

1,056,212 SHARES
ADVANCED MICRO DEVICES, INC.
COMMON STOCK

Advanced Micro Devices, Inc. ("AMD") and NexGen, Inc. ("NexGen") entered into an Agreement and Plan of Merger dated as of October 20, 1995, amended as of December 11, 1995 and January 11, 1996 (the "Merger Agreement") pursuant to which on January 17, 1996, NexGen merged with and into AMD (the "Merger"). In the Merger, each outstanding share of common stock, \$.0001 par value, of NexGen ("NexGen Common Stock") was converted into the right to receive 0.8 (the "Exchange Ratio") of a share of common stock of AMD, \$.01 par value ("AMD Common Stock").

This Prospectus covers the resale of up to 1,056,212 shares of AMD Common Stock (the "Shares") issuable upon exercise of currently exercisable warrants (the "Warrants") granted by NexGen to certain persons and entities (the "Warrantholders"). The Warrantholders are referred to herein as "Selling Stockholders." AMD will not receive any of the proceeds from the sale of the Shares by the Selling Stockholders.

AMD assumed NexGen's obligations under the Warrants which, after the Merger, became exercisable for that number of shares of AMD Common Stock equal to the product of the number of shares of NexGen Common Stock formerly subject to the Warrants multiplied by the Exchange Ratio and rounded downward to the nearest whole number of shares of AMD Common Stock, at an exercise price equal to the exercise price per share of NexGen Common Stock formerly subject to the Warrants divided by the Exchange Ratio and rounded upward to the nearest one-hundredth of one whole cent. In the Merger Agreement, AMD agreed that it would file a registration statement with respect to the Shares issuable upon exercise of the Warrants.

No person is authorized to give any information or to make any representations other than those contained in this Prospectus or in the documents incorporated by reference herein. Any information or representations with respect to such matters not contained herein or therein must not be relied upon as having been authorized by AMD or the Selling Stockholders. This Prospectus does not constitute an offer to sell any securities or a solicitation of an offer to sell any of the securities offered hereby in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. Neither the delivery of this Prospectus nor any distribution of securities hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of AMD since the date hereof or that the information in this Prospectus or in the documents incorporated by reference herein is correct as of any time subsequent to the dates hereof or thereof.

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION, NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this Prospectus is August 1, 1996

AVAILABLE INFORMATION

AMD is subject to the informational requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and in accordance therewith files reports, proxy statements and other information with the Securities and Exchange Commission (the "Commission"). Such reports, proxy statements and other information filed with the Commission can be inspected and copied at the public reference facilities maintained by the Commission at 450 Fifth Street, N.W., Washington, D.C. 20549, and the Commission's Regional Offices, Seven World Trade Center, 13th Floor, New York, New York 10048 and Citicorp Center, 500 West Madison Street, Suite 1400, Chicago, Illinois 60661-2511. Copies of such material can be obtained at prescribed rates from the Commission, Public Reference Section, 450 Fifth Street, N.W., Washington, D.C. 20549. All outstanding shares of AMD Common Stock are listed on the New York Stock Exchange ("NYSE"). Reports, proxy material and other information concerning AMD also may be inspected at the offices of the NYSE, 20 Broad Street, New York, New York 10005.

AMD has filed with the Commission a post-effective amendment on Form S-3 to its Registration Statement on Form S-4 (together with any amendments, the "Registration Statement") under the Securities Act relating to the Shares. This Prospectus was filed by AMD as part of the Registration Statement and does not contain all of the information set forth in the Registration Statement and the Exhibits thereto. The Registration Statement and the Exhibits thereto may be inspected and copied, at prescribed rates, at the public reference facilities maintained by the Commission at the addresses set forth above.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The following documents filed by AMD with the Commission are incorporated by reference in this Prospectus:

- (a) Annual Report on Form 10-K for the fiscal year ended December 31, 1995;
- (b) Quarterly Report on Form 10-Q for the quarter ended March 31, 1996;
- (c) Current Reports on Form 8-K dated January 5, 1996, January 10, 1996, January 12, 1996, January 17, 1996, April 1, 1996, April 9, 1996, June 19, 1996, June 20, 1996, July 10, 1996 and July 22, 1996.
- (d) The description of AMD Common Stock, \$0.01 par value, contained in AMD's Registration Statement on Form 8-A filed September 14, 1979.

All documents subsequently filed by AMD pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this Prospectus shall be deemed to be incorporated by reference herein and to be a part hereof from the date of filing thereof. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Prospectus to the extent that a statement contained herein, or in any subsequently filed document that 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 Prospectus.

THIS PROSPECTUS INCORPORATES BY REFERENCE DOCUMENTS WHICH ARE NOT PRESENTED HEREIN OR DELIVERED HERewith. COPIES OF THESE DOCUMENTS (OTHER THAN CERTAIN EXHIBITS TO SUCH DOCUMENTS) ARE AVAILABLE WITHOUT CHARGE UPON WRITTEN OR ORAL REQUEST BY EACH PERSON TO WHOM A COPY OF THIS PROSPECTUS IS DELIVERED. REQUESTS SHOULD BE DIRECTED TO ADVANCED MICRO DEVICES, INC., ONE AMD PLACE, SUNNYVALE, CALIFORNIA 94086 (TELEPHONE: (408) 732-2400), ATTENTION: ASSISTANT CORPORATE SECRETARY. THE INFORMATION RELATING TO AMD CONTAINED IN THIS PROSPECTUS DOES NOT PURPORT TO BE COMPREHENSIVE AND SHOULD BE READ TOGETHER WITH THE INFORMATION CONTAINED IN THE DOCUMENTS INCORPORATED BY REFERENCE HEREIN.

2

THE COMPANY

AMD is a semiconductor manufacturer with manufacturing facilities in the U.S. and Asia, and sales offices throughout the world. Its products primarily consist of industry-standard integrated circuits, as opposed to custom circuits designed for a single customer. While a substantial portion of AMD's products are standard items, its products are increasingly designed for specific applications such as telecommunications, personal computers, engineering workstations, multimedia or local area networks. As a service to certain major customers, AMD modifies portions of these application-specific devices to meet specific customer needs. The resulting devices are produced in significant volumes for such customers.

AMD began over twenty-five years ago as an alternate-source manufacturer of integrated circuits originally developed by other suppliers. Over time, AMD has become a manufacturer of proprietary products. AMD has made a significant investment in research and development which has contributed toward AMD becoming a leader in manufacturing and process technology within the integrated circuit industry.

AMD is focusing its product development activities in three areas: (1) Computation Products, including x86, K86 Superscalar and other microprocessors, and I/O and network products; (2) Communications and Components, including voice/data communications products and high-volume products such as Erasable Programmable Read-Only Memories (EPROMS), Flash memory devices and embedded processors for personal computers; and (3) Programmable Logic Devices (PLDs). Personal computer (PC) products include microprocessors used in computers. AMD's products are typically subject to intense competition, in an industry characterized by rapid technological advances and innovation.

AMD has sales offices worldwide, and has manufacturing or assembly and testing facilities in Sunnyvale, California; Austin, Texas; Bangkok, Thailand; Penang, Malaysia; and Singapore. In addition, AMD and Fujitsu Ltd. are parties to a joint venture which owns and operates a Flash memory wafer fabrication facility in Aizu-Wakamatsu, Japan. AMD's executive offices and corporate headquarters are located at One AMD Place, Sunnyvale, California 94086, and its telephone number is (408) 732-2400.

Before purchasing Shares offered hereby, potential purchasers should consider carefully the risk factors discussed in AMD's Current Report on Form 8-K dated July , 1996 and in AMD's future reports filed with the Commission and incorporated herein by reference.

SELLING STOCKHOLDERS AND PLAN OF DISTRIBUTION

The Selling Stockholders include the following Warrantholders who have the right to acquire the number of Shares at the adjusted exercise price indicated upon exercise of their Warrants: PaineWebber Incorporated ("PaineWebber") (378,068 Shares at a \$5.00 per share exercise price, 257,044 Shares at a \$6.25 per share exercise price, and 47,280 Shares at a \$9.38 per share exercise price), Kleiner, Perkins, Caulfield & Byers IV, an investment partnership ("KPCB") (280,000 Shares at a \$5.00 per share exercise price), and ASCII Corporation ("ASCII") (93,280 Shares at a \$9.38 per share exercise price). This prospectus covers the resale of an additional 540 shares of AMD Common Stock which may be issuable to certain Warrantholders. In addition, ASCII owns 2,350,231 shares of AMD Common Stock, (constituting 1.74% of the total AMD Common Stock outstanding as of July 11, 1996), which shares are not offered hereby. Such shares may be sold from time to time pursuant to Rule 145(d) under the Securities Act.

Warrants were originally issued to PaineWebber as compensation for acting as sales agent in connection with certain offerings of preferred stock by NexGen in July 1992, July 1993, December 1994 and January 1995. A managing director of PaineWebber was also a director of NexGen. Warrants were issued to KPCB, a former principal stockholder and affiliate of NexGen, in connection with an arrangement under which KPCB provided consulting services to NexGen and as consideration for KPCB's 7% promissory note in the principal amount of

3

\$125,000. Under the consulting arrangement, NexGen paid a monthly consulting fee to KPCB in the form of cancellation of amounts payable under the note referred to above. One of the general partners of KPCB was a director of NexGen. Warrants were issued to ASCII, a former principal stockholder and affiliate of NexGen, in 1994 in consideration of its agreement to modify the terms of certain promissory notes of NexGen held by ASCII and an affiliate, ASCII of America, by extending the term of such notes until March 1, 1996, and terminating interest accruals as of June 1, 1995. ASCII served as a distributor of NexGen's products in Japan. The President of ASCII was also a director of NexGen.

The Selling Stockholders may choose to sell all or a portion of the Shares from time to time offered hereby in transactions executed on the NYSE or other exchanges on which AMD Common Stock may be traded at market prices then prevailing or at negotiated prices, in negotiated transactions, or otherwise including distributions from time to time of the shares by a selling stockholder to its partners or stockholders. In effecting sales, brokers and dealers engaged by Selling Stockholders may arrange for other brokers or dealers to participate. Brokers or dealers will receive commissions or discounts from Selling Stockholders in amounts to be negotiated (and, if such broker-dealer acts as agent for the purchaser of such shares, from such purchaser). Brokers or dealers may agree with the Selling Stockholders to sell a specified number of Shares at a stipulated price per Share, and, to the extent such a broker or dealer is unable to do so acting as agent for a Selling Stockholder, to purchase as principal any unsold Shares at the price required to fulfill the broker's or dealer's commitment to such Selling Stockholder. Brokers or dealers who acquire Shares as principals may thereafter resell such Shares from time to time in transactions (which may involve crosses and book transactions and which may involve sales to and through other brokers or dealers, including transactions of the nature described above) executed on the NYSE or other exchanges on which AMD Common Stock may be traded, at market prices prevailing at the time of sale or at negotiated prices, or otherwise, and in connection with such resales may pay to or receive from the purchasers of such Shares commissions as described above.

Selling Stockholders may also sell Shares pursuant to Rule 144 under the Securities Act instead of this Prospectus after they have held their Shares for the period of time required by Rule 144.

DESCRIPTION OF AMD CAPITAL STOCK

The following summary of terms of AMD's capital stock does not purport to be complete and is subject to, and qualified in its entirety by, the provisions of AMD's Certificate of Incorporation.

GENERAL

The authorized capital stock of AMD consists of 250,000,000 shares of AMD Common Stock, par value \$.01 per share, and 1,000,000 shares of AMD Serial Preferred Stock, par value \$.10 per share.

AMD COMMON STOCK

Of the 250,000,000 authorized shares of AMD Common Stock, 135,371,034 shares were issued and outstanding on July 11, 1996, of which 340,694 shares were owned by the Company as Treasury Stock. No shares of AMD Serial Preferred Stock were outstanding on that date. Holders of AMD Common Stock are entitled to receive dividends when and as declared by the AMD Board of Directors out of funds legally available therefor, and after payment of dividends on any AMD Serial Preferred Stock then outstanding. Each outstanding share of AMD Common Stock has one vote, subject to such special voting rights by class as may be granted to the holders of AMD Serial Preferred Stock, with respect to the election of a limited number of directors upon default by AMD in the payment of dividends upon such serial preferred stock.

The AMD Common Stock is not entitled to any preemptive or other subscription rights, and does not have any conversion rights or redemption or sinking fund provisions. Voting on the election of directors is not cumulative. Upon liquidation, the holders of AMD Common Stock are entitled to share ratably in the entire net assets of AMD remaining available for distribution to stockholders after payment of all preferential amounts payable on liquidation in respect of the holders of classes or series of stock entitled thereto.

4

All outstanding shares of AMD Common Stock are, and the Shares offered hereby issuable upon exercise of the Warrants, will be, validly issued, fully paid and nonassessable. The transfer agent and registrar for the AMD Common Stock is The First National Bank of Boston.

The outstanding shares of AMD Common Stock are listed on the NYSE. The Shares issuable pursuant to the Warrants have been authorized for listing on the NYSE upon official notice of issuance.

AMD SERIAL PREFERRED STOCK

The AMD Serial Preferred Stock may be issued from time to time in one or more series by resolution of the AMD Board of Directors, which may without any further stockholder action determine or fix the dividend rights, dividend rate, voting rights, redemption provisions, liquidation rights, sinking fund provisions and other rights, preferences, privileges and restrictions of any wholly unissued series, the number of shares constituting any such series and the designation thereof. Of the 1,000,000 authorized shares of AMD Serial Preferred Stock, none are outstanding.

LEGAL MATTERS

Certain legal matters with respect to the Shares offered hereby have been passed upon for AMD by Bronson, Bronson & McKinnon LLP, San Francisco, California.

EXPERTS

The consolidated financial statements of AMD incorporated by reference in the AMD Annual Report (Form 10-K) for the year ended December 31, 1995, have been audited by Ernst & Young LLP, independent auditors, as set forth in their report thereon incorporated by reference therein and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such reports given upon the authority of such firm as experts in accounting and auditing.

The supplemental consolidated financial statements of AMD appearing in the AMD Current Report on Form 8-K dated June 19, 1996, have been audited by Ernst & Young LLP, independent auditors, as set forth in their report thereon included therein and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such reports given upon the authority of such firm as experts in accounting and auditing.

5