H264-PMC8

8 Channel H.264 Codec on PMC

Advanced Micro Peripherals
THE EMBEDDED VIDEO EXPERTS

The H264-PMC8 Encoder board is an eight channel H.264 codec on a PMC Mezzanine format card. The H.264-PMC8 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-PMC8 not only provides H.264 compression but can also simultaneously decompress and replay recordings from storage to display

The H264-PMC8 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-PMC8 cards to be fitted in a compactPCI or VMEbus systems for multi-channel video recording and streaming applications.

Real-time,

8-Channel,

Full size,

Full framerate,

H.264 encode of

PAL/NTSC/RS-170

PRELIMINARY INFORMATION (Rev A.00)
Subject to change without notification

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EMBEDDED-PC PC/104 MODULES

H264-PMC8

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Multi-camera

video encoding

and streaming

Applications

Vehicle cameras

Law Enforcement

Asset Monitoring

Remote video surveillance

Electronic news gathering

Situational Awareness

Video acquisition and analysis

Traffic monitoring and control

Solid-state digital video recorder

Intranet/Internet video streaming

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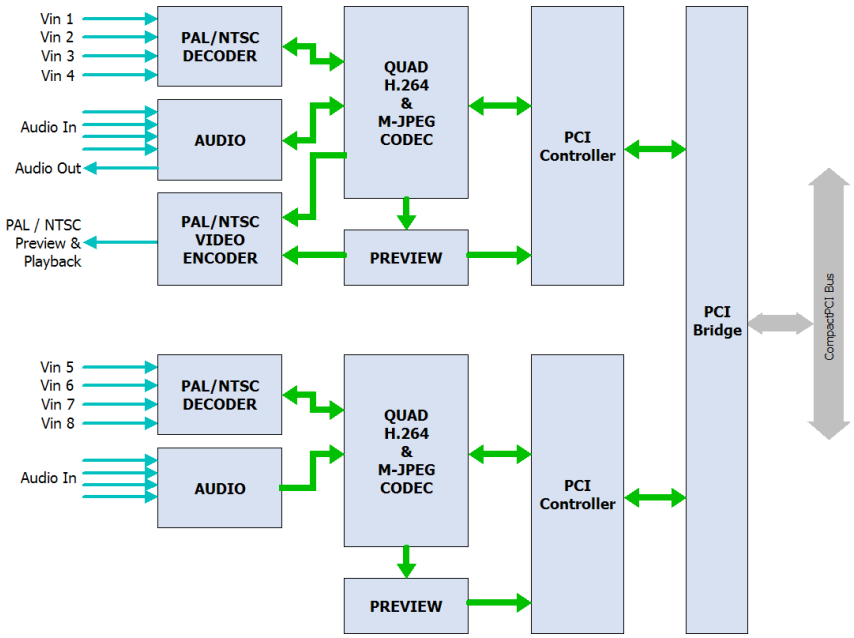

H264-PMC8 Block Diagram

Text and graphics overlay

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.

Multiple H264-PMC8 boards per system

PMC Mezzanine card form factor

Drivers for Windows, Linux

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Technical Specification

CompactPCI Bus Interface

PICMG-2.0 Rev 2.1
32-bit bus width, 33.33 MHz bus speed

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
PAL-B,G,N, PAL-D, PAL-H, PAL-I, PAL-M, PAL-NC, PAL-60

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 Host Computer with 33Mhz PMC site
PCI or AGP Display (if Video Preview to host is required)
3.3V and 5V from PMC Mezzanine site

Mechanical

Standard 32-bit PMC form factor

Operational characteristics

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

Software

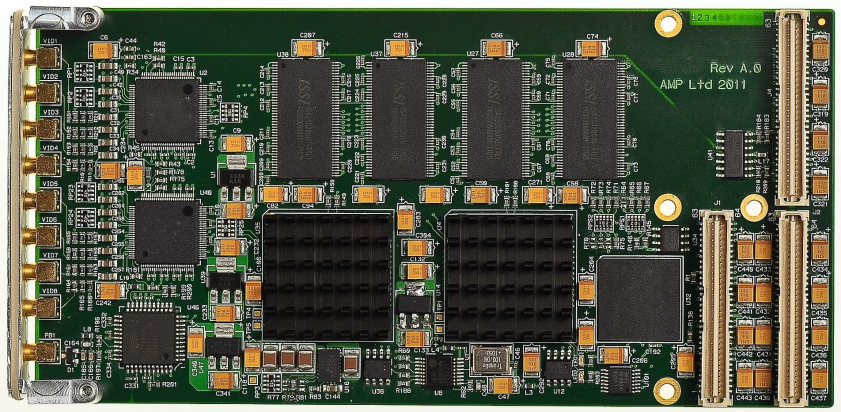
Drivers for Windows-XP, Linux
Comprehensive video recording SDK
Sample video recording application in C/C++ source code

Related Products

H264-PMC8-VStream RTSP Video Streaming SDK

Ordering Information

H264-PMC8 Video Encoder (0 to 60˚C)
H264-PMC8-Ext Video Codec (-40˚C to +85˚C)



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