

# H264-PMC8

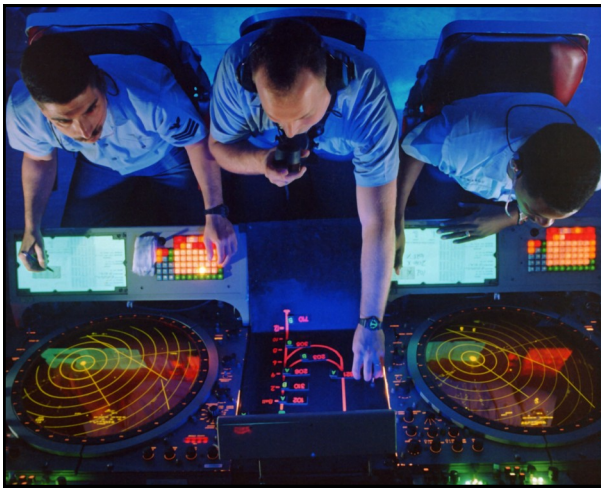
## 8 Channel H.264 Codec on PMC



**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.

### PRELIMINARY INFORMATION (Rev A.00)

Subject to change without notification

Real-time,

8-Channel,

Full size,

Full framerate,

H.264 encode of

PAL/NTSC/RS-170

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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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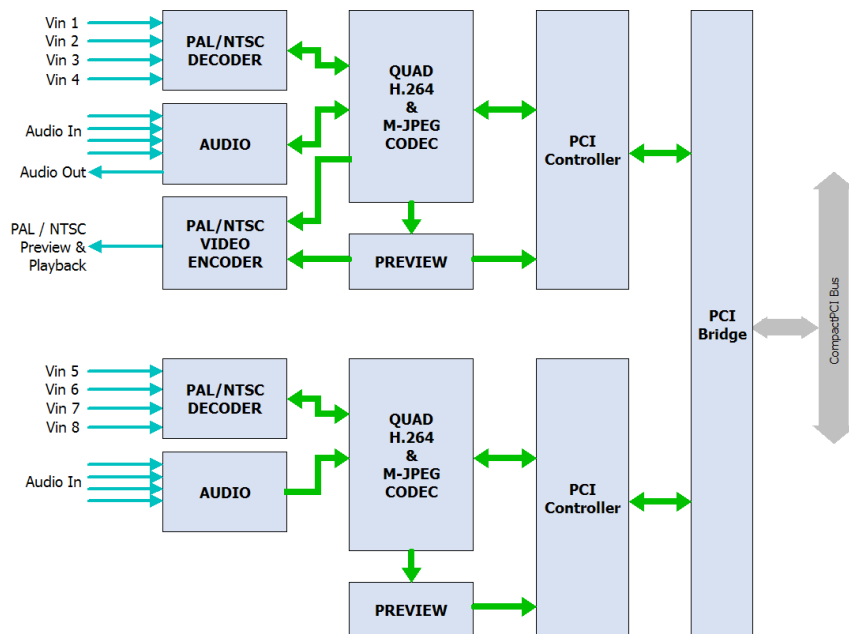
# H264-PMC8

## 8 Channel H.264 Codec on PMC



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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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**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  $-180^{\circ}$  to  $+180^{\circ}$   
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  $0^{\circ}\text{C}$  to  $60^{\circ}\text{C}$   
Extended temperature  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  (option)

**Software**

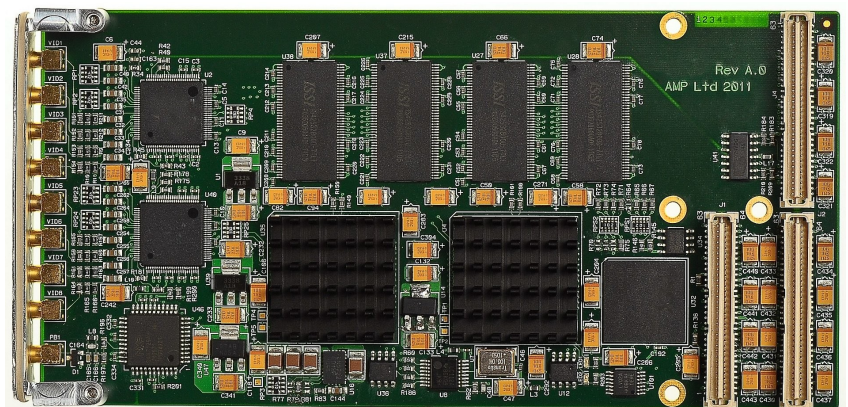
Drivers for Windows-XP, Linux  
Comprehensive video recording SDK  
Sample video recording application in C/C++ source code

**Related Products**

H264-PMC8-VStream RTSP Video Streaming SDK

**Ordering Information**

H264-PMC8 Video Encoder ( $0$  to  $60^{\circ}\text{C}$ )  
H264-PMC8-Ext Video Codec ( $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ )

**H264-PMC8**