The H264-cPCI8 Encoder board is an eight channel H.264 codec for CompactPCI systems. The H.264-cPCI8 provides a powerful and flexible solution for capturing and compressing up to 8 analog video inputs at full size and at full frame rate to the H.264 / MPEG-4 AVC (Part 10) compression standard.

The H264-cPCI8 not only provides H.264 compression but can also simultaneously decompress and replay recordings from storage to display.

The H264-cPCI8 allows high quality real-time video and audio capture and compression from NTSC/PAL video sources to disk and simultaneously provides an additional path for uncompressed video for on-screen preview or optional downstream video analytics.

The high performance H.264 video data compression and efficient bus utilization allow multiple H264-cPCI8 cards to be fitted in a compactPCI for multi-channel video recording and streaming applications.

PRELIMINARY INFORMATION (Rev A.01)
Subject to change without notification
H264-cPCI8

8 Channel H.264 Codec for CompactPCI

Applications

Vehicle cameras
Law Enforcement
Asset Monitoring
Remote video surveillance
Electronic news gathering
Multi-camera systems
Video acquisition and analysis
Traffic monitoring and control
Solid-state digital video recorder
Intranet/Internet video streaming
H264-cPCI8
8 Channel H.264 Codec for CompactPCI

Features

8 channels analog SD composite video inputs
Real-time 8x H.264 full frame rate, full size (4QCIF) encode
H.264/MPEG-4 AVC (Part 10) encoder / decoder
Medium Latency encoder (down to 100ms)
Fast text overlay on recording for Time/Date stamp etc.
GPS for universal time-stamping (option)
Multiple H264-cPCI8 boards per system
3U CompactPCI form factor
Drivers for Win-XP-E, Linux
CompactPCI Bus Interface
- CompactPCI® Core Specification PICMG-2.0 Rev 3.0
- 32-bit bus width, 33.33 MHz bus speed
- Peripheral slot

Video Input ports
- 8 independent composite NTSC or PAL input channels
- 10-bit Analog-to-Digital converters
- Anti-aliasing filters on inputs

Video Input Standards
- Standard CCIR601-NTSC, CCIR-PAL
- NTSC-M, NTSC-N, NTSC-J, NTSC (4.43), RS-170

Video Input Adjustments
- Contrast (luma gain) adjustable from 0 - 200% of original
- Saturation (chroma gain) adjustable from 0 - 200% of original
- Hue (chroma phase) adjustable from −180° to +180°
- Brightness (luma level) can be adjusted from −25 to +25 IRE
- Software adjustable Sharpness, Gamma and noise suppression

Audio Input
- 8x mono input
- Provides Audio/Video Synchronisation

Video Encoding
- ITU-T H.264 (ISO/IEC 14496-10, Baseline profile, level 3)
- M-JPEG Video Encoding (optional)
- 8 channel NTSC 4CIF (704 x 480) at 30fps per channel
- 8 channel PAL 4CIF (704 x 576) at 25fps per channel
- Supports I and P Frame Compression
- Supports Variable Bit Rate (VBR)
- Supports Constant Bit Rate (CBR)
- Approximate 100ms encode Latency

Audio Encoding
- G.723 Audio Codec

Video Decoding / Playback
- Real-time H.264 Video Decoding
- Playback to Composite PAL/NTSC output (optional)

Audio Decoding
- Mono audio output

Uncompressed Video Path
- Real-time Preview to host VGA display
- Optional Preview to Composite PAL/NTSC output

Motion Detection
- 330 (NTSC) or 396 (PAL) detection blocks
- Masking of areas not required for motion detection
- Adjustable sensitivity

System Requirements
- x86 PC-Compatible CompactPCI Host Computer
- PCI or AGP Display (if Video Preview to host is required)
- 3.3V and 5V from CompactPCI backplane

Mechanical
- Standard 3U CompactPCI form factor
- Optional 6U CompactPCI faceplate and mounting

Operational characteristics
- Operating temperature 0˚C to 60˚C
- Extended temperature -40˚C to +85˚C (option)

Software
- Drivers for Windows-XP, Linux
- Comprehensive video recording SDK
- Sample video recording application in C/C++ source code

Related Products
- H264-cPCI8-VStream RTSP Video Streaming SDK

Ordering Information
- H264-cPCI8 Video Encoder (0 to 60˚C)
- H264-cPCI8-Ext Video Codec (-40˚C to +85˚C)