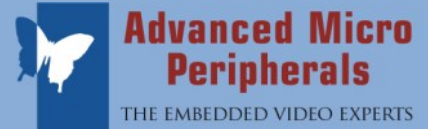


H264-2SDI-PMC

Dual HD-SDI PMC Mezzanine H.264 Encoder



The H264-2SDI-PMC is an ultra low latency, dual channel, H.264 encoder on a PMC Mezzanine form factor board with support for extraction of STANAG 4609 KLV Metadata from HD-SDI sources. The H264-2SDI-PMC provides a powerful and flexible solution for concurrently capturing and compressing high definition HD-SDI inputs to H.264/MPEG-4 AVC (Part 10) standard.



The H264-2SDI-PMC is ideal for time-critical, low latency IP streaming applications with Ultra Low Latency encoding of below 40ms. The flexible H.264 engine has a maximum throughput of 1080p60 allowing single channel @ 1080p60 or dual channel @ 1080p30.

The H264-2SDI-PMC supports extraction of STANAG 4609 KLV metadata (MISB 0605.3 compliant) embedded within the HD-SDI signal. The video and metadata are synchronized and transferred to the host system over the PCI bus for processing.

The H264-2SDI-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.

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

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40ms Ultra low latency

Dual Channel

1080p High Definition

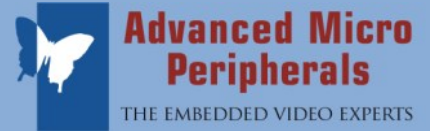
H.264 compression

STANAG 4609

KLV metadata

H264-2SDI-PMC

Dual HD-SDI PMC Mezzanine H.264 Encoder



Real-time
IP streaming
of
2x HD-SDI

KLV metadata

MISB 0605, 0601

Applications

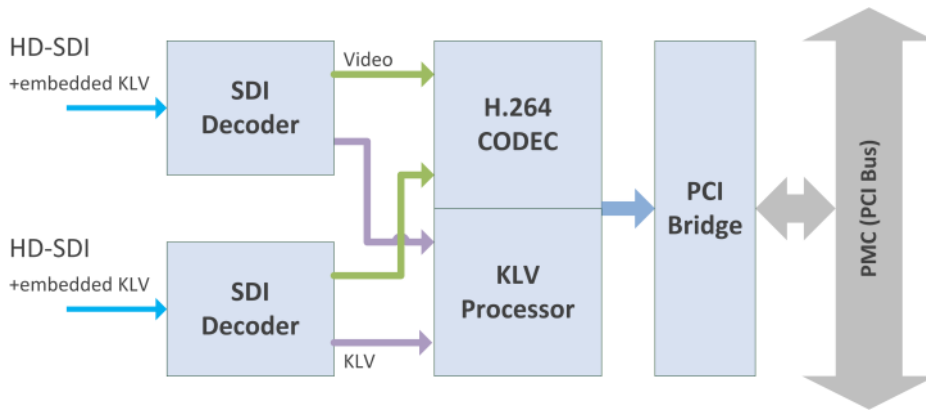
Remote moving platforms
Remotely guided vehicles
UAVs
Vehicle cameras
Remote video surveillance
Electronic news gathering
Multi-camera systems
Traffic monitoring and control
Solid-state digital video recorder
Intranet/Internet video streaming

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H264-2SDI-PMC

Dual HD-SDI PMC Mezzanine H.264 Encoder



H264-2SDI-PMC Block Diagram

Advanced bit rate
control modes
enhance bandwidth
and storage
capacity

Features

- 2x HD-SDI inputs with KLV
- STANAG4609 KLV Capture from HD-SDI
- Single channel encode at up to 1080p60
- Dual channel encode at up to 1080p30
- 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 Mezzanine form factor
- Drivers for Windows and Linux

PMC Interface

PICMG-2.0 Rev 2.1
32bit PCI at 33MHz

Digital Video input ports

2 x high definition HD-SDI input ports

Video capture resolutions

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

Ultra Low Latency Technology

Less than 40ms encode latency

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
Encoding up to 1080p60 (or equivalent multi channel encode).
Single channel encode at up to 1x 1080p60
Dual channel encode at up to 2x 1080p30

KLV Metadata

Extraction of KLV Metadata from HD-SDI as per MISB 0605.3
Supports MISB 0601 UAS Datalink Local Metadata Set

Bit rate control

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

Motion detection

Motion detection at macroblock granularity
Motion vector information

Configuration support per stream

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

System Requirements

x86 Host Computer with 33MHz PMC site
5V from PMC mezzanine site

Mechanical

Standard 2.91 x 5.87 Single-width PMC Mezzanine form factor
IEEE 1386.1 form factor

Operational characteristics

Extended temperature -40°C to +85°C (option)

Software

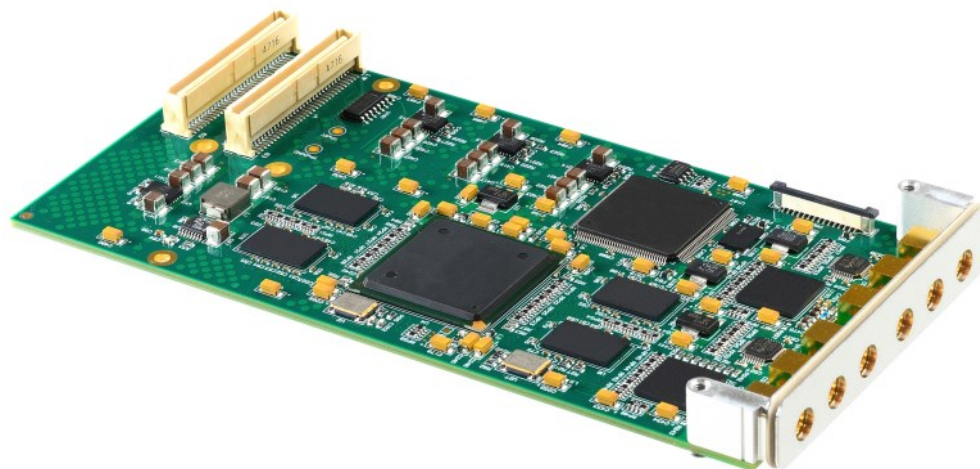
Drivers for Windows, Linux
Comprehensive video recording SDK
Sample video recording application in C/C++ source code

Related Products

H264-2SDI-PMC-VStream RTSP Video Streaming SDK

Ordering Information

H264-2SDI-PMC-EXT Video Encoder (-40°C to +85°C)

**H264-2SDI-PMC**