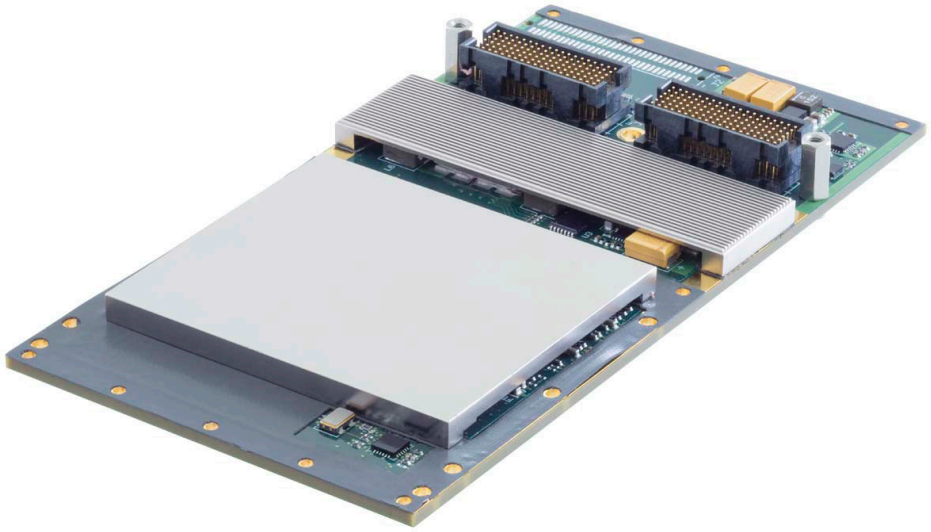
# Condor 4000 XMC





## AMD® E8860 Based XMC Graphics & GPGPU Card with Six Multi-Function Video Outputs

The Condor 4000 represents a series of XMC graphics cards, offering a range of rugged XMC form factor graphics/video/GPGPU cards for use in the embedded market. Based on AMD's Radeon™ E8860 GPU, the Condor 4000 XMC Series products offer superior computing and GPGPU performance. Delivering 768/48 GFLOPs of peak single/double precision floating point performance, the Condor 4000 XMC Series graphics processors are ideal for GPGPU applications such as radar, UAV, C5ISR, and video surveillance/analysis. All Condor 4000 XMC products have built-in video decoders to enable dual HD decoding of H.264, VC-1. MPEG4 and MPEG2 compressed video streams.

The product is offered in various ruggedized levels and has digital (DVI/DisplayPort) and analog (VGA) video outputs available from the front panel or rear XMC (Pn6) or PMC (Pn4) I/O connectors. With multiple product variants available to meet the various needs of the defense and aerospace markets, these products are offered in air cooled and conduction cooled form factors and can be used in VME, VPX, cPCI or rugged PCIe systems. There are up to six multi-format video outputs are supported on either Front or Rear, depending upon the version of the product.

### Key features of this product:

- AMD® Embedded Radeon™ E8860 GPU
- Video Outputs: Six Multi-Function Video Outputs

See Product List Table on Back for Variants

- Front I/O, Rear PMC & Rear XMC I/O Variants
- 2 GB GDDR5 Graphics Memory
- 640 Shader Processors
- 128-bit Memory Interface
- 72 GB/s Memory Bandwidth
- Up to 768 GFLOPs FP32 Compute Performance
- H.264 Hardware Decoder (UVD 4.0)
- H.264 Hardware Encoder (VCE 1.0)
- MIL-STD-810
- Conduction Cooled & Air Cooled
- Thermally Efficient Heatsink Technology

Fully Ruggedized

# Condor 4000 XMC Specifications

| | |
|---|---|
| Graphics Processor | AMD® Embedded Radeon™ E8860 GPU<br>supporting OpenGL 4.2, DirectX 11.1 and Shader 5.0 |
| Interface | XMC 1.0 or XMC 2.0<br>8 Lane PCIe 3.0 |
| Graphics Memory | 2 GB GDDR5<br>128-bit Memory Interface<br>72 GB/s Memory Bandwidth |
| Video Outputs | Six Multi-Function Video Outputs.<br>*(See below Product List table for options)* |
| Video Inputs | Two 3G-SDI, HD-SDI or SD-SDI<br>Rear Pn6 XMC I/O. VITA 46.9 x12d+x8d+24s. |
| GPGPU Capabilities | 640 Shader Processors<br>Up to 768 GFLOPs FP32 Single Floating Point Performance<br>OpenCL 1.2, DirectCompute 11<br>H.264 Hardware Decoder UVD 4.0 (Unified Video Decoder)<br>H.264 Hardware Encoder VCE 1.0 (Video Codec Engine) |
| Power Consumption | 17 - 45 W |
| Operating Temperature (MIL-STD-810) | -40° to 70°C (Rugged Air Cooled)<br>-40°C to 85°C (Rugged Conduction Cooled) |
| Vibration (MIL-STD-810) | 0.1 $g^2$/Hz |
| Shock (MIL-STD-810) | 40 g |
| Humidity (MIL-STD-810) | 95% Without Condensation |
| Software & Platform Support | Windows or Linux on x86<br>RTOS Support - VxWorks (others as needed)<br>VME, cPCI, 3U VPX & PCIe (with adapter board) |

# Condor 4000 XMC Product List

| | | **Product Name** | | | | |
|---|---|---|---|---|---|---|
| | | **Condor 4000xF**<br>(Front Video + Rear PMC.<br>VME Style Pin-Out.<br>Air Cooled) | **Condor 4000xF-DL**<br>(Front Video.<br>Air Cooled) | **Condor 4000xFCS**<br>(Front Video + Rear PMC.<br>VME Style Pin-Out.<br>Pin Compatible w/<br>Condor 2000x.<br>Air Cooled) | **Condor 4000xX**<br>(Rear XMC Video.<br>VPX x12d+x8d+24s.<br>Conduction Cooled) | **Condor 4000xX-6DP**<br>(Rear XMC Video.<br>VPX x12d+x8d+24s.<br>Conduction Cooled) |
| **Output Type** | **VGA** | 1 [front]<br>or<br>1 [rear] | 1 [front] | 1 [front]<br>or<br>1 [rear] | 1 [rear] | NA |
| | **DVI** | 1 Single-Link [front]<br>or<br>2 Single-Link / 1 Dual-Link [rear] | 1 Dual-Link [front] | 1 Dual-Link [front]<br>or<br>2 Single-Link [rear] | 2 Dual-Link [rear] | NA |
| | **DisplayPort** | 1 [front]<br>or<br>4 [rear]<br>(Can be converted to VGA or Single-Link DVI using an off the shelf adapter or EIZO's Adapt product line) | 1 [front]<br>(Can be converted to VGA or Single-Link DVI using an off the shelf adapter or EIZO's Adapt product line) | 1 [front]<br>(Can be converted to VGA or Single-Link DVI using an off the shelf adapter or EIZO's Adapt product line) | 2 [rear]<br>(Can be converted to VGA or Single-Link DVI using an off the shelf adapter or EIZO's Adapt product line) | 6 [rear]<br>(Can be converted to VGA or Single-Link DVI using an off the shelf adapter or EIZO's Adapt product line) |

**[front] = Outputs off the front panel**
**[rear] = Outputs off the rear connector**
**NA = Not available**

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Rev A