

# EMS XtremeRGB

VGA / RGB / DVI Capture Card

- ❖ **Half** size 64 bit PCI Card.
- ❖ Dual Channel real-time Analog VGA/RGB or DVI capture with high speed 500MB/s DMA transfer.
- ❖ Capture resolutions up to 2048x1536 Analog or 1600x1200 DVI.
- ❖ Support for interlace and non-interlace video sources.
- ❖ On board processor providing auto-sync and capture mode detection.
- ❖ 32MB per channel DDR capture memory.
- ❖ Software compatible with the XtremeRGB product range.
- ❖ Includes WDM streaming drivers and the EMS XtremeRGB application software.
- ❖ Fully integrated with the EMS wall controller software VigiControl for video wall applications.
- ❖ XtremeRGB is also optimised for operation with the EMS range of graphics cards.
- ❖ Support for multiple cards allowing up to 64 capture channels. (32 cards)
- ❖ Support for Windows XP/2000/Vista.
- ❖ EMS SDK included for software developers.



## XtremeRGB



The XtremeRGB is an ideal solution for applications that require the capture of Analog VGA/RGB 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 uncompressed or compressed to AVI files.
- Streaming video applications over LAN/WAN.
- Capture & Display multiple PC's/Notebooks on to our Video/Data Walls using our Vigilant range of Graphics Controllers.



## RGB Streaming

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

## XtremeRGB Software:

The XtremeRGB 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 XtremeRGB 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 EMS XtremeRecorder and XtremePlayer applications.

## PhynxVCR

For DirectX WDM drivers we also offer our PhynxVCR digital recorder, similar to the Windows Media Encoder for AVI recording but with a more user friendly interface. The PhynxVCR can record the incoming analog/DVI video and the on-board audio together into an 'AVI' file. The recorded file can be uncompressed or compressed using whatever codec's that is installed within the Windows Media System.

## Hardware Overview:

The XtremeRGB has two complete capture channels, each supporting up to 1600 x 1200 DVI or 2048 x 1536 Analog resolution.

The XtremeRGB captures the Analog/DVI data and stores it in an on-board video buffer. This data is then copied using DMA to the host system for display, storage or streaming.

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

This is especially effective when displaying captured data up-scaled to fill a data or video wall. The XtremeRGB sends portions of the captured data to each video channel and instructs each channel to use its graphics engine to update the data. This utilises the hardware and dramatically increases performance.

Typical up date rates when used with the EMS Vigilant-X graphics card are:

- 1 channel at 1280 x 1024                      75Hz.
- 1 channel at 1024 x 768                      75Hz.

## Models

- XtremeRGB-II                                      A dual channel PCI capture card
- XtremeRGB-I                                      A single channel PCI capture card (not yet released).

### Specifications:

Board Format:	64 bit, up to 133MHz PCI, half size plug-in card 105mm x 170mm. PCI Bus Master with scatter/gather DMA providing up to 1GB/sec peak, 500MB/sec sustained
Connectors:	Two DVI-I Type connectors
Maximum Sample Rate:	330 Mpixels per second RGB or 165MHz DVI
Video Sampling:	RGB: 16 bits per pixel/5-6-5 format, 24 bits per pixel/8-8-8 format. YUV: 422 Chroma packed YUYV format.
Video Capture Memory:	32MB per channel (updated in real time).
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, Custom modes.
EDID Support:	Programmable EDID support allowing custom mode definition for most graphics adapters.
Input Mode Detection:	Automatic detection of input modes in hardware, enabling the tracking of mode changes in the source signal.
Pixel Display Formats:	5-5-5, 5-6-5 or 8-8-8 pixels.
Update Rate:	User defined, typically up to 60 frames per second, limited by available PCI bandwidth. Multi-buffered to eliminate tearing artifacts
Video Format Options:	Analog RGB plus HSync and VSync (5 wire). ) Progressive Analog RGB with Composite Sync (4 wire). )- and Analog RGB with Sync on Green (3 wire). ) interlaced DVI Single Link.
Operating System Support	Windows® 2000, Windows® XP and Windows® Vista.
Power Requirements:	Max current at +3.3V - 1A Max current at +5V - 1A Max power - 8 Watts
Operating Temperature:	0 to 35 deg C.
Storage Temperature:	-20 to 70 deg C.
Relative Humidity	5% to 90% non-condensing.

# EMS XtremeRGB

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For details on how to purchase the XtremeRGB products contact our sales department  
[sales@ems-imaging.com](mailto:sales@ems-imaging.com)



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