VisionSD4+1S

HD/SD Video Capture Card
Advanced Graphics Display Technology

PCI Express	RGB 2048x1536
HD 1080p	PAL
HDMI 1080p	NTSC
DVI - 1920x1200	SECAM
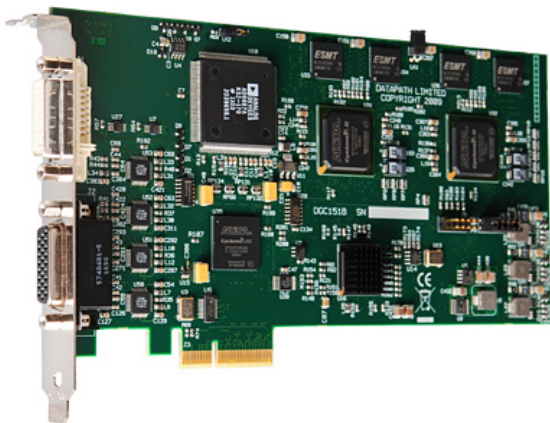
DESCRIPTION

The VisionSD4+1S has five complete capture channels supporting a single channel for up to 1920x1080 DVI or 2048x1536 Analog resolution, plus four SD composite or S-video capture channels. Also supporting a SD maximum capture resolution of 720 x576 x 16bit.

The VisionSD4+1S 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+1S transfers the data directly to the graphics card thereby increasing performance. The VisionSD4+1S 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+1S sends the data to system memory or direct to the graphics card, dependent on the software used for display.

The VisionSD4+1S 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 a PCs, MACs, Industrial/ medical equipment, cameras and other video equipment
- Streaming video applications
- Video/ Data wall controllers

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FEATURES

- **Four channel SD Video + one channel RGB/DVI/HD capture card**

- **Four Lane PCIe interface with a maximum data rate of 650MB/sec for the VisionSD4+1s compared to the VisionSD4+1 at 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 128 SD capture channels + 32 DVI-I capture channels. (32 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 Controlred software for video wall applications.**

- **Support for Windows® XP/Vista/Server 2003/ Server 2008/Windows® 7**

- **Datapath SDK included for software developers**

RGB STREAMING

For streaming applications, the VisionSD4+1S 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® Direct-Show technology can use the VisionSD4+1s due to its built-in WDM support.

SOFTWARE

The VisionSD4+1S 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+1S application to automatically detect the video source format and display the captured video in a window on your desktop.

MODELS AVAILABLE

Code	Description
VisionSD4+1	4 Channel Video and 1 Channel RGB/DVI/HD capture card, PLUS 1 x SD4-cable. PLUS 1 x DVI/VGA, 1 x DVI/component and 1 x DVI/HDMI adapters
VisionSD4+1S	4 Channel Video and 1 Channel RGB/DVI/HD capture card, PLUS 1 x SD4-cable. PLUS 1 x DVI/VGA, 1 x DVI/component and 1 x DVI/HDMI adapters

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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SPECIFICATION

Board Format	PCI-e x4 plug-in card, 110mm x 204mm. PCI-e bus master with scatter gather DMA
Connectors	One DVI-I type connector and one D connector for SD inputs
Maximum Sample Rate	170Mpixels per second analog RGB or 165 MHz DVI. Analog modes up to 340MHz pixel clock can be captured using dual-pass sampling.
Maximum Sample Rate	VisionSD4+1 480MB/s VisionSD4+1s 650MB/s
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	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 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 (650MB/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 in composite or S-Video format for SD inputs
Operating System Support	Windows® XP, Windows® Vista, Windows® Server 2003, Windows® Server 2008 and Windows® 7.
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 / 32 to 96 deg F
Storage Temperature	-20 to 70 deg C / -4 to 158 deg F
Relative Humidity	5% to 90% non-condensing.

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

MAIN SALES DEPARTMENT

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