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AMD Brings Immersive Graphics to Embedded Applications With the New AMD Embedded Radeon(TM) E8860 GPU

Graphics Core Next Based GPU Delivers Double the Performance of Its Predecessor With Industry-Best Seven Year Longevity to Drive a New Era of Visual and GPGPU Embedded Systems

NUREMBERG, GERMANY -- (Marketwired) -- 02/25/14 -- ***Embedded World 2014*** -- AMD (NYSE: AMD) today announced the AMD Embedded Radeon™E8860 GPU (codenamed "Adelaar"), the industry's first discrete graphics card based on Graphics Core Next (GCN) architecture designed specifically to advance the visual growth and parallel processing capabilities of embedded applications. With more than double the performance in the same power envelope as its predecessor[1], the AMD E8860 GPU delivers 3D and 4K graphics to embedded gaming machines, digital signage, medical imaging, commercial aerospace and conventional military, and other embedded applications. A 33 percent higher single precision floating point[2] over the previous generation at 768 GFLOPS enables the AMD E8860 GPU to also blast through the most complex parallel applications like terrain and weather mapping, facial and gesture recognition and biometric and DNA analysis.

"The demand for rich, vibrant graphics and enhanced parallel compute capabilities in embedded systems is greater than ever before, and is expected to continue to grow as we enter the Surround Computing era," said Scott Aylor, corporate vice president and general manager, AMD Embedded Solutions. "Legacy graphics no longer meet the needs of embedded solutions for today and tomorrow. With unprecedented performance-per-watt, the AMD E8860 GPU addresses the need to drive multi-displays, 3D and 4K content and GPGPU compute across small form factors, harsh environments and mission critical applications."

The AMD E8860 GPU, designed in multi-chip module packaging, comes with an industry leading seven year longevity supply guarantee[3] and is available as a mobile PCI Express module (MXM) and PCI Express add-in-board. The AMD E8860 GPU drives multiple independent displays with support for AMD Eyefinity Technology[4], and supports DirectX 11.1, OpenGL 4.2, and OpenCL™ 1.2 with support for Microsoft Windows 7, Windows Embedded 7 Standard, Windows 8/8.1, Windows Embedded 8 Standard, Linux and real-time and safety-critical operating systems supported by CoreAVI's suite of embedded software drivers. Additional features include:

- Industry-leading graphics memory
  - The AMD E8860 GPU features 2GB of GDDR5 frame buffer and delivers up to 80% higher memory bandwidth than the best-performing of NVIDIA's sub-50W category GeForce GPUs[5]

- Advanced GPGPU capabilities for parallel processing with up to 61 percent higher performance-per-watt than competing sub-50W category of discrete GPUs[6]
  - 640 Shader processors
  - AMD APP technology, OpenCL™ 1.2, DirectCompute 11.1
  - 768 / 48 GFLOPS single / double precision peak (600e/4.5Gbps)
- Improved performance with 92 percent higher 3D graphics performance-per-watt then the previous generation[7]
  - 3DMark® 11 score of 2689
  - Advanced platform power management at 37W TDP
- Enhanced graphics & video
  - 128-bit wide, 2GB GDDR5, 72GB/s
  - VCE (video encode), UVD4 (video decode)
  - DP1.2, HDMI™ 1.4, Wireless Display, Stereo 3D

"Embedded GPUs like the AMD E8860 will persevere to accommodate increasingly stringent OEM preferences as demands for HD, 3D and even 4K display capability continue to grow across a seemingly endless array of screen types and sizes," said Chris Rommel, Executive Vice President of M2M Embedded Technology, VDC Research. "The proliferation of GPGPU computing will expand the applicability of GPUs beyond visual applications into medical, conventional military and commercial aerospace applications where massive parallel compute is a necessity."

AMD E8860 GPU-based solutions for digital signage, conventional military and commercial aerospace, medical imaging and embedded gaming machines will be available from Curtiss-Wright Defense Solutions, Quixant, SAPPHIRE, Tech Source Inc., TUL, WOLF Industrial Systems Inc., and other leading board manufacturers and solution providers beginning in Q1 2014.

Supporting Resources

- AMD Embedded Radeon™ E8860 GPU product page and product brief
- Watch the AMD E8860 GPU video
- Become a fan of AMD on Facebook
- Follow AMD Embedded on Twitter

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. AMD Radeon™ E8860 scored 2689 and AMD Radeon E6760 scored 1327 when running 3DMark® 11P benchmark paired with AMD R-464L APU. The E6760's thermal design power (TDP) is 35W and the E8860's TDP is 37W. The E8860 and AMD Radeon E6760 used an AMD DB-FS1r2 motherboard with 8GB DDR3 memory, a 64GB Crucial M4 hard disk drive, and AMD R-464L. The system ran Windows® 7 Ultimate EMB-79
2. AMD Radeon™ E8860's single-precision floating point is 768 GFLOPS; AMD Radeon

E6760's single-precision floating point is 576 GFLOPS. EMB-80
3. Part availability is planned for seven years from date of announcement, subject to change without notice. Further support available under contract
4. AMD Eyefinity technology supports up to five DisplayPort monitors on an enabled graphics card. Supported display quantity, type and resolution vary by model and board design; confirm specifications with manufacturer before purchase. To enable more than two displays, or multiple displays from a single output, additional hardware such as DisplayPort-ready monitors or DisplayPort 1.2 MST-enabled hubs may be required. A maximum of two active adapters is recommended for consumer systems. See www.amd.com/eyefinityfaq for full detail
5. AMD Radeon™ E8860 scored 2689, AMD Radeon E6760 scored 1327, NVIDIA GeForce GT630 (Kepler) scored 1784, and NVIDIA GeForce GT640 (GDDR5) scored 2209 when running 3DMark® 11P benchmark paired with AMD R-464L. The performance-per-watt data was calculated by dividing the 3DMark 11P score by the GPU's thermal design power. The performance delta was calculated based on the E8860's 3DMark 11 score of 2689 and the GeForce GT640 (GDDR5)'s 3DMark 11 score of 2209. The performance-per-watt delta was calculated based on the E8860's performance-per-watt score of 72.7 and the GeForce GT640 (GDDR5)'s performance-per-watt score of 45.1. AMD Radeon E8860, AMD Radeon E6760, NVIDIA GeForce GT630 (Kepler), and NVIDIA GeForce GT640 (GDDR5) used an AMD DB-FS1r2 motherboard with 8GB DDR3 memory, a 64GB Crucial M4 hard disk drive, and AMD R-464L. The system ran Windows® 7 Ultimate. EMB-83
6. AMD Radeon™ E8860 scored 2689, AMD Radeon E6760 scored 1327, NVIDIA GeForce GT630 (Kepler) scored 1784, and NVIDIA GeForce GT640 (GDDR5) scored 2209 when running 3DMark® 11P benchmark paired with AMD R-464L. The performance-per-watt data was calculated by dividing the 3DMark 11P score by the GPU's thermal design power. The graphics performance delta was calculated based on the E8860's 3DMark 11 score of 2689 and the GeForce GT640 (GDDR5)'s 3DMark 11 score of 2209. The performance-per-watt delta was calculated based on the E8860's performance-per-watt score of 72.7 and the GeForce GT640 (GDDR5)'s performance-per-watt score of 45.1. AMD Radeon E8860, AMD Radeon E6760, NVIDIA GeForce GT630 (Kepler), and NVIDIA GeForce GT640 (GDDR5) used an AMD DB-FS1r2 motherboard with 8GB DDR3 memory, a 64GB Crucial M4 hard disk drive, and AMD R-464L. The system ran Windows® 7 Ultimate. EMB-82
7. AMD Radeon™ E8860 scored 2689 and AMD Radeon E6760 scored 1327 when running 3DMark® 11P benchmark paired with AMD R-464L APU. The performance-per-watt data was calculated by dividing the 3DMark 11P score by the GPU's thermal design power. The performance-per-watt delta was calculated based on the E8860's performance-per-watt score of 72.7 and the E6760's performance-per-watt score of 37.9. The E8860 and AMD Radeon E6760 used an AMD DB-FS1r2 motherboard with 8GB DDR3 memory, a 64GB Crucial M4 hard disk drive, and AMD R-464L. The system ran Windows® 7 Ultimate. EMB-81

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