H264-HD-2SDI

Dual HD-SDI H.264 Encoder for PC/104-Express

Advanced Micro Peripherals
THE EMBEDDED VIDEO EXPERTS

The H264-HD-2SDI is an ultra low latency Dual channel H.264 encoder available on a single PC/104-Express form factor board. It allows system builders to easily add high definition HD-SDI video capture with H.264/MPEG-4 AVC (Part 10) encoding to their embedded PC equipment designs.



The H264-HD-2SDI accepts 2 SDI sources, supporting input video resolutions from 480p60 up to 1080p60. In addition to video, the H264-HD-2SDI offers extraction of KLV (MISB 0605.3 compliant) embedded data contained within the HD-SDI signal. The video and metadata are synchronized and transferred to the host system over the PC/104-Express bus.

The powerful H.264 encoding engine supports ultra low latency full frame rate encoding of two HD video sources at up to 1080p30. In single channel mode, the H264-HD-2SDI can encode at full 1080p60 and perform stream duplication of the video input to provide multiple encodings of the same input.

40ms Ultra low latency

1080p High definition

H.264 compression

Dual Channel

PRELIMINARY INFORMATION (Rev A.01)
Subject to change without notification

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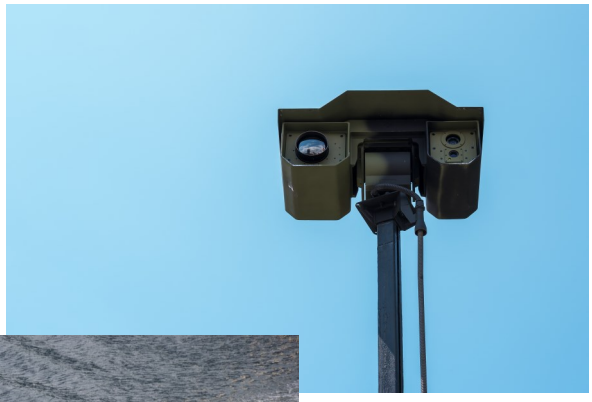
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EMBEDDED-PC PC/104 MODULES

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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

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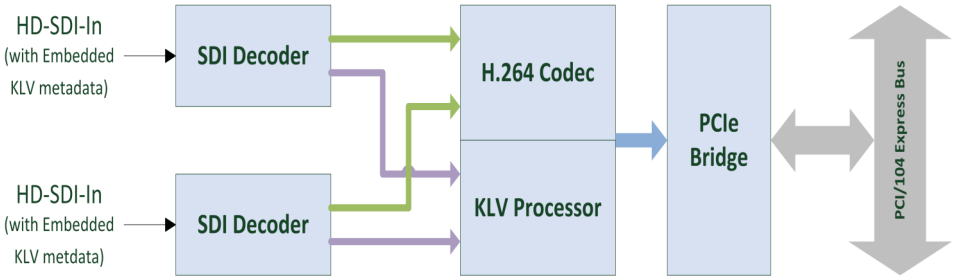
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H264-HD-2SDI Block Diagram

Real-time capture of High quality video and synchronized KLV metadata (MISB 0605.3)

Features

Dual channel encode at up 1080p30

Single channel encode at up to 1080p60

Dual SDI input

KLV extraction from SDI sources (MISB 0605.3 compliant)

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

Ultra Low Latency technology with a latency below 40ms

Intra-refresh to improve bandwidth utilization

Mulitple encodes of same input with different settings

PC/104-Express form factor

Drivers for Windows and Linux

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H264-HD-2SDI

Rev A.01

Dual HD-SDI H.264 Encoder for PC/104-Express

Technical Specification

PC/104-Express Bus Interface

Single x1 PCI Express Link

Video input ports

Dual SDI inputs with embedded KLV metadata

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

Less than 40ms encode latency

Video compression

H.264 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

KLV Metadata

Embedded KLV metadata captured from SDI input
MISB 0605.3 compliant
Synchronized with video

Bit rate control

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

Pre- and post-processing

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

Configuration support per stream

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

System Requirements

x86 PC-Compatible PCI104-Express Host Computer

Mechanical

Standard 3.6 x 3.8in PC/104-Express form factor

Operational characteristics

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

Software

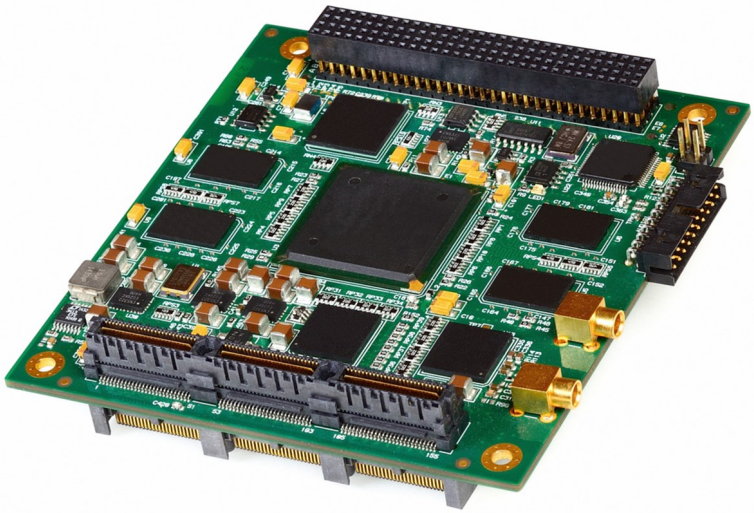
Drivers for Windows, Linux
Comprehensive video recording SDK
Sample video recording application in C/C++ source code

Related Products

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

Ordering Information

H264-HD-2SDI	Video Compression Card (0 to 60˚C)
H264-HD-2SDI-Ext	Video Compression Card (-40˚C to +85˚C)



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