

12G/3G/HD Video Switcher  
**HVS-Q12** "HANABI"

**FOR.A**<sup>®</sup>

**NDI**

**Dante**<sup>®</sup>

12G/3G/HD Video Switcher

**HVS-Q12**

HANABI

花火  
HANABI



NDI<sup>®</sup> is a registered trademark of Vizrt NDI AB.

Dante is registered trademark of Audinate Pty Ltd.

## Powerful and highly configurable switcher with compact body



The number of inputs/outputs can be expanded to 60 inputs and 32 outputs\*<sup>1</sup> for HD and 42 inputs and 23 outputs\*<sup>1</sup> for 4K\*<sup>2</sup>\*<sup>3</sup>. The HVS-Q12 has a compact 4RU size body and up to 8 keyers available on each ME in 3G/HD-SDI. It features FOR-A functions such as HDR/SDR conversion\*<sup>2</sup>\*<sup>3</sup>, up/down conversion\*<sup>2</sup>\*<sup>3</sup>, and audio pass through – even in Frame Sync mode. As for IP I/F, not only NDI®\*<sup>2</sup>, but even Dante®\*<sup>2</sup> I/F is available on the switcher, simplifying workflows. From 3G-SDI to 12G-SDI\*<sup>2</sup>\*<sup>3</sup>, it can be flexibly configured for any application and requirement.

\*<sup>1</sup> Including 2 HDMI outputs. Maximum varies and supporting signals are dependent on the options configured. For details, contact your FOR-A dealer.

\*<sup>2</sup> Optional. \*<sup>3</sup> To be supported. NDI is a registered trademark of Vizrt NDI AB. Dante is registered trademark of Audinate Pty Ltd.

### Key takeaways

#### 1. Highly customizable video switchers

Provides highly stable video processing. The number of inputs/outputs, functions, interfaces, etc. can be added according to the operation. Inputs and outputs can be expanded by up to 60 inputs and 32 outputs\* to support large-scale operation of a 4RU switcher.

\* Including 2 HDMI outputs.

#### 2. Further enhancement on intuitive web GUI for creative operation

While maintaining the usability of HVS series, which is well perceived in the market, the web-based GUI has been further enhanced for intuitive operation and ease of use.

#### 3. Unique functions to enhance workflow

To accelerate ease of use and creative workflow, the HVS Series' unique functions are available, such as event memory, sequences, macros, GPI for external control, user flags, user button, bus follow, etc.



## HVS-NIF for NDI Connectivity

HVS-NIF interface cards provide NDI High Bandwidth connectivity for high-quality, low-latency video transmission and NDI HX for low bit rate transmission. The cards make it easy to build a mixed baseband/IP system you can use to exchange video and audio over a network with other NDI equipment. This is extremely effective for live video production -whether you are shooting remotely or enjoying easy streaming from computers connected via NDI.

### HVS-NIF Features



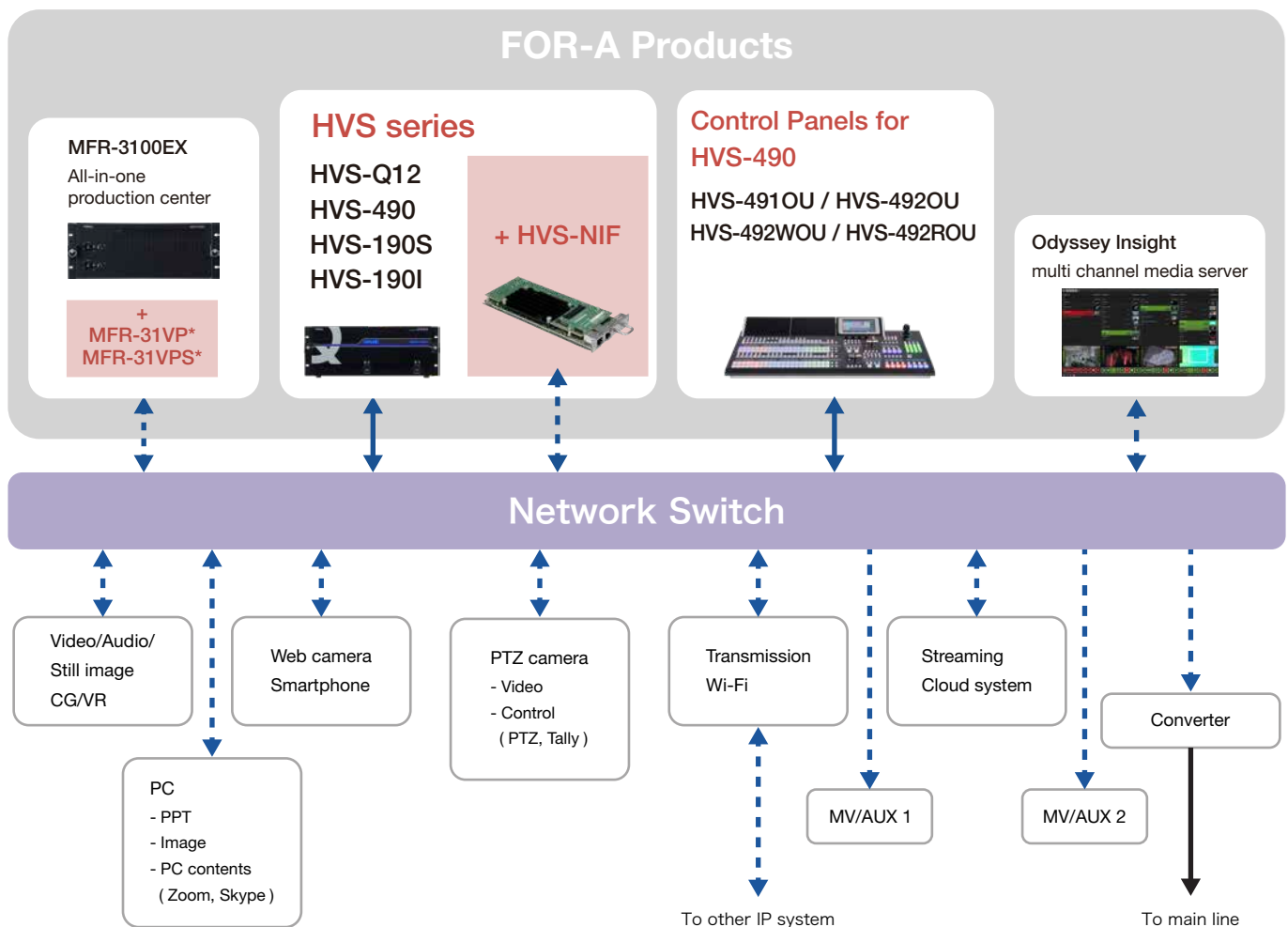
- Supports NDI High Bandwidth and NDI HX input and output.
- Supports 3G/HD-SDI format, with 4 MoIP inputs<sup>1</sup>/2 MoIP outputs per card.
- Supports alpha channel receiving<sup>2</sup>.
- Add up to 3 cards to HVS-Q12<sup>3</sup> and HVS-190S, 2 to HVS-190I and HVS-490<sup>3,4</sup>.
- Frame sync for all inputs.
- Proc amp functionality: adjust source video luminance, saturation or hue.
- Remote camera operation.
- Dual Gigabit Ethernet ports.
- Hardware-based codec processing for peace of mind when building MoIP systems.

<sup>1</sup> NDI High Bandwidth: up to 3 inputs for 1080/59.94p or 50p signals. <sup>2</sup> NDI High Bandwidth only.

<sup>3</sup> HVS-NIF does not support 4K formats.

<sup>4</sup> HVS-190S/190 is 1 M/E, HVS-490 is 2M/E video switcher. For details, visit our website.

### Live Solutions with NDI



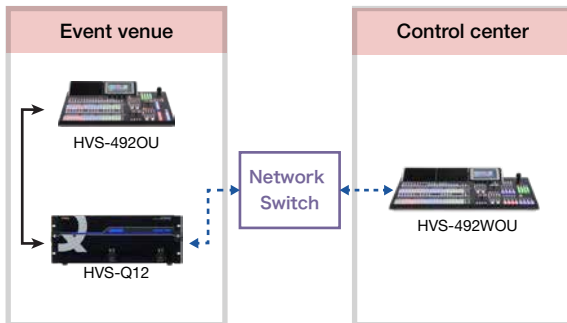
\* MFR-31VP and MFR-31VPS are MFR-3100EX options. For details, visit MFR-3100EX webpage.

## HVS-NIF for NDI Connectivity

### Remote Control

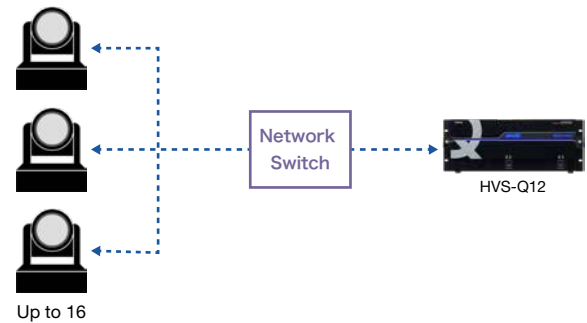
Set up HVS-Q12\* at venues to manage events remotely from a control panel at your base of operations.

\* HVS-4920U/HVS-492WO are shown in the following example.



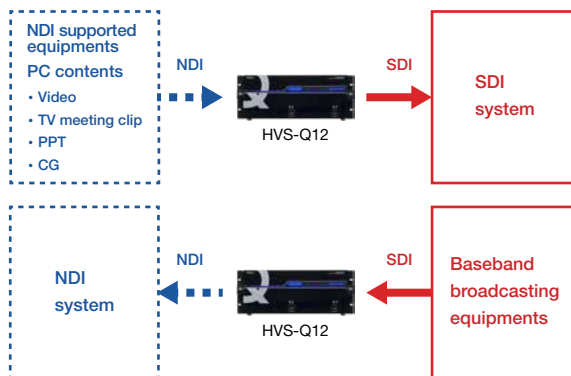
### PTZ Camera Control

Control multiple PTZ cameras - pan, tilt, or zoom, activate tally lights, set or apply presets, or use stored macros for video switching coordinated by bus buttons. Connect to up to 16 cameras.



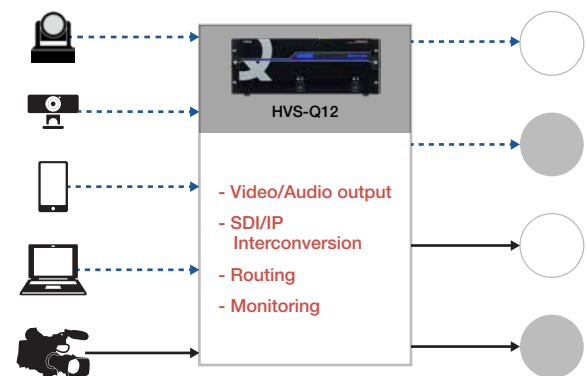
### Support to Build SDI/NDI Mixed System

Easily add devices or computer content compatible with NDI output (such as videos, videoconferencing streams, presentations, or computer graphics) to SDI systems. Reliable baseband switchers can also be added to your NDI system.



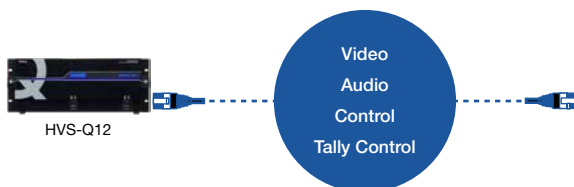
### SDI/IP Conversion and Routing

Add PTZ camera output, computer content, or other sources to SDI equipment, and freely convert between SDI and IP while routing video/audio from a single switcher to multiple devices. SDI/IP sources and output can be arranged side by side with the built-in multi viewer for monitoring over IP.



### 2-way Transfer of Many Signals Using only LAN Cable

Two-way transfer with multiple video, audio, control, or tally systems using only one LAN cable.



### Excels in Many Applications

Beneficial for broadcasting, live production, corporate events, or other applications, regardless of the market.



## Examples of Application

### Mixed SDI/NDI Production

Video feeds with both on-site and remote performers can be sent to the switcher along with computer content. In addition to the PGM bus, provides an Aux buses that can be used to send any video back to remote talent.

### SDI/IP Simulcasts

Simultaneously with SDI playout, connect to streaming sites via an IP stream, enabling mixed or coordinated broadcasts of both sources.

## HVS-DNT for Dante support

The HVS-DNT brings Dante® audio and SDI video together at the HVS-Q12 for the flexibility needed for live event production. By eliminating the need for external equipment, the HVS-DNT simplifies operations and reduces the cost per SDI channel, offering excellent cost performance.

- Support for up to 64 channels of Dante audio input/output per card with optional HVS-DNT.
- Up to 3 cards can be mounted.
- Support for redundancy with primary connector and secondary connector.
- Provides 2 BNCs and expansion up to 2 channels by switching between SDI input/output.
- By remapping Dante audio inputs, HVS-DNT can output Dante audio as SDI output or use as input source of video switcher.
- Available gain adjustment, tone signal output. Audio delay setting is also available when using SDI signal.



**Dante®**



## Features

### ■ Video Input/Output

- 3G/HD-SDI 12 inputs/6 outputs and HDMI 2 outputs as a standard. Supports 4K and NDI with options.
- Supports 12G-SDI and 6G-SDI when using 4K format.
- Expandable up to 60 inputs/32 outputs\*1 for HD and 42 inputs/23 outputs\*1 for 4K.
- Equipped with frame synchronizers\*2 and proc amps for all inputs
- Each output is equipped with a safety marker function\*3.
- For 4K operation, an optional up/down converter can be installed. When using the up/down converter, SDR/HDR and color gamut conversion are available\*4.

\*1 Including 2 HDMI outputs. Maximum varies and supporting signals are dependent on the options configured. For details, contact your FOR-A dealer.

\*2 The frame synchronizer function is not available for input from HVS-DNT connectors.

\*3 Except HVS-NIF and HVS-DNT output.

\*4 Up/down converter, SDR/HDR conversion and color gamut conversion are available on odd-numbered I/O.

### ■ HDMI

- 2 HDMI outputs - each capable of UHD output.
- When outputting UHD, HD video can be displayed on 4 screens.

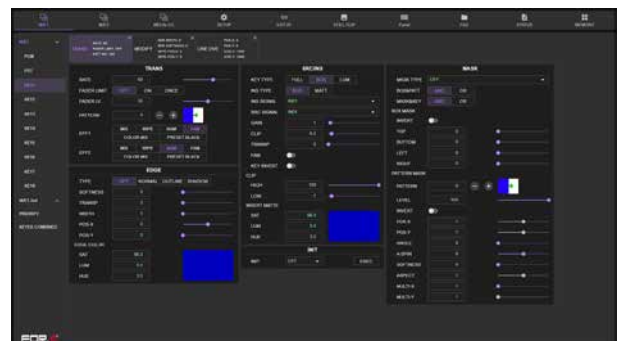
### ■ Frame Synchronizer

- Every input is fitted with frame synchronizers that enable switching of synchronous and asynchronous video signals.
- Audio data can pass through even when frame synchronizer is in use.
- When the input is not in use, FS memory can be used as a still memory.

The frame synchronizer function is not available for input from HVS-DNT connectors.

### ■ Web GUI

- The unit has a built-in web server, allowing various settings to be made via a web browser.
- Redesigned web GUI provides enhanced operability.
- Mobile and tablet terminals can also be used through a wireless access point.



## Features

### ■ Keyer/FLEXaKEY™

- 3 M/E equivalent operation is available with 2 M/E + MELite.
- In standard HD configuration, it can be used as 1M/E (8 keyers) or 2M/E (4 keyers/each). Expandable up to 2M/E (8 keyers/each) with the option.
- In 4K, 1M/E (4 keyers) and expandable up to 2M/E (4 keyers/each) with the option.
- Available as an option, FLEXaKEY offers 8ch in HD mode and 4ch in 4K.
- Keyer gain, clip level, and transparency adjustment is supported, with edge\*<sup>1</sup> and mask functions also provided.
- The keyer is equipped with a 2.5D DVE, and the FLEXaKEY is equipped with a 2D DVE\*<sup>2</sup>

\*1 Keyer only

\*2 The number of channels varies depending on the format

FLEXaKEY:

Keyer that can be assigned to M/E or MELite. Used in conjunction with regular keyers, FLEXaKEY provides additional keyers and increases production flexibility.

### ■ Still/Clip Stores

- 6 still image channels are available for HD and 3 for 4K. Each still image memory has a key.
- Still image memory can be used as video memory, with 4ch available in HD and 3ch available in 4K.
- Graphic transitions with video are available.
- Built-in RAM can be used as a still image or video memory.
- Supply stills in .jpeg, .tga, .bmp, or .png format from a computer via LAN or from an SD card in the control panel.
- Internal memory can hold 2000 frames for HD and 500 frames for 4K with instant switching between image files during playback.
- Optional SSD can be mounted to back up images.

With video storage, sequential still image files are played. Image data will be erased when the power is turned off.

### ■ Event Memory

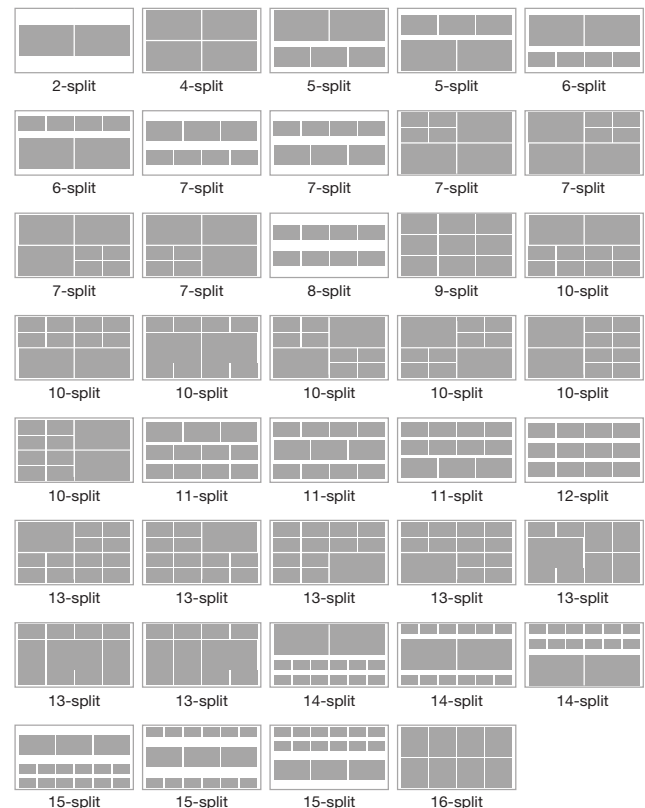
- Store up to 100 patterns consisting of BKGD, KEYER, FLEXaKEY, MELite, AUX, MV, CK, CC, STILL.
- Even the startup status is available as an event memory option.
- Switch panel settings all at once at the press of a button.
- Seamless execution of complex video switching from a single button, with your choice of event-switching effects and switching times.

### ■ Macro

- Enables to store and register a series of operations and then perform complicated operations with one push of a button.
- Up to 100 patterns can be registered.

### ■ 39 Kinds of Multi Viewer Split Patterns

- 2 built-in multi viewer outputs can display up to 16 windows, and optionally, an identically specced 2 multi viewer outputs can be added. Both standard and optional multi viewers can be set up independently.
- Layout patterns without borders can also be selected.
- Display channels can be freely assigned, allowing assignment of not only input source but also PGM output.
- Display elements include title, frame tally, audio level meter, and clock (analog/digital).



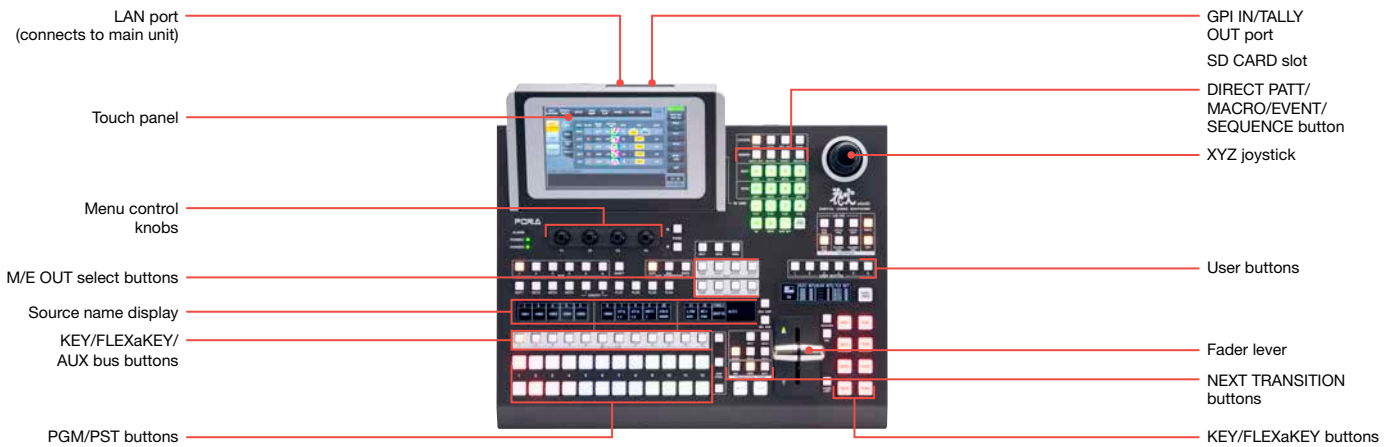
### ■ Other features

- GPI-in/out (20 input/output), POWER and FAN alarm output are standard equipment.
- Expandable up to 4 RS-422 systems and up to 2 GPI in/out (24 input/output /each).
- Redundant power supply is available as an option.
- Built-in color bar.

## HVS-490 Control Panels

HVS-Q12 supports HVS-490 control panels. Up to three units can be connected, which also allows for remote control via LAN. Advantages include enhanced usability and accurate control through customizable RGB button lights assigned to specific video material or button functions, an OLED display for material, a 7-inch touch panel, source and macro name display, and more. Direct input via a three-axis (XYZ) joystick, menu control knobs, and a keypad. A range of functions can also be assigned to user buttons in convenient locations on the control panel. Use an SD card to load or save configuration files and stills.

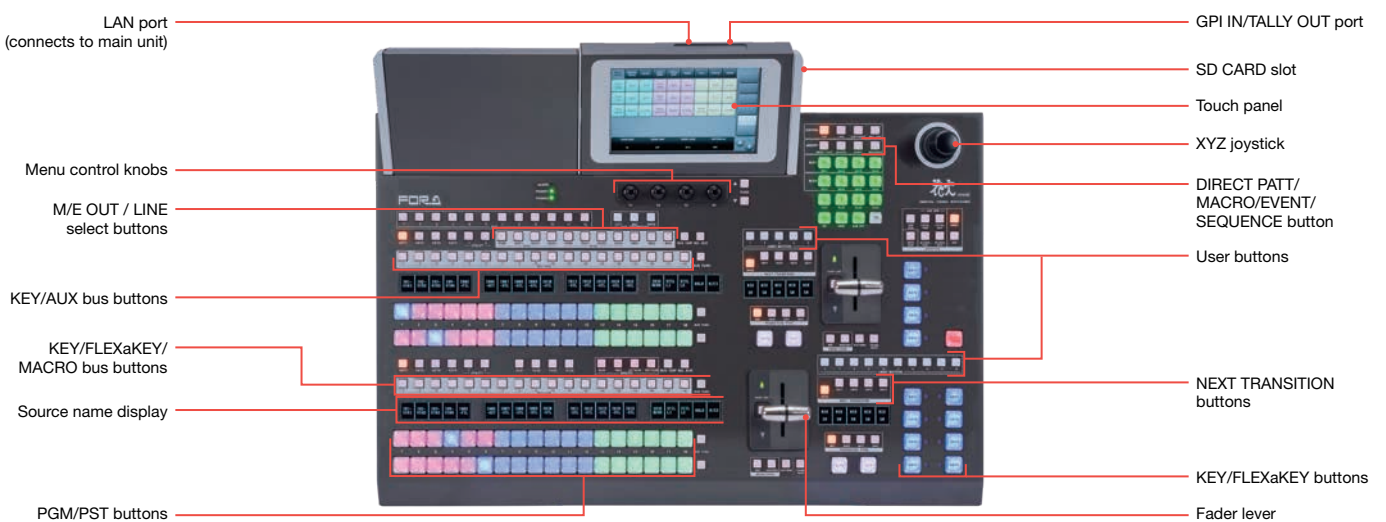
### HVS-491OU 1 M/E (12 buttons) Control Panel



### HVS-492ROU 2 M/E (12 buttons) Control Panel

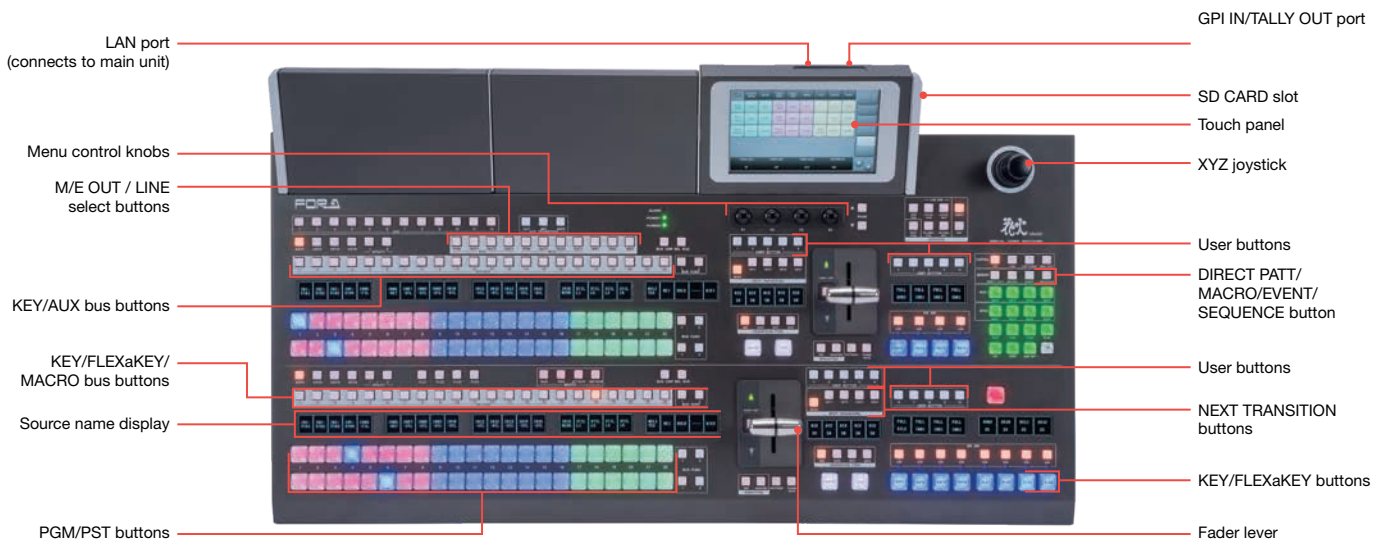


### HVS-492OU 2 M/E (18 buttons) Control Panel



## HVS-490 Control Panels

### HVS-492WOU 1 M/E (18 buttons) Control Panel

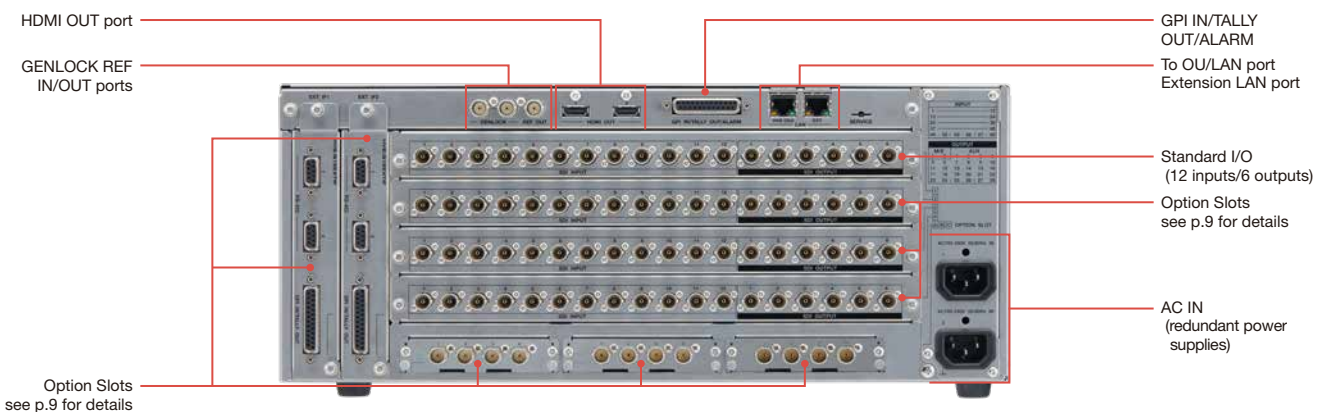


## Main Unit

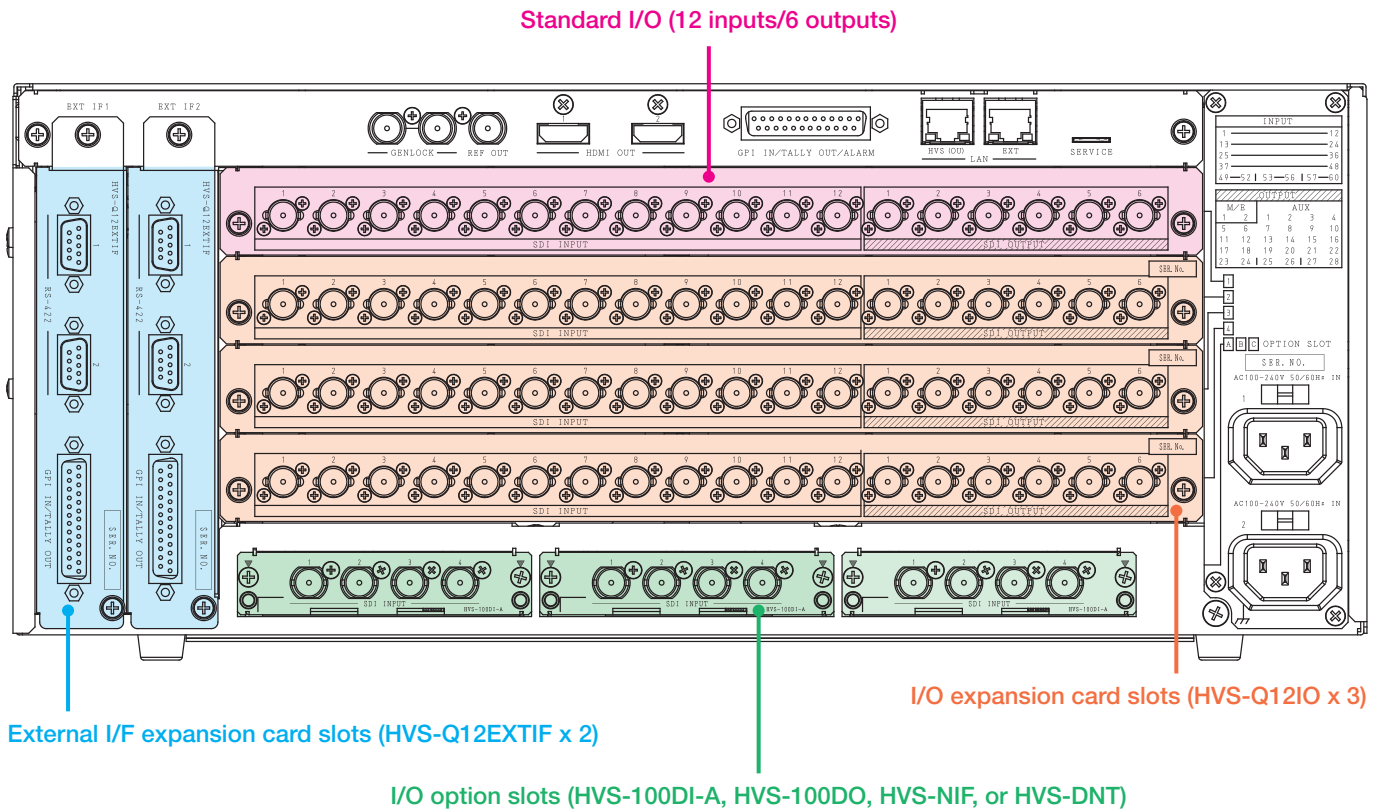
### Front



### Rear



## Options



### Expansion Card

- HVS-Q12IO - I/O Expansion Card \*1
- HVS-Q12ME - M/E, Keyer Expansion Card \*2
- HVS-Q12FLX - FLEXaKEY Expansion Card \*2\*3
- HVS-100DI-A - 4 Channel Digital Input Card \*4
- HVS-100DO - 2 Channel Digital Output Card \*4
- HVS-NIF - NDI I/F Card \*4
- HVS-DNT - Dante Audio Card \*4
- HVS-Q12EXTIF - External I/F Expansion Card

### Software

- HVS-Q12MV1 - Multi viewer Software (for MV3)
- HVS-Q12MV2 - Multi viewer Software (for MV4)
- HVS-Q12UHD - UHD Software (for 12G -SDI supports)\*3
- HVS-Q12CNV - Converter Software (for HD to 4K, SDR to HDR)\*3

### Others

- HVS-Q12PSM - Power Supply Unit
- HVS-Q12SSD - SSD Option (for Clip, Still, log.)
- HVS-AUX16A/32A/64A/16B/16C/16D - AUX Bus Control Box
- HVS-TALOC32 - Tally Control Unit (open collector type with 32 terminals.)
- HVS-TALR32 - Tally Control Unit (relay type with 32 terminals.)

\*1 With a 12G-SDI signal, only odd numbers can be used for both input/output for slot 4. All input/output can support 12G-SDI for slots 2 and 3.

\*2 HVS-Q12ME and HVS-Q12FLX can be mounted from the front.

\*3 To be supported.

\*4 HVS-100DI-A/100DO/NIF/DNT can be mixed and up to 3 expansion cards can be mounted.



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