

# H264-cPCI4

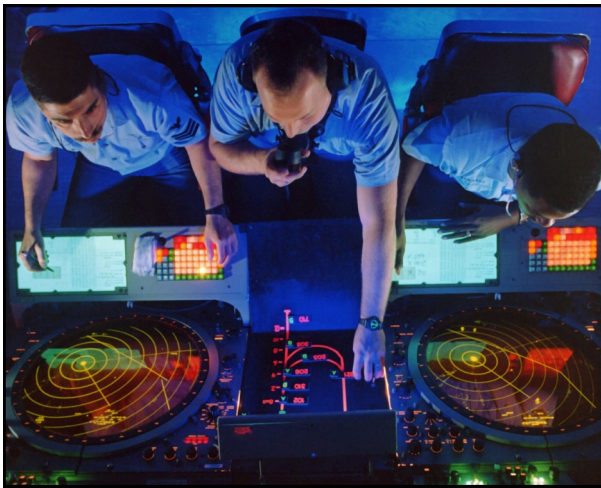
## 4 Channel H.264 Codec for CompactPCI



**Advanced Micro  
Peripherals**

THE EMBEDDED VIDEO EXPERTS

The H264-cPCI4 Encoder board is a quad channel H.264 codec for CompactPCI systems. The H.264-cPCI4 provides a powerful and flexible solution for capturing and compressing up to 4 analog video inputs at full size and at full frame rate to the H.264 / MPEG-4 AVC (Part 10) compression standard.



The H264-cPCI4 not only provides H.264 compression but can also simultaneously decompress and replay recordings from storage to display

The H264-cPCI4 allows high quality real-time video 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.00)

Subject to change without notification

Real-time,

4-Channel,

Full size,

Full framerate,

H.264 encode of

PAL/NTSC/RS-170

**Advanced Micro Peripherals Ltd**  
Cambridge, CB6 2HY, England  
Tel (+44) 1353 659500  
Fax (+44) 1353 659600  
[sales@amp ltd.com](mailto:sales@amp ltd.com)  
<http://www.amp ltd.com>

**Advanced Micro Peripherals Inc**  
New York, NY10016, USA  
Tel (+1) 212 951 7205  
Fax (+1) 212 951 7206  
[sales@amp-usa.com](mailto:sales@amp-usa.com)  
<http://www.amp-usa.com>



# H264-cPCI4

## 4 Channel H.264 Codec for CompactPCI



Multi-camera  
video encoding  
and streaming

### 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

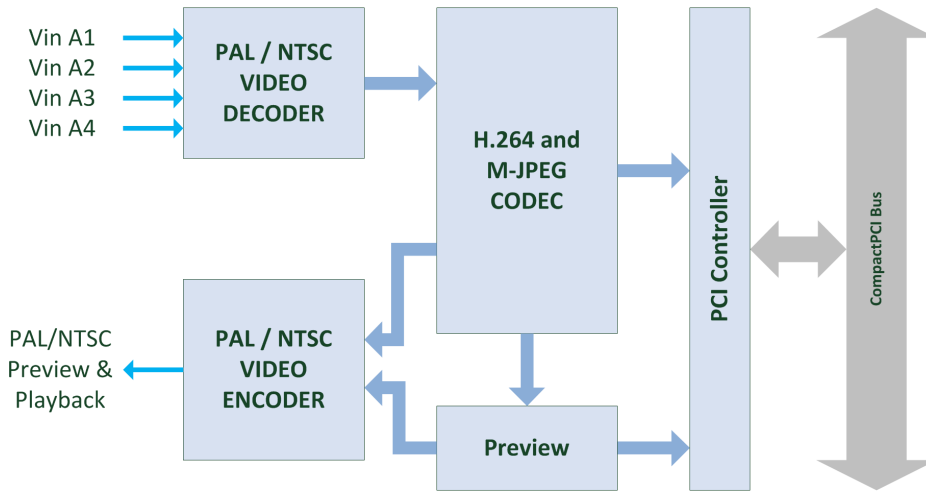
**Advanced Micro Peripherals Ltd**  
Cambridge, CB6 2HY, England  
Tel (+44) 1353 659500  
Fax (+44) 1353 659600  
[sales@ampitd.com](mailto:sales@ampitd.com)  
<http://www.ampitd.com>

**Advanced Micro Peripherals Inc**  
New York, NY10016, USA  
Tel (+1) 212 951 7205  
Fax (+1) 212 951 7206  
[sales@amp-usa.com](mailto:sales@amp-usa.com)  
<http://www.amp-usa.com>



# H264-cPCI4

## 4 Channel H.264 Codec for CompactPCI



**H264-cPCI4 Block Diagram**

Text and graphics  
overlay

GPS timestamping  
(option)

### Features

- 4 channels analog SD composite video inputs
- Real-time 4x 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-cPCI4 boards per system
- 3U CompactPCI form factor
- Drivers for Windows, 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**

4 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

**Video Encoding**

ITU-T H.264 (ISO/IEC 14496-10, Baseline profile, level 3)  
M-JPEG Video Encoding (optional)  
4 channel NTSC 4CIF ( 704 x 480) at 30fps per channel  
4 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

**Video Decoding / Playback**

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

**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 Graphics Controller (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**

Extended temperature -40°C to +85°C

**Software**

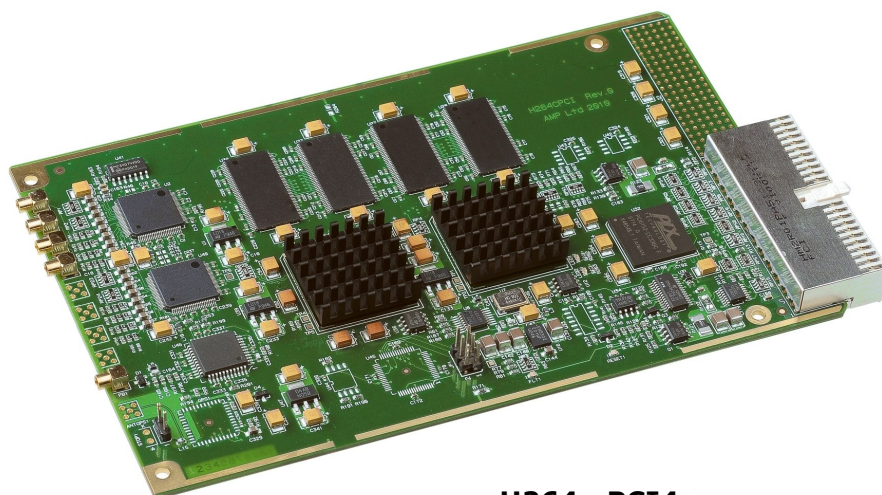
Drivers for Windows, Linux  
Comprehensive video recording SDK  
Sample video recording application in C/C++ source code

**Related Products**

H264-cPCI4-VStream RTSP Video Streaming SDK

**Ordering Information**

H264-cPCI4-Ext Video Codec (-40°C to +85°C)

**H264-cPCI4**