



H.264 Compatible Video Encoding & Streaming XMC Card with up to 4 Video Inputs

The Condor VC100x is a rugged High Definition (HD) or Standard Definition (SD) H.264/M-JPEG Encoding and Streaming card. This XMC form factor card is designed for use in various applications such as surveillance, video recording and transmission, target tracking, unmanned vehicles (UAV) and other camera based video recording/analysis applications. It's relatively low power requirement (typical - 7W) makes it ideal for applications in UAVs, etc.

The Condor VC100x supports up to 4 composite video (CVBS) inputs or 2 HD/SD-SDI video inputs. Various input formats (NTSC/PAL/RS-170/HD-SDI/SD-SDI) are selectable through an API. Two stereo audio and two SDI audio inputs are supported. This card does H.264 or M-JPEG encoding in hardware to minimize CPU usage. Video data is compressed and delivered in an MPEGTS container to the host machine as a UDP/RTSP stream over the PCIe interface. The host can then record the stream locally or forward the stream to a remote location over Ethernet. This data is available to customer applications for processing, analysis or display on a local graphics card.

An API is provided to manage the encoded video data. Condor VC100x is available in multiple ruggedization levels and has convection or conduction cooled variants. While Linux and Windows drivers are available by default, other real time operating systems (RTOS) such as VxWorks may be supported, as per customer requirements.

Key features of this product:

- H.264 (AVC) Baseline, Main or High Profile
- M-JPEG (Motion JPEG)
- Video Inputs: Two HD-SDI or SD-SDI
Four CVBS (NTSC/PAL/RS-170)
- Two Stereo or SDI Audio Inputs
- XMC Form Factor (PCIe carrier available)
- Low Power (less than 10 W)
- Two Channels up to 1080p30
or Four Channels of CVBS
- MPEGTS Stream Packetized as UDP/RTSP
- IP Streams Sent to Host Machine over PCIe
- Video Streaming & Recording (Host Machine)
- Front or Rear XMC I/O
- MIL-STD-810
- Conduction Cooled & Air Cooled

Fully Ruggedized



Condor VC100x Specifications

Interface	XMC 1.0 or XMC 2.0 4 Lane PCIe 2.0 Front Panel or Rear XMC I/O
Capture Format	H.264/AVC Baseline, Main or High Profile up to L4.1 M-JPEG (Motion JPEG)
Video Inputs	Two HD/SD-SDI (1080p30 / 1080i60) Interfaces: SMPTE 292M(HD), SMPTE 259M-C(SD). Four CVBS (NTSC/PAL/RS-170). 75 Ω (2 SDI, 4 CVBS or 1 SDI + 2 CVBS simultaneously)
Audio Inputs	Two SDI audio inputs (SMPTE 272M-C and SMPTE 299M), Two Stereo Line In, 20 kΩ
Output Type	MPEGTS Stream Packetized as UDP/RTSP IP Streams Sent to Host Machine over PCIe Video Streaming & Recording Using Host Machine
Power Consumption	10 W
Operating Temperature (MIL-STD-810)	-40°C to 70°C (Rugged Air Cooled) -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) VME, cPCI, VPX & PCIe (with adapter board)

Condor VC100x Block Diagram

