# VisionHD4

## Quad Channel Capture Card
### Advanced Graphics Display Technology



## DESCRIPTION

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 analogue Component (YPbPr) 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
- 4 x Datapath capture processors
- Frame buffer memory 4 x 256 MB
- All standard Vision Range features
- Datapath unified Windows and Linux driver support

### Quad DVI-I Capture Channel:

- HDMI / DVI / RGB / YPbPr Video Capture
- Maximum resolution up to 4096 x 2048, at 165 MHz Pixel Clock (Digital modes) or 170 Msps in analogue modes.
- HDMI audio capture with streaming from each DVI Channel
- ~800 MB/s bandwidth per capture processor, 3.2GB/s for the card

## VIDEO STREAMING

DirectShow drivers for WDM Streaming driver supports the following applications, to encode, record and stream video over networks or the Internet:

- Microsoft Media Encoder®
- VLC
- VirtualDub
- Any other DirectShow encoding software

For streaming applications, the VisionHD4 can be used with Windows Media Encoder to compress and stream captured video. To replay the video, use Windows® Media Player.

Any application compatible with Windows® DirectShow technology can use the VisionHD4 due to it built-in WDM support.
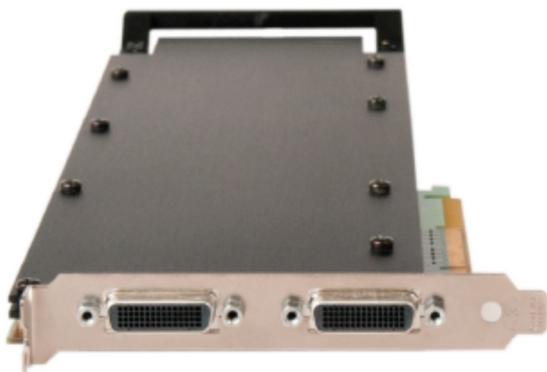
## AUDIO FEATURES

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 96 ksamples/s at 16 bits/sample. The card supports playback and mixing of HDMI embedded audio.

## DATAPATH 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.
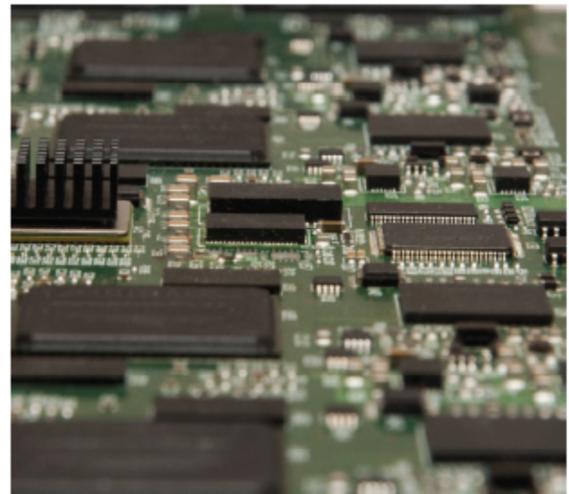
## SOFTWARE CAPABILITIES

**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 fo Capture cards

**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

## MULTISTREAM

Datapath's MultiStream feature is available on all Datapath Capture cards and enables multiple independently formatted video streams to be setup in parallel.

Each stream can be formatted completely independently and individual selection of resolution, colour space, and cropping region can be set for each stream. This maximizes bandwidth utilisation of the capture card PCIe interface, and also simplifies development tasks for application developers who does not need to implement video stream reformatting separately

## 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.

## MODELS AVAILABLE

| Product Name/ Order Code | Description |
|---|---|
| VisionHD4 | Quad Channel HDMI / DVI / RGB / YPbPr Capture Card |

*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*

## ACCESSORIES AVAILABLE

| Product Name | Description |
|---|---|
| DVI/VGA | DVI-A to VGA adapter |
| DVI/ HDMI | DVI to HDMI adapter |
| DVI/ COMPONENT | DVI to YPbPr adapter |

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

*Special requirements may be organised by contacting our Sales team.*