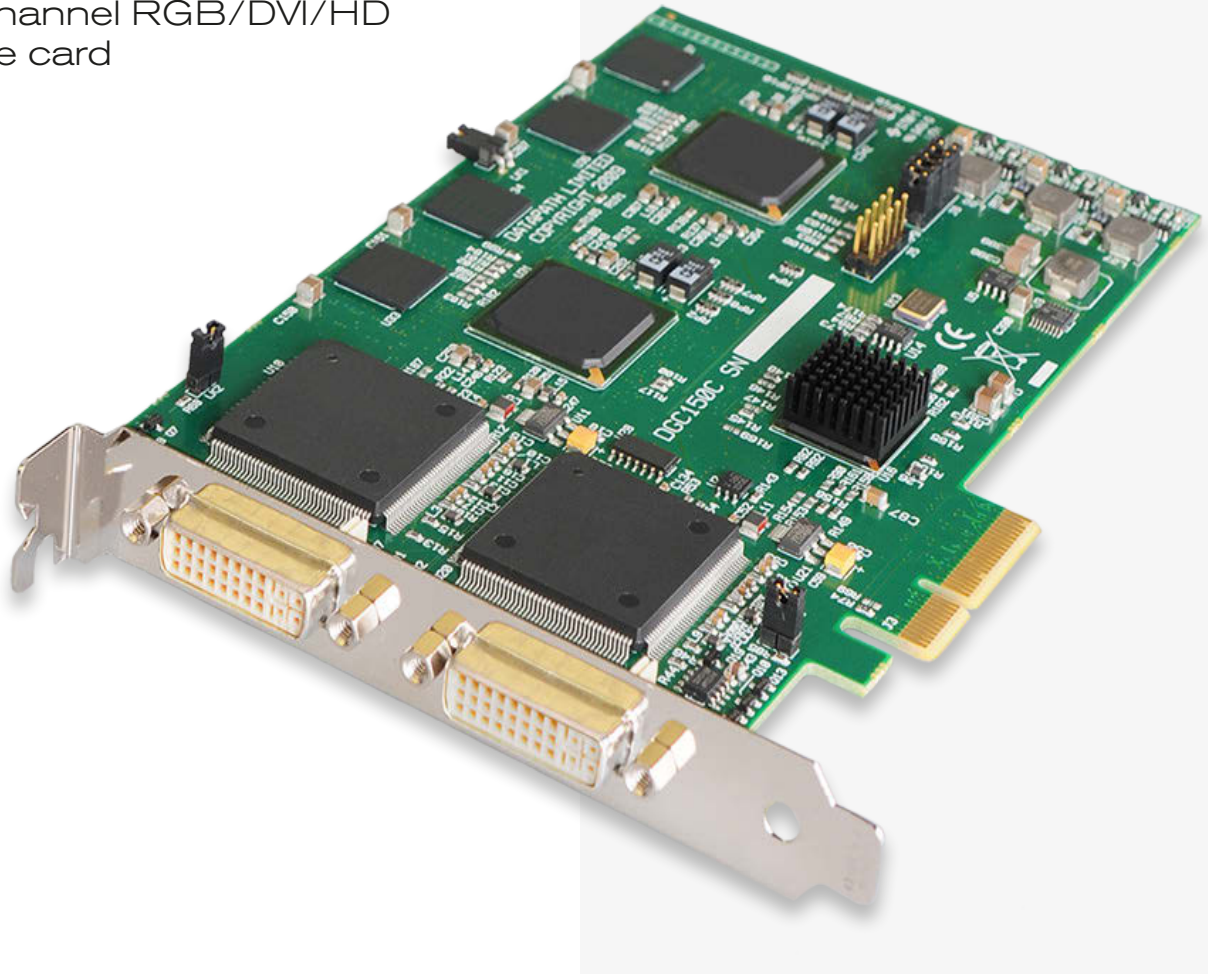


# VisionRGB-E2S

Dual channel RGB/DVI/HD capture card



## DESCRIPTION

The VisionRGB-E2S has two complete capture channels supporting up to 1920 x 1080 DVI or 2048 x 1536 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:

- Industrial/medical equipment, cameras and other video equipment
- Streaming video applications
- Video Wall Controllers

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EXCELLENCE BY DESIGN

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## 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 graphics cards 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
- Vision RGB-E2S is also optimised for operation with the Datapath range of graphic cards

## 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.

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## COMPATIBILITY

The VisionRGB-E2S is supported by the following operating systems: Linux, Windows® XP, Windows Vista, Windows Server 2003, Windows Server 2008, Windows 7, Windows 8/8.1 and Windows 10.

Datapath SDK is included for software developers.

## 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

170Mpixels per second analog RGB or  
165MHz DVI

Analog modes up to 340MHz pixels clock can  
be captured using dual-pass sampling

### MAXIMUM DATA RATE

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, and  
custom modes

### DVI SINGLE LINK MODE SUPPORT

640 x 480, 800 x 600, 1024 x 768, 1280 x 1024,  
1600 x 1200, 1920 x 1080, 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

### POWER REQUIREMENTS

Max current at +3.3V – 0.25A  
Max current at +12V – 1.2A  
Max power – 15 Watts

### OPERATING TEMPERATURE

0 °C to 35 °C / 32 °F to 96 °F

### STORAGE TEMPERATURE

-20 °C to 70 °C / -4 °F to 158 °F

### RELATIVE HUMIDITY

5% to 90% non-condensing

### WARRANTY

3 years

## MODELS AVAILABLE

Order Code: VisionRGB-E2

Dual channel RGB/DVI/HD capture card, 1 x DVI/VGA, 1 x DVI/component, 1 x DVI/HDMI adapters.

Order: VisionRGB-E2S

Dual channel RGB/DVI/HD capture card, 1 x DVI/VGA, 1 x DVI/component, 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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