4K/12G/6G/3G/HD Video Switcher
HVS-6000/6000M "HANABI"

FOR.A ®

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HANABI

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HVS-6000/6000M

Offering 4K UHD and 12G-SDI support, a maximum of 80 inputs/32 outputs or 64 inputs/48 outputs, the HVS-6000 is ideal when upgrading from HD to 4K UHD

Designed for use in 4K UHD systems, the HVS-6000 brings 12G-SDI compatibility to all inputs and outputs. Users can operate the unit in the same manner as current HD systems. In an era of video-over-IP, the HVS-6000 enables IP interfaces to be mounted on all I/O slots*.

* To be supported.

12G-SDI compatibility across all inputs and outputs

Build and use a 4K production system with the same number of connections, phase control, methods of adjustment, and fault-tolerant design as before. Compatible with existing HD equipment, the switcher ensures a smooth transition in equipment and operation, as you move to 4K or take on simulcast production.

Extendability for IP support*

Support for up to 80 inputs provides an ample quantity for future 8K production. Structurally, switcher design also accounts for planned input/output expansion cards for Media over IP. The HVS-6000 video switcher has outstanding expandability, including mixed production with IP video material.   * To be supported.

Includes secondary M/E, four full functional keyers per M/E and 3D DVEs

Each M/E bus provides four full functional keyers, which can be used with 2D DVEs. 3D DVEs can be used for background graphics, enabling HD-quality 3D DVE transitions. Secondary M/E function can also be used for both HD and 4K UHD operation.

Input/output conversion

Upconversion* from HD to 4K on all inputs and downconversion* from 4K to HD on all AUX outputs are supported. Compatible with existing HD systems, the switcher paves the way to 4K migration.

*Optional.

HVS-6000/6000M

Ample bus output

In M/E output, four channels of direct M/E slot output and eight channels of re-entry output can be managed separately from re-entry channels. The switcher can be configured freely, up to the number of keyers, as selected for background. M/Es can also be set up for output of recaptured material, applying unused keyers or a secondary M/E for operation with 3 M/Es or more.
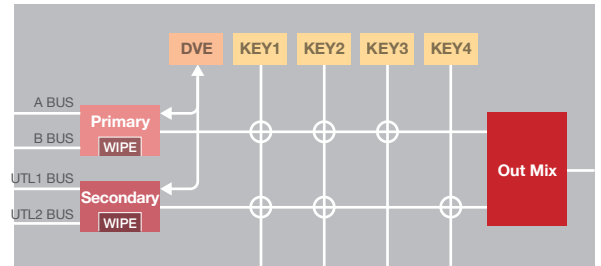
Practical video memory

Data in video memory that is available for all Still and Clip operations is automatically backed up to internal storage. The switcher's memory is also equipped with a mechanism for sequential storage as each image is captured. Saved data is automatically restored when the switcher is turned on, eliminating the need to read material again, and streamlining operation.

Versatile GUI for many switching styles

The control panel features a compact GUI on a 7-inch screen. Larger display and touch operations are possible by connecting an external monitor. By accessing the switcher from a Chrome web browser, users can also display a GUI panel enabling basic operations on a connected smartphone or tablet. This enables still image switching. PNG files can be uploaded with transparency, as edited on the smartphone or tablet. Password locking ensures security. What's more, the switcher is an excellent match for Gear-Link software, which consolidates operations of the switcher and external equipment in a single GUI.

Solid performance with flexibility

Steady operation is ensured by separating real-time control and data transfer in switcher–panel connections. With six channels of serial ports, the synced control/connections for video router linkage, virtual studios, or peripherals are executed simultaneously and independently from current or reserved connections using one-touch controllers. Control can also be set up within an IP network. Tally lamps indicate calculation results for 24 channels in red, green, and so on. Tally input from external sources can be added to internal tally calculation. These features ensure flexibility in control and tallying when temporarily adding system equipment.
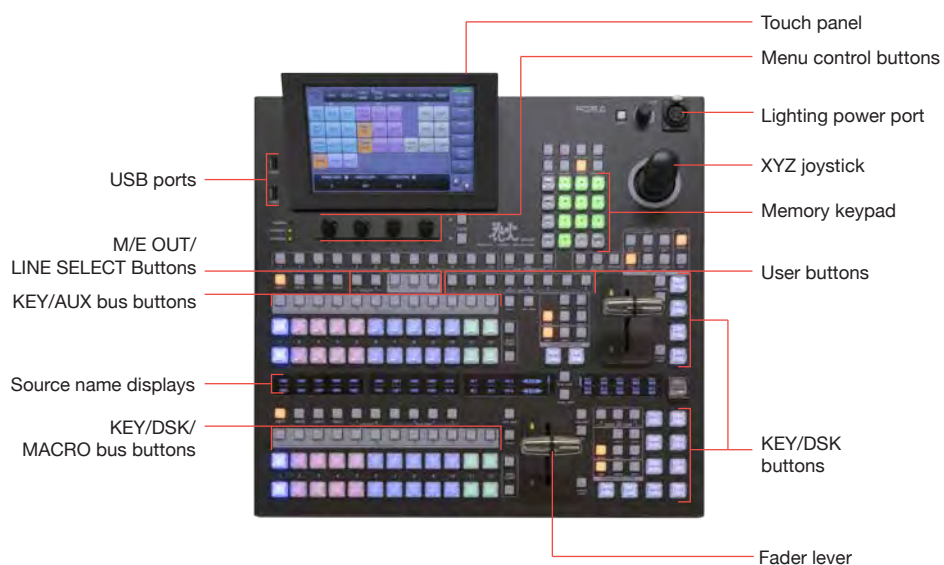
Fault-tolerant design

Structurally, the switcher's power unit and each card (including input, output, M/Es, MTX, CPU, and genlock) slot in and are replaceable. For control panels, GUI and other operations such as button or fader, operations are processed by a separate CPU, enabling uninterrupted operation in case of a GUI failure. An external computer running GUI software can be connected as a backup. Additionally, the HVS-3355OU control panel enables redundant power supplies for line, aux, control, touch panel, and other system components. As an emergency feature in case of switcher failure, MFR routers are controlled by independent CPUs in line units via a dedicated connection. Each row of line units is independent and can also be used for backup. Button assignment in emergencies responds to the switcher bus (including shift bus) reassignment, ensuring a smooth switchover to emergency operation.

Note: Descriptions apply to HVS-6000 specifications. For details on HVS-6000M, see page 6.
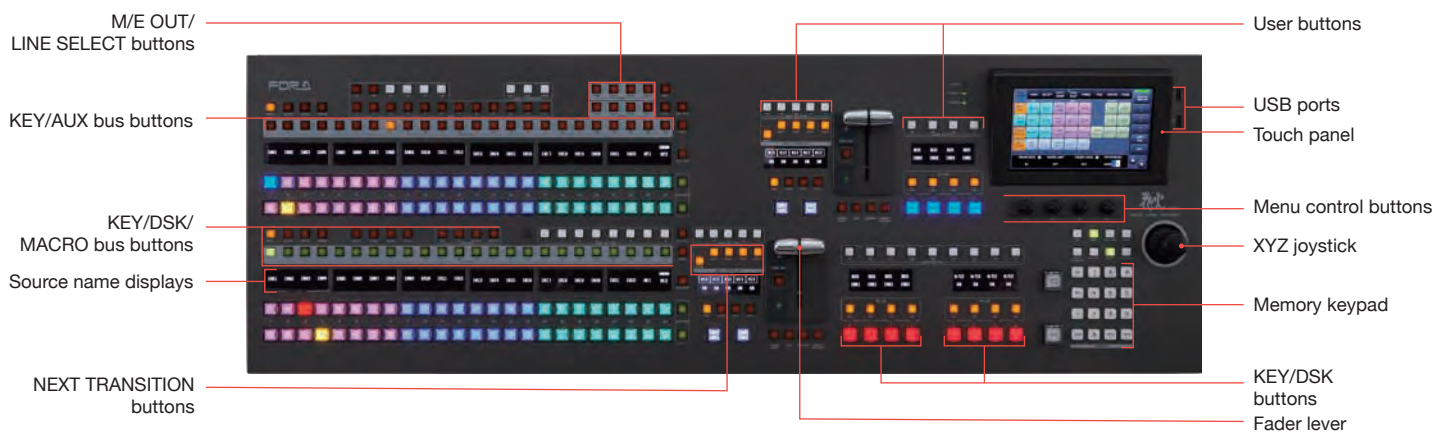
Four types of control panels

The switcher is compatible with HVS-2000 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,buses and fader layout. The panels offer customizable RGB button lights assigned to specific video material or button functions, a touch panel with GUI menus, and button/macro bus macro name display. Direct input is possible via a three-axis (XYZ) joystick, setting knobs, and a keypad. A larger GUI display is possible simply by connecting an external touchscreen monitor. A range of functions can also be assigned to user buttons on the control panel.
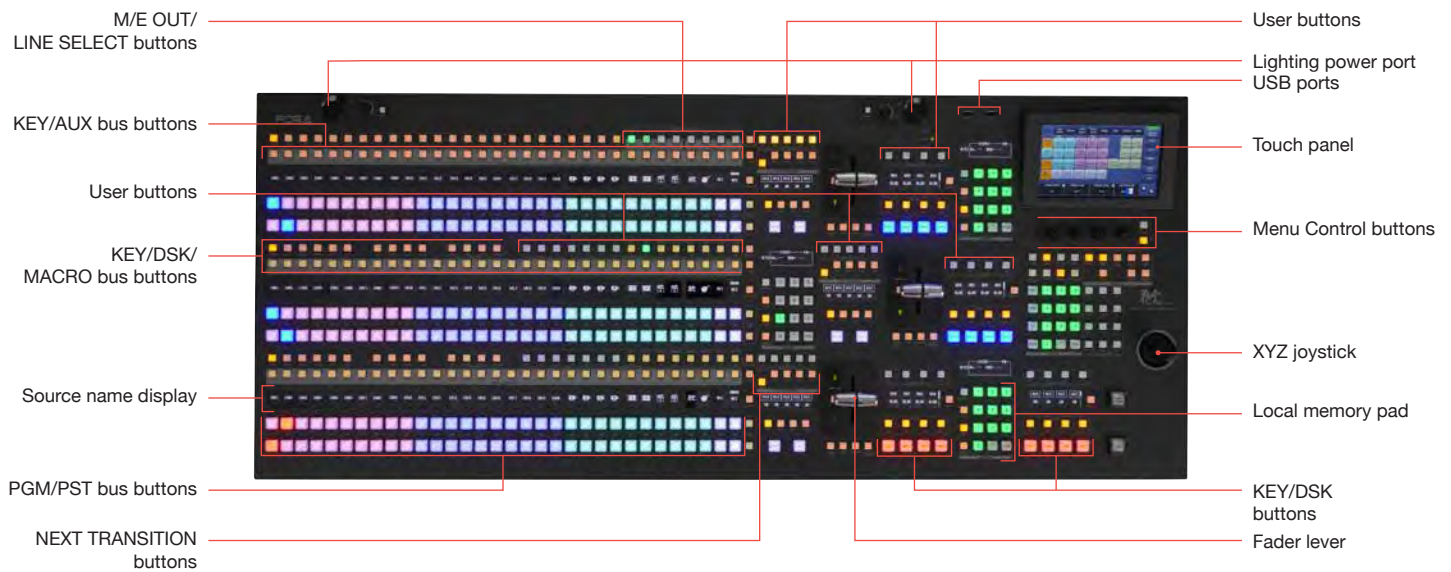
HVS-2120ROU Control Panel

Touch panel
Menu control buttons
Lighting power port
XYZ joystick
Memory keypad
User buttons
KEY/DSK buttons
Fader lever

USB ports
M/E OUT/ LINE SELECT Buttons
KEY/AUX bus buttons
Source name displays
KEY/DSK/ MACRO bus buttons

HVS-2240OUA Control Panel

M/E OUT/ LINE SELECT buttons
KEY/AUX bus buttons
KEY/DSK/ MACRO bus buttons
Source name displays
NEXT TRANSITION buttons

User buttons
USB ports
Touch panel
Menu control buttons
XYZ joystick
Memory keypad
KEY/DSK buttons
Fader lever

HVS-3320OUA Control Panel

M/E OUT/ LINE SELECT buttons

KEY/AUX bus buttons

User buttons

KEY/DSK/ MACRO bus buttons

Source name display

PGM/PST bus buttons

NEXT TRANSITION buttons

User buttons

Lighting power port
USB ports

Touch panel

Menu Control buttons

XYZ joystick

Local memory pad

KEY/DSK buttons

Fader lever

HVS-3355OUA Control Panel

AUX unit

GUI control buttons

LINE unit

Source name display

KEY/MACRO/ USER bus buttons

A/B bus buttons

Bus control buttons

KEY Transition buttons

Touch panel

Menu control buttons
USB ports

XYZ joystick

EVENT/MACRO/ SEQUENCE/ PATTERN control pad

KEY MEMORY buttons

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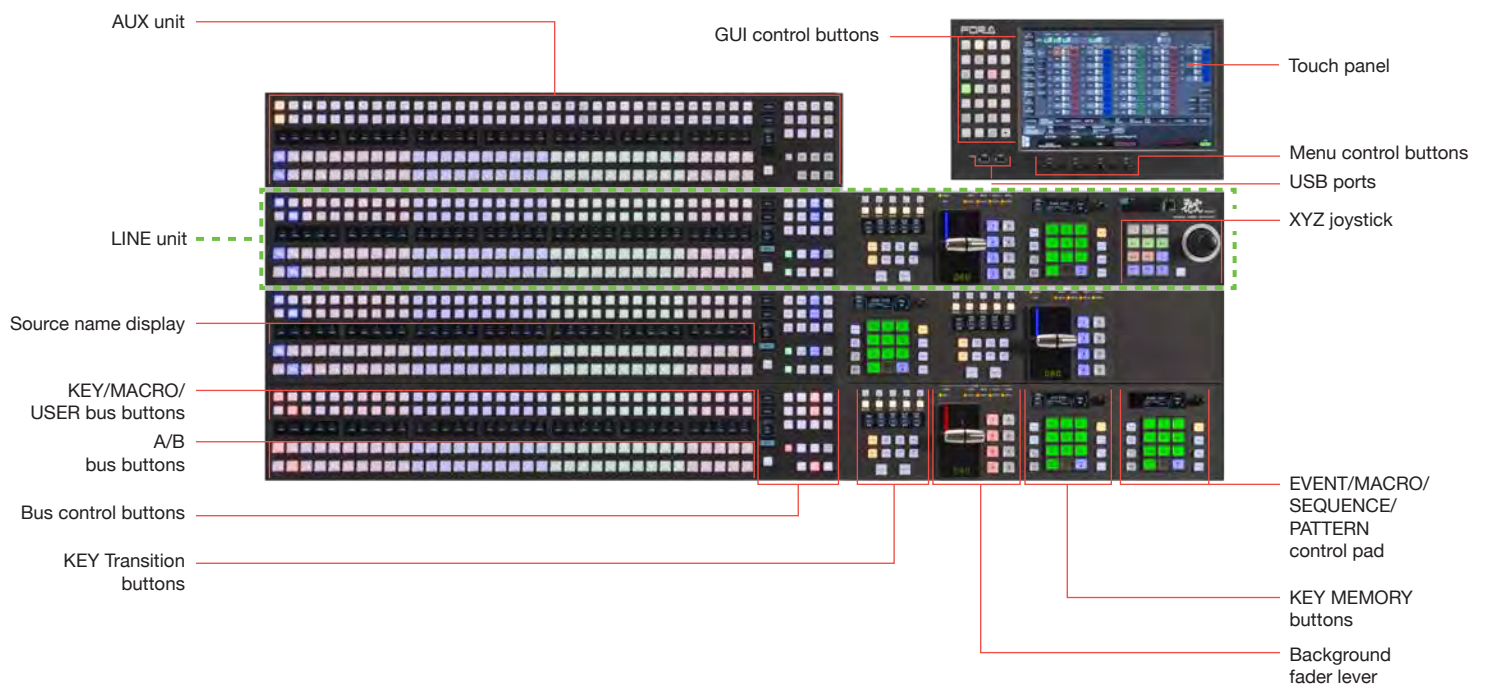
*Control units and GUI units can be connected. Fader units, KEY units, number of M/Es and Control pad unit position can be customized. Please contact us for details.

HVS-6000 Series Line-up

HVS-6000

12RU enclosure with 5 input slots and 2 input/output slots. Can be expanded by 8 channels at a time with the addition of input or output expansion cards. 12G-SDI, expandable to up to 80 inputs/32 outputs or 64/48. A full-featured, expandable model for use as the primary switcher in studios or news control rooms.
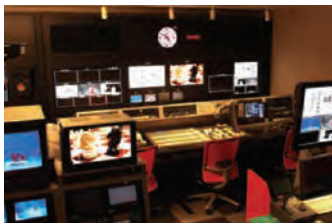
HVS-6000M

2 M/E switcher in a 7RU enclosure offering up to 32 inputs/24 outputs for 4K production. Useful not only in control rooms but also an excellent choice for mobile video production, thanks to a form factor that's less than 500mm deep. Brings full-scale 4K production within reach of many users.

(All specifications in below table are for 4K format.)

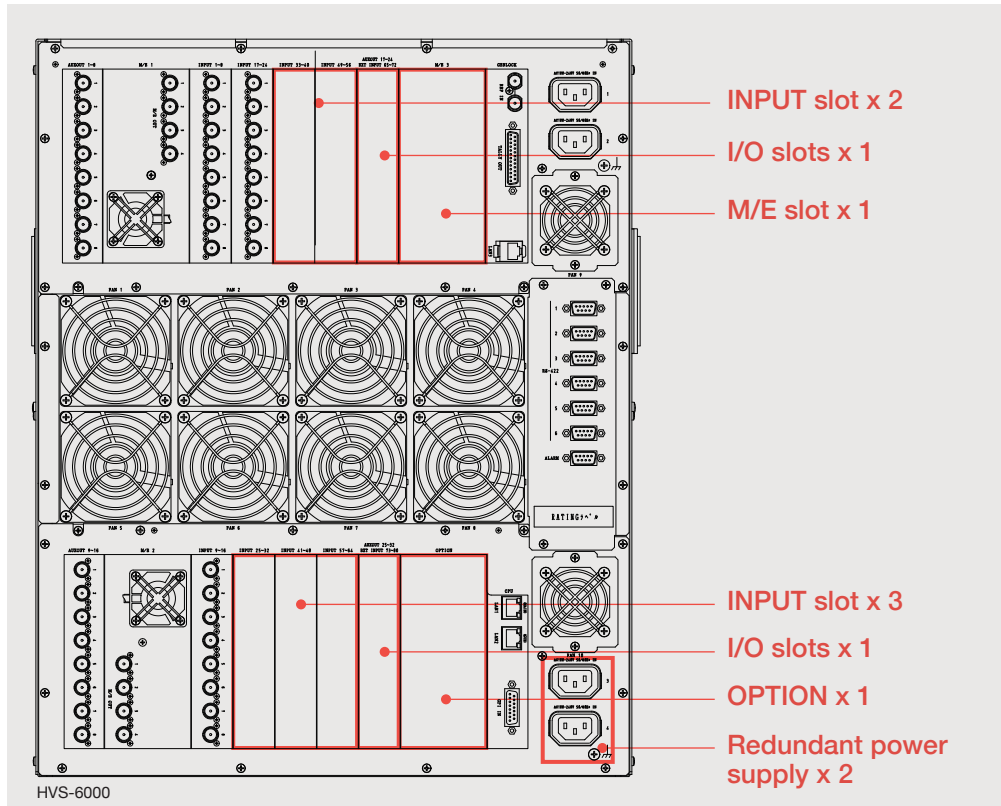|	HVS-6000	HVS-6000M
M/Es	2 M/Es standard, expandable to 4[*1]	2 M/Es standard
Inputs	24 inputs standard, expandable to 80[*1]	24 inputs standard, expandable to 32[*1]
Outputs	24 outputs standard, expandable to 48[*1]	24 outputs standard
AUX	16 standard, expandable to 32[*1]	16 standard
Keyers	4 per M/E	
Still/Clip Stores	4 channels (with key): Approx. 30 sec. of shared uncompressed video memory	2 channels (with key): Approx. 30 sec. of shared uncompressed video memory
Conversion	Both upconversion[*] from HD to 4K and downconversion[*] from 4K to HD are available.	

*1 Optional

HVS-6000 Block Diagram
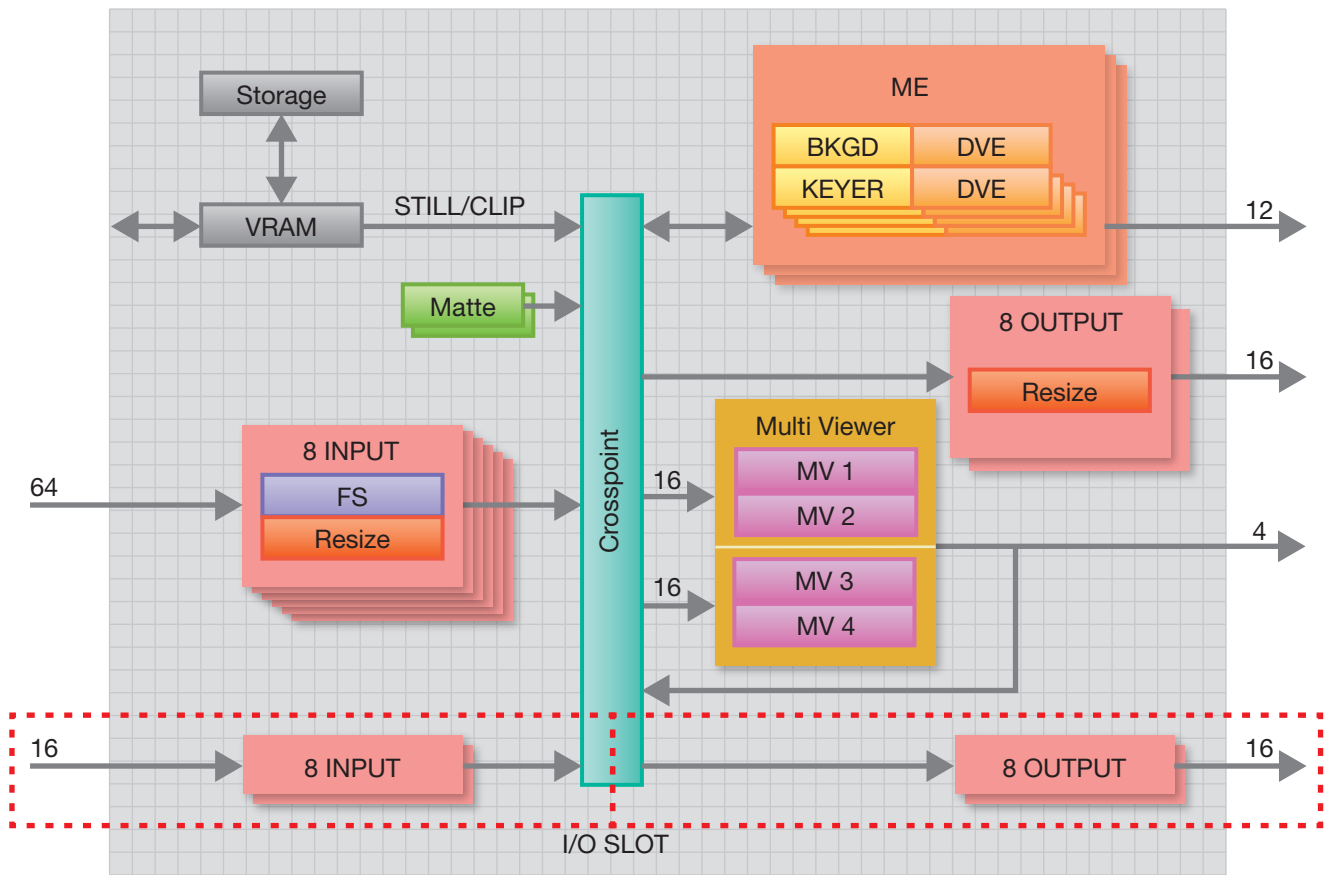
HVS-6000M Block Diagram
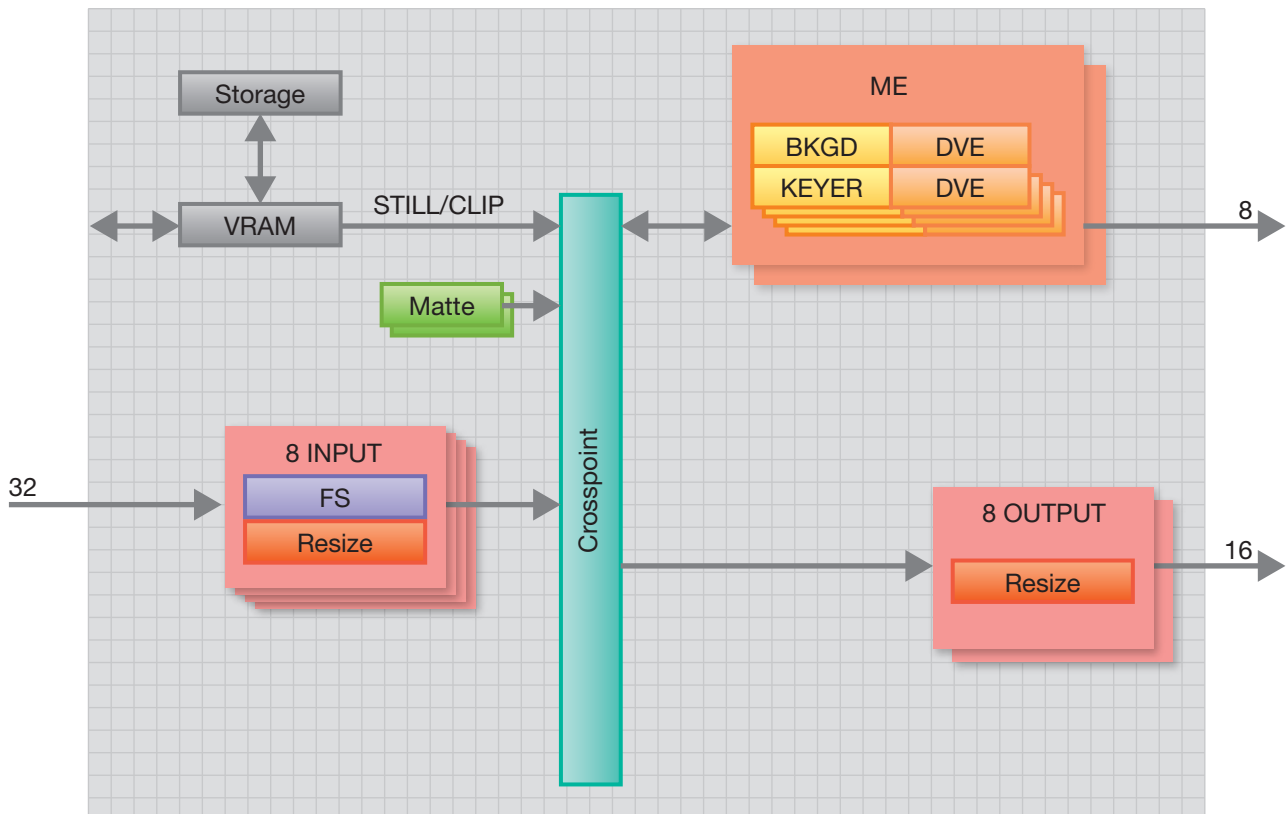
Options

Expansion Cards

5 input slots, 2 I/O slots, 1 M/E slot and 1 M/E or option*1 slot.

INPUT slot x 2
I/O slots x 1
M/E slot x 1

INPUT slot x 3
I/O slots x 1
OPTION x 1
Redundant power supply x 2

HVS-6000

【Available options】

INPUT slot
・ HVS-6000SDI

I/O slot
・ HVS-6000SDO
・ HVS-6000SDI-EX
・ HVS-6000IP-8IO

M/E slot
・ HVS-6000ME (M/E expansion)

OPTION slot
・ HVS-6000ME (DSK expansion)
・ HVS-6000MV

Redundant power supply
・ HVS-6000PSM

【For HVS-6000】

● HVS-6000ME: M/E / DSK expansion card
M/E expansion if installed on M/E slot and DSK expansion if installed on OPTION slot. Expandable to 4M/E with the HVS-6000ME4 and 2 HVS-6000ME units.

● HVS-6000SDI-EX: 12G-SDI Input expansion card (for I/O slots)
8 input channels per card. Up to 2 cards can be installed on I/O slots.

● HVS-6000SDO: 12G-SDI Output expansion card
8 output channels per card. 2 cards standard, expandable to 4.

【For HVS-6000 or HVS-6000M】

● HVS-6000SDI: 12G-SDI Input expansion card
8 input channels per card. 3 cards standard, expandable to 8 (HVS-6000) or 4 (HVS-6000M).

● HVS-6000IP-8IO: Video over IP expansion card*2
8 input and 8 output channels per card. Up to 2 cards can be installed on I/O slots.

● HVS-6000MV: Multiview output expansion card
32 internal videos can be laid out on up to 16 windows. Can be shared to OPTION slot.

Software

【For HVS-6000】

● HVS-6000ME4: Software license for 4M/E expansion
4M/E expansion with 2 HVS-6000ME options with this license.
（2 HVS-6000ME are required.）

【For HVS-6000 or HVS-6000M】

● HVS-6000SDIC: Up-converter software license for each input
Adds upconversion capability from HD to 4K for input.

● HVS-6000SDOC: Down-converter*3 software license for each AUX output
Adds downconversion capability from 4K to HD for AUX output.

*1 For details, contact your FOR-A dealer. *2 To be supported. *3 UHD 4K to HD only.

Options

Other Options

【For HVS-6000 or HVS-6000M】

- **HVS-AUX16A/32A/64A/16B/16C/16D:** Auxiliary Unit (Ethernet LAN connection)
  Up to 12 units* can be connected.

HVS-AUX16A
(16-buttons)

HVS-AUX16B
(16-buttons, table-top 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)

- **HVS-GPIO128:** Interface Extension Unit (Ethernet LAN connection)
  1RU-sized GPI control unit. 128 GPI I/O can be freely assigned.

- **HVS-6000PSM:** Power supply units for power redundancy

- **HVS-TALR32:** Tally Control Unit (Relay type) (RS-422 connection)

- **HVS-TALOC32:** Tally Control Unit (Open Collector type)
  (RS-422 connection)

* To be supported.

Please see Specs or User Manual for details of specs.

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