New 12G-SDI 1M/E switcher on the scene

This new switcher builds on the features of the HANABI HVS-100/110 and HVS-490 video switchers and adds 12G-SDI support as standard. One or two M/E switching (in 4K(UHD) and HD mode, respectively) is just the start. Enjoy two or six M/E performance in these modes thanks to FOR-A’s MELite™ technology. The compact, 3U form factor is exceedingly portable, making the HVS-1200 the perfect choice for mobile production or events.

Various features

Standard 12G-SDI support

10 12G-SDI inputs come standard on this compact unit. Use as a switcher in HD mode with 40 inputs and 2M/Es. Can be used mainly for HD switching while switching to 4K(UHD) as needed. Enjoy convenient operation in HD mode and smoother migration to a 4K(UHD) environment.

Ten standard inputs in 4K(UHD) mode

4K(UHD) mode: 10 inputs and 10 outputs, including two outputs for HDMI 2.0 Level B.
- Mixed inputs of 12G-SDI and quad link 3G-SDI are supported.

HD mode: 40 inputs and ten outputs are supported, including two outputs for HDMI 2.0 Level B.

Frame synchronization on all inputs enables switching of synchronous and asynchronous sources.

Example of 4K system configuration
MELite™

MELite is patented FOR-A technology that expands the capabilities of AUX transitions. With an AUX bus, users can preview transitions before executing them and enjoy the same control over AUX output as for PGM or PST. One MELite (in 4K-UHD mode) or four MELite (in HD mode) are provided. Assigning FLEXaKEY to an MELite expands the system, making 2 M/E performance (in 4K-UHD mode) and 6 M/E performance (in HD mode) possible with this 1 M/E switcher.

- Users can preview output from an AUX bus when applying transitions*1 (cut, mix, or wipe) or when keying. This ground-breaking technology makes sure your production is ready for virtually any request.
- For more sophisticated switching needs, MELite can be assigned before the M/E buses.
- Any M/E can be assigned to multiple on-stage monitors for independent background transitions and graphics transitions - all from the same control panel.

*1 DVE transitions are not included.

FLEXaKEY™

Special FLEXaKEY keyers are designed for flexible reallocation. The one FLEXaKEY (in 4K(UHD) mode) or four FLEXaKEYs (in HD mode) provided operate separately from standard keyers of the full M/E buses. Easy keying of four different FLEXaKEYs in any AUX bus enables performances beyond the reach of conventional switchers.

- The FLEXaKEY system can be freely assigned to M/E or AUX buses.
  - 4K(UHD) mode: Combine up to three keyers for an M/E bus (2 keyers + 1 FLEXaKEY).
  - HD mode: Combine up to eight keyers for an M/E bus (4 keyers + 4 FLEXaKEY).
- P-in-P display is possible using an AUX bus. Assigning FLEXaKEY to an MELite enables use as an upstream key.
- FLEXaKEY can also be applied to create a multi-monitor video wall with a single HVS-1200.

Example of HD system using MELite and FLEXaKEY

Transitions/DVEs

Choose from cut, mix, or wipe transitions. In addition to 100 wipe patterns, the switcher offers five*2 (in 4K(UHD) mode)/16 (in HD mode) 2.5D DVE wipes, such as: rotate, perspective and reposition. Other rich effects include: mosaic, posterization, pseudo color and defocus.

*2 Offers up to four 2.5D DVE wipes at 2160/59.94p and 50p.

Standard multi viewer output

The HVS-1200 provides two displays of multi viewer output*3, each supporting up to 16-split display. More than eight screen layouts each are available. This provides an optimal monitoring environment for both the main operator and other users. Tallys, titles (up to 8 letters) and audio level meters can be displayed on each window.

*3 Supports HD resolution (1920 x 1080).
Various features

- **AES Digital Audio I/O*4**
  Supports four lines (eight channels) of balanced or unbalanced audio input and output. Enables demuxing of video/clip input and muxing of video output. Use an internal sampling rate converter to sync audio input to the system.
  *4  HVS-49AES is required

- **Clean Switching**
  For noiseless transitions, audio is muted when video is switched.

- **Still/Clip Stores**
  One (in 4K(UHD) mode) and four (in HD mode) still/clip stores are equipped. Load video input signals or PGM output signals as stills*5 or import data (either stills or clips with up to 449 frames (in 4K(UHD) mode) and 1797 frames (in HD mode)) created on a computer for use as wipes. Stills and clips are loaded from a control panel and computer. Using the backup feature, operators can also save stills or clips to an optional SSD in the switcher to load the data when the HVS-1200 is restarted.
  *5  JPEG, TGA, and BMP supported

- **GUI Control Function**
  Thanks to a built-in Web server, the HVS-1200 can be controlled from a computer connected via Ethernet. Settings can also be adjusted from mobile devices connected via Wi-Fi to a local access point.

- **Color Corrector Function**
  One color corrector (in 4K(UHD) mode) and four color correctors (in HD mode) are available per M/E.

- **Sequence Function**
  Up to 30 patterns can be registered.

- **External Interfaces**
  Interfaces include: GPI IN (19 inputs); GPI IN/TALLY OUT (22 outputs); Alarm output (cooling fan, power); RS-422 (for editing or other interfaces); and Ethernet (for control from a computer). GPI ports on the operation unit also support up to six inputs and six outputs.

- **Macro Function**
  A macro function enables you to store and register a series of operations and then perform complicated operations with one push of a button.

- **Event Memory/User Button**
  Up to 100 registers of control panel configurations can be stored as events. Event memories can be recalled from the user buttons on the control panels and remote control panels. Operators can set the transition durations and effects. By storing events in advance, operators can use event memories to make performances more expressive, simply by pressing buttons during the event. And because a variety of HVS-1200 functions can be freely assigned to user buttons, operators can customize control panels.

Convenient Control Panels

Choose from HVS-491OU, HVS-492ROU, HVS-492OU or HVS-492WOU panels to suit your application.
Advantages of all the control panels 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.
There is also 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. Remote setup, control, and previews are possible via the switcher’s internal Web server.
Options

Expansion cards

HVS-49AES
Digital Audio I/O Card
Supports four lines (eight channels) of balanced or unbalanced audio input and output.

HVS-49DVE
2.5D DVE Expansion Card
Supports eight channels of DVE output as standard at 1080/59.94p and 50p. With a single card, DVEs are available for all keyers and FLEXaKEYs when 1080/59.94p, 50p and 4K formats are used.

Other options

HVS-1200ED
Editor Interface Software
Adds support for protocols used for editing on other video systems (BVS/DVS, GVG).

HVS-49SSD240G
SSD Expansion Option
SSD for storing stills and clips.

HVS-TALOC32/TALR32
Tally Interface Unit
Connects up to five of the following half-rack tally units to a single HVS-1200.
- HVS-TALOC32: Open-collector, 32 contacts
- HVS-TALR32: Relay, 32 contacts

HVS-AUX16A/AUX32A/AUX64A
AUX Remote Control Panel
16- and 32-button models are 1U size, and 64-button models are 2U. Up to 12 AUX units can be connected via Ethernet. Expand switcher versatility by assigning AUX source previews or a variety of functions to each button.

HVS-49PSM/49PSO
Redundant Power Supply Unit
HVS-49PSM provides a redundant power supply for HVS-1200. HVS-49PSO is available for the HVS-492OU, HVS-492OU or HVS-492WOU.

External view

HVS-1200

Unit: mm

Front

Rear

Side

HVS-1200

M/E, MELite

- **M/E1, M/E2, MELite1-4**
- **1 channel**
- **16 channels (8 channels for 1080/59.94p, 50p) Buses limited.**
- **2 (HD resolution)**
- **Embedded audio to each SDI output:** 1-16 channel, 48 kHz 16-bit to 24-bit
- **100 events:** Crossfade switching available when recalling events.
- **LAN HVS (OU):** 100BASE-TX/1000BASE-T, RJ-45 x 1 (for OU connection)
- **Minimum delay:** approx. 1.4 H, approx. 1.7 H at 720/59.94p, approx. 1.8 H at 720/50p
- **4 channels**
- **Included with M/E1, MELite1**

- **HVS-1200 (standard):** 540 W (at 100-120 V), 506 W (at 220-240 V)
- **HVS-1200 (full option):** 640 W (at 100-120 V), 597 W (at 220-240 V)
- **0 ms - 85 ms (adjustable in 1 ms steps)**
- **See “Options” for details.**

**HVS-492**

- **3G-SDI (Level-A):** 1080p/59.94, 50p
- **4 channels (stores up to 1796 frames)**
- **8 (2: Quad-Link 3G-SDI) (4: Dual-Link 3G-SDI)**

**M/E transition**

- **Video:** CUT, MIX, WIPE
- **Audio input (option):** CUT, MUTE (FADE OUT/FADE IN), MUTE time: 1 V to 10 V (interlaced format: 1 fields to 10 fields, progressive format: 1 frame to 10 frames)

**Audio output**

- **Embedded audio output (Option):** 4 channels
- **M/E transition:** Applicable to M/E1 and two AUX buses (1 from AUX01-03 and 1 from AUX04-06).

**Audio output**

- **SD-CARD slot**
- **Video signal switching available in 4 channels (Similar function as MELite)**

**Video formats**

- **3G-SDI Level-A:**
  - 100p/59.94, 50p
  - 1080/59.94, 50
  - 1080/59.94, 50
  - 1080/59.94, 50
  - 720p/59.94, 50
- **HD-SDI:**
  - Single-Link 12G-SDI Level-A (2SI)
  - Single-Link 4:2:2 10-bit
  - Single-Link 3G-SDI Level-BS (2SI)

**Number of video input**

- **HD-SDI:** 3Gbps/3Gbps, 575, 750, BNC x 4 (Frame synchronizer x 4)

**Video inputs (HD/SDI)**

- **1/2:** Quad-Link 3G-SDI (4: Dual-Link 3G-SDI)

**Video outputs (HD/SDI)**

- **REMI 2.0 Level-II (Type A) x 2 (AUDIO supported)**

**Video outputs (HDMI)**

- **8 channels:** Video signal switching available in 4 channels (Similar function as MELite)

**Proc Amp**

- **Equipped with all inputs**

**Audio delay**

- **0 to 1 frames + Minimum delay (when FS or input re-sizing engine used)**

**Audio processing**

- **Sampling rate converter (SRC), Gain control**

**Audio output**

- **Audio MUTE control:**
  - **HVS-49AES (AES/EBU):**
  - **Unbalanced:**
    - 1.0 Vp-p, 75Ω, BNC x 4
    - 48 kHz, 24-bit

**Video I/O delay**

- **Frame accuracy with 10-bit sampling:**
  - **1 frame:** 0.1 to 1 frames + Minimum delay (when FS or input re-sizing engine used)

**Video level/mode**

- **Input:**
  - **Balanced, 0.3-2.7 Vp-p, 100Ω:** 1, 0.3-2.7 Vp-p, 75Ω

**System phase adjustment**

- **Horizontal: 1/2 H to 1/2 H**

**Video I/O delay**

- **Minimum delay:** approx. 1.4 H, approx. 1.7 H at 720/59.94p, approx. 1.8 H at 720/50p

**Audio input (option) **

- **Balanced, 0.3-2.7 Vp-p:**
  - 1, 0.3-2.7 Vp-p, 75Ω

**Audio output**

- **Audio output:**
  - **Embedded audio output:** 4 channels
  - **Power unit/5 years, redundant power supply/5 years**

**Temperature/humidity**

- **0°C to 40°C/10% to 90% (no condensation)**

**Consumption**

- **HVS-1200 standard:** 540 W (at 100-120 V), 506 W (at 220-240 V)
- **HVS-491OU:**
  - 16 W (at 100-120 V), 16 W (at 220-240 V)
  - 28 W (at 100-120 V), 28 W (at 220-240 V)
- **HVS-492OU:**
  - 27 W (at 100-120 V), 28 W (at 220-240 V)
  - 48 kHz 16-bit to 24-bit
  - Unbalanced, 1.0 Vp-p, 75Ω, BNC x 4, 4 stereo channel pairs, 48kHz, 24-bit

**Video inputs**

- **Number of video input:**
  - **40**
  - **100 events:** Crossfade switching available when recalling events.

**Video outputs**

- **Number of video outputs:**
  - **HD-SDI:** 3Gbps/3Gbps, 575, 750, BNC x 4

**Video outputs (SDI)**

- **1/2:** Quad-Link 3G-SDI (4: Dual-Link 3G-SDI)

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**Specifications**

- **M/E1, M/E2, MELite1-4**
- **1 channel**
- **16 channels (8 channels for 1080/59.94p, 50p. Buses limited.)**
- **2 (HD resolution)**
- **Embedded audio to each SDI output: 1-16 channel, 48 kHz 16-bit to 24-bit**
- **100 events: Crossfade switching available when recalling events.**
- **LAN HVS (OU):** 100BASE-TX/1000BASE-T, RJ-45 x 1 (for OU connection)
- **Minimum delay: approx. 1.4 H, approx. 1.7 H at 720/59.94p, approx. 1.8 H at 720/50p**
- **4 channels**
- **Included with M/E1, MELite1**

- **HVS-1200 (standard):** 540 W (at 100-120 V), 506 W (at 220-240 V)
- **HVS-1200 (full option):** 640 W (at 100-120 V), 597 W (at 220-240 V)
- **0 ms - 85 ms (adjustable in 1 ms steps)**
- **See “Options” for details.**

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