



## 2ME Live Switcher

# AV-HS6000

The main unit is equipped with an abundance of inputs and outputs for great system integration that includes 32 SDI and 2 DVI inputs plus 16 SDI outputs. 4 DVEs per ME enable diverse transitions when producing creative video in demanding fast-paced situations. Three types of control panels can be used. C1 and C2 panels offer 24 XPT buttons and 4 pages and allow easy switching among 96 total crosspoints. The compact panel C4 is 30% shorter than the C1/C2 version and offers an easier integration into small studios and OB Vans.

### Key Features

34 inputs (SDI X32, DVIx2) and 16 SDI outputs; all inputs have built-in frame synchronizers

Simultaneous output in both 1080p and 1080i formats

4 independent MultiViewer displays; Single MultiViewer can display a maximum of 16 video sources

Equipped with real-time high-quality chroma keying that employs Primatte® algorithms / Standard 1 channel, expandable up to 4 channels

The switcher can be set by the 10,1-type touch-operated Menu Panel AV-HS60C3G (optional) or by a PC monitor and USB mouse





## AV-HS6000

<https://ap.connect.panasonic.com/sg/en/av-hs6000>

<b>Mainframe -&gt; Model No.</b>	AV-HS60U2P/E
<b>Mainframe -&gt; General -&gt; Power Supply</b>	AC 100 V to 240 V, 50 Hz/60 Hz (supports redundant power supply)
<b>Mainframe -&gt; General -&gt; Power Consumption</b>	110 W
<b>Mainframe -&gt; General -&gt; Operating Temperature</b>	0 °C to 40 °C (32 °F to 104 °F)
<b>Mainframe -&gt; General -&gt; Operating Humidity</b>	10 % to 90 % (no condensation)
<b>Mainframe -&gt; General -&gt; Storage Temperature</b>	0 °C to 40 °C (32 °F to 104 °F)
<b>Mainframe -&gt; General -&gt; Storage Humidity</b>	10 % to 90 % (no condensation)
<b>Mainframe -&gt; General -&gt; Weight</b>	Approx. 13.5 kg (29.7 lbs.) (excluding accessories)
<b>Mainframe -&gt; General -&gt; Dimensions</b>	W 482 mm x H 399 mm x D 418 mm (18-31/32 inches x 5-3/16 inches x 16-15/32 inches) (excluding protrusions)
<b>Mainframe -&gt; Video Terminal -&gt; SDI IN</b>	<p>During Standard mode Standard 32 lines</p> <ul style="list-style-type: none"> <li>• Connector: BNC x 32</li> <li>• SDI IN 27, SDI IN 28, SDI IN 21, SDI IN 32、 SDI IN 32 terminals are equipped with up-converters,</li> <li>• SDI IN 25 to SDI IN 32 terminals are equipped with color correctors.</li> </ul> <p>HD-SDI SEMPTE 292M (BTQ-004) standard compliant</p> <ul style="list-style-type: none"> <li>• 0.8 V [p-p] ± 10 % (75 Ω)</li> <li>• Automatic equalizer 100 m (328 ft) (when 1.5 Gbps/5C-FB cable is used)</li> </ul> <p>SD-SDI SEMPTE 259M standard compliant</p> <ul style="list-style-type: none"> <li>• 0.8 V [p-p] ± 10 % (75 Ω)</li> <li>• Automatic equalizer 200 m (656 ft) (when 5C-2V cable is used)</li> </ul> <p>During 3G mode 16 lines</p> <ul style="list-style-type: none"> <li>• Connector: BNC x 16 (only the odd numbered terminals can be used)</li> <li>• The even numbered terminals , .. cannot be used.</li> <li>• , .. , and terminals are equipped with color correctors</li> </ul> <p>During 4K mode 4K signal x 8 lines</p> <ul style="list-style-type: none"> <li>• Connector: BNC x 32 (3G-SDI x 4 SQD/2SI)</li> <li>• Can use the 4K signal in SQD format and 2SI format</li> </ul> <p>3G-SDI 3G serial digital, SMPTE424M standard compliant</p> <ul style="list-style-type: none"> <li>• 0.8 V [p-p] ± 10 % (75 Ω)</li> <li>• Automatic equalizer 100 m (328 ft) (when 3 Gbps/5C-FB cable is used)</li> <li>• 3G-SDI Level B</li> <li>• 3G-SDI Level A (FS ON)</li> </ul>

<b>Mainframe -&gt; Video Terminal -&gt; SDI OUT</b>	<p>During Standard mode</p> <p>16 lines (2 distributed outputs per line)</p> <ul style="list-style-type: none"> <li>Connectors: BNC x 32</li> <li>ME1 PGM, ME1 PVW, ME1 CLN, ME1 KEYPVW, ME2 PGM, ME2 PVW, ME2 CLM, ME2 KEYPVW, DSKPGM1, DSKPGM2, DSKPVW1, DSKPVW2, DSK1 CLN, DSK2 CLN, DSK3 CLN, DSK4 CLN, SEL KEYPVW, MV1 to MV4, and AUX1 to AUX16 can be assigned.</li> </ul> <p>HD-SDI</p> <p>SMPTTE292M (BTQ 5-004) standard compliant</p> <ul style="list-style-type: none"> <li>Output level: 0.8 V [p-p] ± 10 %</li> </ul> <p>SD-SDI</p> <p>SMPTTE259M standard compliant</p> <ul style="list-style-type: none"> <li>Output level: 0.8 V [p-p] ± 10 %</li> </ul> <p>During 3G mode</p> <p>3G-SDI output: 8 lines (2 distribute outputs per line)</p> <p>HD-SDI output: 2 lines (2 diestbute outputs per line)</p> <ul style="list-style-type: none"> <li>Connector</li> </ul> <p>3G-SDI: BNC x 16 (odd numbered terminals only)</p> <p>HD-SDI: BNC x 4 ( and terminals only)</p> <ul style="list-style-type: none"> <li>3G-SDI signal is output from the even numbered terminals.</li> <li>No signal is output from the , ... terminals.</li> <li>The HD-SDI signal converted to the 1080i format is output from the and terminals. This signal is converted to the 1080i format by decimating the 1080p signal from the and terminals.</li> <li>and terminals are equipped with color correctors. The same color corrector setting is also applied to and terminals.</li> <li>ME1 PGM, ME1 PVW, ME1 CLN, ME1 KEYPVW, ME2 PGM, ME2 PVW, ME2 CLM, DSKPGM1, DSKPGM2, DSKPVW1, DSKPVW2, DSK1 CLN, DSK2 CLN, SEL KEYPVW, MV1 to MV4, and AUX1 to AUX8 can be assigned.</li> </ul> <p>During 4K mode</p> <p>4K signal output: 3 lines (2 distribute outputs per line)</p> <p>2K signal output: 2 lines (2 distribute outputs per line)</p> <ul style="list-style-type: none"> <li>Connector</li> </ul> <p>3G-SDI (for 4K signal): BNC x 24 (terminal number 1 to 12)</p> <p>3G-SDI (for 2K signal): BNC x 4 (terminal number 13 and 15)</p> <p>HD-SDI (for 2K signal): BNC x 4 (terminal number 14 and 16)</p> <ul style="list-style-type: none"> <li>The 4K signal is output in SQD format.</li> <li>The HD-SDI signal converted to the 1080i format is output from the and</li> </ul>
<b>Mainframe -&gt; Video Terminal -&gt; DVI-D2 IN</b>	<p>Digital RGB: XGA (1024 x 768), WXGA (1280 x 768), SXGA (1280 x 1024), WSXGA+(1680 x 1050), UXGA (1600 x 1200), WUXGA (1920 x 1200)</p> <p>Vertical frequency: 60 Hz</p> <p>Video format inputs: 1080/59.94p, 1080/50p, 1080/59.94i, 1080/50i, 720/59.94p, 720/50p</p> <ul style="list-style-type: none"> <li>Connectors: DVI-D x 2</li> <li>The terminals do not support HDCP.</li> <li>The DVI-I connector cable cannot be used.</li> <li>For the DVI-D connector cable, use a cable with a length of up to 5 m. (16.4 ft)</li> <li>/ terminals cannot be used during 3G mode and 4K mode</li> </ul>
<b>Mainframe -&gt; Video Terminal -&gt; Video Format</b>	<p>SD: 480/59.94i, 576/50i</p> <p>HD: 1080/59.94i, 1080/50i, 720/59.94p, 720/50p, 1080/24PsF, 1080/23.98PsF, 1080/25PsF, 1080/29.97PsF,</p> <p>3G: 1080/59.94p, 1080/50p</p> <p>4K: 2160/59.94p, 2160/50p (SQD)</p>
<b>Mainframe -&gt; Video Terminal -&gt; Signal Processing</b>	<p>[Y:PB:PR] 4:2:2 10 bit</p> <p>[R:G:B] 4:4:4 8 bit</p>
<b>Mainframe -&gt; Video Terminal -&gt; ME Number</b>	<p>2 ME</p>
<b>Mainframe -&gt; Synchronous Terminal -&gt; REF Terminal</b>	<ul style="list-style-type: none"> <li>Connectors: BNC</li> <li>Same field frequencies as those of the system formats supported</li> </ul> <p>In Genlock mode: Black burst or Tri-level Sync input signals (with loop-through)</p> <ul style="list-style-type: none"> <li>If the loop-through output is not used, provide a 75 Ω termination</li> <li>In the 1080/24PsF and 1080/23.98PsF formats, only Genlock mode supported</li> <li>In the 1080/23.98PsF format, black burst signals with 10 Field ID (SMPTTE318M standard compliant) or Try-level with 10 Sync signals supported</li> <li>In the 1080/24PsF format, Tri-level Sync signals supported</li> </ul> <p>In internal sync mode: Black burst output signal x 2</p>
<b>Mainframe -&gt; Synchronous Terminal -&gt; LTC IN Terminal</b>	<p>This is the LTC (linear time code) input terminal.</p> <ul style="list-style-type: none"> <li>Connector: BNC</li> <li>Impedance: 1 kΩ</li> <li>Level: 1 to 2 V [p-p]</li> </ul>
<b>Mainframe -&gt; Synchronous Terminal -&gt; Video Delay Time</b>	<p>During Standard mode</p> <p>1 line (H): When the frame synchronizer is set to "Off" and the up-converter is set to "Off"</p> <p>2 field (V): When the frame synchronizer is set to "On" and the up-converter is set to "On"</p> <ul style="list-style-type: none"> <li>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.</li> </ul> <p>During 3G mode</p> <p>2 line (H) When the frame synchronizer is set to "Off"</p> <p>2 frame (V) When the frame synchronizer is set to "On"</p> <ul style="list-style-type: none"> <li>Maximum of 2 frame delay is added to each when passed through PinP, DVE, or MultiVIew.</li> </ul>
<b>Mainframe -&gt; Control Terminal -&gt; LAN Terminal</b>	<p>Compatible with 100Base-TX and AUTO-MDIX (For IP control)</p> <ul style="list-style-type: none"> <li>Connection cable: LAN cable (CAT5e), max. 100 m (328 ft), STP (Shielded Twisted Pair) cable recommended</li> <li>Connector: RJ-45</li> </ul>

<b>Mainframe -&gt; Control Terminal -&gt; PANEL Terminal</b>	Compatible with 100BASE-TX and AUTO-MDIX (For Control Panel AV-HS60C2/AV-HS60C4 connection) • Connection cable (supplied with AV-HS60C2/AV-HS60C4): LAN cable (CAT5e), straight cable, STP (Shielded Twisted Pair), 10 m (32.8 ft) • Connector: RJ-45
<b>Mainframe -&gt; Control Terminal -&gt; COM1 (M) / COM2(M) / COM3 (M) Terminals</b>	RS-422 Control Terminal For master connection for controlling external devices • Connector: D-sub 9-pin (female) x 3, inch screw
<b>Mainframe -&gt; Control Terminal -&gt; COM4 (M/S) Terminal</b>	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
<b>Mainframe -&gt; Control Terminal -&gt; GPI IN Terminal</b>	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
<b>Mainframe -&gt; Control Terminal -&gt; GPI OUT1 / GPI OUT2 terminal</b>	GPI OUT: 48 outputs, selected from general purpose, tally Open collector output • Connector: D-sub 25-pin (female) x 2, inch screw
<b>Control Panel -&gt; Model No.</b>	AV-HS60C2P/E, AV-HS60C4P/E
<b>Control Panel -&gt; General -&gt; Power Supply</b>	AC 100 V to 240 V, 50 Hz/60 Hz (supports redundant power supply)
<b>Control Panel -&gt; General -&gt; Power Consumption</b>	40 W
<b>Control Panel -&gt; General -&gt; Operating Temperature</b>	0 °C to 40 °C (32 °F to 104 °F)
<b>Control Panel -&gt; General -&gt; Operating Humidity</b>	10 % to 90 % (no condensation)
<b>Control Panel -&gt; General -&gt; Storage Temperature</b>	0 °C to 40 °C (32 °F to 104 °F)
<b>Control Panel -&gt; General -&gt; Storage Humidity</b>	10 % to 90 % (no condensation)
<b>Control Panel -&gt; General -&gt; Weight</b>	AV-HS60C2P/E: Approx. 13.9 kg (30.6 lbs.) (excluding accessories) AV-HS60C4P/E: Approx. 15.0 kg (33.0 lbs.) (excluding accessories)
<b>Control Panel -&gt; General -&gt; Dimensions</b>	AV-HS60C2P/E: W 980 mm x H 153.4 mm x D 267 mm (38-19/32 inches x 6-1/32 inches x 10-1/2 inches) (excluding protrusions) AV-HS60C4P/E: 656 mm x 160 mm x 400 mm (25-53/64 inches x 6-19/64 inches x 15-3/4 inches) (excluding protrusions)
<b>Control Panel -&gt; Control Terminal -&gt; Mainframe Terminal</b>	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) • Connector: RJ-45 When connected to the terminal, no video will be displayed on the Menu Panel AV-HS60C3G.
<b>Control Panel -&gt; Control Terminal -&gt; MENU PANEL Terminal</b>	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 terminal. Select with the display selector switch.
<b>Control Panel -&gt; Control Terminal -&gt; DVI-D Terminal</b>	Used for displaying menus to the DVI monitor • Connector: DVI-D • Monitor resolution: 1366 x 768 compatible monitor • Cannot be used concurrently with the <MENU PANEL> terminal. Select with the display selector switch.
<b>Control Panel -&gt; Control Terminal -&gt; USB Terminal</b>	For DVI monitor menu operation • Connector: USB (type A, female) • Cannot be used for the Menu Panel AV-HS60C3G.
<b>Control Panel -&gt; Control Terminal -&gt; Display Selector Switch</b>	Switch for selecting <MENU PANEL> terminal or <DVI-D> terminal
<b>Control Panel -&gt; Control Terminal -&gt; COM1 (M) Terminal</b>	RS-422 Control Terminal For master connection for controlling external devices • Connector: D-sub 9-pin (female), inch screw
<b>Control Panel -&gt; Control Terminal -&gt; COM2 (RS-232) Terminal</b>	RS-232 Control Terminal For external device control connections • Connector: D-sub 9-pin (male), inch screw
<b>Control Panel -&gt; Control Terminal -&gt; GPI I/O Terminal</b>	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
<b>Control Panel -&gt; Control Terminal -&gt; ME Number</b>	2 ME
<b>Menu Panel -&gt; Model No.</b>	AV-HS60C3G
<b>Menu Panel -&gt; General -&gt; Power Supply</b>	DC 12 V/0.54 A (Supplied from AV-HS60C2/AV-HS60C4 using the supplied cable)
<b>Menu Panel -&gt; General -&gt; Power Consumption</b>	6.48 W
<b>Menu Panel -&gt; General -&gt; Ambient Operating Temperature</b>	0 °C to 40 °C (32 °F to 104 °F)
<b>Menu Panel -&gt; General -&gt; Ambient Operating Humidity</b>	10 % to 90 % (no condensation)
<b>Menu Panel -&gt; General -&gt; Storage Temperature</b>	0 °C to 40 °C (32 °F to 104 °F)
<b>Menu Panel -&gt; General -&gt; Storage Humidity</b>	10 % to 90 % (no condensation)

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<b>Menu Panel -&gt; General -&gt; Weight</b>	Approx. 1.7 kg (3.7 lbs.) (excluding accessories)
<b>Menu Panel -&gt; General -&gt; Dimensions</b>	W 290 mm x H 177 mm x D 46.1 mm (11-13/32 inches x 6-31/32 inches x 1-13/16 inches) (excluding protrusions) 4RU
<b>Menu Panel -&gt; Control Terminal -&gt; Control Panel Terminal</b>	Used only for the Control Panel AV-HS60C2/AV-HS60C4 • 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 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.
<b>Storage Module -&gt; Model No.</b>	AV-HS60D1G
<b>Storage Module -&gt; General -&gt; Weight</b>	Approx. 7.0 g (0.3 oz.)
<b>Storage Module -&gt; General -&gt; Dimensions</b>	H 29.85 mm x W 4.0 mm x D 50.8 mm (1-3/16 inches x 5/32 inches x 2 inches)

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