

Dual Display ATI E2400 XMC Graphics Module



Product Datasheet

PDSi's new dual display graphics module (XMC-E24D) is a versatile, high performance graphics subsystem featuring high speed switched XMC interconnects in the familiar CMC/PMC form factor. It is designed for use with VITA 42.3 compatible VME, CompactPCI®, AdvancedTCA®, and PCI Express processor boards with an XMC mezzanine card interface. Using the ATI Radeon™ E2400 Graphics controller from AMD (based on ATI's "M72" core), the module enables these systems to take full advantage of AMD's advanced graphics technology.



The XMC-E24D module supports two independent high resolution display devices (DVI-I and VGA) and features a unified superscalar shader architecture plus 128MB of on-chip GDDR3 video memory for fast, high quality 2D and 3D graphics rendering. Built-in algorithms ensure exceptional flicker-free performance on interlaced displays and high color quality even on lower resolution displays.

This module plugs into a standard XMC site on any compatible carrier and drives two independent displays through the full-size DVI-I and VGA ports on its front panel. Displays can have independent refresh rates, resolutions, and color controls, offering great flexibility. Other I/O configurations are possible – PDSi will adapt this design to meet specific OEM requirements. Extended availability from PDSi is assured as key components are supported by embedded roadmaps. PDSi can also provide integration, extended warranty, repair and support services as needed.

Key Features

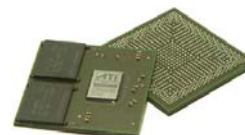
- Based on ATI Radeon E2400 graphics processor
- Superior 2D and 3D graphics acceleration
- 128MB on-chip GDDR3 video memory
- Dual independent high performance display interfaces
 - DVI-I and analog VGA (full size connectors)
- Dual integrated triple 10-bit DACs for dual RGB output
- Supports analog displays up to QXGA (2048 x 1536)
- 32-bit color depth
- New low power 65nm design
- VITA XMC-compliant interfaces for high bandwidth
- Extended availability assured
- RoHS compliant

Versatile XMC Video Adapter

The XMC-E24D dual display graphics module has a compact, ruggedized footprint that is ideal for mobile imaging and other real world embedded PCI express-based applications in industries such as:

- Military / Aerospace
- Industrial Control and Instrumentation
- Telecom / Datacomm
- Medical Imaging

The XMC-E24D fits any VME, Compact PCI, ATCA or PCIe carrier board with an XMC site, and offers high performance, low power, flexibility, and long life-cycle availability.



*Powered by the ATI
Radeon E2400 GPU*

GPU ATI Radeon™ E2400 high performance 2D and 3D graphics controller (M72-CSP128) featuring:

- ATI Avivo HD Video and Display architecture
- Unified Superscalar Shader architecture
- DirectX 10 Shader Model support
- Open GL 2.0 support

Clock Scalable up to 600 MHz (graphics processor)

Memory 128 MB on-chip GDDR3 video memory

Display Support Supports 2 displays with independent resolutions, refresh rates, color controls:

- DVI-I TMDS format, 165MHz, single link up to UXGA (1600x1200) resolution. Uses one of two integrated triple 10-bit DACs for RGB output.
- VGA - 400 MHz, up to QXGA (2048 x1536) resolution. Uses one of two integrated triple 10-bit DACs for RGB output on the high density D-Sub 15 connector.
- LVDS – Contact PDSi with requirements. Special BIOS required.

High quality pre- and post-scaling engines with underscan support for all display outputs

Color Depth True 32-bit color. Dithering gives 32-bit quality on 18- and 24- bit displays

De-flicker Filter Content-adaptive de-flicker filtering for interlaced displays

Front Panel

DVI 1 - DVI-I 28 pin Socket
VGA 1- HD-15 pin D-sub Socket



Custom connector configurations possible – contact PDSi

XMC Interfaces

P15 PCIe x 8 interface
Pn4 Dual channel LVDS output – requires special BIOS – contact PDSi.

Signaling Keyed for Universal signaling

Power 12V or 5V VPWR
Total power – less than 20 watts

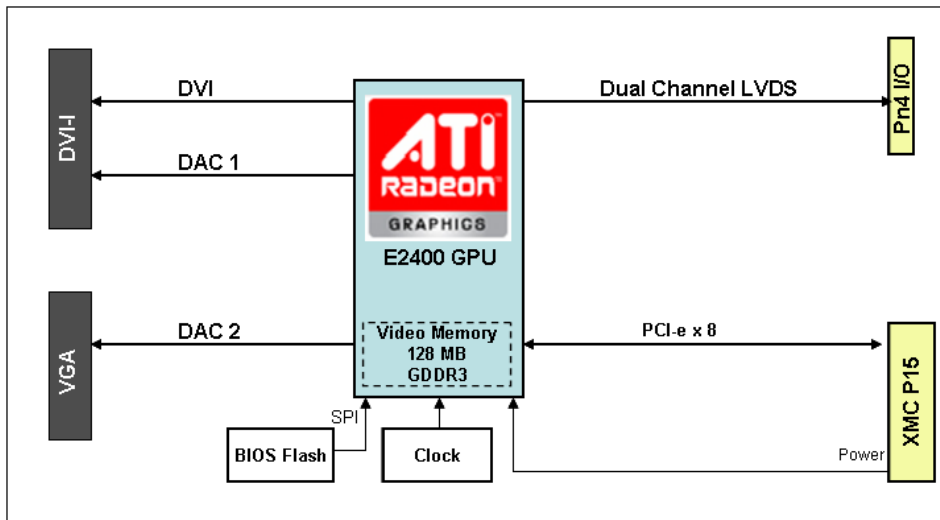
Power Management APM, ACPI support
ATI PowerPlay™ 7.0 – optimizes performance and power consumption.

Compliance VITA 42.3 (convection cooled)
ANSI/TIA/EIA-644 (electrical)
RoHS Directive 2002/95/EC

Operating Systems Linux, Windows

FormFactor/ Dimensions Single height XMC
74mm x 149mm x 8.2mm

Temperature & Humidity Operation : 0 to 60 degC
10% - 90% non-condensing



Ordering Part Number (OPN)	Description
XMC-E24D-10-000	XMC Graphics card, Dual Display, ATI E2400, 128MB video memory