

Specifications

Video Processing			Output Connectors	
Processing		4:2:2 (Y:Pb:Pr), 10 bit	Analog SD	S-Video (4 pin mini DIN type) x 1 Composite (BNC type) x 1
Supported Formats	VIDEO (HD/SD)	480/59.94i, 576/50i, 480/59.94p, 576/50p, 1080/59.94p, 1080/50p, 1080/59.94i, 1080/50i, 720/59.94p, 720/50p	Analog HD (Component)	Y/Pb/Pr (BNC type) x 1 D-Sub 15 pin type x 1 * D-Sub 15 pin type : combined use with analog RGB
	RGB	640 x 480/60 Hz *1, 800 x 600/60 Hz *1, 1024 x 768/60 Hz *1, 1280 x 768/60 Hz *1, 1280 x 1024/60 Hz *1, 1600 x 1200/60 Hz *2 *1 Conforms to VESA DMT Version 1.0 Revision 10 *2 Output refresh rate is 75 Hz when frame rate is set to 50 Hz *2 Reduced blanking	Analog RGB	D-Sub 15 pin type x 1 * Combined use with analog HD (Component)
	STILL	Windows Bitmap File (.bmp) * Maximum 1900 x 1200 pixels, 24-bit per pixels, uncompressed	DVI-D	Single Link Type x 2
Input/Output Level and Impedance			HD/SD-SDI	BNC type x 2 * Conforms to SMPTE 259M-C, SMPTE 292M
Composite		1.0 Vp-p, 75 ohms	Other Connectors	
S-Video		Luminance Signal : 1.0 Vp-p, 75 ohms Chrominance Signal : 0.286 Vp-p, 75 ohms (NTSC) 0.3 Vp-p, 75 ohms (PAL)	TALLY	D-Sub 15 pin type x 3 (200 mA, Open Collector type)
Analog HD/RGB		0.7 Vp-p, 75 ohms (H, V : 5VTTL)	Remote	MIDI (IN, OUT/THRU) RS-422 (D-Sub 9 pin type) x 1
Input Connectors	* Loop thru connectors are equipped for all inputs			
Analog SD		S-Video (4 pin mini DIN type) x 1 Composite (BNC type) x 1 * Select one from menu	REFERENCE	BNC type (IN, THRU) *Black Burst (Sync to Frames), Bi-Level, Tri-Level Sync
Analog HD (Component)		Y/Pb/Pr (BNC type) x 2 D-Sub 15 pin type x 2 * Combined use with analog RGB	USB port (host)	A type x 1 for USB memory
Analog RGB		R/G/B/H/V (BNC type) x 2 D-Sub 15 pin type x 2 * Combined use with analog HD (Component)	Effects	
DVI-D		Single Link Type x 2	Transition	Mix, FAM, NAM, Wipe (9 patterns)
HD/SD-SDI		BNC type x 8 * Conforms to SMPTE 259M-C, SMPTE 292M	Composition	PinP, Chroma Key, Luminance Key, Split, DSK
			Others	Output Fade, Edge Blending, Dual Screen, Span Screen
			Others	
			Power Consumption	90 W
			Dimensions	482 (W) x 319.4 (D) x 206.2 (H) mm 19 (W) x 12-5/8 (D) x 8-1/8 (H) inches
			Weight	8.1kg 17 lbs 14 oz
			Accessories	Power Cord, Owner's Manual

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

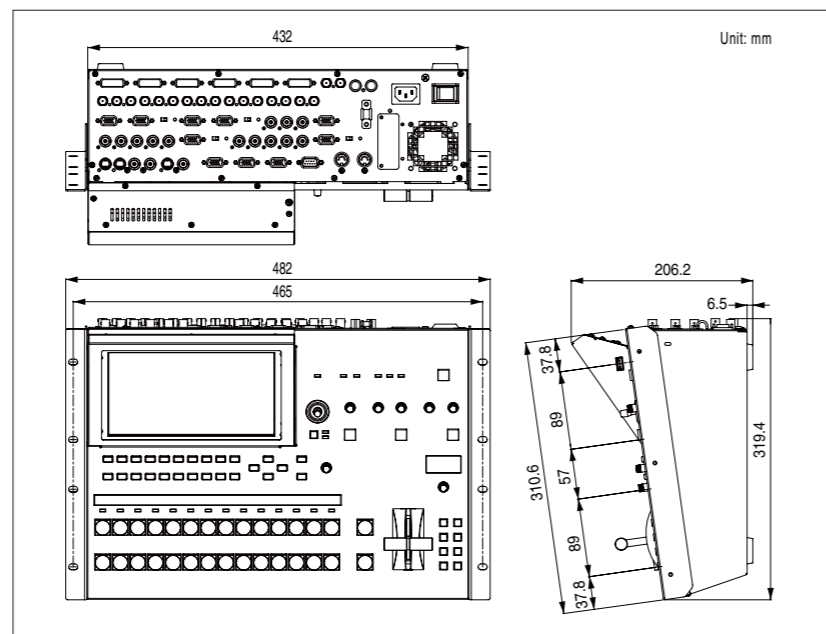
This product is intended for use in the following Electromagnetic environments:

E1.residential, E2.commercial and light industrial, E3.urban outdoors, E4.controlled EMC environment, ex. recording studio (broadcasting studio) which are specified in EN55103-1 and EN55103-2.

Rackmount Setup



Dimensions



Roland Systems Group

Roland Systems Group, a member of the worldwide group of Roland companies, is dedicated to the support of audio and video professionals demanding excellence in both performance and system design. Through the development and support of video and audio products, we endeavor to improve workflow and maximize creative possibilities.

V-LINK

Using V-LINK, musicians can "play" video from their electronic instrument when used with Roland video products. With V-LINK, musicians have a powerful interface for realtime audio and video integration.

Ensuring high quality while protecting the environment: Roland is ISO9001 and ISO14001 certified

At Roland, several group companies have obtained ISO9001 certification. In addition, in January 1999, Roland also received ISO14001 international environmental management system certification. We're actively seeking ways to maintain harmony with the environment. (ISO-International Standardization Organization: an organization for the promotion of standardization of international units and terms. They provide different categories of certification: ISO9001 Series certification is a product quality certification for products that undergo a certain level of quality control from the design stage to the after service stage; ISO14001 Series certification is for environment-related standards. Each member of the Roland Group is striving to obtain certification.)



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V-1600HD

MULTI-FORMAT VIDEO SWITCHER

HD-SDI SD-SDI DVI-D HDMI RGB COMPONENT COMPOSITE S-VIDEO STILL IMAGE



An All-In-One Multi-Channel, Multi-Format Live Video Switcher



The All-in-One Solution for Any Live Event

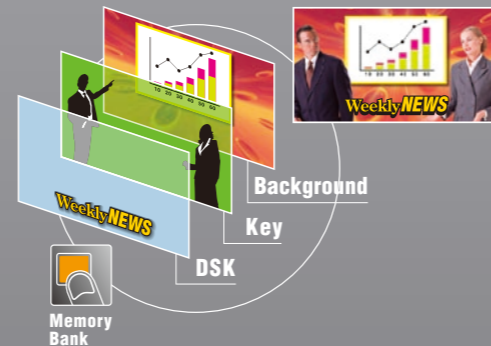
All-In-One

Built-in Monitor, Scalers and Multi-Format Inputs and Outputs.



Intuitive Operation

DSK, Key Composition, and PinP are controlled using simple operations. 64 Memory banks provide storage and instant recall of setup parameters.

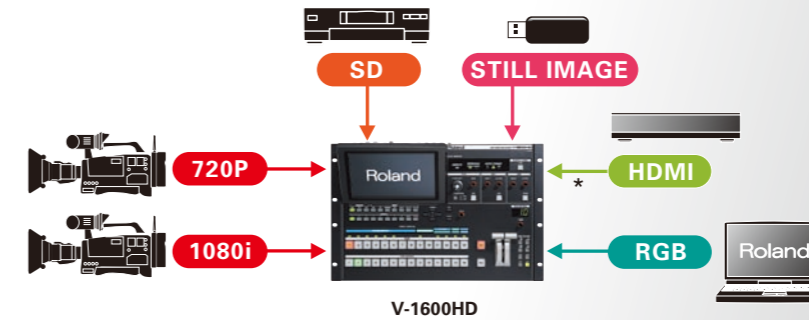


Multi-Format

Multiple input and output formats with no need to purchase extra cards.



Multiple Video Input Formats

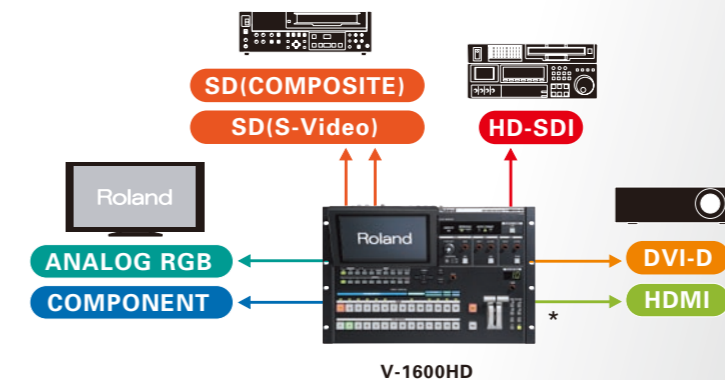


- 8 HD/SD-SDI INPUTS
- 4 RGB/COMPONENT INPUTS
- 2 DVI-D/HDMI INPUTS
- 2 SD INPUTS

Equipped with HD/SD SDI for professional video equipment as well as DVI-D for directly connecting PC/Mac. Also included is analog RGB, Component, S-Video and Composite.

*DVI-D - HDMI adaptor is needed.

Multiple Video Outputs



- 2 HD/SD-SDI OUTPUTS
- 2 RGB/COMPONENT OUTPUTS
- 2 DVI-D/HDMI OUTPUTS
- 2 SD OUTPUTS

Output digital/analog HD resolution while down-converting at the same time. Display to a primary screen with secondary feed to recording or broadcast. Spread output across two screens including ability to edge-blend.

*DVI-D - HDMI adaptor is needed.

Connect, seamlessly mix and output a variety of video sources such as cameras, VTR's, RGB Computer Sources, Blu-ray/DVD, and high-end SD/HD-SDI video sources. The V-1600HD's all-in-one design combined with professional quality and features makes it the ideal choice for live video production.

V-1600HD

MULTI-FORMAT VIDEO SWITCHER

- HD-SDI
- SD-SDI
- DVI-D
- HDMI
- RGB
- COMPONENT
- COMPOSITE
- S-VIDEO
- STILL IMAGE



Multi-Format Solution for the HD Generation

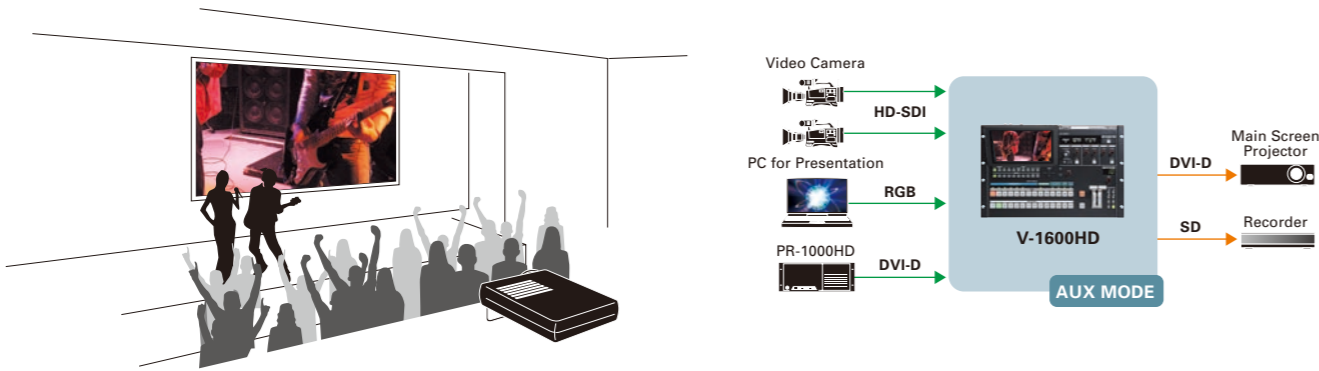
HD video sources are now a common video format. The need to also mix in other video sources and formats makes the V-1600HD a necessary component for today's live video production.



LIVE PRODUCTION

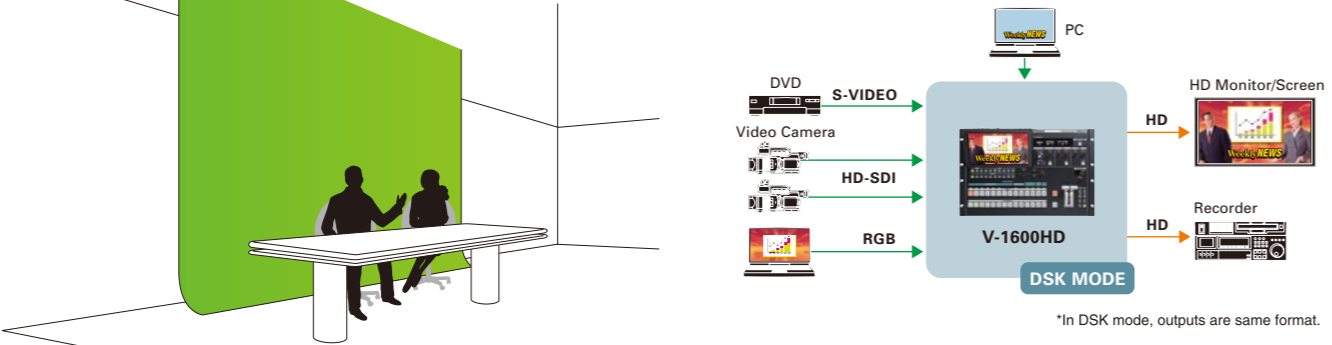
Event Production

Various video sources can be mixed seamlessly without external video converters.



Studio Production

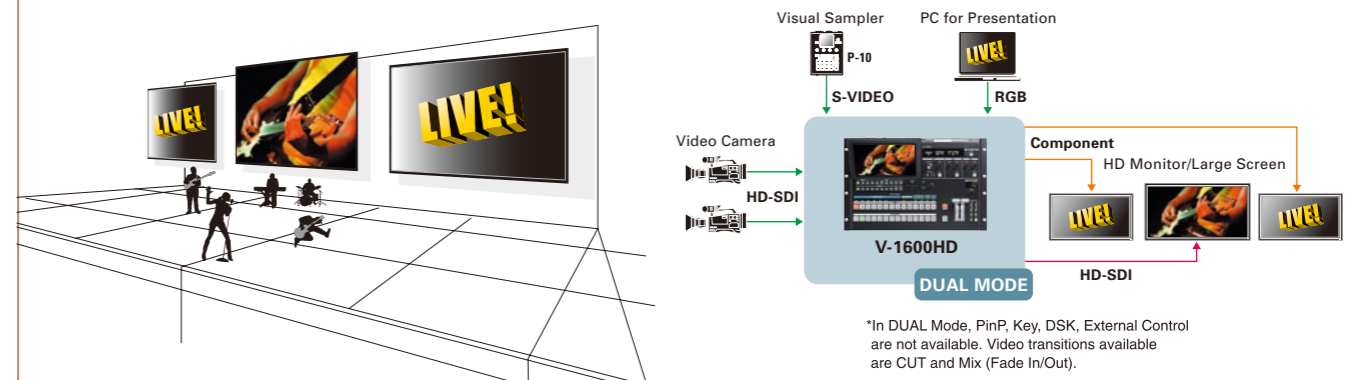
Text/Graphic from a PC/Mac can be composited on background video content. HD output is available for display, recording, or broadcasting and SD output is available for monitoring, live streaming or recording.



MULTI-SCREEN SOLUTIONS

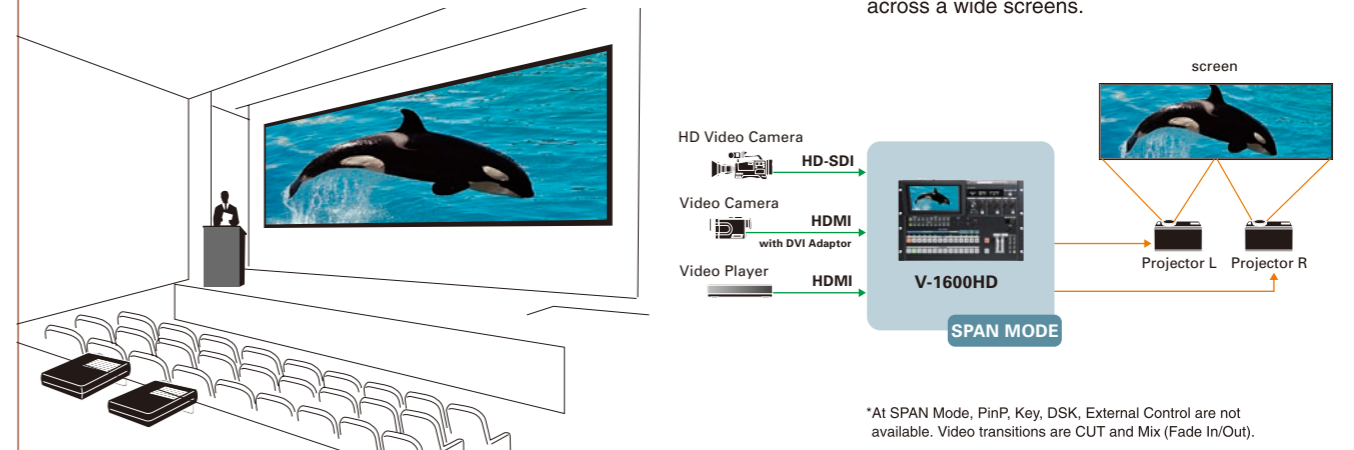
Independent Outputs

Two independent outputs enable powerful multi-screen video productions.



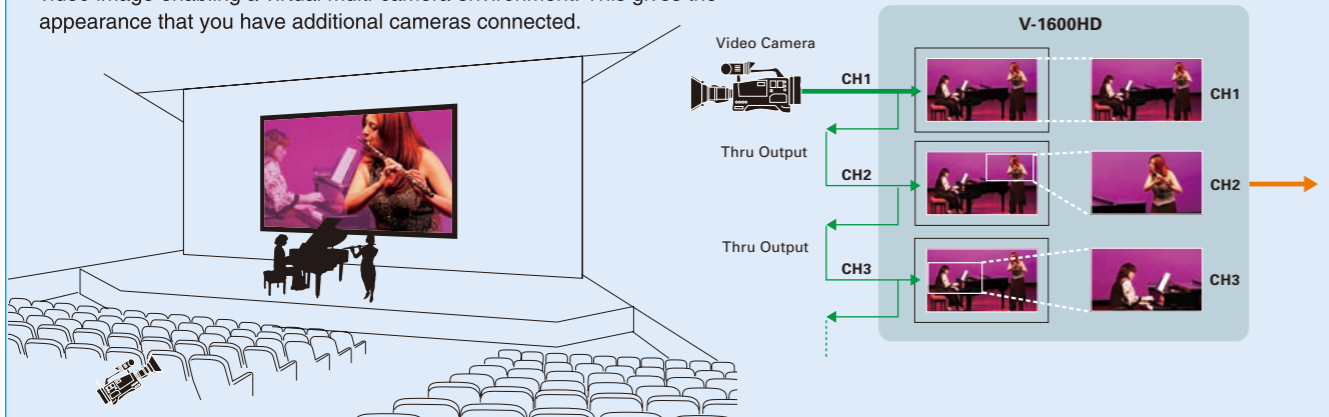
Multi-Screen With Edge Blending

Displays a single image across two screens. Edge Blending function enables seamless image across a wide screens.



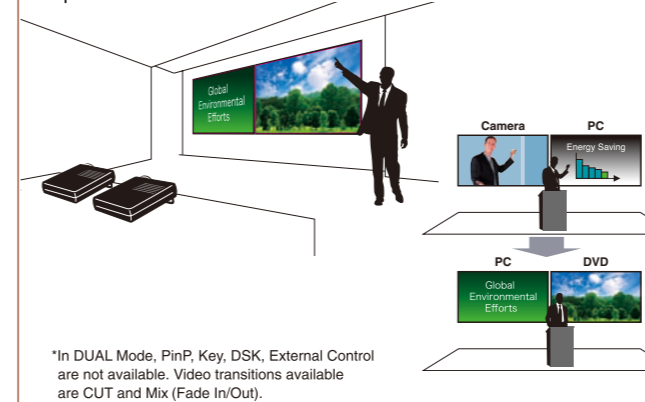
MULTI-ZOOM

Using the thru out connectors, one video input can be daisy-chained to multiple inputs. The scaler for each input can zoom into any position in the video image enabling a virtual multi-camera environment. This gives the appearance that you have additional cameras connected.



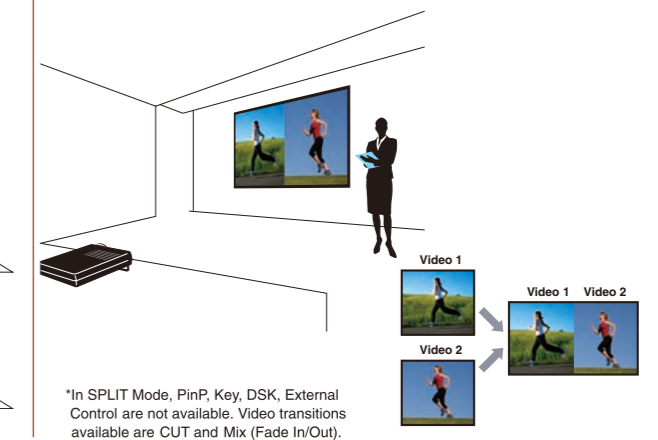
DUAL Mode

Using the DUAL Mode, two video inputs can be switched individually. Switching the both inputs at same time is also possible. Preview monitoring of each output enables confident operation.



SPLIT Mode

Using SPLIT Mode, two video inputs can be displayed on one display. This is useful for comparing two videos on a single screen.



Everything You Need in One Unit

High Resolution 8.5 inches LCD Monitor

The built-in high quality monitor provides the ability to preview each video source eliminating the need for external preview monitors. Additionally, menu functions and parameters can be on the built-in screen.



PVW (Preview) BUS enables previewing of the visual effect before PinP composition.

Menu setup is available with output monitoring.

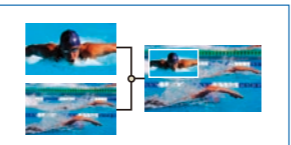
3 Monitor Selections

Monitor sources can be selected from PGM (Program), PVM (Preview), and AUX (Auxiliary) bus.



PinP (Picture in Picture)

Two images can be combined in one video image using PinP function.



Key Composition

Enable Chroma/Luminance Key composition, including semi-transparent composition using Linear Key.

DSK (Downstream Keyer)

DSK function is suitable for compositing logos or text. Key source can be confirmed by PVW monitor.



Synchronize using V-LINK

EDIROL video mixers/video presenters and RSS digital audio mixers can be synchronized with the V-1600HD using V-LINK.



Still Images from USB Memory

Up to 1920 x 1200 pixel BMP images can be assigned.



64 (8x8) Memory Presets

Save favorite setups for convenient and instant recall.

Quick Access to Functions

Dedicated setup buttons enable quick and easy setup.



14 channels of PGM/PST

PGM/PST (Program/Presets) style buttons are similar to those used in broadcast switchers. If signal is present, green color indicator is lit.

Manual Transition

Equipped with TAKE button and flip flop style T-bar fader.

Switchable Inputs

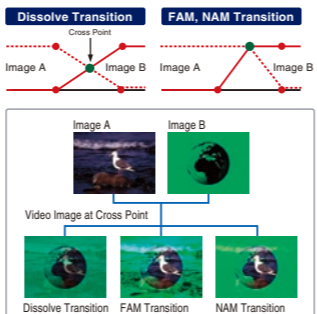
Input format types are switchable on Ch 11-14. The selected format is indicated on the backlit input status indicator.



Various Transition Effects

Includes Dissolves, NAM, and FAM mixing types. 4 types of wipe patterns are also included.

FAM (Full Additive Mix) transition: Images will transition with the luminance level held steady.
NAM (Non-Additive Mix) transition: The two images will be compared, and the pixels that have a higher brightness level will be shown while the images are switched.



MULTI-INPUT



HD/SD-SDI Input x 8

HD-SDI, SD-SDI is recognized automatically. If output setup and aspect ratios are different from input, you can choose letterbox, crop or fill options.
*Embedded audio is not available.



DVI-D/HDMI Input x 2

Four DVI-D inputs are supplied. HDMI* signal can be input using HDMI to DVI adapter.
*Does not support HDCP and HDMI 1.3 or later. Embedded audio is not available.



RGB/COMPONENT Input x 4

Four D-Sub 15-pin connectors for analog RGB input, including two switchable component connectors. Also supports RGBHV.



SD Input x 2

Composite input (BNC type) and S-Video (Y/C)



* All inputs have individual thru out connectors for flexible system configuration.



MULTI-OUTPUT



SDI Output x 2

Supports HD-SDI or SD-SDI output formats. Output 2 is assignable one signal source from PGM/PVW/AUX.



DVI-D/HDMI Output x 2

Connect a projector or monitor that supports a digital connection. HDMI output is possible using an HDMI to DVI-D adapter. Output 2 is assignable one signal source from PGM/PVW/AUX.



RGB/COMPONENT Output x 2

PC monitor or Projector can be connected from analog RGB or component connector. An output source is assignable from PGM/PVW/AUX.
*Output format depends on output mode.



SD Output x 2

SD video can be output from the AUX bus using built-in scaler. An output source is assignable from PGM/PVW/AUX. *Output format depends on output mode.



CONTROL INTERFACE

REFERENCE Input

Reference input is available for synchronizing external equipment.



RS-422 REMOTE Connector

Controllable using RS-422 via computer software.



TALLY Output

TALLY signal is provided for camera or external monitors.



MIDI Connector

Control the V-1600HD via any MIDI device or any V-LINK enabled product.

