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AMD Introduces New Low-Power AMD Embedded G-Series APU and Extends Platform Availability Through 2017

New APU Ideal for Industrial Control, Point-of-Sale, Medical Appliance and Transportation Markets; Delivers Three Times the Performance,(i) Reduces Power Consumption by up to Seven Percent(ii) and Chip Footprint by 58 Percent(iii) Compared to AMD Geode(TM) LX Processor

SUNNYVALE, CA -- (Marketwire) -- 06/25/12 -- AMD (NYSE: AMD) today introduced the latest entry to the AMD Embedded G-Series processor family with the AMD Embedded G-T16R Accelerated Processing Unit (APU). The AMD G-T16R is targeted at very low power, small form factor and cost-sensitive embedded designs that require a combination of x86 compatibility and graphics. The optimized design of the AMD Embedded G-T16R sips power, with power consumption of just 2.3 watts(iv) on average or 4.5 watts thermal design power (TDP).

Embedded product designers are taking to the industry's green challenge to design a broad range of next-generation applications for the industrial control, point-of-sale, medical appliance and transportation markets. For example, industrial customers can use the APU to help create greener factories based on more power-efficient factory hardware. Additionally, embedded designers can develop applications like point-of-sale order entry stations and tablets, medical bedside terminals and even solar-powered traffic control devices using the AMD G-T16R.

The new AMD Embedded G-Series APU also offers embedded product designers a seamless upgrade path for legacy applications with the following features:

- Fits into small form factor boards by implementing a two-chip platform, the APU and its companion controller hub;
- Legacy I/O card support based on a full 32-bit PCI interface and an ISA bus solution with DMA support;
- Support for a full range of display technologies, with analog VGA and LVDS support for legacy applications and DVI, HDMI and DisplayPort interfaces for the latest display technology.

"It's critical that the latest AMD Embedded G-Series APUs provide compatibility with existing x86 processors while supporting the latest interface technologies," said Jim McGregor, principal analyst of TIRIAS Research. "Having a simple migration path allows engineers to develop robust designs using the latest DVI, HDMI and DisplayPort display technologies."

There are already more than 50 standard form factor motherboards available supporting the AMD Embedded G-Series platform, ranging from the small Qseven computer-on-modules to

the versatile and widely available MiniITX form factor. This enhanced compatibility provides original equipment manufacturers (OEMs) with a variety of board options to design into their system solutions. The platform consists of both the APU and its companion controller hub, which have a total combined footprint of just 890 mm2 -- approximately the size of a square inch.

The AMD Embedded G-T16R APU is designed to help reduce product development and life cycle costs through a common scalable platform design that spans the entire AMD Embedded G-Series. AMD's unique approach enables one design to serve multiple product configurations, simplifying the supply chain, helping reduce operational complexity and enabling better platform economics. The AMD G-T16R APU is also available at extremely accessible price points, allowing designers to easily incorporate it into cost-sensitive embedded applications.

"With the AMD G-T16R APU, we were striving for that critical balance of performance, power efficiency and cost for power, and cost-sensitive embedded applications, and we've achieved it," said Arun Iyengar, corporate vice president and general manager, AMD Embedded Solutions. "This new APU helps to enable small form factor and fan-less designs with power consumption of just 2.3 watts on average."

For users of the AMD Geode™ LX processor family, the AMD G-T16R APU offers a cost-effective upgrade path, consuming about seven percent less power and three times the performance of the 2.45 watt AMD Geode™ LX processor, while reducing the overall chip footprint by 58 percent. Support for the latest DDR3 memory helps reduce memory costs for legacy applications while enabling higher memory speed and capacity(v).

The AMD Embedded G-T16R APU supports Windows® Embedded Compact 7, Green Hills INTEGRITY and Express Logic ThreadX® operating systems, allowing applications that leverage these popular embedded and real-time operating systems to easily migrate to the new platform.

Along with the announcement of the new AMD G-T16R APU, AMD is also extending the planned availability for the entire AMD Embedded G-Series processor family through 2017, resetting the five-year clock for both existing and new designs.

A variety of AMD customers are announcing small form factor motherboards designed around the legacy I/O and low power support of the AMD G-T16R APU:

- Advantech PCM-3356 PC/104 CPU module;
- Aewin PM-6161 PC/104 board;
- Arbor EmETX-a55E0 ETX CPU module;
- aValue ECM-A50M 3.5" embedded motherboard;
- Axiomtek CM100 COM Express™ module;
- MEN Mikro Elektronik SC24 computer-on-module.

Supporting Resources

- Visit the AMD Embedded G-Series platform site
- Visit the AMD Embedded Solutions blog for more background on the new G-Series APU
- Learn about the full ISA bus solution for the AMD G-Series APU
- For more AMD-based Embedded products, visit the AMD-Based Embedded Product Catalog

About AMD
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(i) Performance comparison based on the geometric mean of the SciMark2 Composite, FFT, Jacobi Successive Over-Relaxation, Montecarlo, Sparse Matrix Multiply and Dense LU Matrix Factorization benchmark tests for a 22.05 for the AMD Geode LX 800 and 65.55 for the AMD G-T16R APU. System configurations: AMD G-T16R APU, IBASE MI958, 4GB DDR3, Ubuntu 11.04, AMD Geode LX 800, AMD Geode™ LX DB800 Development Board, 1GB DDR1 SO-DIMM, Ubuntu 11.04. EMB-28

(ii) While running a Winbench 99 business graphics benchmark the AMD G-T16R APU consumed an average of 2.284W. System Configuration: AMD G-T16R APU (DVT) at 30 degrees C, "Inagua" Development Board, 4GB 1.35V DDR3, Windows 7 Ultimate. The AMD Geode LX800 consumed an average of 2.450W. System Configuration: AMD Geode LX 800 (Rev C0 500 MHz), "Norwich" Development Board, 256MB DDR-400, Windows XP Pro SP1.

(iii) The footprint of the AMD G-Series APU+A55E is 890mm2 and the footprint of the AMD Geode LX processor + CS5536 is 2129mm2.

(iv) While running a Winbench 99 business graphics benchmark the AMD G-T16R APU consumed an average of 2.284W. System Configuration: AMD G-T16R APU (DVT) at 30 degrees C, "Inagua" Development Board, 4GB 1.35V DDR3, Windows 7 Ultimate. The AMD Geode LX800 consumed an average of 2.450W. System Configuration: AMD Geode LX 800 (Rev C0 500 MHz), "Norwich" Development Board, 256MB DDR-400, Windows XP Pro SP1.

(v) The Session Average DRAM Spot Price listed on http://www.dramexchange.com/ on May 30th at 18:00 (GMT+8) was $0.70 for DDR3 1Gb 128Mx8 1333MHz and $0.98 for DDR 512Mb 64Mx8 400MHz. EMB-35

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