned registrant hereby undertakes to supplement the prospectus, after the expiration of the subscription period, to set forth the results of the subscription offer, the transactions by the underwriters during the subscription period, the amount of unsubscribed securities to be purchased by the underwriters, and the terms of any subsequent reoffering thereof. If any public offering by the underwriters is to be made on terms differing from those set forth on the cover page of the prospectus, a post-effective amendment will be filed to set forth the terms of such offering.
- (d) The undersigned registrant hereby undertakes to file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of Section 310 of the Trust Indenture Act in accordance with the rules and regulations prescribed by the Commission under Section 305(b)(2) of the Trust Indenture Act.
- (e) 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 SEC 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-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Chelmsford, Commonwealth of Massachusetts, on June 8, 2018.

MACOM 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 hereby constitutes and appoints John Croteau and Robert J. McMullan, and each of them acting individually, as his true and lawful attorneys-in-fact and agents, each with full power of substitution, for him in any and all capacities, to sign any and all amendments to this Registration Statement (including any post-effective amendments, and any new registration statement with respect to the offering contemplated thereby filed pursuant to Rule 462(b) of the Securities Act), and to file the same, with exhibits thereto and other documents in connection therewith, with the SEC, granting unto such attorneys-in-fact and agents, with full power of each to act alone, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he might or could do in person, hereby ratifying and confirming all that such attorneys-in-fact and agents, or his or their substitute or substitutes, may lawfully 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 and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ John Croteau</u> John Croteau	President and Chief Executive Officer and Director (Principal Executive Officer)	June 8, 2018
<u>/s/ Robert J. McMullan</u> Robert J. McMullan	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	June 8, 2018
<u>/s/ John Ocampo</u> John Ocampo	Chairman of the Board	June 8, 2018
<u>/s/ Susan Ocampo</u> Susan Ocampo	Director	June 8, 2018
<u>/s/ Charles Bland</u> Charles Bland	Director	June 8, 2018
<u>/s/ Peter Chung</u> Peter Chung	Director	June 8, 2018

[Table of Contents](#)

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Gil Van Lunsen</u> Gil Van Lunsen	Director	June 8, 2018
<u>/s/ Stephen Daly</u> Stephen Daly	Director	June 8, 2018
<u>/s/ Geoffrey Ribar</u> Geoffrey Ribar	Director	June 8, 2018

**THIRD AMENDMENT
TO THE SECOND AMENDED AND RESTATED
INVESTOR RIGHTS AGREEMENT**

THIS THIRD AMENDMENT TO THE SECOND AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT (this “Third Amendment”) is made as of June 6, 2018, by and among MACOM Technology Solutions Holdings, Inc., a Delaware corporation (the “Company”), and the Persons listed as set forth on the signature pages hereto, each of which is an Investor under that certain Second Amended and Restated Investor Rights Agreement, dated as of February 28, 2012 (as amended, the “Agreement”), for the purpose of making certain amendments to the Agreement. Unless otherwise defined herein, all capitalized terms used but not defined herein shall have the meanings ascribed to them in the Agreement.

PRELIMINARY STATEMENTS

Pursuant to Section 3.04 of the Agreement, the Agreement may be amended by the written agreement of the Company, the Majority Class B Investors and the Majority Continuing Investors. The Company and the undersigned Investors constituting the Majority Class B Investors and the Majority Continuing Investors desire to make the amendment to the Agreement set forth in this Third Amendment.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual promises provided herein, and other good and valid consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree to the following:

1. Exception to Piggyback Registration Rights.

Section 2.02(a) of the Agreement is hereby amended by inserting the following sentence at the end of the paragraph in Section 2.02(a):

“Notwithstanding the foregoing, the notice provisions of this Section 2.02(a) shall not apply to any Piggyback Registration relating to the registration statement on Form S-3 to be filed by the Company with the Securities and Exchange Commission prior to June 30, 2018 (the “2018 Shelf Registration Statement”). Furthermore, only Summit Investors and GaAs Labs Investors, and, for the avoidance of doubt, no other Investor, shall have any registration rights under Article II of the Agreement with respect to their respective Registrable Securities in connection with the 2018 Shelf Registration Statement or any public offering of Registrable Securities which are offered for sale under the 2018 Shelf Registration Statement and the Company shall include in any such public offering all Continuing Investor Registerable Securities held by the GaAs Labs Investors and all Summit Registrable Securities with respect to which the Company has received written requests for inclusion therein within 5 days after receipt of the Company’s notice, subject to the limitations and priorities set forth in this Section 2.02.”

2. Full Force and Effect

Except as otherwise amended hereby, the terms and provisions of the Agreement shall remain in full force and effect and any conflict between the terms of the Agreement and this Third Amendment shall be construed in favor of this Third Amendment.

3. Headings

The headings of this Third Amendment are for convenience only and do not constitute a part of this Third Amendment.

4. Counterparts

This Third Amendment may be executed in any number of counterparts (including by means of facsimile or electronic transmission in portable document format (pdf)), each of which shall be enforceable against the parties actually executing such counterparts, and all of which together shall constitute one instrument.

5. Telecopy Execution and Delivery

A facsimile, telecopy or other reproduction of this Third Amendment may be executed by one or more parties hereto and delivered by such party by facsimile or any similar electronic transmission device pursuant to which the signature of or on

behalf of such party can be seen. Such execution and delivery shall be considered valid, binding and effective for all purposes. At the request of any party hereto, all parties hereto agree to execute and deliver an original of this Third Amendment as well as any facsimile, telecopy or other reproduction hereof.

6. Governing Law

This Third Amendment and the rights and obligations of the parties hereunder shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to principles of conflicts of law.

[Signature Pages Follow]

IN WITNESS WHEREOF, the parties hereto have executed this Third Amendment to the Second Amended and Restated Investor Rights Agreement as of the date first above written.

COMPANY:

MACOM TECHNOLOGY SOLUTIONS HOLDINGS,
INC.

By: /s/ Robert J. McMullan

Name: Robert J. McMullan

Title: Senior Vice President and Chief Financial Officer

SIGNATURE PAGE TO THE THIRD AMENDMENT TO THE
SECOND AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

INVESTORS:

OCAMPO FAMILY TRUST—2001

By: /s/ John L. Ocampo

Name: John L. Ocampo

Title: Trustee

/s/ John L. Ocampo

John L. Ocampo, Co-Trustee of the 2007 Trust Agreement
for Bobby J. Ocampo

/s/ Susan M. Ocampo

Susan M. Ocampo, Co-Trustee of the 2007 Trust Agreement
for Bobby J. Ocampo

/s/ John L. Ocampo

John L. Ocampo, Co-Trustee of the 2007 Trust Agreement
for Ashley T. Ocampo

/s/ Susan M. Ocampo

Susan M. Ocampo, Co-Trustee of the 2007 Trust Agreement
for Ashley T. Ocampo

/s/ John L. Ocampo

John L. Ocampo, Co-Trustee of the 2007 Trust Agreement
for Joshua F. Ocampo

/s/ Susan M. Ocampo

Susan M. Ocampo, Co-Trustee of the 2007 Trust Agreement
for Joshua F. Ocampo

SIGNATURE PAGE TO THE THIRD AMENDMENT TO THE
SECOND AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

SUMMIT PARTNERS PRIVATE EQUITY FUND VII-A,
L.P.

By: Summit Partners PE VII, L.P.
Its: General Partner

By: Summit Partners PE VII, LLC
Its: General Partner

By: Summit Partners, L.P.
Its: Managing Member

By: Summit Master Company, LLC
Its: General Partner

By: /s/ Peter Y. Chung

Name: Peter Y. Chung

Title: Member

SUMMIT PARTNERS PRIVATE EQUITY FUND VII-B,
L.P.

By: Summit Partners PE VII, L.P.
Its: General Partner

By: Summit Partners PE VII, LLC
Its: General Partner

By: Summit Partners, L.P.
Its: Managing Member

By: Summit Master Company, LLC
Its: General Partner

By: /s/ Peter Y. Chung

Name: Peter Y. Chung

Title: Member

SUMMIT INVESTORS I, LLC

By: Summit Investors Management, LLC
Its: Manager

By: Summit Master Company, LLC
Its: Managing Member

By: /s/ Peter Y. Chung

Name: Peter Y. Chung

Title: Member

SUMMIT INVESTORS I (UK), L.P.

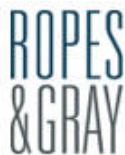
By: Summit Investors Management, LLC
Its: Manager

By: Summit Master Company, LLC
Its: Managing Member

By: /s/ Peter Y. Chung

Name: Peter Y. Chung

Title: Member



ROPE & GRAY LLP
PRUDENTIAL TOWER
800 BOYLSTON STREET
BOSTON, MA 02199-3600
WWW.ROPEGRAY.COM

June 8, 2018

MACOM Technology Solutions Holdings, Inc.
100 Chelmsford Street
Lowell, MA 01851

Re: Registration of Securities by MACOM Technology Solutions Holdings, Inc.

Ladies and Gentlemen:

We have acted as counsel to MACOM Technology Solutions Holdings, Inc., a Delaware corporation (the "Company"), in connection with the registration statement on Form S-3 (the "Registration Statement") filed on the date hereof by the Company with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), relating to the registration under the Securities Act and the proposed issuance and sale from time to time pursuant to Rule 415 under the Securities Act of:

- (i) shares of the Company's common stock, \$0.001 par value per share (the "Common Stock");
- (ii) shares of preferred stock of the Company, \$0.001 par value per share (the "Preferred Stock");
- (iii) one or more series of debt securities of the Company (the "Debt Securities"), which Debt Securities may include senior debt securities or subordinated debt securities issued under an indenture, including any supplemental indenture related thereto, and may be convertible into or exchangeable for other securities;
- (iv) depositary shares representing fractional interests in Preferred Stock of a particular series (the "Depositary Shares");
- (v) warrants representing the right to purchase, upon exercise, a number of shares of Common Stock, Preferred Stock, Debt Securities or other securities (the "Warrants");
- (vi) purchase contracts to purchase Common Stock, Preferred Stock, Debt Securities or other securities (the "Purchase Contracts"); and

(vii) units consisting of any combination of Common Stock, Preferred Stock, Debt Securities, Depositary Shares, Warrants, Purchase Contracts or debt obligations of third parties, such as U.S. Treasury securities (the "Units").

The Common Stock, the Preferred Stock, the Debt Securities, the Depositary Shares, the Warrants, the Purchase Contracts and the Units are referred to herein collectively as the "Securities."

In connection with this opinion letter, we have examined such certificates, documents and records and have made such investigation of fact and such examination of law as we have deemed appropriate in order to enable us to render the opinions set forth herein. In conducting such investigation, we have relied, without independent verification, upon certificates of officers of the Company, public officials and other appropriate persons.

The opinions expressed below are limited to the laws of the State of New York and the Delaware General Corporation Law.

Based upon and subject to the foregoing and the assumptions, qualifications and limitations set forth below, we are of the opinion that:

1. When (i) the issuance and sale of any shares of Common Stock have been duly authorized by all necessary corporate action of the Company and (ii) such shares have been issued and delivered against payment of the purchase price therefor (in an amount in excess of the par value thereof) in accordance with the applicable purchase, underwriting or other agreement, and as contemplated by the Registration Statement, such shares of Common Stock will be validly issued, fully paid and nonassessable. The Common Stock covered in the opinion in this paragraph includes any shares of Common Stock that may be issued upon exercise, conversion or exchange pursuant to the terms of any other Securities.

2. When (i) the terms of any Preferred Stock of a particular series and their issuance and sale have been duly authorized by all necessary corporate action of the Company, (ii) a certificate of designations with respect to such series of Preferred Stock has been duly adopted by the Company and filed with the Secretary of State of the State of Delaware and (iii) such shares of Preferred Stock have been issued and delivered against payment of the purchase price therefor (in an amount in excess of the par value thereof) in accordance with the applicable purchase, underwriting or other agreement, and as contemplated by the Registration Statement, such shares of Preferred Stock will be validly issued, fully paid, and nonassessable. The Preferred Stock covered in the opinion in this paragraph includes any shares of Preferred Stock that may be issued upon exercise, conversion or exchange pursuant to the terms of any other Securities.

3. When (i) the terms of any Debt Securities and their issuance and sale have been duly authorized by all necessary corporate action of the Company and (ii) such Debt Securities have been duly executed, authenticated and delivered against payment of the purchase price therefor in accordance with the applicable definitive purchase, underwriting or similar

agreement, as contemplated by the Registration Statement, and in the manner provided for in the applicable indenture, such Debt Securities will constitute valid and binding obligations of the Company enforceable against the Company in accordance with their respective terms. The Debt Securities covered in the opinion in this paragraph include any Debt Securities that may be issued upon exercise, conversion or exchange pursuant to the terms of any other Securities.

4. When (i) the terms of any Depositary Shares and their issuance and sale have been duly authorized by all necessary corporate action of the Company, (ii) the shares of Preferred Stock relating to such Depositary Shares have been duly authorized and validly issued and are fully paid and nonassessable as contemplated in paragraph 2 above and have been deposited with the depositary under the applicable deposit agreement and (iii) the depositary receipts evidencing such Depositary Shares have been duly executed, countersigned and delivered in accordance with the related depositary agreement, and as contemplated by the Registration Statement and the related depositary agreement, the depositary receipts evidencing such Depositary Shares will be validly issued and will entitle the holders thereof to the rights specified in the Depositary Shares and the related depositary agreement. The Depositary Shares covered in the opinion in this paragraph include any Depositary Shares of the Company that may be issued upon exercise, conversion or exchange pursuant to the terms of any other Securities.

5. When (i) the terms of any Warrants and their issuance and sale have been duly authorized by all necessary corporate action of the Company and (ii) such Warrants have been duly executed, countersigned and delivered in accordance with the applicable warrant agreement and against payment of the purchase price therefor in accordance with the applicable purchase, underwriting or other agreement, and as contemplated by the Registration Statement, such Warrants will constitute valid and binding obligations of the Company enforceable against the Company in accordance with their terms.

6. When (i) the issuance and terms of any Purchase Contracts and their issuance and sale have been duly authorized by all necessary corporate action of the Company and (ii) such Purchase Contracts have been duly executed and delivered in accordance with the applicable purchase, underwriting or other agreement, and as contemplated by the Registration Statement, such Purchase Contracts will constitute valid and binding obligations of the Company enforceable against the Company in accordance with their respective terms.

7. When the issuance and terms of any Units (including the terms of the component Securities) and their sale have been duly authorized by all necessary corporate action of the Company and (ii) such Units have been duly executed (if the Units are represented by a separate instrument) and delivered in accordance with the applicable purchase, underwriting or other agreement, and as contemplated by the Registration Statement, such Units will constitute valid and binding obligations of the Company enforceable against the Company in accordance with their respective terms.

In rendering the opinions set forth above, we have assumed that (i) the Registration Statement will have become effective under the Securities Act, a prospectus supplement will have been prepared and filed with the Commission describing the Securities offered thereby and

such Securities will have been issued and sold in accordance with the terms of such prospectus supplement; (ii) a definitive purchase, underwriting, or similar agreement, and any applicable indenture (including any supplemental indenture), warrant or depositary agreement, pursuant to which such Securities may be issued, will have been duly authorized, executed and delivered by the Company and the other parties thereto, and the specific terms of such Securities will have been duly established in conformity with the applicable agreement and the certificate of incorporation and bylaws of the Company (if applicable); (iii) at the time of the issuance of any Securities, the Company will be a validly existing corporation under the law of its jurisdiction of incorporation; (iv) the number of shares of Common Stock issued pursuant to the Registration Statement, together with the number of shares outstanding or reserved at the time of issuance, will not exceed the respective number of shares authorized by the Company's certificate of incorporation in effect at the time of such issuance; (v) the number of shares of Preferred Stock issued pursuant to the Registration Statement, together with the number of shares outstanding or reserved at the time of issuance, will not exceed the respective number of shares authorized by the Company's certificate of incorporation in effect at the time of such issuance; and (vi) all the foregoing actions to be taken by the Company will have been taken so as not to violate any applicable law and so as to comply with any requirement or restriction imposed by any court or governmental or regulatory body having jurisdiction over the Company or any of its property.

Our opinions set forth above are subject to (a) bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance and similar laws affecting the rights and remedies of creditors generally, (b) general principles of equity and (c) the effects of the possible judicial application of foreign laws or foreign governmental or judicial action affecting creditors' rights. Our opinions are also subject to the qualification that the enforceability of provisions in the applicable indenture (including any supplemental indenture) providing for indemnification or contribution, broadly worded waivers, waivers of rights to damages or defenses, waivers of unknown or future claims, and waivers of statutory, regulatory or constitutional rights may be limited on public policy or statutory grounds. In addition, we express no opinion with respect to the enforceability of rights to receive prepayment premiums or the unaccrued portion of original issue discount upon acceleration of any Debt Securities, in each case to the extent determined to be unreasonable or to constitute unmatured interest.

We hereby consent to the filing of this opinion letter as an exhibit to the Registration Statement and to the use of our name therein and in the related prospectus under the caption "Legal Matters." In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ Ropes & Gray LLP

Ropes & Gray LLP

MACOM Technology Solutions Holdings, Inc.
Ratio of Earnings to Fixed Charges
(in thousands, except ratio data)

	Fiscal Year Ended					Six months ended March 30, 2018
	September 27, 2013	October 3, 2014	October 2, 2015	September 30, 2016	September 29, 2017	
Earnings available for fixed charges:						
Income (loss) from continuing operations before income tax	\$ 2,946	\$(40,900)	\$(15,400)	\$ (21,571)	\$ (49,505)	\$ (34,107)
Fixed Charges	2,316	14,560	20,543	20,750	32,474	16,807
Net income—noncontrolling interests	—	—	—	—	—	—
Total earnings available for fixed charges	\$ 5,262	\$(26,340)	\$ 5,143	\$ (821)	\$ (17,031)	\$ (17,300)
Fixed Charges:						
Interest expense	\$ 817	\$ 12,362	\$ 18,376	\$ 18,427	\$ 28,855	15,209
Portion of rental expense which represents interest factor (1)	1,499	2,198	2,167	2,323	3,619	1,598
Total Fixed Charges	\$ 2,316	\$ 14,560	\$ 20,543	\$ 20,750	\$ 32,474	\$ 16,807
Ratio of earnings to fixed charges	2.3x	(1.8)x ⁽²⁾	0.3x ⁽²⁾	(0.0)x ⁽²⁾	(0.5)x ⁽²⁾	(1.0)x ⁽²⁾

(1) The portion of total rent expense that represents the interest factor is 33.3%.

(2) The ratio coverage for fiscal year 2014, 2015, 2016, 2017 and the six months ended March 30, 2018 was less than 1:1. We would have needed to generate additional earnings of approximately \$40.9 million, \$15.4 million, \$21.6 million, \$49.5 million and \$34.1 million in fiscal year 2014, 2015, 2016, 2017 and the six months ended March 30, 2018, respectively, to achieve a coverage ratio of 1:1 during these periods.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated November 15, 2017, relating to the consolidated financial statements of MACOM Technology Solutions Holdings, Inc., appearing in the Annual Report on Form 10-K of MACOM Technology Solutions Holdings, Inc. for the year ended September 29, 2017 and our report dated November 15, 2017, relating to the effectiveness of the Company's internal control over financial reporting appearing in the Annual Report on Form 10-K/A of MACOM Technology Solutions Holdings, Inc. for the year ended September 29, 2017. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ Deloitte & Touche LLP

Boston, MA

June 8, 2018