

3G/HD/SD 2M/E Video Switcher
HVS-2000 "HANABI"

FOR.A[®]

花火
HANABI

3G/HD/SD 2M/E Video Switcher
HVS-2000

HANABI



The 4K(UHD) supported HVS-2000 video switcher offers 7M/E capability and is ideal for a variety of applications.

The HVS-2000 switcher is a powerful 7 Video M/E machine and a game changer in today's video production switchers. Now with the power in our new HVS-7M/E technology, the switcher can be used in a variety of applications.

- Up stream transition effects
- Down stream transition effects
- Add the pure power of 7 real M/Es for multiple independent on-stage monitor display control or add multiple control panels to operate from a control room...each with mixes, wipes, keys, and DVEs including preview control.

The HANABI will allow its users to win the video production race with all of its quality features and ease of operation.

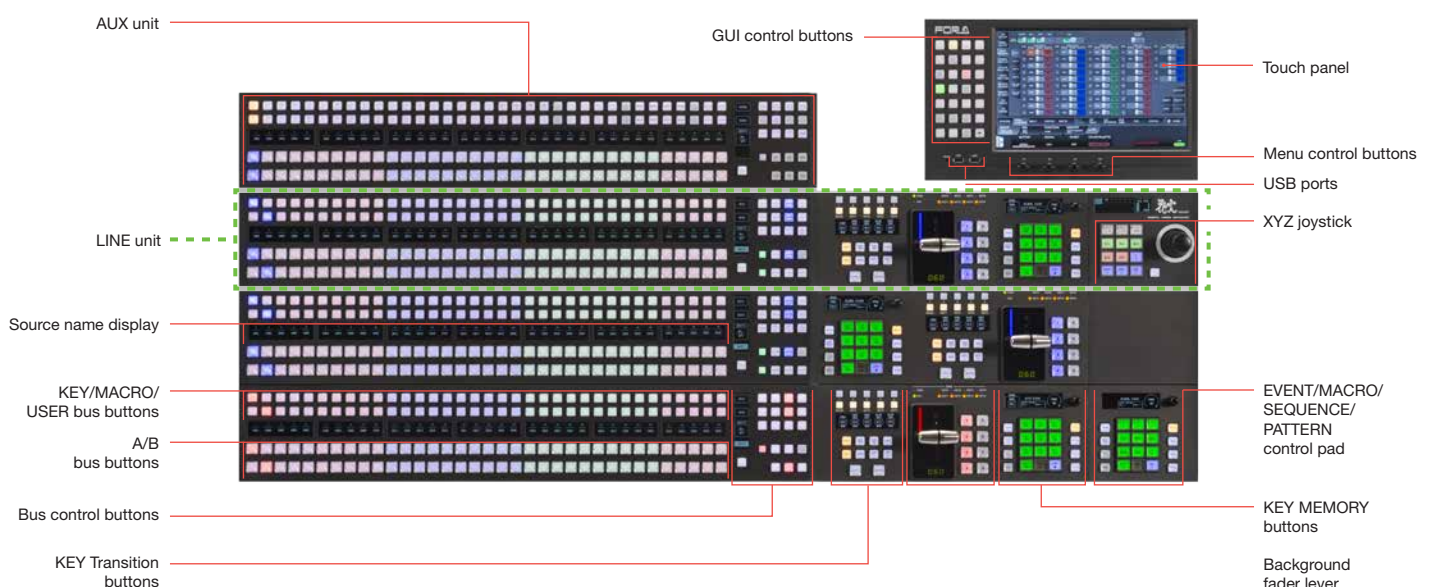
* 7M/E capability: 3M/E + exclusive 4 MELite™ with FLEXaKEY™

Reasons to buy

1 Easy-to-use control panel

The switcher is compatible with main HVS-6000/6000M control panels. Four options are available: the rack-sized HVS-2120ROU, two-bus HVS-2240OU, three-bus HVS-3320OU, and the HVS-3355OUA, with a custom-ordered amount of buttons and buses and fader layout. Through customizable RGB button lights assigned to specific video material or button functions, a touch panel with GUI menus, button/macro bus macro name display, and other features, the panels offer enhanced usability and support accurate control. Direct input via a three-axis (XYZ) joystick, setting knobs, and a keypad. Operations while viewing a larger GUI display are possible by connecting an external touchscreen monitor. A range of functions can also be assigned to user buttons in convenient locations on the control panel.

HVS-3355OUA Control Panel

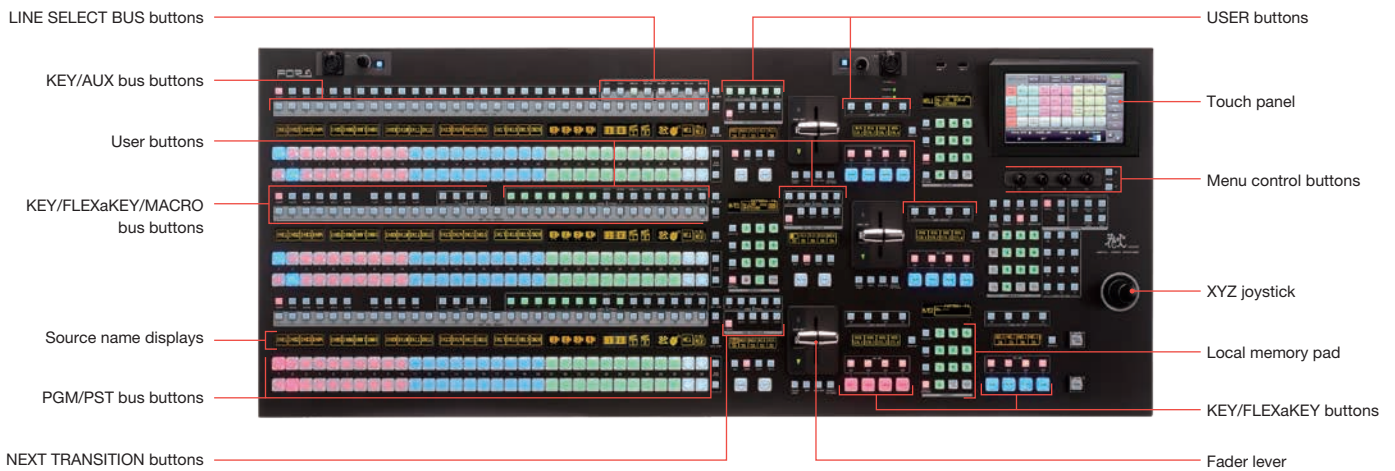


*Control unit and GUI unit can be connected. Fader units, KEY units, number of M/Es and Control pad unit position can be customized. Please contact us for details.

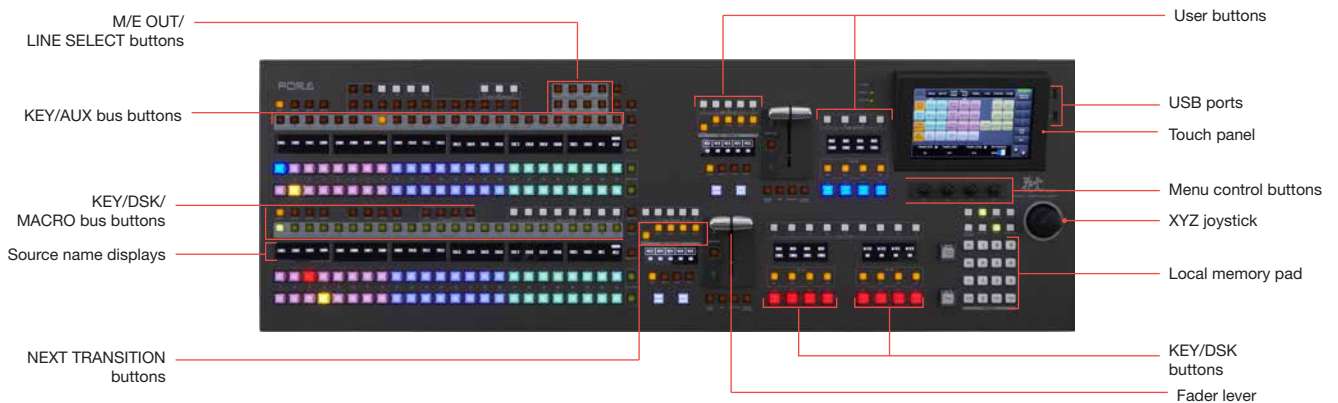
Reasons to buy

HVS-33200UA* control panel

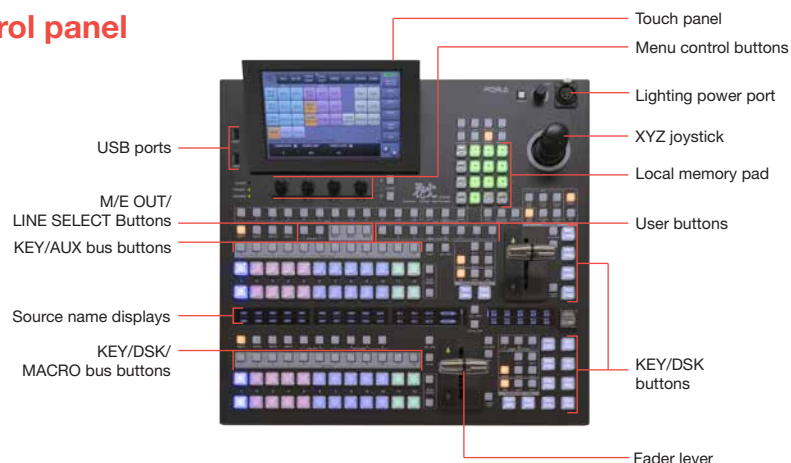
* Appearance subject to change.



HVS-22400UA control panel



HVS-2120ROU control panel



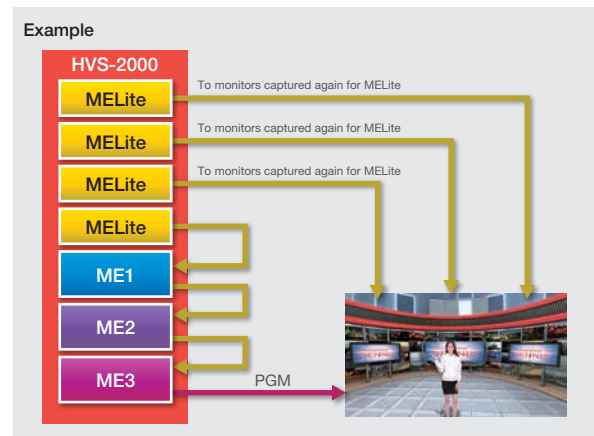
2 4 keyers per M/E, plus 4 FLEXaKEY per system

The four FLEXaKEY system can be freely assigned to M/E1, M/E2, or MELite™ (AUX output). When assigned to M/E2, up to eight keyers (4 keys and 4 FLEXaKEY) can be combined. DVE is available for FLEXaKEY to generate multiple P-in-Ps. FLEXaKEY can also be assigned to an MELite bus and Advanced Aux as an upstream keyer, and to multiple AUX buses to change each with keying output. Useful in many scenarios.

Reasons to buy

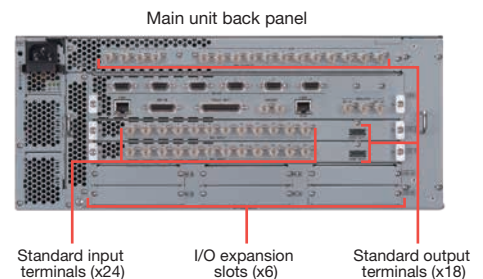
3 7M/E performance—3M/E + 4 MELite, with FLEXaKEY architecture

In addition to three full M/E's (optional), the switcher includes MELite. With cuts, mixing, wiping, and keying "all with preview" available from four MELite buses. Operators will enjoy the performance of 7M/E's in a single unit. Versatile in re-entry, MELite is ready for a broad range of scenarios, such as providing an independent "web cut" output, expanding an operation with multiple control surfaces, delegating M/E resource and even allowing a single operator from a single desk to easily control independent transitions on multiple monitors.



4 24 inputs/18 outputs standard, expandable to 48/18 or 40/22

Besides standard inputs and outputs, six expansion slots enable you to add optional I/O cards for easy in-field expansion. Easily incorporate an array of content from PC sources (such as PowerPoint, videos played on computers, webcam images, or Skype calling screens) and combine it with broadcast material. Even analog composite I/O can be added.



5 2.5D DVEs*1 (total: 8 per system*2), 3D DVEs (total: 6; optional per system) up to 4 channels per M/E or MELite

2.5D DVEs enable free arrangement of P-in-Ps in a 3D space using global axes. Also combines exceptionally well with 3D content, as with virtual studios. Flying key, which moves titles with DVEs applied, is available from all DVEs and can be assigned to all resources in any M/E, whether PGM, PST, or KEY 1-4. P-in-Ps are available in a variety of other shapes besides standard shapes such as quadrilaterals, and can be used in live sports coverage, for example. The switcher's 3D DVEs include page turn and other warping effects.



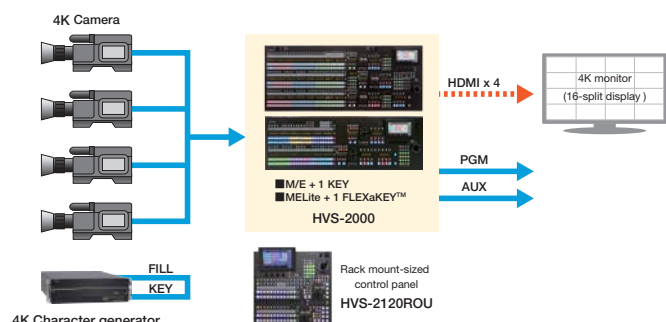
*1 Operates in 2D DVE when using 3G format. *2 A total 16 channels with HVS-2000ME installed.

6 Expanded 4K mode

No need to configure I/O settings when using 4K systems. Four 3G-SDI lines (I/O or bus) are automatically grouped. Expanded system settings enable output of down-resized video or DVE from built-in multi viewers.



Example of 4K system configuration



Applications



Broadcasting environments/control rooms

The HVS-2000 can be the main switcher for: Broadcasting Stations/control rooms, cable TV stations, Internet television providers and satellite studios. The advanced features and programmability of HVS-2000 allow you to create high quality content without any compromise. FOR-A's quality and attention to detail ensures a reliable solution for live programming.



Live staging / Event production

The combination of the HVS-2000 and its rich feature set makes it the best suited switcher for live applications where systems need to be set up temporarily in a short amount of time. MELite allows multiscreen staging with effects, including cuts, mix, wipe, keys and DVE. You can reduce the number of switchers and streamline system operation, keeping everything simple and easy for everyone.



Mobile OB and Up-Link production trucks

The HVS-2000 is perfect for mobile video production or Up-Link applications in which space is limited. The HVS-2000 switcher offers a rich feature set perfect for live or recorded production. With integrated frame synchronizers and up to 4 multi viewers, the HVS-2000 can reduce the amount of equipment required in the truck. Using multiple control panels, the system can also provide an environment for several operators, each in charge of separate tasks, including a dual-feed operation.

Main features

- 6M/E capability: 2M/E + exclusive 4 MELite with FLEXaKEY architecture
- Expandable to 3M/E (Optional), offering the performance of up to 7M/E: 3M/E + 4 MELite (with FLEXaKEY)
- 24 in/18 out standard (including 2 HDMI). Up to 48 in/18 out or 40 in/22 out (optional)
- 6 I/O expansion slots: HVS-100 series optional cards can be installed
- PGM, PVW and 2 CLEAN outputs per full M/E
- Supports 3D DVEs that can be used in 4K video processing (optional)
- Supports 4K input in 2SI format (optional)
- Multi format: HD/SD/HDMI/Analog/VGA (optional)
- 3G/4K Ready (S/W option)
- 4 x Keyers per M/E, and 4 x FLEXaKEYs (assignable to M/E or AUX)
Up to 6 keyers to M/E1, up to 8 keyers to M/E2, and up to 4 keyers to AUX are assignable
- 8* x 2.5D DVE plus 4 x 3D DVE (Optional)
* A total 16channels with HVS-2000ME installed.
- 18 Auxiliary buses (2 HDMI, 12 SDI, 8 AUX transition, 6 MELite function)
- Intuitive GUI software HVS-2000GUI is included which allows HVS-2000 control and settings to be configured
- Control panel with LED, RGB, user-configurable color buttons and 7-inch touch mini menu GUI
- 4 multi viewers (standard: 2, up to 4 MVs, and 64 windows)
- All inputs have FS with Still image store and capture
- 4 Still/Clip media player. 4-channel image store with access to pool of 900 frames/30 seconds of online clip playback, also includes HDD library of images
- All full ME keyers have chroma keys and ability to add 2 optional channels of advanced chroma keys
- Easy operation with Midas Touch™ master set up and configuration GUI
- ONStage™ mode for stage and multiscreen application
- Color corrector input, output, and bus lines (optional)

Five key features for advanced operation

FLEXaKEY

Powerful quad FLEXaKEY allows the operator to place keyers in practical areas of the switcher:

- Add keys to traditional M/E resources to provide more graphic layers
- Add keys to AUX and multiply additional M/E's (MELite)
- Can also expand and multiply AUX bus transitions

The HVS-2000 V6MU engine is the only system that offers this kind of pure power and user flexibility.

MELite

This powerful, distinguishing and core feature allows a traditional AUX bus to transform into a full functional M/E with cuts, mixes, wipes, keys all with preview (MELite). The MELite is the building block to a real full-function 6M/E switcher and can be assigned upstream or downstream from main mix effects. Also, MELite allows operators to configure a 3M/E switcher with a 3 rows control surface that provides independent output with transitions to display sources on back monitors

in the studio.

ONStage

Another exclusive feature of the switcher is ONStage, a newly developed technology designed specifically for staging events, such as house of worship or corporate events where multiple image magnification displays are used, each with independent transitions. This is the first switcher mode that allows operators to see mix, wipe, key and DVE changes with full preview control connected directly to the fader controller transition area. With ONStage, operators have more power and creativity in their video switching than ever before.

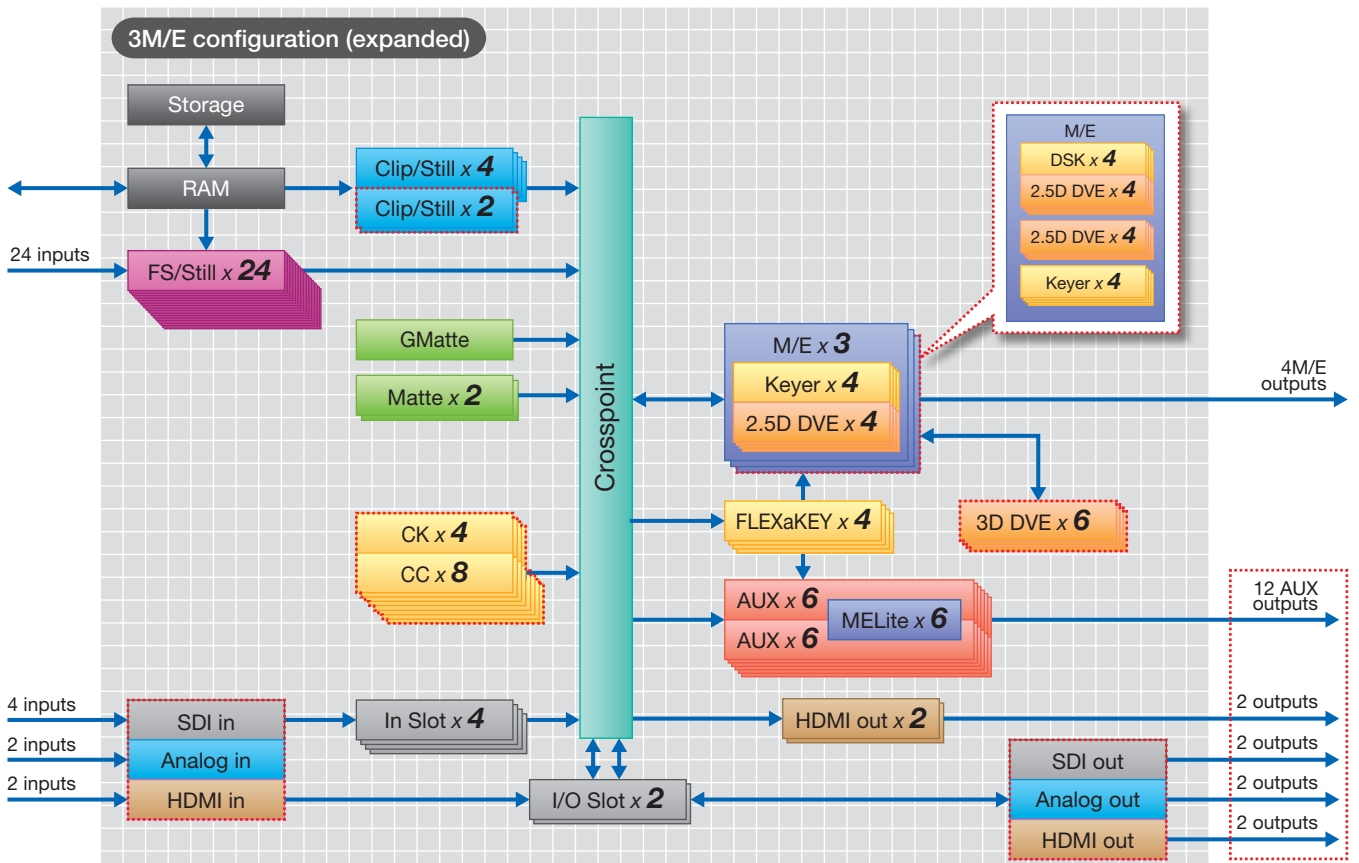
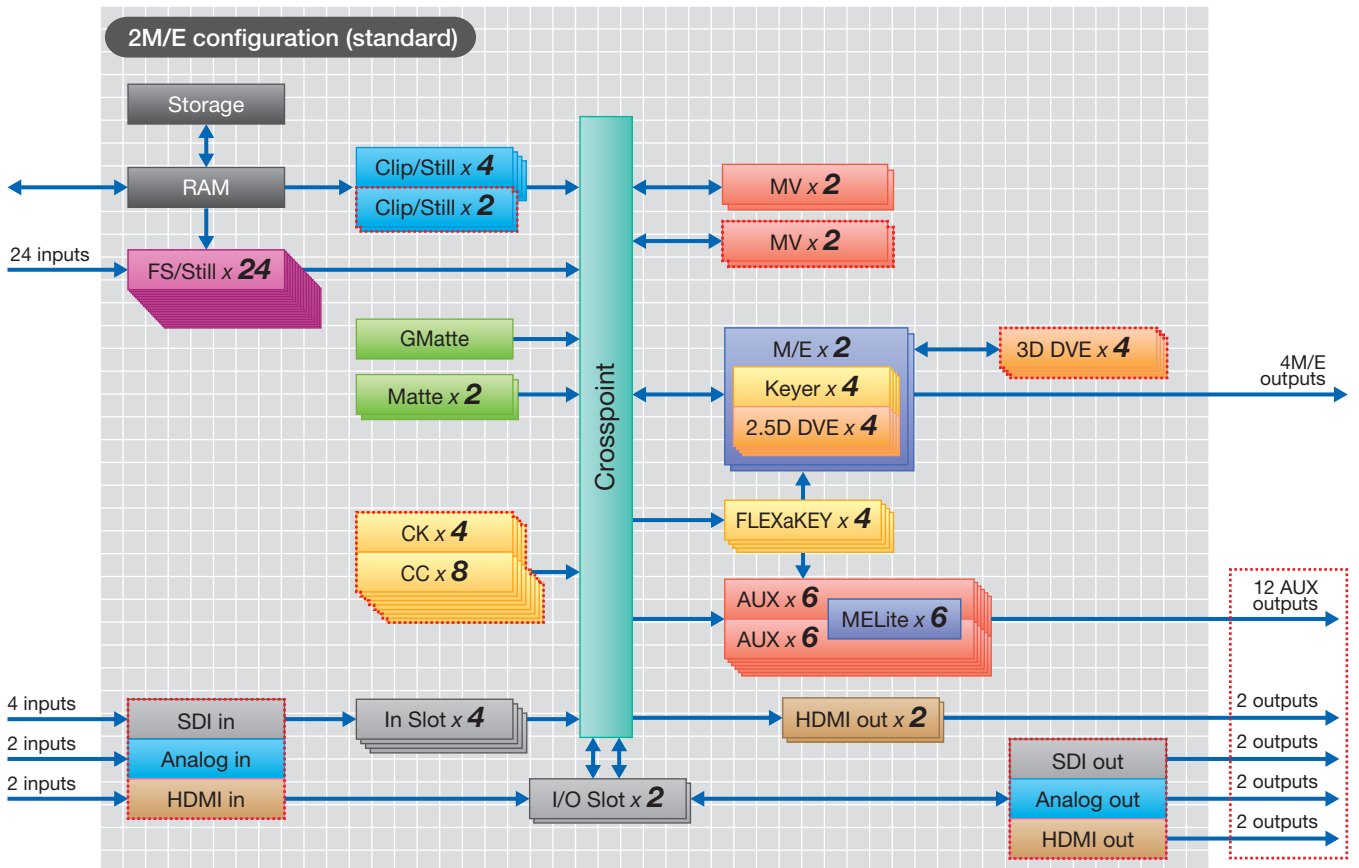
P-MEM™

P-MEM is capable of saving and recalling full switcher set-up or series of operations on M/E, MELite and AUX. P-MEM can be used with macro functions and operators only need to push one button to perform a complex series of events.

Midas Touch

A new menu system that allows operators to easily configure and change

Block diagram



 : Expansion cards (optional)

Options

Control panels

- Up to 3 control panels can be connected simultaneously.
HVS-2000 dedicated control panels: HVS-2120ROU, HVS-3320OU, HVS-2240OU and HVS-3355OUA
 - A single processing main unit can supply a dual operation. Able to share resources between two independent suites.
 - Link buses and keys in multilingual or a dual-feed production. Have the second language follow the primary language for simultaneous switching of on-screen text prepared for each screen.
-
- 6 types of auxiliary unit (ethernet LAN connection) available. Allows remote aux control or even a shotbox for user button control or macro recall. Up to 12 auxiliary unit connections (Planned for future support).



HVS-AUX16A
(16 buttons)



HVS-AUX16B
(16 buttons, tabletop model)



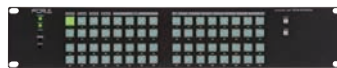
HVS-AUX16C
(16-buttons with OLED displays)



HVS-AUX16D
(16-buttons with OLED display, table-top model)



HVS-AUX32A (32 buttons)



HVS-AUX64A (64 buttons)

Expansion cards

With the HVS-2000, you can add just the input and output formats and functions you need, in just the amount needed. The six I/O expansion slots enable support for additional HD/SD-SDI, analog component/composite, HDMI, and RGB connectivity. Other cards expand capabilities by adding six channels of 3D DVEs, two channels of multi viewer display, color correction, or advanced chroma keying.



- **HVS-100DI-A:**
HD/SD-SDI input expansion card

4 channels of HD/SD-SDI output are possible using a single card. A frame synchronizer function for all inputs and re-size (expansion) function for 2 inputs are provided. SD images can be processed internally as HD



- **HVS-100AI:**
Analog input card

2 channels of analog video signal input are possible using a single card. Input terminal 2 is a dedicated connector (conversion connector supplied). The user can select between analog composite and analog component (HD or SD) input for each input terminal.



- **HVS-100PCI:**
PC (HDMI/VGA) input card

HDMI and VGA terminals have been mounted onto a single card. 2 input channels are possible using both.



- **HVS-100DO:**
HD/SD-SDI output expansion card

2 channels of HD/SD-SDI output are possible using a single card. As down-converters are provided for all outputs, HD and SD images can be simultaneously output.

Options

Expansion cards



- **HVS-100AO:**
Analog output card

2 channels of analog video signal input are possible using a single card. Output terminal 2 is a dedicated connector (conversion connector supplied). Select between analog composite and analog component (HD or SD) output for each output terminal.



- **HVS-100PCO:**
PC (HDMI/VGA) output card

HDMI and VGA terminals have been mounted onto a single card. 2 output channels are possible using both.



- **HVS-2000DVE:**
3D DVE card

4 channels of 3D DVE output are possible using a single card. 2 additional 3D DVE channels can be used by adding the HVS-2000DVE-EX. Includes effects such as page turn, ripple, and wave, as well as cropping with rounded corners.



- **HVS-2000DVE-EX:**
4K format expansion card for HVS-2000DVE

Adds 3D DVEs available in 4K video processing. Assign one 3D DVE channel when working with 4K or six channels (2 for each M/E) for 3G/HD/SD-SDI formats when using the 3M/E Expansion Card.*

* HVS-2000DVE is required.



- **HVS-2000EX:**
Color corrector / advanced chroma keyer card

Adds 4 channels of chroma keying and 8 channels of color correction. Chroma keying can be applied to FLEXaKEY signals and color correction to source material or to video from AUX output.*

* Supports only HD.



- **HVS-2000ME:**
3M/E expansion card

Adds 3M/E along with 4 keyers, 4 DSKs and 8 channels of 2.5D DVE using a single card. Offers the performance of up to 7M/Es when MELite buses are added to the three M/E buses.*

* Cannot be used in conjunction with the built-in multi viewers or optional



- **HVS-2000MV:**
Multi viewer 2ch expansion card

Replicates the features of the standard multi viewer and adds another 2 channels of multi viewer display.

Options

Software

Optional software introduces 3G-SDI and 4K format support or adds a switcher control interface.

- **HVS-2000ED:**
Editor interface software
Enables switcher control using control commands that expand the editor interface. Can also be linked to OTC-1000 or GearLink™.
- **HVS-2000EXP3G:**
3G-SDI format expansion software
Introduces 3G-SDI format support, enabling the switcher to be used with 4K systems.
- **HVS-2000GUI:**
GUI software license
Intuitive GUI software allows HVS-2000 control and settings to be configured.
- **HVS-2000-2SI:**
4K-2SI support software
Enables direct switching of 2SI video, with less camera output delay than with SQD.

Other Options

Options to support stable operation include power supply redundancy and clip memory capacity expansion.

- **HVS-2000RAM:**
V-RAM Expansion
Clip memory capacity can be doubled.
- **HVS-2000PSM:**
Redundant power supply unit
- **HVS-GPIO128:**
Interface extension unit (ethernet LAN connection)
1RU-sized. 128 GPI I/O can be freely assigned.
- **HVS-TALR32:**
Tally control unit (relay type) (RS-422 connection)
- **HVS-TALOC32:**
Tally control unit (open collector type)
(RS-422 connection)

HVS-2000 Datasheet

1. Specifications

Basic specifications

Temperature	5°C to 40°C
Humidity	30% to 90% (no condensation)
Power	100VAC to 240 VAC \pm 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) 2D/2.5D DVE: Max. 8 channels (4 channels per M/E, including DVE patterns) * Max. 16 channels when the HVS-2000ME is installed. 3D DVE(Optional): Max. 6 channels 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 WIPE modify	Available (limited patterns in SQD mode) Border (in SQD mode), CG WIPE
Transition	Execution: Type:	Fader lever, AUTO or CUT button 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
HVS-2000PSM	Redundant Power Supply Unit for HVS-2000 (1 set)
HVS-2000GUI software license (*1)	

Up to 6 I/O cards available. (Max 6 cards for input and max 2 cards for output.)

(*1) Up to three HVS-2000GUI applications (including the OU touch panel application) can be simultaneously launched in the system.

HVS Series options

HVS-AUX16A/32A/64A16B/16C/16D	Auxiliary Unit (Ethernet LAN connection)
HVS-TALR32	Tally Control Unit (Relay type) (RS-422 connection)
HVS-TALOC32	Tally Control Unit (Open Collector type) (RS-422 connection)
HVS-GPIO128	Interface Extension Unit (Ethernet LAN connection)

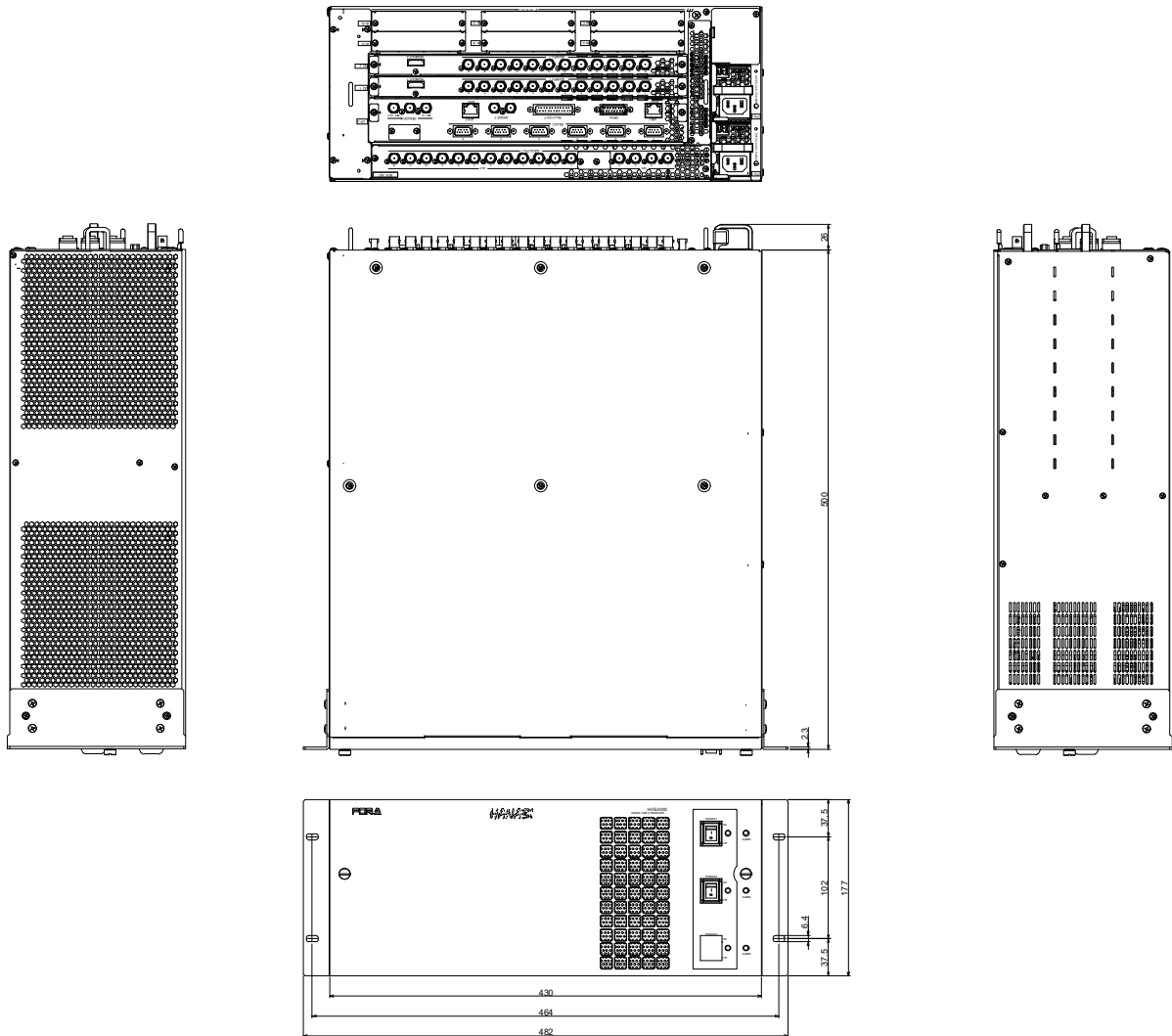
Accessories

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

2. External Dimensions

(All dimensions in mm.)

HVS-2000



HVS-3355OU/OUA Datasheet

1. Specifications

Basic specifications

Temperature	0°C to 40°C
Humidity	30% to 90% (no condensation)
Consumption	150 W (if in normal configuration, 35 buttons and 3 M/Es)
Power	[OU Control Unit] AC 100 V - 240 V ±10%, 50/60 Hz [Touch Panel Unit] DC 12 V or DC 48 V [LINE Unit] DC 12 V or DC 48 V [AUX Bus Unit] DC 12 V or DC 48 V
Dimensions	1300 (W) x 528(D) x 68 (H) mm (LINE Unit x 3, AUX Unit x 1, plane placement)
	[OU Control Unit] 430 (W) x 300 (D) x 88 (H) mm 480 (W) (including rack mount brackets) [Touch Panel Unit] 410 (W) x 68 (D) x 221 (H) mm [LINE Unit] 1300 (W) x 132 (D) x 68 (H) mm [AUX Bus Unit] 777 (W) x 132 (D) x 68 (H) mm
Weight	[OU Control Unit] 5 kg (With redundant power supply: 6 kg) [Touch Panel Unit] 3 kg [LINE Unit] 8 kg [AUX Bus Unit] 5 kg
Consumables(*1) (at 24-hour operation)	[OU Control Unit] Power supply unit: Replace every 5 years. [Touch Panel Unit] SBC battery: Replace every 2 years after factory shipment.

(*1) Replace the battery every 1 year when the unit powered off for an extended period.

OU Control Unit: Technical specifications

Supported switcher	HVS-2000 HVS-6000/6000M
LAN port	RJ-45 x 7 For OU component connection and external device connection
TO TOUCH PANEL UNIT	9-pin D-sub (female) x 1 (w/ inch screws)
GPI IN/TALLY OUT	25-pin D-sub (female) x 1 (w/ inch screws) 12 inputs /12 outputs
DC OUTPUT (OUT1)	Cannon 3-pin XLR (female) x 1 (DC 48 V distributed output)

Touch Panel Unit: Technical specifications

Display	TFT LCD, 12.1-inch, w/ multi-touch RJ-45 x 2 For OU Control Unit and other device connection
SBC	Windows 7 Embedded, Windows IoT
TO CONTROL UNIT	RS-422 9-pin D-sub (female) x 1 (for OU Control Unit connection)
EXT PC block	(For optional configuration)
HDMI IN	Type-A connector x 1

SW CONTROL	USB Type-B connector x 1
PANEL SENSOR	USB Type-B connector x 1
USB1, USB2	USB Type-B connector x 2
LAN 2 (SUB)	RJ-45 x 2 (for OU control panel connection)
USB port	USB Type-A connector x 4
HDMI OUT	(Do not use.)
VGA	(Do not use.)
DC 12 V IN	AC adapter input
DC 48 V IN	Cannon 3-pin XLR x 1 (Power supplied from OU Control Unit)

LINE Unit: Technical specifications

Bus button	35 (switched by SEL) x 2 rows (for key video, macro and user) 35 (4 levels) x 2 rows (for M/E background video source)
Control Unit	RJ-45 x 1
Ethernet	RJ-45 x 1 (for OU control panel connection)
DC 12 V IN	AC adapter input
DC 48 V IN DC 48 V OUT	Cannon 3-pin XLR x 1 (Supplied from OU Control Unit in cascade connection) Cannon 3-pin XLR x 1 (Supplied from OU Control Unit in cascade connection)

AUX Bus Unit: Technical specifications

Bus Button	35 (switched by SEL) x 2 rows (for AUX bus, DSK bus, MACRO and USER) 35 (4 levels) x 2 rows (for video source)
Control Unit	RJ-45 x 1
Ethernet	RJ-45 x 1 (for OU Control Unit connection)
DC 12 V IN	AC adapter input
DC 48 V IN DC 48 V OUT	Cannon 3-pin XLR x 1 (Supplied from OU Control Unit in cascade connection) Cannon 3-pin XLR x 1 (Supplied from OU control Unit in cascade connection)

Option

HVS-3355PSO	Power Supply Unit for OU (Control Unit)'s power redundancy
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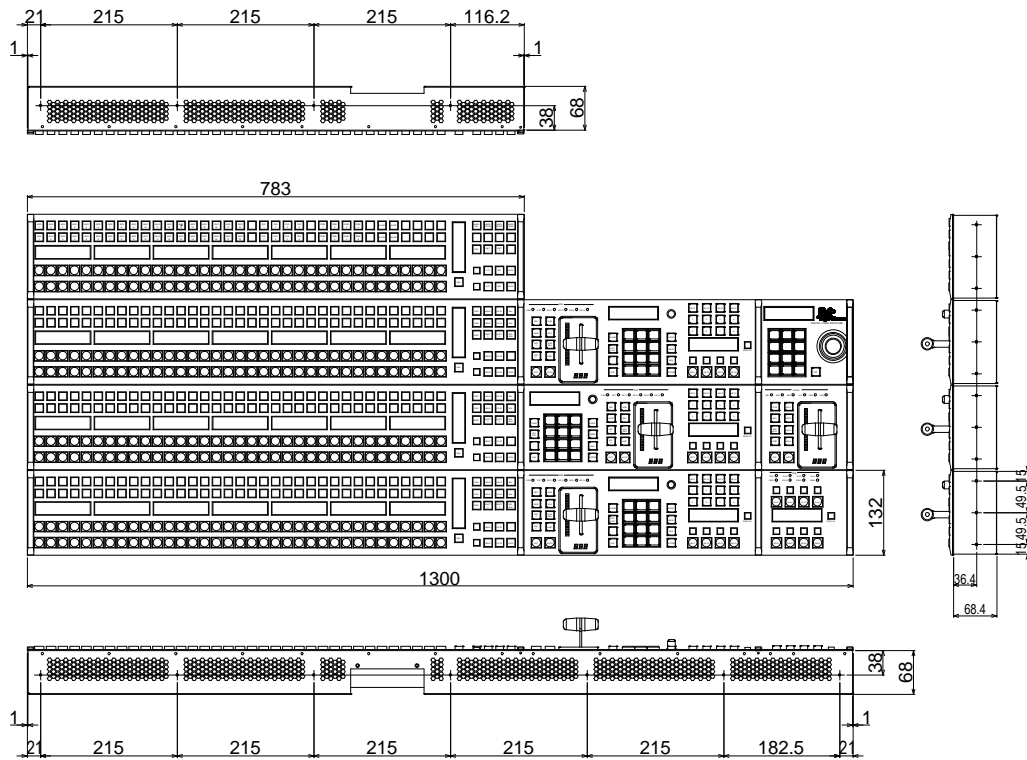
Accessories

LAN cable, RS-422 cable, AC power cable, DC canon cable, Rack Mount Brackets

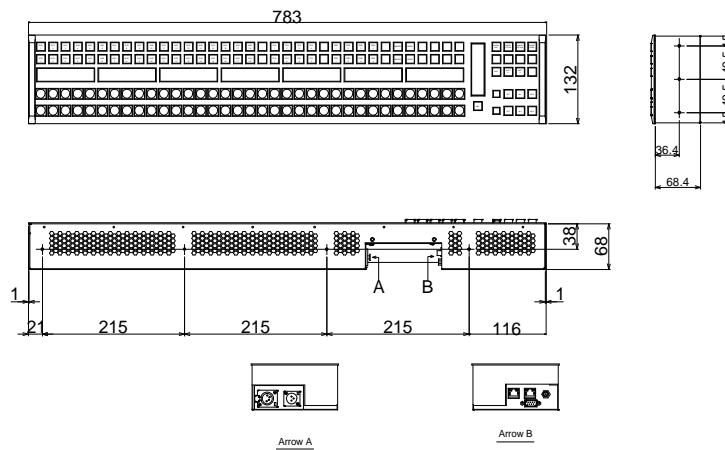
2. External Dimensions

(All dimensions in mm.)

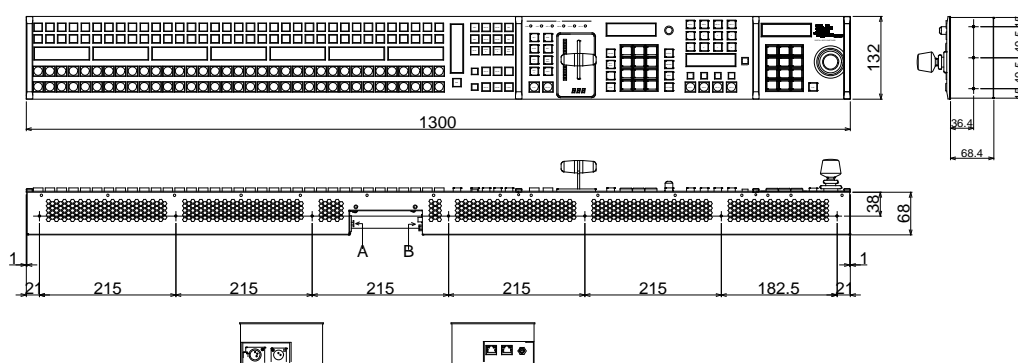
HVS-3355OU/OUA



AUX bus unit



LINE unit



HVS-2240OU/2240OUA, 3320OU/3320OUA, 2120ROU Datasheet

1. Specifications

Basic specifications

Temperature	0°C to 40°C		
Humidity	30% to 90% (no condensation)		
Power	AC100V - 240V ±10% 50/60Hz		
Consumption	[2240OU]	46 W (at 100-120 V)	46 W (at 220-240 V)
	[2240OUA]	57 W (at 100-120 V)	47 W (at 220-240 V)
	[3320OU]	67 W (at 100-120 V)	63 W (at 220-240 V)
	[3320OUA]	77 W (at 100-120 V)	75 W (at 220-240 V)
	[2120ROU]	46 W (at 100-120 V)	46 W (at 220-240 V)
Dimensions	[2240OU/OUA]	1060 (W) x 354 (D) x 155 (H) mm	
	[3320OU/OUA]	1196 (W) x 494 (D) x 155 (H) mm	
	[2120ROU]	430 (W) x 420 (D) x 127 (H) mm	
Weight	[2240OU]	12 kg	
	[2240OUA]	15.5 kg	
	[3320OU]	22 kg (23 kg w/ redundant power supply)	
	[3320OUA]	22 kg	
	[2120ROU]	8 kg	
Consumables(*1) (at 24-hour operation)	Power supply unit:	Replace every 5 years.	
	SBC battery:	Replace every 2 years after factory shipment. (2240OU, 3320OU and 2120ROU)	
		Replace every 3 years after factory shipment. (2240OUA and 3320OUA)	

(*1) Replace the battery every 1 year when the unit powered off for an extended period.

Technical specifications

Supported switcher	HVS-2000 HVS-6000/6000M		
Number of lines	[2240OU/OUA]	2	
	[3320OU/OUA]	3	
	[2120ROU]	2	
Number of bus buttons	[2240OU/OUA]	24	
	[3320OU/OUA]	32	
	[2120ROU]	12	
Interfaces			
VGA	For PC monitor connection		
HDMI	For touch panel connection		
USB	[2240OU/2240OUA and 3320OU/OUA]	Panel: 2.0 (Type-A) x 2 Rear: 2.0 (Type-A) x 4	
	[2120ROU]	Panel: 2.0 (Type-A) x 2 Rear: 3.0 (Type-A) x 2	
LAN 1 (MAIN)	RJ-45 x 1 For HVS-2000 connection		
LAN 2 (SUB)	[2240OU/OUA and 3320OU/OUA]	RJ-45 x 1 For HVS-2000 connection	
	[2120ROU]	RJ-45 x 2 For HVS-2000 connection	
GPI IN/TALLY OUT	[2240OU/OUA and 3320OU/OUA]	25-pin D-sub (female) x 1 (inch screws) 12-input/12-output	

GPI I/O	[2120ROU]	5-pin D-sub (female) x 1 (inch screws) 6-input/6-output
DC OUTPUT(5V)	[2120ROU]	4-pin XLR x 1 For LED lam (w/ power switch and controller)
LAMP	[2120ROU]	USB 2.0 (Type-A) x 1 For LED lighting

HVS-2240OU / 3320OU Options

HVS-2000PSO	Redundant power supply unit for HVS-2240/3320OU
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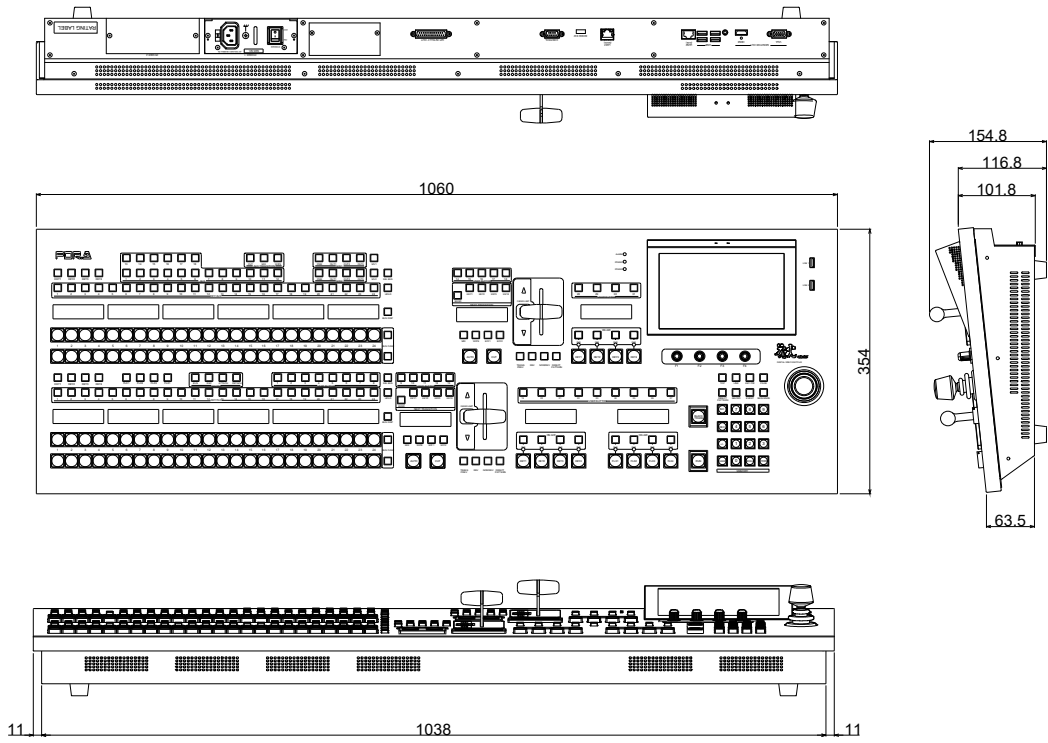
HVS-2240OU/2240OJA, 3320OU, 2120ROU Accessories

Bus button partition plate (2240OU/2240OJA, 3320OU), User button cover plate (3320OU), Control cables, AC Cord or AC adapter

2. External Dimensions

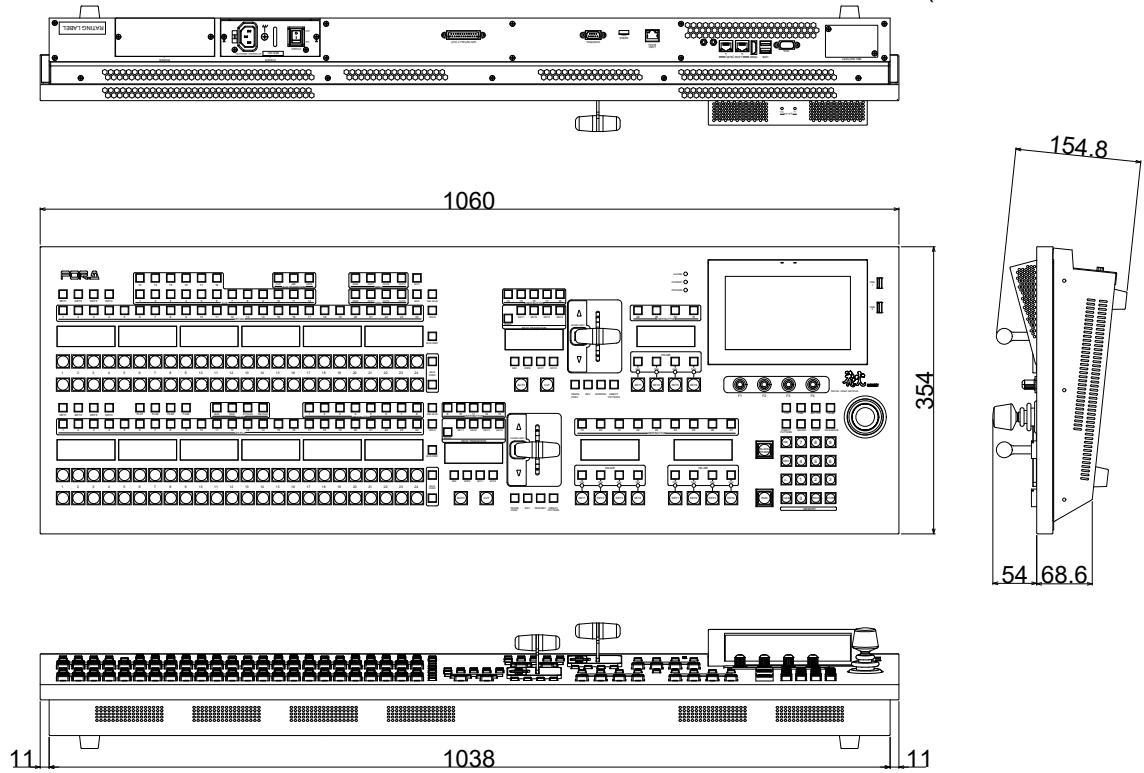
(All dimensions in mm.)

HVS-2240OU



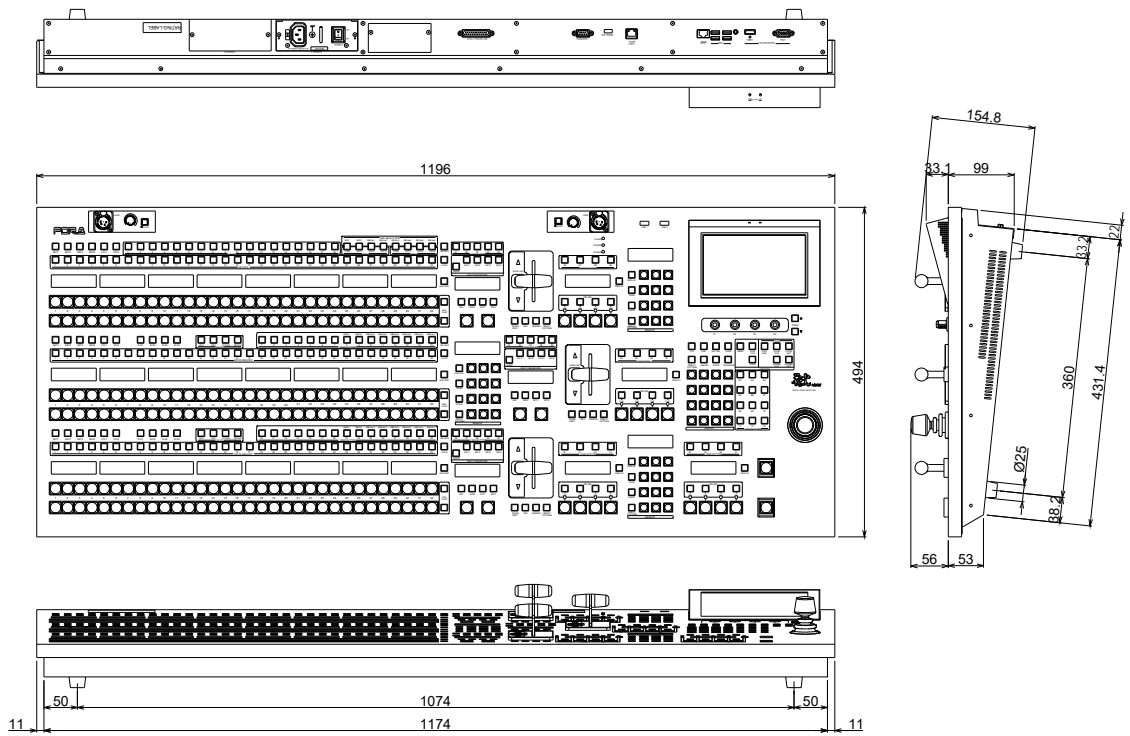
HAV-2240OUA

(All dimensions in mm.)



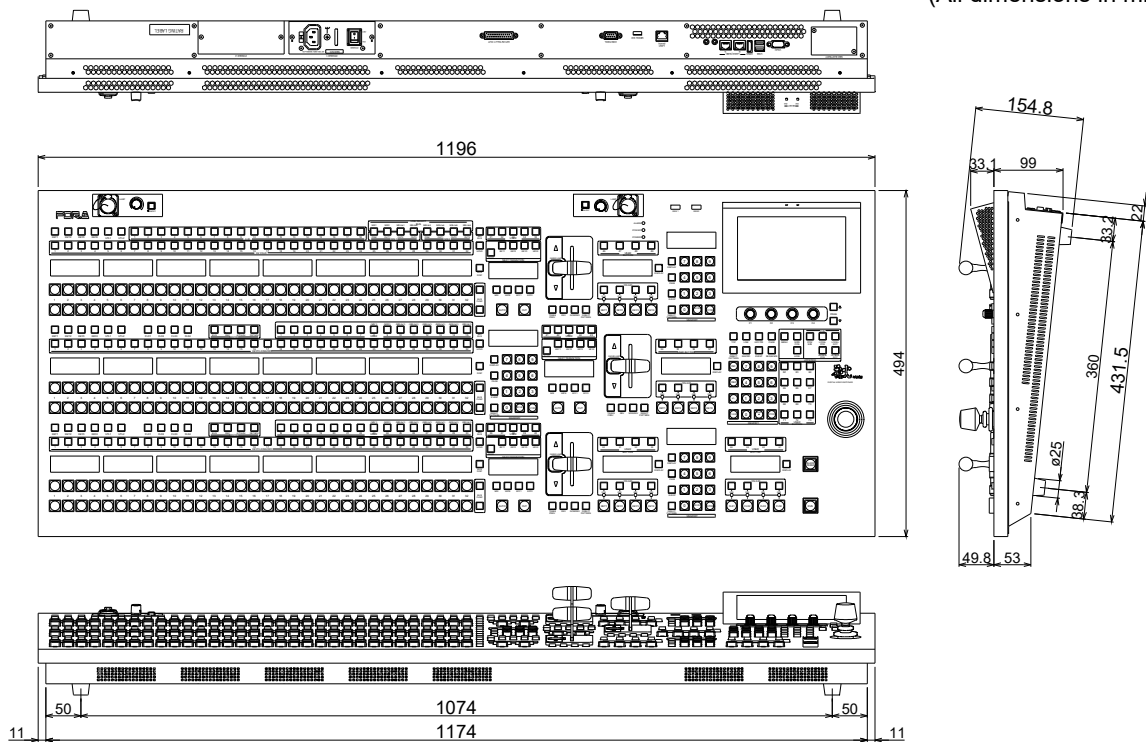
HVS-3320OU

(All dimensions in mm.)

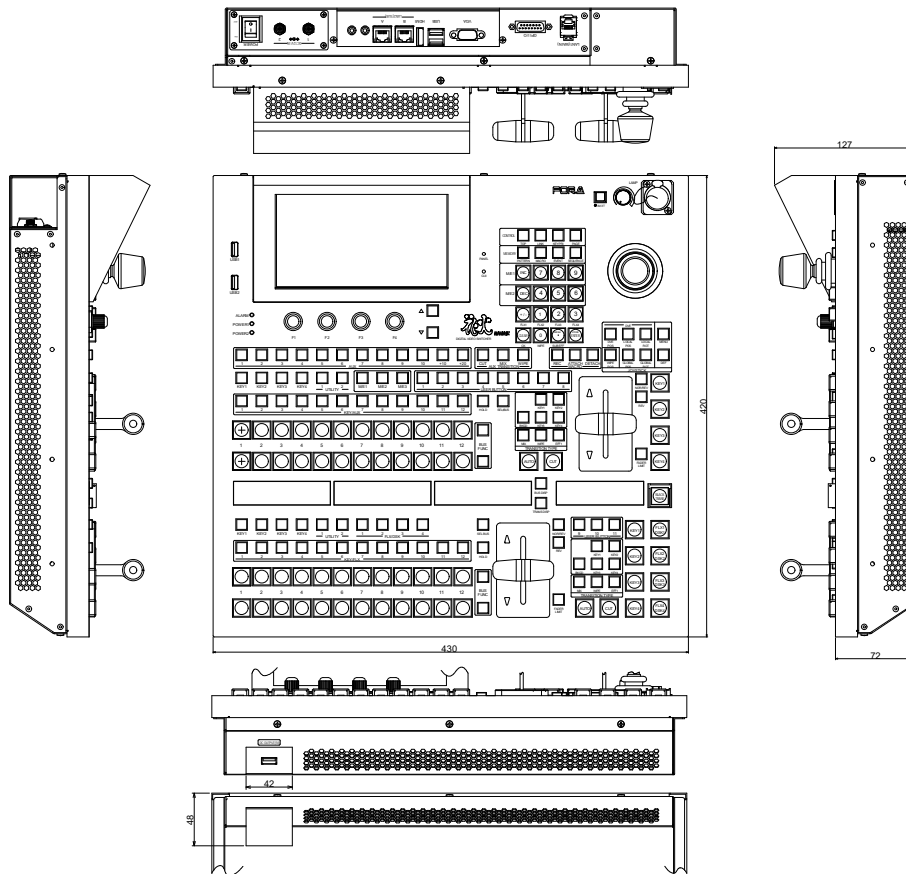


HVS-3320OUA

(All dimensions in mm.)



HVS-2120ROU





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