The new XtremeDV-HD1+ provides simultaneous HD and SD video capture through one channel of HDMI or DVI-I video capture and one channel of composite video capture.
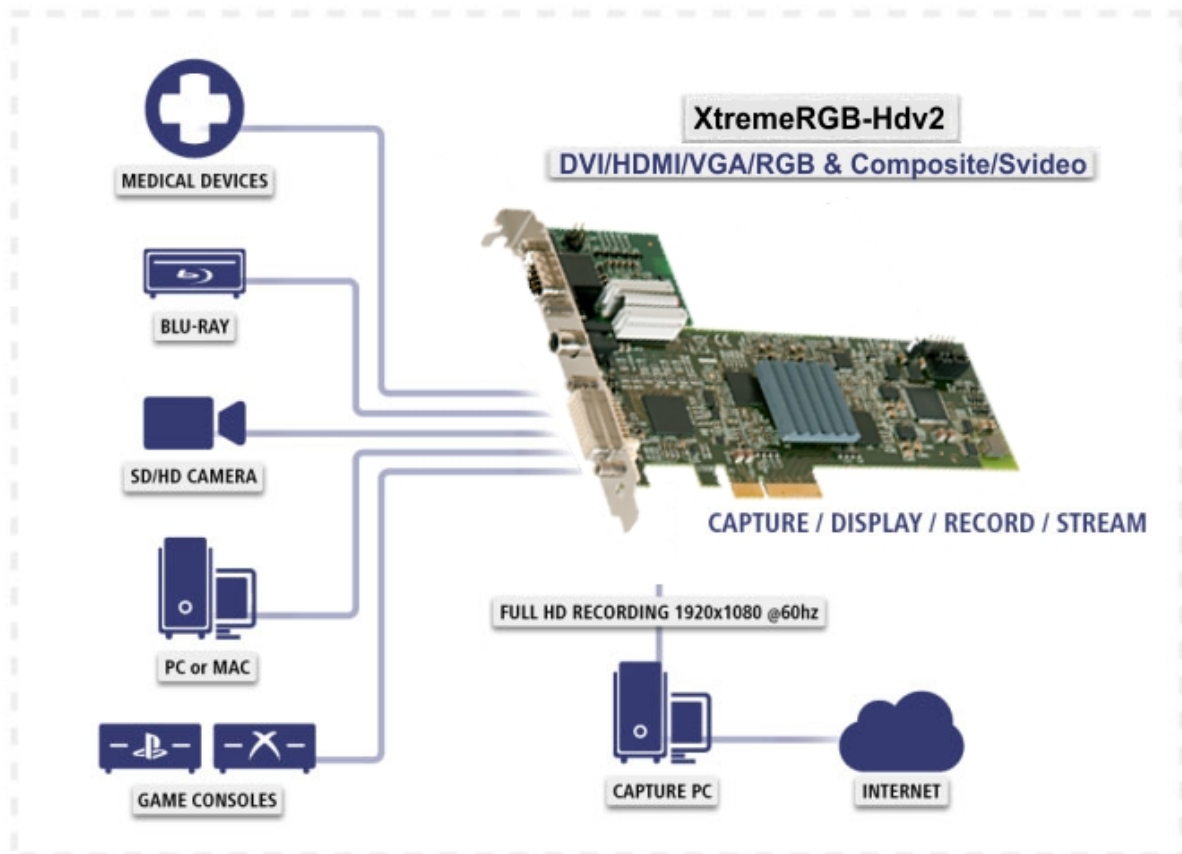
Capture HD Video to PC, with HDMI input

XtremeDV-HD1+ HDMI Capture Card is the best solution of capturing and recording High Definition video sources on your desktop PC. It provides with HDMI/YPbPr/Composite/S-Video/Audio(L/R)interface that can be connected with all kinds of high definition video equipments, compatible with all the video input systems.

The XtremeDV-HD1+ is a x4 lane PCI Express capture card providing up to 800MB/s bandwidth from the capture engine. The XtremeDV-HD1+ has up to 256MB buffer memory, enabling triple buffering for all video modes for tear free play back. It can also capture digital video for progressive and interlaced modes up to 4096 x 4096 resolutions to a maximum of 165 MHz pixel clock for DVI and 170 MHz for Analog RGB. This card provides HDMI audio capture* and streaming from DVI Channel, as well as balanced and unbalanced analog audio capture.

Key Features

Key qualities of the XtremeDV-HD1+ Capture Card:

- HDMI, DVI, RGB, YPbPr, composite video and analog audio capture
- Dual Channel Video
- Channel 1: HDMI, DVI, RGB, YPbPr digital or analog HD video
- Channel 2: Composite video - NTSC, SECAM and PAL
- Flexible Audio Capture
- Balanced (XLR) and Unbalances (RCA) from an optional module
- Analog audio capture
- HDMI audio through HD video channel*
- EMS Unified XtremeRGB Driver
- Multiple cards per system, 16 streams per channel
- Frame sync and time stamping
- DirectShow interface
- XtremeRGBEasy API for advanced audio and video control
- High quality up/down scaling (7 x 5 Polyphase Filter) the XtremeRGB range provides an excellent visual experience
- Multiple channel audio and video capture
- Multiple capture cards per system
- small form factor low power consumption
- Fully integrated for use with EMS Wall Control software for video wall applications
- Support for Windows® XP/ Vista/ Server 2003/ Server 2008/ Windows 7/ Windows 8/ Server 2012 and Linux support (audio support*)
- HD modes using the supplied DVI/ Component Adapter or DVI/ HDMI Adapter, for HDCP contact EMS
- On card processor for realtime mode detection - for trouble free connection to a wide variety of video sources
- Support for YUV 4:2:2, RGB 5:5:5, 5:6:5, 8:8:8 video output formats providing compatibility with a wide variety of data streams

Applications

The XtremeDV-HD1+ is an ideal solution for applications that require the capture of analog or DVI sources in real time. Typical applications include capturing analog or DVI sources from PCs, MACs, industrial/medical equipment, cameras and other video equipment streaming video applications and Video Wall Controllers.

Adding support for simultaneous analog and digital audio capture makes this a versatile capture card for streaming, webcasting, video conference and many other applications.

Direct WDM streaming driver supports the following applications, to encode, record and stream video over networks or the internet:

- Dataton WatchOut

- Microsoft Expression Encoder

- Microsoft Windows® Media Encoder

- VideoLAN VLC

- NorPix StreamPix

- VitualDub

- Adobe Flash Encoder

- VidBlaster

- AMCap and other DirectShow compatible software

For further details see the EMS DirectShow SDK documentation supplied as part of a typical installation.

A single XtremeRGB device supports up to 16 independent scale factors, colour spaces and frame rate clients, which enables multiple streams to be sent to and from the card at the same time in different formats.

Supports time stamp for capture synchronisation across inputs, cards and systems.

- For the use with edge blending, frame stitching, stereoscopic and many more applications using gen-locked sources.

Flexible and configurable preferred mode EDID Management

- Allows programming of custom EDID parameters including 'Preferred Mode'

Low input to output capture latency

- DMA to third party graphics vendors back and front buffers via Direct3D

- Compatibility with AMD DirectGMA

- Compatibility with Nvidia GPUDirect

Signal detection

- XtremeDV-HD1+ capture card detection of HDMI, DVI, VGA 5 wire, 4 wire, 3 wire, component and composite video, balanced, unbalanced and digital audio detection.

- Additional XtremeRGB cards include capture for SDI and DL-DVI input

driver & command line interface

- Supplied with a standard application for full control of any XtremeRGB capture card, this includes GUI's for window properties, input, settings, on screen display and EDID configuration.

- The XtremeRGB application also includes a comprehensive command line interface for all GUI controls.

XtremeRGBEasy

- SDK for advanced audio and video control

- Sample applications including low latency DirectX rendering

DirectShow

- DirectShow SDK

- Sample applications including AV encoding

- SDK diagnostic transform filters

- Kernel Mode - WDM video capture filters (crossbar required)

- User Mode – Additional support for PiP, IAMStream control and cropping

DVI/HDMI/VGA/RGB & Composite Capture Card

Specifications

Board Format	PCI-Express x4 low profile card, 68.9mm x 167.6mm
Connectors (main board)	DVI-I , RCA (female)
Connectors (audio board)	HD15 (male) for connection of supplied Audio Breakout cable: · Stereo line in (2 x RCA), stereo balanced in (2 x XLR), stereo line out (2 x RCA) · 16-way header for connection to main board
HDMI Capture	
DVI Capture	Supports DVI 1.0 RGB 24bit capture to 165MHz. Incorporates TMDS equalizer to support up to 20m cables.
VGA/ YPbPr Capture	Triple ADCs sampling up to 170Msps. Full 4:4:4 sampling, 8 bits per colour. 5-wire, 4-wire or sync-on-green signal formats.
Composite Video Capture	CCIR601 sampling. PAL, NTSC, SECAM formats automatically detected
Audio Capture	Stereo Line-In/Stereo balanced inputs with programmable gain (+/-12dB) 16 bit sampling at 44.1/48/96kHz. Analog stereo line-out for direct passthrough of selected input at up to 64kHz sampling, sourced from Analog input or HDMI channel
Video Capture Memory	256MB high bandwidth frame buffer supports triple buffering of HD and SD video. Local storage of complex scatter-gather tables for DMA engine (eliminates read overhead)
Video Processing	Polyphase FIR scaling engine (7x5) for hardware downscaling and upscaling Colour space conversion allows captured data to be transferred in any format: · RGB 16 bit (5-5-5, 5-6-5), 24 bit (8-8-8) or 32 bit (8-8-8-alpha) · YUV 16 bit (4:2:2) · Mono: 8bit
DMA Engine	Direct DMA to physical or virtual memory buffers with full scatter-gather support. DMA bandwidth : up to 800MB/s 16 independent DMA streams: · Any mix of HD and SD sources, colour space, cropping and scaling parameters

DVI/HDMI/VGA/RGB & Composite Capture Card

Operating System Support	Windows XP, Windows Server 2003, Windows Vista, Windows Server 2008, Windows Server 2012, Windows 7, Windows 8 and Linux support (audio support*) See www.ems-imaging.com for updates.
Power Requirements	Max current at 12V – 0.5A Max current at 3.3V – 0.2A Thermal dissipation – 6.5W
Operating Temperature	0 to 35 ºC (32 to 96ºF)
Storage Temperature	-20 to 70 ºC (-4 to 158ºF)
Relative Humidity	5% to 90% non-condensing
Warranty	3 years

We are continuously developing the technology used within our product ranges delivering outstanding innovative solutions, therefore the specification may change from time to time.

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

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