

Roland

# V-1600HD

MULTI-FORMAT VIDEO SWITCHER

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

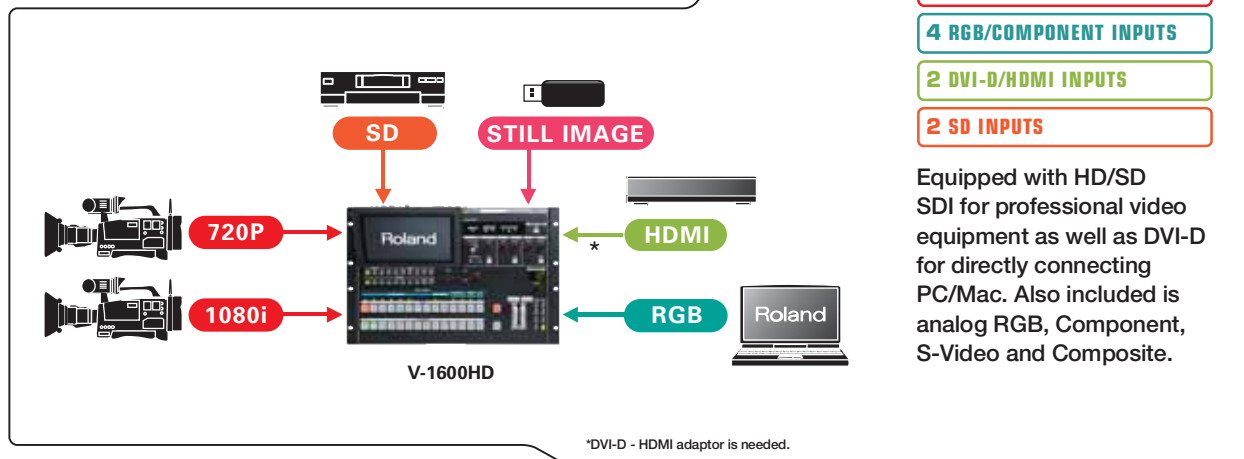


**An All-In-One Multi-Channel,  
Multi-Format Live Video Switcher**

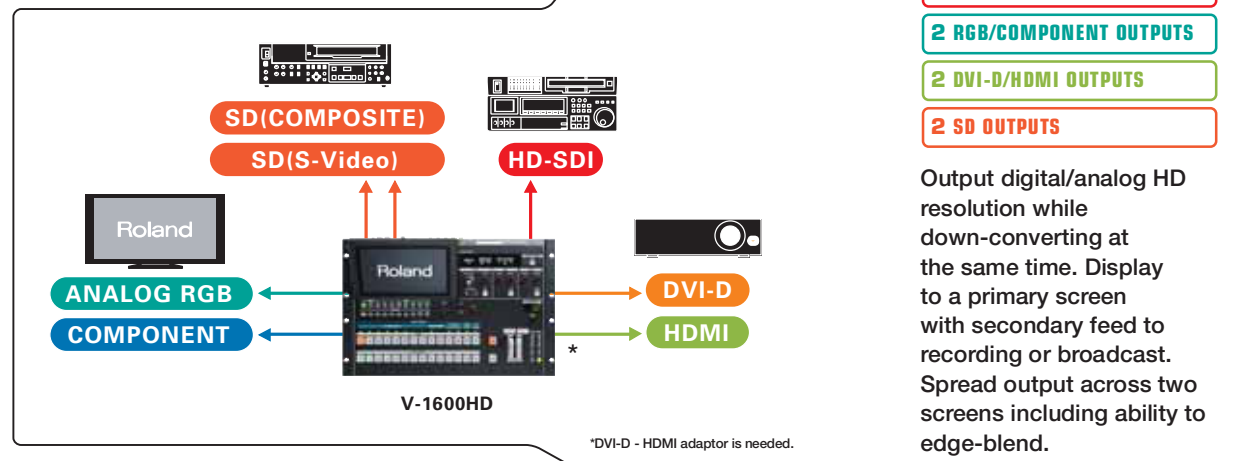


# Multi-Format

## Multiple Video Input Formats



## Multiple Video Outputs



### ■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, 1920 x 1200/60 Hz *2 * Conforms to VESA DMT Version 1.0 Revision 10 *1 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
Input Connectors			Other Connectors	
Composite		1.0 Vp-p, 75 ohms	TALLY	D-Sub 15 pin type x 3 (200 mA, Open Collector type)
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)	Remote	MIDI (IN, OUT/THRU) RS-422 (D-Sub 9 pin type) x 1
Analog HD/RGB		0.7 Vp-p, 75 ohms (H, V : 5V TTL)	REFERENCE	BNC type (IN, THRU) *Black Burst (Sync to Frames), Bi-Level, Tri-Level Sync
Input Connectors			USB port (host)	A type x 1 for USB memory
Input Connectors			Effects	
Analog SD		S-Video (4 pin mini DIN type) x 1 Composite (BNC type) x 1 * Select one from menu	Transition	Mix, FAM, NAM, Wipe (9 patterns)
Analog HD (Component)		Y/Pb/Pr (BNC type) x 2 D-Sub 15 pin type x 2 * Combined use with analog RGB	Composition	PinP, Chroma Key, Luminance Key, Split, DSK
Analog RGB		R/G/B/H/V (BNC type) x 2 D-Sub 15 pin type x 2 * Combined use with analog HD (Component)	Others	Output Fade, Edge Blending, Dual Screen, Span Screen
DVI-D		Single Link Type x 2	Others	
HD/SD-SDI		BNC type x 8 * Conforms to SMPTE 259M-C, SMPTE 292M	Power Consumption	90 • •
			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

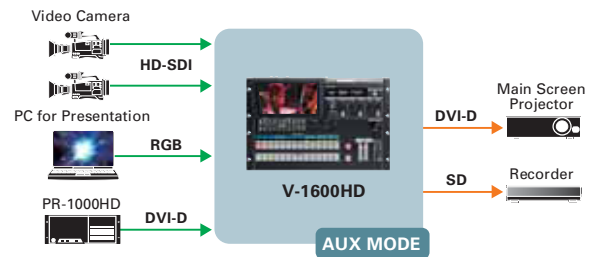
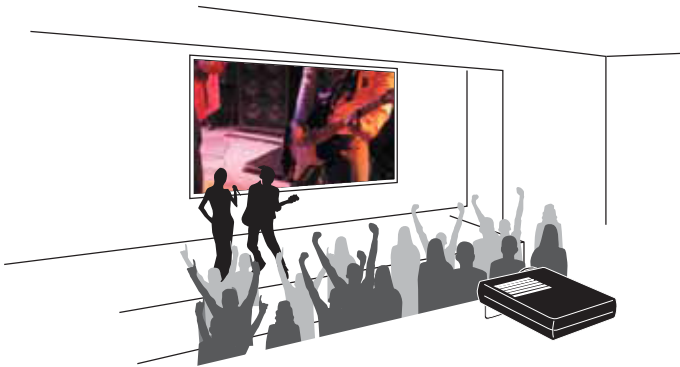
# Multi-Format Solution for the HD Generation

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

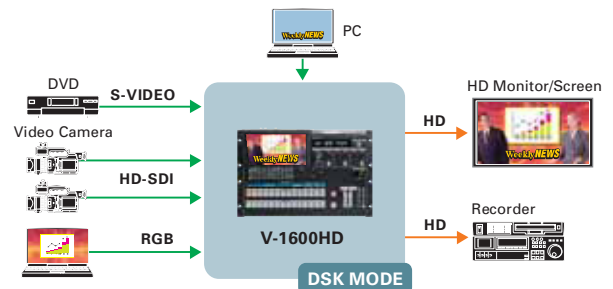
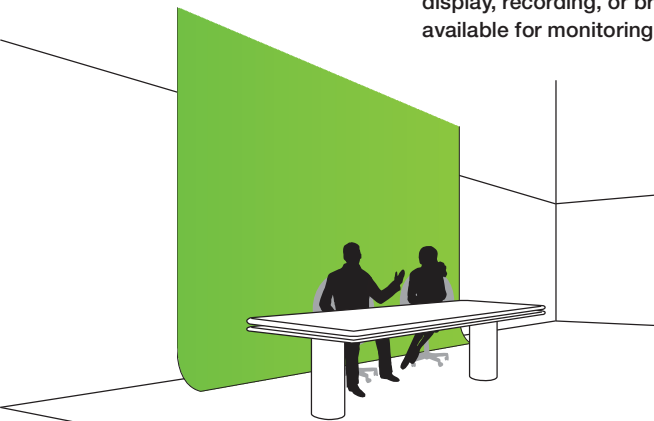
### Event Production

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



### Studio Production

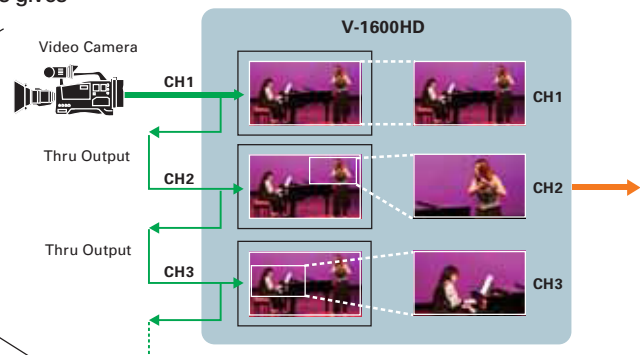
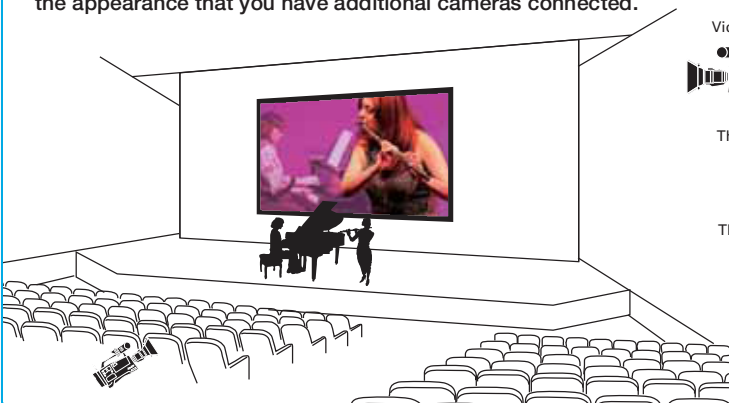
Text/Graphic from a PC/Mac can be composited on background video content. HD output is available for display, recording, or broadcasting and SD output is available for monitoring, live streaming or recording.



\*In DSK mode, outputs are same format.

## MULTI-ZOOM

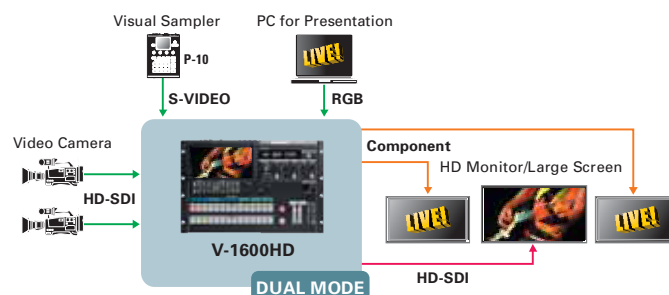
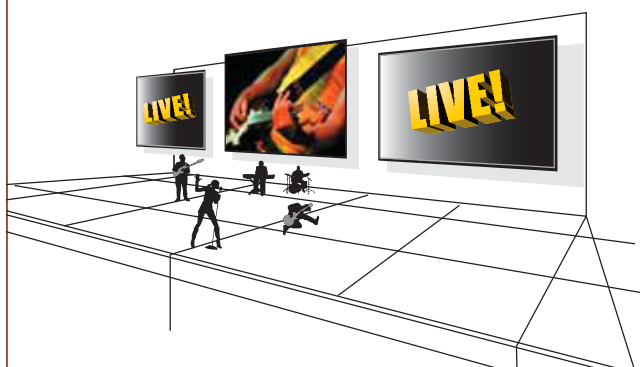
Using the thru out connectors, one video input can be daisy-chained to multiple inputs. The scaler for each input can zoom to any position in the video image enabling a virtual multi-camera environment. This gives the appearance that you have additional cameras connected.



# MULTI-SCREEN SOLUTIONS

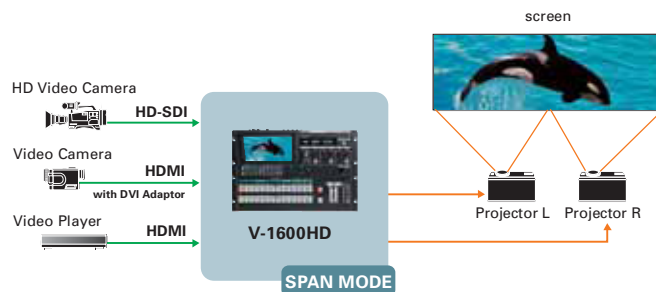
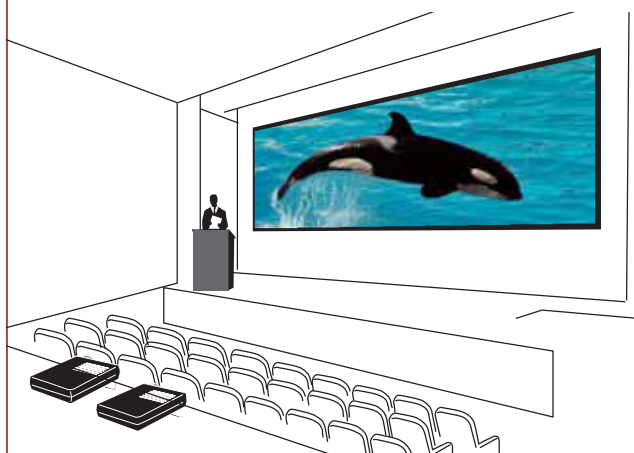
## Independent Outputs

Two independent outputs enable powerful multi-screen video productions.



\*In DUAL Mode, PinP, Key, DSK, External Control are not available. Video transitions available are CUT and Mix (Fade In/Out).

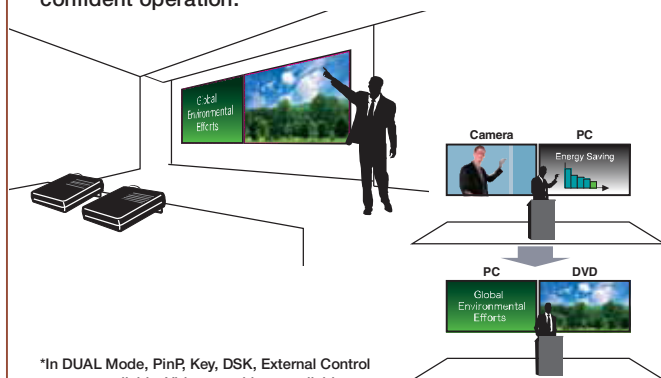
## Multi-Screen With Edge Blending



\*At SPAN Mode, PinP, Key, DSK, External Control are not available. Video transitions are CUT and Mix (Fade In/Out).

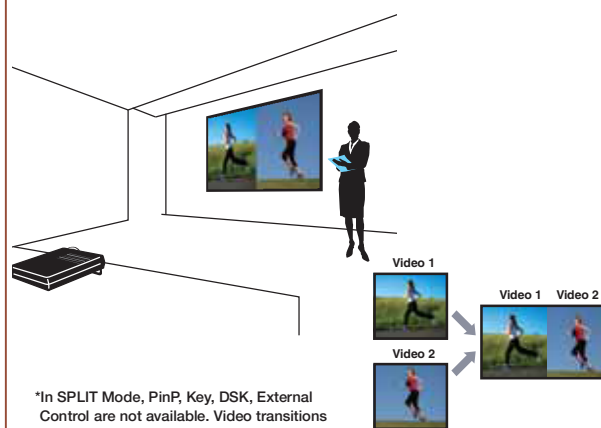
## DUAL Mode

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.



\*In DUAL Mode, PinP, Key, DSK, External Control are not available. Video transitions available are CUT and Mix (Fade In/Out).

## SPLIT Mode



\*In SPLIT Mode, PinP, Key, DSK, External Control are not available. Video transitions available are CUT and Mix (Fade In/Out).



# 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-translucent 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/Preset) 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

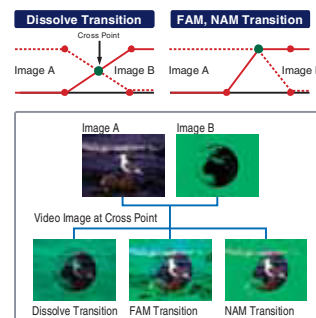
Input format types are switchable on Ch 11-14. The selected format is indicated on the backlit input status indicator.



## 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.



# Input & Output

## 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.

