



EIZO Rugged Solutions

Formerly Tech Source

www.eizorugged.com

Corporate Overview

EIZO Rugged Solutions, formerly Tech Source Inc, is an independent embedded graphics and video processing company that provides high quality and reliable hardware and software solutions to the ATC, Surveillance and Defense markets. EIZO Rugged Solutions offers innovative products for airborne, shipboard, UAV, ground vehicle and related applications in either convection or conduction cooled rugged environments. When working with EIZO Rugged Solutions you can expect to have your inquiry or support problem addressed in a timely fashion. EIZO Rugged Solutions has a team of highly experienced engineers and related professionals dedicated to video, graphics and radar processing technology. EIZO Rugged Solutions is an ISO 9001 company.



PRODUCTS AND CAPABILITIES

- * XMC, VPX and other form factors supported
- * Stand Alone Solutions
- * Custom (modified COTS) solutions
- * H.265 (HEVC)/ H.264 encoding, recording & streaming
- * GPGPU Computing Solutions. OpenCL support
- * Highest Performance Graphics Output
- * Video Input and Windowing/Overlay capabilities
- * Windows, Linux, and RTOS support
- * AMD, NVIDIA or FPGA based
- * Front or Rear I/O, many variants, consult factory
- * MIL-STD-810G, IP67 and other rugged environments

Condor GR2 3U VPX Series

Rugged 3U VPX Graphics Processor with CUDA® Support

The Condor GR2 3U VPX is a 3U VPX graphics / video card based on the leading edge NVIDIA® GeForce® GTX 850M that uses NVIDIA Maxwell™ GPU architecture. The Condor GR2 3U VPX offers very high performance graphics and GPGPU capability with CUDA® support for the embedded /rugged market.

The 3U VPX form factor offers higher power tolerance and hence higher performance compared to smaller rugged form factors. It also offers very high GPGPU performance using CUDA™ or OpenCL™.

The Condor GR2 3U VPX is a conduction cooled or air cooled 3U VPX card that supports PCI Express 3.0 (16, 8 or 4 lane) when mated with compatible Single Board Computers (SBCs). Two DisplayPort outputs are available from the rear VPX connectors. The board can consume up to 50W based on the application.

The Condor GR2 3U VPX graphics / video card is ideal for a myriad of intensive compute applications. The board design is modular to allow for graphics performance upgrades in the future. This product is designed to withstand high temperature, shock and vibration environments and because of this, the board meets MIL-STD-810 standards.

There are many customizations that are possible such as different video outputs from the rear VPX connectors or a front I/O configuration. Please contact us for more information.

Key Features

- NVIDIA GTX 850M GPU
- 2GB frame buffer
- 3U VPX form factor
- 640 CUDA cores, with CUDA & OpenCL support
- OpenGL 4.4/DirectX 11.2
- Two DisplayPort outputs (customization available)
- Long term product availability
- Comprehensive customer care
- Ideal for embedded applications
- Conduction Cooled and Rugged (-40 to 85°C)
- Modular design allows for future upgrades

Condor VC100 Series

H.264 Video Capture, Compression & Streaming

The Condor VC100x XMC product is a video capture and H.264 compression card that has been designed for use in various applications such as surveillance, image detection, video recording, unmanned vehicles (UAV) and other camera based video recording/analysis applications. This XMC form factor video capture card supports up to four video inputs (2 HD-SDI inputs or 4 TV inputs). It also accepts 2 stereo audio inputs. All inputs are handled through the front connectors, although a factory configured version with rear Pn4 connector and onboard connectors is also available. Resolutions up to 1920x1080 (including HD—interlaced and progressive) are supported. The Condor VC100 series video capture cards do H.264 (High, Main or Baseline profile) encoding in hardware, minimizing CPU usage. Video data is captured and stored in files. This data is available to customer applications for processing, analysis or display on a local graphics card. The Condor VC100 also supports transfer of video stream over TCP/IP or UDP through the host machine for remote display of captured data. An API is provided to manage captured video data.

Condor VC102x is a conduction cooled variant that provides raw data in addition to compressed data with onboard Ethernet. The 2 HD-SDI inputs are accepted through a wire connection to the board and the 4 TV inputs and Ethernet outputs are handled through the rear PMC connector (VME style). The raw data is sent to the host machine through PCIe for low latency and the H.264 compressed data is sent off the Ethernet ports on the PMC connector for remote streaming or recording.

VC100x Key Features

- Video Capture card (XMC form factor)
- H.264/AVC baseline, main or high profile up to L4.1
- Two HD-SDI or SD-SDI video inputs
- Four TV (NTSC/PAL/SECAM) inputs
- 2 channels up to 1080p30 or 4 channels of TV (composite)
- 2 Stereo Audio Inputs
- Data Streaming over TCP/IP or UDP

VC102x Key Features

- Access to raw and compressed data
- Onboard Ethernet output
- Conduction Cooled board

Condor 4000 Series

High Performance XMC Graphics Processor with OpenCL™ Support

The Condor 4000 series is designed to provide very high graphics performance for OpenGL, DirectX, OpenCL, GPGPU and other applications, in rugged environments. Based on the new E8860 GPU from AMD, the Condor 4000 series offers ground breaking performance with 60% better performance than the previous series. Its performance per watt is higher than other solutions on the market. It features 640 shader processors, 2GB graphics memory and OpenCL support. It offers 768/48 GFLOPS single/double precision performance.

The product is offered in air cooled or conduction cooled XMC cards or a conduction cooled 3U Open-VPX form factor. It provides up to six video outputs in a variety of formats (2x DVI, 6x DisplayPort, 1x VGA).

Key Features

- AMD E8860 discrete GPU
- 2GB frame buffer
- XMC or 3U Open-VPX form factor
- 2D/3D graphics compatibility
- OpenGL 4.2/DirectX 11.1/OpenCL 1.2
- Front and rear DVI/VGA/DisplayPort
- Up to 2560 x 1600 resolution (Dual-link DVI & DisplayPort)
- Long term product availability (up to 15 years)
- Comprehensive customer care
- Optimized for DirectX 11 applications



Tyton VS2

Rugged H.265 (HEVC) / H.264 Video Encoder with two 3G-SDI Inputs and CoT/KLV Metadata

- Fully Ruggedized 103 Cubic Inch LRU
- Low Size, Weight and Power (SWaP)
- Two 3G-SDI Video Inputs
- H.265 (HEVC) / H.264 Video Encoding and Streaming
- MPEG-4 Part 10. Baseline, Main, High Profiles.
- CoT & KLV Metadata Insertion
- 1Gbps Ethernet Output
- Bypass 3G-SDI Video Outputs
- AAC Audio Encoding
- MPEG-2 TS Mux Video, Audio, and CoT/KLV metadata
- Low Power & Low Latency
- -45°C to 85°C Operating Temperature
- Ruggedized for Vibration, Shock, MIL-STD-810G & IP67
- SNMP Control Support
- Small Compact Form Factor
- Control API available for Windows XP/7 & Linux
- MTBF > 45,000 Hours MIL-HDBK-217F AUF
- Long Term Product Availability



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Cambridge Pixel Radar Solutions

EIZO Rugged Solutions is also the US distributor for Cambridge Pixel which includes products and software toolkits for video and radar distribution, radar tracking, scan conversion, recording and related areas. Please contact spxsales@eizo.com and/or visit www.cambridgepixel.com

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Condor 2100 Series

High Performance XMC Graphics Processor with two video inputs and video windowing

Based on the E4690 GPU from AMD, the Condor 2100 series cards enhance the high performance graphics outputs with two video inputs. Based on the variation of the card (factory configured) or BIOS, several input and output formats are supported – VGA, RS-343, TV, RS-170 DVI, HDMI, HD-SDI, SD-SDI, STANAG, LVDS, DisplayPort, etc. Also, there are front I/O or rear I/O variations, for convection and conduction cooled systems.

Condor 2100 series captures incoming video data from the supported sources. For example, the video input data is decoded in hardware and raw frames are provided to customer applications with low latency for processing, analysis, stitching, compression, recording, streaming or just displaying on the screen. An API is provided for easy access to the hardware capabilities. All scaling, video combining and format conversions are done on the board, with minimal CPU impact.

The multiple input streams are displayed on either of the two outputs and can be positioned or sized (zoom or shrink) under software control. Support for Windows, Linux and VxWorks is available

Key Features

- 512MB frame buffer
- XMC form factor
- 128-bit memory interface
- 2D/3D graphics (OpenGL)
- DVI/VGA Outputs (front or rear)
- LVDS Output (rear)
- DisplayPort++ Output (front)
- 2 Inputs (SDI, TV, VGA, RGB, DVI, STANAG)
- Video input processing. Raw data. Low latency
- STANAG 3350 B/C inputs / outputs
- Sync-on-green inputs / outputs. RS-343
- Resolutions up to 1920x1200
- Conduction or convection cooled
- Optimized for DirectX 9