

Panasonic

AV-HS6000

2ME Live Switcher



2ME Live Switcher with wide system adaptability and intuitive operability provides high reliability.



Excellent Live Operability Meets Creativity

Excellent Value System Capability

32 SDI and 2 DVI inputs, 16 SDI outputs

Despite its compact 3RU body, this mainframe provides wide variety of inputs/outputs with frame synchronizer, format converter, and color correctors.

Colors can be adjusted to correspond to different video source formats, camera properties, and displays, enabling trouble-free production.

[Input]

- 34 inputs in total, with 32 SDI and 2 DVI inputs.
- All SDI inputs are provided with a 10 bit frame synchronizer.
- 8 inputs equipped with color correctors.^{*1}
- 4 inputs equipped with up-converters. Signals can be delayed by up to 8 frames.

[Output]

- 16 SDI outputs with 2 outputs per channel.
- 4 outputs equipped with color correctors.^{*1}
- 2 outputs equipped with downconverters.

Control Panel Rear Terminal



Supported Formats

			Input		Output		
			SDIx32	DVI-Dx2	SDIx16		
SDI	480/59.94i, 576/50i		●	—	●		
	1080/59.94i, 50i		●	—	●		
	720/59.94p, 50p ^{*1}		●	—	●		
	1080/24PsF ^{*1}		●	—	●		
	1080/23.98PsF ^{*1}		●	—	●		
	1080/25PsF ^{*1}		●	—	●		
	1080/59.94p, 50p ^{*2}		*2	—	*2		
DVI-D	XGA	60Hz	1024 x 768	—	●	—	
	WXGA	60Hz	1280 x 768	—	●	—	
	SXGA	60Hz	1280 x 1024	—	●	—	
	WSXGA+	60Hz	1680 x 1050	—	●	—	
	UXGA	60Hz	1600 x 1200	—	●	—	
	WUXGA	60Hz	1920 x 1200	—	●	—	
	1080/59.94p, 50p				—	●	—
	720/59.94p, 50p				—	●	—

^{*1} : Available in the near future.

^{*2} : Future development, subject to an additional fee. Functionality will be partially restricted.

Mainframe Rear Terminal





2ME Live Switcher
AV-HS6000

System Functionality

32 SDI and 2 DVI inputs and 16 SDI outputs, with a wide variety of keyers and DVEs. Versatile transition modes and extensive video production features are achieved with high cost effectiveness. Functions are scalable using plug-in software^{*1}.

Operability

Intuitive operation is realized by Multi-Selection Panel, cross point buttons with color grouping function, and a OLED source name display panel. These function to enhance visibility helps quick and accurate switching.

Reliability

The power supply for the mainframe and control panel is redundant. Up to 3 panels can be operated through an IP connection to provide stable system operation^{*2}.

^{*1} : Installation of plug-in software will be supported in the near future.
^{*2} : Available in the near future.

Built-in 4ch MultiViewer Function

An independent 4ch MultiViewer output function is provided as standard, enabling displays of up to 16 split screens (a total of 9 patterns).

All of these functions are available without the need for a specialized device.

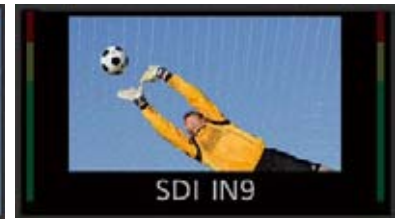
- MultiViewer can be selected from a total of 9 patterns, including 4 split, 5 split (2 patterns), 6 split (2 patterns), 9 split, 10 split (2 patterns), and 16 split.
- Source names, tallies, audio level meters, clock and safety markers can be displayed.
- Squeeze mode^{*3} can be selected to display the same sized split video image with the source name and level meter placed outside of the image.

^{*3} : Available in the near future.

Standard mode display example



Squeeze mode display example



MultiViewer examples



4 split

9 split

10 split

16 split

4-system MV (split screens)

5 additional patterns can be selected.



5 split

6 split

10 split



Mainframe

Control Panel

Effects to Enhance Your Creativity

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.*1 Diverse rendering of image effects such as mosaic or defocus are possible.*1

- 4ch of 3D DVE and 2ch of 2D DVE systems are provided to support background and keys for each ME.

Various Keyers

Featuring variety of keyers, HS6000 supports creative live content creation. A luminance key, linear key, chroma key*2, full key, and PinP are provided for 4ch per ME (8ch in total), plus 4ch of DSK, for a total 12keyers, with 4ch of upstream key (USK)*1.

- **Chroma key:** By implementing the Primatte®*3 algorithm, real time and high quality key composition are possible.
- **PinP:** 4ch per ME (8ch total) .
- **Key preset***1: Key Preset function allows easy store and recall of the settings for key. 4 settings for each channel of key and 4 settings for each channel of DSK can be registered.
- **Upstream key***1: 4ch of USK are convenient for usage such as adding the CG sources to fill the gap of 4:3 image to 16:9 image.
- **Downstream key:** 4ch are available. Can be assigned to PGM1/PGM2.

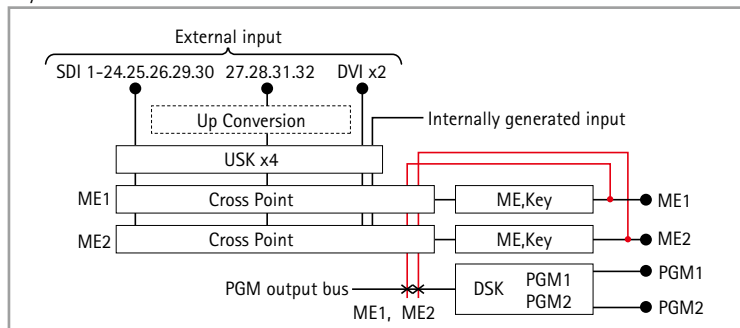
Key Types

	USK	KEY	DSK
Luminance key	✓	✓	✓
Linear key	✓	✓	✓
Chroma key		✓	
Full key		✓	
Picture in Picture		✓	

Available Functions

	<KEY1>	<KEY2>	<KEY3>	<KEY4>	DSK1-4
Transition	CUT/MIX/WIPE	CUT/MIX/WIPE	CUT/MIX/WIPE	CUT/MIX/WIPE	CUT/MIX
Chroma key	Standard	optional	optional	optional	N/A
PinP	3D effect	3D effect	2D effect	2D effect	N/A
Flying key	available	available	N/A	N/A	N/A

Key Formation

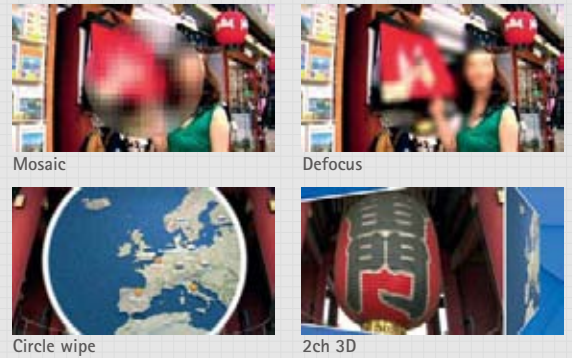


*1 : Available in the near future.

*2 : Standard for Key 1. Optional for Key 2 to Key 4. Chroma key option is available in the near future.

*3 : Primatte® is a registered trademark of IMAGICA DIGIX Inc. The copyright of Primatte® belong to IMAGICA DIGIX Inc. The patents for Primatte® belong to IMAGICA DIGIX Inc.

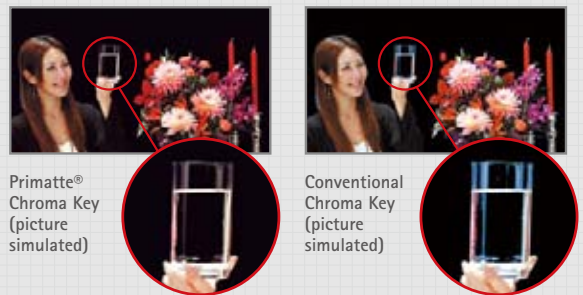
Transitions and Effects Display Example



Sample of 4 keyers in use



Primatte® High-Quality Chroma Key (picture simulated)



Display Example of Using Upstream Key



Display Example of using Downstream Key (Example of multi-language broadcasting)



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.

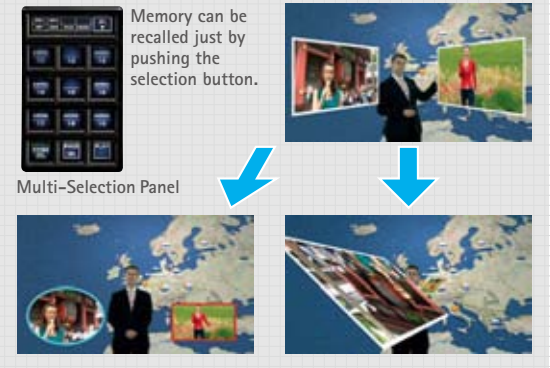
- **Shot memory:** This function recalls background transition patterns or other video effects, including PinP size, position, border width, and key on (maximum of 81 memories). Effect dissolve^{*1} can be set to ensure smooth switching from the current effect to the next effect registered in shot memory.
- **Event memory^{*1}:** This function allows continuous image effects to be registered and played back in a timeline.
- **Macro memory^{*1}:** This function allows record and playback of a series of operations^{*2} 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.
- **Video memory:** Moving image (Clip) and still image (Still) can be recorded in 4ch each (maximum of 81 memories^{*1*3}) for use as video sources. Maximum 60 seconds of moving images can be saved in standard mode, and Maximum 30 seconds in high image quality mode.

Intuitive Switching

- **Multi-Selection Panel:** A color panel that can display thumbnail images with high visibility. The switches provide a tactile response which allows quick and precise memory operation.
- **Animation wipe:** With moving images (clip) and still images (still) recorded in video memory, animation wipes can be created easily.



Display Example of Shot memory



Display Example of Multi-Selection Panel^{*4}



- *1 : Available in the near future.
- *2 : Operation on Multi-Selection Panel cannot be memorized.
- *3 : Storage module is required separately.
- *4 : Thumbnail display on Multi-Selection Panel will be available in the near future.

Flexible Scalability and Secure Operability

System Scalability

- 16 AUX buses are provided. MIX transition is available from the AUX1 to AUX4 buses.
- The system can be operated from a PC via a network connection.^{*5}
- Various interfaces and plug-in software installation capability to expand the connectivity with other devices. Three plug-in software is pre-installed and customized plug-in software can be created using SDK.^{*6}

Plug-in software provided

Serial control software

This software controls switching and transition of crosspoint with GVG200 compliant external controllers and editors via an RS-422 serial interface (External controllers and control software are purchased separately).

IP connected AUX bus control software

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

Serial tally software

This software provides tally output and source names to an external tally display and I/F with UMD protocol Ver. 3.1 compliant and RS-422 serial communication devices.

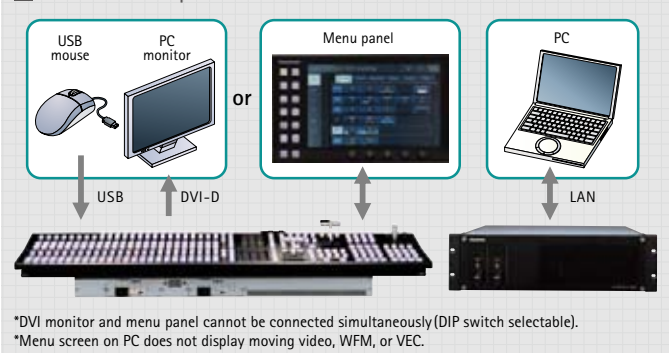
Backup System for Peace of Mind

- A redundant power supply is provided for the mainframe and control panel.
- Operation of up to 3 control panels is possible through an IP connection^{*5}.
- ME rows can be switched by swapping the ME panel and changing the output of the system when ME faults^{*5}.
- A web browser is provided to allow access to the GUI menu from a remote PC^{*5}.
- System settings and memory information can be stored on SD cards, PC's^{*5}, and other optional storage devices.

*5 : Available in the near future.

*6 : RS422 x 4 ports and LAN x 1 port for mainframe, RS422 and RS232 x 1 port each for control panel. Installation of the plug-in software to be supported in the near future.

Selectable GUI operation



Redundant power supply



Operability Enhanced with Ergonomics

The graphical user interface combines excellent visibility with ease of operation

Control Panel

AV-HS60C1 (single power supply model)
AV-HS60C2 (redundant power supply model)

ME1 KEY bus selector buttons (KEY BUS DELEGATION)

- Switches bus column and functions operated by ME1 KEY bus
1. Select KEY 1 to 4 key source/key fill bus
(key source/key fill link coupling function available)
 2. 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)
 3. Select Display <DISP> bus¹
(*1: This bus selects images to be displayed on Menu Panel (AV-HS60C3))
 4. Select Utility bus²
(*2: This bus selects sources to be inserted in border background or key edge)
 5. Select MACRO bus³ (*3: This bus plays back the macro memory)

KEY bus crosspoint buttons

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

Source name display panel

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

Crosspoint buttons

1. 8 colors can be used for grouping to matched sources
2. Switching is possible among 24 crosspoints x 4 pages
(96 total crosspoints)
3. Assign and play back the macro memory

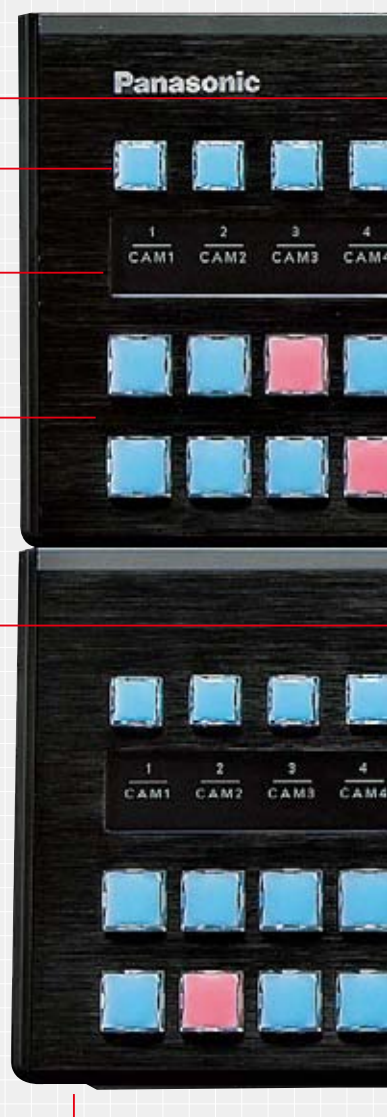
ME2 KEY bus selector buttons (KEY BUS DELEGATION)

- Switches bus column and functions operated by ME2 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 Utility bus²
(*2: This bus selects sources to be inserted in the border background or key edge)
 4. Select MACRO bus³ (*3: This bus plays back the macro memory)

Multi-Selection Pa



Wipe Pattern



ically Designed Panels

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



Event memory

Shot memory

Video memory (CLIP)

Video memory (STILL)



Crosspoint area

Panasonic

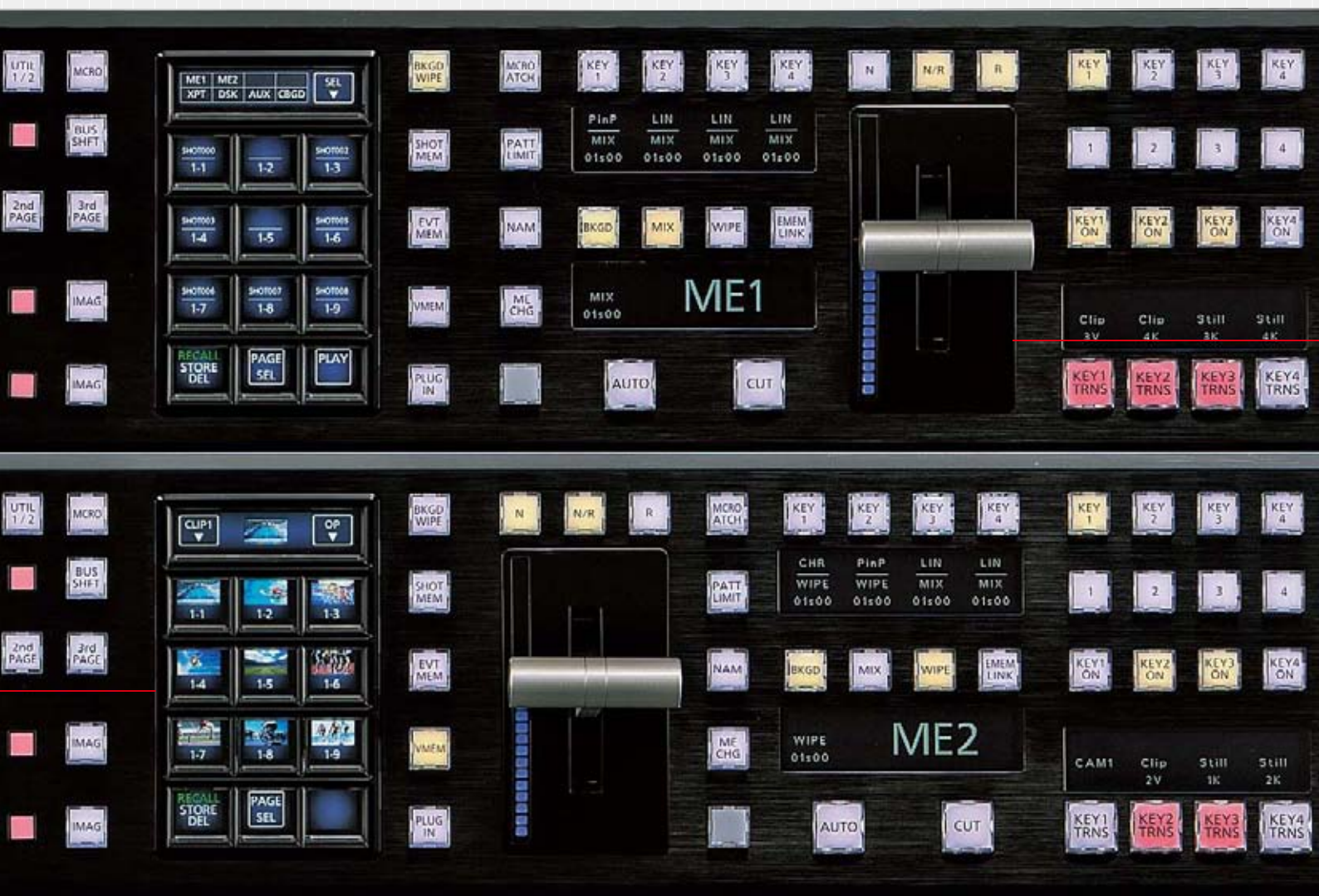


Large and easy-to-

Menu

AV-H

- 10.1-type(256.5 mm) Menu Panel and easy menu operation
- On-screen software keyboard/
- General-purpose DVI monitor



Multi-Selection Panel area

Transition area

KEY / DSK

to-use touch panel

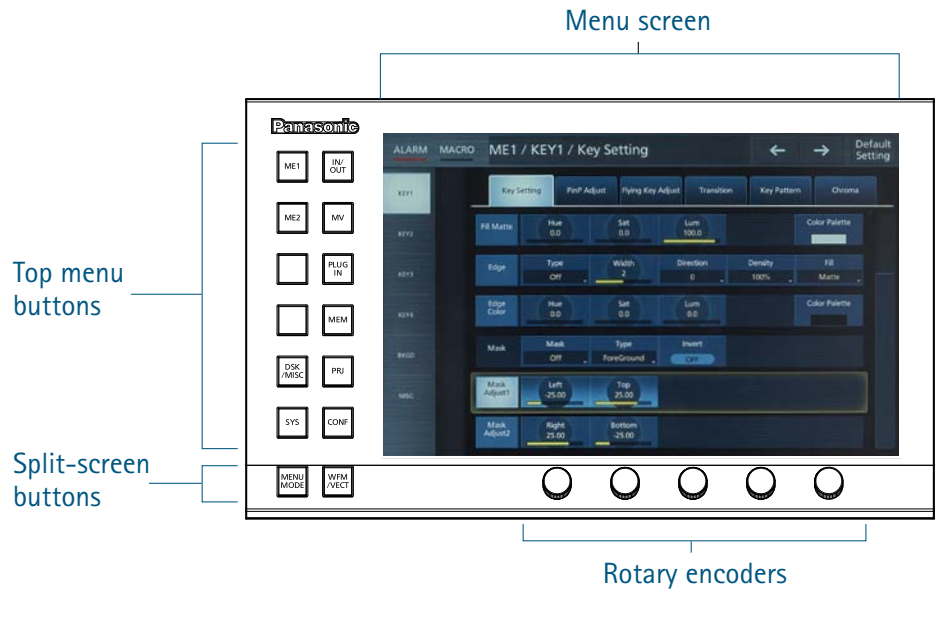
Panel

S60C3G

Panel with touch screen allows quick

numerical keypad available can be used instead of Menu Panel

Menu Panel



Positioner area



Memory Card Slot

- Settings 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 / Flying Key, 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. ME change: switches the Control Panel ME1/ME2 columns

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

operation area

AV-HS6000 Series Composition

		Model no.
Mainframe		Single Power Supply Model AV-HS60U1P/AV-HS60U1E
		Redundant Power Supply Model AV-HS60U2P/AV-HS60U2E
Control Panel		Single Power Supply Model AV-HS60C1P/AV-HS60C1E
		Redundant Power Supply Model AV-HS60C2P/AV-HS60C2E
Menu Panel		AV-HS60C3G
Storage Module		AV-HS60D1G
Chroma Key Software		AV-SFU60G*

*Available in the near future.

Specifications

Mainframe AV-HS60U1P/E, AV-HS60U2P/E

Power Supply	AC100 V to 240 V, 50 Hz/60 Hz (AV-HS60U2 supports redundant power supply)
Power Consumption	110 W
Ambient Operating 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	AV-HS60U1: Approx. 12.6 kg(27.8 lbs.)(excluding accessories) AV-HS60U2: Approx. 13.5 kg(29.7 lbs.)(excluding accessories)
Dimensions(WxHxD)	482 mmx132 mmx418 mm (18-31/32 inchesx5-3/16 inchesx16-15/32 inches)(excluding protrusions)

Video Terminal

SDI IN 1 to SDI IN 32 Terminals	32 lines • Connectors: BNCx32 • SDI IN 27, SDI IN 28, SDI IN 31, SDI IN 32 terminals are equipped with up-converters. • SDI IN 25 to SDI IN 32 terminals are equipped with color correctors.*1
HD-SDI	SMPTE292M (BTA S-004) standard compliant • 0.8 V [p-p]±10% (75 Ω) • Automatic equalizer more than 100 m(328 ft) (when 1.5 Gbps/5C-FB cable is used)
SD-SDI	SMPTE259M standard compliant • 0.8 V [p-p]±10% (75 Ω) • Automatic equalizer 200 m (656 ft) (when 5C-2V cable is used)
DVI-D IN 1 to DVI-D IN 2 Terminals	2 lines Digital RGB:XGA (1024x768), WXGA (1280x768), SXGA (1280x1024), WSXGA-(1680x1050),UXGA (1600x1200), WUXGA (1920x1200) Vertical frequency: 60 Hz Video format inputs: 1080/59.94p, 1080/50p, 1080/59.94i, 1080/50i, 720/59.94p, 720/50p • Connectors: DVI-Dx2 • The terminals do not support HDCP. • The DVI-I connector cable cannot be used. • For the DVI-D connector cable, use a cable with a length of up to 5 m.(16.4 ft)
SDI OUT 1 to SDI OUT 16 Terminals	16 lines (2 distributed outputs per line) • Connectors: BNCx32 • ME1PGM, ME1PWW, ME1CLN, ME1KEYPWW, ME2PGM, ME2PWW, ME2CLN, ME2KEYPWW, DSKPGM1, DSKPGM2, DSKPWW1, DSKPWW2, DSK1CLN, DSK2CLN, DSK3CLN, DSK4CLN, SEL KEYPWW, MV1 to MV4, and AUX1 to AUX16 can be assigned.
HD-SDI	SMPTE292M (BTA S-004) standard compliant • Output level: 0.8 V [p-p]±10%
SD-SDI	SMPTE259M standard compliant • Output level: 0.8 V [p-p]±10%

*1 : Available in the near future.

Signal Formats	SD	480/59.94i, 576/50i
	HD	1080/59.94i, 1080/50i, 720/59.94p ¹ , 720/50p ¹ , 1080/24PsF ¹ , 1080/23.98PsF ¹ , 1080/25PsF ¹
Signal Processing	Y:Ps:Pr	4:2:2 10 bit
	R:G:B	4:4:4 8 bit
ME Number		2 ME

Synchronous Terminal

REF Terminal	<ul style="list-style-type: none"> • Connectors: BNC • Same field frequencies as those of the system formats supported In Genlock mode: Black burst or Tri-level Sync input signals (with loop-through) • If the loop-through output is not used, provide a 75 Ω termination. • In the 1080/24PsF and 1080/23.98PsF formats, only Genlock mode supported • In the 1080/23.98PsF format, black burst signals with 10 Field ID (SMPTE318M standard compliant) or Tri-level Sync signals supported • In the 1080/24PsF format, Tri-level Sync signals supported In internal sync mode: Black burst output signal x2 	
LTC IN Terminal	This is the LTC (linear time code) input terminal. <ul style="list-style-type: none"> • Connectors: BNC • Impedance: 1 kΩ • Level: 1 to 2 V [p-p] 	
Video Delay Time	1 line (H)	When the frame synchronizer is set to "Off" and the up-converter is set to "Off"
	1 frame (F)	When the frame synchronizer is set to "On", or the up-converter is set to "On"
<ul style="list-style-type: none"> • When the signals have passed through PinP, DVE, MultiView, down-converter, or DVI-IN, a maximum delay of 1 frame is applied in each case. 		

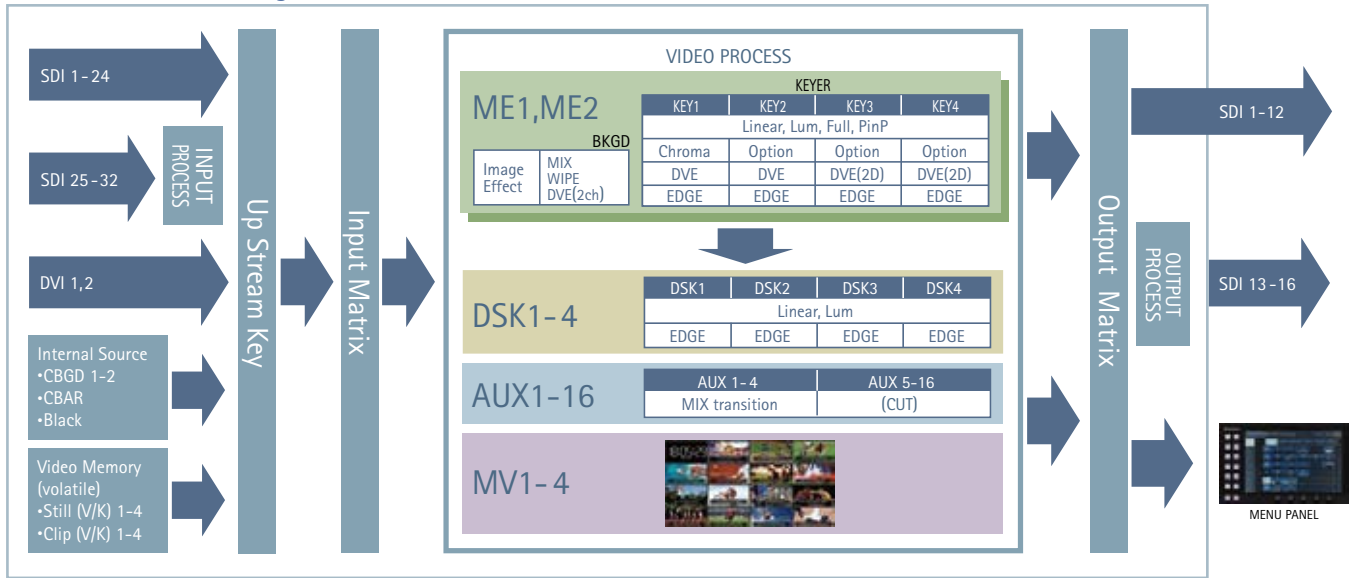
Control Terminal

LAN Terminal	Compatible with 100Base-TX and AUTO-MDIX (For IP control) • Connection cable: LAN cable (CAT5E), max. 100 m (328 ft), STP (Shielded Twisted Pair) cable recommended • Connector: RJ-45
PANEL Terminal	Compatible with 100Base-TX and AUTO-MDIX (For Control Panel AV-HS60C1/AV-HS60C2 connection) • Connection cable (supplied with AV-HS60C1/AV-HS60C2): LAN cable (CAT5E), straight cable, STP (Shielded Twisted Pair), 10 m (32.8 ft) • Connector: RJ-45
COM1(M)/COM2(M)/COM3(M)Terminals	RS-422 Control Terminal For master connection for controlling external devices • Connector: D-sub 9-pin (female) x 3, inch screw
COM4(M/S) Terminal	RS-422 Control Terminal For master/slave connection for controlling external devices • Connector: D-sub 9-pin (female), inch screw • Switchable between master connection and slave connection via menu
GPI IN Terminal	GPI IN: 18 inputs, general-purpose, photocoupler sensing ALARM OUT: 1 output, open collector output (negative logic) • Connector: D-sub 25-pin (female), inch screw
GPI OUT1/GPI OUT 2 terminal	GPI OUT: 48 outputs, selected from general purpose, tally Open collector output • Connector: D-sub 25-pin (female) x 2, inch screw

Accessories

- AC cable -AV-HS60U1P: 1 cable, AV-HS60U2P: 2 cables -AV-HS60U1E: 2 cables, AV-HS60U2E: 4 cables
- Rack-mounted rear panel support bracket
- Screws for the rack-mounted rear panel support bracket: 8 screws
- Operating Guide for the AV-HS6000 series (Excerpted Version)

AV-HS6000 Block Diagram



Control Panel AV-HS60C1P/E, 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	AV-HS60C1: Approx. 13.0 kg (28.6 lbs.)(excluding accessories) AV-HS60C2: Approx. 13.9 kg (30.6 lbs.)(excluding accessories)
Dimensions(WxHxD)	980 mm×153.4 mm×267 mm (38-19/32 inches×6-1/32 inches×10-1/2 inches) (excluding protrusions)

Control Terminal

Mainframe Terminal	Compatible with 100Base-TX and AUTO-MDIX (For Mainframe AV-HS60U1/AV-HS60U2 connection) Connection cable (supplied with AV-HS60C1/AV-HS60C2): 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 • Because an independent signal format is used, cannot be displayed on a DVI-D monitor. • Cannot be used concurrently with a DVI-D monitor (computer) connected to the <DVI-D> terminal. Select with the display selector switch.
DVI-D Terminal	Used for displaying menus to the DVI monitor (computer) • 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 (computer) 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 master/slave connection for controlling external devices • Connector: D-sub 9-pin (female), inch screw • Switchable between master connection and slave connection via menu
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 -AV-HS60C1P: 1 cable, AV-HS60C2P: 2 cables
- -AV-HS60C1E: 2 cables, AV-HS60C2E: 4 cables
- LAN Cable: 1 cable (used to connect with the Mainframe AV-HS60U1/AV-HS60U2)
- Switch blank cap (large): 24 caps
- Switch blank cap (small): 12 caps

Menu Panel AV-HS60C3G

Power Supply	DC12 V/0.54 A (Supplied from AV-HS60C1/AV-HS60C2 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-HS60C1/AV-HS60C2 • Connectors: DVI-D • Because an independent 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-HS60C1/ AV-HS60C2. Set the display selector switch of the Control Panel AV-HS60C1/AV-HS60C2 to the <MENU PANEL> terminal side.
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Accessories	• Connecting cable (with ferrite core) for the Control Panel AV-HS60C1/AV-HS60C2 : 1 cable • Bracket for mounting the Control Panel AV-HS60C1/AV-HS60C2 • Screws for the bracket for mounting the Control Panel AV-HS60C1/AV-HS60C2 : 6 screws
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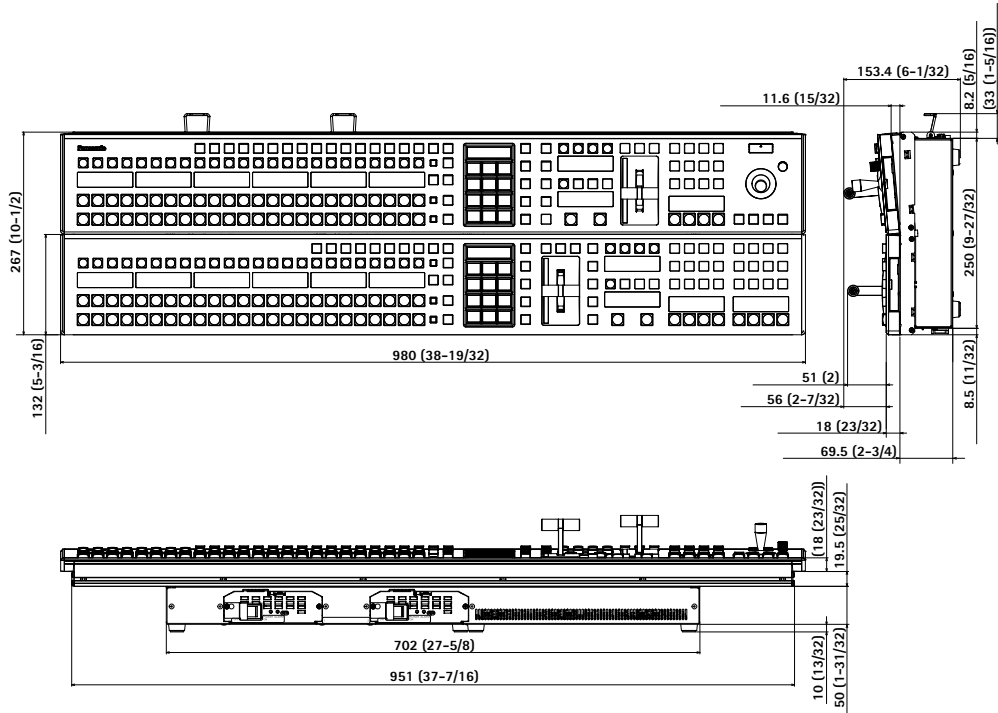
Storage Module AV-HS60D1G

Weight	Approx. 7.0 g (0.3 ozs.)
Dimensions(WxHxD)	29.85 mm×4.0 mm×50.8 mm (1-3/16 inches×5/32 inches×2 inches)

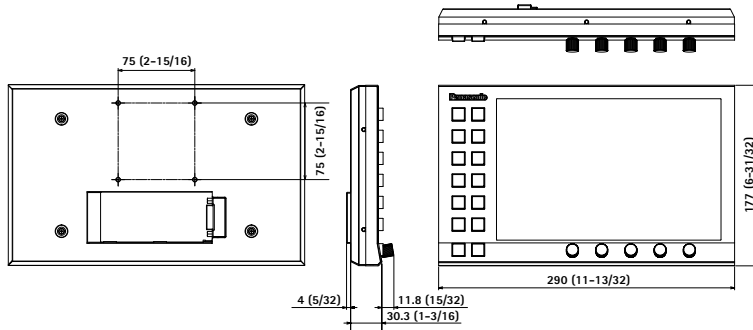
Accessories	• AV-HS60D1 Installation Guide
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Due to device characteristics, the storage module AV-HS60D1G is subject to data damage and overwriting restrictions. Backup of important data is recommended.

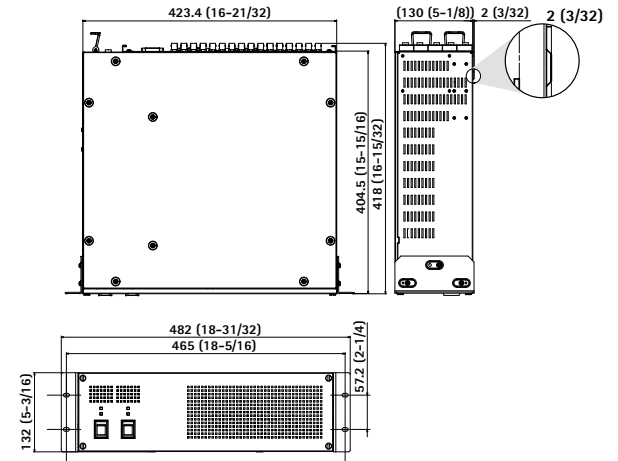
Control Panel



Menu Panel



Mainframe



Panasonic®

[Countries and Regions]

Panasonic Corporation
 AVC Networks Company
 2-15 Matsuba-cho, Kadoma, Osaka 571-8503
 Japan
<http://pro-av.panasonic.net/>

Argentina	+54 11 4122 7200	Lebanon	+96 11665557
Australia	+61 (0) 2 9491 7400	Malaysia	+60 3 7809 7888
Bahrain	+973 252292	Mexico	+52 55 5488 1000
Brazil	+55 11 3889 4035	Netherlands, Belgium	
Canada	+1 905 624 5010		+31 73 640 2729
China	+86 10 6515 8828	New Zealand	+64 9 272 0100
Hong Kong	+852 2313 0888	Norway	+47 67 91 78 00
Czech Republic:	+421 (0) 903 447 757	Pakistan	+92 5370320 (SNT)
Denmark	+45 43 20 08 57	Palestine	+972 2 2988750
Egypt	+20 2 23938151	Panama	+507 229 2955
Finland, Latvia, Lithuania, Estonia	+358 (9) 521 52 53	Philippines	+65 6277 7284
France	+33 (0) 1 47 91 64 00	Poland	+48 (22) 338 1100
Germany, Austria, Switzerland	+49 (0) 6103 313887	Portugal	+351 21 425 77 04
Greece	+30 210 96 92 300	Romania, Albania, Bulgaria, Macedonia	+40 (0) 729 164 387
Hungary	+36 (1) 382 60 60	Russia & CIS	+7 495 9804206
India	+91 1860 425 1860	Saudi Arabia	+96 626444072
Indonesia	+65 6277 7284	Singapore	+65 6277 7284
Iran		Slovak Republic, Croatia, Serbia, Bosnia, Montenegro, Slovenia	+421 (0) 903 447 757
(Vida)	+98 21 2271463	South Africa	+27 11 3131622
(Panasonic Office)	+98 2188791102	Spain	+34 (93) 425 93 00
Italy	+39 02 6788 367	Sweden	+46 (8) 680 26 41
Jordan	+962 6 5859801	Syria	+963 11 2318422/4
Kazakhstan	+7 727 298 0891	Taiwan	+886 2 2227 6214
Korea	+82 2 2106 6641	Thailand	+662 731 8888
Kuwait	+96 522431385		

Turkey	+90 216 578 3700
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Ukraine	+380 44 4903437
U.K.	+44(0)1344 70 69 13
U.S.A.	+1 877 803 8492
Vietnam	+65 6277 7284



JQA-0443



Factories of AVC Networks Company have received ISO14001:2004-the Environmental Management System certification. (Except for 3rd party's peripherals.)