



H.264 XMC Video Encoder with up to 4 Video Inputs

Condor VC100 Series cards are rugged High Definition (HD) or Standard Definition (SD) video capture and H.264/MJPEG encoding cards. These XMC form factor cards are designed for use in various applications such as surveillance, image detection, video recording, unmanned vehicles (UAV) and other camera based video recording/encoding/analysis applications. There are multiple variants with slightly different specifications. The extremely low power requirements (typical - 7W) makes the Condor VC100 Series ideal for applications sensitive to SWaP (Size, Weight and Power).

The Condor VC100 Series supports up to 2 HD/SD-SDI video inputs or 4 Composite video inputs. Various input formats (HD-SDI/SD-SDI/NTSC/PAL/SECAM) are selectable through an API. VC100x variants send the H.264 encoded stream over PCIe to the host machine. VC102x variants have dedicated Ethernet outputs with the H.264 video stream and send the captured video data in raw format to the host machine over PCIe.

The Condor VC100 Series boards perform H.264 encoding in hardware to minimize CPU usage. Video data is captured and stored to files locally or streamed to a remote location. This data is available to customer applications for processing, analysis or display on a local graphics card. The Condor VC100 series also supports transfer of the video stream via UDP or TCP/IP for remote display of captured data while keeping latency low.

An API is provided to manage captured video data. Condor VC100 series cards are available as convection or conduction cooled with various levels of ruggedization. While Linux and Windows 7 drivers are available by default, other real time operating systems (RTOS) such as VxWorks may be supported as per customer requirements.

The product comes with EIZO Rugged Solutions' commitment of availability for up to 7 years. This comes with the legendary support of our seasoned team members, who may offer immediate assistance to troubleshoot and resolve any technical challenges.

EIZO Rugged Solutions has provided video solutions for over 28 years and has always met customer needs with long-term commitment and support.

Key Features

- H.264/AVC Baseline, Main or High Profile up to L4.1 or MJPEG
- Two HD/SD-SDI Video Inputs
- Four Composite Video Inputs (NTSC/PAL/SECAM)
- XMC Form Factor
- Low Power (less than 10W)
- 2 Channels up to 1080p30 or 4 Channels of TV (Composite)
- 2 Stereo Audio Inputs
- Video Streaming over TCP/IP (Host Machine or Dedicated)
- Video Recording (On Host Machine)
- Raw Video Capture (VC102x)
- Front or Rear I/O
- Convection or Conduction Cooled

Platforms

- Linux/Windows 7
- VME, VPX, cPCI
- VxWorks on x86 and PowerPC

Condor VC100 Series Specifications

Interface	XMC form factor, 4 Lane PCI Express Interface
Capture format	H.264/AVC Baseline, Main or High Profile up to L4.1 Raw Video Capture (VC102x)
Video Inputs	Four Composite Video (NTSC/PAL/SECAM) (Front or Rear) Two HD/SD-SDI, Interfaces: SMPTE 292M(HD), SMPTE 259M-C(SD). 1 HD can be combined with 2 Composite inputs, 75 Ω (Front or Rear)
Audio Inputs	Two SDI audio inputs (SMPTE 272M-C and SMPTE 299M), Two stereo line inputs, 20 kΩ
Resolutions	2 channels of up to 1080p30 or 1080i60 for HD, or 4 channels of 480i/576i for SD
Power Rating	Max 10 Watts
Operating Temperature	0°C to 55°C (Standard) -40°C to 70°C (Rugged Convection Cooled) -40°C to 85°C (Rugged Conduction Cooled)
Non-operating Temperature	-40°C to 85°C (Standard) -55°C to 105°C (Rugged Convection Cooled) -55°C to 105°C (Rugged Conduction Cooled)
Vibration	0.04 g ² /Hz, 5-2K Hz (Standard) 0.1 g ² /Hz, 5-2K Hz (Rugged)
Shock	20g peak (Standard), 40g peak (Rugged)
Conformal Coating	Available (Standard with conduction cooled version)
Humidity	90% without condensation, 95% (For Rugged)
Dimensions and Weight	149mm x 74mm (Convection, Front I/O), 143.75mm x 74mm (Conduction); 4.0 oz
Software/Platform Support	Linux or Windows 7 RTOS support—VxWorks & Integrity (Others as needed) x86 (now), PowerPC (Future)

Condor VC100 Series Variants

		Product Name				
		Condor VC100x (Front Panel Inputs, Two HD-BNC + 15pin D-SUB, Air Cooled)	Condor VC100x-cc (Rear PMC Inputs (TV) Board-mounted SDI, Conduction Cooled)	Condor VC100xX (Rear XMC Inputs, VPX VITA 46.9 x12d+x8d+24s Conduction Cooled)	Condor VC102xP (Rear PMC + Board-mounted SDI, VME Style Pin-Out, Conduction Cooled)	Condor VC102xX (Rear XMC Inputs, VPX VITA 46.9 x12d+x8d+24s Conduction Cooled)
Input Type	Composite / TV	4	4	4	4	4
	HD-SDI	2	2	2	2	2
	SD-SDI	2	2	2	2	2
	Audio	2 Stereo / 4 Mono	2 Stereo / 4 Mono	2 stereo / 4 mono	None	2 stereo / 4 mono

	Condor VC100x	Condor VC100x-cc	Condor VC100xX	Condor VC102xP	Condor VC102xX
H.264 Video Encoding	Yes	Yes	Yes	Yes	Yes
Raw Video Capture over PCIe	No	No	No	Yes	Yes
Dedicated Ethernet Output	No	No	No	Yes	Yes

Condor VC100xF : Front I/O (HD-BNC +15pin D-SUB). H.264 Encoding.

Condor VC100x-cc : Rear PMC I/O (TV), Board-mounted SDI. H.264 Encoding.

Condor VC100xX : Rear XMC I/O, VITA 46.9 x12d+x8d+24s. H.264 Encoding.

Condor VC102xP : Rear PMC I/O (TV). Board-mounted SDI. H.264 Encoding and Raw Video Capture. Dedicated Ethernet.

Condor VC102xX : Rear XMC I/O. VITA 46.9 x12d+x8d+24s. H.264 Encoding and Raw Video Capture. Dedicated Ethernet.



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