The H264ULL-DECODER is an ultra low latency, quad channel, H.264 decoder on a single PCI/104 form factor board. The H264ULL-DECODER provides a powerful solution for decompressing up to 4 H.264/MPEG-4 AVC (Part 10) encoded streams to analog NTSC/PAL composite displays.

The H264ULL-DECODER is an ideal companion to Advanced Micro Peripherals range of Ultra Low Latency H.264 encoder products. When combined with a card such as the H264-ULL-SD4 the H264-ULLDECODER can be used to create an ultra low latency video streaming solution with a glass to glass latency of less then 100mS.

The high performance H.264 video decompression and efficient bus utilization allows the H264ULL-DECODER to do multiple channel, low latency decoding when hosted on a low power, fanless CPU board.

The H264ULL-DECODER is supported by a set of well-documented and established SDKs that minimize development risk and shorten time to market for applications requiring video playback.

PRELIMINARY INFORMATION (Rev A.00)
Subject to change without notification
H264ULL-DECODER

Ultra Low Latency Quad H.264 Decoder

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
H264ULL-DECODER

Ultra Low Latency Quad H.264 Decoder

Features

Real time 4x full size H.264 decode at full frame rate
Composite NTSC/PAL/RS-170 video output
H.264/MPEG-4 AVC (Part 10) decoder
Ultra Low Latency technology with a latency below 40ms
Up to four H264ULL-DECODER boards per system
Standard PCI/104 form factor
Drivers for WinXP-E and Linux
H264ULL-DECODER
Ultra Low Latency Quad H.264 Decoder

PCI/104 Bus Interface
Compliant with PCI Rev 2.1
132 MBytes/sec bandwidth at 33.33 MHz bus speed
Single +5 V supply

Analog Video Output
4 composite NTSC/PAL/RS-170 video output channels
10-bit DAC per channel

Video Output Formats
Standard CCIR601-NTSC, CCIR-PAL
NTSC-M, RS-170, PAL-B/G

Ultra Low Latency
Less than 40ms decode latency

Video Decoding
H.264 ISO/IEC 14496-10 baseline and Main Profile up to L4.2
Real-time multi stream H.264 Ultra Low Latency decompression
4 channel NTSC D1 (720x480) at 30fps
4 channel PAL D1 (720x576) at 25fps

Configuration support per output
Video Standard

System Requirements
x86 PC-Compatible PCI/104 Computer
Spare REQ/GNT on PCI/104 Bus
3.3V signalling PCI/104 bus

Mechanical
Standard 3.6 x 3.8in PCI/104 form factor

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

Software
Drivers for Win-XP, Linux
Comprehensive video recording SDK
Sample video decoding application in C/C++ source code

Ordering Information
H264ULL-DECODER Video Decoder Card (0 to 60˚C)
H264ULL-DECODER-Ext Video Decoder Card (-40˚C to +85˚C)

4-channel, Low Latency Video Streaming application