

Tech Source

An EIZO Group Company

www.techsource.com

Corporate Overview

Tech Source, Inc. is one of the very few independent embedded graphics and video processing companies and have provided high quality and reliable hardware and software solutions to the ATC and Defense markets for over 24 years, which speaks volumes about our commitment to quality standards and commitment to long term support. Tech Source offers innovative products for airborne, shipboard, UAV, ground vehicle and related applications in either convection or conduction cooled rugged environments. As a Tech Source customer you can expect to have your inquiry or support problem addressed in a timely fashion. We are a team of highly experienced engineers and related professionals dedicated to video, graphics and radar processing technology.



PRODUCTS AND CAPABILITIES

- XMC, VPX and other form factors supported
- H.264 compression and recording
- GPGPU Computing Solutions
- Highest Performance Graphics Output
- Video Input and Windowing/Overlay capabilities
- Windows, Linux, and RTOS support
- Custom (modified COTS) solutions
- Partner with AMD and ALT Software
- Front or Rear I/O modules, many variants, consult factory
- Work with most Single Board Computers

Condor VC 100x Series

H.264 Video Capture & Compression

The Condor VC 100x XMC product is a video capture and 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 SD TV inputs). All inputs are handled through the front connectors, although a factory configured version with rear Pn4 connector is also available. Resolutions up to 1920x1080 (including HD—interlaced and progressive) are supported.

The Condor VC 100x XMC video capture card does 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 VC 100x also supports transfer of video stream over TCP/IP or UDP for remote display of captured data. An API is provided to manage captured video data.

Key Features

- Video Capture card (XMC form factor)
- H.264/AVC baseline, main or high profile up to L4.1
- 2 x SDI or HD-SDI
- 2 channels up to 1080p30 or 4 channels of TV (composite)
- Interlaced video support
- 2 Stereo Audio Inputs
- Data Streaming over TCP/IP or UDP
- Convection and Conduction cooled versions

Condor 2000x Series

High Performance XMC Display Processor

The Condor 2000x is designed to provide very high graphics performance for OpenGL and other applications, in rugged environments. Based on the E4690 GPU from AMD, it boasts the latest graphics features that include hardware acceleration of H.264 and VC-1 HD video as well as MPEG-2, enabling multiple HD video streams while freeing the CPU for other tasks.

The product is offered in various ruggedized levels and has digital (DVI/OpenLDI) and analog (VGA) video outputs available from the front (face plate) of the card or through the rear Pn4/P16 connectors. Both, Convection (air) and Conduction cooled versions are available.

Key Features

- 512 MB frame buffer
- XMC form factor
- 2D/3D graphics compatibility
- OpenGL 3.0/DirectX 10.1
- Front and rear DVI/VGA
- Rear OpenLDI output
- Up to 2560 x 1600 resolution
- Long term product availability
- Comprehensive customer care
- Ideal for embedded applications



Condor 2100x Series

Video Windowing and Input card

Based on the E4690 GPU from AMD, the Condor 2100x series cards enhance the high performance graphics outputs with two inputs. Based on the variation of the card (factory configured) or BIOS, several input and output formats are supported – RGB, TV, DVI, STANAG, LVDS, etc. Also, there are front IO or rear IO variations, for convection and conduction cooled systems.

Condor 2100x captures incoming data from the supported sources. For example, the TV, RGB or even DVI fed data is decoded in hardware and raw frames are provided to customer applications 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 and Linux currently available. VxWorks support will be available shortly.

Key Features

- 512 MB frame buffer
- XMC form factor
- 128-bit memory interface
- 2D/3D graphics (OpenGL)
- DVI/VGA Outputs (front or rear)
- OpenLDI Output (rear)
- 2 Inputs (TV, HD, RGB, DVI)
- Video input processing
- STANAG 3350B support
- Sync-on-green support
- Resolutions up to 1920x1200
- External Sync Input support
- GPGPU computing (OpenCL)
- Conduction or convection cooled

Condor 3000x Series

High Performance graphics with GPGPU capability

Condor 3000x is a leading edge XMC form factor graphics/video card for use in applications that require very high-end graphics and computation. Based on AMD's Radeon 6760 GPU, the Condor 3000 product line offers exceptional performance with immersive desktop-level 3D graphics and outstanding multimedia features. It's built-in video decoder enables dual HD decoding of H.264, VC-1. MPEG4 and MPEG2 compressed video streams.

The product is offered in various levels of ruggedization and has digital (DVI/LVDS/Display Port) and analog (VGA) video outputs available from the front panel (face plate) of the card or through rear PMC/XMC connectors. Conduction cooled versions are available.

Delivering up to 576 GFLOPs of peak single precision floating point performance, the Condor 3000 graphics processor is ideal for general purpose graphics processing unit (GPGPU) applications such as radar, video, image processing, target identification and recognition as well as in self guidance systems. Supported by the industry standard OpenCL™ programming language, it is the natural alternative to CUDA. With OpenCL adopted by all leading graphics companies, it is the future! OpenCL also works well with OpenGL and in GPU/CPU combinations

Key Features

- 1 GB frame buffer
- XMC form factor
- 2D/3D graphics compatibility
- OpenGL 4.1/DirectX 11
- OpenCL (GPGPU computing)
- Front/Rear Outputs (DVI, VGA, Dual Mode Display port)
- Up to 1920 x 1200 resolution with Single-Link configuration and 2560 x 1600 with Dual-Link
- Long term product availability
- Comprehensive customer care
- Ideal for embedded applications
- Open CL White Paper (on website)
- Conduction or convection cooled

FOLLOWING IS A PARTIAL LIST OF OUR EXISTING CUSTOMERS:

- DRS
- Northrop Grumman
- Mercury Computer
- Sierra Nevada Corp
- Concurrent Technologies
- Elbit
- Chandler May
- SAIC
- Elma
- General Dynamics
- NSWC
- Scientific Research Corp.
- Raytheon Company
- BAE Systems

TYPICAL PROJECTS

- Legacy system upgrades
- Rugged Avionics display drivers
- Radar and Video Upgrades
- Coastguard, Navy, VTS, ATC

For additional information on Condor products contact:

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Cambridge Pixel Radar Solutions

Tech Source is also the US distributor for Cambridge Pixel which include products and software toolkits for video and radar distribution, radar tracking, scan conversion, recording and related areas. Please contact Bill Fox directly at wmfox@techsource.com and/or visit www.cambridgepixel.com

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More product info on back of tri-fold brochure