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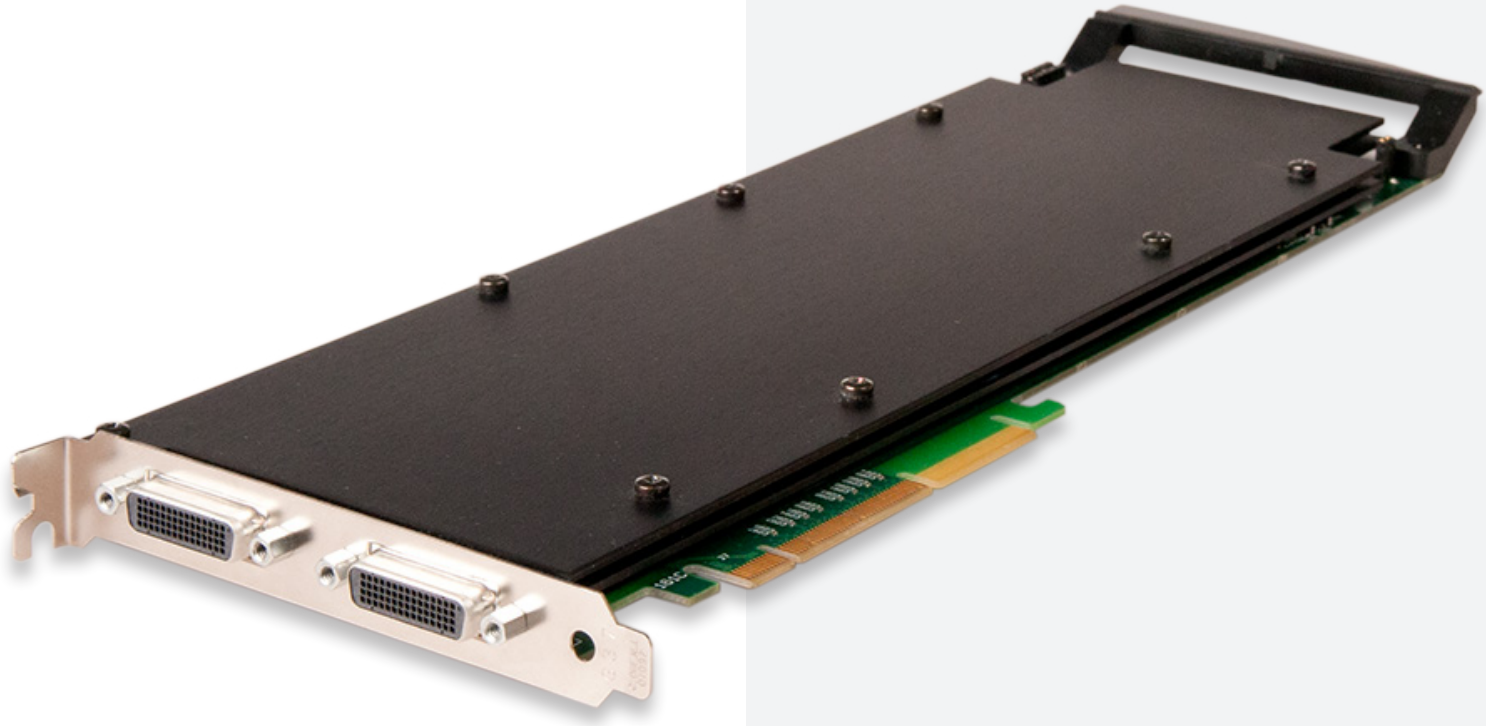
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VisionHD4

Quad channel capture card



HIGH PERFORMANCE CARD

The VisionHD4 is a high end, four channel, high definition video capture card delivering high performance and flexibility in demanding environments.

The VisionHD4 has four independent video capture channels, supporting high definition capture and analogue video. The signals are input on four DVI-I connectors and can support HDMI, DVI, VGA and analog component (YbPr) at all resolutions up to 4096 x 2048, at 165 MHz Pixel Clock (digital modes) or 170 Msps in analogue modes.

The VisionHD4 captures all four video channels simultaneously and triple buffers them into onboard storage for tear free video, alongside an audio stream that can be selected from four of the HDMI audio ports. This data can then be processed and copied using DMA transfers to the host system for display, storage or streaming.

FEATURES

General capture card features

- 8 Lane PCI Express Gen.3 bus
- 3.2 GB/s total capture bandwidth in 4 PCIe lanes Gen.3 or 8 Lanes Gen.2
- Frame buffer memory 4 x 256 MB
- Datapath unified Windows® and Linux driver support

Quad DVI-I capture channel

- Max resolution up to 4096 x 2048, at 165 MHz Pixel Clock (Digital modes) or 170 Msps in analog modes
- HDMI audio capture with streaming from each DVI channel
- ~800 MB/s bandwidth per capture processor, 3.2GB/s for the card

Engineering the **world's best** visual solutions

DATAPATH
EXCELLENCE BY DESIGN

Professional video capture card

SOFTWARE CAPABILITIES

Timestamp support for streaming synchronisation

- Synchronisation of multiple inputs across multiple cards
- Synchronise systems using network clock synchronisation
- For edge blending and other applications

Flexible and configurable EDID Management

- Allows programming of custom EDID parameters for capture cards

AUDIO FEATURES

- HDMI audio capture and streaming from each DVI channel
- Supports audio capture to the PCI Express bus at popular sample rates from 44.1 to 96k samples/s at 16 bits/sample
- The card supports playback and mixing of HDMI embedded audio

To see our full range of Vision features, please visit our product section on our website **www.datapath.co.uk**.

GRAPHICS CARD INTEGRATION

When the VisionHD4 is used with a Datapath graphics card, it is able to transfer the data directly to the graphics card thereby increasing performance and allowing both sources to be viewed at full frame rate.

When the video data is displayed on a non-Datapath graphics card, the VisionHD4 may still be able to boost performance by using the graphics card's DirectGMA interface to transfer directly to its off-screen memory, for example AMD DirectGMA and Nvidia GPUDirect. This is dependent upon the graphics card driver software capabilities.

The VisionHD4 is an ideal solution for applications that require both a real time camera feed, with synchronised audio, as well as high resolution image capture at full frame rates.

DATAPTH VISION SOFTWARE

The VisionHD4 is supplied with a powerful software application for configuring the format of the input sources and displaying the data.

Simply connect your video source into the card, run the VisionHD4 application to automatically detect the video source format and display the captured video in a window on your desktop.

Low input to output capture latency

- DMA to third party graphics vendors back and front buffers via Direct3D
- Compatibility with AMD DirectGMA
- Compatibility with Nvidia GPUDirect

User Mode filter for source selection

- Enables cropping support in DirectShow on all inputs
- Supports Start and Stop trigger interface on all Vision inputs

Datapath Unified Vision Driver

- Multiple cards per system, 16 streams per input
- Frame sync and time stamping
- DirectShow interface
- The RGBEasy API for advanced audio and video control
- Fully integrated for use with Datapath Wall Control software for video wall applications

COMPATIBILITY

The VisionHD4 is supported by the following operating systems: Linux, Windows® XP, Windows Vista, Windows Server 2003, Windows Server 2008, Windows 7, Windows 8/8.1 and Windows 10.

Datapath SDK is included for software developers.

Professional video capture card

SPECIFICATION

BOARD FORMAT
Full size, 8 Lane PCIe 3.0 interface PCI Express card, 111mm x 312mm

CONNECTORS
Two DMS59 high density video connectors

MAXIMUM SAMPLE RATE
S800 MB/s bandwidth per capture processor, 3.2 GB/s for the card

VIDEO SAMPLING
24 bits per pixel / 8-8-8 format

VIDEO CAPTURE MEMORY
256MB per capture channel, triple buffered

ANALOG RGB MODE SUPPORT
640 x 480, 800 x 600, 1024 x 768, 1280 x 1024, 1600 x 1200, 1920 x 1080, 1920 x 1200, custom modes

DVI SINGLE LINK MODE SUPPORT
640 x 480, 800 x 600, 1024 x 768, 1280 x 1024, 1600 x 1200, 1920x1080, 1920 x 1200, and custom modes

HD MODES
1080p,1080i, 720p, 576p, 576i, 480p and 480i using a Component-DVI connector For HDCP support, contact the Sales Department for more information

INPUT MODE DETECTION
Automatic detection of input modes in hardware, enabling the tracking of mode changes in the source signal. DirectShow streams are maintained at a fixed resolution across mode changes

PIXEL TRANSFER FORMATS
RGB: 5-5-5, 5-6-5 or 8-8-8 (24bit/32bit) pixels
YUV: 4:2:2
MONO: 8bit

UPDATE RATE
User defined, captured frame rate will match the source providing max data rate (800MB/s) is not exceeded
Multi-buffered to eliminate tearing artifacts

VIDEO FORMAT OPTIONS
Analogue RGB plus HSync and VSync (5 wire)
Analogue RGB with Composite Sync (4 wire)
Analogue RGB with Sync on Green/YPbPr (3 wire)
DVI Single Link. HDMI 1.3

POWER REQUIREMENTS
Max current at 12V – 1.9A
Max current at 3.3V – 2.5A
Max power – 31W

OPERATING TEMPERATURE
0 ºC to 35 ºC / 32 ºF to 96 ºF

STORAGE TEMPERATURE
-20 ºC to 70 ºC / -4 ºF to 158 ºF

RELATIVE HUMIDITY
5% to 90% non-condensing

WARRANTY
3 years

MODELS AVAILABLE

Order Code: VisionHD4
Quad Channel HDMI/ DVI/ RGB/ YPbPr capture card

Order Code: DVI/ VGA
DVI-A to VGA adapter

Order Code: DVI/ COMPONENT
DVI to YPbPr adapter

Order Code: DVI/ HDMI
DVI to HDMI adapter

** Adapters for other types of video connectors such as DVI/HDMI, DVI/VGA or DVI/Component are not included with the VisionHD4 but are available from Datapath, contact our Sales team for details.*

All products are shipped with the latest software available, unless stated otherwise. Special requirements may be organised by contacting our Sales team.

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