Product Brief

2nd Generation AMD Embedded R-Series APU

The 2nd Generation AMD Embedded R-Series APU (previously codenamed: “Bald Eagle”) boosts processing performance, power efficiency, and multimedia immersion by leveraging Heterogeneous System Architecture.

PRODUCT OVERVIEW

The 2nd Generation AMD Embedded R-Series accelerated processing unit (APU) delivers breakthrough graphics performance and power efficiency designed to provide ultra-immersive HD multimedia experiences and parallel processing compute performance. Harnessing the processing power of AMD’s “Steamroller” CPU core and a graphics core based on the AMD Radeon™ HD 9000 platform, the AMD R-Series APU offers next-generation performance-per-watt compute efficiency in the x86 product category by allowing system designers to take advantage of Heterogeneous System Architecture (HSA).

The high-performance CPU and GPU cores within the 2nd Generation AMD Embedded R-Series APU can be allocated to the best suited compute tasks by utilizing HSA. As noted below, this enables outstanding system performance and multimedia interactivity, superior battery life, and small, sleek system form factors for a wide range of graphics and compute-intensive embedded applications including embedded gaming, digital signage, medical imaging, and more.

SKY HIGH PERFORMANCE AT LOW POWER

2nd Generation AMD R-Series APUs deliver up to 66% more compute performance¹ and up to 55% more 3D graphics performance than previous generation AMD Embedded R-Series APUs.² Compared to Intel Haswell Core-i CPUs with 35W or lower thermal design power (TDP), the new AMD R-Series APUs provide up to 46% more compute performance³, and up to 44% more 3D graphics performance.⁴
BREATHTAKING GRAPHICS AND MULTIDISPLAY IMMERSION

2nd Generation AMD Embedded R-Series APUs enable stunningly crisp 3D, 4K, and HD video content and offer support for up to four independent displays (4096 x 2160 resolution per display output). The AMD Dual Graphics configuration allows you to combine the power of the 2nd Generation AMD R-Series APU with an AMD Embedded Radeon™ E8860 discrete GPU to provide up to 64% more 3D graphics performance than a standalone 2nd Generation AMD R-Series APU. AMD Eyefinity technology allows the AMD R-Series APUs to drive multiple displays simultaneously as a single large surface.

ADDITIONAL KEY BENEFITS

- Available in dual-core and quad-core “Steamroller” CPU configurations with up to 4 MBytes of shared L2 cache.
- Includes support for DirectX® 11.1, OpenGL 4.2, and AMD’s Mantle for the latest game development advancements. Offers dual-channel DDR3 support and error-correction code (ECC) memory support for high integrity applications.
- Features a new audio coprocessor that enables low-latency audio signal processing for crisper sound and audio effects.
- Enables hardware accelerated video encode and decode using Unified Video Decode (UVD) 4.2 and Video Compression Engine (VCE) 2.0.

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1. The AMD RX-427BB scored 75.6 and AMD R-Series 464L scored 61.6, when running BasemarkCL 1.0 benchmark. The performance delta of 24% was calculated based on RX-427BB's performance score of 75.6 and R-464L’s performance score of 61.6.

2. The AMD RX-427BB scored 301.3 and AMD R-Series 464L scored 246.4, when running SPECint2006 benchmark. The performance delta of 21% was calculated based on RX-427BB's performance score of 301.3 and R-464L’s performance score of 246.4.

3. The AMD RX-427BB scored 115.8 and AMD R-Series 464L scored 92.0, when running SPECint2006 benchmark. The performance delta of 25% was calculated based on RX-427BB's performance score of 115.8 and R-464L’s performance score of 92.0.

4. The AMD RX-427BB scored 76 and Intel Haswell Core i7-4765T scored 52, when running BasemarkCL 1.0 benchmark. 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.

5. The AMD RX-427BB scored 2434 and Intel Haswell Core i7-4765T scored 1921, when running BasemarkCL 1.0 and Core i7-4765T’s performance score of 1921. The performance delta of 26% was calculated based on RX-427BB's performance score of 2434 and Core i7-4765T’s performance score of 1921.

6. The AMD RX-427BB scored 76.5 and AMD R-Series 464L scored 46.1, when running BasemarkCL 1.0 benchmark. The performance delta of 66% was calculated based on RX-427BB's performance score of 76.5 and R-464L’s performance score of 46.1.