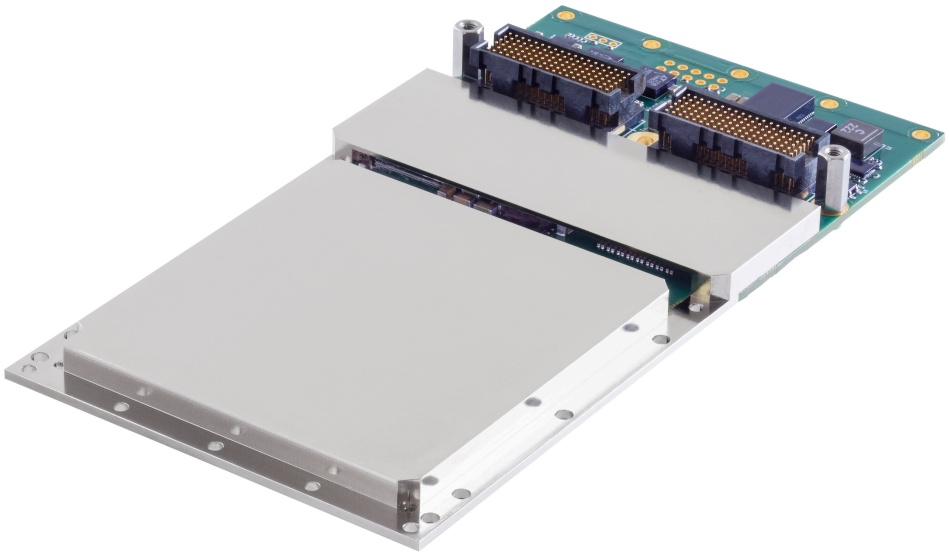
Condor 4107xX



AMD E8860 Based XMC Graphics Card with Dual 3G-SDI Video Inputs and Outputs

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

The Condor 4107xX supports two 3G/HD/SD-SDI, one DisplayPort and one VGA or RGsB (STANAG 3350, RS-343) video output. It also captures up to two simultaneous 3G-SDI video inputs, brings the data into GPU memory with extremely low latency, and can be used for compute intensive GPGPU applications. Applications can access the captured video data in the form of raw frames for image 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. 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). VCE 1.0 (Video Codec Engine) and UVD 4.0 (Unified Video Decoder) and can be used to hardware encode or decode H.264 video. The card is available in conduction cooled with rear XMC I/O on Pn6.

Key features of this product:

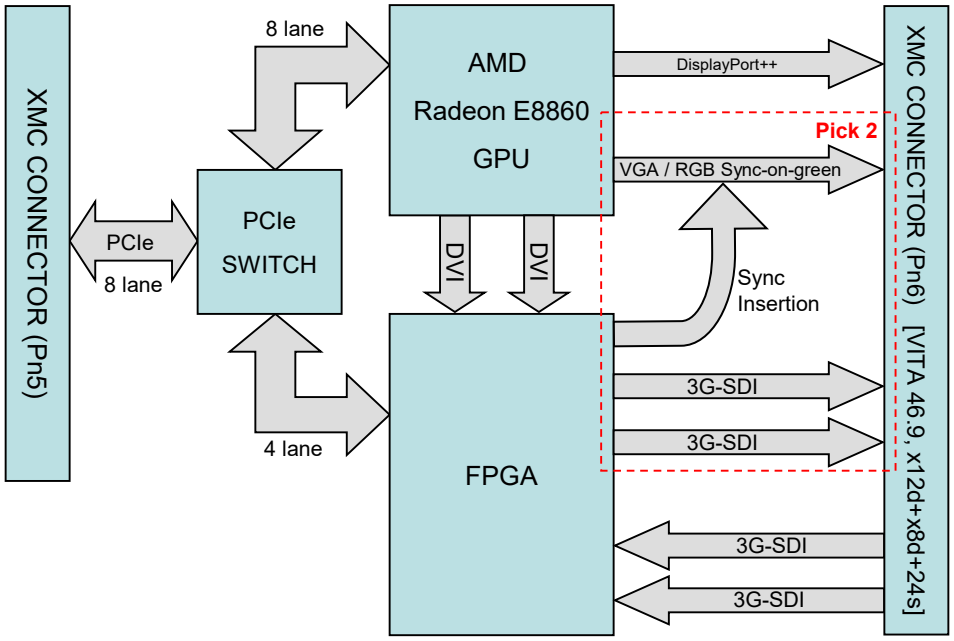
- AMD Embedded Radeon E8860 GPU
- Video Inputs: (2) 3G-SDI / HD-SDI / SD-SDI
- Video Outputs:
  (2) 3G-SDI / HD-SDI / SD-SDI
  (1) DisplayPort
  (1) VGA / RGsB (STANAG 3350, RS-343)
- Rear XMC I/O (Pn6 VITA 46.9, x12d+x8d+24s)
- 2 GB GDDR5 Graphics Memory
- 640 Shader Processors
- 128-bit Memory Width
- 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
- Thermally Efficient Heatsink Technology

Fully Ruggedized

Condor 4107xX Specifications

Graphics Processor	AMD Radeon E8860 GPU supporting OpenGL 4.2, DirectX 11.1 and Shader 5.0
Interface	XMC 1.0 or XMC 2.0 8 Lane PCIe 3.0
Graphics Memory	2 GB GDDR5 128-bit Memory Width 72 GB/s Memory Bandwidth
Video Outputs	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 / RS-343) Rear Pn6 XMC I/O. VITA 46.9 x12d+x8d+24s
Video Inputs	Two 3G-SDI, HD-SDI or SD-SDI Rear Pn6 XMC I/O. VITA 46.9 x12d+x8d+24s.
GPGPU Capabilities	OpenCL 1.2, DirectCompute 11 640 Shader Processors Up to 768 GFLOPs FP32 Single Floating Point Performance H.264 Hardware Decoder UVD 4.0 (Unified Video Decoder) H.264 Hardware Encoder VCE 1.0 (Video Codec Engine)
Power Consumption	20 - 45 W
Operating Temperature (MIL-STD-810)	-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 RTOS Support - VxWorks (others as needed) VPX & PCIe (with adapter board)

Condor 4107xX Block Diagram



EIZO Rugged Solutions

Website: www.eizorugged.com

Email: condor@eizo.com

EIZO, the EIZO logo, and Condor are trademarks or registered trademarks of EIZO Corporation. All other company names, product names, and logos are trademarks or registered trademarks of their respective companies. Copyright ©2020 EIZO Rugged Solutions Inc. All rights reserved. Information in this document is subject to change without notice. EIZO Rugged Solutions Inc. assumes no responsibility for errors or omissions that may appear in this document

Rev A