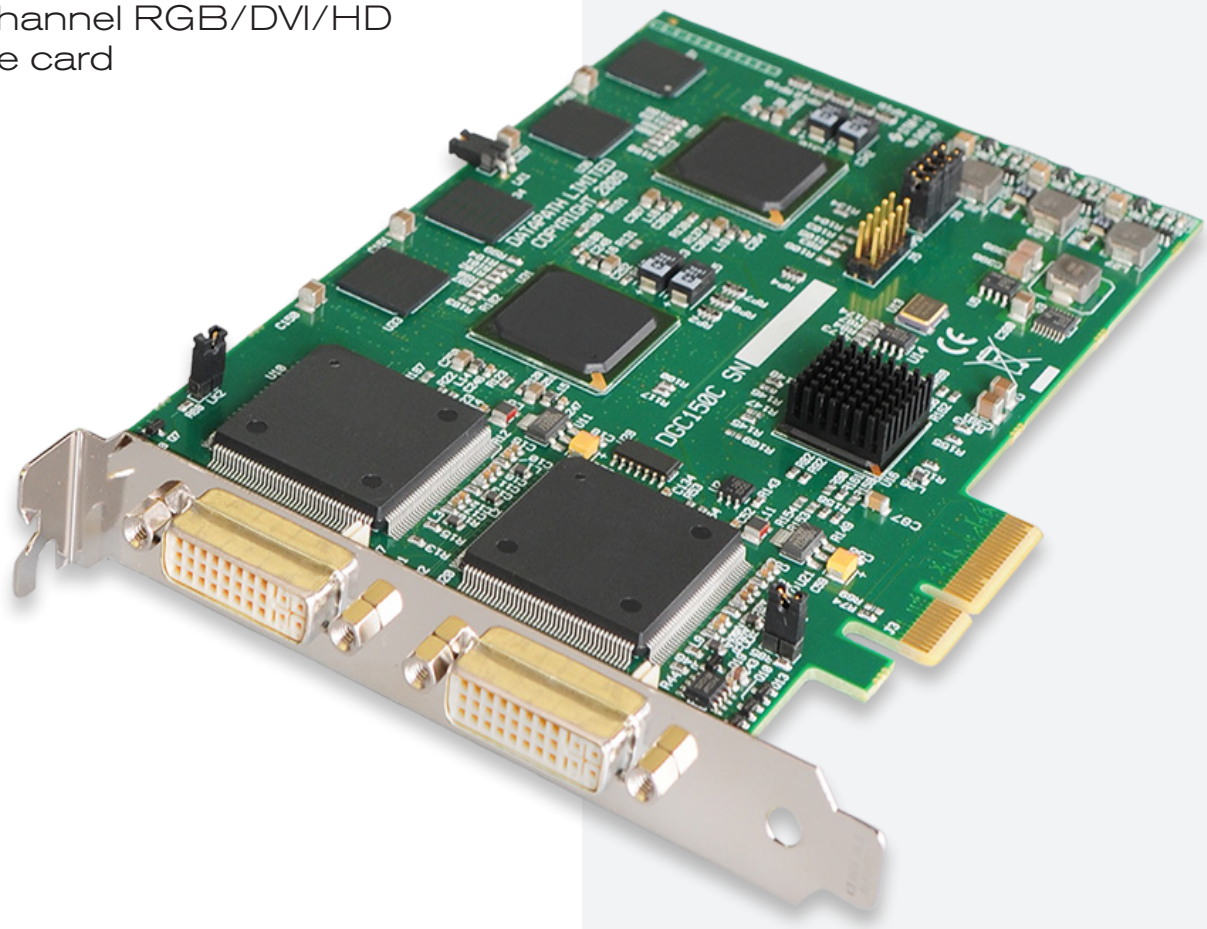
XtremeRGB-Ex2+

Dual channel RGB/DVI/HD capture card



DESCRIPTION

The XtremeRGB-Ex2+ has two complete capture channels supporting up to 1920 x 1080 DVI or 2048 x 1536 Analog resolution.

The XtremeRGB-Ex2+ 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-Ex2+ transfers the data directly to the graphics card thereby increasing performance. The XtremeRGB-Ex2+ 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-Ex2+ sends the data to system memory or direct to the graphics card, dependant on the software used for display.

The XtremeRGB-Ex2+ 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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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 EMS Vision application software
- Fully integrated with the EMS Wall Control software for video wall applications
- XtremeRGB-Ex2+ is also optimised for operation with the EMS range of graphic cards

RGB STREAMING

For streaming applications, the XtremeRGB-Ex2+ 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-Ex2+ due to its built-in WDM support.

SOFTWARE

The XtremeRGB-Ex2+ 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-Ex2+ application to automatically detect the video source format and display the captured video in a window on your desktop.

COMPATIBILITY

The XtremeRGB-Ex2+ 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.

EMS 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
XtremeRGB-Ex2+ 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, 1920x1080, 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: XtremeRGB-Ex2+
Dual channel RGB/DVI/HD capture card, 1 x DVI/VGA, 1 x DVI/component, 1 x DVI/HDMI adapters.

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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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