

*Live video direction in environments where time is of the essence.  
4K compatible Live Switcher*



# Functionality required for on-site video production Live Switcher



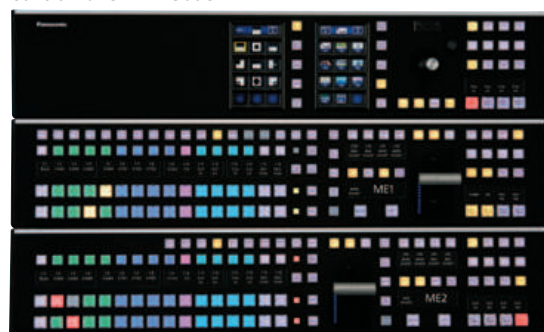
Live Switcher AV-HS7300 

## Two types of Control Panels

Control Panel AV-HS60C2



Control Panel AV-HS60C4



The control and menu panels support accurate switching and intuitive operation and boast a multitude of functional inputs and outputs as well as keyers and DVEs that support a variety of performances. Additionally, 4K video production is supported through 4K format\*<sup>1</sup> compatibility. Furthermore, redundant power for the mainframe and control panel heighten stability during live operation. The AV-HS7300 Live Switcher harnesses Panasonic's extensive broadcasting experience and achievements for unparalleled on-site live video production.

- ■ Maximum of 72 inputs\*<sup>2</sup> and 42 outputs\*<sup>3</sup> to easily handle large-scale video production
- ■ 4K video format support\*<sup>1</sup> with 4 x 3G-SDI
- ■ 8ch (stills and clips, 4ch each) video memory for support of various video production
- ■ 4ch MultiViewer loaded with nine patterns
- ■ Mainframe with built-in SSD (non-volatile memory) for video and project file
- ■ Background transitions for a variety of video effects
- ■ All inputs equipped with frame synchronizer, color corrector and frame delay
- ■ Settings for each video program are stored per project file to reduce operator burden
- ■ Compact 9 RU mainframe equipped with redundant power supply
- ■ A wealth of keyers, such as upstream key, ME row key, downstream key, etc., are equipped
- ■ Event memory, shot memory and macro memory equipped for saving complex procedures
- ■ Can simply assign any ME (ME1-ME4) operation with every row in the control panel. In addition to a capability of single panel operation, a multi panel connectivity realizes a large scale production system requirements.

Model no.	ME Number	XPT	Power Supply	Width
AV-HS60C2	2 ME	24 XPT	Redundant Power Supply	980 mm (38-19/32 inches)
AV-HS60C4	2 ME	16 XPT	Redundant Power Supply	656 mm (25-13/16 inches)

\*1: ME extension video processing board required (AV-HS70M4, sold separately). For the 4K system, see page 7.

\*2: SDI input extension rear board (AV-HS70M1, sold separately) required.

\*3: SDI output extension rear board (AV-HS70M2, sold separately) required.

# Effects to Enhance Your Creativity

## Maximum of 72 SDI Inputs and 42 SDI Outputs

1080/59.94i, 1080/50i, 1080/29.97PsF, 1080/25PsF, 1080/23.98PsF, 1080/59.94p\*1 and 1080/50p\*1 video formats supported. The 9 RU mainframe is loaded with a multitude of inputs and outputs supporting as frame synchronizer, frame delay and color corrector. Asynchronous signal capture, absorbance of delay with the virtual system and color adjustment supporting individual camera and display characteristics are supported for smooth progress in video production.

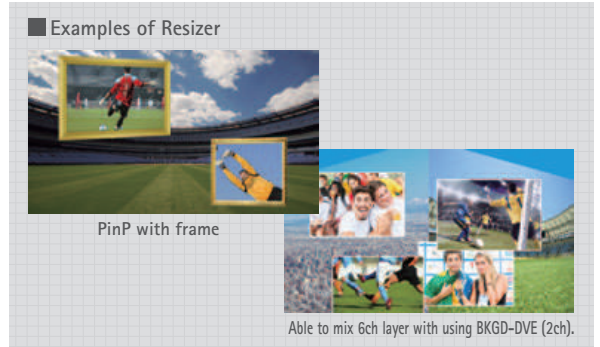


- Maximum of 72 SDI inputs (18ch x 4).
- All channels equipped with 10 bit frame synchronizer / Eight frame delay / color corrector.
- Maximum of 42 SDI outputs (30ch x 1, 12ch x 2).
- All channels equipped with color corrector.

## Various Keyers

Featuring variety of keyers, AV-HS7300 supports creative live content creation. A luminance key, linear key, chroma key, full key are provided for 4ch per ME (16ch in total), plus 4ch of DSK. Upstream key (USK) equipped with 4ch.

- **Resizer:** All ME keyers are equipped with 2.5D-DVE (Resizer) and support PinP. Move, expand and shrink the input key signals using Resizer.
- **Chroma key:** By implementing the Primatte®<sup>2</sup> algorithm, real time and high quality key composition is possible. 4ch chroma key enabled for 1 ME.
- **Key preset:** The 4 key settings per keyer for each ME and 4 key settings per DSK are all equipped with a savable preset function. These settings can be called directly via button operation.
- **Upstream key:** Each input is equipped with a 4ch upstream key capable of attaching related information such as names for relay source materials, location and people as well as different CG materials to the ends of up-converted materials.
- **Downstream key:** 4ch are available. The ME is selectable for the DSK base signal (ME1 to 4) and can be assigned to PGM 1 or 2 as desired. Clean output is enabled per DSK.

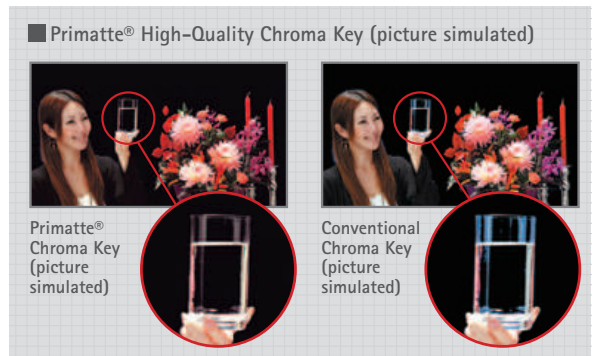


### Key Types

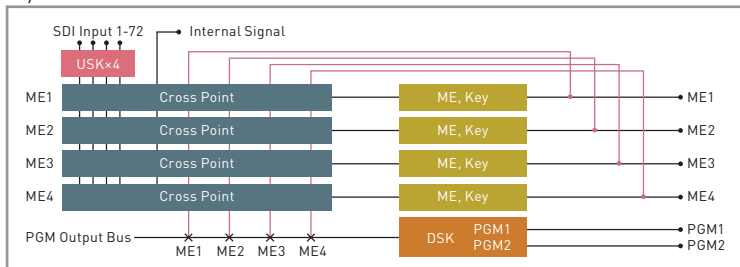
	USK	KEY (for each ME)	DSK
Luminance key	✓	✓	✓
Linear key	✓	✓	✓
Chroma key		✓	
Full key		✓	

### Available Functions

	<KEY1>	<KEY2>	<KEY3>	<KEY4>	DSK1-4
Transition	CUT/MIX/ WIPE	CUT/MIX/ WIPE	CUT/MIX/ WIPE	CUT/MIX/ WIPE	CUT/MIX
Resizer	✓	✓	✓	✓	N/A

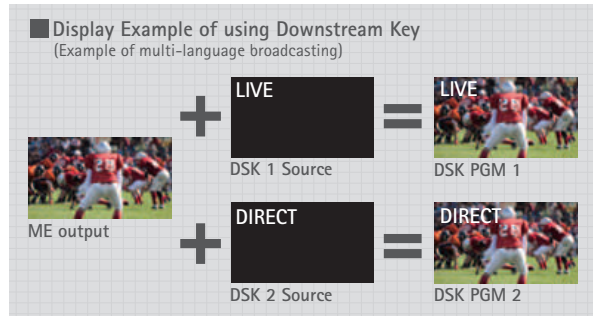


### Key Formation



\*1: Supported via purchasable option. Some functions restricted.

\*2: Primatte® is the registered trademark of Photron Limited. Photron Limited is the holder of the intellectual rights to Primatte®. Photron Limited is the holder of the patent for Primatte®.



## Diverse DVE Transitions

In addition to wipe, mix, and cut transitions, DVE transitions with 3D DVE 2ch, such as size reduction and sliding, can be performed. Paint, mosaic, defocus and other image effects are enabled for the A/B and key buses.

- All channels are equipped with 3D DVE supporting background and keys for each ME.

## Memory Functions

Using memory function, setting, video and effects can be easily stored and recalled. It allows quick operation of switching and recalling effects in live video production, supports efficient operation and making it easy to perform video effects for more complicated operations.

- **Video memory:** The 4ch each of equipped CLIP and STILL memory (V+K) can be used simultaneously for video footage and saved to each of the 81ch in non-volatile internal memory (SSD). Up to 60s of video can be saved to video memory in standard mode, and up to 30s in high quality mode\*. Clips can also be recorded with embedded audio. Playback can be linked to fader transitions in addition to the KEY ON/OFF and AUTO buttons.  
\*4ch each of video and still memory plus an additional 81ch of stills within the SSD can be saved in the project file.
- **Animation wipe:** Animation wipes can be easily created using CLIP recorded to video memory. Playback can be linked to a fader transition. Material length can be adjusted by specifying clip IN and OUT points.
- **Shot memory:** This function recalls background transition patterns or other video effects, including PinP size, position, border width, and key on (maximum of 81 memories). Effect dissolve can be set to ensure smooth switching from the current effect to the next effect registered in shot memory.
- **Event memory:** This function allows continuous image effects to be registered and played back in a timeline, enabling complex image effects to be executed via simple operations. Seamless effects can be achieved by interpolating events with each other during continuous playback.
- **Macro memory:** This function allows record and playback of a series of operations on the Control Panel. It can also record and playback setting information, such as input/output and keyers. Macro memories can be played back by assigning them to the cross point buttons, such as macro bus, PGM, and PST.

■ Transitions and Effects Display Example

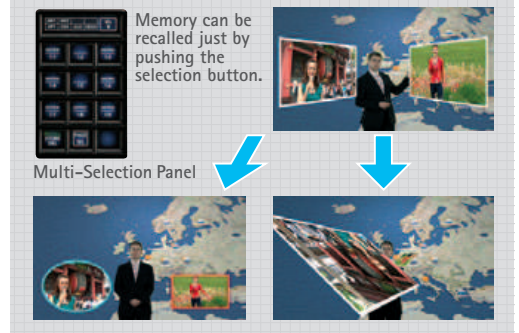


Page Turn

■ Animation Wipe Examples



■ Display Example of Shot memory



## Split Screen Outputs to Fit the Setup

### Built-in 4ch MultiViewer Function

An independent 4ch MultiViewer output function is provided as standard, enabling displays of up to 16 split screens per channel.

- MultiViewer can be selected from a total of nine patterns, including four split, five split (two patterns), six split (two patterns), nine split, 10 split (two patterns), and 16 split.
- Source names, tallies, audio level meters, clock and safety markers can be displayed.
- Select between fit mode, in which the video image is the same size as the split frame, and squeeze mode, which places the source name and level meter outside the image.

Fit mode display example



Squeeze mode display example



MultiViewer examples

Five additional patterns can be selected.

1	2	3	4	5	1	2	3	4	5	6	1	2		
3	4	5	1	2	3	4	5	6	1	2	3	4	5	6
5 split					6 split						10 split			

Mainframe      Menu Panel      Control Panel

# Operability Enhanced with Ergonomically Designed Panels

The graphical user interface combines excellent visibility with ease of operation

## Control Panel

AV-HS60C2 (redundant power supply model)

### KEY bus selector buttons (ME1~ME4) (KEY BUS DELEGATION)

- Switches bus column and functions operated by KEY bus

  1. Select KEY 1 to 4 key source/key fill bus (key source/key fill link coupling function available)
  2. Select DSK 1 to 4 key source/key fill bus (can be assigned to PGM1/PGM2)
  3. Select AUX1 to 16 bus (AUX1 to 4 support the MIX transition function) (AUX bus 1/2 to 15/16 have the crosspoint link coupling function)
  4. Select Utility bus<sup>1</sup> (\*1: This bus selects sources to be inserted in border background or key edge)
  5. Select MACRO bus<sup>2</sup> (\*2: This bus plays back the macro memory)

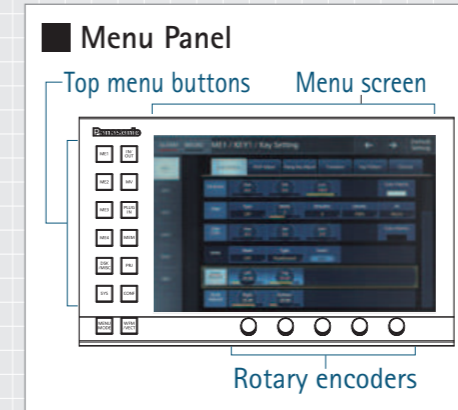


Large and easy-to-use touch panel

## Menu Panel

AV-HS60C3G

- 10.1-type(256.5 mm) Menu Panel with touch screen allows quick and easy menu operation
- On-screen software keyboard/numerical keypad available
- General-purpose DVI monitor can be used instead of Menu Panel



### Memory Card Slot

- Video files, project files and log data can be stored / accessed on an SD memory card or SDHC memory card
- \*SD memory card and SDHC card are sold separately

### Positioner

- Provides cursor operation for positioning WIPE/PinP, size adjustment, chroma key

### Transition

1. Background/key transition: operate fader, AUTO, or CUT transitions
2. Select transition type: select from WIPE, MIX, or NAM transitions
3. Switch on/off the macro memory attachment function (macro attach): enable/disable the macro memory play back trigger assigned to PGM bus, PST bus, or AUX bus buttons
4. Fader play back of the event memory (EMEM link): performs fader operation of the event memory
5. Each row of the control panel operation (ME1 to 4) is selectable

### Key, DSK operation

1. KEY/DSK transition: operates KEY 1 to 4, DSK 1 to 4 AUTO, CUT transition of each ME
2. Key preset: For KEY 1 to 4 and DSK 1 to 4 of each ME, register and access key preset



Crosspoint area

Multi-Selection Panel area

Transition area

KEY / DSK operation area

### Crosspoint buttons

1. Eight colors can be used for grouping to matched sources
2. Switching is possible among 24 crosspoints x four pages (96 total crosspoints)
3. Assign and play back the macro memory

### Source name display panel

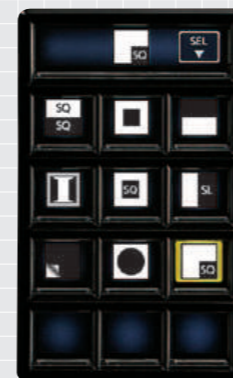
- Displays crosspoint numbers, source display names, and macro names. Bit map characters can be displayed for source names

### KEY bus crosspoint buttons

- Select source for the bus switched with KEY bus select buttons
- Can playback macro memory

## Multi-Selection Panel

- Easy-to-use colored switches with tactile response
- Wipe patterns, Event memory, Shot memory, Video memory (CLIP/STILL) can be registered and recalled



Wipe Pattern



Shot memory



Event memory



Video memory (CLIP)



Video memory (STILL)

## 4K Format Video Production Functionality Supported

\* 4K SQD input is Level A/B, output is Level B only.

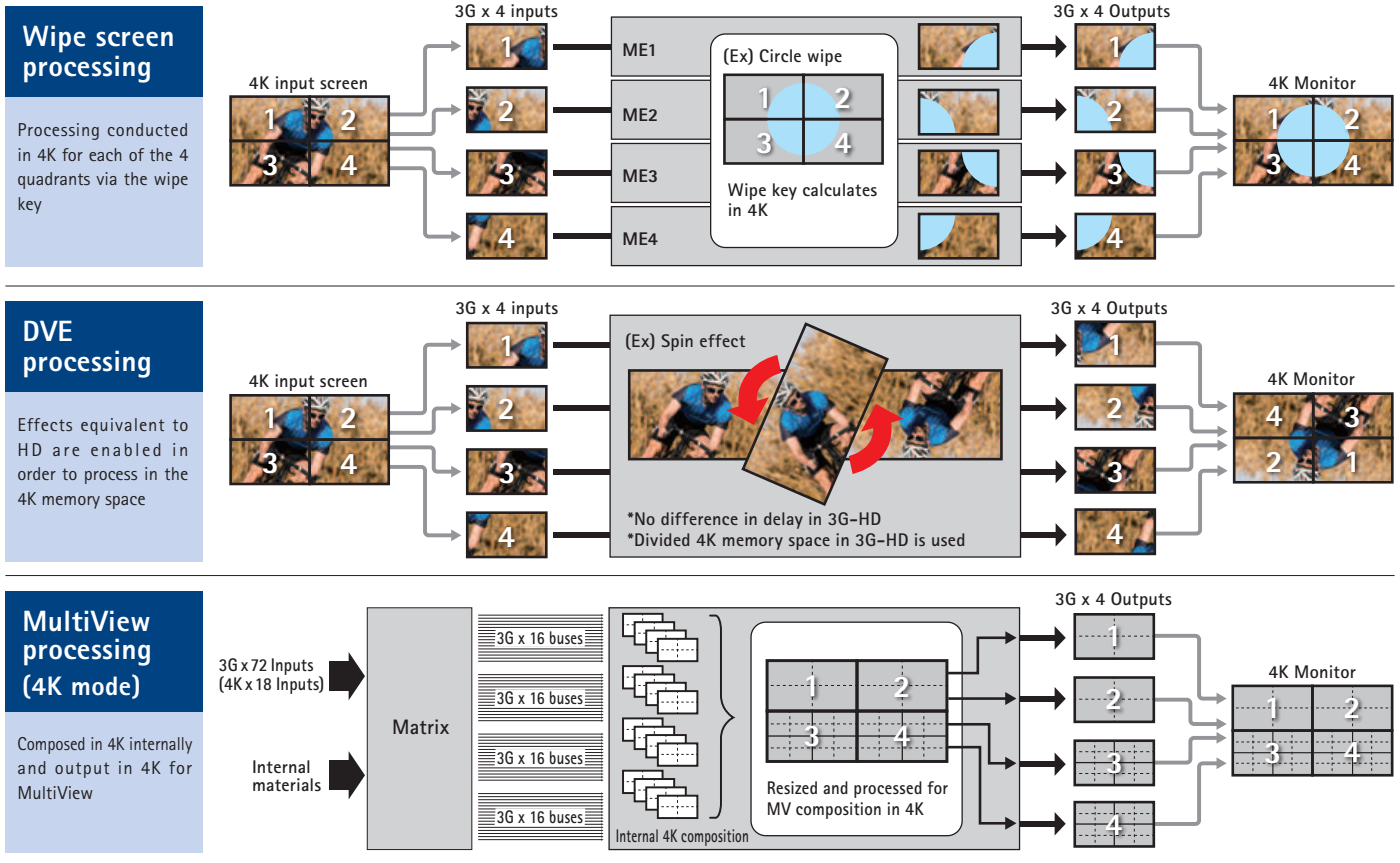
- Optional board (AV-HS70M4) extension enables support of 4K format video production functionality.
- ME transition effects (MIX/WIPE/DVE/KEY/chroma key) are the same as in 2K operations\*1.
- Video memory function is supported for still and clip.
- SQD (square division) supported.
- 4K MultiView processing enables use as a dedicated 4K MV device, reducing system costs.

\*1: KEY edge not supported.

### AV-HS7300 Functions per System Format

Functions	HD mode (Standard)	3G mode (Option)	4K mode (Option)
	4ME+4DSK	4ME+4DSK	1.5ME+2DSK
Number of Inputs / Outputs	72 / 42	72 / 42	18 / 9
Number of ME (4KEY, 6DVE)	4	4	1.5 (0.5 ME does not have DVE, KEY)
ME1 Transition	MIX / WIPE / DVE	MIX / WIPE / DVE	MIX / WIPE / DVE
DSK	4	4	2
VMEM (Still,Clip)	4ch each	4ch each	1ch each
MV (MultiViewer)	4	4	1
USK	4	4	2
AUX	24	24	6

### AV-HS7300 4K Wipe, DVE and MultiView Processing



### Option Boards for AV-HS7300

Product Name	Model No.	Function
Input Board	AV-HS70M1	<b>SDI input board with 18 lines</b> <ul style="list-style-type: none"> <li>• Two boards are attached as standard (standard number of inputs: 36 lines)</li> <li>• Maximum of two boards can be added (maximum number of inputs: 72 lines)</li> </ul>
Output Board	AV-HS70M2	<b>SDI output board with 14 lines</b> <ul style="list-style-type: none"> <li>• First four lines of the 14 lines are for two distribute output</li> <li>• One board is attached as standard (standard number of outputs: 14 lines)</li> <li>• Maximum of two boards can be added (maximum number of outputs: 42 lines)</li> </ul>
ME-MAIN Board	AV-HS70M4	<b>ME process board</b> <ul style="list-style-type: none"> <li>• One board is attached as standard</li> <li>• Image formats for standard install: 1080/59.94i, 1080/50i, 1080/29.97PsF, 1080/23.98PsF</li> <li>• Maximum of one board can be added</li> <li>• Image formats added when board is added: 1080/59.94p, 1080/50p, 2160/59.94p, 2160/50p</li> </ul>

## System Scalability\*1

- 24 AUX buses are provided. MIX transition is available from the AUX1 to AUX4 buses.
- Menu operations can be performed from a PC or tablet via a network connection.

### Compatible with a variety of system interfaces via plug-in software

#### EXT\_Control

This software allows sending and receiving information on source switching or source name for AV-HS7300 buses between external devices such as system controllers or tally interfaces connected via network. Control can be done via router control systems from Evertz and Utah Scientific.<sup>2</sup>

Evertz	Utah Scientific
MAGNUM Router Control System	SC-4 System Controller

\*2: Please inquire with the individual manufacturer regarding router system settings.

#### AUX\_IP

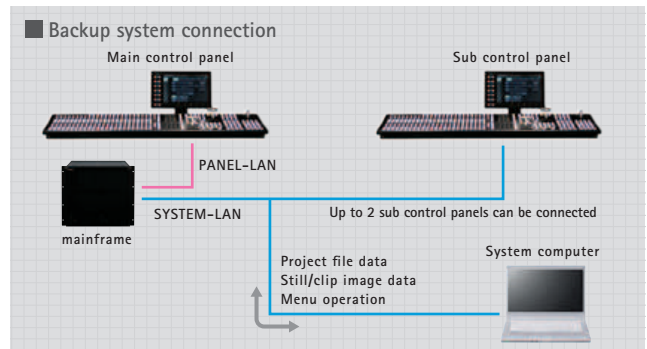
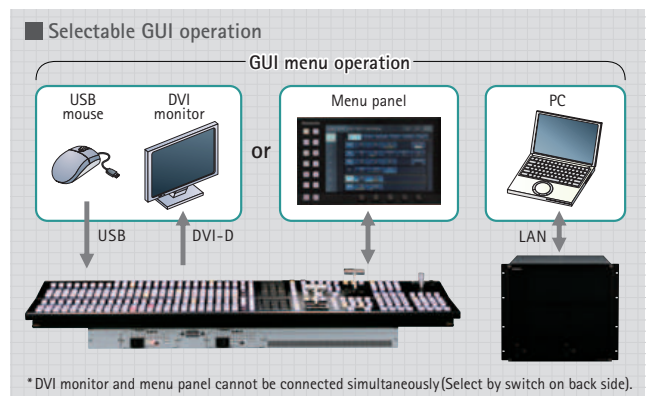
This software allows crosspoint switching from a remote operation panel (VS-R45) via an IP network. (VS-R45 is a product of Venetex Corp.)

#### EXT\_PANEL\_IP

This software allows crosspoint switching, executing transitions, and controlling macro playback from a remote operation panel via an IP network. Control can be done from LAWO LBP series remote operation panel<sup>3</sup>

\*3: Please inquire with LAWO regarding remote operation panel settings.

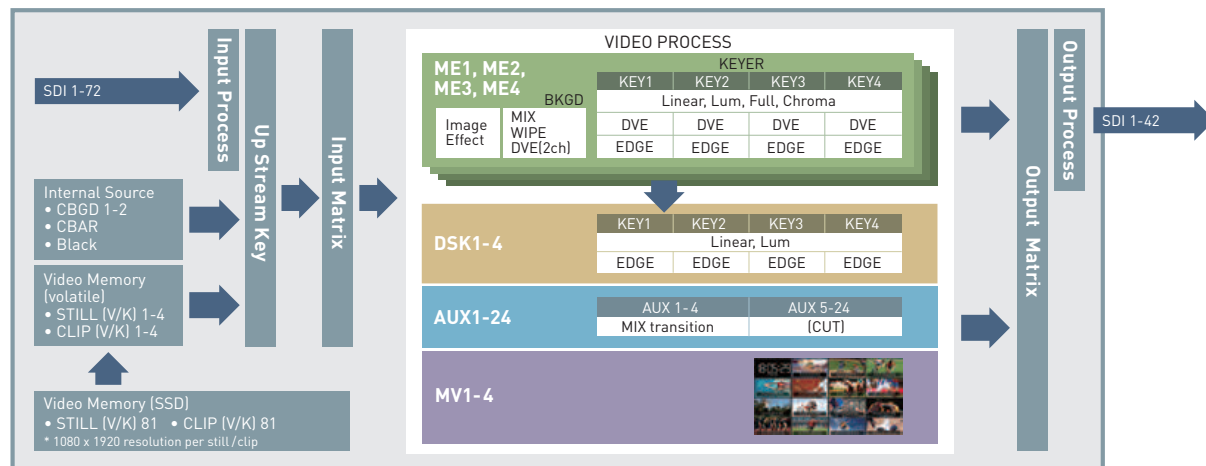
\*1: Some functions differ when 3G/4K mode is selected. See "3G/4K format compatibility" for details.



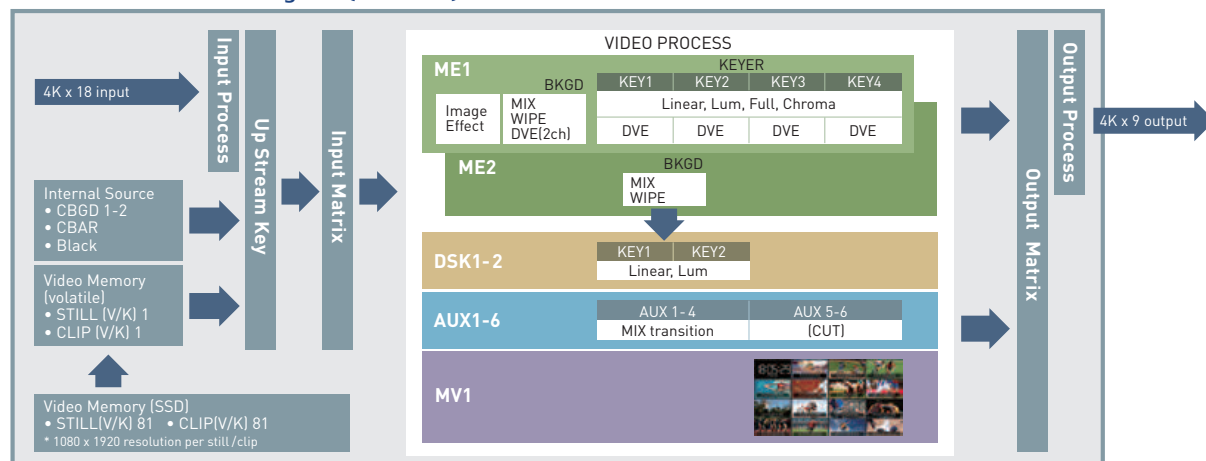
## Secure Backup System

- A redundant power supply is provided for the mainframe and control panel.
- Operation of up to three control panels is possible through an IP connection.
- ME rows can be switched by swapping the ME panel and changing the output of the system when ME faults.
- A web browser is provided to allow access to the GUI menu from a remote PC.
- System settings and memory information can be saved and loaded as project files within mainframe storage, external SD memory cards, PCs.

### AV-HS7300 Block Diagram (Standard mode)



### AV-HS7300 Block Diagram (4K mode)





Mainframe AV-HS73U2

Power Supply	AC 100 V to 240 V, 50 Hz/60 Hz
Power Consumption	460 W
Ambient Operating Temperature	0°C to 40°C (32°F to 104°F)
Humidity	10% to 90% (no condensation)
Dimensions (WxHxD)	482 mm x 399 mm x 420 mm (excluding protrusions) 9RU
Weight	Approx. 37 kg (when full option is installed, excluding accessories)

Video Terminal

SDI IN 1 to SDI IN 72 Terminals	During Standard mode Standard 36 lines <ul style="list-style-type: none"> <li>Connector: BNC x 36</li> <li>Maximum 72 lines</li> <li>Connector: BNC x 72</li> </ul>	
	HD-SDI	HD serial digital, SMPTE292M (BTA S-004) standard compliant <ul style="list-style-type: none"> <li>0.8 V [p-p] ± 10% (75 Ω)</li> <li>Automatic equalizer 100 m (when 1.5 Gbps/5C-FB cable is used)</li> </ul>
	3G-SDI	3G serial digital, SMPTE424M standard compliant <ul style="list-style-type: none"> <li>0.8 V [p-p] ± 10% (75 Ω)</li> <li>Automatic equalizer 100 m (when 3 Gbps/5C-FB cable is used)</li> <li>3G-SDI Level A, 3G-SDI Level B</li> </ul>
SDI OUT 1 to SDI OUT 42 Terminals	During 4K mode Standard 9 lines <ul style="list-style-type: none"> <li>Connector: BNC x 36 (construct one line of 4K signal with four terminals)</li> <li>Maximum 18 lines</li> <li>Connector: BNC x 72 (construct one line of 4K signal with four terminals)</li> <li>Can use the 4K signal in SQD format</li> </ul>	
	During Standard mode Standard 14 lines (<SDI OUT 1> to <SDI OUT 4>: Two distribute output, <SDI OUT 5> to <SDI OUT 14>: One distribute output) <ul style="list-style-type: none"> <li>Connector: BNC x 18</li> <li>Maximum 42 lines (&lt;SDI OUT 1&gt; to &lt;SDI OUT 4&gt;, &lt;SDI OUT 15&gt; to &lt;SDI OUT 18&gt;, &lt;SDI OUT 29&gt; to &lt;SDI OUT 32&gt;: Two distribute output, other: One distribute output)</li> <li>Connector: BNC x 54</li> <li>ME1PGM, ME1PVW, ME1CLN, ME1KEYPVW, ME2PGM, ME2PVW, ME2CLN, ME2KEYPVW, ME3PGM, ME3PVW, ME3CLN, ME3KEYPVW, ME4PGM, ME4PVW, ME4CLN, ME4KEYPVW, DSKPGM1, DSKPGM2, DSKPVW1, DSKPVW2, DSK1CLN, DSK2CLN, DSK3CLN, DSK4CLN, SEL KEYPVW, MV1 to MV4, AUX1 to AUX24 can be assigned.</li> </ul>	
	HD-SDI	HD serial digital, SMPTE292M (BTA S-004) standard compliant <ul style="list-style-type: none"> <li>Output level: 0.8 V [p-p] ± 10%</li> <li>Rise time: Less than 270 ps (HD)</li> <li>Fall time: Less than 270 ps (HD)</li> <li>Difference between rise time and fall time: 100 ps or less (HD)</li> <li>Alignment jitter: 0.2 UI (130 ps) or less (HD)</li> <li>Timing jitter: 1.0 UI or less (HD)</li> <li>Eye aperture ratio: 90% or more</li> <li>DC offset: 0 ± 0.5 V</li> </ul>
	3G-SDI	3G serial digital, SMPTE424M standard compliant <ul style="list-style-type: none"> <li>Output level: 0.8 V [p-p] ± 10%</li> <li>Rise time: 135 ps or less</li> <li>Fall time: 135 ps or less</li> <li>Difference between rise time and fall time: 50 ps or less</li> <li>Alignment jitter: 0.3 UI or less</li> <li>Timing jitter: 2.0 UI or less</li> <li>DC offset: 0 ± 0.5 V</li> <li>3G-SDI Level B</li> </ul>
Signal formats	During 4K mode Standard 3 lines (construct one line of 4K signal with four terminals) <ul style="list-style-type: none"> <li>&lt;SDI OUT 1&gt; to &lt;SDI OUT 4&gt;: One line x two distribute output, &lt;SDI OUT 5&gt; to &lt;SDI OUT 12&gt;: Two lines x one distribute output</li> <li>Maximum 9 lines (construct one line of 4K signal with four terminals)</li> <li>&lt;SDI OUT 1&gt; to &lt;SDI OUT 4&gt;: One line x two distribute output, &lt;SDI OUT 5&gt; to &lt;SDI OUT 12&gt;: Two lines x one distribute output</li> <li>&lt;SDI OUT 15&gt; to &lt;SDI OUT 18&gt;: One line x two distribute output, &lt;SDI OUT 19&gt; to &lt;SDI OUT 26&gt;: Two lines x one distribute output</li> <li>&lt;SDI OUT 29&gt; to &lt;SDI OUT 32&gt;: One line x two distribute output, &lt;SDI OUT 33&gt; to &lt;SDI OUT 40&gt;: Two lines x one distribute output</li> <li>The 4K signal in SQD format can be used.</li> <li>ME1PGM, ME1PVW, ME1CLN, ME1KEYPVW, ME2PGM, ME2PVW, ME2CLN, ME2KEYPVW, DSKPGM1, DSKPGM2, DSKPVW1, DSKPVW2, DSK1CLN, DSK2CLN, SEL KEYPVW, MV1, and AUX1 to AUX6 can be assigned.</li> </ul>	
	1080/59.94p, 1080/59.94i, 1080/50p, 1080/50i, 1080/29.97PsF, 1080/25PsF, 1080/23.98PsF, 2160/59.94p, 2160/50p	
	Signal processing	Y:Cb:Cr 4:2:2 10 bit R:G:B 4:4:4 8 bit
ME number	4ME (Standard Mode) / 1.5ME (4K Mode)	

Synchronous Terminal

REF Terminal	In Genlock mode: Black burst or Tri-level Sync input signals (with loop-through) <ul style="list-style-type: none"> <li>If the loop-through output is not used, provide a 75 Ω termination.</li> <li>Connector: BNC</li> <li>Same field frequencies as those of the system formats supported</li> <li>Only the Genlock mode is supported for 1080/23.98PsF format</li> <li>In the 1080/23.98PsF format, black burst signals with 10 Field ID (SMPTE318M standard compliant) or Tri-level Sync signals supported</li> </ul>	
Video Delay Time	During Standard mode	
	1 line (H)	When the frame synchronizer is set to [Off]
	2 field (V)	When the frame synchronizer is set to [On]
<ul style="list-style-type: none"> <li>Maximum delay of 1 frame is added when passing through PinP, DVE, MultiView, or DVI-IN.</li> </ul>		

Control Terminal

LAN Terminal	Compatible with 100Base-TX and AUTO-MDIX (For IP control) <ul style="list-style-type: none"> <li>Connection cable: LAN cable (CAT5E), max. 100 m, STP (Shielded Twisted Pair) cable recommended</li> <li>Connector: RJ-45</li> </ul>
PANEL Terminal	Compatible with 100Base-TX and AUTO-MDIX (For Control Panel AV-HS60C2/AV-HS60C4 connection) <ul style="list-style-type: none"> <li>Connection cable (supplied with AV-HS60C2/AV-HS60C4): LAN cable (CAT5E), straight cable, STP (Shielded Twisted Pair), 10 m</li> <li>Connector: RJ-45</li> </ul>
COM1(M)/COM2(M)/COM3(M) Terminals	RS-422 control terminal For master connection for controlling external devices <ul style="list-style-type: none"> <li>Connector: D-sub 9-pin (female) x 3, inch screw</li> </ul>
COM4(M/S) Terminal	RS-422 control terminal For master/slave connection for controlling external devices <ul style="list-style-type: none"> <li>Connector: D-sub 9-pin (female), inch screw</li> <li>Switchable between master connection and slave connection by the menu</li> </ul>
GPI IN Terminal	GPI IN: 18 inputs, general-purpose, photocoupler sensing ALARM OUT: 1 output, open collector output (negative logic) <ul style="list-style-type: none"> <li>Connector: D-sub 25-pin (female), inch screw</li> </ul>
GPI OUT1/GPI OUT2 terminal	GPI OUT: 48 outputs, selected from general purpose, tally Open collector output <ul style="list-style-type: none"> <li>Connector: D-sub 25-pin (female) x 2, inch screw</li> </ul>
Accessories	<ul style="list-style-type: none"> <li>AC cable: 4cables</li> </ul>

Control Panel AV-HS60C2P/E

Power Supply	AC100 V to 240 V, 50 Hz/60 Hz (AV-HS60C2 supports redundant power supply)
Power Consumption	40 W
Operating Ambient Temperature	0°C to 40°C (32°F to 104°F)
Operating Ambient Humidity	10% to 90% (no condensation)
Storage Temperature	0°C to 40°C (32°F to 104°F)
Storage Humidity	10% to 90% (no condensation)
Weight	Approx. 13.9 kg (30.6 lbs.)(excluding accessories)
Dimensions (WxHxD)	980 mm x 153.4 mm x 267 mm (38-19/32 inches x 6-1/32 inches x 10-1/2 inches) (excluding protrusions)

Control Terminal

Mainframe Terminal	Compatible with 100Base-TX and AUTO-MDIX (For Mainframe AV-HS60U2 connection) Connection cable (supplied with AV-HS60C2): LAN cable (CAT5E), Straight cable, STP (Shielded Twisted Pair), 10 m(32.8 ft) <ul style="list-style-type: none"> <li>Connector: RJ-45</li> <li>When connected to the &lt;LAN&gt; terminal, no video will be displayed on the Menu Panel AV-HS60C3G.</li> </ul>
MENU PANEL Terminal	Used only for the Menu Panel AV-HS60C3G <ul style="list-style-type: none"> <li>Connector: DVI-D</li> <li>Cannot be connected to DVI-D monitor.</li> <li>Cannot be used concurrently with a DVI-D monitor connected to the &lt;DVI-D&gt; terminal. Select with the display selector switch.</li> </ul>
DVI-D Terminal	Used for displaying menus to the DVI monitor <ul style="list-style-type: none"> <li>Connector: DVI-D</li> <li>Monitor resolution: 1366x768 compatible monitor</li> <li>Cannot be used concurrently with the &lt;MENU PANEL&gt; terminal. Select with the display selector switch.</li> </ul>
USB Terminal	For DVI monitor menu operation <ul style="list-style-type: none"> <li>Connector: USB (type A, female)</li> <li>Cannot be used for the Menu Panel AV-HS60C3G.</li> </ul>
Display Selector Switch	Switch for selecting <MENU PANEL> terminal or <DVI-D> terminal
COM1(M) Terminal	RS-422 Control Terminal For master connection for controlling external devices <ul style="list-style-type: none"> <li>Connector: D-sub 9-pin (female), inch screw</li> </ul>
COM2(RS-232) Terminal	RS-232 Control Terminal For external device control connections <ul style="list-style-type: none"> <li>Connector: D-sub 9-pin (male), inch screw</li> </ul>
GPI I/O Terminal	GPI IN: 8 inputs, general-purpose, photocoupler sensing ALARM OUT: 1 output, open collector output (negative logic) GPI OUT: 10 outputs, selected from general purpose, tally Open collector output <ul style="list-style-type: none"> <li>Connector: D-sub 25-pin (female), inch screw</li> </ul>
ME Number	2 ME
Accessories	<ul style="list-style-type: none"> <li>AC Cable AV-HS60C2P: 2 cables</li> <li>AV-HS60C2E: 4 cables</li> <li>LAN Cable: 1 cable (used to connect with the Mainframe AV-HS73U2)</li> <li>Switch blank cap (large): 24 caps</li> <li>Switch blank cap (small): 12 caps</li> </ul>

**Control Panel AV-HS60C4P/E**

Power Supply	AC100 V to 240 V, 50 Hz/60 Hz (Supports redundant power supply)
Power Consumption	40 W
Operating Ambient Temperature	0°C to 40°C (32°F to 104°F)
Operating Ambient Humidity	10% to 90% (no condensation)
Storage Temperature	0°C to 40°C (32°F to 104°F)
Storage Humidity	10% to 90% (no condensation)
Weight	Approx. 15.0 kg (33.0 lbs.) (excluding accessories)
Dimensions (WxHxD)	656 mm×160 mm×400 mm (25-53/64 inches×6-19/64 inches×15-3/4 inches) (excluding protrusions)

**Control Terminal**

Mainframe Terminal	Compatible with 100Base-TX and AUTO-MDIX (For Mainframe AV-HS60U2 connection) Connection cable (supplied with AV-HS60C4): LAN cable (CAT5E), Straight cable, STP (Shielded Twisted Pair), 10 m (32.8 ft) • Connector: RJ-45 When connected to the <LAN> terminal, no video will be displayed on the Menu Panel AV-HS60C3G.
MENU PANEL Terminal	Used only for the Menu Panel AV-HS60C3G • Connector: DVI-D • Cannot be connected to DVI-D monitor. • Cannot be used concurrently with a DVI-D monitor connected to the <DVI-D> terminal. Select with the display selector switch.
DVI-D Terminal	Used for displaying menus to the DVI monitor • Connector: DVI-D • Monitor resolution: 1366×768 compatible monitor • Cannot be used concurrently with the <MENU PANEL> terminal. Select with the display selector switch.
USB Terminal	For DVI monitor menu operation • Connector: USB (type A, female) • Cannot be used for the Menu Panel AV-HS60C3G.
Display Selector Switch	Switch for selecting <MENU PANEL> terminal or <DVI-D> terminal
COM1(M) Terminal	RS-422 Control Terminal For master connection for controlling external devices • Connector: D-sub 9-pin (female), inch screw
COM2 (RS-232) Terminal	RS-232 Control Terminal For external device control connections • Connector: D-sub 9-pin (male), inch screw
GPI I/O Terminal	GPI IN: 8 inputs, general-purpose, photocoupler sensing ALARM OUT: 1 output, open collector output (negative logic) GPI OUT: 10 outputs, selected from general purpose, tally Open collector output • Connector: D-sub 25-pin (female), inch screw
ME Number	2 ME

**Accessories**

- AC Cable: 2 cables
- LAN Cable: 1 cable (used to connect with the Mainframe AV-HS73U2)
- Switch blank cap (large): 16 caps
- Switch blank cap (small): 8 caps

**Menu Panel AV-HS60C3G**

Power Supply	DC12 V/0.54 A (Supplied from AV-HS60C2/AV-HS60C4 using the supplied cable)
Power Consumption	6.48 W
Operating Ambient Temperature	0°C to 40°C (32°F to 104°F)
Operating Ambient Humidity	10% to 90% (no condensation)
Storage Temperature	0°C to 40°C (32°F to 104°F)
Storage Humidity	10% to 90% (no condensation)
Weight	Approx. 1.7 kg (3.7 lbs.) (excluding accessories)
Dimensions (WxHxD)	290 mm×177 mm×46.1 mm (11-13/32 inches×6-31/32 inches×1-13/16 inches) (excluding protrusions) 4RU

**Control Terminal**

Control Panel Terminal	Used only for the Control Panel AV-HS60C2/AV-HS60C4 • Connectors: DVI-D • Because an original signal format is used, DVI-D source cannot be displayed. • Cannot be used concurrently with a DVI-D monitor connected to the <DVI-D> terminal of the Control Panel AV-HS60C2/AV-HS60C4. Set the display selector switch of the Control Panel AV-HS60C2 /AV-HS60C4 to the <MENU PANEL> terminal side.
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**Accessories**

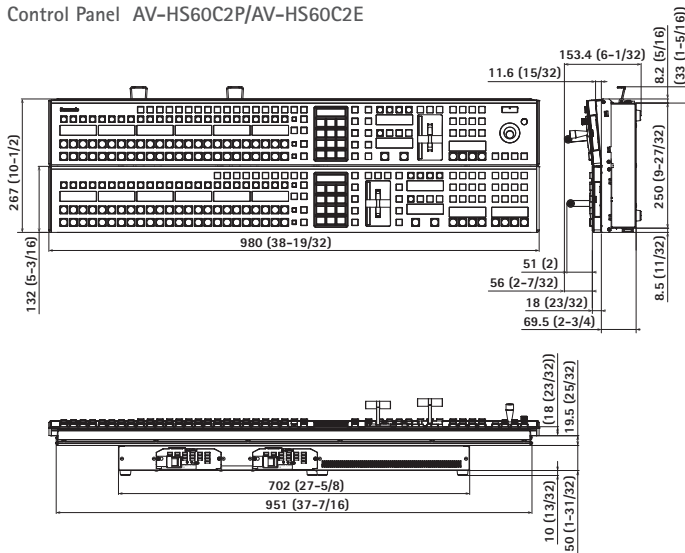
- Connecting cable (with ferrite core) for the Control Panel AV-HS60C2 /AV-HS60C4 : 1 cable
- Bracket for mounting the Control Panel AV-HS60C2/AV-HS60C4
- Screws for the bracket for mounting the Control Panel AV-HS60C2 /AV-HS60C4 : 6 screws

**Rear Terminal**

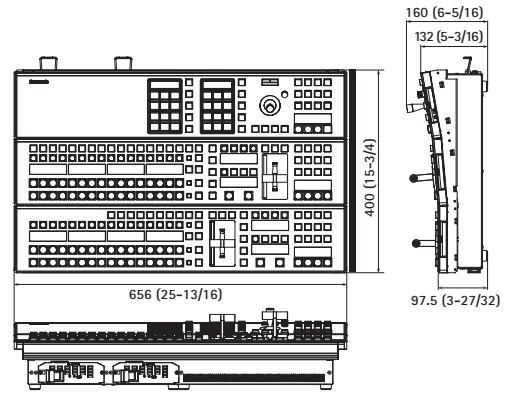
Mainframe



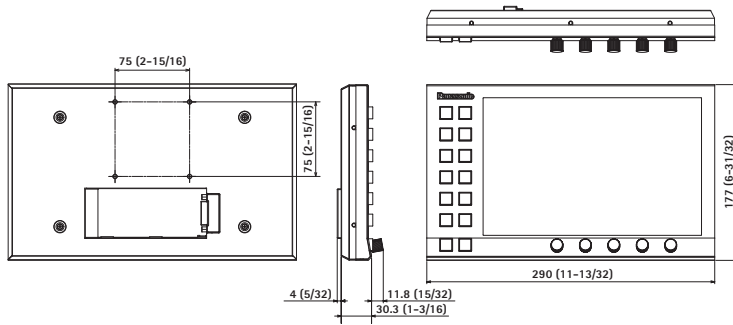
Control Panel AV-HS60C2P/AV-HS60C2E



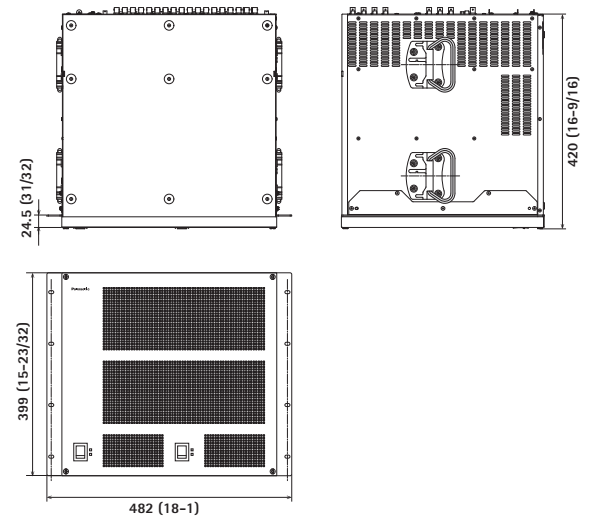
Control Panel AV-HS60C4P/AV-HS60C4E



Menu Panel



Mainframe



**Panasonic®**

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For more information, please visit Panasonic web site  
<https://pro-av.panasonic.net/en/qr/>



Factories of Panasonic Connect Co., Ltd. have received ISO14001:2015-the Environmental Management System certification. (Except for 3rd party's peripherals.)



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