

# HDSTORM & HDSTORM Plus

HDMI-BASED EDITING FOR THE DIGITAL GENERATION



Including Grass Valley EDIUS nonlinear editing software, HDSTORM Plus helps users making the transition from standard-definition (SD) to high-definition (HD).

The Grass Valley™ EDIUS® family supports the real-time editing of all popular standard-definition (SD) and high-definition (HD) formats, including Canopus® HQ, Canopus Lossless, DV, DVCAM, HDV, MPEG-2, and uncompressed video.

## HDSTORM – HDMI-based Editing

A single PCI Express form factor board, HDSTORM™ allows editors to work with HDMI inputs and outputs, and has the Canopus HQ hardware codec built-in for optimized, CPU-free capture and export. This includes full-resolution and synched preview of effects.

The power of having the Canopus HQ codec on-board means users are not restricted by their CPU speeds or workstation limitations when ingesting

or creating Canopus HQ files. Keeping the compression processing separate brings new reliability and system performance to the editing and effects creation environment.

HDSTORM can handle any mix of HD and SD video content; unlimited video, audio, title, and graphics layers; and any combination of real-time effects. It also offers real-time, full-resolution, full-quality component HD and SD video output.

## Real-Time Display Streamlines Workflows

Unlike systems that compromise video quality to provide real-time editing, HDSTORM delivers genuine real-time, HD-resolution editing—including full-quality, full-frame-rate HD output to an

HDMI video monitor from the timeline. No rendering is required to preview edited sequences; the system displays them instantly and with audio synced.

## HDSTORM Plus – The Perfect Transitional Tool

An optional (5.25-inch) bay is also available (included as standard with HDSTORM Plus). The bay not only features additional connectors for HDMI devices, but also input and output connectors for analog HD/SD component, S-Video, composite, and unbalanced audio; this helps those still working in analog to make the transition to digital and HD production.

## KEY FEATURES

- Edit any mix of SD and HD resolution video content together in real time
- Works with many different native video formats, including DV, HDV, AVCHD, uncompressed, and more
- New GPU-accelerated 3D transitions
- Real-time editing performance increases as CPU power increases
- Supports newer file-based formats, including Infinity™ JPEG 2000, XDCAM and XDCAM EX, P2 (DVCPRO and AVC-Intra), and GFCam
- HDMI input/output for connectivity with HDMI devices and real-time monitoring from the included EDIUS NLE software
- Canopus HQ hardware encoder for fast, high-quality capture of video to Canopus HQ AVI files
- Windows XP and Windows Vista support
- Bay option for HD/SD analog component, S-Video, and composite input/output
- Advanced hardware video input filtering and high-quality analog inputs/outputs (as standard with HDSTORM Plus, or when adding optional bay to HDSTORM)

## PRODUCT DATA SHEET

### Player/Recorder Monitor View

Player side controls capture and source trimming. Recorder side controls timeline operation and trimming.

### Jog/Shuttle Control

Jog/shuttle control via slider, mouse scroll-wheel, or mouse motion.

### Unlimited Video, Audio, and Title Tracks

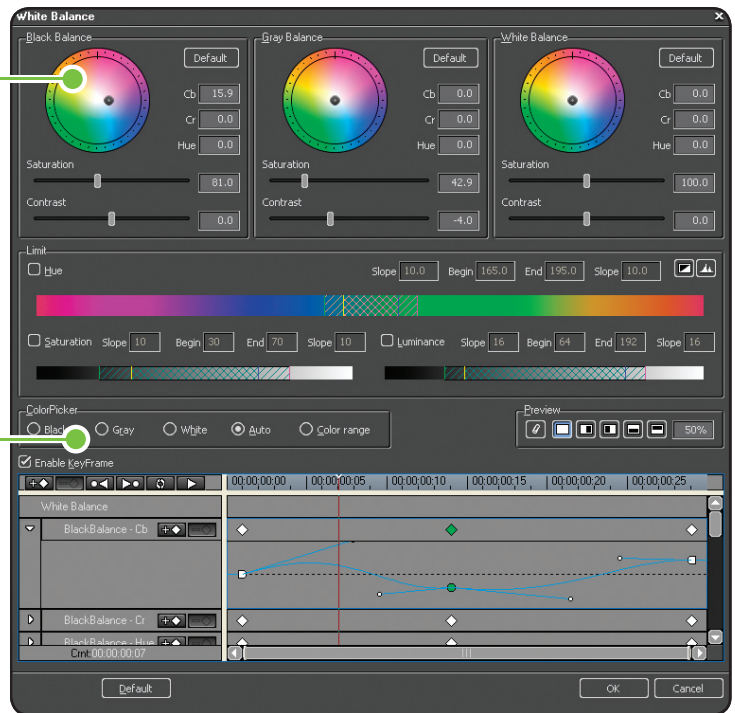
Edit with unlimited video, audio, and title tracks.

### Real-Time Color Correction

Use real-time color correction with an interactive split-screen display and secondary controls. Stack multiple filters for even greater control.

### Keyframeable Color Correction

Color correction filters are keyframeable for precise, subtle changes over time.



### Unsurpassed Image Quality and Performance

EDIUS software features the revolutionary Canopus HQ codec. Designed with scalable technology, this innovative codec offers the highest image quality and performance available in any HD editing platform. The Canopus HQ codec not only provides superior luma and chroma sampling of HD video, but features an adjustable bit rate for increased video quality when capturing and encoding on high-performance systems.

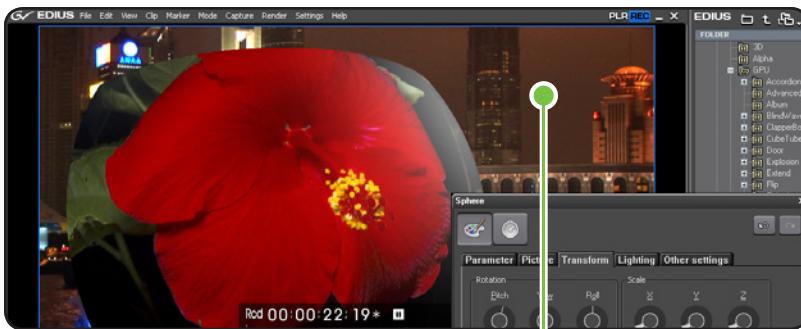


### Flexible Bin Structure

Organize, search, and manage assets with folders and dynamic search results.

### Real-Time Audio Mixer and Waveform/Vectorscope

Use the real-time audio mixer for audio adjustments and the real-time waveform/vectorscope to ensure legal output.



### GPU-Accelerated 3D Transitions

Harness the power of your graphics card to create real-time, stunning quality transition effects in SD and HD. Using the GPU as an additional, parallel source of computation means that the CPU does not become a bottleneck.

### Tapeless Workflow Support

Support for tapeless workflows with metadata preservation for modern file-based workflows.



### Superior Integration for Tapeless Workflows

EDIUS software provides excellent support for today's tapeless digital workflows including those that use Grass Valley K2 media server/media client systems, as well as Panasonic P2 and VariCam, Sony XDCAM, Ikegami GigaFlash, and popular direct-to-edit (DTE) devices. It doesn't matter whether assets come from tape, disk, network, or a mixture of them all, with EDIUS software, you spend less time worrying—and less time editing, too.



**PACKAGE CONTENTS**

- HDSTORM PCI-Express card
- EDIUS installation disk set (DVD-ROM)
- USB license key
- QuickStart guide
- Hardware setup manual
- 5.25" HDSTORM bay (HDSTORM Plus only)
- HDSTORM bay connector cable (HDSTORM Plus only)
- S-Video conversion cables (2) (HDSTORM Plus only)

**BUNDLED SOFTWARE**

- NewBlue video filters: Art Effects, Film Effects & Motion Effects
- ProDAD video effects & image stabilization: VitaScene & Mercalli Expert
- iZotope VST audio plug-ins: Audio Effects Suite, AudioRestore, AGC & Mastering Effects Suite
- Corel DVD & Blu-ray authoring: DVD MovieFactory
- Artbeats HD stock footage and graphics
- Trial Version SmartSound SonicFire Pro
- Harris TitleMotion Pro

**SPECIFICATIONS**

**HDSTORM**

**Bus Interface**

PCI Express Rev. 1.1 x1 lane

**Video Formats (Output) (CEA-861D)**

- 1920x1080/59.94i, 1920x1080/50i, 1440x1080/59.94i, 1280x1080/59.94i
- 1280x720/59.94p, 1280x720/50p, 960x720/59.94p
- 720x480/59.94p, 720x576/50p
- 720x480/59.94i, 720x576/50i

**Video Formats (Input) (CEA-861D)**

- 1920x1080/59.94i, 1920x1080/50i, 1440x1080/59.94i, 1280x1080/59.94i
- 1280x720/59.94p, 1280x720/50p, 960x720/59.94p
- 720x480/59.94p, 720x576/50p
- 720x480/59.94i, 720x576/50i

**Video Output Connector**

HDMI 1 port (HDCP not supported)

**Video Input Connector**

HDMI 1 port (HDCP not supported)

**Audio Formats**

LPCM 48/44.1/32kHz 24-bit

**Audio Output Connectors**

- HDMI LPCM 8-channel
- Monitor: line output (stereo mini-jack)

**Audio Input Connector**

HDMI (LPCM 8-channels)

**Power Requirements:** +12V: TBD, +3.3V: 3A

**Physical Dimensions:** 190 x 111 mm (7.5 x 4.375 in.) (HxW)

**Regulatory Compliance:** CE, FCC CLASS B, C-Tick

**HDSTORM Plus**

(as above, but with the following additional features)

**Analog Formats (Output)**

- 1920x1080/59.94i, 1920x1080/50i, 1440x1080/59.94i, 1280x1080/59.94i (SMPTE 274M)
- 1280x720/59.94p, 1280x720/50p, 960x720/59.94p (SMPTE 296M)
- 720x480/59.94p, 720x576/50p (SMPTE 294M)
- 720x486/59.94i, 720x576/50i (SMPTE 259M-C)

**Analog Input Formats**

- 1920x1080/59.94i, 1920x1080/50i, 1440x1080/59.94i, 1280x1080/59.94i, iSMPTE 274M
- 1280x720/59.94p, 1280x720/50p, 960x720/59.94p, iSMPTE 296M
- 720x480/59.94p, 720x576/50p (SMPTE 294M)
- 720x486/59.94i, 720x576/50i (SMPTE 259M-C)

**Video Output Connector**

- Additional HDMI 1 port (HDCP not supported)
- Analog component (S-Video, component YPbPr)

**Video Input Connector**

- Additional HDMI 1 port (HDCP not supported)
- Analog Component (S-Video, component YPbPr)

**Audio Formats**

Analog I/O: 48 kHz, 24-bit

**Audio Output Connectors**

- HDMI LPCM 8-channels
- Line (RCA connectors: stereo)

**Audio Input Connector**

- HDMI LPCM 8-channels
- Line (RCA connectors: stereo)

**Board-to-Bay Connection:** cable supplied (LVDS)

**Power Requirements (Bay):** +12V: TBD, +5V TBD (via HDD power cable)

**Physical Dimensions (Bay):** 143 x 42 x 165 mm (5.63 x 1.65 x 6.5 in.) (WxHxD)

**System Requirements**

**CPU**

Intel or AMD CPU with a 3 GHz processor speed or faster (multiple CPUs and/or multi-core CPUs are recommended. SSE2 and SSE3 instruction set supported).

**Memory**

1 GB RAM (2 GB or more recommended)

**PCI Express**

One free PCI Express bus slot

**Hard Disk**

- 800 MB or more space required for software installation
- Drive with ATA100/7,200rpm or faster is necessary for video storage:
  - Available HDD disc space should be twice the size of the file to be edited
  - RAID-0 is recommended for HD resolution editing

**Graphics Card**

- A graphics card supported by Direct3D 9.0c or later, and PixelShader Model 3.0 or later is required

- Please check <http://www.grassvalley.com/products/professional> for the latest information on compatible graphics cards for GPU effects. As a general guideline:
  - For SD editing: 128 MB or larger required, 256 MB or larger recommended
  - For HD editing: 256 MB or larger required, 512 MB or larger recommended

**Sound Card**

Sound card with WDM driver support required.

**DVD-ROM Drive**

- Required for software installation.
- DVD-R/RW or DVD+R/RW drive is required when creating DVD-Video with DVD Creator

**5.25" Bay**

One free 5.25" bay required for HDSTORM bay

**USB Port**

Free USB port (1.1 or higher) is required for security key

**Operating System**

- Windows XP Home or Windows XP Professional (SP2 or later, 32-bit)
- Windows Vista (SP1 or later, 32-bit), including the following operation systems:
  - Windows Vista Home Basic
  - Windows Vista Home Premium
  - Windows Vista Business
  - Windows Vista Ultimate

**DEALERS/RESELLERS**

To find your local reseller or dealer for Grass Valley professional audio video products, please visit [www.grassvalley.com/sales/partners/PVP](http://www.grassvalley.com/sales/partners/PVP).

**SERVICE & SUPPORT**

Twelve-month limited warranty with service provided through local resellers. Additional support available on a contractual basis.

