

XMC Graphics Board & Video Input Card



## XMC Graphics Board & Video Input Card

## Condor<sup>®</sup>2100x

The Condor 2100x delivers in embedded system environments with the form factor and features required in defense, industry, command and control training and simulation, and radar display. With two video inputs (in several formats), the product has the versatility needed for surveillance and intelligence gathering applications. API is provided for integration into your application.

- Based on the E4690 GPU from AMD, the product offers excellent performance for applications in the embedded market
- Provides 320 stream processors to do GPGPU computing using OpenCL.
- Decoding, scaling, video combining and format conversions are done in the GPU with minimal CPU impact.
- Two configurable outputs supporting DVI, RGB, VGA, STANAG or RS-170 available via the rear Pn4 (PMC) connector.
- Two video inputs (TV, HDTV, RGB, RS-170, VGA, STANAG 3350 or DVI) also available via the rear Pn4 (PMC) connector.
- Multiple input streams are displayed on either output and can be positioned or sized with the provided software and libraries.
- External sync input and sync-on-green support.
- Availability for up to 10 years from the date of release.
- Compatible with VME, cPCI and ATCA chassis. (Others available through customization)
- Product customizations or new designs with different I/O or form factor can be developed in a short time frame upon request.

Graphics ProcessorATI E4690 GPU supporting OpenGL 3.0 and DirectX 10.1w/ Native PCI Express interface (1.0a and 1.1 compliant)InterfaceXMC form factor, 8 Lane PCI Express InterfaceGraphics Memory512MB GDDR3 memoryMaximum Video Resolution1920 x 1200 (DVI or Analog)2 Independent Video Outputs (Factory Configurable)Output 1 (Pick One) : RGB, STANAG 3350B or RS-170, DVI¹ Output 2 (Pick One) : Single Link DVI-I, TV, RGB, STANAG 3350B or RS-1702 Independent Video InputsInput A : RGB, TV (NTSC/PAL), STANAG 3350B, or RS-170 Input B : DVI(Single-Link), LVDS, RGB, TV, STANAG 3350 or RS-170Power RatingLess than 25 watts (can be configured to be as low as 15 watts)Operating Temperature -20°C to 70°C (Semi-Rugged) -40°C to 85°C (Rugged/Conduction cooled)		
InterfaceXMC form factor, 8 Lane PCI Express InterfaceGraphics Memory512MB GDDR3 memoryMaximum Video Resolution1920 x 1200 (DVI or Analog)2 Independent Video Outputs (Factory Configurable)Output 1 (Pick One) : RGB, STANAG 3350B or RS-170, DVI1 Output 2 (Pick One) : Single Link DVI-I, TV, RGB, STANAG 3350B or RS-1702 Independent Video InputsInput A : RGB, TV (NTSC/PAL), STANAG 3350B, or RS-170 Input B : DVI(Single-Link), LVDS, RGB, TV, STANAG 3350 or RS-170Power RatingLess than 25 watts (can be configured to be as low as 15 watts)Operating Temperature -20°C to 70°C (Semi-Rugged) -40°C to 85°C (Rugged/Conduction cooled)	Graphics Processor	ATI E4690 GPU supporting OpenGL 3.0 and DirectX 10.1w/ Native PCI Express interface (1.0a and 1.1 compliant)
Graphics Memory 512MB GDDR3 memory   Maximum Video 1920 x 1200 (DVI or Analog)   Resolution Output 1 (Pick One) : RGB, STANAG 3350B or   2 Independent Output 1 (Pick One) : Single Link DVI-I, TV, RGB, STANAG 3350B or   (Factory Configurable) Output 2 (Pick One) : Single Link DVI-I, TV, RGB, STANAG 3350B or RS-170   2 Independent Input A : RGB, TV (NTSC/PAL), STANAG 3350B, or RS-170   Video Inputs Input A : RGB, TV (NTSC/PAL), STANAG 3350B, or RS-170   Power Rating Less than 25 watts (can be configured to be as low as 15 watts)   Operating Temperature 0°C to 55°C (commercial) -20°C to 70°C (Semi-Rugged) -40°C to 85°C (Rugged/Conduction cooled)	Interface	XMC form factor, 8 Lane PCI Express Interface
Maximum Video Resolution 1920 x 1200 (DVI or Analog)   2 Independent Video Outputs (Factory Configurable) Output 1 (Pick One) : RGB, STANAG 3350B or RS-170, DVI <sup>1</sup> Output 2 (Pick One) : Single Link DVI-I, TV, RGB, STANAG 3350B or RS-170   2 Independent Video Inputs Input A : RGB, TV (NTSC/PAL), STANAG 3350B, or RS-170 Input B : DVI(Single-Link), LVDS, RGB, TV, STANAG 3350 or RS-170   Power Rating Less than 25 watts (can be configured to be as low as 15 watts)   Operating Temperature -20°C to 75°C (commercial) -40°C to 85°C (Rugged/Conduction cooled)	Graphics Memory	512MB GDDR3 memory
2 Independent Output 1 (Pick One) : RGB, STANAG 3350B or RS-170, DVI <sup>1</sup> Video Outputs Output 2 (Pick One) : Single Link DVI-I, TV, RGB, STANAG 3350B or RS-170   2 Independent Input A : RGB, TV (NTSC/PAL), STANAG 3350B, or RS-170   Video Inputs Input A : RGB, TV (NTSC/PAL), STANAG 3350B, or RS-170   Power Rating Less than 25 watts (can be configured to be as low as 15 watts)   Operating Temperature 0°C to 55°C (commercial)   -20°C to 70°C (Semi-Rugged) -40°C to 85°C (Rugged/Conduction cooled)	Maximum Video Resolution	1920 x 1200 (DVI or Analog)
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	Operating Temperature	0°C to 55°C (commercial) -20°C to 70°C (Semi-Rugged) -40°C to 85°C (Rugged/Conduction cooled)

Vibration (sine)	10 g peak (15-2K Hz) (Rugged/Conduction cooled)
Vibration (random)	0.1 g2/Hz (15-2K Hz) (Rugged/Conduction cooled)
Shock	40 g peak
Conformal Coating	Available
Humidity	90% without condensation
Dimensions (L ×W)	74 mm x 143.75 mm
Net Weight	5.1 oz
Software/Platform Support	Windows or Linux (OpenGL, OpenCL), GPGPU computing RTOS support –VxWorks & Integrity (others as needed) X86 (now), PowerPC (future)
Product Customizations	IO configurations, video formats, rear/front IO, software support. Email <u>embeddedgraphics@techsource.com</u> for details.

## **Block Diagram**





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