



**Conveniently Compact Switcher Achieves High-quality Video**

## AV-HSW10

IP Live Switcher with intuitive and compact design takes online communication one level higher.

### Key Features

Diverse Interfaces to Suit Wide-ranging Needs

Diverse Keyers for More Attractive Video

Multiviewer With 10 Selectable Patterns

Remote Control With Software Control Panel

## AV-HSW10

<https://latam.connect.panasonic.com/ar/es/productos/broadcast-y-proav/av-hsw10>

Live Switcher -> General-> Power Supply	16 V Dedicated Adaptor
Live Switcher -> General-> Power Consumption	3.0 A (48 W)
Live Switcher -> General-> Operating Temperature	0°C to 40 °C (32 °F to 104 °F)
Live Switcher -> General-> Operating Humidity	10 % to 90 % (no condensation)
Live Switcher -> General-> Storage Temperature	0 °C to 40 °C (32 °F to 104 °F)
Live Switcher -> General-> Storage Humidity	10 % to 90 % (no condensation)
Live Switcher -> General-> Weight	Approx. 1.8 kg ( Approx.3.96 lb)
Live Switcher -> General-> Dimensions	W 254 mm x H 67 mm x D 175 mm  (10 inches x 2-5/8 inches x 6-7/8 inches)  (excluding protrusions)
Live Switcher -> General-> ME Number	1 ME
Live Switcher -> Video Terminal -> SDI IN	4 lines
	<ul style="list-style-type: none"> <li>• Connectors: BNC x 4</li> <li>• Equipped with frame synchronizer</li> <li>• Connectors and have simplified format simple format converters, and have high-performance format converters.</li> <li>• Connectors to are equipped with simplified format converters.</li> <li>* SDI IN 1 excludes HDMI IN1.</li> </ul>
	[3G-SDI] 3G-SDI, SMPTE424 standard complied with (Compatible with Level-A/Level-B)
	<ul style="list-style-type: none"> <li>• 0.8 V [p-p] ± 10 % (75 Ω)</li> <li>• Automatic equalizer 100 m (when using a cable)</li> </ul>
	[HD-SDI] HD-SDI, SMPTE292M standard
	<ul style="list-style-type: none"> <li>• 0.8 V [p-p] ± 10 % (75 Ω)</li> <li>• Automatic equalizer 100 m (when using a cable)</li> </ul>

<b>Live Switcher -&gt; Video Terminal -&gt; HDMI IN</b>	2 lines, HDMI 1.4b compatible
	<p data-bbox="833 221 991 244">Video format inputs:</p> <p data-bbox="833 293 1497 340">720p/59.94 Hz, 720p/50 Hz, 1080i/59.94 Hz, 1080i/50 Hz, 1080p/59.94 Hz, 1080p/50 Hz, 1080p/29.97 Hz, 1080p/25 Hz, 1080p/24 Hz, 1080p/23.98</p> <p data-bbox="833 461 967 483">PC format inputs:</p> <p data-bbox="833 533 1519 580">WSXGA+ (1680 x 1050, 60 Hz), SXGA (1280 x 1024, 60 Hz), WXGA (1280 x 768, 60 Hz), XGA (1024 x 768, 60 Hz)</p> <p data-bbox="833 701 995 723">Mode: Full/Fit-H/Fit-V</p> <ul data-bbox="833 844 1334 1084" style="list-style-type: none"><li data-bbox="833 844 1011 866">• Connectors: HDMI x 2</li><li data-bbox="833 916 1334 938">• Equipped with frame synchronizer and simplified color corrector.</li><li data-bbox="833 987 1177 1010">• The HDMI IN connector has scaler function.</li><li data-bbox="833 1059 1281 1081">• This connector does not support the HDCP technologies.</li></ul> <p data-bbox="833 1131 1070 1153">* HDMI IN 1 excludes SDI IN 1.</p>
<b>Live Switcher -&gt; Video Terminal -&gt; SDI OUT</b>	2 lines
	<ul data-bbox="833 1303 1292 1397" style="list-style-type: none"><li data-bbox="833 1303 999 1326">• Connectors: BNC x 2</li><li data-bbox="833 1375 1292 1397">• PGM, PVW, CLN, MV, AUX1/2, and Key Out can be assigned.</li></ul> <p data-bbox="833 1518 1437 1541">[3G-SDI] 3G-SDI, SMPTE424M standard complied with (Compatible with Level-A)</p> <ul data-bbox="833 1590 1037 1612" style="list-style-type: none"><li data-bbox="833 1590 1037 1612">• 0.8 V [p-p] ± 10 % (75 Ω)</li></ul> <p data-bbox="833 1662 1134 1684">[HD-SDI] HD-SDI, SMPTE292M standard</p> <ul data-bbox="833 1733 1037 1756" style="list-style-type: none"><li data-bbox="833 1733 1037 1756">• 0.8 V [p-p] ± 10 % (75 Ω)</li></ul>
<b>Live Switcher -&gt; Video Terminal -&gt; HDMI OUT</b>	1 line, HDMI 1.4b compatible
	<ul data-bbox="833 1904 1074 1998" style="list-style-type: none"><li data-bbox="833 1904 1002 1926">• Connector: HDMI x 1</li><li data-bbox="833 1975 1074 1998">• Equipped with scaler function.</li></ul> <p data-bbox="833 2047 1144 2069">Mode: Fit-V, Fit-H Full, Full-90%, Full-80%</p> <ul data-bbox="833 2119 1292 2141" style="list-style-type: none"><li data-bbox="833 2119 1292 2141">• PGM, PVW, CLN, MV, AUX1/2, and Key Out can be assigned.</li></ul>

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**Live Switcher -> Video Terminal ->  
LAN**

Compatible with 1000Base-T and AUTO-MDIX (for IP signal transmission/control)

- Connecting cable: LAN cable (Category 5e or more), max. 100 m (328 ft), STP (Shielded Twisted Pair) cable recommended

- Connector: RJ-45

IP input signal:

Assigned to IN 6 to 9.

- IN 6, IN 7: Selectable from SRT/NDI|HX (version1/version2).

- IN 8, IN 9: Dedicated to High Bandwidth NDI input.

Supports NDI a channel input. Used as a pair with IN 9 in this case.

- IN6 to 9: High Bandwidth NDI x4 can be selected by changing to firmware that supports NDI HB mode.

\*For H.264, the AV-HSW10 supports input up to Level 4.2.

For H.265, the AV-HSW10 supports input up to Level 5.1 (Main tier) and Level 4.1 (High tier).

IP output signal:

Assigned to OUT 4 and OUT 5.

- OUT 4, OUT 5: Selectable from SRT/High Bandwidth NDI/RTMP.

- PGM, PVW, CLN, MV, AUX1/2, Key Out can be assigned.

- Equipped with scaler function and i/p conversion function. \*1

- IN6 to IN9: When using firmware in NDI HB mode, only the High Bandwidth NDI of OUT4 is enabled.

- Possible output formats:

1920 x 1080/60fps, 50fps, 30fps, 25fps, 24fps, 1280 x 720/60fps, 50fps

\*For H.264, the AV-HSW10 outputs at Level 4.2.

For H.265, the AV-HSW10 outputs at Level 5 (Main tier).

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<b>Live Switcher -&gt; Video Terminal -&gt; USB</b> Connector for outputting UVC/UAC	
	Assigned to OUT 6.
	• Connector: USB3.2 Gen1 Type-C, No USB bus power functionality
	• PGM, PVW, CLN, MV, AUX1/2, and Key Out can be assigned.
	• Equipped with scaler function and i/p conversion function. *1
	• Possible output formats:
	1920 x 1080/60fps, 50fps, 30fps, 25fps, 24fps, 1280 x 720/60fps, 50fps, 30fps, 25fps, 24fps
<b>Live Switcher -&gt; Video Terminal -&gt; Signal Formats</b>	3G-SDI
	1080/59.94p, 50p, 29.97p, 25p, 24p, 23.98p
	1080/59.94i, 50i,
	720/59.94p, 50p
	NDI® High Bandwidth
	1080/59.94p, 50p, 29.97p, 25p, 24p, 23.98p
	720/59.94p, 50p
	NDI® HX
	1080/60p, 50p, 30p, 25p, 24p
	720p/60p, 50p
<b>Live Switcher -&gt; Video Terminal -&gt; Signal Processing</b>	USB
	1080/60p, 50p, 30p, 25p, 24p *1
	720p/60p, 50p, 30p, 25p, 24p
	[R:G:B] 4:4:4 8bit / 4:2:2 10bit (when HDMI)
	[Y:Cb:Cr] 4:2:2 8bit (when NDI® High Bandwidth/UVC)
	[Y:Cb:Cr] 4:2:0 8bit (when NDI® HX/SRT/RTMP)
	[Y:Cb:Cr] 4:2:2 10bit
<b>Live Switcher -&gt; Audio Terminal -&gt; AUDIO IN</b>	L/1 and R/2
	• Connector: Pin jacks
	• Equipped with embedded functionality to each output.
	• Equipped with delay/level adjustment function.

<b>Live Switcher -&gt; Audio Terminal -&gt; AUDIO OUT</b>	Connector for headphone monitor
	<ul style="list-style-type: none"> <li>• Connector: <math>\Phi</math>3.5 mm TRS</li> <li>• Equipped with output volume adjustment function.</li> </ul>
<b>Live Switcher -&gt; Synchronous Terminal -&gt; REF Terminal Reference Input/ BB Outputs</b>	In Genlock mode: Selectable from BB (black burst), Tri-level Sync, and internal synchronization
	<ul style="list-style-type: none"> <li>• Loop-through output is performed in BB mode and Tri-level Sync mode.</li> <li>• If loop-through output is not going to be used, provide a 75 <math>\Omega</math> termination.</li> <li>• Connectors: BNC<math>\times</math>2</li> <li>• Same field frequencies as those of the system formats supported.</li> <li>• For 23.98 Hz and 24 Hz, only Tri-level input or internal synchronization is supported.</li> </ul>
<b>Live Switcher -&gt; Synchronous Terminal -&gt; Video Delay Time</b>	1 line (H)
	When the frame synchronizer setting is [Off] and neither the up-converter nor the down-converter is operating
	1 frame (F)
	When the frame synchronizer setting is on and the up-converter and downconverter are operating
	• When the signals have passed through PinP, multi view, down-converter or HDMI IN/OUT, a maximum delay of 1 frame is applied in each case.
<b>Live Switcher -&gt; Control Terminal -&gt; LAN Terminal</b>	Compatible with 1000Base-T and AUTO-MDIX (For IP control)
	<ul style="list-style-type: none"> <li>• Connecting cable: LAN cable (Category 5e), max. 100 m (328 ft), STP (Shielded Twisted Pair) cable recommended</li> <li>• Connector: RJ-45</li> </ul>
<b>Live Switcher -&gt; Control Terminal -&gt; TALLY GPI Terminal</b>	INPUT: 5 inputs, general-purpose, photocoupler sensing
	OUTPUT: 8 outputs, selected from R/G tally, general-purpose
	ALARM: 1 output, open collector output (negative logic)
	• Connectors: D-Sub 15pin
<b>Live Switcher -&gt; Control Terminal -&gt; USB Terminal</b>	• Connector: USB2.0, Type-A, with USB bus power functionality
	Use a USB memory to save and load configuration files and still data, and perform firmware updates.
<b>Live Switcher -&gt; Audio</b>	IN: RCA x 2, OUT: 3.5 mm TRS
<b>Live Switcher -&gt; Frame Synchronizer</b>	All inputs
<b>Live Switcher -&gt; CC/UC/DC (Input)</b>	i/P converter, DC/UC (1080-720P), CC
<b>Live Switcher -&gt; Keyer</b>	2 (PinP, Linear key, Luminance key, Chroma key*2)
<b>Live Switcher -&gt; AUX</b>	2
<b>Live Switcher -&gt; Genlock</b>	BB or Tri-level (Input/through output)
<b>Live Switcher -&gt; PTZ Link</b>	RP Link (AW-RP60/ RP150), TSL5.0
<b>Live Switcher -&gt; VMEM</b>	Still x 2
<b>Live Switcher -&gt; Shot MEM</b>	Max. 12 presets
<b>Footnote Description</b>	1. Planned support with a firmware update