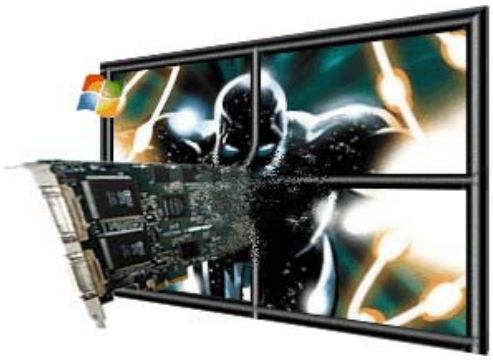
EMS XtremeRGB-Ex2+

HDMI /DVI /VGA / RGB Capture Card



- **Dual channel DVI/VGA capture card (PCI-Express)**
- **Four Lane PCIe bus 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 1080 x 24bit (1920x1200 with reduced blanking)**
- **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 EMS XtremeRGB application software.**
- **Fully integrated with the EMS Wall Control software for video wall applications.**
- **XtremeRGB-Ex2 is also optimized for operation with the EMS range of graphics cards.**
- **Windows® XP Professional, Windows® Server 2003, Windows Vista®, Windows® Server 2008 and Windows® 7 (x86 and x64 Operating Systems)**
- **EMS SDK & Directshow samples are also included for software developers.**

The XtremeRGB-Ex2 captures the display output (component HD, HDMI, analog RGB or single link DVI) from one source and then displays it as an independent application on your display screen. This is done in real time, enabling you to view data from PCs, MACs, industrial/medical equipment, cameras and other video equipment.

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.

RGB Streaming:

For streaming applications, the XtemeRGB-Ex2 can be used with Directshow applications such as Windows Media Encoder / VLC etc... 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-Ex2 due to its built-in WDM support.

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XtremeRGB Software:

HDMI /DVI /VGA / RGB Capture Card

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.

The captured video data is displayed in a desktop window with/without menu/borders. The captured display can be resized up/down, overlapped and/or maximized to full screen display. For multi-channel capture display simply run the application multiple times and choose the appropriate input channel to display.

PhynxVCR

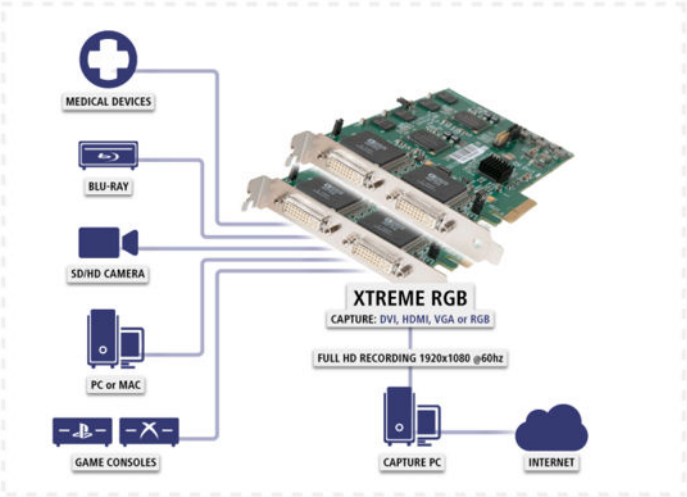
For DirectX WDM drivers we also offer our PhynxVCR digital recorder, similar to the Windows Media Encoder for AVI recording but with a more user friendly interface. The PhynxVCR can record the incoming analog/DVI video and the on-board audio together into an 'AVI' file. The recorded file can be uncompressed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

Hardware Overview:

The XtremeRGB-Ex2, a standalone PCIe x4 plug in card, delivers extreme performance with 650MB/s transfer bus bandwidth. This high industrial performance makes the XtremeRGB series ideal for a wide range of applications.

The XtremeRGB-Ex2 has a two independent capture channels supporting up to 1920x1080 DVI (1920x1200 with reduced blanking) or 2048x1536 VGA resolutions. The XtremeRGB-Ex2 captures the Analog/DVI data and triple age. This data is then copied using Direct Memory Access (DMA) to the host system for display, storage or streaming. The included application includes option to either transfer video data direct to the graphics card thereby increasing performance or to transfer video data to the graphics card via system memory.

Models XtremeRGB-Ex1 - A single channel PCI-Express capture card.
Models XtremeRGB-Ex2 - A dual channel PCI-Express capture card.



CAPTURE / DISPLAY / RECORD / STREAM

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 650Mb/s
- Connectors: Two 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 :
- 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 (HDCP not supported)
- 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, UYVY, YUY2, YVYU
- Update Rate: User defined, typically 60 frames per second, limited by available PCI-Express bandwidth max 650MB/s. Triple-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 (3 wire). -> Progressive. DVI Single Link.
- Operating System Support Windows® XP, Windows® Vista and Windows® Server 2008 (x86 and x64)
- 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.
- Storage Temperature: -20 to 70 deg C. 5% to 90% non-condensing.
- Anbalog input range: Min 0.5Vpp Max 1.0Vpp
- Input Offset: +/- 2V
- Hsync: 15Khz – 110Khz
- Vsync: no hardware limits, typ. 25Hz – 200Hz for real signals
- Separate Sync Polarity: Positive or Negative. (Separate H & V sync, Composite Sync)
- Sync on Green Polarity: Negative
- Inputs: 75 Ohm Terminated

For details on how to purchase the XtremeRGB products contact our sales department
sales@ems-imaging.com

Electronic Modular Solutions Limited
Kendal House, 20 Blaby Road, S. Wigston, Leics., LE18 4SB, England
Tel: +44 (0) 116 2775730
Fax: +44 (0) 116 2774973
Email: sales@ems-imaging.com
Web: www.ems-imaging.com