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)

Smaller reporting company □

50 Minuteman Road Andover, Massachusetts 01810 (978) 256-1300 (Address of Principal Executive Offices)

MERCURY SYSTEMS, INC. 1997 Employee Stock Purchase Plan (Full Title of the Plan)

Christopher C. Cambria Executive Vice President, General Counsel, and Secretary Mercury Systems, Inc. 50 Minuteman Road Andover, Massachusetts 01810 (978) 256-1300

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," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer [] Accelerated filer \square Non-accelerated filer \sqcap

Emerging growth company \square

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 the Securities Act. \Box

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered (1)(2)	Proposed Maximum Offering Price Per Share (2)	Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee (2)
Common Stock	500,000	\$71.02	\$35,510,000.00	\$3,874.14

-	(1)	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.

⁽²⁾ 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 of our Common Stock on the Nasdaq Global Select Market on November 6, 2020.

EXPLANATORY NOTE

This Registration Statement is being filed solely for the purpose of registering 500,000 additional shares of common stock, par value \$.01 per share (the "Common Stock"), of Mercury Systems, Inc. (the "Company") to be offered to participants under the Company's 1997 Employee Stock Purchase Plan, as amended and restated (the "ESPP"), originally adopted in 1997 and most recently amended and restated on August 31, 2020 (and approved by the Company's shareholders on October 28, 2020). The maximum number of shares issuable under the ESPP is 2,300,000 shares, of which 500,000 shares were previously registered with the Securities and Exchange Commission (the "Commission") on Form S-8 (File No. 333-53291 filed on May 21, 1998) (the "1998 Form S-8"), as adjusted for a 2-for-1 stock split on December 21, 1999 pursuant to Rule 416(a) under the Securities Act of 1933, as amended, and 1,300,000 shares were previously registered with the Commission on Forms S-8 (File Nos. 333-139020 filed on November 30, 2006, 333-163707 filed on December 14, 2009, 333-177770 filed on November 4, 2011, and 333-209384 filed on February 4, 2016, and collectively with the 1998 Form S-8, the "Prior Registration Statements").

This Registration Statement relates to securities of the same class as that to which the Prior Registration Statements relate, and is submitted in accordance with General Instruction E to Form S-8 regarding Registration of Additional Securities. Pursuant to General Instruction E of Form S-8, the contents of the Prior Registration Statements, to the extent relating to the registration of Common Stock issuable under the ESPP, are incorporated herein by reference and made part of this Registration Statement, except as amended hereby.

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 July 3, 2020, as filed with the Commission on August 18, 2020:
- (b) The Company's Definitive Proxy Statement on Schedule 14A, as filed with the Commission on September 3, 2020, to the extent specifically incorporated by reference into our Annual Report on Form 10-K for the fiscal year ended July 3, 2020;
- (c) The Company's Quarterly Report on Form 10-Q for the fiscal quarter ended October 2, 2020, as filed with the Commission on November 10, 2020;
- (d) The Company's Current Reports on Form 8-K filed with the Commission on July 31, 2020 and November 2, 2020; and
- (e) The description of the Company's Common Stock contained in the Company's Registration Statement on Form 8-A dated January 7, 1998, as updated by Exhibit 4.2 to the Company's Annual Report on Form 10-K for the fiscal year ended July 3, 2020, as filed with the Commission on August 18, 2020.

All documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14, and 15(d) of the Securities Exchange Act of 1934, as amended, 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.

See the Exhibit Index attached hereto.

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 Andover, the Commonwealth of Massachusetts on this 12th day of November, 2020.

MERCURY SYSTEMS, INC.

By: <u>/s/ Michael D. Ruppert</u>
Michael D. Ruppert
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, Christopher C. Cambria, and Michael D. Ruppert as his or her true and lawful attorneys-in-fact and agents, each acting alone, with full powers of substitution and resubstitution, for him or her or in his or her 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 or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, each acting alone, or his or her 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.

Signature	Title	Date
<u>/s/ Mark Aslett</u> Mark Aslett	President, Chief Executive Officer, and Director (Principal Executive Officer)	November 12, 2020
<u>/s/ Michael D. Ruppert</u> Michael D. Ruppert	Executive Vice President, Chief Financial Officer, and Treasurer (Principal Financial Officer)	November 12, 2020
<u>/s/ Michelle M. McCarthy</u> Michelle M. McCarthy	Vice President, Chief Accounting Officer (Principal Accounting Officer)	November 12, 2020
<u>/s/ Vincent Vitto</u> Vincent Vitto	Chairman of the Board of Directors	November 12, 2020
<u>/s/ James K. Bass</u> James K. Bass	Director	November 12, 2020
<u>/s/ Orlando P. Carvalho</u> Orlando P. Carvalho	Director	November 12, 2020
<u>/s/ Michael A. Daniels</u> Michael A. Daniels	Director	November 12, 2020
<u>/s/ Lisa S. Disbrow</u> Lisa S. Disbrow	Director	November 12, 2020
<u>/s/ Mary Louise Krakauer</u> Mary Louise Krakauer	Director	November 12, 2020
<u>/s/ Barry R. Nearhos</u> Barry R. Nearhos	Director	November 12, 2020
<u>/s/ William K. O'Brien</u> William K. O'Brien	Director	November 12, 2020

EXHIBIT INDEX

Exhibit	Description
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	<u>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)</u>
4.3	Articles of Amendment (incorporated herein by reference to Exhibit 1 of the Company's Registration Statement on Form 8-A 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 with the Commission 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 with the Commission on June 30, 2015)
4.6	By-laws, amended and restated effective July 28, 2020 (incorporated herein by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K filed with the Commission on July 31, 2020)
4.7	Mercury Systems, Inc. Amended and Restated 1997 Employee Stock Purchase Plan (incorporated herein by reference to Appendix B of the Company's Definitive Proxy Statement on Form Schedule 14A filed with the Commission on September 3, 2020)
5.1*	Opinion of Morgan, Lewis & Bockius LLP
23.1*	Consent of KPMG 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

Exhibit 5.1

November 12, 2020

Mercury Systems, Inc. 50 Minuteman Road Andover, Massachusetts 01810

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 November 12, 2020 (the "Registration Statement"), of an aggregate of 500,000 shares (the "Shares") of common stock, par value \$0.01 per share (the "Common Stock"), of Mercury Systems, Inc., a Massachusetts corporation (the "Company"), which may be issued pursuant to the Company's 1997 Employee Stock Purchase Plan, as amended and restated (the "ESPP").

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 options granted or to be granted pursuant to the ESPP were or will be validly granted in accordance with the terms of the ESPP, that all Shares to be issued upon exercise of such options will be issued in accordance with the terms of such options and the ESPP, and that all Shares sold or granted as a stock appreciation right, restricted stock award or deferred stock award will be sold or granted in accordance with the terms of the ESPP.

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 ESPP, 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 opinion only 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

Consent of Independent Registered Public Accounting Firm

The Board of Directors Mercury Systems, Inc.:

We consent to the use of our report dated August 18, 2020, with respect to the consolidated balance sheets of Mercury Systems, Inc. and subsidiaries (the Company) as of July 3, 2020 and June 30, 2019, and the related consolidated statements of operations and comprehensive income, shareholders' equity, and cash flows for each of the fiscal years in the three-year period ended July 3, 2020, and the related notes and financial statement schedule II (collectively, the consolidated financial statements), and the effectiveness of internal control over financial reporting as of July 3, 2020, which report appears in the July 3, 2020 annual report on Form 10-K and is incorporated herein by reference.

Our report dated August 18, 2020 on the effectiveness of internal control over financial reporting as of July 3, 2020 contains an explanatory paragraph that states that the Company acquired American Panel Corporation ("APC") during fiscal year 2020, and management excluded from its assessment of the effectiveness of the Company's internal control over financial reporting as of July 3, 2020, APC's internal control over financial reporting associated with 7 percent of total consolidated assets (of which 5 percent represented goodwill and intangible assets included within the scope of the assessment) and 3 percent of total consolidated revenues included in the consolidated financial statements of the Company as of and for the fiscal year ended July 3, 2020. Our audit of internal control over financial reporting of the Company also excluded an evaluation of the internal control over financial reporting of APC.

/s/ KPMG LLP

Boston, Massachusetts November 11, 2020