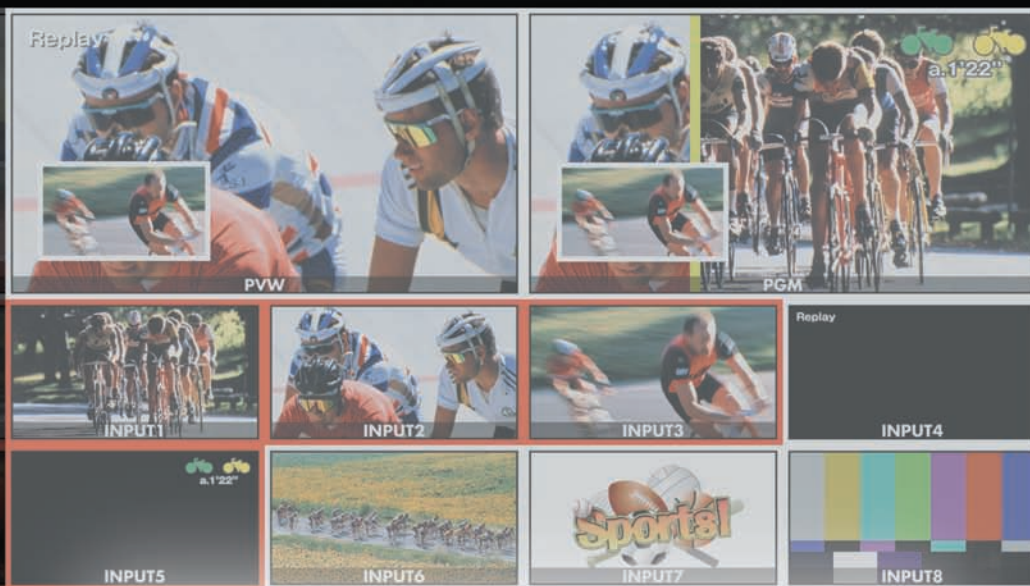


Compact, High-Performance, Multi-Format Live Switcher
with Multi-view display

AV-HS400



Full Production Quality from Compact 1M/E Digital Video Switcher



MULTI FORMAT
DIGITAL CAMERA SYSTEM

HD-SDI Multi-purpose
Camera
AK-HC1500



P2HD

Memory Card Camera-Recorder



P2HD

Memory Card Camera-Recorder



Worldwide Production



News Magazine Show



P2HD

Memory Card Camera-Recorder



P2HD

Memory Card Camera-Recorder



Educational Solution

Multi-Format HD/SD Compatibility for Worldwide Use

Compatibility with various HD/SD formats will help you meet changing production needs as video moves towards HD on a global scale.

The AV-HS400 lets you up-convert and mix SD signals with HD, to provide an easy transition to full HD production.

The AV-HS400 is compatible with virtually all common input devices.



Compatible formats

HD 1080/59.94i, 1080/50i, 720/59.94p, 720/50p

SD 480/59.94i, 576/50i

* The multi-format logo indicates a model that supports two or more formats including the HD format.

Built-in Frame Synchronizers for Versatile Operation

Each input features a built-in 10-bit Frame Synchronizer for smooth switching, even with asynchronous sources, such as DVDs or satellite feeds.

Reference (black burst) signal outputs are provided to enable synchronization with external systems.

The main unit and control panel are integrated in a compact body, ideal for small studios and mobile production.

* AC 220 V to 240 V power supply.

• The unit is not waterproof so please avoid direct contact with rain and water.

Versatile Support
for Remote Production



Compatible with HD/SD cameras worldwide.

Sports Arena

Hall



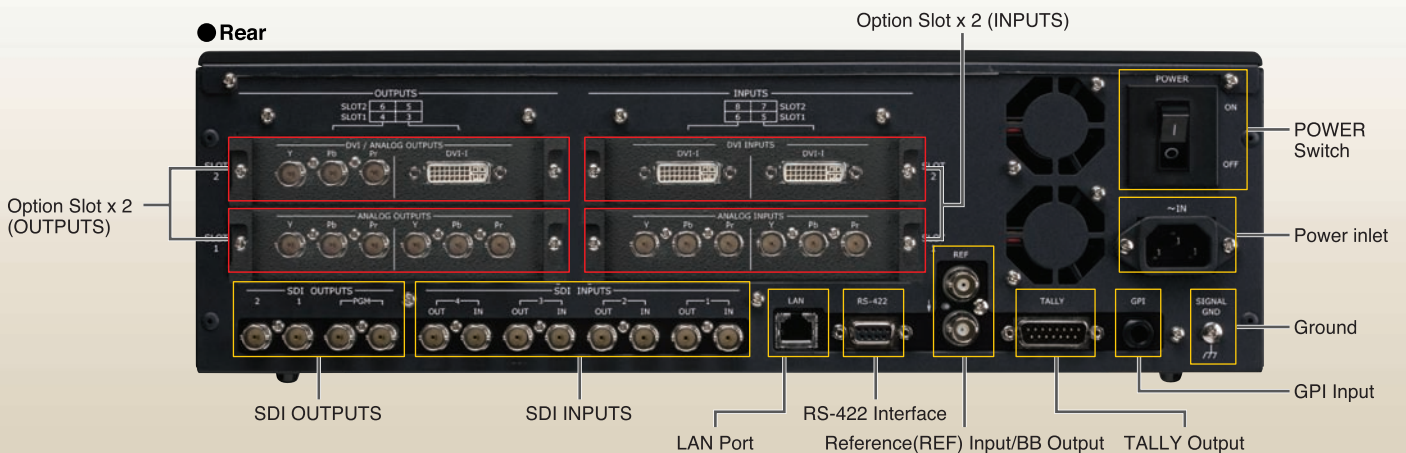
Built-in HD-SDI Interfaces with DVI, Component, and SDI Options for up to 8 Inputs and 8 Outputs

- Four HD-SDI inputs and four HD-SDI outputs^{1*} are standard equipment.
- Optional input and output expansion boards include.
 - Input..... Up to four HD/SD-SDI inputs (with AV-HS04M1 x 2) or four HD/SD analog inputs (with AV-HS04M2 x 2) or up to four DVI inputs^{2*} (with AV-HS04M3 x 2) can be added.
 - Optional input boards feature up-converters.
 - Output... Up to four HD/SD analog outputs (with AV-HS04M4 x 2) or up to two DVI outputs^{3*} (with AV-HS04M5 x 2) (scaleable to 1980 x 1080) can be added.
- Input/output features 10-bit video processing and 4:2:2 signal processing.
- Tally outputs for up to eight cameras for extra convenience.
- RS-422 compatible (GVG protocol compatible) control jack.

^{1*} Two interfaces assignable as PGM, PVW, AUX, multi-screen and keyout. ^{2*} Compatible with XGA, SXGA, WXGA.

^{3*} Compatible with XGA (1024 x 768), WXGA (1280 x 768), SXGA (1280 x 1024)^{4*}, WSXGA+ (1680 x 1050)^{4*}, UXGA (1600 x 1200)^{4*}, WUXGA (1920 x 1200)

^{4*} Digital only



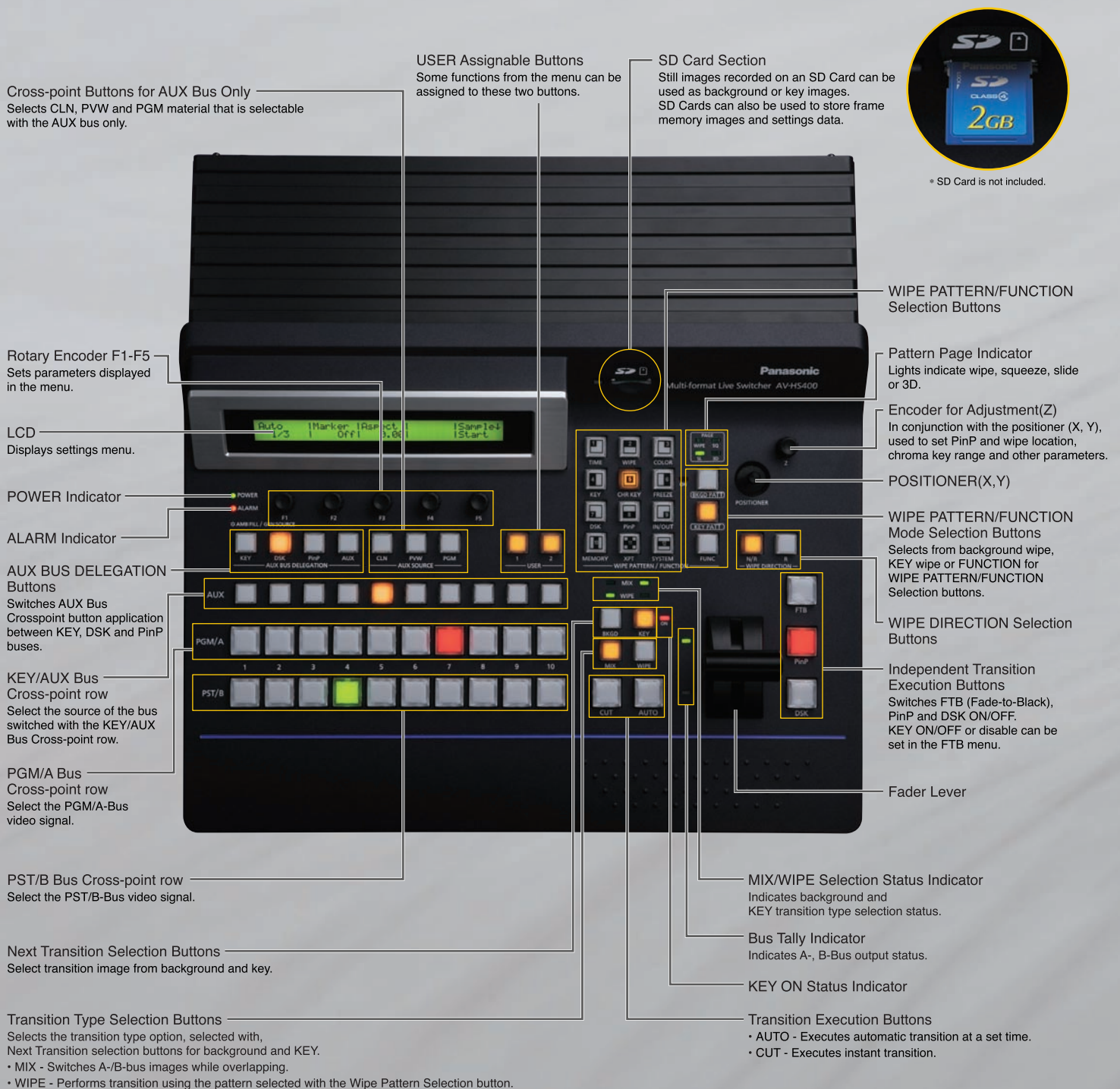
Optional boards enable expansion of inputs/outputs (up to two of each).

The photograph above is an image with the AV-HS04M3 (top right)/AV-HS04M2 (bottom right) / AV-HS04M5 (top left) / AV-HS04M4 (bottom left) added.

Multi-system compatibility for extra flexibility

“Compact” -- with all the functions you need

The main unit and control panel are integrated in a compact body.



in the field and studio. for superb results.



Multi-view display Preview on a Single Monitor

Multi-view display lets you view PGM, PVW, and inputs (up to 10) on a single screen, reducing the number of monitors required.

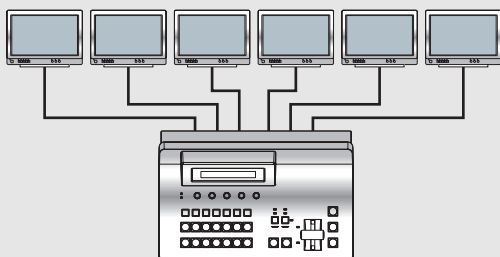
Example of an AV-HS400 monitor system

Simultaneous split-screen preview with a single monitor.



Example of conventional monitor system

Connection of separate monitors is required for each input, PVW and PGM.



* The image shows loop-through outputs connected to switcher inputs.

Number and Location of Images is Selectable

- Display of signal name in each screen (ON/OFF possible).
- Display of red tally indications in frames for PGM output.
- Left/right switching of PGM and PVW screens possible.
- Arrangement of the images can be changed.



Ten Split Pictures (images)



Eight Split Pictures (images)



Four Split Pictures (images)

Multiple Effects for Stunning Results

In addition to standard wipe patterns, the DVE allows you to enjoy squeeze and slide effects, and different types of 3D. Luminance key, chroma key and DSK are also provided as standard. Plus PinP (Picture-in-Picture), with extremely simple operation.

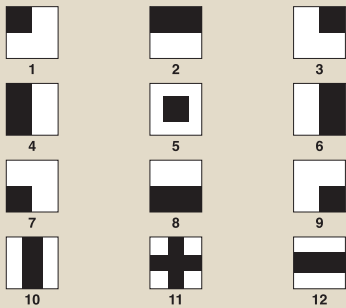
A total of 43 effects offer great creative flexibility

WIPE

Switching between 12 wipe patterns.

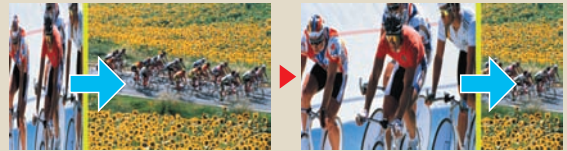


(images:pattern4)

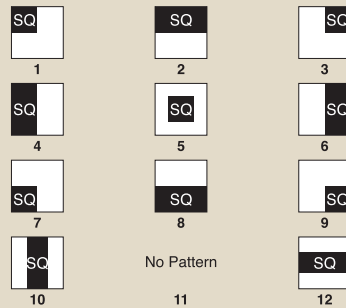


SQ (Squeeze)

Switching between 11 types of squeeze including center, top and bottom.

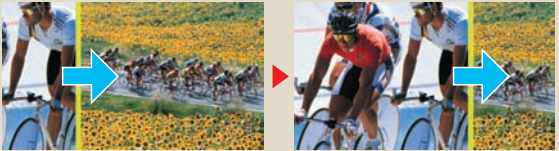


(images:pattern4)

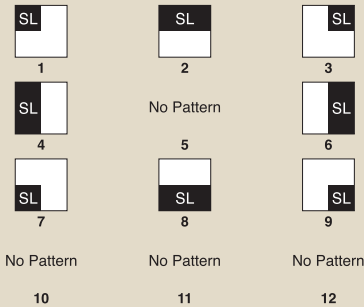


SL (Slide)

Switching between up, down, left, right and diagonal slide effects.

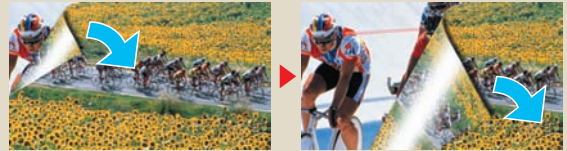


(images:pattern4)

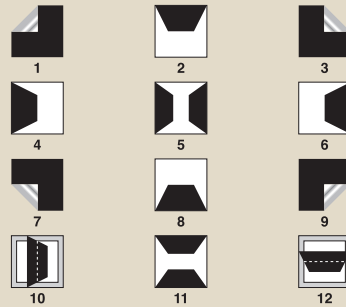


3D (3 Dimension)

Switching between 3D effects such as page turn and rotate.



(images:pattern1)



Chroma key for broadcast quality composite images

High-quality chroma key for broadcast and commercial production applications.

Chroma key material

Background material

After composition



Example of composite effect

WIPE DSK



PinP

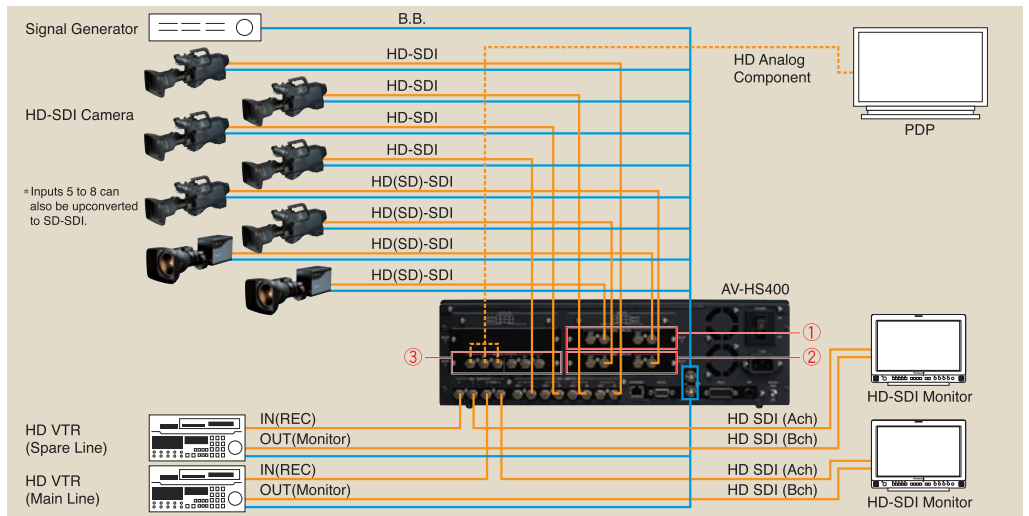
(images)

SYSTEM EXAMPLE

● Ready for broadcast and studio production applications.

HD-SDI camera environment (with Genlock)

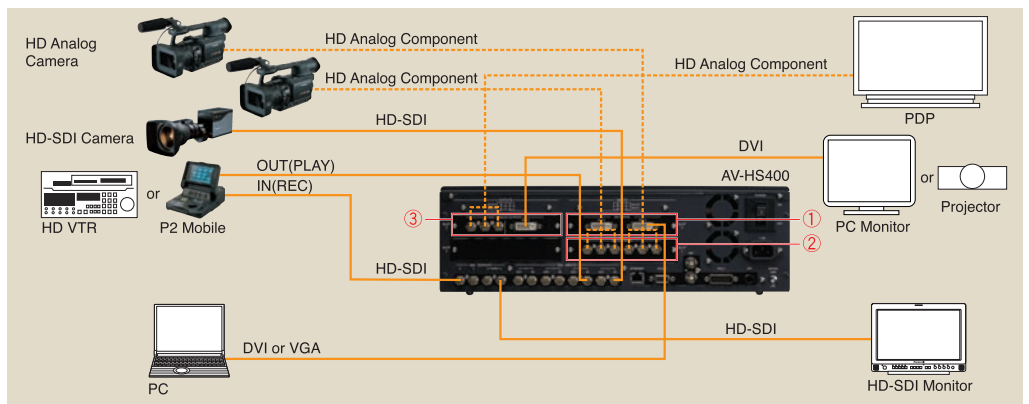
- ☐ =Option Boards
- ① SDI INPUTS(AV-HS04M1)
- ② SDI INPUTS(AV-HS04M1)
- ③ ANALOG OUTPUTS(AV-HS04M4)



● Ideal for use with simple systems at CATV stations, schools and other locations.

HD camera environment (no Genlock): Using the HD Analog component option

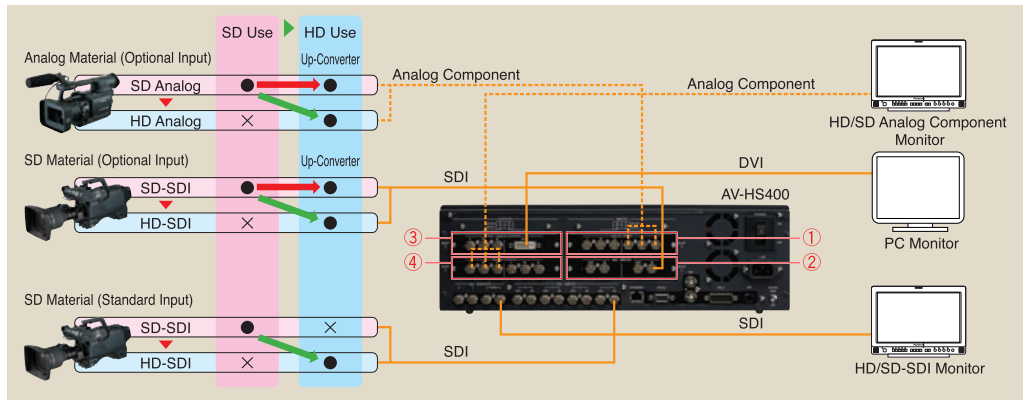
- ☐ =Option Boards
- ① DVI INPUTS(AV-HS04M3)
- ② ANALOG INPUTS(AV-HS04M2)
- ③ DVI/ANALOG OUTPUTS(AV-HS04M5)



● Provides the flexibility required for facilities moving from SD to HD production.

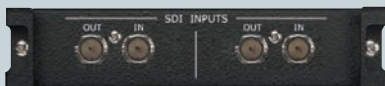
A combined HD/SD environment without Genlock.

- ☐ =Option Boards
- ① ANALOG INPUTS(AV-HS04M2)
- ② SDI INPUTS(AV-HS04M1)
- ③ DVI/ANALOG OUTPUTS(AV-HS04M5)
- ④ ANALOG OUTPUTS(AV-HS04M4)



■ Option Boards You can expand inputs/outputs to match your system.

INPUTS



SDI INPUTS
AV-HS04M1
INPUTS: HD/SD-SDI x 2(BNC)(Built-in Up-converter)



DVI INPUTS
AV-HS04M3
INPUTS: DVI-I x 2(Built-in Scaler)

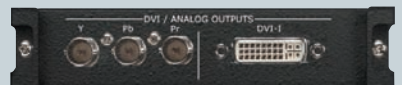


ANALOG INPUTS
AV-HS04M2
INPUTS: HD/SD ANALOG Component x 2(Y/Pb/Pr)
(Built-in Up-converter)

OUTPUTS



ANALOG OUTPUTS
AV-HS04M4
OUTPUTS: Analog Component x 2(Y/Pb/Pr)



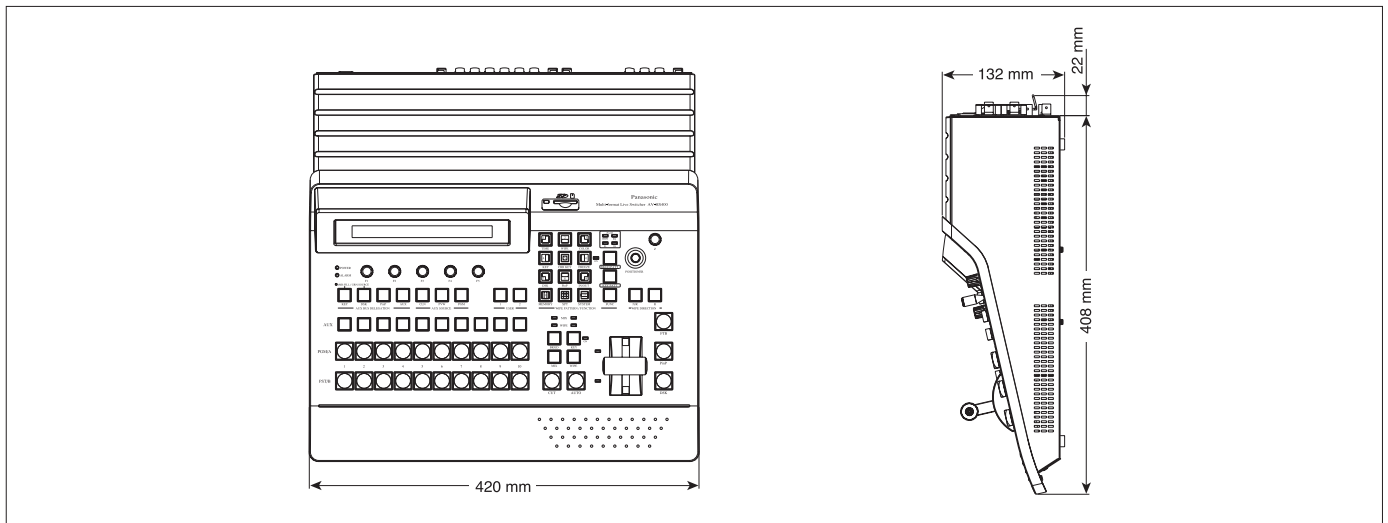
DVI/ANALOG OUTPUTS
AV-HS04M5
OUTPUTS: DVI-I x 1, Analog x 1

● Specifications

Video processing	Video format	SD (480/59.94i, 576/50i), HD (1080/59.94i, 1080/50i, 720/59.94p, 720/50p)	WIPE/DVE	Pattern	WIPE x 12, Squeeze x 11, SLIDE x 8, 3D DVE x 12 (3 directions) Excluding 3D, selection with key transition is possible independently of background.
M/E		1M/E		Transition method	FADER, AUTO
Input	Video processing	Y:Cb:Cr, 4:2:2 10 bit RGB, 4:4:4 8 bit	Transition	Transition type	Cut, mix, wipe (including DVE), background and key can be selected.
	Video	4 inputs (HD/SD-SDI) Option: A maximum of four inputs (up to 2 boards each of 2 of 3 types of input boards can be added: HD/SD-SDI x 2, HD/SD-analog x 2, DVI/RGB x 2).		KEYER	Key source
	Key	Assign one out of video inputs	Key fill		BUS, MATTE
	DSK	Assign one out of video inputs	Key mode		Linear key, Lum key, Chroma key (Key only)
	Reference	Black burst/TRI (loop through) x 1	PinP	Transition method	AUTO (PinP only)
Output	Video	Standard: Four outputs (PGM x 2, general-purpose x 2, each HD/SD-SDI) Option: A maximum of four outputs (up to 2 boards each of 2 types of output boards can be added: general-purpose x 4, each HD/SD-analog x 2, DVI/analog x 1 each). The six general-purpose output interfaces (OUT1 to 6) above are assignable as PGM, PVW, AUX, multi-screen and keyout.	Interface	Serial (EDITOR)	Dsub9pin x 1: RS422A (GVG protocol compatible)
				Tally output	Dsub15pin x 1, open collector output
				GPI	ø 3.5 Stereo mini jack
				Ethernet	100 Mbps/10 Mbps x 1 (Service purpose)
	Removable media	SD memory card slot	1 (for transferring still image files and providing an upgrade capability)		
	Power		AC 220 V to 240 V, 50 Hz/60 Hz		
	Dimensions (W x H x D)		420 mm x 132 mm x 408 mm (excluding protrusions)		

* Features and specifications in this document are subject to change without notice due to continual improvements.

● Dimensions



● SD Logo is a trademark.

Panasonic

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