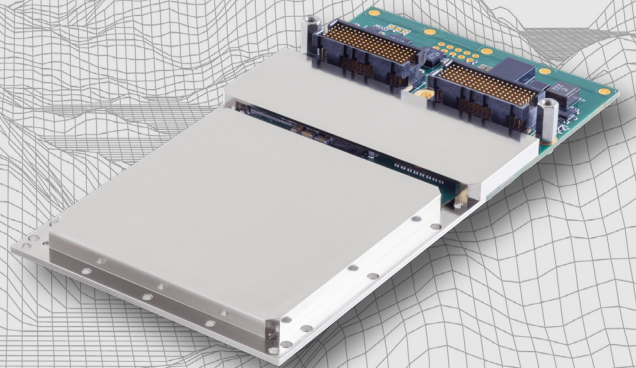


Rugged XMC graphics & video capture card based on the AMD Radeon E8860 GPU with two ARINC 818 video inputs/outputs.

**AMD
EMBEDDED
SOLUTIONS**

PARTNER



LOW LATENCY VIDEO CAPTURE

Rugged XMC Graphics Card
with Video Capture

DUAL ARINC 818 I/O

Two ARINC 818 & two
DisplayPort Outputs
Two ARINC 818 Inputs

HIGH-PERFORMANCE GPU

AMD Radeon™ E8860 GPU
2 GB GDDR5 graphics memory

XMC GPGPU Card with Dual ARINC 818 Video Inputs/Outputs

The Condor 4108xX is a rugged, XMC Graphics card based on the AMD® Radeon® E8860 GPU. This card is built with two DisplayPort and two ARINC 818 compatible outputs, along with two ARINC 818 compatible inputs. The AMD GPU supports OpenGL, DirectX, and OpenCL and can be used for GPGPU applications. This XMC card can simultaneously capture and display two simultaneous ARINC 818 compatible video streams that include frame header, container header, video, and ancillary data. The card captures the incoming video data and sends it over PCIe to the host machine as raw data with low latency.

The AMD GPU on the Condor 4108xX supports OpenCL and can be used for compute intensive GPGPU applications. 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. A simple, proven, and efficient API is provided to handle all video capture, processing, and display and can integrate seamlessly into your application. This enables developers to capture video and ancillary data from a camera or other ARINC 818 source, perform video tracking or analysis on the data using the GPU, and then send the ARINC 818 signal 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.



MIL-STD 810
Shock



MIL-STD 810
Temperature



MIL-STD 810
Vibration



SWaP

Condor 4108xX Specifications

Interface

XMC 1.0 or XMC 2.0
8 Lane PCIe 3.0

Graphics Processor

AMD Radeon E8860 GPU
Supporting OpenGL 4.2, DirectX 11.1 and Shader 5.0

Graphics Memory

2 GB GDDR5
128-bit Memory Interface
72 GB/s Memory Bandwidth

GPGPU Capabilities

640 Shader Processors
Up to 768 GFLOPs FP32 Single Floating Point Performance
H.264 Hardware Decoder UVD 4.0 (Unified Video Encoder)
H.264 Hardware Encoder VCE 1.0 (Video Codec Engine)
OpenCL, DirectCompute

Video Outputs

Two ARINC 818 (over copper)
Two DisplayPort
Rear Pn6 XMC I/O. VITA 46.9 x12d+x8d+24s
Note: ARINC 818 includes video data, frame header, container header, ancillary data and video data.

Video Inputs

Two ARINC 818 (over copper)
Rear Pn6 XMC I/O. VITA 46.9 x12d+x8d+24s.

Software & Platform Support

Windows or Linux on x86
RTOS Support - VxWorks (others as needed)

Operating Temperature (MIL-STD-810)

-40°C to 85°C (Rugged Conduction Cooled)

Power Consumption

20 - 45 W

Vibration (MIL-STD-810)

0.1 g²/Hz

Shock (MIL-STD-810)

40 g

Humidity (MIL-STD-810)

95% Without Condensation

Condor 4108xX Block Diagram

