

VCoderH264-HD-SDI

HD-SDI H.264 Video Encoder for PCIe/104



**Advanced Micro
Peripherals**

THE EMBEDDED VIDEO EXPERTS

The VCoderH264-HD-SDI is a High Definition H.264 video encoder on a single PCIe/104 expansion module. The VCoderH264-HD-SDI captures a HD-SDI input at up to 1080p60 and encodes it using the H.264 video compression standard. The single board solution is ideal for demanding applications in Military, Communications, Transportation, mining and Energy industries.



The VCoderH264-HD-SDI provides AAC audio encoding in addition to the H.264 video compression. Stereo audio embedded in the input HD-SDI source can be captured, encoded, and synchronized with the encoded video prior to transfer over the PCIe/104 bus. The VCoderH264-HD-SDI also supports extraction of KLV (MSB 0605.3 compliant) embedded data contained within the HD-SDI source. The KLV metadata is synchronised and captured with the compressed video.

The high performance, efficient video and audio encoding allows the VCoderH264-HD-SDI to use only a single x1 PCI Express Link. Multiple VCoderH264-HD-SDI can be used in a PCIe/104 system to allow multiple High Definition HD-SDI capture channels whilst leaving the system with spare bandwidth for other peripherals and expansion modules.

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Subject to change without notification

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**Real-time
capture of
High definition
video,
Audio,
and
Synchronized
metadata**



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The VCoderH264-HD-SDI is supported by a set of well-documented, comprehensive SDKs that minimize development risk and shorten time-to-market for applications in video recording, video streaming, and video analysis. The SDKS are available for both Windows and Linux



Applications

Unmanned vehicles (UAV, ROV)

Rugged video recorders for marine, aviation

Situational Awareness

Remote Video Surveillance

Border Security

Traffic Monitoring and Control

Video Acquisition and Analytics

Solid state multi-channel video and sensor recorders

H.264 encode
at up to 1080p60

Comprehensive
SDKs that shorten
time-to-market

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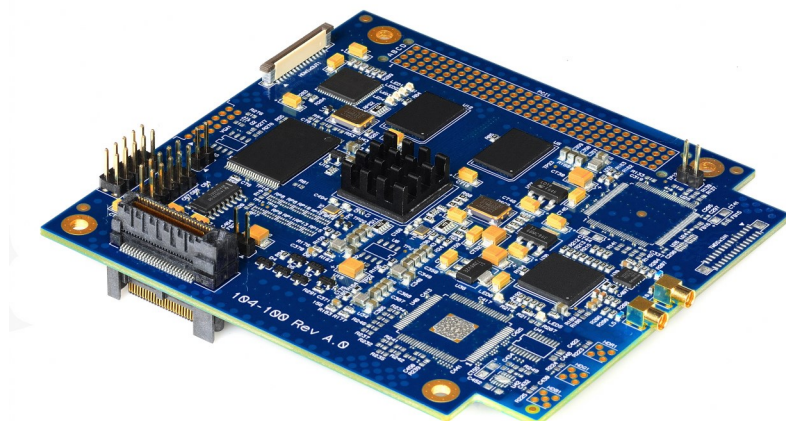
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VCoderH264-HD-SDI

Features

- 1x HD-SDI input up to 1080p60
- Real-time HD H.264 encode at 1080p60
- Stereo audio capture from HD-SDI
- KLV metadata extraction from HD-SDI
- Low power operation for long endurance
- Standard PCIe/104 form factor
- SDK and Drivers for Windows and Linux
- Power consumption less than 4W

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Ideally suited to
the demanding
applications, space
requirements and
environmental
conditions of
Military,
Transportation,
Mining and
Energy Industries



HD-SDI Video Input

Flexible Capture at up to 1080p60
HD-SDI monitor output

Audio Input

Embedded Audio captured from HD-SDI input
Provides Audio/Video synchronisation

H.264 Video Encoding

ITU-T H.264 (ISO/IEC 14496-10), supported profiles:
Baseline profile,
Main profile (I,P frame coding only)
High profile (I, P frame coding only) at level 4.1
Up to 1080p60 encode
CAVLC and CABAC coding
Supports Variable Bit Rate (VBR)
Supports Constant Bit Rate (CBR)

JPEG Encoding

JPEG (ISO/IEC 10918-1)
Baseline JPEG with JFIF support

Audio Encoding

AAC Audio Codec

KLV metadata Extraction

KLV capture from HD-SDI input
MSB 0605.3 Compliant

PCIe interface

Single x1 PCI Express Link using PCIe/104 OneBank™ connector
PCIe Gen 2.0

Mechanical

Standard 3.6 x 3.8in PCIe/104 form factor
Operating temp 0°C to 60°C
Operating temp -40°C to +85°C (extended temp option)
PCI-104 pass-through (option)

Power

Single +5V supply
Max power consumption < 4W

Software

Drivers for Windows and Linux
Sample video recording application in C/C++ source code

Ordering Information**VCODERH264-HD-SDI**

H.264 HD-SDI Video Encoder (0 to 60°C)

VCODERH264-HD-SDI-EXT

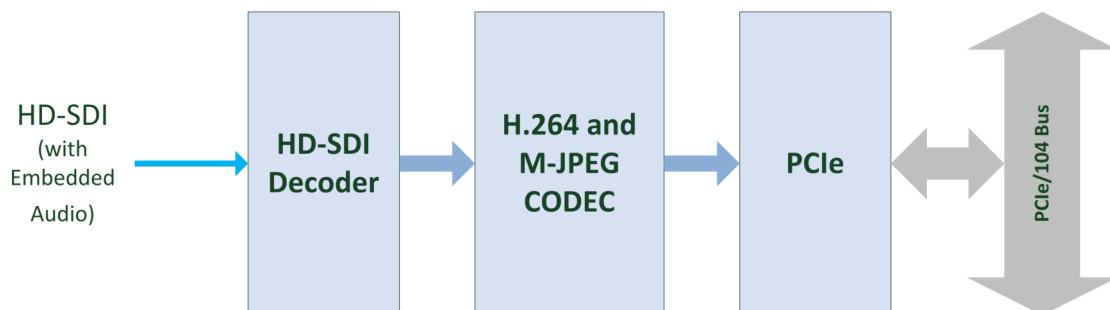
H.264 HD-SDI Video Encoder (-40°C to +85°C)

Related Products**VCODERH264-VSTREAM**

RTSP Video Streaming SDK

TINYATOM-DC/8G

PCI/104-Express Intel ATOM SBC (0 to 60°C)

**VCoderH264-HD-SDI Functional Diagram**