VisionRGB-E2S

Dual Channel RGB/DVI/HD Capture Card
Advanced Graphics Display Technology

DESCRIPTION

The VisionRGB-E2S has two complete capture channels supporting up to 1920x1080 DVI or 2048x1536 Analog resolution.

The VisionRGB-E2S 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 VisionRGB-E2S transfers the data directly to the graphics card thereby increasing performance. The VisionRGB-E2S 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 VisionRGB-E2S sends the data to system memory or direct to the graphics card, dependant on the software used for display.

The VisionRGB-E2S is an ideal solution for applications that require the capture of Analog or DVI sources in real time.

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

STREAMING SUPPORT

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

- Microsoft Media Encoder®
- VLC
- StreamPix
- VirtualDub
- Adobe Flash Encoder
- AMCap
- Any other Direct Show encoding software

FEATURES

- Dual channel RGB/DVI/HD capture card (PCI Express)

- Four Lane PCIe interface with a maximum data rate of 650MB/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)

- On card processor for real time mode and sync detection

- Support for multiple cards allowing up to 32 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

- 16 cropping windows per capture channel

- Includes WDM streaming drivers and the Datapath Vision application software

- Fully integrated with the Datapath Wall Control software for video wall applications.

- VisionRGB-E2S is also optimised for operation with the Datapath range of graphics cards

- Support for Windows® XP/Vista/Server 2003/ Server 2008/Windows® 7/ Windows® 8 and Linux

- Datapath SDK included for software developers

RGB STREAMING

For streaming applications, the VisionRGB-E2S 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 VisionRGB-E2S due to its built-in WDM support.

SOFTWARE

The VisionRGB-E2S 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 or Analog source into the card, run the VisionRGB-E2S application to automatically detect the video source format and display the captured video in a window on your desktop.

MODELS AVAILABLE

Code	Description
VisionRGB-E2	Dual Channel RGB/DVI/HD Capture Card, PLUS 1 x DVI/VGA, 1 x DVI/component and 1 x DVI/HDMI adapters.
VisionRGB-E2S	Dual Channel RGB/DVI/HD Capture Card, 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.

SPECIFICATION

Board Format	PCI-e x4 half size plug-in card, 110mm x 170mm. PCI-e bus master with scatter gather DMA
Connectors	Two DVI-I type connectors.
Maximum Sample Rate	170 MHz analogue RGB or 165MHz DVI. Analog modes up to 340MHz pixel clock can be captured using dual-pass sampling.
Maximum Data Rate	VisionRGB-E2 480MB/s VisionRGB- E2s 650MB/s
Video Sampling	RGB: 24 bits per pixel / 8-8-8 format.
Video Capture Memory	64 MB, triple buffered.
Analog RGB Mode Support	640 x 480, 800 x 600, 1024 x 768, 1280 x 1024, 1600 x 1200, 1920 x 1080, 2048 x 1536, 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 (HDCP not supported).
Input Mode Detection	Automatic detection of input modes in hardware, enabling the tracking of mode changes in the source signal.
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 (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.
Operating System Support	Windows XP, Windows Server 2003, Windows Vista, Windows Server 2008, Windows Server 2012, Windows 7, Windows 8 and Linux support See www.datapath.co.uk for updates.
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.
Warranty	3 years

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