

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

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

ADVANCED MICRO DEVICES, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

94-1692300
(I.R.S. Employer
Identification Number)

**One AMD Place
Sunnyvale, California 94088-3453**
(Address of Principal Executive Offices including Zip Code)

ADVANCED MICRO DEVICES, INC. 2004 EQUITY INCENTIVE PLAN
(Full Title of the Plan)

Harry A. Wolin, Esq.
Senior Vice President and General Counsel and Secretary
Advanced Micro Devices, Inc.
One AMD Place
Sunnyvale, California 94088-3453
(408) 749-4000
(Name and Address, Including Zip Code, 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 definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. Check one:

Large Accelerated Filer Accelerated Filer
Non-Accelerated Filer Smaller Reporting Company

CALCULATION OF REGISTRATION FEE

| Title of Securities To Be Registered | Amount to be Registered(1) | Proposed Maximum Offering Price Per Share(2) | Proposed Maximum Aggregate Offering Price(2) | Amount of Registration Fee |
|---|----------------------------------|---|--|----------------------------------|
| Common Stock, \$.01 Par Value | 20,500,000 | \$8.62 | \$176,710,000 | \$12,600 |

- (1) This registration statement shall also cover any additional shares of common stock which become issuable under the Advanced Micro Devices, Inc. 2004 Equity Incentive Plan by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the registrant's receipt of consideration which results in an increase in the number of outstanding shares of the registrant's common stock.
- (2) Estimated solely for the purpose of determining the registration fee computed in accordance with Rule 457(h) and Rule 457(c) under the Securities Act of 1933, as amended, on the basis of the average of the reported high (\$8.88) and low (\$8.35) sale prices of the common stock, as reported on the New York Stock Exchange on May 5, 2010.

**Proposed sale to take place as soon after the effective date of the registration statement as
options granted under the plan are exercised or restricted stock units granted under the plan vest.**

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The information called for in Part I of Form S-8 is not being filed with or included in this Form S-8 (by incorporation by reference or otherwise) in accordance with the rules and regulations of the Securities and Exchange Commission (the "SEC").

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

In this registration statement, Advanced Micro Devices, Inc. is sometimes referred to as "we," "us" or "our."

Pursuant to General Instruction E of Form S-8:

- This registration statement is filed solely to register an additional 20,500,000 shares of our common stock reserved for issuance under our 2004 Equity Incentive Plan, which increase was approved by our Board of Directors on March 5, 2010 and our stockholders on April 29, 2010; and
- The contents of our registration statement on Form S-8 (File No. 333-115474) filed with the SEC on May 13, 2004, our registration statement on Form S-8 (File No. 333-134853) filed with the SEC on June 8, 2006 and our registration statement on Form S-8 (File No. 333-159367) filed with the SEC on May 20, 2009 are incorporated by reference herein.

Item 3. Incorporation of Documents by Reference.

We hereby incorporate by reference the following documents filed with the SEC pursuant to the Securities Exchange Act of 1934, as amended (File No. 001-07882):

- Our Annual Report on Form 10-K for the fiscal year ended December 26, 2009, including information specifically incorporated by reference into our Form 10-K from our Proxy Statement for our 2010 Annual Meeting of Stockholders, filed with the SEC on March 5, 2010;
- Our Quarterly Report on Form 10-Q for the quarterly period ended March 27, 2010, filed with the SEC on May 4, 2010;
- Our Current Report on Form 8-K filed with the SEC on January 29, 2010;
- Our Amended Current Report on Form 8-K filed with the SEC on February 19, 2010;
- Our Current Report on Form 8-K filed with the SEC on April 8, 2010;
- Our Current Report on Form 8-K filed with the SEC on May 4, 2010;
- The description of our common stock, par value \$.01 per share, contained in our registration statement on Form 8-A, filed with the SEC on September 14, 1979, including any subsequently filed amendments and reports updating such description; and
- All documents we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, after the date of this registration statement and prior to the filing of a post-effective amendment to this registration statement which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold.

Information that we file later with the SEC will automatically update and supersede this information.

Item 8. Exhibits.

See Index to Exhibits.

Item 9. Undertakings.

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the 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 the 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 SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

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

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the registration statement is on Form S-8 and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 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 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 Act and will be governed by the final adjudication of such issue.

INDEX TO EXHIBITS

EXHIBIT

- 5.1 Opinion of Latham & Watkins LLP.
- 10.1 Second Amended and Restated Advanced Micro Devices, Inc. 2004 Equity Incentive Plan.⁽¹⁾
- 23.1 Consent of Latham & Watkins LLP (included in Exhibit 5.1).
- 23.2 Consent of Independent Registered Public Accounting Firm.
- 24.1 Power of Attorney (included in the signature page to this registration statement).

⁽¹⁾ Incorporated by reference to Advanced Micro Devices' Definitive Proxy Statement on Schedule 14A filed with the SEC on March 5, 2010.

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 www.lw.com

LATHAM & WATKINS^{LLP}

May 7, 2010

Advanced Micro Devices, Inc.
 One AMD Place
 Sunnyvale, California 94088-3453

Re: Registration Statement on Form S-8; 20,500,000 shares of Common
Stock, par value \$0.01 per share, of Advanced Micro Devices, Inc.

Ladies and Gentlemen:

We have acted as special counsel to Advanced Micro Devices, Inc., a Delaware corporation (the "Company"), in connection with the registration by the Company of up to 20,500,000 shares of common stock, par value \$0.01 per share (the "Shares"), issuable under the Advanced Micro Devices, Inc. 2004 Equity Incentive Plan (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 May 7, 2010 (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 General Corporation Law of the State of Delaware (the "DGCL"), and we express no opinion with respect to any other laws.

FIRM / AFFILIATE OFFICES

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LATHAM & WATKINS LLP

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof, when the Shares shall have been duly registered on the books of the transfer agent and registrar therefor in the name or on behalf of the purchasers, and have been issued by the Company against payment therefor (not less than par value) in the circumstances contemplated by the Plan, and assuming in each case that the individual grants or awards under the Plan are duly authorized by all necessary corporate action of the Company and duly granted or awarded and exercised in accordance with the requirements of law and the Plan (and the agreements and awards duly adopted thereunder and in accordance therewith), 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 DGCL.

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) pertaining to the Advanced Micro Devices, Inc. 2004 Equity Incentive Plan, of our reports dated February 19, 2010, with respect to the consolidated financial statements and schedule of Advanced Micro Devices, Inc. included in its Annual Report (Form 10-K) for the year ended December 26, 2009, and the effectiveness of internal control over financial reporting of Advanced Micro Devices, Inc. filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

San Jose, California
May 4, 2010