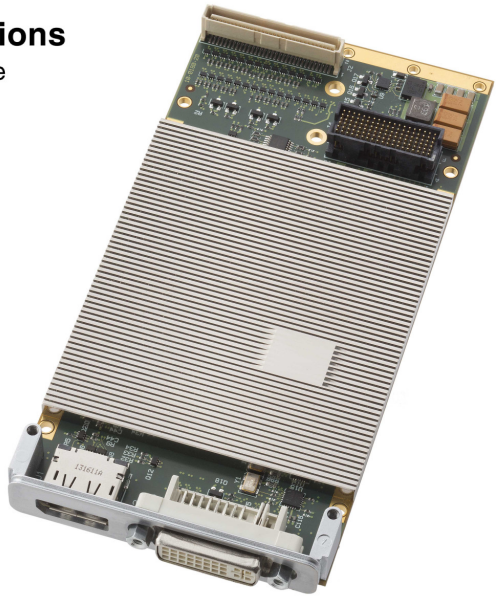
EIZO Rugged Solutions
Formerly Tech Source

Condor 4000 Series



High Performance XMC graphics with up to six multi-function video outputs and GPGPU capability

The Condor 4000 Series boards are leading edge XMC, 3U VPX or PCIe form factor graphics/video cards for use in applications that require very high-end graphics and computation. Based on AMD's Radeon E8860 GPU, the Condor 4000 Series offers ground breaking performance with 1.6x the performance of the E6760 GPU.

The series has many variants and is offered in various levels of ruggedization. Air Cooled and Conduction Cooled variants are available and have up to six multi-function video outputs (DVI, DisplayPort, VGA) available from the front panel (face plate), rear PMC or rear XMC I/O connectors.

The board can be factory configured for front or rear VGA, rear PMC or rear XMC. Dual-Link DVI is available as a factory configured option. The rear PMC pin-out is compatible with VME and some cPCI single board computers. The rear XMC pin-out is compatible with VITA 46.9 VPX systems. 3U VPX and PCIe form factors are supported with carrier boards.

The Condor 4000 Series graphics processor is ideal for general purpose graphics processing unit (GPGPU) applications such as radar and video surveillance/analysis. At the maximum power consumption, the card provides 768/48 GFLOPs single/double precision performance.

The product comes with EIZO Rugged Solutions' commitment of availability for up to 9 years from the date of release (16 years w/ sales forecast). This comes with the legendary support of our seasoned team members, who may offer immediate assistance to troubleshoot and resolve any technical challenges.

While Windows or Linux drivers are available by default, other real time operating systems (RTOS) such as VxWorks, Integrity and LynxOS may be supported as per customer requirements.

EIZO Rugged Solutions has provided graphics solutions for nearly 3 decades and has always met customer needs with long term commitment and support.

Key Features

- XMC, 3U VPX or Rugged PCIe
- 2GB frame buffer
- 640 shader processors
- 768/48 GFLOPs single/double precision performance
- OpenGL 4.2, DirectX 11.1, Shader 5.0
- OpenCL 1.2, DirectCompute 11 (GPGPU computing)
- Six multi-function video outputs
- Front panel, rear PMC or XMC outputs available (DVI, VGA, DisplayPort)
- Up to 4K UHD resolution (front panel DisplayPort)
- 1920 x 1200 resolution with single-link DVI configuration and 2560 x 1600 with dual-link
- Long term product availability
- Comprehensive customer care
- Ideal for rugged applications

Platforms

- Linux/Windows 7
- VME, VPX, cPCI, Rugged PCIe
- VxWorks on x86 and PowerPC (other RTOS)

Condor 4000 Series Specifications

Graphics Processor	AMD Radeon E8860 GPU supporting OpenGL 4.2, DirectX 11.1 and Shader 5.0
Interface	XMC, PCIe or 3U VPX form factor, 8 Lane
Graphics Memory	2GB GDDR5 memory
Video Outputs	See Above Variants table
Maximum Video Resolution	4K UHD from front panel DisplayPort 1920 x 1200 for Single-Link DVI / VGA Configuration and 2560 x 1600 for Dual-Link DVI
OpenCL & GPGPU Capabilities	OpenCL 1.2, DirectCompute 11 640 Shaders 768/48 GFLOPs single/double precision peak (600e/4.5Gbps)
Power Rating	45 Watts (Can be configured to be as low as 17W)
Operating Temperature (MIL-STD-810)	0°C to 55°C (Standard)
	-40°C to 70°C (Rugged Air Cooled)
	-40°C to 85°C (Rugged Conduction Cooled)
Humidity	95% without condensation
Vibration (MIL-STD-810)	0.1 g^2/Hz
Shock (MIL-STD-810)	40g
Software & Platform Support	Windows or Linux
	VxWorks, Other real time OS as needed
	x86, PowerPC

Notes: Only two DVI or VGA outputs can be active at a time. The rest of the outputs must be DisplayPort. VGA can only be routed to the front or the rear but not both at the same time. DisplayPort outputs can be converted to DVI or VGA with the use of an off the shelf adapter. 2 outputs on the front panel can be active while 4 outputs are active on the rear.

Condor 4000 Series Variants

		PRODUCT NAME				
		Condor 4000xF (Front Video + Rear PMC. VME Style Pin-Out. Air Cooled)	**Condor 4000xF-DL (Front Video. Air Cooled)**	**Condor 4000xX (Rear XMC Video. VPX x12d+x8d+24s. Conduction Cooled)**	**Condor 4000xX-6DP (Rear XMC Video. VPX x12d+x8d+24s. Conduction Cooled)**	**Condor 4000xFCS (Front Video + Rear PMC. VME Style Pin-Out. Pin Compatible with Condor 2000x. Air Cooled)**
OUTPUT TYPE	**VGA**	1 or 2 (adapter) [front] or 1 or 4 (adapter) [rear]	1 or 2 (adapter) [front]	1 [rear] or 3 (adapter) [rear]	NA or 6 (adapter) [rear]	1 or 2 (adapter) [front] or 1 [rear]
	DVI	1 or 2 (adapter) [front] or 2 Single-Link / 1 Dual-Link [rear] 4 DVI possible with (adapter)	1 Dual-Link [front]	2 Dual-Link [rear]	NA or 6 (adapter) [rear]	1 Dual-Link [front] or 2 Single-Link [rear]
	DisplayPort	1 [front] or 4 [rear]	1 [front]	2 [rear]	6 [rear]	1 [front]

(fo) = Factory Option, (adapter) = Uses off the shelf adapter,
[front] = Outputs off the front panel, [rear] = Outputs off the rear connector, NA = Not available

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