AMD EMBEDDED SOLUTIONS



Product Brief: AMD Power-Efficient Embedded GPUs

Excellent Processing Performance and Low Power Consumption to Meet Exacting Thermal Requirements

Product Overview

AMD Embedded Radeon™ power-efficient embedded discrete GPUs provide an optimal performance-per-watt balance for embedded systems with strict thermal constraints, enabling passive cooling for many designs. Targeted for use in low-power, small form factor, and ruggedized systems, AMD power-efficient embedded GPUs are an excellent fit for applications including mobile and static-screen digital signage, digital casino gaming, retail and kiosks, factory human-machine interfaces, thin client computing, medical displays, and heads-up aerospace displays.

Key Benefits

- **Low Power Consumption –** Boost energy efficiency for power-sensitive systems by leveraging low-power processors enabling Total Board Power (TBP) profiles ranging from 28W to 50W with uncompromising performance up to 1.2 TFLOPS (AMD Embedded Radeon™ E9170). Reduce thermal dissipation, improve cooling efficiency, and help lower total cost of ownership by using less power.
- **Multi-Display Configurability and 4K Graphics –** Power up to five independent displays simultaneously with brilliant 4K graphics[1]. Enable immersive, eye-catching visual experiences that capture and hold viewers' attention.
- **High-Resolution Graphics in a Small Footprint –** Leverage high-quality graphics for small form factor and remotely deployed systems. Maximize space savings with compact systems that fit behind digital signage installations, in airplane cockpit panels, and on mobile hospital workstations.
- **Fanless Designs and Improved Ruggedization –** Employ passive cooling to conserve space and help improve system reliability. Utilize sealed, ventless enclosures that protect against moisture and airborne particulates in harsh operating environment.

AMD Embedded Radeon™ E9170 Series

AMD Embedded Radeon™ E6465 Series

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Product Details

AMD Embedded Radeon™ E9170 Series (MCM, MXM, and PCIe®)

- 14nm FinFET "Polaris" architecture
- Eight Compute Units[2]; 1.2 TFLOPS
- 2 or 4GB GDDR5 Memory; 64- or 128-bit wide
- 35-50W Total Board Power; 35W Total Graphics Power for MCM
- Graphics Clock 1124 or 1219MHz
- Memory Clock 1500MHz
- AMD Eyefinity technology for up to five display outputs[3]
- 4K HEVC/H.265 and AVC/H.264 decode and encode[4]; 4K support at 60Hz
- Microsoft DirectX® 12 capable

AMD Embedded Radeon™ E6465 Series (MCM, MXM, and PCIe)

- 40nm "Caicos" architecture
- Two Compute Units; 192 GFLOPS
- 2GB GDDR5 Memory; 64-bit wide
- 28W Total Board Power; 28W Total Graphics Power for MCM
- Graphics Clock 600MHz
- Memory Clock 800MHz
- AMD Eyefinity technology for up to four display outputs[3]
- Dual HD decode of H.264, VC-1, MPEG-4 and MPEG-2
- Microsoft DirectX® 11 capable

OPN	Model	Format	TBP/TGP	Display Output	Thermal Solution Included
100-CG2955	AMD Embedded Radeon™ E9171	MCM	35W	5x DisplayPort/HDMI/DVI	N/A
100-K00259	AMD Embedded Radeon™ E9172	Type A MXM	35W	5x DisplayPort/HDMI/DVI	Heatsink
100-K00264	AMD Embedded Radeon™ E9172	Type A MXM	35W	5x DisplayPort/HDMI/DVI	N/A
100-438279	AMD Embedded Radeon™ E9173	PCIe Low Profile Format and Bracket	35W	1x DisplayPort + 2x mini DisplayPort	Fan
100-438280	AMD Embedded Radeon™ E9173	PCIe Low Profile Format and Full Height Bracket	35W	1x DisplayPort + 2x mini DisplayPort	Fan
100-K00260	AMD Embedded Radeon™ E9174	Type A MXM	50W	5x DisplayPort/HDMI/DVI	Heatsink
100-K00265	AMD Embedded Radeon™ E9174	Type A MXM	50W	5x DisplayPort/HDMI/DVI	N/A
100-438281	AMD Embedded Radeon™ E9175	ATX PCIe	50W	5x mini DisplayPort	Fan
100-CG2763	AMD Embedded Radeon™ E6465	MCM	28W	4 x DisplayPort / HDMI / DVI	N/A
100-K00209	AMD Embedded Radeon™ E6465	Type A MXM	28W	4 x DisplayPort / HDMI / DVI	N/A
100-K00210	AMD Embedded Radeon™ E6465	Type A MXM	28W	4 x DisplayPort / HDMI / DVI	Heatsink
100-438182	AMD Embedded Radeon™ E6465	PCIe Low Profile Format and Bracket	28W	4 x mini DisplayPort	Heatsink
100-438181	AMD Embedded Radeon™ E6465	PCIe Low Profile Format and Bracket	28W	2 x DisplayPort	Heatsink

For more information about the specific features and specifications supported by select products in AMD's solutions portfolio, or to learn more about AMD Power-Efficient Embedded GPUs, visit **www.amd.com/embedded**

AMD.com/embedded

1. Number of displays supported varies by model.
2. Discrete AMD Radeon™ and FirePro™ GPUs based on the Graphics Core Next architecture consist of multiple discrete execution engines known as a Compute Unit ("CU"). Each CU contains 64 shaders ("Stream Processors") working together. GD-78
3. Learn more about AMD Eyefinity technology at amd.com/eyefinity.
4. HEVC acceleration is subject to inclusion/installation of compatible HEVC players. GD-81

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