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

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

MERCURY SYSTEMS, INC.

(Exact Name of Registrant as Specified in its Charter)

Massachusetts
(State of Incorporation)

04-2741391
(I.R.S. Employer Identification Number)

201 Riverneck Road
Chelmsford, Massachusetts 01824
(978) 256-1300
(Address of Principal Executive Offices)

MERCURY SYSTEMS, INC.
Amended and Restated 2005 Stock Incentive Plan
(Full Title of the Plan)

Gerald M. Haines II
Executive Vice President, Chief Financial Officer, and Treasurer
Mercury Systems, Inc.
201 Riverneck Road
Chelmsford, Massachusetts 01824
(978) 256-1300
(Name, Address and Telephone Number, Including Area Code, of Agent for Service)

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered (1)(2)	Proposed Maximum Offering Price Per Share (3)	Proposed Maximum Aggregate Offering Price (3)	Amount of Registration Fee (3)
Common Stock	114,669	\$26.05	\$2,987,127	\$301.00

- (1) The 114,669 shares of the registrant’s common stock listed are being registered pursuant to Section 3(e) of the Company’s Amended and Restated 2005 Stock Incentive Plan (the “2005 Plan”). The shares registered hereby are restricted shares issued under and in accordance with the 2005 Plan as a result of the Company’s acquisition of all of the outstanding membership interests in Microsemi LLC - RF Integrated Solutions from Microsemi Corporation.
- (2) In addition, pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the “Securities Act”), this registration statement also covers an indeterminate number of additional shares of common stock to be offered or sold as a result of the anti-dilution provisions of the employee benefit plan described herein, including to prevent dilution resulting from any reorganization, recapitalization, reclassification, stock dividend, stock split, or other similar change.
- (3) Calculated in accordance with Rule 457(c) and (h) under the Securities Act solely for the purpose of determining the amount of the registration fee, based on the average of the high and low prices on the NASDAQ Global Select Market on July 19, 2016.

EXPLANATORY NOTE

This registration statement is being filed solely for the purpose of registering 114,669 additional shares of common stock, par value \$0.01 per share (“Common Stock”), of Mercury Systems, Inc. (the “Company”) to be offered to participants under the Company’s Amended and Restated 2005 Stock Incentive Plan (the “2005 Plan”), originally adopted in 2005. The number of shares of Common Stock reserved and available for issuance under the 2005 Plan includes 15,251,878 shares which were previously registered with the Securities and Exchange Commission (the “Commission”) on Form S-8 (File Nos. 333-129929 filed on November 23, 2005, 333-139019 filed on November 30, 2006, 333-149046 filed on February 4, 2008, 333-156364 filed on December 19, 2008, 333-163705 filed on December 14, 2009, 333-172775 filed on March 11, 2011, 333-177771 filed on November 4, 2011, 333-184756 filed on November 5, 2012, 333-192161 filed on November 7, 2013, 333-199917 filed on November 6, 2014, and 333-209383 filed on February 4, 2016) (collectively, the “Prior Registration Statement”), plus the number of shares underlying any grants previously made under the Company’s 1997 Stock Option Plan, as amended (the “1997 Plan”) that are forfeited, canceled, or are terminated (other than by exercise) from and after the effective date of the 2005 Plan.

On May 2, 2016, the Company purchased from Microsemi Corporation (“Microsemi”) all of the issued and outstanding membership interests (the “Interest”) in Microsemi LLC - RF Integrated Solutions (together with its subsidiaries, the “Carve-Out Business”) pursuant to the Stock Purchase Agreement, dated as of March 23, 2016 (the “SPA”). Pursuant to Section 9.02 of the SPA, the Company agreed to issue restricted shares in substitution for certain outstanding restricted stock units previously issued by Microsemi to employees of the Carve-Out Business. Pursuant to Section 3(e) of the 2005 Plan, awards may be granted under the 2005 Plan in substitution for stock and stock based awards held by employees, directors or other key persons of another corporation in connection with the merger or consolidation of the employing corporation with the Company or a subsidiary of the Company or the acquisition by the Company or a subsidiary of the Company of property or stock of the employing corporation. Pursuant to Section 3(e) of the 2005 Plan, any substitute Awards granted under the Plan shall not count against the share limitation set under the Plan.

As described above, the 114,669 shares registered hereby have been included in the shares which may be granted under the 2005 Plan as a result of Section 3(e) of the 2005 Plan. The shares registered hereby are restricted shares issued under and in accordance with the 2005 Plan as a result of the Company’s acquisition of the Carve-Out Business.

Pursuant to General Instruction E of Form S-8, the contents of the Prior Registration Statement are incorporated herein by reference, except as otherwise noted below.

PART II
INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

ITEM 3. INCORPORATION OF DOCUMENTS BY REFERENCE.

The following documents are incorporated herein by reference:

- (a) The Company's annual report on Form 10-K for the fiscal year ended June 30, 2015, as filed with the Commission on August 13, 2015;
- (b) The Company's quarterly reports on Form 10-Q for the fiscal quarters ended September 30, 2015, as filed with the Commission on November 5, 2015; ended December 31, 2015, as filed with the Commission on February 4, 2016; and March 31, 2016, as filed with the Commission on May 5, 2016;
- (c) The Company's current reports on Form 8-K filed with the Commission on December 11, 2015; March 23, 2016; April 4, 2016; April 8, 2016; April 13, 2016; and May 2, 2016.
- (d) The description of the Company's Common Stock contained in the Company's registration statement on Form 8-A dated January 7, 1998, as filed with the Commission pursuant to Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including any amendment thereto or report filed for the purpose of updating such description.

All documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14, and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or that deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be a part hereof from the date of the filing of such documents.

ITEM 5. INTERESTS OF NAMED EXPERTS AND COUNSEL.

The validity of the Common Stock offered under this registration statement will be passed upon for the Company by Morgan, Lewis & Bockius LLP, Boston, Massachusetts. Morgan, Lewis & Bockius LLP does not have a substantial interest, direct or indirect, in the Company.

ITEM 8. EXHIBITS.

<u>Exhibit</u>	<u>Description</u>
4.1	Articles of Organization (incorporated herein by reference to Exhibit 3.1.1 of the Company's annual report on Form 10-K for the fiscal year ended June 30, 2009)
4.2	Articles of Amendment (incorporated herein by reference to Exhibit 3.1.2 of the Company's annual report on Form 10-K for the fiscal year ended June 30, 2010)
4.3	Articles of Amendment (incorporated herein by reference to Exhibit 1 of the Company's registration statement on Form 8-A, as filed with the Commission on December 15, 2005)
4.4	Articles of Amendment (incorporated herein by reference to Exhibit 3.1 of the Company's current report on Form 8-K filed on November 13, 2012)
4.5	Articles of Amendment (incorporated herein by reference to Exhibit 3.1 of the Company's current report on Form 8-K filed on June 30, 2015)
4.6	By-laws, amended and restated effective May 4, 2011 (incorporated herein by reference to Exhibit 3.2 of the Company's quarterly report on Form 10-Q for the quarter ended March 31, 2011 filed with the Commission on May 5, 2011)
4.7	Mercury Systems, Inc. Amended and Restated 2005 Stock Incentive Plan (incorporated herein by reference to Appendix A of the Company's Definitive Proxy Statement filed with the Commission on October 29, 2015)
5.1*	Opinion of Morgan, Lewis & Bockius LLP
23.1*	Consent of KPMG LLP
23.2*	Consent of PricewaterhouseCoopers LLP
23.2	Consent of Morgan, Lewis & Bockius LLP (contained in the opinion filed as Exhibit 5.1 to this registration statement)
24.1*	Power of Attorney (included in signature page to this registration statement)
*	Filed herewith

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the town of Chelmsford, the Commonwealth of Massachusetts on this 25th day of July, 2016.

MERCURY SYSTEMS, INC.

By: /s/ Gerald M. Haines II

Gerald M. Haines II

Executive Vice President, Chief Financial Officer,
and Treasurer

Power of Attorney

KNOW ALL MEN BY THESE PRESENTS that each person whose signature appears below constitutes and appoints Mark Aslett and Gerald M. Haines II as his true and lawful attorneys-in-fact and agents, each acting alone, with full powers of substitution and resubstitution, for him or in his name, place and stead, in any and all capacities to sign any and all amendments or post-effective amendments to this registration statement (or any registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, each acting alone, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, each acting alone, or his 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/ Mark Aslett</u> Mark Aslett	President, Chief Executive Officer, and Director (Principal Executive Officer)	July 25, 2016
<u>/s/ Gerald M. Haines II</u> Gerald M. Haines II	Executive Vice President, Chief Financial Officer, and Treasurer (Principal Financial Officer)	July 25, 2016
<u>/s/ Charles A. Speicher</u> Charles A. Speicher	Vice President, Controller, Chief Accounting Officer, and Assistant Treasurer (Principal Accounting Officer)	July 25, 2016
<u>/s/ Vincent Vitto</u> Vincent Vitto	Chairman of the Board of Directors	July 25, 2016
<u>/s/ James K. Bass</u> James K. Bass	Director	July 25, 2016
<u>/s/ Michael A. Daniels</u> Michael A. Daniels	Director	July 25, 2016
<u>/s/ George K. Muellner</u> George K. Muellner	Director	July 25, 2016
<u>/s/ Mark S. Newman</u> Mark S. Newman	Director	July 25, 2016
<u>/s/ William K. O'Brien</u> William K. O'Brien	Director	July 25, 2016

EXHIBIT INDEX

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July 25, 2016

Mercury Systems, Inc.
201 Riverneck Road
Chelmsford, Massachusetts 01824

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

This opinion is furnished in connection with the registration, pursuant to a Registration Statement on Form S-8 under the Securities Act of 1933, as amended (the "Securities Act"), to be filed with the Securities and Exchange Commission on or about July 25, 2016 (the "Registration Statement"), of an aggregate of 114,669 shares (the "Shares") of common stock, par value \$0.01 per share, of Mercury Systems, Inc., a Massachusetts corporation (the "Company"), which are or will be issuable to officers, employees, non-employee directors and consultants of the Company and its subsidiaries in connection with restricted shares ("Restricted Shares") granted pursuant to the Company's Amended and Restated 2005 Stock Incentive Plan, as amended (the "2005 Plan").

We have acted as counsel to the Company in connection with the foregoing registration of the Shares. We have examined and relied upon originals or copies of such records, instruments, certificates, memoranda, and other documents as we have deemed necessary or advisable for purposes of this opinion and have assumed, without independent inquiry, the accuracy of those documents. In that examination, we have assumed the genuineness of all signatures, the conformity to the originals of all documents reviewed by us as copies and the authenticity and completeness of all original documents reviewed by us in original or copy form. We have further assumed that all Restricted Shares to be issued will be validly issued in accordance with the terms of the 2005 Plan.

This opinion is limited solely to the substantive laws of the Commonwealth of Massachusetts.

Based upon and subject to the foregoing, we are of the opinion that, upon the issuance and the delivery of the Shares in accordance with the terms of the 2005 Plan, the Shares will be validly issued, fully paid, and nonassessable.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement. In giving our consent, we do not 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 thereunder. In rendering the opinions set

forth above, we are opining only as to the specific legal issues expressly set forth therein, and no opinion shall be inferred as to any other matter or matters.

Very truly yours,

/s/MORGAN, LEWIS & BOCKIUS LLP

MORGAN, LEWIS & BOCKIUS LLP

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Mercury Systems, Inc.:

We consent to the use of our report dated August 13, 2015, with respect to the consolidated balance sheets of Mercury Systems, Inc. and subsidiaries as of June 30, 2015 and 2014, and the related consolidated statements of operations, comprehensive income (loss), shareholders' equity, and cash flows for each of the years in the three-year period ended June 30, 2015, and the related financial statement schedule II, and the effectiveness of internal control over financial reporting as of June 30, 2015, incorporated herein by reference.

/s/ KPMG LLP
Boston, Massachusetts
July 25, 2016

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of Mercury Systems, Inc. of our report dated March 22, 2016 relating to the financial statements of Microsemi LLC – RF Integrated Solutions and its subsidiaries, which appears in Mercury Systems, Inc.'s Form 8-K dated April 4, 2016.

/s/ PricewaterhouseCoopers LLP

Irvine, CA
July 25, 2016