May 20, 2014

AMD Embeds Intelligent, Interactive and Immersive Experiences With 2nd Generation AMD Embedded R-Series APUs and CPUs

New "Bald Eagle" Platform Delivers Unmatched Compute and Graphics Performance Targeting Gaming Machines, Medical Imaging, Digital Signage and Other Embedded Applications

MACAO, CHINA -- (Marketwired) -- 05/20/14 -- *G2E* -- AMD (NYSE: AMD) today announced the 2nd generation AMD Embedded R-series accelerated processing unit (APU) and CPU family (previously codenamed "Bald Eagle") for embedded applications. The new solutions are targeted at gaming machines, medical imaging, digital signage, industrial control and automation (IC&A), communications and networking infrastructure that require industry-leading compute and graphics processing technology.

"When it comes to compute performance, graphics performance and performance-per-watt, the 2nd generation AMD Embedded R-series family is unique in the embedded market," said Scott Aylor, corporate vice president and general manager, AMD Embedded Solutions. "The addition of HSA, GCN and power management features enables our customers to create a new world of intelligent, interactive and immersive embedded devices."

The 2nd generation AMD R-series APU and CPU solutions are designed for mid- to high-end visual and parallel compute-intensive embedded applications with support for Linux, RTOS and Windows operating systems. The new solutions range from 2.2-3.6 GHz CPU frequency with max boost, based on AMD's latest CPU architecture (codenamed: "Steamroller") and 533-686 MHz GPU frequency based on AMD's latest Graphics Core Next (GCN) architecture, designed to advance the visual growth and parallel processing capabilities of embedded applications.

Industry-First Features, Benefits and Support

- Heterogeneous System Architecture (HSA): The 2nd generation AMD Embedded R-series APU is the first embedded processor to incorporate HSA features, enabling applications to distribute workloads to run on the best compute element -- e.g., CPU, GPU or a specialized accelerator such as video decode -- for up to 44 percent more 3-D graphics performance(1) and up to 46 percent more compute performance than comparable Intel Haswell Core-i CPUs(2).
- Open-source Linux development: As a gold-level member of the Yocto Project™, a Linux Foundation Collaboration Project, and as part of a recent multiyear agreement with Mentor Graphics, embedded systems developers now have access to customized embedded Linux development and commercial support on the 2nd generation AMD

Embedded R-series family through Mentor Embedded Linux and Sourcery™ CodeBench, as well as Mentor Embedded Linux Lite available at no cost.
- Embedded-specific features: The 2nd generation AMD Embedded R-series family is specifically designed for embedded applications with industry-leading, 10-year longevity(3), dual-channel memory with error-correcting code (ECC), DDR3-2133 support and configurable TDP for system design flexibility to optimize the processor at a lower TDP.

Target Markets
Visual Embedded: For embedded applications like gaming machines and digital signage that provide immersive and interactive visual experiences, AMD customers can achieve up to 64 percent more 3-D graphics performance than a standalone 2nd generation AMD Embedded R-series APU(4), and greater flexibility and scalability with support for up to nine independent displays and 4K resolution with the combination of the newly launched AMD Embedded Radeon™ E8860 discrete GPU.

Medical Imaging: The 2nd generation AMD R-series APU is also ideal for clinical and field medical imaging applications across portable, 3-D and 4-D ultrasound, low-dose X-ray, and imaging-assisted surgical systems. The new AMD Embedded R-series APUs deliver high image transformation performance and low latencies in a low-power and highly integrated solution for medical imaging device vendors looking to help reduce size, weight, complexity and system cost. The combination of high compute performance and low memory access latency afforded by hUMA, as well as high graphics performance in the 2nd generation AMD Embedded R-series platform accelerate image transformation and deliver excellent image rendering to enable next-generation ultrasound applications to help diagnose and treat patients.

Communications and Networking Infrastructure: For non-visual applications, the advanced parallel-compute graphics engine in the 2nd generation AMD Embedded R-series APU provides a highly unique heterogeneous compute platform for control plane switching and routing applications. With up to 66 percent more compute performance than the previous generation AMD Embedded R-series APU,(5) the high-performance GPU enables acceleration of parallelizable functions such as deep packet inspection, encryption or decryption, search, and compression or decompression allowing more CPU headroom for customers to help increase feature velocity.

Supporting Resources

- Learn more about the 2nd generation AMD Embedded R-series product family
- Blog: Radgames optimize Bink 2.0 for AMD R-series APU
- Become a fan of AMD on Facebook
- Follow @AMDEmbedded on Twitter
- Join AMD on Google Plus

About AMD
AMD (NYSE: AMD) designs and integrates technology that powers millions of intelligent devices, including personal computers, tablets, game consoles and cloud servers that define the new era of surround computing. AMD solutions enable people everywhere to realize the full potential of their favorite devices and applications to push the boundaries of what is possible. For more information, visit www.amd.com.

1. The AMD RX-427BB scored 2051 and Intel Haswell Core i7-4765T scored 1424, when running 3DMark® 11P benchmark. RX-427BB's TDP is 35W and Core i7-4765T's TDP is 35W. The performance delta of 44% was calculated based on RX-427BB's performance score of 2051 and Core i7-4765T's performance score of 1424. The AMD RX-427BB used an AMD Ballina motherboard with 8GB DDR3 SO-DIMM memory and 256GB SanDisk HDD. The Core i7-4765T used a Lenovo ThinkCentre M93p with 8GB DDR3 memory and 128GB Crucial M4 HDD. Both systems ran Windows® 7 Ultimate. EMB-93
2. The AMD RX-427BB scored 76 and Intel Haswell Core i7-4765T scored 52, when running BasemarkCL 1.0 benchmark. RX-427BB's TDP is 35W and Core i7-4765T's TDP is 35W. The performance delta of 46% was calculated based on RX-427BB's performance score of 76 and Core i7-4765T's performance score of 52. The AMD RX-427BB used an AMD Ballina motherboard with 8GB DDR3 SO-DIMM memory and 256GB SanDisk HDD. The Core i7-4765T used a Lenovo ThinkCentre M93p with 8GB DDR3 memory and 128GB Crucial M4 HDD. Both systems ran Windows® 7 Ultimate. EMB-94
3. Part availability is planned for 10 years from date of announcement, subject to change without notice. Further support available under contract
4. The AMD RX-427BB scored 2,051, and the AMD Radeon™ E8860 paired with RX-427BB at dual-graphics mode scored 3,359 when running 3DMark®11P benchmark. The AMD Bald Eagle RX-427BB used an AMD Ballina motherboard with 8GB DDR3 SO-DIMM memory and 256GB SanDisk HDD. The AMD Radeon E8860 used an AMD DB-FS1r2 motherboard with 8GB DDR3 memory, 64GB Crucial M4 HDD, and RX-427BB. The system ran Windows® 7 Ultimate. EMB-97
5. The AMD Bald Eagle RX-427BB scored 76 and AMD R-Series 464L scored 46, when running BasemarkCL 1.0 benchmark. The performance delta of 66% was calculated based on RX-427BB's performance score of 76 and R-464L's performance score of 46. The AMD Bald Eagle RX-427BB used an AMD Ballina motherboard with 8GB DDR3 SO-DIMM memory and 256GB SanDisk HDD. The R-464L used an AMD DB-FS1r2 development board with 8GB DDR3 memory and 160GB Hitachi HDD. Both systems ran Windows® 7 Ultimate. EMB-95

Contact:
Travis Williams
AMD Public Relations
(512) 602-4863
travis.williams@amd.com

Source: Advanced Micro Devices