

■ V-1200HD Multi-format Video Switcher

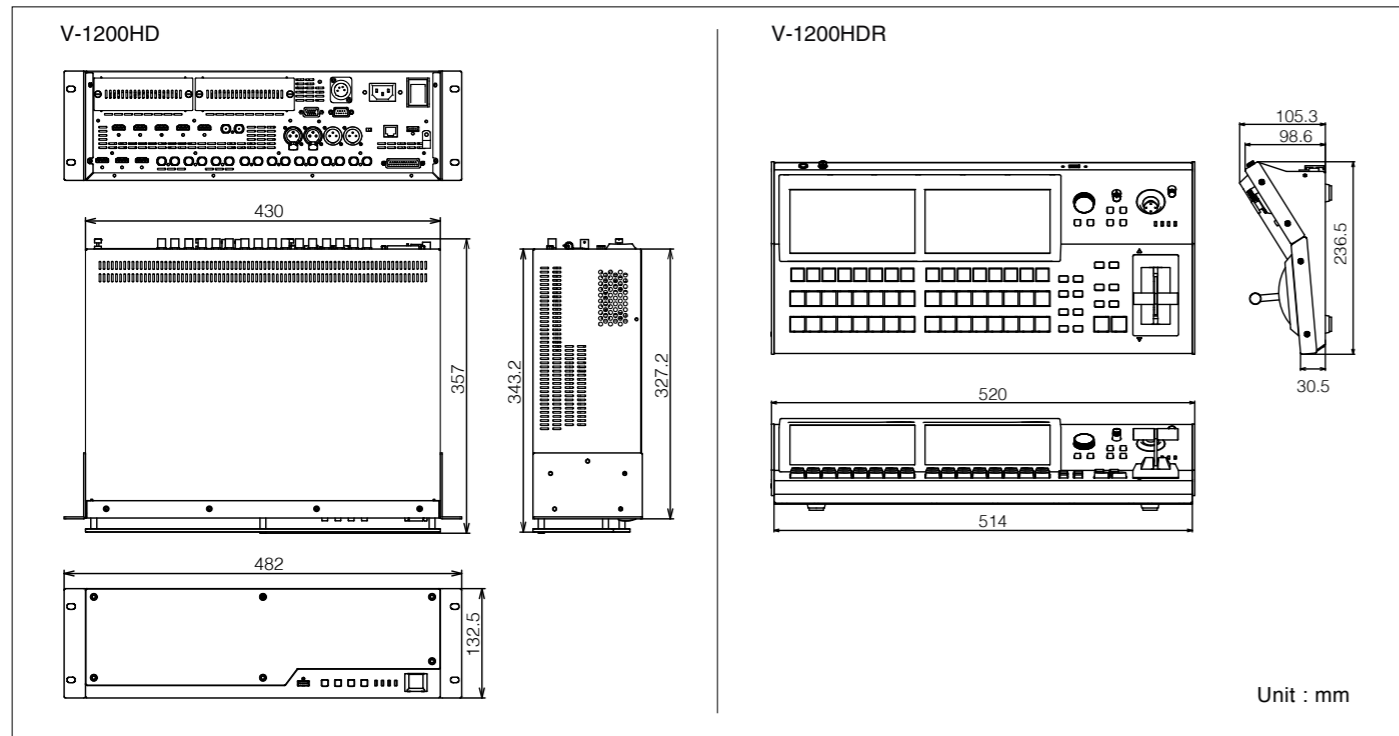
<b>Video</b>	4: 4: 4 (Y/Pb/Pr / RGB), 10-bit / 4: 2: 2 (Y/Pb/Pr), 10-bit	<b>Output Connectors</b>	3G/HD/SD-SDI: BNC type x 4 (Ch1-4), HDMI x 2, AUDIO OUT (XLR/TRS) L (1/2), R (3/4) * Analog Audio or AES/EBU
<b>Input Connectors</b>	3G/HD/SD-SDI: BNC type x 10 * Conforms to SMPTE 424M (SMPTE 425M-AB), 292M, 259M-C HDMI: type A x 2 (HDMI INPUT 1--2) * HDCP Not supported HDMI: type A x 2 (HDMI INPUT 3--4) * HDCP Supported, Multi-format Supported.	<b>Input Level and Impedance</b>	AUDIO IN: -68--+4dBu (Maximum: +22dBu, 4k ohms)
<b>Output Connectors</b>	3G/HD/SD-SDI: BNC type x 6 * Conforms to SMPTE 424M (SMPTE 425M-AB), 292M, 259M-C HDMI: type A x 2 (HDMI OUTPUT 1--2) * HDCP Supported HDMI: type A x 2 (HDMI OUTPUT MULTI-VIEW 1 * HDCP Not required, 1080/59.94p) (HDMI OUTPUT MULTI-VIEW 2 * HDCP Required, 1080/59.94p)	<b>Output Level and Impedance</b>	AUDIO OUT: +4dBu (Maximum: +22dBu, 600 ohms)
<b>Formats</b>	SDI: 480/59.94i, 576/50i, 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p * Conforms to SMPTE 274M, SMPTE 296M, ITU-R BT.601-5 HDMI: 480/59.94i, 576/50i, 480/59.94p, 576/50p, 720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p, 1024x768/60*1, 1280x720/60*1, 1280x800/60*1, 1366x768/60*1, 1280x1024/60*1, 1400x1050/60, 1600x1200/60, 1920x1080/60, 1920x1200/60 * Conforms to CEA-861-E, VESA DMT Version 1.0 Revision 11 * The output format of HDMI1, 2 and SDI is always the same. * 1 Output refresh rate is 75 Hz when frame rate is set to 50 Hz. Frame rate: 59.94 (NTSC) or 50 (PAL) MULTI-VIEW 1--2: 1080/59.94p	<b>Effects</b>	SDI: Linear PCM, 24bits, 48kHz, 16ch * Conforms to SMPTE 299M, SMPTE272M-C HDMI: Linear PCM, 24bits, 48kHz, 2ch AES/EBU: Linear PCM, 24bits, 48kHz, 4ch
<b>Effects (4:2:2 Processing)</b>	M/E: 1 M/E, 1.5 M/E, 2 M/E (9 patterns) Transition: Mix, NAM*, FAM*, Cut, Wipe, Slide*, Squeeze* * PGM/PST only Composition (Keyer): 4 channels * The number of composition depends on M/E, PinP, Chroma Key, Luminance Key, External Key supported AUX: 2 * The number of AUX depends on M/E Others: Output Fade, Freeze, Capture, Composition Edit, SDI Output Patchbay	<b>Others</b>	Patchbay: 92 inputs x 92 outputs Delay: 16ch Mixer: 16ch, channel Effects: 3-Band EQ, Delay Master Effects: Mastering, 3-Band EQ, Reverb
<b>Effects (4:4:4 Processing)</b>	M/E: 1 M/E, Matrix, Scaler Input: 4 (4:2:2 Processing outputs x 2, HDMI INPUT 3, HDMI INPUT 4) Transition: Mix, Cut* Keyer: Luminance Key (1 M/E)* Others: HDCP Supported, Output Fade, Output Cropping, Signal Generator* * The function depends on M/E	<b>Expansion Slot</b>	Slot: 2, Internal video bus: Input 2, Output 2 / Internal audio bus: Input 16ch, Output 16ch * 2 slots total
<b>Still Image</b>	Still Image Inputs: 2, Internal Memory: 16, Maximum 1920x1080 pixels Format: Windows Bitmap File (.bmp) 24 bit per pixel, uncompressed, Portable Network Graphic File (.png) * Alpha channel Supported.	<b>Phase adjustment</b>	±1080 Lines
<b>Multiviewer</b>	MULTI-VIEW 1 (4:2:2 Processing): 16/10 screens, Audio Level, Label, Tally * HDCP Not required MULTI-VIEW 2 (4:4:4 Processing): 4 screens, Audio Level, Label, Tally, OSD Setup Menu * HDCP Required	<b>Reference</b>	Input: BNC type x 1 Output/Through: BNC type x 1 * Black Burst (Sync to frames), Bi-Level, Tri-Level * Through when using an Input.
<b>Proc. Amp.</b>	Equipped with all inputs	<b>External Connectors</b>	RS-232: D-Sub 9 pin type x 1 * for Remote Control * 9600/38400bps, Data 8bit, Stop 1bit, Parity None, Flow XON/XOFF, ASCII Code Set RS-422: D-Sub 9 pin type x 1 * for VISCA Control TALLY/GPIO: D-sub 25 pin type x 1 (Input: 8, Output: 16) LAN: RJ45 100Base-TX (Connect to V-1200HDR or Computer (V-1200HDRCS)), Maximum: V-1200HD x 4, V-1200HDR or V-1200HDRCS x 4 USB: A type x 2 USB Memory / Use for future expansion
<b>Audio</b>		<b>Memory</b>	8 * Last Memory Function
<b>Processing</b>	Sampling Rate : 24 bits/48 kHz	<b>User Function Button</b>	32 * 16 buttons x 2 banks
<b>Input Connectors</b>	3G/HD/SD-SDI: BNC type x 4 (Ch7-10), HDMI x 4, AUDIO IN (XLR/TRS) L (1/2), R (3/4) * Analog Audio or AES/EBU	<b>Remote Camera Control</b>	RS-422: D-Sub 9 pin type x 1 Protocol: VISCA * 9600/38400bps, Data 8bit, Stop 1bit, Parity None, Flow None, Maximum: 4 Units
		<b>Remote Controller</b>	V-1200HDR Control Surface * Option V-1200HD RCS * Windows7 or later / Mac OSX
		<b>Power Supply</b>	AC 100V, DC 24V/10A (XLR-4-32 type) * Redundant Power Supply * 240W
		<b>Operation Temperature</b>	+0 to +40 degrees Celsius +32 to +104 degrees Fahrenheit
		<b>Dimensions</b>	Width: 430 mm / Depth: 357 mm / Height: 132.5 mm * EIA-3U rack mount size
		<b>Weight</b>	9.0 kg
		<b>Accessories</b>	Power Cord, Rack Mount Angle (2), Input Template, Owner's Manual

This product is a Class A digital device under FCC part 15.  
\*VISCA\* is a trademark of Sony Corporation.

■ V-1200HDR Control Surface

<b>Display</b>	7 inch Graphic color LCD (touch screen) x 2	<b>Power Supply</b>	AC Adaptor DC 12V / Secondary AC Adaptor DC 9 V to 16 V (XLR-4-32 type) , DC 12V / 2.5A
<b>Video input</b>	HDMI (type A) x 2 * HDCP Supported	<b>Operation Temperature</b>	+0 to +40 degrees Celsius +32 to +104 degrees Fahrenheit
<b>Video output</b>	HDMI (type A) x 1 * Use for future expansion	<b>Dimensions</b>	Width: 514 mm / Depth: 236.5 mm / Height: 105.3 mm
<b>Others</b>	USB: Type A x 1 * USB Memory, USB: Type B x 1 * Use for future expansion LAN: RJ45 100Base-TX (Connect to V-1200HD) PHONES jack (Stereo 1/4-inch phone type) (headphones) 80mW + 80mW, 35 ohms Internal stereo speakers	<b>Weight</b>	4.3 kg
		<b>Accessories</b>	AC Adaptor, Power Cord, Owner's Manual

■ Dimensions



Preliminary



# MULTI-FORMAT VIDEO SWITCHER V-1200HD

Hybrid Engine 2 M/E Switcher and Processor  
for Broadcast and Live Event



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A comprehensive and flexible multi-format video switcher giving you complete control of video sources, key layers and mixing engine configurations. The V-1200HD introduces a unique flexible hybrid engine with 4:2:2 broadcast switcher and 4:4:4 live event switcher. In addition to powerful video capabilities, the V-1200HD also has a built-in 16-channel audio mixer.

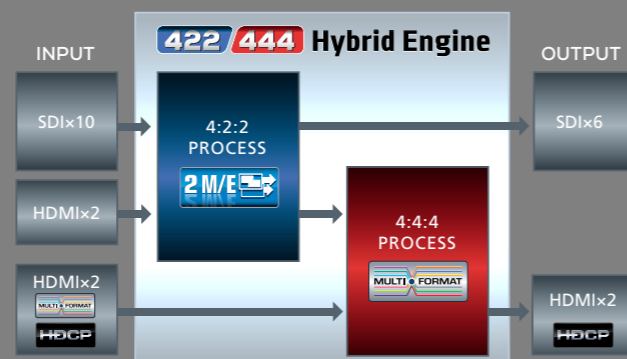


- 10 SDI and 4 HDMI inputs, and 6 SDI and 2 HDMI outputs
- 4:2:2/4:4:4 hybrid engine
- The 4:2:2/10-bit processor is 2 M/E switcher that is able to switch 2 M/E, 1.5 M/E, and 1 M/E.
- The 4:4:4/10-bit multi-format processor supports live presentation, split-screen, and matrix output.
- 4K switching mode
- Up to 92 Inputs/Outputs 16-channel audio mixer
- Control of up to 4 remote cameras
- Optional control surface with T-bar and dual displays.
- All switcher functions can be operated from a computer using remote control software, V-1200HD RCS
- Input/output expandable via expansion slots

**MULTI-FORMAT VIDEO SWITCHER**  
**V-1200HD**  
**CONTROL SURFACE**  
**V-1200HDR**

### Innovative hybrid processing from Roland

In addition to a 4:2:2 video process widely used for video signals, 4:4:4 signals that are the standard output for computers are handled by a separate processing engine.

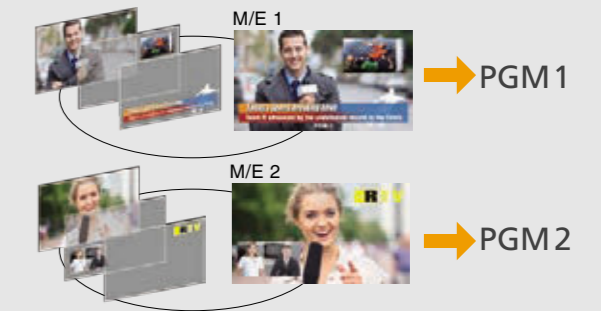


## Flexible M/E

The 4:2:2 engine's variety of M/E modes allows for more creative freedom.

### 2 M/E Mode

This provides a standard 2 M/E operation style. Two keys can be used with each M/E. Keyer priority can also be assigned and changed. Not only is re-entry of the video source from M/E 1 to M/E 2 possible, but so is reverse re-entry from M/E 2 to M/E 1. Each of the two M/Es can be output independently allowing for applications such as simultaneous transmission of captions in two different languages.



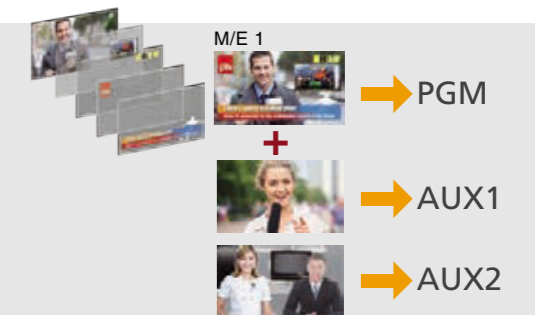
### 1.5 M/E Mode

This is the highest-performance operation style, capable of using PGM/PST rows as the final stage in addition to 1 M/E. All four keys can be used in 1 M/E. You can freely change the priority of each keyer, and even copy keys. This mode enables complex mixing operations such as a video source plus 4-layers of composition and transition functions to another single video source.



### 1 M/E Mode

This is a simple operation style using 1 M/E + 4 keys. In addition to using PGM/PST rows on the main line, you can use two AUX buses. This mode allows discrete video feeds to be switched and routed to additional outputs making the V-1200HD the ideal primary switcher for a number of broadcast and live performance applications.

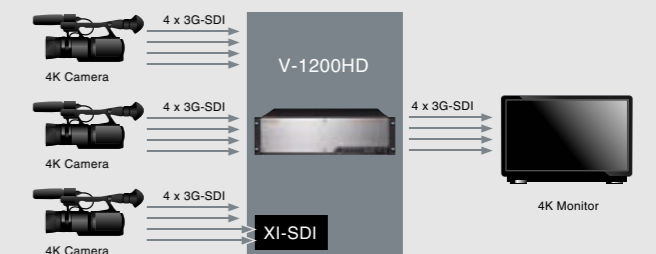


### 4K Switching Mode

\* Future upgrade

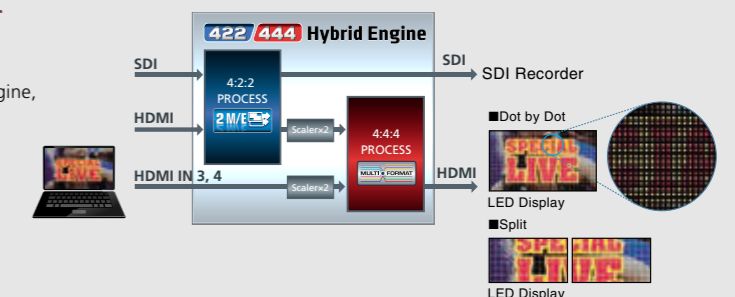
This functions as a 4K/60p routing switcher by combining four SDI inputs or outputs to achieve a single 4K source. Installing an XI-SDI expansion card enables 4K routing of up to three inputs and two outputs.

- \* 4K HDMI input/output is not supported.
- \* M/Es and keyers cannot be used.



### 4:4:4 Multi-Format Processor

There are two scalars between the 4:2:2 engine and the 4:4:4 engine, and two scalars between HDMI IN 3 and 4 and the 4:4:4 engine. These enable switching, self key composition, and matrix output. When using HDMI direct in and out, all processing is done using 4:4:4 10-bit that supports RGB and computer signals.





An innovative and flexible system designed to easily realize your full creative potential.

## Video Structure



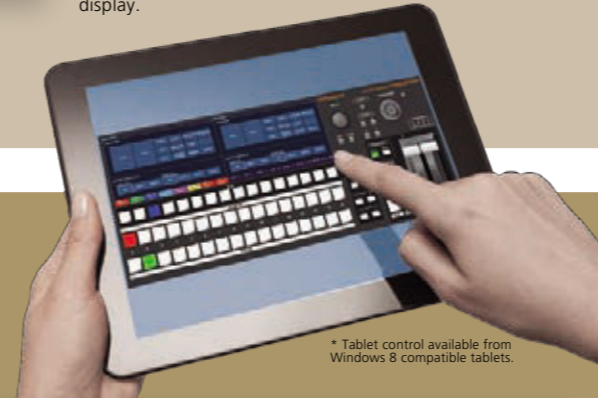
In addition to full functionality using the 4:2:2 processor you can also use the 4:4:4 processor to output two independent HDMI signals with outstanding color reproduction, no color bleed, and crystal clear image on even large-size LED and projector displays.

## Support for a Wide Range of Resolutions

FORMAT	480i/576i	480p/576p	720p	1080i	1080p

HDMI inputs 3 and 4 and both HDMI outputs are equipped with scalars that support SD through HD, including data resolutions such as 1366x768 and 1920x1200. This makes it possible to input common data resolutions sent from computers without external converters and transmit signals from the V-1200HD that are matched to the native resolution of the destination display.

## Root Menu



\* Tablet control available from Windows 8 compatible tablets.



All functions and setting changes are accessible from the root menu. This instantly calls up the required operation screen from among the large number of parameters. These operations can be performed not only via the dedicated

V-1200HDR Control Surface, but also by using the free remote control software, V-1200HD RCS, on a connected computer. Use the software without the V-1200HD for off-line system configurations and for training operators.

## Audio Structure



Input and output of up to 92 channels of audio embedded in SDI and HDMI signals is possible. Full 16-channel support is provided for SDI audio. A 16-channel audio mixer equipped with EQ, reverb, and delay is also built-in. Powerful patchbay functionality lets you select 16 sources to be assigned to the audio mixer and also accomplish central control of source feeds as a hub not just for video, but for audio as well.

\* Audio input is supported by SDI inputs 7 through 10.

## M/Es



Select multiple configuration from 1 M/E, 1.5 M/E, 2 M/E to meet the needs of your video production. You can also select from four types of keys: Luminance Key, Chroma Key, \*External Key, and PinP.

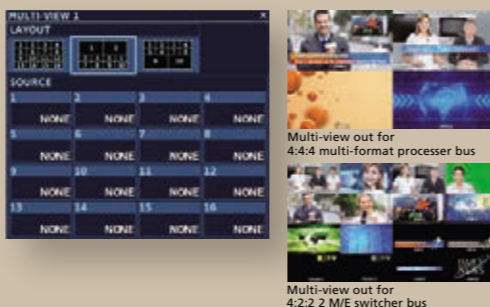
\* Two keys are used when External Key is selected.

## Keyers



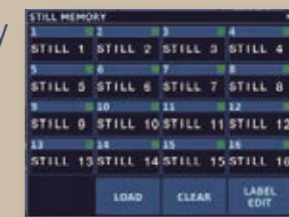
Features for changing priority and for copying and pasting settings are built into the four channels of composition (keyers). You can instantly access preset settings through store and recall operations using four memory banks.

## Multi-view



Multi-view is indispensable for single-point monitoring of multiple video feeds. The V-1200HD contains two multi-view outputs, one for the 4:2:2 bus and one for the 4:4:4 bus. Along with selecting from among three layout patterns, you can also customize the arrangement of the sources any way you like. (The 10-source layout configuration for the 4:4:4 process uses skip frame for the frame rate.)

## Still Memory



Store up to 16 still images as BMP or PNG file formats in the internal memory. The unit supports resolutions up to 1920x1200, and also supports alpha channel for images in PNG format.

## Assignable Cross-point

LABEL	INPUT	SDI 1	SDI 2	SDI 3	SDI 4	SDI 5	SDI 6	SDI 7	SDI 8	SDI 9	SDI 10	SDI 11	SDI 12	SDI 13	SDI 14	SDI 15	SDI 16
SDI 1	SDI 1	SDI 2	SDI 3	SDI 4	SDI 5	SDI 6	SDI 7	SDI 8	SDI 9	SDI 10	SDI 11	SDI 12	SDI 13	SDI 14	SDI 15	SDI 16	
SDI 2	SDI 1	SDI 2	SDI 3	SDI 4	SDI 5	SDI 6	SDI 7	SDI 8	SDI 9	SDI 10	SDI 11	SDI 12	SDI 13	SDI 14	SDI 15	SDI 16	
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SDI 4	SDI 1	SDI 2	SDI 3	SDI 4	SDI 5	SDI 6	SDI 7	SDI 8	SDI 9	SDI 10	SDI 11	SDI 12	SDI 13	SDI 14	SDI 15	SDI 16	
SDI 5	SDI 1	SDI 2	SDI 3	SDI 4	SDI 5	SDI 6	SDI 7	SDI 8	SDI 9	SDI 10	SDI 11	SDI 12	SDI 13	SDI 14	SDI 15	SDI 16	
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SDI 16	SDI 1	SDI 2	SDI 3	SDI 4	SDI 5	SDI 6	SDI 7	SDI 8	SDI 9	SDI 10	SDI 11	SDI 12	SDI 13	SDI 14	SDI 15	SDI 16	



Primary input is freely assignable to any cross-point location. Quick input changes can be accommodated easily because the source labels follow simultaneously.



A dedicated V-1200HDR controller provides fast and accurate operation. Dual touch monitors provide quick and easy operation.

All the functionality required for operation of a high-end switcher, in an efficient compact size.

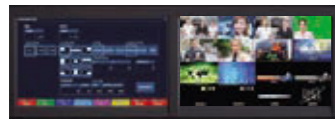
## CONTROL SURFACE V-1200HDR

### Dual Touch Monitors

These dual touch monitors let you display different GUIs on the left and right. Incoming video signals from the HDMI connectors on the rear panel can also be displayed.



● V-1200HDR menus shown on the left and right displays



● The V-1200HDR's multi-view output shown on the right display

### Headphones Output

Monitor local audio inputs to the console via HDMI.

### Value Knob

The value knob allows you to precisely adjust parameter settings and enables fast operation with "touch and turn" control from parameters selected on the touch panel

### Audio Master Volume

This adjusts the volume level of mixed audio.

### Positioner

The Positioner is for the three X, Y, and Z parameters when adjusting position and size for PinP and controlling remote cameras.



### Layout Buttons

Four LAYOUT buttons are used to select preset menus on the dual displays.

### M/E Transition Selection

Designed in the style of a 1 M/E interface, the control panel also accommodates 2 M/E operations.

### T-bar

The large T-bar provides manual precise mixing and transition control.



### Transition Block

Transition buttons provide accurate, full control of operations for the next take.



● Examples of Wipe Patterns

Along with standard MIX, NAM and FAM transitions are also built in. With NAM, mixing proceeds from the picture's brightest areas, and FAM transitions from the picture on bus A to bus B with additive compositing.



### Cross-point View

Cross-points for primary inputs are freely assignable to any location. The name of the source appears at the bottom of the display, reducing operation errors.

### AUX Bus Switches

Select AUX outputs as well as inputs for composition and user presets. Functions can be accessed via the delegation block to the right.

### 16 Cross-Points

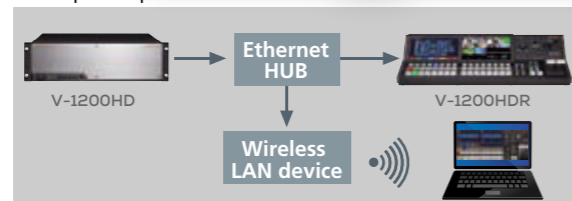
This broad range of cross-point switches affords a commanding view of 16 sources at one time. This is also switchable to either PGM/PST or flip/flop according to operator preference.

### Redundant Power

In addition to an AC adapter, the unit can be powered by 12V battery. Connecting both at the same time provides redundant power.



### Setup Example



### LAN Port

An Ethernet cable connects the console and the main-unit processors. Using an Ethernet hub lets you connect up to four control panels or with the V-1200HDR RCS (remote control software) to the V-1200HDR at the same time.  
\* Use a Cat 5e or higher cable for connection.

### HDMI Input

Connect the main V-1200HDR unit's multi-view outputs to the V-1200HDR's HDMI inputs to display the multiview content on the V-1200HDR's built-in screens.  
\* HDCP support

### HDMI Output

For future feature expansion

### Delegation Block

In addition to four composition inputs, the AUX bus buttons also function as switches for two AUX buses and two user presets.



Multi-format support for a diverse range of inputs and outputs.  
Two expansion slots are provided for even more compatibility.



**MULTI-FORMAT VIDEO SWITCHER V-1200HD**

**USB Port**

Along with importing still images for storage in internal memory, this is used for saving and loading settings for the V-1200HD as well as for updating the firmware.

**Menu button LED Status Display**

Visually monitor the status of the power supply, console link, and the cooling fan.

**TALLY/GPIO Connector**

Connect a video monitor capable of tally input or a tally light system to illuminate the tally lamps.

**SDI Input**

The ten SDI inputs support 3G, HD, and SD. All inputs are equipped with color correction.  
\* SDI IN 7 through 10 each support 16 channels of embedded audio input.

**SDI Output**

The six SDI outputs support 3G, HD, and SD. Each output is individually switchable to PGM, FTB, and still image.  
\* SDI OUT 1 through 4 can each embed 16-channel audio.

**4:2:2 HDMI Input**

Dedicated HDMI inputs for 4:2:2 processor with color space selection and color correction. (no support for HDCP)  
\* HDMI IN 1 and 2 each support the upper two channels of embedded audio input.

**LAN Port**

An Ethernet cable connects the console and the main-unit processors. Using an Ethernet hub lets you connect up to four control panels or computers installed with V-1200HDR RCS (remote control software) to the V-1200HD at the same time.

**XLR Audio Inputs**

Either two analog channels or four AES/EBU channels are selectable for the XLR audio input/output connectors. (Input and output share a common format.)

**Multi-view Output 2**

Video in the 4:4:4 processor can be monitored via MULTI-VIEW 2. Use an HDCP-compatible display for monitoring is recommended.

**Multi-view Output 1**

Video in the 4:2:2 processor can be monitored via MULTI-VIEW 1. An ordinary computer display can be used for monitoring.  
\* HDMI IN 1 and 2 each support the upper two channels of embedded audio input.



**USB Port**

For future feature expansion

**Remote Connector**

The RS-422 connector is VISCA\*-compatible, and can be used to control up to 4 cameras.

**Reference**

Black burst, 2-value, and 3-value input are supported. In addition to loop-through, installing a generator for output is also supported.

**HDMI Output**

The 4:4:4 processes is output to HDMI outputs.

**4:4:4 HDMI Input**

The 4:2:2 and 4:4:4 processes can both use HDMI inputs. You can scale inputs to the 4:2:2 processor. The 4:4:4 processor supports HDCP as well.  
\* HDMI IN 3 and 4 each support the upper two channels of embedded audio input.  
\* 4:2:2 processor doesn't support HDCP.

**Redundant Power**

The V-1200HD accommodates both AC and DC 24V power sources. Connecting both establishes a redundant power supply (with priority given to AC power).

**Expansion Slots**

The unit's functionality can be extended through two expansion slots. These make it possible to add input and output for video and audio or even to add fiber-optic support via SFP cartridges.



\* "VISCA" is a trademark of Sony Corporation.

The flexible workflow and functionality supports a wide variety of live production applications.

**Broadcast Studios**



A wide variety of video effects enhances broadcast studio productions.

Composition with freely selectable priority can be accomplished using the four scaler-equipped keyers. The system also features high-end Chroma Key, as well as the External Key essential for title compositing. In addition to PGM and PVW output, two AUX buses are usable for output (when in the 1M/E mode).

**Live-performance Production**



Multiple M/E choices allow for a diverse range of video production applications in one switcher.

The V-1200HD is ideal as a main switcher for concert recording and for a live feed. Through a variety of multi-view functions, even a large number of sources can be checked at a glance. The M/E configuration can be varied as desired to meet the needs of the production. Control up to four remote cameras, ensures creative productions even with limited camera operators.

**Live Events**



Equipped with HDMI input and output with multi-format support. Freely mix computer and video sources and output to a wide range of displays and devices

Along with ten SD/HD-SDI inputs, the V-1200HD features four HDMI inputs. Six SD/HD-SDI and two HDMI outputs are also provided. Among these, the two HDMI inputs and outputs offer multi-format support. Computer sources with varying resolutions and frame rates are supported without a need for video converters. The signal is passed directly to the 4:4:4 process, so it can be output, unchanged, at the same high resolution. What's more, using an XI expansion card with a built-in scaler makes it possible to mix digital and analog inputs and outputs.

**Performance Hall Equipment**



Supporting a rich range of control as a video/audio hub.

The full-featured routing functionality enables conversion and distribution of a high number of video sources in a variety of formats. The V-1200HD can also achieve remote operation as a video/audio source hub from a variety of control terminals and programs. In addition to just simple video switching, the system also offers functions available only on production switchers, such as distributing PinP video to various locations.

A diverse selection of option cards for video and audio system expansion.



SDI Expansion Interface  
**XI-SDI**

- Equipped with four SDI connectors for switchable bidirectional input/output.
- Two scalars are built in.
- Connect to 4:2:2 engine



DVI Expansion Interface  
**XI-DVI**

- Equipped with two DVI-I connectors for switchable bidirectional input/output, with support for analog RGB, composite, DVI-D, and HDMI signals.
- Two scalars are built in.
- Connect to 4:2:2 engine



SFP Expansion Interface  
**XI-SFP**

- Base board installable with two SFP modules.
  - Connect to 4:2:2 engine
- \* Support Transmitter/Receiver, Dual/Single  
\* Compatible with NON-MSA (SFP, INF-8074i Rev1.0)  
See pin assign on the next page.



REAC Expansion Interface  
**XI-REAC**

- REAC audio interface.
- Connect 16 input channels and 16 output channels to the internal audio processor.



DANTE Expansion Interface  
**XI-DANTE**

- Dante audio interface.
  - Connect 16 input channels and 16 output channels to the internal audio processor.
- \* Audinate, the Audinate logo and Dante are trademarks of Audinate Pty Ltd.



MADI Expansion Interface  
**XI-MADI**

- MADI audio interface.
- Connect 16 input channels and 16 output channels to the internal audio processor.



WAVES SOUNDGRID Expansion Interface  
**XI-WSG**

- WAVES SOUNDGRID audio interface
- Connect 16 input channels and 16 output channels to the internal audio processor.

■ XI-SFP pin assign

PIN #	Transceiver Reciever (Non-MSA) (Video)	Dual Transmitter (Non-MSA) (Video)	Dual Reciver (Non-MSA) (Video)
1	VEE	VEE	VEE
2	VEE	NC	Rx2-
3	NC	NC	Rx2+
4	VEE	VEE	VEE
5	SCL	SCL	SCL
6	SDA	SDA	SDA
7	VEE	VEE	VEE
8	Rx1- LOS	Tx2+	NC
9	NC	Tx2-	NC
10	NC	Tx2- DIS	NC
11	VEE	VEE	VEE
12	Rx1+	NC	Rx1+
13	Rx1+	NC	Rx1+
14	VEE	VEE	VEE
15	VCC	VCC	VCC
16	VCC	VCC	VCC
17	VEE	VEE	VEE
18	Tx1+	Tx1+	NC
19	Tx1-	Tx1-	NC
20	Tx1- DIS	Tx1- DIS	NC

VC-1 Series Video Converters

Converters enabling input/output expansion and format conversion however you like. These provide support for upgrading systems to achieve low heat generation and lossless conversion.



Scan Converter  
**VC-1-SC**  
Up/Down/Cross Scan Converter to SDI/HDMI with Frame Sync



HDMI to SDI  
**VC-1-HS**  
Conversion of video and audio signals from HDMI input to SDI output

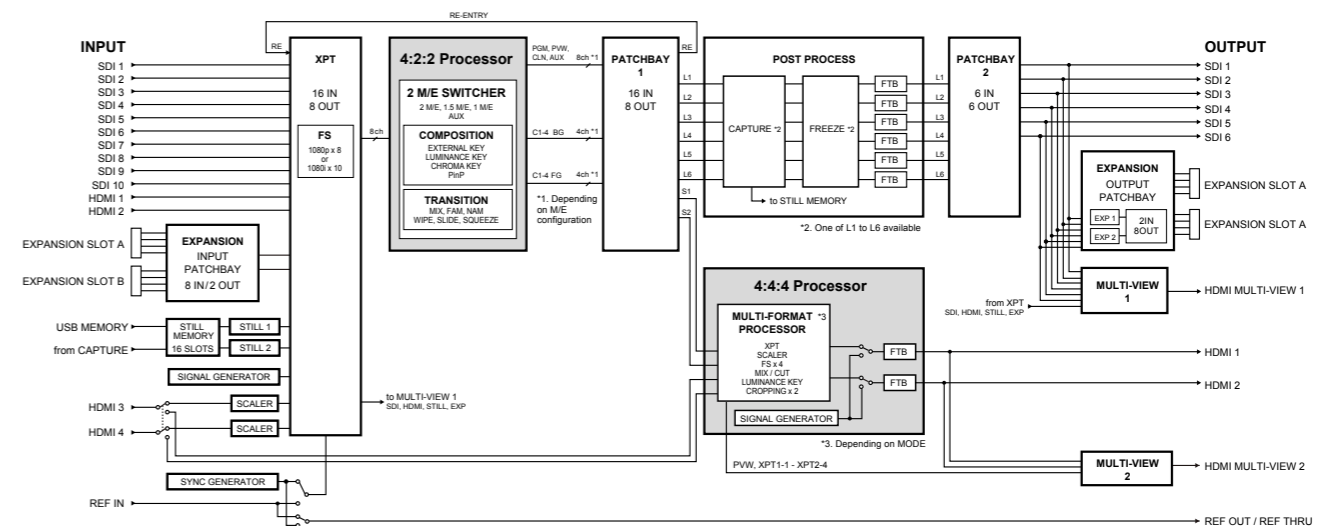


FS Delay  
**VC-1-DL**  
Bi-directional Conversion of video and audio signals from HDMI to SDI or SDI to HDMI with Frame Sync and Delay

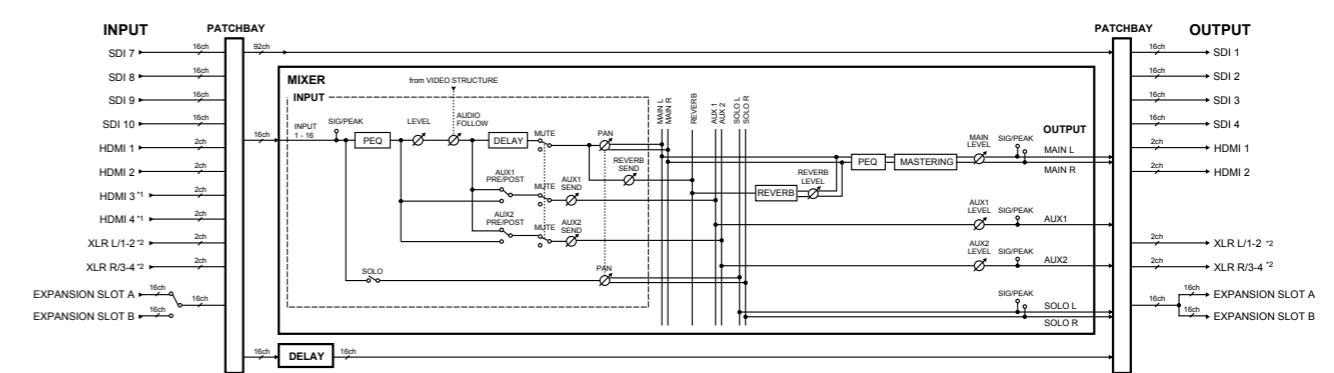


SDI to HDMI  
**VC-1-SH**  
Conversion of video and audio signals from SDI input to HDMI output

Video Block Diagram



Audio Block Diagram



\*1. When HDCP is on, the input signal can only be output to the XLR analog outputs and the HDMI outputs that are connected to HDCP compliant devices.  
\*2. When analog is selected, the XLR connectors are mono only.