AMD Radeon™ E6760 Embedded GPU

PRELIMINARY INFORMATION

Embedded Discrete GPU enables Exceptional Graphics, Computing and Multiple Displays

Immersive Desktop Graphics with Outstanding Multimedia Features

The AMD Radeon™ E6760 embedded discrete graphics processor (GPU) enables an exceptional entertainment experience with immersive desktop-level 3D graphics and outstanding multimedia features. The advanced 3D graphics engine and programmable shader architecture support Microsoft® DirectX® 11 technology for superior graphics rendering. The third generation unified video decoder enables dual HD decode of H.264, VC-1, MPEG4 and MPEG2 compressed video streams. Using the AMD Radeon™ E6760 GPU, designers of casino gaming, arcade and medical imaging systems can deliver products with a compelling, competitive advantage.

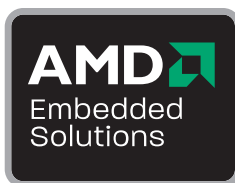### Accelerated GPGPU Computing with Open Standards

Delivering 576 GFLOPs of peak single precision floating point performance, the AMD Radeon™ E6760 GPU is ideal for general purpose, graphics processing unit (GPGPU) applications such as ultrasound, radar and video surveillance. Supported by the industry standard OpenCL™ programming language, GPGPU application software development is accelerated with the AMD Stream Software Development Kit (SDK). The AMD Stream SDK includes developer tools such as compiler, debugger, code profiler and math libraries.

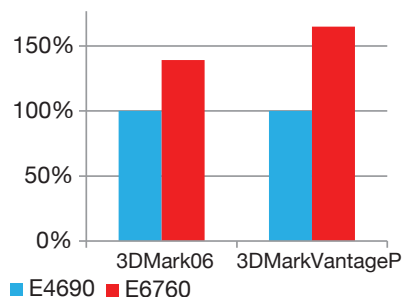### Multi-Display Support with AMD Eyefinity Technology

AMD Eyefinity multi-display technology supports up to 6 display outputs[3]. Multiple display interface combinations include up to 2 display outputs from analog RGB, single/dual-link DVI, single/dual-link LVDS and HDMI™ 1.4a, and up to 4 display outputs from DisplayPort™ 1.1a and DisplayPort™ 1.2. HDMI 1.4a supports stereoscopic video while DisplayPort 1.2 enables higher link speeds and simplifies display connectivity with a daisy-chain cable and connector architecture. AMD Eyefinity technology benefits digital signage systems by minimizing system cost and enabling multiple displays to be driven from a single system controller.

Designed to Perform, Engineered to Lead, Built to Win

AMD understands the unique requirements of the embedded market. Building on a proven track record of customer-centric innovation, AMD offers the AMD Radeon™ E6760 embedded discrete GPU with a 5 year planned product life cycle[4]. With specialized technical support and fast time-to-market, the AMD Radeon™ E6760 GPU provides system designers with an exciting and innovative solution for their embedded graphics or GPGPU applications.

SUPERIOR NEXT GENERATION GRAPHICS
> Advanced 3D graphics engine
> Microsoft® DirectX® 11 capable
> 3DMark™ Vantage (P) 5300+[1]
> 128-bit, 1GB GDDR5

SUPERCOMPUTING GPGPU
> AMD Accelerated Parallel Processing (AMD APP)
> 480 processing elements
> 576 GFLOPS SPFP (peak)
> OpenCL™ 1.1[2]

OUTSTANDING VIDEO FEATURES
> 3rd generation video decoder
> H.264, VC-1, MPEG-2
> Blu-ray & Stereo 3D
> Dual HD decode & PiP

AMD EYEFINITY TECHNOLOGY[3]
> Up to 6 display outputs

EXTENDED AVAILABILITY
> 5 year supply[4]
> Dedicated support

AMD Embedded Solutions

AMD **Accelerated Parallel Processing** TECHNOLOGY

AMD **Eyefinity** MULTI-DISPLAY TECHNOLOGY

Relative Performance:
AMD Radeon™ E4690 vs E6760 GPU[1]
(higher is better)

Legend: E4690 (blue), E6760 (red); categories: 3DMark06, 3DMarkVantageP; scale 0%–150%+

AMD Embedded GPU Comparison	ATI Radeon™ E4690	AMD Radeon™ E6760
Package Dimensions	GPU + memory, 35 mm x 35 mm BGA	GPU + memory, 37.5 mm x 37.5 mm BGA
Thermal Design Power (TDP)	25 W	35 W[9]
Graphics Processing Unit		
Process Technology	55 nm	40 nm
Graphics Engine Operating Frequency (max)	600 MHz	600 MHz
CPU Interface	PCI Express® 2.0 (x1, x2, x4, x8, x16)	PCI Express® 2.1 (x1, x2, x4, x8, x16)
Shader Processing Units	4 SIMD engines x 80 processing elements = 320 shaders	6 SIMD engines x 80 processing elements = 480 shaders
Floating Point Performance (single precision, peak)	384 GFLOPS	576 GFLOPS
Display Engine	ATI Avivo™ Display Engine[5]	AMD EyeSpeed visual acceleration[6], AMD Eyefinity & AMD HD3D technologies[7]
DirectX capability	DirectX® 10.1	DirectX® 11
Shader Model	Shader Model 4.0	Shader Model 5.0
OpenGL	OpenGL 3.3	OpenGL 4.1
OpenCL™ compliant	NA	AMD APP, OpenCL™1.1, DirectCompute 11
Unified Video Decoder (UVD)	UVD2 for H.264, VC-1, MPEG-2 decode	UVD3 for H.264, VC-1, MPEG-2, MPEG-4 part 2 decode
Internal Thermal Sensor	●	●
Memory		
Operating Frequency (max)	700 MHz / 1.4 Gbps	800 MHz / 3.2 Gbps
Configuration, type	128-bit wide, 512 MB, GDDR3	128-bit wide, 1 GB, GDDR5
Display Interfaces [8]		
Analog RGB	2x Triple 10-bit DAC, 400 MHz	1x Triple 10-bit DAC, 400 MHz
Analog TV	1x Comp / YC / YPbPr	NA
Single / Dual-Link DVI	2 x Single-Link, 2 x Dual-Link	4x single-link DVI / 1x dual-link DVI
DisplayPort™ 1.1a	2x	2x
DisplayPort™ 1.2	NA	4x
Single / Dual-Link LVDS	1 x Single-Link / Dual-Link	1 x Single-Link / Dual-Link
HDMI™	1x HDMI 1.2	1x HDMI 1.4a
Number Independent Displays (max)	2x	Up to 2 display outputs from VGA, single / dual-link DVI, single / dual-link LVDS and HDMI 1.4a + up to 4 display outputs from DisplayPort 1.1a / 1.2
HD Audio Controller (Azalia)	●	●
HDCP Keys	2x	6x
DVO	12-bit DDR or 24-bit SDR / DDR	12-bit DDR or 24-bit SDR / DDR
Software Support		
Windows XP / Windows XP Embedded	●	●[10]
Windows Vista	●	
Windows 7 / Windows 7 Embedded	●	●
Linux (x86)	●	●

1. System configuration: 1280x1024, AMD Phenom™ II X4 965 @ 3.4GHz, MSI 890FXA-GD70, Corsair XMS3 8GB (4x2GB) 1333MHz 9-9-9-24 (TW3X4G1333C9A G), Windows® 7 64bit Ultimate
2. OpenCL certification expected
3. AMD Eyefinity technology can support multiple displays limited by display output clock dependencies. Two internal PLLs + an integrated DisplayPort reference clock can support (1) two legacy display outputs + four DisplayPort outputs, (2) one legacy display output + five DisplayPort outputs or (3) six DisplayPort outputs. Microsoft® Windows® 7, Windows Vista®, or Linux® is required in order to support more than 2 displays. SLS ("Single Large Surface") functionality requires an identical display resolution on all configured displays.
4. Part availability is planned for 5 years from date of announcement and subject to change without notice.
5. ATI Avivo™ HD is a technology platform that includes a broad set of capabilities offered by certain AMD Radeon™ graphics processors. Full enablement of some ATI Avivo™ HD capabilities may require complementary products.

6. AMD EyeSpeed is a set of technologies designed to improve video quality and enhance application performance. Full enablement of some features requires support for AMD Accelerated Parallel Processing (APP) technology and/or AMD's Universal Video Decoder (UVD).
7. AMD HD3D is a technology designed to enable stereoscopic 3D support in games, movies and/or photos. Additional hardware (e.g. 3D enabled panels, 3D-enabled glasses/emitter, Blu-ray 3D drive) and/or software (e.g. Blu-ray 3D discs, 3D middleware, games) are required for the enablement of stereoscopic 3D.
8. Not all display interfaces available at same time. Maximum resolution dependent on link bit-rate and available memory bandwidth. AMD Embedded Catalyst Software driver version 8.81 or higher required to support AMD Eyefinity multi-display technology. AMD Eyefinity multi-display technology has certain restrictions on supported display interfaces.
9. System configuration: 1920x1200, 32bpp, 1x DP output, 3DMark03 Game4, AMD Shiner, ATHLON 64 X2 DUAL CORE 4400+ @ 2.20GHZ, 2GB system memory, driver 8.86_110405n, Windows 7 64bit Ultimate.
10. Some features not supported e.g. AMD Eyefinity, DirectX 11 etc.

Contact your local AMD distributor for ordering information. OPN: 100-CG2266

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