

# Datapath VisionRGB-E1

# Single Channel RGB/DVI Capture Card

## Advanced Graphics Display Technology

- Single channel RGB/DVI capture card (PCI-Express)
- Four Lane PCIe bus 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 1080 x 24bit
- On card processor for real time mode and sync detection
- Support for multiple cards allowing up to 32 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
- 16 cropping windows per capture channel
- Includes WDM streaming drivers and the Datapath VisionRGB application software
- Fully integrated with the Datapath Wall Control software for video wall applications.
- VisionRGB-E1 is also optimised for operation with the Datapath range of graphics cards
- Support for Windows® XP/ Server 2003
- Datapath SDK included for software developers



The VisionRGB-E1 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
- Recording Analog or DVI video sources
- Streaming video applications
- Video/Data Wall Controllers

# Datapath VisionRGB-E1

# Single Channel RGB/DVI Capture Card

## Advanced Graphics Display Technology

### RGB Streaming

For streaming applications, the VisionRGB-E1 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-E1 due to its built-in WDM support.

### VisionRGB Software:

The VisionRGB-E1 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-E1 application to automatically detect the video source format and display the captured video in a window on your desktop. You can also use the software application to record and capture the Analog data at high frame rates and play it back using the Datapath VisionRecorder and VisionPlayer applications.

### Hardware Overview:

The VisionRGB-E1 has a single capture channel supporting up to 1920x1080 DVI or 2048x1536 Analog resolution.

The VisionRGB-E1 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.

Whenever the RGB/DVI data is displayed on a non Datapath graphics card, the VisionRGB-E1 sends the data to system memory, after which, the operating system copies the data to the display. When a Datapath graphics card is used, the VisionRGB-E1 transfers the data directly to the graphics card thereby increasing performance.

The VisionRGB-E1 sends portions of the captured data to the video channel and instructs each channel to use its graphics engine to update the data. This utilises the hardware and dramatically increases performance.

### Models

VisionRGB-E1 - A single channel PCI Express capture card.

# Datapath VisionRGB-E1

# Single Channel RGB/DVI Capture Card

## Advanced Graphics Display Technology

### Specifications:

- **Board Format:** PCI-e x4 low profile card, 68.9mm x 167.6mm  
PCI-e bus master with scatter gather DMA providing maximum data rate of 480Mb/s
- **Connectors:** One DVI-I type connectors
- **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
- **Video Sampling:** RGB: 24 bits per pixel / 8-8-8 format
- **Video Capture Memory:** 32 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, custom modes.
- **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 pixels.  
YUV: 4:2:2
- **Update Rate:** User defined, typically 60 frames per second, limited by available PCI-Express bandwidth.  
Multi-buffered to eliminate tearing artifacts
- **Video Format Options:** Analog RGB plus HSync and VSync (5 wire). )  
Analog RGB with Composite Sync (4 wire). )- Progressive  
Analog RGB with Sync on Green (3 wire). )  
DVI Single Link.
- **Operating System Support:** Windows® XP, Windows® Vista and Windows® Server 2003.
- **Power Requirements:** Max current at +3.3V – 0.25A  
Max current at +12V – 0.5A  
Max power – 6.8 Watts
- **Operating Temperature:** 0 to 35 deg C.
- **Storage Temperature:** -20 to 70 deg C.

# Datapath VisionRGB-E1

## Single Channel RGB/DVI Capture Card

### Advanced Graphics Display Technology

For details on how to purchase the VisionRGB-E1 contact our sales department [sales@datapath.co.uk](mailto:sales@datapath.co.uk)

#### **Datapath Limited**

Alfeton Road, Derby, DE21 4AD, England

Tel: +44 (0) 1332 294441

Fax: +44 (0) 1332 290667

Email: [sales@datapath.co.uk](mailto:sales@datapath.co.uk)

Web: [www.datapath.co.uk](http://www.datapath.co.uk)

#### **Datapath Germany**

Friedrich-Ebert Straße 21

D-64846 Groß-Zimmern, Germany

Tel: (+49) 06071 96300

Fax: (+49) 06071 963020

Web: <http://www.datapath.de/>

#### **Datapath France**

7 Rue des Pinsons, 78990 Elancourt,  
France

Tel: (+33) 130138934

Fax: (+33) 130138935

Email: [datapathfrance@sqynet.com](mailto:datapathfrance@sqynet.com)