



EIZO Rugged Solutions
Formerly Tech Source



Condor 4107xX

Rugged XMC Graphics with Dual 3G-SDI Video Input and Output

The Condor 4107xX is a rugged, conduction cooled XMC Graphics card with two 3G-SDI video outputs and 3G-SDI video capture. It is based on the AMD Embedded Radeon E8860 GPU and designed for seamless integration with VPX Single Board Computers (SBC).

The board supports video inputs and outputs on the rear XMC I/O connector (Pn6 VITA 46.9, x12d+x8d+24s). The board can capture two simultaneous 3G-SDI, HD-SDI or SD-SDI video inputs. The board captures the incoming video data and sends it over PCIe to the host machine as raw data with low latency. Condor 4107xX supports two 3G-SDI / HD-SDI / SD-SDI and one DisplayPort++ video output or one SDI, one VGA / RGB Sync-on-green / STANAG 3350 and one DisplayPort++ output on the rear XMC I/O connector Pn6.

The AMD GPU on the Condor 4107xX supports OpenCL and can be used for GPGPU applications. This enables developers to capture video data from a camera or other SDI source, perform video tracking or analysis on the data using the GPU, and then send the 3G-SDI video on to a compatible display device, such as a monitor. The input streams can be displayed on any of the outputs and can be positioned or sized (enlarged or shrunk). A field proven API is provided for customer integration. Applications can access video streams in the form of raw frames for processing, 360° stitching, frame/video analysis, compression or video streaming. All decoding, scaling, video combining and format conversions can be done in the GPU with minimal CPU impact.

While Windows and Linux drivers are available by default, other real time operating systems (RTOS) such as VxWorks & Integrity will be supported on both x86 and PowerPC platforms. Different video outputs and connector formats may be supported upon request.

Condor 4107xX is available in various ruggedized levels with the form factor and features required for defense, command and control, training and simulation, surveillance and radar display environments (MIL-STD-810g).

EIZO Rugged Solutions, formerly Tech Source Inc, has provided graphics solutions since 1987. Responsiveness has been the key to our success. Product customizations or new designs can be developed in a short time to meet your needs. The product comes with EIZO Rugged Solutions' commitment of availability for up to 10 years from the date of release and product support up to 20 years.

Key Features

- Two 3G-SDI / HD-SDI / SD-SDI Video Outputs
- Two 3G-SDI / HD-SDI / SD-SDI Video Inputs
- One DisplayPort Video Output
- One VGA / RGB Sync-on-green / STANAG 3350 Video Output
- Low Latency Video Capture
- 2GB Frame Buffer
- 640 Shader Processors
- OpenGL 4.2, DirectX 11.1, Shader 5.0
- OpenCL 1.2, DirectCompute11 (GPGPU computing)
- XMC Form Factor
- Rear XMC I/O (Pn6 VITA 46.9, x12d+x8d+24s)
- Ideal for Rugged Applications (MIL-STD-810g)
- Conduction Cooled
- Long Term Product Availability
- Comprehensive Customer Care

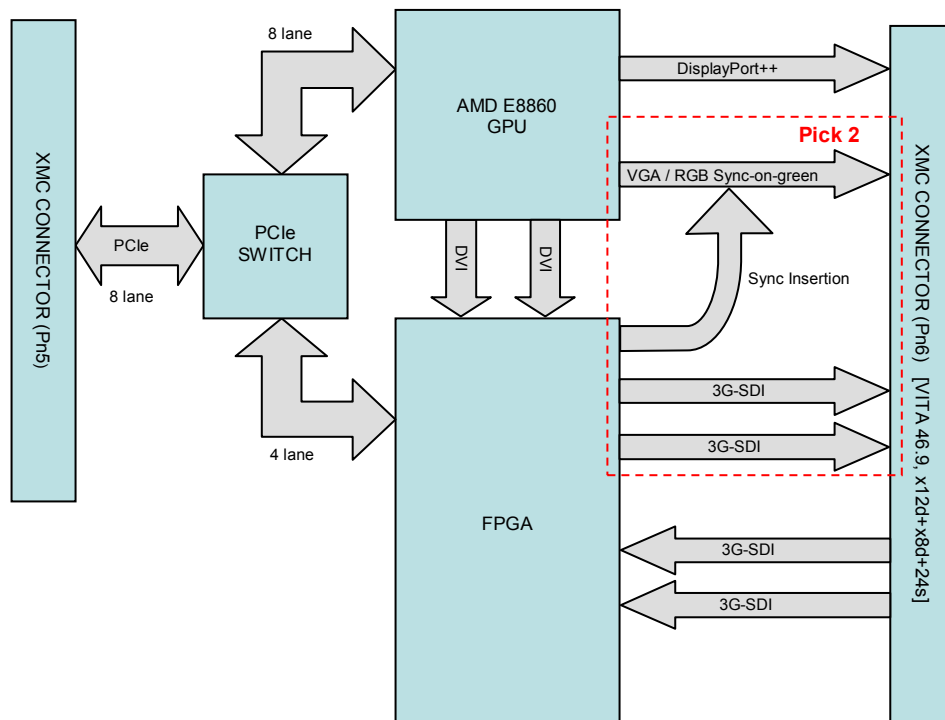
Platforms

- Windows/Linux (provided by default)
- Real-time Operating System (RTOS) support including VxWorks & Integrity (optional)

Condor 4107xX Specifications

| | |
|--|--|
| Graphics Processor | AMD Radeon E8860 GPU supporting OpenGL 4.2, DirectX 11.1 and Shader 5.0 |
| Interface | XMC form factor, 8 Lane PCI Express Interface |
| Graphics Memory | 2GB GDDR5 memory |
| Video Outputs | [Rear XMC Pn6] : Two 3G-SDI (1080p60) / HD-SDI (1080p30) / SD-SDI (480p) One DisplayPort++ (converted to DVI or VGA with adapters) One VGA/RGB Sync-on-green/STANAG 3350 |
| Video Inputs | [Rear XMC Pn6] : Two 3G-SDI, HD-SDI, SD-SDI |
| Maximum Video Output Resolution | 1080p60 (3G-SDI), 1920x1200@60 (DisplayPort, VGA/RGB) |
| GPGPU Capabilities | OpenCL 1.2, DirectCompute 11 640 Shaders, 608/38 GFLOPs single/double precision peak |
| Power Rating | Variants ranging from 20W to 45W |
| Operating Temperature | -40°C to 85°C (Rugged Conduction Cooled) |
| Non-operating Temperature | -55°C to 105°C |
| Vibration (MIL-STD-810g) | 0.1 g ² /Hz (15-2K Hz) |
| Shock (MIL-STD-810g) | 40g peak |
| Conformal Coating | Included |
| Humidity | 95% without condensation |
| Dimensions and Weight | 74mm x 143.75mm; 10mm Stacking Height; 5.6 oz |
| Software/Platform Support | Windows or Linux (OpenGL) |
| | RTOS support—VxWorks (others as needed) |
| | x86 (now), PowerPC (future) |

Condor 4107xX Block Diagram



EIZO Rugged Solutions

442 Northlake Blvd

Altamonte Springs, FL 32701, USA

407.262.7100

www.eizorugged.com



EIZO Rugged Solutions
Formerly Tech Source

5/24/2016 Rev C

EIZO Rugged Solutions Inc, Condor and the EIZO Rugged Solutions logo are trademarks of EIZO Corporation. EIZO name and logo are registered trademarks of EIZO Corporation. All other trademarks are the property of their respective owners. ©2016 EIZO Rugged Solutions. All rights reserved. Information in this document is subject to change without notice. EIZO Rugged Solutions assumes no responsibility for errors or omissions that may appear in this document.