

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

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

AEROVIRONMENT, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation or organization)

95-2705790
(I.R.S. Employer
Identification No.)

**181 W. Huntington Drive, Suite 202
Monrovia, California 91016**
(Address of principal executive offices including zip code)

AEROVIRONMENT, INC. 2006 EQUITY INCENTIVE PLAN, AS AMENDED
(Full title of the plan)

Timothy E. Conver
Chairman of the Board, President and Chief Executive Officer
AeroVironment, Inc.
181 W. Huntington Drive, Suite 202
Monrovia, California 91016
(626) 357-9983-7000
(Name, address, and telephone number, including area code, of agent for service)

Copies to:

Craig M. Garner, Esq.
Latham & Watkins LLP
12636 High Bluff Drive, Suite 400
San Diego, California 92130
(858) 523-5400

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 (Do not check if a smaller reporting company)

Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered (1)	Proposed maximum offering price per share	Proposed maximum aggregate offering price	Amount of registration fee
Common stock, \$0.0001 par value	1,200,000 shares (2)	\$30.68 (3)	\$36,816,000	\$4,219.11

- (1) In addition, pursuant to Rule 416 under the Securities Act of 1933 (the "Securities Act"), this registration statement shall also cover any additional shares of common stock which become issuable under the above named plan by reason of any stock split, stock dividend, recapitalization or any other similar transaction effected without the receipt of consideration which results in an increase in the number of outstanding shares of our common stock.
- (2) Represents 1,200,000 additional shares of our common stock available for issuance under the AeroVironment, Inc. 2006 Equity Incentive Plan (as amended and restated, the "2006 Plan").
- (3) The proposed maximum offering price per share has been estimated in accordance with Rules 457(c) and (h) under the Securities Act solely for the purpose of calculating the registration fee. The computation is based upon the average of the high and low prices of the common stock as reported on the Nasdaq Global Select Market on December 1, 2011, because the price at which the awards to be granted in the future may be exercised is not currently determinable.

Proposed sales to take place as soon after the effective date of the registration statement as awards granted under the above-named plan are granted, exercised and/or distributed.

EXPLANATORY NOTE

This Registration Statement on Form S-8 registers the offer and sale of an additional 1,200,000 shares of common stock of AeroVironment, Inc. for issuance under the 2006 Plan. In accordance with Instruction E to Form S-8, the contents of the prior Registration Statement, File No. 333-140237, previously filed with respect to the 2006 Plan are hereby incorporated by reference.

Item 3. Incorporation of Documents by Reference.

The Securities and Exchange Commission (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 registration statement, and later information filed with the SEC will update and supersede this information. We hereby incorporate by reference into this registration statement the following documents previously filed with the SEC:

- (a) Our Annual Report on Form 10-K filed with the SEC on June 22, 2011;
- (b) Our Quarterly Report on Form 10-Q filed with the SEC on September 8, 2011;
- (c) Our Current Report on Form 8-K filed with the SEC on October 5, 2011 (as amended by the Form 8-K/A filed with the SEC on December 2, 2011); and
- (d) The description of our common stock set forth in our registration statement on Form 8-A filed with the SEC on January 18, 2007, including any subsequently filed amendments and reports updating such description (File No. 001-33261).

All documents that we subsequently file pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934, prior to the filing of a post-effective amendment to the registration statement which indicates that all of the shares of common stock offered have been sold or which deregisters all of such shares then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of the filing of such documents; except as to any portion of any future annual or quarterly report to stockholders or document or current report furnished under Item 2.02 or 7.01 of Form 8-K that is not deemed filed under such provisions. For the purposes of this registration statement, any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement. Under no circumstances will any information furnished under Item 2.02 or 7.01 of Form 8-K be deemed incorporated herein by reference unless such Form 8-K expressly provides to the contrary.

You should rely only on the information provided or incorporated by reference in this registration statement or any related prospectus. We have not authorized anyone to provide you with different information. You should not assume that the information in this registration statement or any related prospectus is accurate as of any date other than the date on the front of the document.

Item 8. Exhibits.

Reference is made to the attached Exhibit Index, which is incorporated herein by reference.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that the registrant meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Monrovia, State of California, on December 6, 2011.

AeroVironment, Inc.

By: /s/ Timothy E. Conver
Timothy E. Conver
Chairman of the Board, President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Timothy E. Conver and Jikun Kim, and each of them, with full power to act without the other, such person's true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign this registration statement, and any and all amendments thereto (including post-effective amendments), and to file the same, with exhibits and schedules thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing necessary or desirable 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, or any of them, or their 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.

Signature	Title	Date
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<u>/s/ Timothy E. Conver</u> Timothy E. Conver	Chairman of the Board, President and Chief Executive Officer (Principal Executive Officer)	December 6, 2011
<u>/s/ Jikun Kim</u> Jikun Kim	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	December 6, 2011
<u>/s/ Joseph F. Alibrandi</u> Joseph F. Alibrandi	Director	December 6, 2011
<u>/s/ Kenneth R. Baker</u> Kenneth R. Baker	Director	December 6, 2011
<u>/s/ Arnold L. Fishman</u> Arnold L. Fishman	Director	December 6, 2011
<u>/s/ Murray Gell-Mann</u> Murray Gell-Mann	Director	December 6, 2011
<u>/s/ Charles R. Holland</u> Charles R. Holland	Director	December 6, 2011

EXHIBIT INDEX

<u>Exhibit Number</u>	<u>Description</u>
5.1	Opinion of Latham & Watkins LLP with respect to the legality of the shares being registered
10.1	AeroVironment, Inc. 2006 Equity Incentive Plan, as amended and restated (incorporated by reference to the exhibits to the registrant's Form 8-K filed on October 5, 2011 (File No. 001-33261))
10.3	Form of Stock Option Agreement pursuant to the AeroVironment, Inc. 2006 Equity Incentive Plan (incorporated by reference to the exhibits to the registrant's Form S-1 (File No. 333-137658))
10.4	Form of Performance-Based Bonus Award pursuant to the AeroVironment, Inc. 2006 Equity Incentive Plan (incorporated by reference to the exhibits to the registrant's Form S-1 (File No. 333-137658))
10.5	Form of Long-Term Compensation Award Grant Notice and Long-Term Compensation Award Agreement pursuant to the AeroVironment, Inc. 2006 Equity Incentive Plan (incorporated by reference to the exhibits to the registrant's Form 8-K filed on July 28, 2010 (File No. 001-33261))
23.1	Consent of independent registered public accounting firm
23.2	Consent of Latham & Watkins LLP (included in Exhibit 5.1)
24.1	Power of Attorney (included on signature page)

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LATHAM & WATKINS LLP

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December 6, 2011

AeroVironment, Inc.
 181 W. Huntington Drive
 Suite 202
 Monrovia, California 91016

Re: Registration Statement on Form S-8; 1,200,000 Shares of Common Stock, par value \$0.0001 per share

Ladies and Gentlemen:

We have acted as special counsel to AeroVironment, Inc., a Delaware corporation (the "**Company**"), in connection with the registration of an aggregate of 1,200,000 shares of common stock, par value \$0.0001 per share, of the Company (the "**Shares**"), pursuant to the AeroVironment, Inc. 2006 Equity Incentive Plan, as amended and restated (the "**Plan**"). The Shares are included in a Registration Statement on Form S-8 under the Securities Act of 1933, as amended (the "**Act**"), filed with the Securities and Exchange Commission (the "**Commission**") on December 6, 2011 (the "**Registration Statement**"). This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement, other than as expressly stated herein with respect to the issue of the Shares.

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters. We are opining herein as to the General Corporation Law of the State of Delaware, and we express no opinion with respect to any other laws.

In our examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity to authentic original documents of all documents submitted to us as copies.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof, when the Shares have been duly registered on the books of the transfer agent and registrar therefor in the name or on behalf of the recipients, or certificates representing the Shares (in the form of the specimen certificate incorporated by reference as an exhibit to the Company's most recent Annual Report on Form 10-K) have been manually signed by an authorized officer of the transfer agent and registrar

December 6, 2011
 Page 2

LATHAM & WATKINS LLP

therefor, and subject to the Company completing all actions and procedures required on its part to be taken prior to the issuance of the Shares, when the Shares have been issued by the Company in the circumstances contemplated by the Plan against requisite payment therefor, the issue and sale of the Shares will have been duly authorized by all necessary corporate action of the Company, and the Shares will be validly issued, fully paid and nonassessable. In rendering the foregoing opinion, we have assumed that the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the General Corporation Law of the State of Delaware.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Act. We consent to your filing this opinion as an exhibit to the Registration Statement. 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 Act or the rules and regulations of the Commission thereunder.

Very truly yours,
 /s/ Latham & Watkins LLP

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-_____) pertaining to the 2006 Equity Incentive Plan, as amended of AeroVironment, Inc. of our reports dated June 21, 2011, with respect to the consolidated financial statements and schedule of AeroVironment, Inc., and the effectiveness of internal control over financial reporting of AeroVironment, Inc., included in its Annual Report (Form 10-K), filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Los Angeles, California
December 6, 2011
