

VCODEC-H264-D4X

Quad Channel H.264 Codec for PC/104-Plus



**Advanced Micro
Peripherals**

THE EMBEDDED VIDEO EXPERTS

The VCODEC-H264-D4CX is a 4-channel H.264 (MPEG-4 Part 10 AVC) codec on a single PC/104-Plus form factor module. The VCODEC-H264-D4X provides a powerful and flexible solution for capturing and compressing up to 4 analog video inputs at full size and frame rate to the H.264 digital video standard.



The VCODEC-H264-D4X not only provides H.264 compression but can also simultaneously decompress and replay recordings from storage to display.

The VCODEC-H264-D4X allows high quality real-time video and audio capture and compression from NTSC/PAL video sources to disk and simultaneously provides an additional path for uncompressed video for on-screen preview or optional downstream video analytics. The high performance H.264 video data compression and efficient bus utilization allow up to four VCODEC-H264-D4 cards to be fitted in a PC/104-Plus system with spare band-width for other collaborating peripherals.

PRELIMINARY INFORMATION (Rev A.00)

Subject to change without notification

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



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The VCODEC-H264-D4X is supported by a set of well-documented comprehensive SDKs that minimize development risk and shorten time-to-market for applications in video streaming, recording, or routing. The SDKs are available for Windows and Linux.



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

Simultaneous

H.264

Record and

Playback

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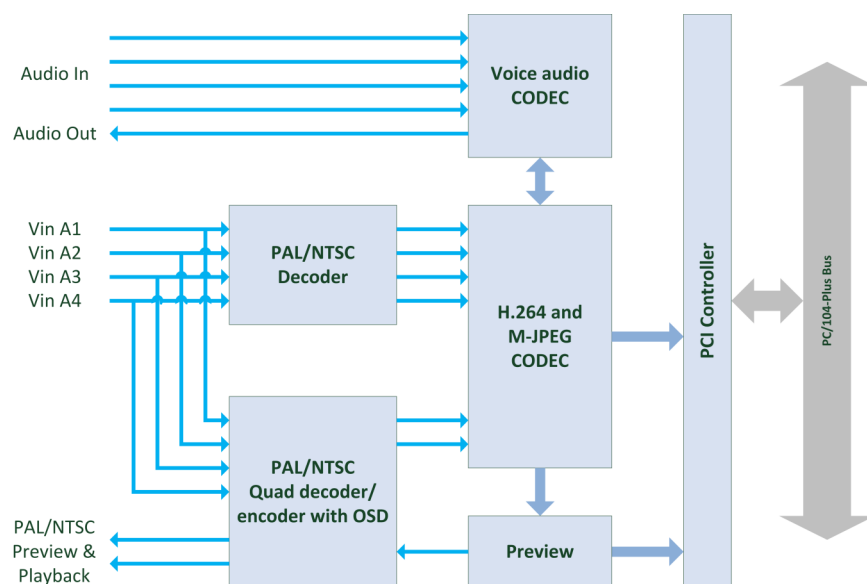
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VCODEC-H264-D4X Block Diagram

Text and graphics
overlay

Features

Live input from NTSC/PAL

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

Real-time 4 x Motion-JPEG Encode at full frame rate

Quad Encoding of 4 inputs into a single 4CIF stream

H.264 Decode/Playback

Text/graphics overlay on Recording

Video preview to system VGA and analog NTSC/PAL output

4 x mono audio input channels

Up to 4 VCODEC-H264-D4X cards per system

Compact 3.6" x 3.8" PC/104-Plus stackable card.

Drivers for Windows and Linux

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PC/104-Plus Bus Interface

Compliant with PCI Rev 2.1
 132MBytes/sec bandwidth at 33.33 MHz bus speed
 Live H.264 capture to memory or disk
 Concurrent H264 Capture and live preview

Analog Video Input

Up to 4 concurrent composite PAL or NTSC video input channels
 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

Contrast (or luma gain) adjustable from 0 - 200% of original
 Saturation (or chroma gain) adjustable from 0 - 200% of original
 Hue (or chroma phase) adjustable from -180° to +180°
 Brightness (or luma level) can be adjusted from -25 to +25 IRE
 Software adjustable Sharpness, Gamma and noise suppression

Audio Input

4x mono input
 Provides Audio/Video Synchronisation

Video Encoding

ITU-T H.264 (ISO/IEC 14496-10, Baseline profile, level 3)
 M-JPEG Video Encoding (optional)
 4 channel NTSC 4CIF (704 x 480) at 30fps
 4 channel PAL 4CIF (704 x 576) at 25fps
 Supports I and P Frame Compression
 Supports Variable Bit Rate (VBR)
 Supports Constant Bit Rate (CBR)

Audio Encoding

G.723 Audio Codec

Video Decoding / Playback

Real-time H.264 Video Decoding
 Playback to Composite PAL/NTSC output (optional)

Uncompressed Video Path

Real-time Preview to host VGA display
 Optional Preview to Composite PAL/NTSC output

System Requirements

x86 PC-Compatible PC/104-Plus Computer
 PCI Display (if Video Preview to host is required)
 Spare REQ/GNT on PC/104-Plus Bus
 3.3V signalling PC/104-Plus bus

Miscellaneous

Single +5V supply
 Operating temp 0°C to 60°C
 Operating temp -40°C to +85°C (extended temp option)
 Standard 3.6 x 3.8in PC/104-Plus form factor

Software Drivers

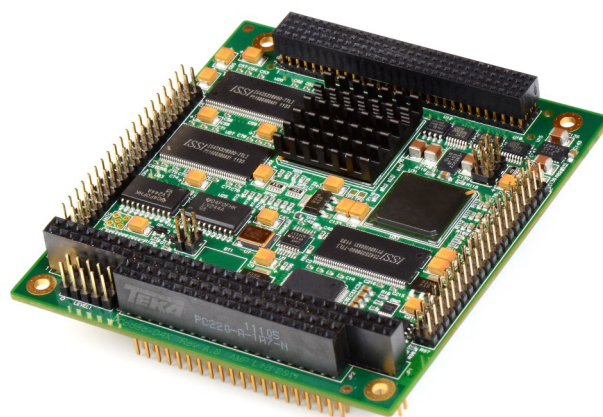
Drivers for Windows and Linux
 Sample video recording application in C/C++ source code

Related Products

VCH264D4X-VStream RTSP Video Streaming SDK

Ordering Information

VCODEC-H264-D4X H.264 Video Codec (0 to 60°C)
 VCODEC-H264-D4X-Ext H.264 Video Codec (-40°C to +85°C)

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