H264-ULL-PMC

Dual-channel PMC Mezzanine HD H.264 Encoder

Advanced Micro Peripherals
THE EMBEDDED VIDEO EXPERTS

The H264-ULL-PMC is a ultra low latency, dual channel, H.264 encoder on a PMC Mezzanine form factor board. The H264-ULL-PMC provides a powerful and flexible solution for capturing and compressing up to 2 analog video inputs at up to 1080p HD resolution to the H.264/MPEG-4 AVC (Part 10) standard.

The H264-ULL-PMC is ideal for time-critical applications as it offers Ultra Low Latency encoding of below 40ms across the entire capture resolution range. The H264-ULL-PMC can do dual H.264 encodes at resolutions up to 1080p30 or a single encode at 1080p60. The H.264 encoding can be flexibly configured to suit a range of bandwidth and storage requirements.

The H264-ULL-PMC has two analog HD video input channels. Each channel can be independently configured for analog YP_BP_R HD or analog RGsB (Sync on Green).

The H264-ULL-PMC is supported by a set of well-documented and established SDKs that minimize development risk and shorten time to market for applications requiring video recording or streaming.

40ms Ultra low latency

1080p High Definition

H.264 compression

Dual channel

PRELIMINARY INFORMATION (Rev A.03)
Subject to change without notification

Advanced Micro Peripherals Ltd
Cambridge, CB6 2HY, England
Tel (+44) 1353 659500
Fax (+44) 1353 659600
sales@ampltd.com
http://www.ampltd.com

Advanced Micro Peripherals Inc
New York, NY10007, USA
Tel (+1) 212 951 7205
Fax (+1) 212 658 9073
sales@amp-usa.com
http://www.amp-usa.com

Windows® Embedded Partner

EMBEDDED-PC PC/104 MODULES

H264-ULL-PMC

Dual-channel PMC Mezzanine HD H.264 Encoder

Advanced Micro Peripherals
THE EMBEDDED VIDEO EXPERTS

Ideal for -

Hi-Res Surveillance

Remote Platform

Real-time control

Gaming

Simulation

Applications

Remote moving platforms

Remotely guided vehicles

UAVs

Vehicle cameras

Remote video surveillance

Electronic news gathering

Multi-camera systems

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@ampltd.com
http://www.ampltd.com

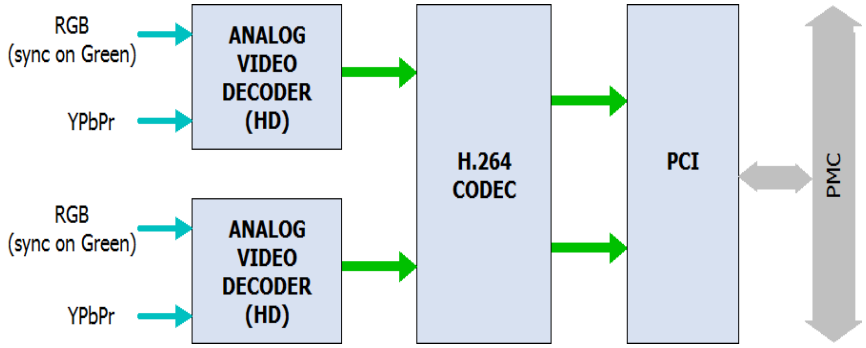
Advanced Micro Peripherals Inc
New York, NY10007, USA
Tel (+1) 212 951 7205
Fax (+1) 212 658 9073
sales@amp-usa.com
http://www.amp-usa.com

Windows® Embedded Partner

EMBEDDED-PC PC/104 MODULES

H264-ULL-PMC

Dual-channel PMC Mezzanine HD H.264 Encoder



H264-ULL-PMC Block Diagram

Advanced bit rate control modes enhance bandwidth and storage capacity

Features

Dual channel encode at up to 1080p30

Single channel encode at up to 1080p60

Dual Analog HD inputs (YPbPr, RGB Sync on Green)

Ultra Low Latency encoder (below 40ms)

H.264/MPEG-4 AVC (Part 10) encoder

Intra-refresh to improve bandwidth utilization

Motion detection with motion vector information

PMC (PCI Mezzanine Card) Mezzanine form factor

Drivers for Windows and Linux

Advanced Micro Peripherals Ltd
Cambridge, CB6 2HY, England
Tel (+44) 1353 659500
Fax (+44) 1353 659600
sales@ampltd.com
http://www.ampltd.com

Advanced Micro Peripherals Inc
New York, NY10007, USA
Tel (+1) 212 951 7205
Fax (+1) 212 658 9073
sales@amp-usa.com
http://www.amp-usa.com

H264-ULL-PMC

Rev A.03

Dual-channel PMC Mezzanine HD H.264 Encoder

Technical Specification

PMC Mezzanine Interface

PICMG-2.0 Rev 2.1
IEEE 1386.1 standard
Single +5 V supply
32 bit PCI at 33MHz

Ultra Low Latency Technology

Less than 40 ms encode latency

Video input ports

2 x high definition Analog video input ports
Analog HD from:
- YPrPb,
- RGsB (Sync on Green),

Video capture resolutions

Flexible capture resolutions, 16x16 pixel granularity.
Standard resolutions supported include:
- 1080p60, 1080i60, 1080p50, 1080i50
- 720p60, 720i60, 720p50, 720i50
- 480p60, 576p50

Video Encoding

H.264 ISO/IEC 14496-10 baseline and Main Profile up to L4.2
Interlaced and progressive video encode support
Real-time multi stream H.264 Ultra Low Latency capture
Dual channel encode at up to 1080p30
Single channel encode at up to 1080p60

Bit rate control

Constant bit rate (CBR)
Variable bit rate (VBR)

Motion detection

Motion detection at macroblock granularity
Motion vector information

Pre- and post-processing

Trans-rating and trans-sizing
Selective blocking of video input regions

Configuration support per stream

Frame rate
Resolution
Bit rate control
Key frame interval
Intra-refresh mode

System Requirements

X86 PC-Compatible Host Computer with 33MHz PMC site
5V from PMC mezzanine site

Mechanical

Standard 2.91 x 5.87 in Single PMC Mezzanine form factor

Operational characteristics

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

Software

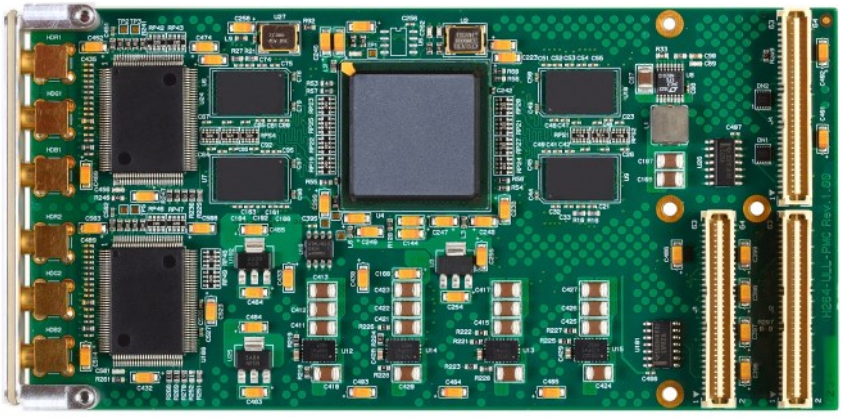
Drivers for Windows, Linux
Comprehensive video recording SDK
Sample video recording application in C/C++ source code

Related Products

H264-ULL-PMC-VStream RTSP Video Streaming SDK

Ordering Information

H264-ULL-PMC	Video Encoder (0 to 60˚C)
H264-ULL-PMC-Ext	Video Encoder (-40˚C to +85˚C)



H264-ULL-PMC

Advanced Micro Peripherals Ltd
Cambridge, CB6 2HY, England
Tel (+44) 1353 659500
Fax (+44) 1353 659600
sales@ampltd.com
http://www.ampltd.com

Advanced Micro Peripherals Inc
New York, NY10007, USA
Tel (+1) 212 951 7205
Fax (+1) 212 658 9073
sales@amp-usa.com
http://www.amp-usa.com

Advanced Micro Peripherals
THE EMBEDDED VIDEO EXPERTS