



# HDTHUNDER

HD & SD MULTIFORMAT EDITING



## HD/SD SDI-Based Editing with HDMI Monitoring



HDTHUNDER is designed for video professionals who want one solution for both SDI-based editing and tapeless workflows, with the capability to preview their projects on affordable HDMI monitors. Based on the PCI Express form factor, the HDTHUNDER solution includes EDIUS® nonlinear editing software, HD-SDI inputs and outputs, and an HDMI output for full-resolution, real-time preview monitoring. Embedded HDMI audio provides high-quality audio monitoring. It's a premium, high-powered solution for multi-format editing.

Timecode input and output is supported for accurate editing from field logs. The reference input supports both analog blackburst and tri-level sync. External VTR ingest can be controlled via the RS-422 port and the optional VTR emulation software may be used to control the EDIUS software like a VTR for direct playout from the workstation.

The HDTHUNDER board can handle any mix of high- and standard-definition (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 HD and SD video outputs.

### KEY FEATURES

- HD/SD SDI input and output with embedded audio and timecode
- HDMI output for full-resolution, real-time monitoring from the included EDIUS 5 NLE software
- Bonus disc with over \$1,000 value of plug-ins, applications, and sample material
- Embedded HDMI audio output for high-quality audio monitoring
- Video and audio output stays perfectly in sync with editing windows for accurate editing and trimming
- Reference input supports blackburst or tri-level sync
- RS-422 master and (optional) slave machine control support
- 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
- Real-time SD/HD resolution, aspect ratio, and frame rate conversion and output – including 16:9 to 4:3 and NTSC to PAL
- New GPU-accelerated 3D transitions
- Real-time editing performance increases as CPU power increases
- Supports newer file-based formats, including Infinity™ JPEG 2000, XDCAM, XDCAM EX, P2 (DVCPRO and AVC-Intra), and GFCam
- Compatible with Windows XP and Windows Vista



## Package Contents

- HDTHUNDER PCI Express x4 bus card
- EDIUS software installation disc set (DVD-ROM)
- EDIUS bonus disc (DVD-ROM)
- EDIUS USB dongle
- Hardware setup manual
- TitleMotion Pro

## SPECIFICATIONS

### Bus Interface

PCI Express Rev. 1.1 x4 lane

### Video Formats (Output) (HDMI)

- 1920x1080i50/60
- 1920x1080p23.98/24p\*
- 1280x720p59.94
- 720x480i59.94
- 720x576i50
- 720x480p59.94
- 720x576p50

### Video Formats (Input/Output) (HD/SD SDI)

- 1920x1080i50/59.94
- 1920x1080psf23.98/24/25/29.97
- 1280x720p59.94
- 720x486i59.94
- 720x576i50

### Video Output Connector

- HD/SD-SDI:
  - Video: SMPTE 292M, SMPTE 259M-C
  - Audio: SMPTE 299M, SMPTE 272M-A
  - Timecode: LTC/VITC Packet (HD), D-VITC (SD)
  - HDMI 1 port (HDCP not supported):
    - Video: YCbCr 4:2:2 or RGB 4:4:4 (8-bit)
    - Audio: LPCM 8-channel (24-bit/48 kHz)

### Video Input Connector

- HD/SD-SDI:
  - Video: SMPTE 292M, SMPTE 259M-C
  - Audio: SMPTE 299M, SMPTE 272M-A
  - Timecode: VITC Packet (HD), D-VITC (SD)

### Audio Formats

LPCM 24-bit/48 kHz

### Audio Output Connectors

- HDMI LPCM 8-channel
- HD/SD SDI embedded audio

### Reference Input

BNC: Blackburst or tri-level sync

### Machine Control

9-pin D-Sub: RS-422A (master/slave) (slave function requires VTR emulation option, sold separately)

### Power Requirements

+12V: 1.6 A, +3.3V: 0.5A

### Physical Dimensions

111.15 x 167.65 mm (4.375 x 6.600 in.) (HxW)

### Regulatory Compliance

CE, FCC CLASS B, C-Tick

### System Requirements

- 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))
  - 1 GB RAM (2 GB or more recommended)
  - One free PCI Express x4 bus slot
  - 800 MB or more space required for software installation
  - Drive with ATA100/7,200rpm or faster capable of sustaining at least 20 MB/s data transfer.
    - Available hard disk space should be twice the size of the file to be edited
    - A RAID stripe set of two or more hard disk drives is required for multiple HD stream output
  - A graphics card with at least 256 MB of graphics memory (512 MB recommended) with support for Direct3D 9.0c or later, and PixelShader Model 3.0 or later is required (PixelShader Model 4.0 or later recommended)\*\*
  - Sound card with WDM driver support required
  - DVD-ROM drive is required for software installation. DVD-R/RW or DVD+R/RW drive is required when creating DVD-Video with DVD Creator
  - Free USB port (1.1 or higher) is required for security key
  - Windows XP (SP3 or later, 32-bit)
  - Windows Vista (SP1 or later, 32-bit or 64-bit), including the following operating systems:
    - Windows Vista Home Basic
    - Windows Vista Home Premium
    - Windows Vista Business
    - Windows Vista Ultimate
- \* Not available in first release.  
 \*\* Please check <http://desktop.thomsongrassvalley.com/> 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

## HEADQUARTERS

Thomson Worldwide Headquarters  
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 92648 Boulogne Cedex  
 FRANCE

## DEALERS/RESELLERS

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

## SERVICE & SUPPORT

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