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AMD Raises Expectations for Server Performance, Unveils EPYC Processor Brand for the Datacenter

Upcoming Launch of EPYC Promises Dynamic Dual-Socket Systems, Disruptive Single-Socket Platforms

SUNNYVALE, Calif., May 16, 2017 (GLOBE NEWSWIRE) -- AMD (NASDAQ:AMD) today ushered in a new era for high-performance server processors and the datacenter with EPYC™. With its high core count, superior memory bandwidth, and unparalleled support for high-speed input/output channels in a single chip[1], EPYC aims to revolutionize the dual-socket server market while simultaneously reshaping expectations for single-socket servers. Previously codenamed "Naples," this new family of high-performance products for cloud-based and traditional on-premise datacenters will deliver the highly successful "Zen" x86 processing engine scaling up to 32 physical cores[2]. The first EPYC-based servers will launch in June with widespread support from original equipment manufacturers (OEMs) and channel partners.

"With the new EPYC processor, AMD takes the next step on our journey in high-performance computing," said Forrest Norrod, senior vice president and general manager of Enterprise, Embedded & Semi-Custom Products. "AMD EPYC processors will set a new standard for two-socket performance and scalability. As we demonstrated today, we see further opportunity with the industry's first no-compromise one-socket solutions. We believe that this new product line-up has the potential to reshape significant portions of the datacenter market with its unique combination of performance, design flexibility, and disruptive TCO."

Today, at the 2017 AMD Financial Analyst Day, a single EPYC processor was shown exceeding the performance of a competitive mid-range, two-socket / two-processor platform in a head-to-head comparison. EPYC exceeds today's top competitive offering on critical parameters, with 45% more cores[1], 60% more input/output capacity (I/O)[2], and 122% more memory bandwidth[3].

"Dropbox is currently evaluating AMD EPYC CPUs in-house, and we are impressed with the initial performance we see across workloads in single-socket configurations," said Akhil Gupta, vice president of infrastructure at Dropbox. "The combination of core performance, memory bandwidth, and I/O support make EPYC a unique offering. We look forward to continuing to evaluate EPYC as an option for our infrastructure."

EPYC Features

- A highly scalable, 32-core System-on-a-chip (SoC) design, with support for two high-performance threads per core

- Industry-leading memory bandwidth, with 8 channels of memory per EPYC device[3]. In a dual-socket server, support for up to 32 DIMMS of DDR4 on 16 memory channels, delivering up to 4 terabytes of total memory capacity
- Complete SoC with fully integrated, high-speed I/O supporting 128 lanes of PCIe® 3, negating the need for a separate chip-set
- Highly-optimized cache structure for high-performance, energy-efficient computing
- Infinity Fabric coherent interconnect for two EPYC CPUs in a dual-socket system
- Dedicated security hardware

“Today’s single-socket server offerings push buyers toward purchasing a more expensive two-socket server just to get the memory bandwidth and I/O they need to support the compute performance of the cores,” said Matthew Eastwood, senior vice president, IDC. “There are no fully-featured, high-performance server processors available today in a single-socket configuration. EPYC changes that dynamic by offering a single-processor solution that delivers the right-sized number of high-performance cores, memory, and I/O for today’s workloads.”

Supporting Resources

- EPYC on AMD.com
- Single-socket whitepaper
- Financial Analyst Day overview press release
- Financial Analyst Day presentations
- Learn more about the “Zen” x86 core
- Follow AMD datacenter developments on Twitter @AMDServer

About AMD

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1. AMD EPYC processor offers up to 64 PCI Express high speed I/O lanes per socket, versus the Xeon E5-2699A v4 processor at 40 lanes per socket. NAP-05

2. AMD EPYC processor includes up to 32 CPU cores versus the Xeon E5-2699A v4 processor with 22 CPU cores. NAP-02

3. AMD EPYC processor supports up to 21.3 GB/s per channel with DDR4-2667 x 8 channels (total 170.7

GB/s), versus the Xeon E5-2699A v4 processor at 19.2 GB/s with max DDR4-2400 x 4 channels (total 76.8 GB/s). NAP-03

CAUTIONARY STATEMENT:

This press release contains forward-looking statements concerning Advanced Micro Devices, Inc. (AMD) including: the features, functionality, availability, timing, and expected benefits of AMD future products, including AMD's EPYC products; EPYC products setting the high mark for single-socket servers; the potential of EPYC products to reshape the datacenter and server markets; and EPYC products launching with a strong portfolio of ecosystem partners, which are made pursuant to the Safe Harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are commonly identified by words such as "would," "intends," "believes," "expects," "may," "will," "should," "seeks," "intends," "plans," "pro forma," "estimates," "anticipates," or the negative of these words and phrases, other variations of these words and phrases or comparable terminology. Investors are cautioned that the forward-looking statements in this document are based on current beliefs, assumptions and expectations, speak only as of the date of this document and involve risks and uncertainties that could cause actual results to differ materially from current expectations. Such statements are subject to certain known and unknown risks and uncertainties, many of which are difficult to predict and generally beyond AMD's control, that could cause actual results and other future events to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. Material factors that could cause actual results to differ materially from current expectations include, without limitation, the following: Intel Corporation's dominance of the microprocessor market and its aggressive business practices may limit AMD's ability to compete effectively; AMD has a wafer supply agreement with GF with obligations to purchase all of its microprocessor and APU product requirements, and a certain portion of its GPU product requirements, from GLOBALFOUNDRIES Inc. (GF) with limited exceptions. If GF is not able to satisfy AMD's manufacturing requirements, its business could be adversely impacted; AMD relies on third parties to manufacture its products, and if they are unable to do so on a timely basis in sufficient quantities and using competitive technologies, AMD's business could be materially adversely affected; failure to achieve expected manufacturing yields for AMD's products could negatively impact its financial results; the success of AMD's business is dependent upon its ability to introduce products on a timely basis with features and performance levels that provide value to its customers while supporting and coinciding with significant industry transitions; if AMD cannot generate sufficient revenue and operating cash flow or obtain external financing, it may face a cash shortfall and be unable to make all of its planned investments in research and development or other strategic investments; the loss of a significant customer may have a material adverse effect on AMD; AMD's receipt of revenue from its semi-custom SoC products is dependent upon its technology being designed into third-party products and the success of those products; global economic uncertainty may adversely impact AMD's business and operating results; the markets in which AMD's products are sold are highly competitive; AMD may not be able to generate sufficient cash to service its debt obligations or meet its working capital requirements; AMD has a large amount of indebtedness which could adversely affect its financial position and prevent it from implementing its strategy or fulfilling its contractual obligations; the agreements

governing AMD’s notes and the Secured Revolving Line of Credit impose restrictions on AMD that may adversely affect its ability to operate its business; AMD's issuance to West Coast Hitech L.P. (WCH) of warrants to purchase 75 million shares of its common stock, if and when exercised, will dilute the ownership interests of its existing stockholders, and the conversion of the 2.125% Convertible Senior Notes due 2026 may dilute the ownership interest of its existing stockholders, or may otherwise depress the price of its common stock; uncertainties involving the ordering and shipment of AMD’s products could materially adversely affect it; the demand for AMD’s products depends in part on the market conditions in the industries into which they are sold. Fluctuations in demand for AMD’s products or a market decline in any of these industries could have a material adverse effect on its results of operations; AMD’s ability to design and introduce new products in a timely manner is dependent upon third-party intellectual property; AMD depends on third-party companies for the design, manufacture and supply of motherboards, software and other computer platform components to support its business; if AMD loses Microsoft Corporation’s support for its products or other software vendors do not design and develop software to run on AMD’s products, its ability to sell its products could be materially adversely affected; and AMD’s reliance on third-party distributors and AIB partners subjects it to certain risks. Investors are urged to review in detail the risks and uncertainties in AMD's Securities and Exchange Commission filings, including but not limited to AMD's Quarterly Report on Form 10-Q for the quarter ended April 1, 2017.

Contact:
Gary Silcott
AMD Corporate Marketing
+1 (512) 602-0889
Gary.Silcott@amd.com

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