

## HVS-2000 Datasheet

### 1. Specifications

#### Basic specifications

Temperature	5°C to 40°C
Humidity	30% to 90% (no condensation)
Power	100VAC to 240 VAC ±10%, 50/60Hz
Consumption	HVS-2000 (standard): 496 W (at 100-120 V) 476 W (at 220-240 V) HVS-2000 (full option): 796 W (at 100-120 V) 762 W (at 220-240 V)
Dimensions	430 (W) x 500 (D) x 177 (H) mm 482 (W) (Including rack mount brackets)
Weight	18 kg (With all options: 30kg)
Consumables (at 24-hour operation)	Power supply unit: Replace every 5 years. Cooling fans: Replace every 5 years. 2.5-inch HDD: Replace every 3 years

#### Technical specifications

Number of M/Es	Standard: 2                      HVS-2000ME installed: 3
Video Formats	HD: 1080p/30, 29.97, 25, 24, 23.98    720p/59.94, 50 1080i/59.94, 50    1080PsF/30, 29.97, 25, 24, 23.98 SD: 525i/59.94 (NTSC), 625i/50 (PAL)
HVS-2000EXP3G	Full HD (3G-SDI): 1080p/59.94, 1080p/50 (Level A)
Video Input	HD-SDI: 1.5 Gbps or SD-SDI: 270 Mbps 75-ohm BNC x 24 (Frame synchronizer on each input)
HVS-2000EXP3G	3G-SDI: 3Gbps
Video Input (option)	
HVS-100DI-A	HD-SDI: 1.5 Gbps or SD-SDI: 270 Mbps 75-ohm BNC x 4 (Frame synchronizer on each input, Resize engine on 2 inputs)
HVS-100AI	HD/SD analog component or analog composite 1.0 Vp-p 2 inputs BNC
HVS-100PCI (RGB)	2 inputs (HDCP not supported) HDMI 1.2 (Type-A), VGA 1080p,1080i, 1080PsF: XGA~WUXGA, HDTV 720p: XGA, SXGA, WXGA, HDTV SD: VGA, SVGA, XGA, SDTV
Number of Inputs	Standard: 24 (SDI only) Max: 48 (If 6 HVS-100DI-A cards installed)
Video Output	HD-SDI: 1.5 Gbps or SD-SDI: 270 Mbps 75-ohm BNC x 16 (M/E OUT1- 4, AUX1-12) HDMI 1.2 x 2 HDTV only (1080/23.98PsF unsupported) HDCP supported RGB full range / RGB limited range selectable
HVS-2000EXP3G	3G-SDI: 3Gbps

Video Output (option)	
HVS-100DO	HD-SDI: 1.5 Gbps or SD-SDI: 270Mbps 75-ohm BNC x 4 (2 outputs with a down-converted output per each)
HVS-100AO	HD/SD analog component or analog composite 1.0 Vp-p 2 outputs BNC
HVS-100PCO (HDMI: RGB)	2 outputs (HDCP not supported), HDMI (Type-A), VGA 1080p, 1080i, 1080PsF: SXGA, UXGA, WSXGA, WUXGA, HDTV 720p: SXGA, WXGA, HDTV SD: SVGA, SDTV
Number of Outputs	Standard: 18 (SDI x 16, HDMI x 2) Max: 22 (If 2 outputs cards installed)
AUX Outputs	Standard: 14, Max: 18 (Crosspoint switching with effects available on each output)
Color Sampling	YCbCr Key 4:2:2:4 10-bit
Genlock Input	BB: NTSC: 0.429 Vp-p/PAL: 0.45Vp-p or Tri-level Sync: 0.6 Vp-p 75-ohm BNC x 1, loop-through (Terminate with 75-ohm terminator, if unused.)
System Phase Adjust	Horizontal: -1/2H to +1/2H
Genlock Output	BB: NTSC: 0.429 Vp-p/PAL: 0.45Vp-p or Tri-level Sync: 0.6 Vp-p 75-ohm BNC x 1
I/O Delay	Minimum delay: HD: 1H, SD: 1.7H If FS or Up-resize engine used: 1 to 2 frames + Minimum delay If FS or Up-resize engine plus DVE used: 2 to 3 frames + Minimum delay If FS or Up-resize engine plus Output resize engine and DVE used: 3 to 4 frames + Minimum delay
Effects	Pattern (WIPE): 100 (w/ modification feature) Pattern (DVE): More than 30 (2.5D) (w/ modification feature) DVE: 8 channels (4 channels per M/E, including DVE patterns) SUB EFFECT: 8 channels (4 channels per M/E)
Transition	Execution: Fader lever, AUTO or CUT button Type: MIX or WIPE (DVE included)
Still/Clip Store	4 channels with backup feature, Stills: 4, Video clip: 30 sec (60 sec. w/ HVS-2000RAM), still savable in FS frame memory on all inputs
Keyer / FLEXaKEY	12 channels (KEY x 4 per M/E and FLEXaKEY x 4) (8 channels added by HVS-2000ME) Luminance, Full, Bus and Chroma key, Edge FLEXaKEY: Direct display on AUX outputs
Multi-viewer	2 channels, 2/4/5/7/9/10/11/13/14/16-way split views (2 channels added by HVS-2000ME) Display: Title, Tally, Audio Level Meter, Safety Area and Frame Border 1 frame delay relative to PGM output
Process Amp	Process Amp feature on each input and output
Color Correction	4 channels (2 channels for each M/E) Correction mode: Balance, Differential and Sepia Clip mode: YPbPr, RGB
Event Memory	100 events: Crossfade switching available during event recall
Macro	100 macros: No. 00-89: Max. 30 actions, No.90-99: Max. 300 actions

Interfaces	
LAN 1 (MAIN) LAN 2 (SUB)	100BASA-TX/1000BASE-T, RJ-45 x 2 For OU and other external control unit connection
GPI IN	15-pin D-sub (female) x 1 (inch screw) 10 inputs
GPI/TALLY OUT	25-pin D-sub (female) x 1 (inch screw) 20 outputs
RS-422	9-pin D-sub (female) x 6 (with inch screws) For tally unit connection
ARCNET	75-ohm BNC x 1, loop-through (Terminate with 75-ohm terminator, if unused.) For optional control panel connection

#### 4K mode specifications (option)

4K UHD Signal (3840 x 2160 4:2:2 YCbCr 10-bit	59.94p, 50p Quad Link 3G-SDI (Level-A) (SMPTE425-5) 2SI (2 Sample Interleave) or SQD (Square Division)	
	29.97p, 23.98p Dual Link 3G-SDI (Level-B-DS) 2SI (SMPTE425-3) Quad Link HD-SDI (Level-A) SQD	
	59.94i, 50i 30PsF, 29.97PsF, 25PsF, 24PsF, 23.98PsF 30p, 25p, 24p Quad Link HD-SDI (Level-A) SQD * Require an HVS-2000EXP3G option for 3G-SDI. * Require an HVS-2SI option for 4K 2SI. * 3G Level-B input available with an HVS-100DI-A option.	
	SDI input x 6 (Max 12) (Frame synchronizer on each input)	
	SDI output x 4 (Max 5)	
HDMI output	x 2, HDTV (1080i)	
Color sampling	3G/HD-SDI: 4:2:2 10-bit	
Effects	WIPE pattern	Available (limited patterns in SQD mode)
	WIPE modify	Border (in SQD mode), CG WIPE
Transition	Execution:	Fader lever, AUTO or CUT button
	Type:	MIX and WIPE
DVE	See the operation manual for more details.	
KEYER	2 channels (KEY1 and KEY2) Luminance, Full, and Bus key, Chromakey (4K 2SI only), Box mask	
FLEXaKEY	1 channels Luminance, Full, and Bus key, Displayed on M/E, MELite and AUX	
Color Corrector	One channel (Only for 1.5G-SDI input in 4K SQD)	
Multi-viewer	2 channels (2K output), Full or Quad screen Display: Title, Tally marker and Safety Area 1 frame delay relative to PGM output	
Event memory	100 events: Crossfade switching available during event recall * Event data in Normal mode are unavailable.	
Available functions same as HD/SD mode	Macro, Genlock Input, System Phase Adjust, Genlock Output, I/O Delay	

Unavailable functions	Chromakey (4K SQD), Advanced chromakey, BUS LINK, TRANS LINK, Sub effects (for 59.94p or 50p signal input) Color corrector (for 59.94p or 50p signal input) Local direct pattern, Local event
Parameters to be reset by switching to 4K mode	M/E 1, M/E 2, AUX (excluding HDMI) and MELite settings KEY LINK and FLEXaKEY settings Side Panel, MV and Standard color corrector settings

### Options

HVS-100DI-A	HD/SD-SDI input expansion card
HVS-100AI	Analog input card
HVS-100PCI	PC input card
HVS-100DO	HD/SD-SDI output expansion card
HVS-100AO	Analog output card
HVS-100PCO	PC output card
HVS-2000EXP3G	3G-SDI format expansion software
HVS-2000DVE	3D DVE 4ch card
HVS-2000DVE-EX	4K Format Expansion for HVS-2000DVE
HVS-2000MV or HVS-2000ME	Multi-viewer or 3M/E Expansion card
HVS-2000EX	Function Expansion card
HVS-2000-2SI	4K-2SI Support software
HVS-2000ED	Editor Interface software
HVS-2000RAM	V-RAM Expansion software
HVS-2000PSM	Redundant Power Supply Unit for HVS-2000 (1 set)
HVS-2000GUI software license	

### HVS Series options

HVS-AUX16A/32A/64A16B/16C/16D	Auxiliary Unit (Ethernet LAN connection)
HVS-TALR20/32	Tally Control Unit (Relay type) (RS-422 connection)
HVS-TALOC20/32	Tally Control Unit (Open Collector type) (RS-422 connection)
HVS-GPIO128	Interface Extension Unit (Ethernet LAN connection)
HVS-391OU/392OU/392ROU/392WOU	Switcher Control Panel modified exclusively for HVS-2000

### Accessories

AC Cord, Rack Mount Brackets, CD-ROM, Quick Setup Guide

**2. External Dimensions**

**HVS-2000**

(All dimensions in mm.)

