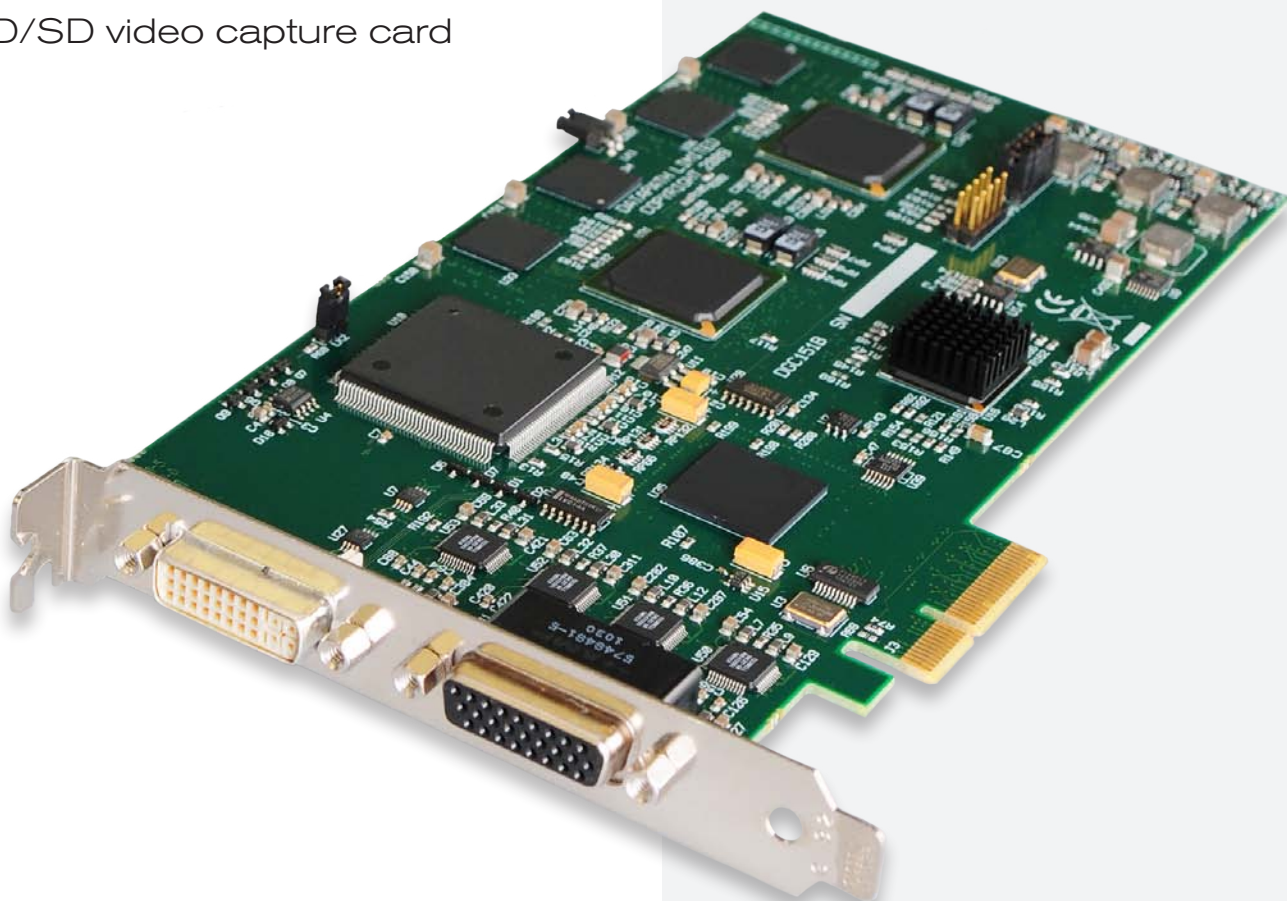


# XtremeRGB-Ex4+

HD/SD video capture card



## DESCRIPTION

The XtremeRGB-Ex4+ has five complete capture channels supporting a single channel for up to 1920 x 1080 DVI or 2048 x 1536 analog resolution, plus four SD composite or S-video capture channels. Also supporting a SD maximum capture resolution of 720 x 576 x 16bit.

The XtremeRGB-Ex4+ 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 EMS graphics card is used, the XtremeRGB-Ex4+ transfers the data directly to the graphics card thereby increasing performance. The XtremeRGB-Ex4+ 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 EMS graphics card, the XtremeRGB-Ex4+ sends the data to system memory or direct to the graphics card, dependent on the software used for display. The XtremeRGB-Ex4+ 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 Wall Controllers

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## STREAMING SUPPORT

DirectShow 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 DirectShow encoding software

## FEATURES

- Four channel SD Video + one channel RGB/DVI/HD capture card
- 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)
- 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 EMS Xtreme application software
- Fully integrated with the EMS Wall Control software for video wall applications

## RGB STREAMING

For streaming applications, the XtremeRGB-Ex4+ 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 XtremeRGB-Ex4+ due to its built-in WDM support.

## SOFTWARE

The XtremeRGB-Ex4+ 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 XtremeRGB-Ex4+ 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 XtremeRGB-Ex4+ is supported by the following operating systems: Windows® XP, Vista 2003, Server 2008, Windows 7, Windows 8/8.1 and Windows 10.

EMS SDK is included for software developers.

## SPECIFICATION

### BOARD FORMAT

PCI-e x4 plug-in card, 110mm x 204mm.  
PCI-e bus master with scatter gather DMA  
providing maximum data rate of 650MB/s

### 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

### VIDEO SAMPLING

RGB: 24 bits per pixel / 8-8-8 format  
Video: 16bits per pixel/YUV format

### SD MAXIMUM CAPTURE RESOLUTION

720 x 576 x 16bit

### 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

### 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/YpPr (3 wire)

DVI Single Link

PAL, NTSC, SECAM in composite or S-Video  
format for SD inputs

### 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: XtremeRGB-Ex4+/1

A five channel PCI express card single pack.

Order Code: XtremeRGB-Ex4+/2

A five channel PCI express card single pack, 1 x SD4-Cable, 1 x DVI/VGA adapter, 1 x DVI/HDMI adapter, 1 x VI/component adapter.

*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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