MXC-E4690-VO/MV

Modular MXC supporting independent video outputs designed for Industrial, Medical, Military, and Aerospace COTS customers requiring -40°C to +85ºC operation, MIL-STD-810D 40G shock and vibration, and IPC Class 3 reliability

FEATURES

- ATI™ Radeon™ E4690 GPU 600MHz
- 700MHz 128-bit 512MB GDDR3 Memory
- Form Factor:
  MXC-E4690-VO: MXC Type-A
  MXC-E4690-MV: MXC Type-B
- Bus Interface: PCIe
- GPU Interface: PCIe 2.0 x1, x2, x4, x8, x16
- 55nm Process Technology
- DirectX® 10.1
- Shader Model 4.1
- OpenGL® 3.0
- Shader Processing Units: 320
- AVIVO™ Display Engine
- Full 30-bit Display Pipeline
- Stream Computing
- Motion Video Decode:
  UVD2.0 for H.264, VC-1, MPEG-2 decoding
- Internal Thermal Sensor

OVERVIEW

The WOLF-designed and manufactured MXC-E4690-VO/MV Video Cards are conduction-cooled mezzanine cards designed to be used with carrier cards based upon EuroCard specifications including, but not limited to, 3U VPX, 3U cPCI, 3U VME64, and many others.

These MXC Cards are part of a dynamic advancement in the ability of offering video graphics in a reduced modular architecture. The cards offers superior connectivity and over 500 pins providing over 100 combinations of video input and outputs.

These cards use an MXC form-factor, and are available in extended temperature (-XT) conduction-cooled, operating between a range of -40°C and +85°C.

CUSTOM CONFIGURATIONS:

WOLF offers OEMs customized video configurations on all of its Video Graphic Modules, guaranteeing the perfect fit to your product.

MXC Type-A pictured

Development partners: AMD | RADEON GRAPHICS AMD

WOLF Industrial Systems Inc.

The MXC-E4690-VO/MV Video Graphic Modules allow for hundreds of unique combinations of video output inputs and outputs using groundbreaking MXC mezanine specification. Supported input and output formats include the following: HDMI, DisplayPort, DVI-D, TMDS, LVDS, VGA, S-Video, TV-Out, and Composite video.
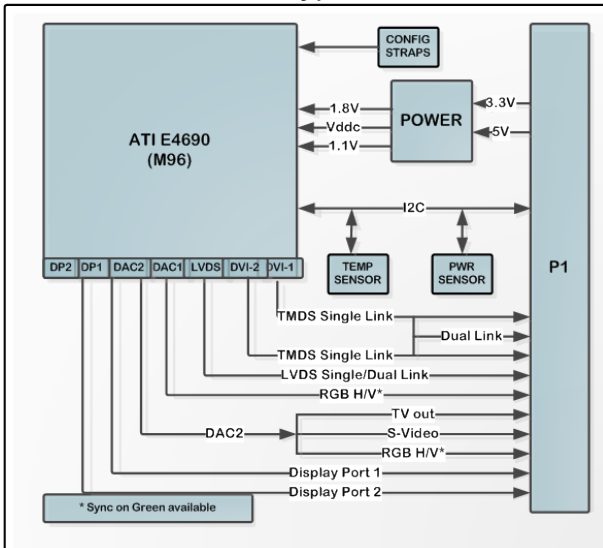
VIDEO OUTPUT OPTIONS:

- LVDS
- TMDS
- HDMI 1.4a
- DisplayPort™ 1.1a, 2.0
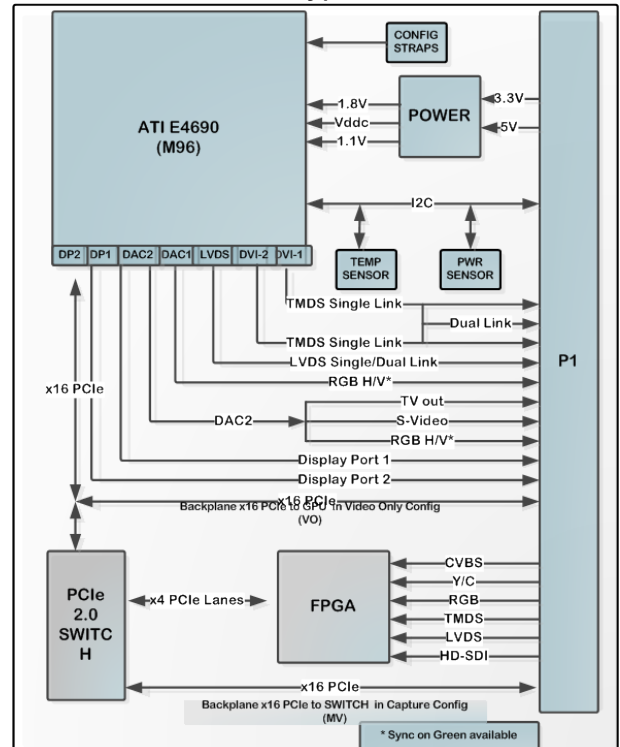- DVI-D
- VGA
- S-Video
- Composite

Environmental Specs

Supply Voltage:	+3.3V and +5V and +12V DC
Power Consumption:	10-25 watts, tunable
Dimensions:	MXC Type-A: 85mm×70mm MXC Type-B: 85mm×110mm
Weight:	Less than 125 grams
Operating Temp (XT):	-40°C to +85°C
Storage Temp:	-55°C to +105°C
Relative Humidity:	5% to 95% non-condensing
Shock:	40G, 11ms half-sine shock pulses in 3-axis
Explosion Safety:	no voltages above 12V DC
Altitude:	between 0 and 15,250 meters

Type-A

Type-B

Contact www.wolf.ca/products/ for more information about this and other advanced video modules and solutions.

WOLF Industrial Systems Inc.

Development partners: AMD RADEON GRAPHICS

AMD/ATI Mᴏʙɪʟɪᴛʏ Rᴀᴅᴇᴏɴ™ E4690 Sᴘᴇᴄɪꜰɪᴄᴀᴛɪᴏɴꜱ:

The AMD/ATI Mobility Radeon™ E4690 is a fully integrated graphics solution which provides the fastest and most advanced 2D and 3D multimedia graphics performance in its class for mobile, industrial, aerospace and military computers using the new PCI Express® bus architecture.

Further, it integrates many progressive new features required for demanding applications without compromising performance.

Graphic Features:

DirectX® 10.1 programmable vertex and pixel shades, enabling complex and realistic texture and lighting effects. Up to 16 textures per pixel.

OpenGL® 3.0

SmartShader™ 4.1

Power Play™, a robust power-management technology that reduces graphics-processor power consumption and maximizes the life of your systems battery. Its features include Power-on-Demand, which monitors system activity, and dynamically adjusts clocks and voltages based on usage.

Charisma Engine™, which includes acceleration for advanced character-animation features.

Smooth Vision™, which permits new levels of realism without slowing down frame rates.

Specifications:
- OpenGL® 3.0
- PCI Express Specification Rev. 2.0
- DVI 1.0 Spec Digital Visual Interface Assemblies
- IEEE STD 1386 Standard For Common Mezzanine Card Family

Full-screen anti-aliasing and anisotropic filtering.

TV-Out and S-Video support for up to 1024×768 resolution.

DVI, SVGA, S-video, Composite, TMDS single link, and LVDS 18bpp and 24bpp single and dual links.

Video Modes:

The VGA, DVI, and LVDS outputs will support the following resolutions for both LCD and CRT displays:
- 640×480 (VGA)
- 800×600 (SVGA)
- 1024×768 (XGA)
- 1280×768 (WXGA)
- 1280×800 (WXGA)
- 1280×1024 (SXGA)
- 1600×1200 (UXGA)
- 1920×1200 (WUXGA)
- 2048×1536 (QXGA)
- 2560×1600 (WQXGA)
- 2560×2048 (QSXGA)
- up to 3840×2400 (QUXGA)

These resolutions are supported for the following refresh rates:
- 60Hz
- 70Hz
- 75Hz
- 85Hz

RGB and DVI video modes support 16-bit (65K) color and 32-bit (16.7 million) color.

Military Standards:
- MIL-STD-810F Environmental Engineering
- IPC Class 3 Requirements for Soldered Electrical and Electronic Assemblies