

Advanced Graphics Display Technology

VisionSD4+1



- Four channel SD Video + one channel RGB/DVI/HD capture card
- Four Lane PCIe interface with a maximum data rate of 480MB/sec
- Maximum analog RGB capture resolution of 2048 x 1536 x 24bit
- Maximum DVI capture resolution of 1920 x 1200 x 24bit
- HD modes using the supplied DVI/ Component Adapter or DVI/HDMI Adapter (HDCP not supported)
- Four SD capture channels for PAL/NTSC, SECAM (composite or S-Video inputs)
- On card processor for real time mode and sync detection
- Support for multiple cards allowing up to 64 SD capture channels + 16 DVI-I capture channels. (16 cards)
- Direct DMA driver software and streaming driver
- High quality down scaling
- Support for YUV 4:2:2, RGB 5:5:5, 5:6:5 and 8:8:8 video formats
- High performance DMA to system memory or direct to graphics memory with scatter gather
- Support for separate H/V sync, Composite sync or Sync on Green
- Includes WDM streaming drivers and the Datapath Vision application software
- Fully integrated with the Datapath Wall Control software for video wall applications.
- Support for Windows® XP/Vista/Server 2003/Server 2008/Windows® 7
- Datapath SDK included for software developers

The VisionSD4+1 is an ideal solution for applications that require the capture of an RGB/DVI source simultaneously with up to four SD video sources. Typical applications include:

- Viewing Analog or DVI sources from PCs, MACs, Industrial/medical equipment, cameras and other video equipment
- Streaming video applications
- Video/Data Wall Controllers

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RGB Streaming

For streaming applications, the VisionSD4+1 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 VisionSD4+1 due to its built-in WDM support.

Vision Software

The VisionSD4+1 is supplied with a powerful software application for configuring the timing and format of the input sources and displaying the data. Simply connect your external DVI, Analog or video source into the card, run the VisionSD4+1 application to automatically detect the video source format and display the captured video in a window on your desktop.

Hardware Overview

The VisionSD4+1 has five complete capture channels supporting a single channel for up to 1920x1080 DVI or 2048x1536 Analog resolution, plus four SD analog capture channels.

The VisionSD4+1 captures the Analog/DVI data and triple buffers it into onboard storage. This data is then copied using DMA to the host system for display, storage or streaming.

When a Datapath graphics card is used, the VisionSD4+1 transfers the data directly to the graphics card thereby increasing performance. The VisionSD4+1 sends the relevant portions of each captured image to each display channel and instructs each channel to use its graphics engine to render the data. This fully utilises the hardware and dramatically increases performance.

When the RGB/DVI data is displayed on a non Datapath graphics card, the VisionSD4+1 sends the data to system memory or direct to the graphics card, dependant on the software used for display.

Models

VisionSD4+1 - A five channel PCI Express capture card. Supplied with 1 x SD4-Cable, 1 x DVI/VGA Adapter, 1 x DVI/HDMI Adapter and 1 x DVI/Component Adapter.

Related Products

VisionRGB-E1/E2, VisionSD8 and Express9

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Specifications:

- **Board Format:** PCI-e x4 plug-in card, 110mm x 204mm
PCI-e bus master with scatter gather DMA providing maximum data rate of 480MB/s
- **Connectors:** One DVI-I type connector and one D connector for SD inputs
- **Maximum Sample Rate: (RGB/DVI)** 170Mpixels per second analog RGB or 165 MHz DVI
Analog modes up to 340MHz pixel clock can be captured using dual-pass sampling
- **Video Sampling:** RGB: 24 bits per pixel / 8-8-8 format
Video: 16bits per pixel/YUV format
- **SD Maximum Capture Resolution:** 720x576x16bit
- **Video Capture Memory:** 64 MB, triple buffered
- **Analog RGB Mode Support:** 640x480, 800x600, 1024x768, 1280x1024, 1600x1200, 1920x1080, 2048x1536, custom modes.
- **DVI Single Link Mode Support:** 640x480, 800x600, 1024x768, 1280x1024, 1600x1200, 1920x1080, 1900x1200 and custom modes.
- **HD Modes** 1080p, 1080i, 720p, 576p, 576i, 480p and 480i using the supplied DVI/ Component Adapter or DVI/HDMI Adapter (HDCP not supported).
- **Input Mode Detection:** Automatic detection of input modes in hardware, enabling the tracking of mode changes in the source signal.
- **Pixel Output Formats:** RGB: 5-5-5, 5-6-5 or 8-8-8 (24bit/32bit) pixels.
YUV: 4:2:2
- **Update Rate:** User defined, captured frame rate will match the source providing max data rate (480MB/s) is not exceeded.
Multi-buffered to eliminate tearing artifacts
- **Video Format Options:** Analog RGB plus HSync and VSync (5 wire).
Analog RGB with Composite Sync (4 wire).
Analog RGB with Sync on Green/YPbPr (3 wire).
DVI Single Link.
PAL, NTSC, SECAM or S-Video for SD inputs
- **Operating System Support** Windows® XP Professional (x32 and x64), Windows® Server 2003 (x32 and x64), Windows Vista® (x32 and x64), Windows® Server 2008 (x32 and x64) and Windows 7®.
- **Warranty** 3 years

Datapath VisionSD4+1

HD/SD Video Capture Card

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- Power Requirements: Max current at +3.3V – 0.25A
 Max current at +12V – 1.2A
 Max power – 15 Watts
- Operating Temperature: 0 to 35 deg C.
- Storage Temperature: -20 to 70 deg C.

For details on how to purchase the VisionSD4+1 contact our sales department sales@datapath.co.uk

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