



TRIPLE CHANNEL CAPTURE & ENCODING

Advanced Capture & IP Streaming Technology

+ HIGH PERFORMANCE ENCODING

Capturing and encoding video for digital streaming or storing is a key requirement for the professional AV market. Users need to be able to capture video and not only send the data to the screen but transport compressed video to online resources or to storage locations for remote access or later retrieval. The Datapath VisionHD2-SQX is an advanced video capture card with SQX technology that allows captured video to be encoded into H.264.

Featuring three independent capture channels the VisionHD2-SQX allows users to capture two high definition 1920x1080p video feeds and directly encode them into H.264 using the dedicated SQX processor. Each encoded video can be utilized by the SQX media server for distribution over a network. In addition raw captured video can be rapidly transferred to graphics hardware or system buffers for viewing or further processing.



+ DATAPATH SQX TECHNOLOGIES

Datapath's SQX encoding technology uses the global H.264 standard for video compression and streaming. Multiple streams of captured video can be simultaneously encoded and streamed to different locations. The VisionHD2-SQX can capture two 1080p channels, the encoding engine can encode one channel

at 60 fps or both at 30 fps, allowing one stream to be broadcast over the internet and another to be stored to disk. A single stream can be distributed to any number of network locations all configured through a media server.

+ VISION PERFORMANCE FEATURES

Datapath's Vision cards come complete with a suite of Vision performance features. Included is MultiStream technology allowing multiple instances of the same capture to be used independently. MultiStream for SQX allows the same input to be encoded multiple times each with different properties. Crop or scale individual streams for encoding to suit the project needs. Use MultiStream to encode a 1080p stream for disk storage whilst encoding a 720p stream for online transmission. Input Mode detection technologies combined with SQX means that input sources can be switched without interruption to the encoding process.

To view the full range of Vision Features, please visit our website.

+ SPECIFICATIONS

Board Format
PCIe x8 plug-in card

Connectors
Three channel input: 2 x DVI-I, 1 x RCA (female)

HDMI Capture
Support HDMI 1.3 to 225MHz HDMI, audio source can be selected for audio streaming. TMDS equalizer for 20m cable support

DVI Capture
Supports DVI 1.0 RGB 24bit capture to 165Mhz. TMDS equalizer for 20m cable support

VGA /YPbPr Capture
Triple ADCs sampling up to 170MSPS. Full 4:4:4 sampling, 8 bits per colour 5-wire, 4-wire or sync-on-green signal formats

Composite Video Capture
CCIR601 sampling. PAL, NTSC, SECAM formats with auto detection

Audio Capture
Stereo Line-In / Stereo Balanced inputs with programmable gain (+/-12dB) 16 bit sampling at 44.1/48/96kHz. Digital audio can be captured from both HDMI channels Analog stereo line-out for direct pass-through of selected input at up to 64kHz sampling, sourced from analog input or HDMI channel

Video Capture Memory
512MB high bandwidth frame buffer supports triple buffering of HD and SD video. Local storage of complex scatter-gather tables for DMA engine

+ SPECIFICATIONS CONT'D

Video Processing

Polyphase FIR scaling engine (3x3) for hardware down-scaling and up-scaling. Colour space conversion allows captured data to be transferred in any format RGB: 16bit (5-5-5, 5-6-5, 24bit (8-8-8) or 32bit (8-8-8-alpha) YUV: 16bit (4:2:2) Mono: 8bit

Encoder

H.264. Single channel compression, 1080p 60fps. Dual channel compression 1080p 30fps

H.264 Profiles

Baseline Profile (BP) / Main Profile (MP) / High Profile (HiP)

H.264 Levels

Level 4.1 / Level 4.2

Max video coding bit rate

BP/MP 50,000kbps / HiP 62,500kbps

DMA Engine

Direct DMA to physical or virtual memory buffers with full scatter-gather support. DMA bandwidth: up to 800MB/s 16 independent DMA streams per HD channel including any mix of HD and SD sources, colour space, cropping and scaling parameters

OS Support

Windows Vista / 7 / 8 / 8.1 Windows Server 2003 / 2008 / 2012

Power requirements

Max power ≈ 18W (TBC)

Operating Temp

0 to 35°C / 32 to 96°F

Storage Temp

-20 to 70°C (-4 to 158°F)

Relative Humidity

5% to 90% non-condensing

We are continuously developing the technology used within our product ranges delivering outstanding innovative solutions, therefore the specification may change from time to time.

+ MODELS AVAILABLE

Order Code: VisionHD2-SQX

Triple channel encoding and decoding card

All products are shipped with the latest software available, unless stated otherwise.