

HDWS X1 & X1 ELITE (JAPAN ONLY)

EDIUS 11 Broadcast Nonlinear Editing Workstation



The HDWS X1 and X1 Elite are high-end desktop workstations for up to 4K editing. They come with EDIUS® 11 Broadcast nonlinear editing software pre-installed, which enables background rendering. These turnkey systems are now available for Japan.

EDIUS turnkey systems are positioned as a one-stop solution from the Grass Valley® factory that provide the best out-of-box experience and peace of mind to users, without any potential software conflicts or hardware glitches. Grass Valley also provides optional commissioning, training and support beyond the initial 12-month (defects in materials and workmanship) warranty period.

These specifically designed workstations makes it possible to extend the support period. Unlike our lower-tier workstation, REXCEED, the operating system version of HDWS X1 and X1 Elite can be fixed.

The system is designed for the best performance in video editing operations, including the total number of playback streams and the encoding speed.

Key Features

Editing Features

- EDIUS 11 Broadcast
- Support for various 4K codecs: XAVC (Intra/Long GOP), XAVC S, AVC-Ultra, XF-AVC, 1D C Motion JPEG
- Supports resolutions from 24x24 to DCI 4K, allowing you to mix and edit material from different frame rates in real time on the same timeline

- Supports RS-422 control: Insert editing with high-precision RS-422 control is also possible
- Native support for many formats: XDCAM, P2, XF, CMF (K2 files), AVCHD, MXF, etc.

Other

- Equipped with a 4K preview board (QFHD/DCI 4K compatible)

Specifications – Workstation

		HDWS X1	HDWS X1 Elite
OS		Microsoft Windows 11 IoT Enterprise 64-bit	
Processor	Core	Xeon Single 12-core	Xeon Single 16-core
	Thread (H/T)	24 threads	32 threads
Memory	Capacity	96 GB	128 GB
Graphics Cards		NVIDIA Series	NVIDIA Series
Storage	System	240 GB (240 GB SSD x2 / RAID-1)	
	Data	8 TB (U.2 SSD x1)	8 TB (U.2 SSD 8 TB x 2 (RAID-1))
Optical drive		Blu-ray disc drive x1	
Sound (on-board)		7.1ch High-definition audio (Realtek ALC888S)	
Interface	Display	Mini DisplayPort x4 (with DisplayPort conversion adapters x2)	
	Network	RJ45 1 GbE LAN (Intel i210AT) x1 RJ45 10 GbE LAN (Marvel AQC113C) x1	
	USB	USB 2.0 Type-A (rear x2) USB 3.2 Gen1 5 Gb/s Type-A (front x3) USB 3.2 Gen2 10 Gb/s Type-A (rear x4) USB 3.2 Gen2 10 Gb/s Type-C (front x1) USB 3.2 Gen2x2 20 Gb/s Type-C (rear x1)	
	Sound	Stereo Mini (Line in x1, Line out x1, CEN/LFE out x1, surround out x1), Mono Mini (Mic in x1), Optical Rectangular Connector (SPDIF out x1)	
	Media Slots	SD card (SDXC, UHS-II, Micro P2), CFexpress Type B, XQD, 2.5" U.2 SSD, 2.5" SATA SSD	
	Power	Rated input voltage/frequency	AC 100-240V, 50/60 Hz
	Redundant	Redundant power supplies	
	Surveillance system	Input power failure detection, front panel LED indication	
Power Consumption		Maximum 800W	
Operating temperature range		5°C - 35°C (41°F - 95°F)	
External dimensions		430 (W) x 625 (D) x 176 (H) mm (16.9 x 24.6 x 6.9 in.) (Rubber feet and protrusions are not included.) 19" 4 RU rackmount size	
Weight		Approx. 23.0 kg (50.7 lbs.)	



Specifications (Cont.)

4K Preview Board

This board is dedicated to 4K preview.

Video Output

SDI:

DIN 1.0/2.3 x4 (DIN 1.0/2.3 – Connect the BNC cable)
SMPTE ST 292/424 (Level A/B compliant)

SDI x4 – DCI 4K (4096 x 2160), QFHD (3840 x 2160)

HDMI:

Mini HDMI connector x1 (HDMI 1.4/HDMI 2.0 Level B
50p/60p YUV 8-bit 4:2:0)

Audio Output

SDI:

SMPTE ST 299, 24-bit, 48 kHz
QFHD: Embedded audio 16ch*2
DCI 4K: Embedded audio 8ch*2

HDMI:

Mini HDMI connector x1 (HDMI 1.4 conformance)
8ch 24-bit HDMI embedded audio sample rate
48 kHz sync

AES/EBU:

BNC x4*1
8ch 24-bit AES/EBU audio sample rate 48 kHz

Timecode

LTC Output: BNC x1*1

Reference Input

BNC x1*1,3

*1 Uses breakout cables

*2 SDI x 4 Embedded in all outputs

*3 Reference signal input that acts only on the video output terminal on the 4K preview board

Video I/O Board (Grass Valley STORM 3G)

Video Input

SDI: BNC x1 (SMPTE ST 424*1/292/259-C)

Video Output

SDI: BNC x1 (SMPTE ST 424*1/292/259-C)

HDMI: Mini HDMI connector x1 (HDMI 1.3 compliant)*2

Audio Input

SDI: Embedded audio 16-channel (SMPTE ST
299/272-A)

Audio Output

SDI: Embedded audio 16-channel (SMPTE ST
299/272-A, 20/24-bit, 48 kHz locked)

HDMI: 2ch/8ch, 24-bit, 48 kHz*3

Timecode

LTC Input: BNC x 1 (0.5V to 18 Vp-p, 10 kΩ)

VITC Input: Separate from SDI Input

VITC Output: Superimposed on SDI output

Reference

Input: BNC x1 (HD3 value/SD BB automatic
detection)*4

Output: BNC x2 (HD3 value/SD BB switchable, x1
connected to REF in)

Remote

RS-422A (D-Sub 9-pin) x1

*1 3G-SDI is only compatible with Level B

*2 HDCP is not supported

*3 Only uncompressed PCM audio is supported

*4 This is a reference signal input that acts only on the video input/
output terminals on the video I/O board

EDIUS version (pre-installed)

EDIUS 11 Broadcast

Accessories

- EDIUS keyboard (USB) x1
- Optical scrolling mouse (USB) x1
- DIN 1.0/2.3 – BNC conversion cable x1
- Mini DP – DP conversion adapters x2
- 3P-AC power cable x2
- REF-TC BNC cable x1
- 4K Preview Board breakout cable x1
- HDMI – mini HDMI cable x1
- Information on Support Service Registration

Precautions

About I/O devices and 4K Preview Boards:

- For preview devices other than 4K video editing, select STORM 3G and connect the device to the output terminal of the main board
- For 4K editing, select STORM 4K and connect the device to the output terminal of the 4K preview board.

We do not guarantee the operation of all devices other than accessories and optional products made by Grass Valley for various turnkey interfaces.

Bundled Software	Type	Remarks
EDIUS 11 Broadcast	Video Editing Software	Installed
QuickTitrer	Title Creation Software	Installed
Mync 11	Content Management Software	Installed
Options	Remarks	
EW11-OP-VE	Option to control playback of EDIUS projects by external control	
HDWSOP-RM-EAR	Rackmount bracket for HDWS – Fixing the HDWS to a 19-inch rack	

List of video input devices (EDIUS 11 Broadcast)

Video Input – SDI (STORM 3G)	Recorded Video		
Format	Codec	#of bits	Container
1920x1080 59.94p/59.94i/50p/50i/29.97PsF/25PsF/24PsF/23.98PsF 1440x1080 59.94i/50i/29.97PsF/25PsF/24PsF/23.98PsF 1280x1080 59.94i 1280x720 59.94p/50p 1280x720 Constant Rate Shooting 59.94p 960x720 59.94p/50p 960x720 Constant Rate Shooting 59.94p 720x576 (4:3/16:9 and 4:3/16:9 DV) 50i 720x486 (4:3/16:9) 59.94i 720x480 (4:3 DV/16:9 DV) 59.94i	Uncompressed/ Uncompressed 10-bit	8-bit/10-bit	AVI
1920x1080 59.94p/50p/24PsF 1440x1080 24PsF 1280x1080 59.94i 1280x720 Constant Rate Shooting 59.94p 960x720 Constant Rate Shooting 59.94p	Grass Valley HQ/ Grass Valley HQX	8-bit/10-bit	AVI
1920x1080 59.94i/50i/29.97PsF/25PsF/23.98PsF 1440x1080 59.94i/50i/29.97PsF/25PsF/23.98PsF 1280x720 59.94p/50p 960x720 59.94p/50p 720x576 (4:3/16:9 and 4:3/16:9 DV) 50i 720x486 (4:3/16:9) 59.94i 720x480 (4:3 DV/16:9 DV) 59.94i	Grass Valley HQ/ Grass Valley HQX	8-bit/10-bit	AVI/MXF
1920x1080 59.94i/50i 1280x720 59.94p/50p 1920x1080 29.97PsF/25PsF/23.98PsF 1440x1080 59.94i/50i 960x720 59.94p/50p	AVC-Intra 100	8-bit/10-bit	MXF/CMF (K2 Clip) MXF
1440x1080 29.97PsF/25PsF/23.98PsF 960x720 59.94p/50p 1440x1080 29.97PsF/25PsF/23.98PsF	AVC-Intra 50	8-bit/10-bit	MXF/CMF (K2 Clip) MXF
1920x1080 59.94i/50i/29.97PsF/25PsF/23.98PsF 1440x1080 59.94i/50i/29.97PsF/25PsF/23.98PsF 1280x720 59.94p/50p 960x720 59.94p/50p 720x576 (4:3/16:9 and 4:3/16:9 DV) 50i 720x480 (4:3 DV/16:9 DV) 59.94i	MPEG-2 Custom	8-bit/10-bit	MXF
1920x1080 59.94i/50i 1440x1080 59.94i/50i 1280x720 59.94p/50p 720x576 (4:3/16:9 and 4:3/16:9 DV) 50i	MPEG-2 for K2 Clip	8-bit/10-bit	CMF (K2 Clip)
1920x1080 59.94i/50i 1280x720 59.94p/50p 1920x1080 29.97PsF/25PsF/23.98PsF 1440x1080 59.94i/50i	XDCAM HD422 Compatible	8-bit/10-bit	MXF/CMF (K2 Clip) MXF
1440x1080 59.94i/50i 1280x720 59.94p/50p 1440x1080 29.97PsF/25PsF/23.98PsF	XDCAM HD Compatible	8-bit/10-bit	MXF/CMF (K2 Clip) MXF
1920x1080 59.94i/50i 1440x1080 59.49i/50i 1280x720 59.94p/50p 1920x1080 29.97PsF/25PsF/23.98PsF 1440x1080 29.97PsF/25PsF/23.98PsF	XDCAM EX Compatible	8-bit/10-bit	MXF/CMF (K2 Clip) MXF
1440x1080 50i 1280x1080 59.94i 960x720 59.94p/50p 960x720 Constant Rate Shooting 59.94p	DVCPRO HD	8-bit/10-bit	AVI/MXF/CMF (K2 Clip) AVI
720x576 (4:3/16:9) 50i 720x486 (4:3/16:9) 59.94i 720x576 (4:3 DV/16:9 DV) 50i 720x480 (4:3 DV/16:9 DV) 59.94i	MPEG IMX DV/DVCPRO/DVCPRO50	8-bit/10-bit 8-bit/10-bit	MXF/CMF (K2 Clip) AVI/MXF/CMF (K2 Clip)

List of video output devices (EDIUS 11 Broadcast)*1

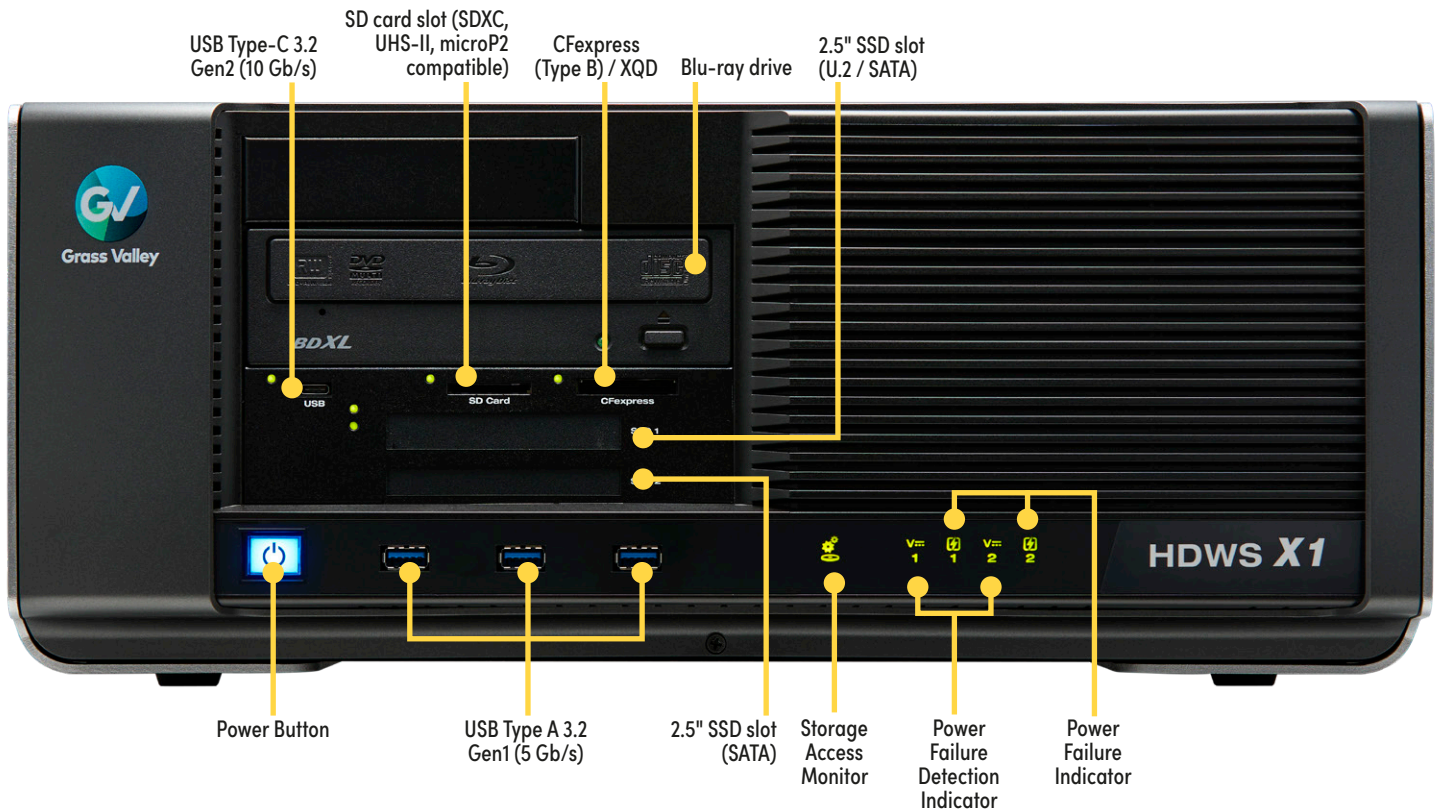
Pin	Device Format	Project Format
SDI x4 (4K Preview Board)	4096x2160 59.94p/50p/25p/25PsF/24p/24PsF/23.98p/23.98PsF	4096x2160 59.94p/50p/29.97p/25p/24p/23.98p
	3840x2160 59.94p/50p/29.97p/25p/25PsF/ 24p/24PsF/23.98p/23.98PsF	3840x2160 59.94p/50p/29.97p/25p/24p/23.98p
HDMI*2 (4K Preview Board)	4096x2160 59.94p/50p/24p/23.98p	4096x2160 59.94p/50p/24p/23.98p
	3840x2160 59.94p/50p/29.97p/24p/23.98p	3840x2160 59.94p/50p/24p/23.98p
SDI (STORM 3G)	1920x1080 59.94p/59.94i/50p/50i/24PsF/23.98PsF	1920x1080 59.94p/59.94i/50p/50i/29.97p/25p/24p/23.98p 1440x1080 59.94i/50i/29.97p/25p/24p/23.98p 1280x1080 59.94i/29.97p/23.98p
	1280x720 59.94p/50p	1280x720 59.94p/50p/29.97p/25p/23.98p,960x720 59.94p/50p/29.97p/25p/23.98p
	720x576 50i	720x576 50i/25p
	720x486 59.94i	720x486 59.94i/29.97p/23.98p 720x480 59.94i/29.97p/23.98p
HDMI (STORM 3G)	1920x1080 59.94p/59.94i/50p/50i	1920x1080 59.94p/59.94i/50p/50i/29.97p/25p/23.98p 1440x1080 59.94i/50i/29.97p/25p/23.98p 1280x1080 59.94i/29.97p/23.98p
	1280x720 59.94p/50p	1280x720 59.94p/50p/29.97p/25p/23.98p 960x720 59.94p/50p/29.97p/25p/23.98p
	720x576 (4:3/16:9) 50i*3	720x576 50i/25p
	720x480 (4:3/16:9) 59.94i*3	720x486 59.94i/29.97p/23.98p 720x480 59.94i/29.97p/23.98p

*1 Signal output on all terminals that support the output format

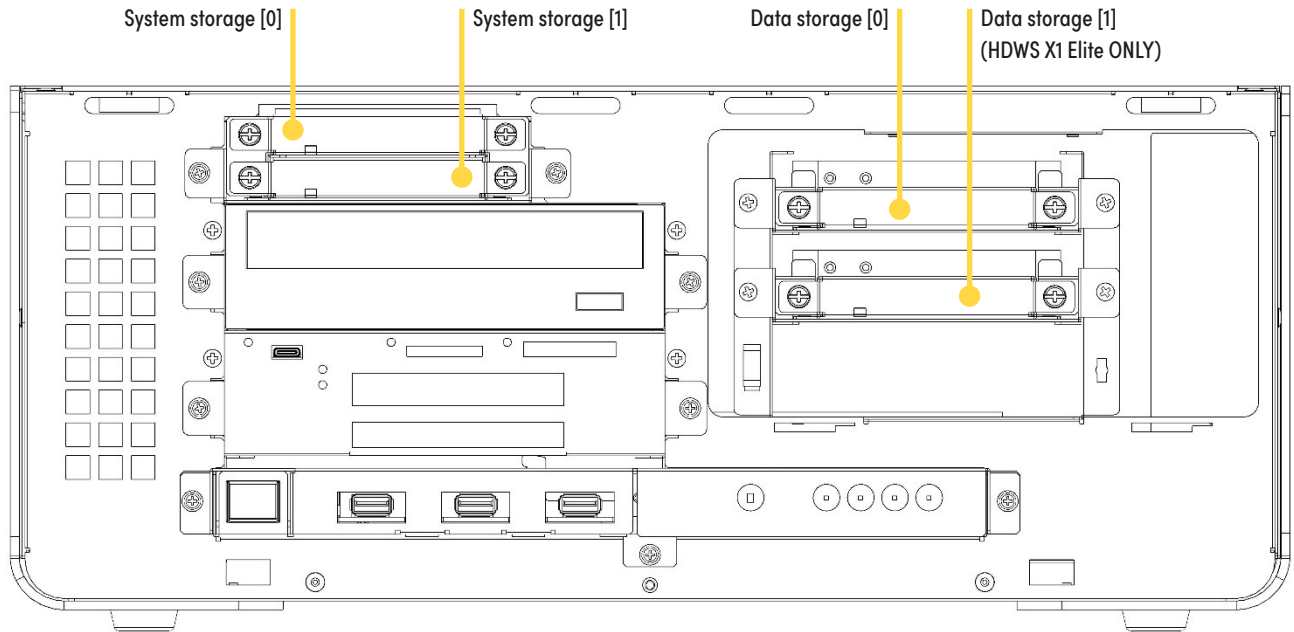
*2 59.94p/50p supports YUV 4:2:0

*3 On monitors that cannot display interlacing, it may be displayed as progressive

Exterior view – Front view of the workstation



Exterior view – Interior front view of the workstation



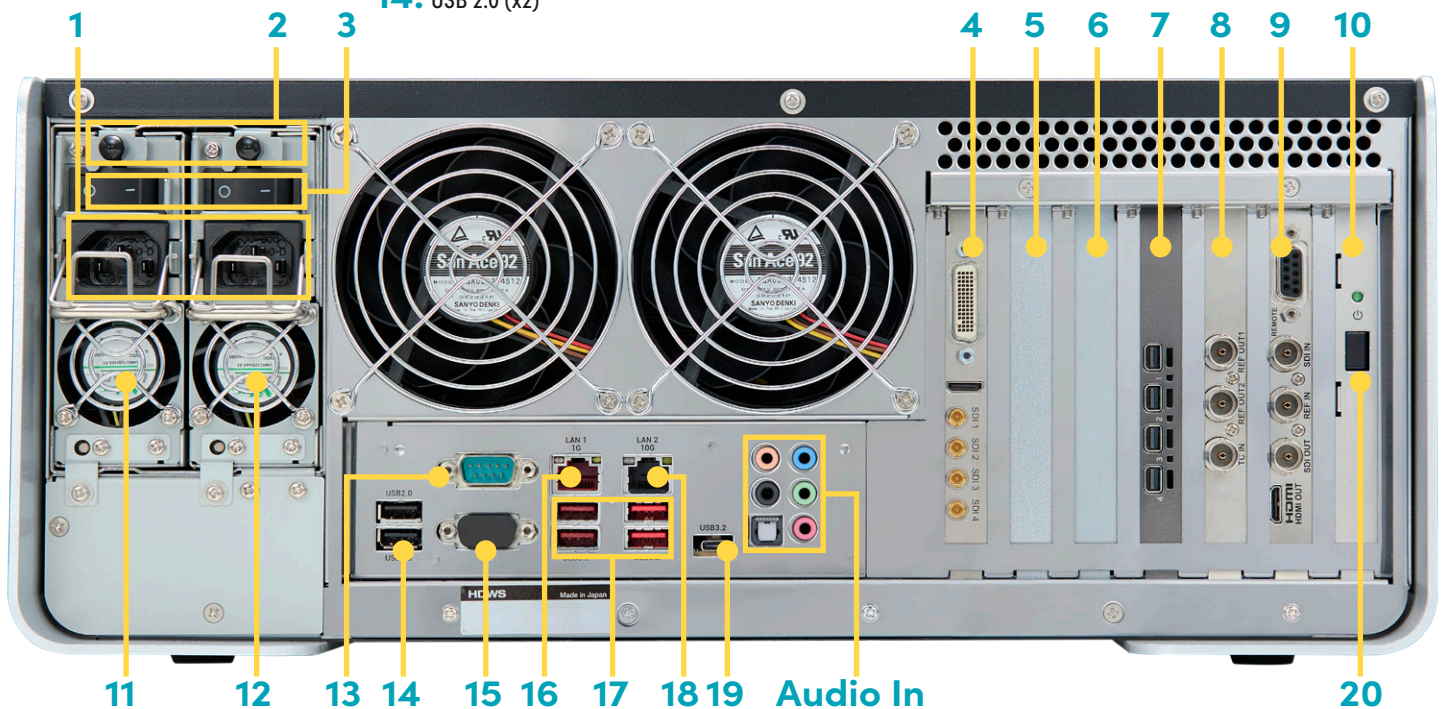
Exterior view – Rear view of the workstation

1. Power Input Terminals
2. Power Supply Release Lever
3. Main Power Switch
4. 4K Preview Board
5. Free Slots PCIe5.0 x16
6. Free Slots PCIe5.0 x16
7. Mini DisplayPort (x4)*1

8. Expansion Board (STORM 3G REF-TC)
9. Main Board (STORM 3G)
10. Power LED Lamp
11. Power Supply Unit 2
12. Power Supply Unit 1
13. Unused terminal*2
14. USB 2.0 (x2)

15. Unused terminal*2
16. 1 GbE LAN
17. USB 3.2 Gen2 (x4)
18. 10 GbE LAN
19. USB 3.2 Gen2x2 (Type-C)
20. Power Button

- Audio IN**
- Center / Subwoofer Out (Orange)
 - Side Speaker Out (Black)
 - SPDIF Out
 - Line In / Rear Speaker Out (Blue)
 - Line Out / Front Speaker Out (Green)
 - Mic In (Pink)

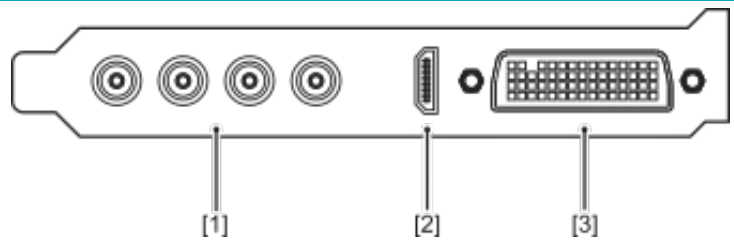


*1 Depending on the monitor you are using, use a conversion adapter to connect. If you want to connect only one monitor, connect it to Port 4 (bottom row). This product comes with two Mini DP to DP conversion adapters.

*2 This product does not support connection.

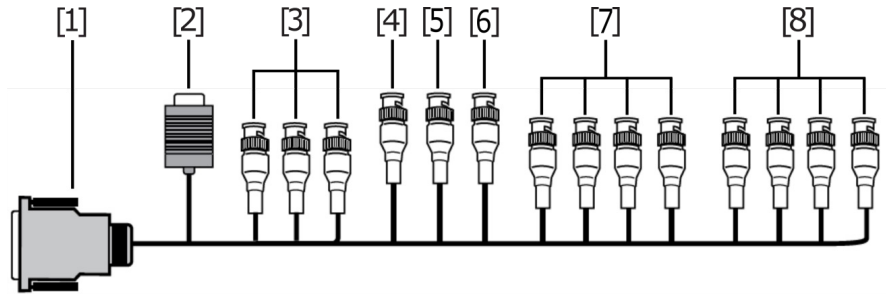
External View – 4K Preview Board

1. SDI output (1/2/3/4)
2. HDMI Mini Output terminal (HDMI OUT)
3. Breakout cable connection terminals



Exterior View – 4K I/O Breakout Cable

1. 4K preview board connection terminal
2. RS-422 Remote Terminal (D-Sub 9-pin)*1
3. HD Component/SD Component, Composite, S-Video Out (BNC x3)*1
4. REF In (BNC)*2
5. LTC In (BNC)*1
6. LTC Out (BNC)
7. Digital Audio (AES/EBU) (1/2 In / 3/4 In / 5/6 In / 7/8 In) (BNC x4)*1
8. Digital Audio (AES/EBU) (1/2 Out / 3/4 Out / 5/6 Out / 7/8 Out) (BNC x4)

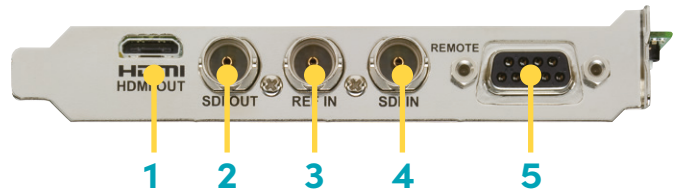


*1 Not supported by EDIUS

*2 Reference signal input that acts only on the video output pins on the 4K I/O board

External view – Video I/O board (Grass Valley STORM 3G)

1. HDMI Mini Output Connector (HDMI OUT)
2. SDI Output Terminal (SDI OUT)
3. Reference Input Pin (REF IN)*1
4. SDI Input Terminal (SDI in)
5. Remote Terminal (REMOTE)

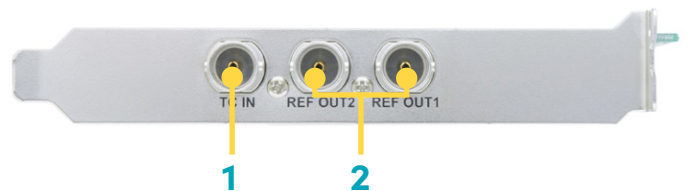


*1 This reference signal input acts only on the video input/output pins on the video I/O board

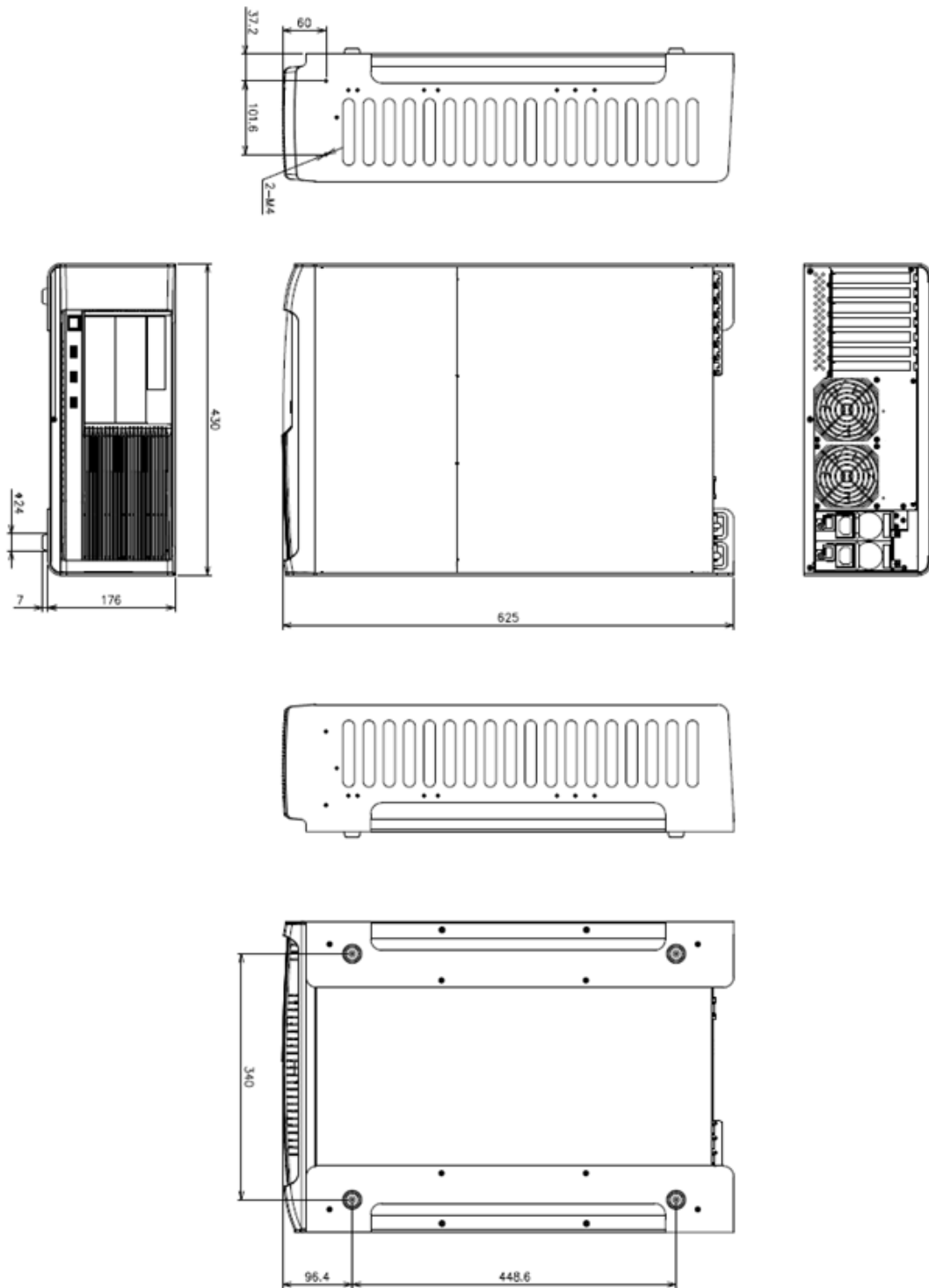
Exterior view – Expansion board (Grass Valley STORM 3G REF-TC)

1. TC Input Terminal (TC IN)*1
2. Reference Output Pin (REF OUT1/REF OUT2)

*1 This video on the video I/O board is superimposed on the signal from the input terminal



Dimensions (mm)



This product may be protected by one or more patents. For further information, please visit: www.grassvalley.com/patents

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