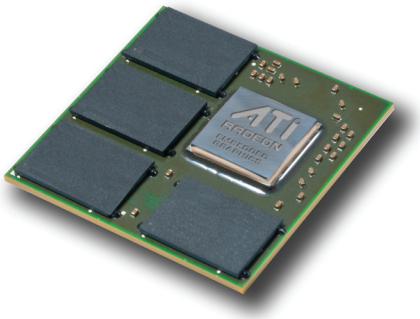
# ATI Radeon™ E4690

Embedded Graphics Processor

## Serious Graphics for Gaming and HD Video



- **Desktop-level Performance**
  - 320 shader processors
  - 128-bit memory interface
  - 512 MB GDDR3
- **Exceptional Video Decode**
  - H.264, VC-1, MPEG-2
  - Picture-in-Picture
- **Extended Availability**
  - 5 year supply availability**
  - Dedicated technical support

### Unprecedented Embedded Graphics Performance

The ATI Radeon™ E4690 delivers leading performance for embedded applications from casino and arcade gaming to digital signage. With 3x the performance of AMD's previous generation embedded GPUs*, the E4690 can help deliver the performance needed for today's embedded applications. This performance is delivered through state of the art features, including a wider 128-bit memory interface and 512MB of on-chip memory. The E4690 provides broad hardware support for video codecs and allows for multiple HD video streams to be decoded simultaneously delivering features like picture in picture. For ultimate performance, multiple GPUs can be combined through ATI CrossFireX™ technology.

### Low and Scalable Power Consumption

Based on 55nm technology, the E4690 delivers more than double the performance per watt* than previous generation processors. Built with ATI's PowerPlay™ technology the E4690 has dynamic power management delivering high performance when needed, while intuitively conserving energy at idle or when demand is low. The E4690 graphics processor also allows for exceptional scalability of performance between 8W and 25W.

### Broadest Range of Display Outputs

Today's embedded applications require support for a large range of output interfaces. The E4690 delivers a comprehensive selection of output options including the first ever embedded support for DisplayPort that delivers up to 2x the bandwidth of DVI. Whether it is HDMI, dual-link DVI, analog output, or custom timings for LVDS panels, the E4690 has the flexibility to meet most embedded applications.

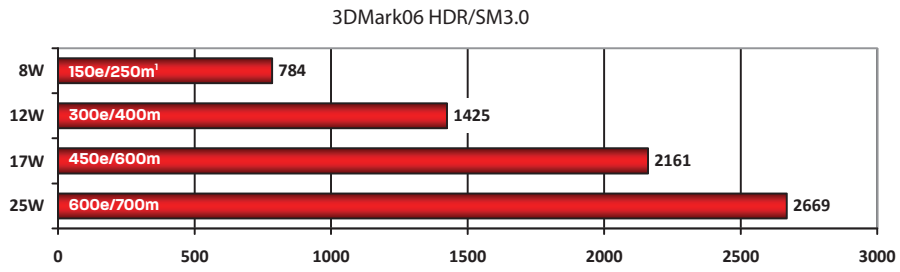
### Assurance of Availability

AMD understands the unique requirements of the embedded market. Unlike desktop PC solutions, embedded designers need to know that the high performance graphics processors they select today will be available in years to come. That is why as with other AMD embedded graphics solutions, the E4690 has a five year supply availability.

### Fast Time to Market

AMD embedded graphics products focus on speeding your solution to market by simplifying the design and providing specialized technical support. By incorporating the high-speed graphics memory on-chip, the E4690 helps simplify board design. During all phases of design, development, and deployment, AMD works with designers to deliver support from technical experts that can help to solve issues and allow their customers to spend more time focusing on the features that make their solutions unique.

### ATI Radeon™ E4690 Scalable Performance




Note 1. e/m indicates the 3D engine (e) and memory (m) clock speed in MHz.

* Performance claim based on 3DMark06 HDR/SM3.0 benchmarks compared to the ATI Radeon E2400.
** Part availability is planned for 5 years from date of announcement, subject to change without notice.

AMD
The future is fusion

Downloaded from Arrow.com.

| ATI Embedded Comparison | E2400 | E4690 |
|---|---|---|
| **Graphics Processing Unit** | | |
| Max Frequency | 600 MHz | 600 MHz |
| Process Technology | 65nm | 55nm |
| CPU Interface | PCIe 1.1 (x1, x2, x4, x8, x16) | PCIe 2.0 (x1, x2, x4, x8, x16) |
| Shader Processing Units | 40 | 320 |
| AVIVO Display Engine | ✓ | ✓ |
| Full 30-bit Display Pipeline | ✓ | ✓ |
| DirectX | 10 | 10.1 |
| Shader Model | 3.0 | 4.0 |
| OpenGL | 2.0 | 3.x |
| Stream Computing | ✓ | ✓ |
| Motion Video Decode | H.264, VC-1 | H.264, VC-1, MPEG-2 |
| Internal Thermal Sensor | ✓ | ✓ |
| **Memory** | | |
| Max Frequency | 700 MHz | 700 MHz |
| Type | GDDR3 | GDDR3 |
| Configuration (on-chip) | 128MB | 512MB |
| Width | 64 bit | 128 bit |
| **Display Interfaces*** | | |
| Analog RGB (triple 10 bit DAC, 400MHz) | 2 | 2 |
| Analog TV (YPbPr, Composite, SVideo) | 1 | 1 |
| DVI – Single Link | 2 | 2 |
| DVI – Dual Link | 1 | 2 |
| DisplayPort (v1.1a) | | 2 |
| HDMI | 1 | 1 |
| Integrated HD Audio Controller (Azalia) | 1 | 1 |
| HDCP Keys | 1 | 2 |
| LVDS – Single or Dual Link, 18 or 24 bpp | 1 | 1 |
| DVO (12-bit DDR or 24-bit SDR/DDR) | 1 | 1 |
| **Operating System Support** | | |
| Windows XP | ✓ | ✓ |
| Windows Vista | ✓ | ✓ |
| Windows 7 | ✓ | ✓ |
| Linux (x86) | ✓ | ✓ |

* Not all display interfaces can be used at the same time. All display outputs are independent timings. Display resolutions up to 3840x2400 per display output, provided available memory or interface bandwidth are not oversubscribed.

Contact your local AMD distributor for ordering information
OPN: 100-CG1820

© Copyright 2010. Advanced Micro Devices, Inc. All rights reserved. AMD, the AMD arrow logo, ATI, the ATI logo, Radeon, and combinations there of are trademarks of Advanced Micro Devices, Inc. All other company and/or product names are for informational purposes only and may be trademarks and/or registered trademarks of their respective owners.

47285C

Downloaded from Arrow.com.