nanoH264-D4

4 Channel H.264 Encoder for miniPCI-express

Advanced Micro Peripherals
THE EMBEDDED VIDEO EXPERTS

The nanoH264-D4 is a 4 channel H.264 encoder on a single miniPCI-express card. The nanoH264-D4 provides a powerful and flexible solution for capturing and compressing 4 analog video inputs at full size and at full frame rate to either H.264 of M-JPEG encoding standards.

Real-time 4 x fullsize, full frame rate H.264 encode of PAL/NTSC/RS-170

The nanoH264-D4 allows high quality real-time video capture and compression from NTSC/PAL/RS-170 video sources for storage to disk and transmission over Ethernet networks.

The nanoH264-D4 is supported by comprehensive SDKs that minimize development risk and shorten time-to-market for applications in video streaming, recording, or routing. The SDKs are available for popular operating systems such as Windows and Linux.

PRELIMINARY INFORMATION (Rev A.02)
Subject to change without notification

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Windows® Embedded Partner

EMBEDDED-PC PC/104 MODULES

nanoH264-D4

4 Channel H.264 Encoder for miniPCI-express

Simultaneous

H.264

and

M-JPEG

encoding

Applications

Solid-State Digital Video Server

Vehicle-based Video Codec

Law Enforcement

Crime Scene Recording

Remote Video Surveillance

Multi-camera Security Application

Asset Monitoring

Traffic Monitoring and Control

Video Acquisition and Analytics

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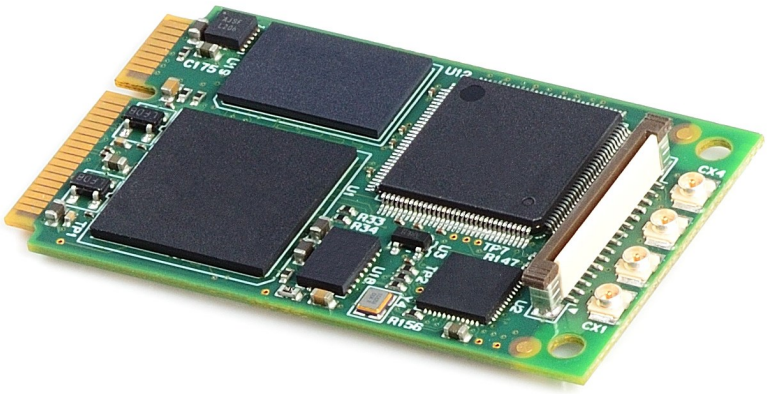

SWaP optimised for applications in the Military, Transportation, Mining and Energy Industries

Features

4 channel standard definition video encoding to H.264 from NTSC/PAL/RS-170 composite inputs

Real-time 4 x D1 H.264 Encode at full frame rate

H.264/MPEG-4 AVC Encoding (ISO/IEC 14496-10)

JPEG Encoding (ISO/IEC IS 10918-1)

SDK and drivers for Windows, Linux

Super Low Power operation (less than 4W)

Very small footprint miniPCI-express form factor.

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Technical Specification

mini-PCI Express Bus Interface

Full height MiniPCI-Express card
PCIe Gen 2.0
Live multi-stream H.264 capture to memory, disk, or network
4x NTSC D1 (720 x 480) at 30fps
4x PAL D1 (720 x 576) at 25fps

Analog Video Input

Up to 4 concurrent composite PAL / NTSC / RS-170 video inputs
Four 10-bit Analog-to-Digital converters
Anti-aliasing filters on inputs

Video Input Formats

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

Software configurable Contrast (luma gain), Saturation (chroma gain) , Hue (chroma phase) and Brightness (luma level)

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

Supports I and P Frame Compression
Supports Variable Bit Rate (VBR)
Supports Constant Bit Rate (CBR)

JPEG Video Encoding

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

System Requirements

x86 Host Computer with spare miniPCI-Express socket

Miscellaneous

Standard full height miniPCI-Express form factor
Operating temp 0˚C to 60˚C
Operating temp –40˚C to +85˚C (extended temp option)

Software Drivers

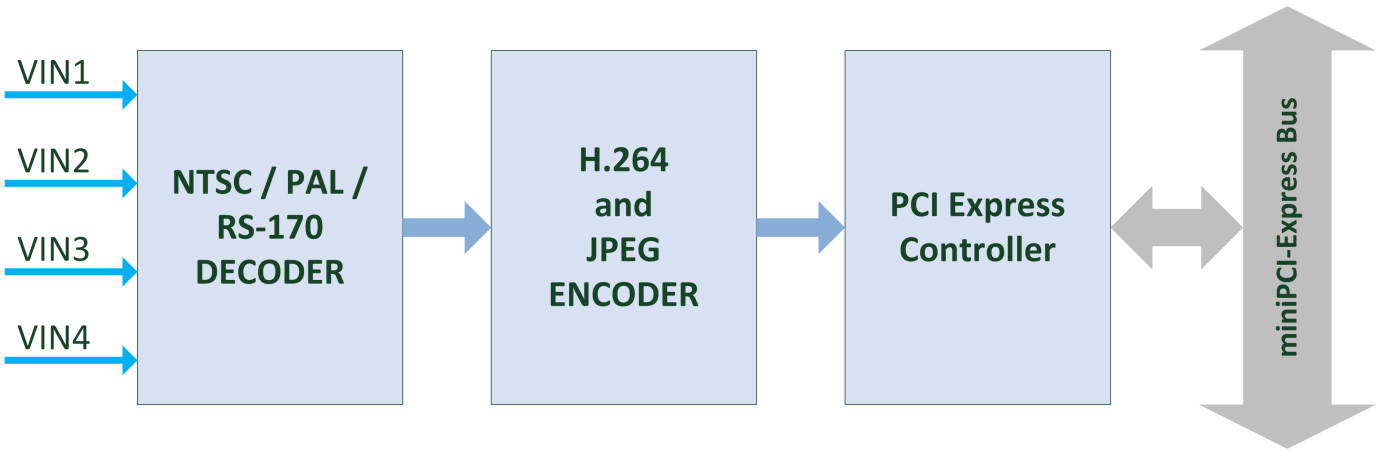
Drivers for Windows and Linux (other OS by request)
Sample video recording application in C/C++ source code

Related Products

nanoH264-D4-VStream	RTSP Video Streaming SDK

Ordering Information

nanoH264-D4	H.264 Video Codec (0 to 60˚C)
nanoH264-D4-Ext	H.264 Video Codec (-40˚C to +85˚C)



nanoH264-D4 Functional Diagram

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