

# STORM 3G Elite

THE MOST COMPREHENSIVE, MOST COMPLETE SIGNAL INTERFACE AVAILABLE TODAY

STORM 3G Elite is a 2 RU rack-mountable multi-I/O device, providing complete connectivity and HD/SD hardware for real-time, same frame, downconversion with real-time, full-quality, full-resolution 3G 10-bit HD-SDI, SD-SDI, DV, and HD/SD analog output from the timeline with EDIUS Pro 6.5 included.



STORM™ 3G Elite consists of a breakout box with a PCIe 4X I/F card for desktop connection (4X mode: up to 1080p50/60) as well as an Express 34 card (1X mode: up to 1080i) for laptop connection. It ships with a full version of EDIUS® Pro 6.5.

STORM 3G Elite provides the most comprehensive, most complete signal interface available today. Video interfaces include dual 3G SDI, which can be used as either one 3G SDI signal or one pair of high-definition and standard-definition signal outputs. Other interfaces include

1080p-capable HDMI I/O, composite (SD only), and component (up to 1080i) analog video I/O.

For audio, STORM 3G Elite has four pairs of AES/EBU interfaces (as eight BNC connectors, each accommodating eight audio I/Os up to 48 kHz, 24-bit). Another four pairs of XLR balanced audio are also available, with a stereo pair each of balanced AND unbalanced audio monitor out. A switchable line/mic (switchable phantom power) is also available for a dedicated voice-over input.

The uniqueness of STORM 3G Elite continues with control/sync. STORM 3G Elite has two RS-422 interfaces, one for controlling a VTR as master, another for control of a slave. Linear timecode I/O, reference in/through/out interfaces (which accept both bi-sync and tri-sync level), and a locking power connector round out the rest of the interfaces.

## KEY FEATURES

- HD/SD-SDI input and output with embedded audio and timecode
- HDMI input and output for full-resolution, real-time monitoring from the included EDIUS Pro 6.5 NLE software
- Embedded HDMI audio input and 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 bi-level or tri-level sync
- RS-422 master and 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
- Supports newer file-based formats, including Infinity™ JPEG 2000, XDCAM and XDCAM EX, P2 (DVCPRO and AVC-Intra), and GFCam
- Compatible with Windows 7 (32-bit or 64-bit)

## SPECIFICATIONS

### Bus Interface

PCI Express Rev. 1.1 x4 lane  
ExpressCard/34

### Video Formats (Input/Output) (3G-SDI)

- 1920x1080p50/59.94
- 1920x1080i50/59.94
- 1920x1080psF23.98/24/25/29.97
- 1280x720p50/59.94
- 720x486i59.94
- 720x576i50

### Video Formats (Input/Output) (HDMI)

- 1920x1080p50/59.94
- 1920x1080i50/59.94
- 1280x720p50/59.94
- 720x480i59.94
- 720x576i50
- 720x480p59.94
- 720x576p50

### Video Output Connector

#### 3G-SDI:

- Video: SMPTE-292M, SMPTE-259M-C
- Audio: SMPTE-299M, SMPTE-272M-A
- Analog Component (BNC: Y/Pb/Pr)
- Analog Composite (BNC)
- Timecode: LTC/VITC Packet (HD), D-VITC (SD)

#### HDMI 1 port (HDCP not supported):

- Video: YCbCr4:2:2 or RGB4:4:4 (8/10-bit)
- Audio: LPCM 8-channel (24-bit/48 kHz)

### Video Input Connector

#### 3G-SDI:

- Video: SMPTE-292M, SMPTE-259M-C
- Audio: SMPTE-299M, SMPTE-272M-A

#### Analog Component (BNC: Y/Pb/Pr)

#### Analog Composite (BNC)

#### Timecode: VITC Packet (HD), D-VITC (SD)

#### HDMI 1 port (HDCP not supported):

- Video: YCbCr4:2:2 or RGB4:4:4 (8/10-bit)
- Audio: LPCM 8-channel (24-bit/48 kHz)

### Audio Formats

LPCM 48 kHz/24-bit

### Audio Output Connectors

- HDMI LPCM 8-channel
- HD/SD-SDI embedded audio 8-channel
- AES/EBU digital audio 8-channel
- Balanced analog audio 4-channel
- Balanced analog audio monitor 2-channel
- Unbalanced analog audio monitor 2-channel

### Audio Input Connectors

- HDMI LPCM 8-channel
- 3G-SDI embedded audio 8-channel
- AES/EBU digital audio 8-channel
- Balanced analog audio 4-channel

### Reference Input

BNC: Black Burst or Tri-Level Sync

### Machine Control

9-pin D-Sub: RS-422A x 2 (Master/Slave)

### Power Requirements

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

### Physical Dimensions

2 RU

### Regulatory Compliance

CE, FCC CLASS B, C-Tick

### Minimum System Requirements

- Any Intel Core 2 or Core iX CPU. Intel or AMD single core 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 x1 bus slot
- 800 MB or more space required for software installation
- Drive with ATA100/7,200 rpm 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. For writing onto DVD or Blu-ray disc, a compatible drive is required
- Windows 7 (32-bit or 64-bit)
- Internet connection for EDIUS software activation

**Note:** EDIUS Pro 6.5 requires Windows 7 (32-bit or 64-bit). EDIUS Pro 6.5 software requires that all previous versions of EDIUS software be uninstalled.

## PACKAGE CONTENTS

- STORM 3G Elite breakout box
- PCI Express 4X IF bus card with connection cable
- Express 34 bus card with connection cable
- EDIUS Pro 6.5 software installation disc set (DVD-ROM)
- Hardware setup manual



## MAXIMIZE AND OPTIMIZE YOUR INVESTMENT



With program production and distribution becoming ever more complex and affecting business issues on a daily basis, you need a trusted partner that understands those complexities and how to convert them into opportunities. Grass Valley's team of experienced engineers and system integrators can help you turn your challenges into opportunities in the most efficient and cost-effective way possible, from system design all the way through to commissioning. Grass Valley Professional Services helps you to:

**Define:** We consult with you to help define your business and technology requirements and then design the right solutions to meet them.

**Deploy:** Our professional service organization, backed by proven project management methodologies, can take you from design through deployment, commissioning, and training.

**Support:** We offer a complete portfolio of support services to keep your systems running, and help manage your long-term maintenance needs.

For information about Grass Valley, please visit [www.grassvalley.com](http://www.grassvalley.com).

Join the Conversation at **GrassValleyLive** on Facebook, Twitter, and YouTube.

