**IP Live Switcher with Intuitive, Compact Design**
**For High-quality Video Streaming**
**Takes Online Communication One Level Higher**

NDI® &
NDI® HX
**Built-in**

SRT ALLIANCE
SECURE RELIABLE TRANSPORT

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

# Broadcast-quality video in a compact, notebook-size chassis.
## Supports diverse IP protocols for smooth IP-based video production and distribution

## Conveniently Compact Switcher Achieves High-quality Video

The AV-HSW10 supports 10bit processing for broadcast-quality video and is also equipped with diverse functions necessary for high-quality video production, such as a frame synchronizer, Genlock, and various keyers. SDI input / output allows transmission at a minimum of 1H (when Genlock is used) or 1 frame + 1H (when frame synchronizer is used) facilitating stable video transmission with low latency. It also supports audio input, enabling switching between video and audio with a single unit. The AV-HSW10 takes video broadcasting to the next level, making it perfect for highly professional online lectures, corporate webinars and other live events that are gaining momentum these days.

## Diverse Interfaces to Suit Wide-ranging Needs

In addition to 3G-SDI and HDMI, the AV-HSW10 compact switcher supports IP transmission standards such as NDI®,[1] SRT and RTMP to meet new needs for video production. In addition to Normal mode where IP and SDI can be used in combination, NDI HB mode[2] offer expanded input / output capacity to allow users to choose flexibly according to the site scale and system.[3] The switcher can be paired with an IP-compatible PTZ camera to easily create an IP-based video production system. Also, support for USB Video Class ensuring high compatibility with web conferencing services.

## Simple, Intuitive and Reliable Operation

The AV-HSW10 offers the simple, intuitive operability required in live production and ensures easy, error-free operation - all in a robust chassis design. The main unit features buttons and a fader - inspired by its predecessor, the AW-HS50, and have been enhanced for even greater operability essential for high-quality video distribution. On-screen display (OSD) also is supported.

## Auto Color Adjustment for Multi-camera Videos

The Auto Color Adjustment function automatically adjusts the color tone of videos captured from multiple cameras to match the color tone of the selected camera. The color tone of videos recorded and distributed using multiple cameras tends to vary from one camera to another, and this simple system can be used to equalize this.

▲ Check out the video!

## NDI®[1] signal with Alpha Channel for CG Materials

Supports NDI®[1] input signal with alpha channel,[4] allowing CG materials with transparency information (alpha channels) to be input directly from a PC via a single LAN cable. This facilitates flexible operation, such as the easy editing of materials during an event.

▲ Check out the video!

## Equipped with Audio Input Selection[5]

Any audio source even embedded in other video inputs can be assigned to video input. In addition, the embedded audio on KEY can be toggled on/off when KEY is activated for highly flexible video production and distribution.

## Diverse Keyers for More Attractive Videos

Two channels of keyers can be programmed for PinP, linear, luminance or chroma key[6] enabling high-quality compositing achievable only with 10bit signal processing. Two AUX buses are also provided.

Webinar screen example with keyer

## PTZ Camera Linkages (RP Link,[7] etc.)

The AW-RP150/60 Remote Camera Controller can be connected to up to nine PTZ cameras. Using an IP connection, camera selection can be synchronized with the main unit's AUX output switching (External Control AUX Panel) and the tally of each PTZ camera can be managed from the unit (Tally Link). This streamlined setup eliminates the need for additional monitors to check camera output or tally transmission devices.

## MultiViewer with 10 Selectable Patterns

MultiViewer output is provided as standard, enabling up to 16 split screens to be displayed on a single screen. Split-layout options include 4, 5 (2 patterns), 6 (2 patterns), 9, 10 (2 patterns), 12 and 16 screens.
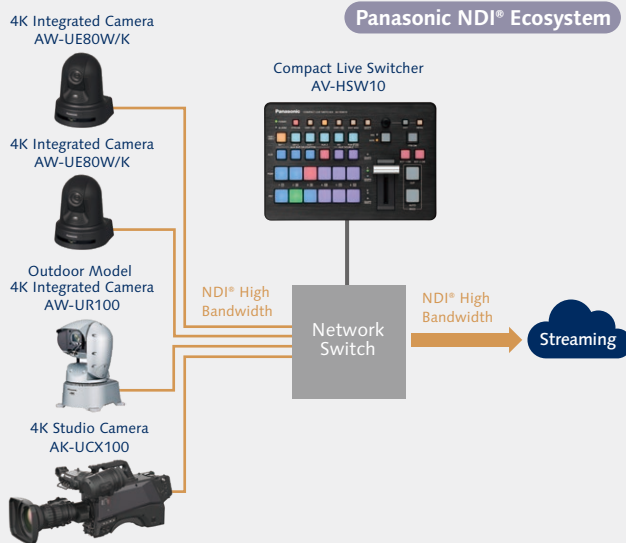
12-split MultiViewer screen

# NDI HB mode[*1] provide greater flexibility for delivery and operation systems[*2]

In addition to Normal mode for hybrid use of NDI®[*3] and SRT, the switcher also offers NDI HB mode[*1, 4] in response to growing demand for IP-based video distribution, allowing appropriate inputs and outputs to be selected for the IP configuration of each operation and delivery system[*5]. The number of baseband inputs and outputs remains unchanged in either mode, so hybrid IP and baseband operation is still possible.

| Mode | Input | | | Output | | | |
|------|-------|---|---|--------|---|---|---|
| | SDI/HDMI | NDI® High Bandwidth | NDI® HX1/ NDI® HX2/ SRT | SDI/HDMI | UVC | NDI® High Bandwidth | SRT/ RTMP/ RTMPS |
| Normal | SDI x 4 or 3 HDMI x 1 or 2 | 2 | 2 | SDI x 2 HDMI x 1 | 1 | 2 | |
| NDI HB[*1] | | 4 (Alpha ch. supported.) | – | | | 1 | – |

## System Configuration of NDI® High Bandwidth (Example)

4K Integrated Camera AW-UE80W/K

4K Integrated Camera AW-UE80W/K

Outdoor Model 4K Integrated Camera AW-UR100

4K Studio Camera AK-UCX100

**Panasonic NDI® Ecosystem**

Compact Live Switcher AV-HSW10

NDI® High Bandwidth

Network Switch

NDI® High Bandwidth

Streaming

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# System Operation
## (Example shows in Normal mode)

### Ex.1 Lecture or live event

For hybrid, in-person and online events, large-screen video at the venue can be output via 3G-SDI or HDMI and easily broadcast to remote locations via IP. In addition, supporting NDI®[*3] input signal with alpha channel facilitates the use of CG materials.

Studio cameras and camera recorders

AV-HSW10

3G-SDI x 4 or 3 HDMI x 1 or 2

3G-SDI x 2 HDMI x 1

Screens in lecture rooms, large screens at event venues, etc.

PTZ cameras

SRT/NDI® HX1/ NDI® HX2[*3] x 2

CG materials

CG

NDI® High Bandwidth[*3] x 2 (NDI® input signal with alpha channel supported)[*6]

Network Switch

NDI® High Bandwidth[*3]/RTMP/RTMPS/SRT
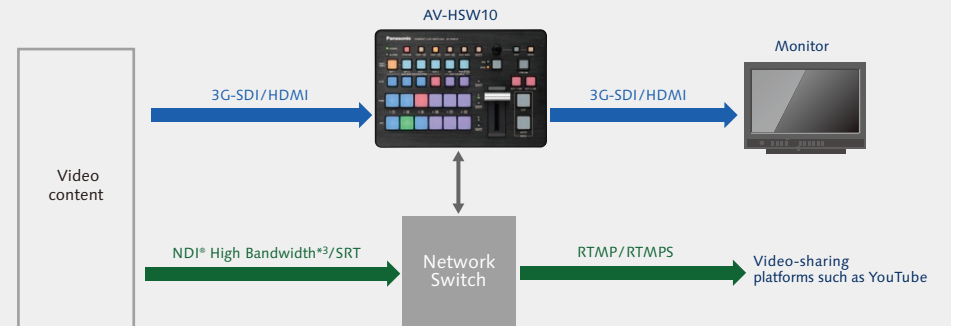
Streaming output to remote destination
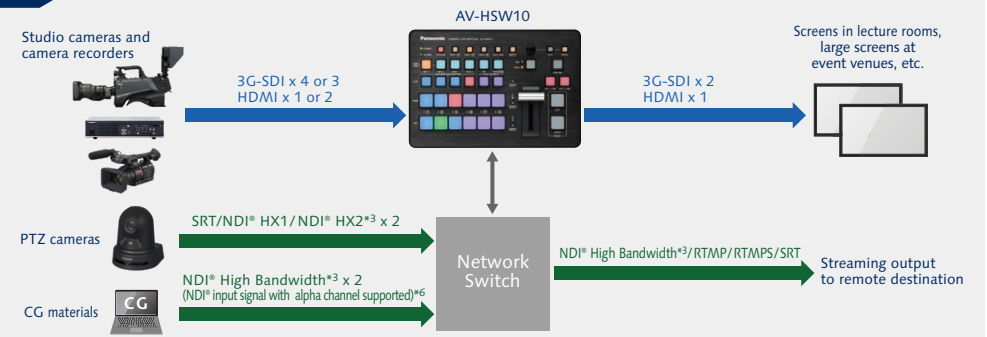
### Ex.2 Webinar or teleconference

USB Video Class is supported for streaming to a web conferencing service, such as Teams or Zoom, without having to install a special driver on the PC.

AV-HSW10

PTZ cameras

3G-SDI/HDMI

USB Video Class

Teams, Zoom, etc.

NDI® High Bandwidth[*3]/SRT

Network Switch
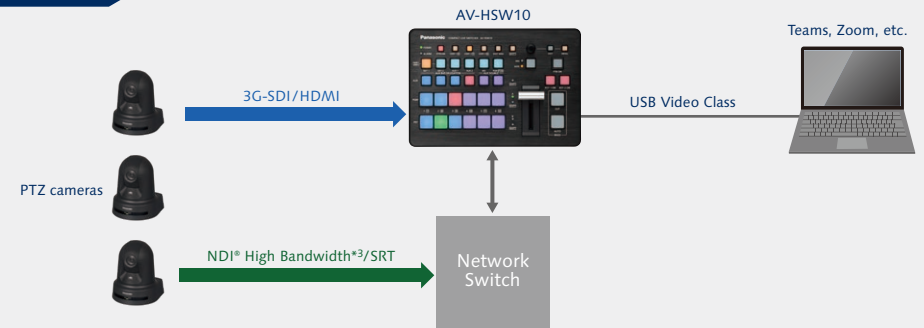
### Ex.3 Video streaming

The AV-HSW10, also a great option for broadcasting prerecorded video, supports RTMP for direct uploading to video-sharing platforms such as YouTube.

AV-HSW10

Video content

3G-SDI/HDMI

3G-SDI/HDMI

Monitor

NDI® High Bandwidth[*3]/SRT

Network Switch

RTMP/RTMPS

Video-sharing platforms such as YouTube

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*1: Abbreviated for mode name; NDI HB refers to NDI® High Bandwidth. *2: Scheduled from January 2025 with firmware update. *3: NDI® is a video connectivity technology and is registered as a trademark by Vizrt NDI AB in the United States and other countries. *4: Scheduled from January 2025. *5: Normal, or NDI HB mode firmware must be selected, rewritten and rebooted using external USB memory. NDI HB mode after Normal mode requires firmware rewriting and rebooting. *6: NDI® High Bandwidth input is required when using NDI® input signal with alpha channel.

## AV-SF10 Software Control Panel  `free software`

The AV-SF10 Software Control Panel allows a networked PC or tablet (Windows or MacOS) connected to the AV-HSW10 main unit to be used for diverse operations and configurations. The GUI screen integrates Panasonic's unique MultiViewer and control panel for intuitive operation. Combining the main unit and a PC or tablet loaded with the Software Control Panel enables work sharing and remote operation in the field location.
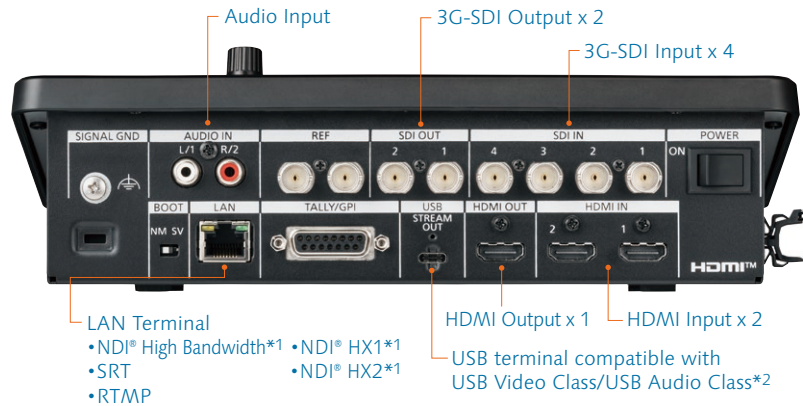
For details:

Main Mode

## Rear View

Audio Input
3G-SDI Output x 2
3G-SDI Input x 4

LAN Terminal
•NDI® High Bandwidth*1   •NDI® HX1*1
•SRT                      •NDI® HX2*1
•RTMP

USB terminal compatible with USB Video Class/USB Audio Class*2

HDMI Output x 1    HDMI Input x 2

## Related Equipment   As of January, 2025

### Panasonic 4K/HD integrated camera with tally control directly from AV-HSW10

| High-end Model | Standard Model | Entry Model |
|---|---|---|
| AW-UE160W/K | AW-UE80W/K | AW-UE20W/K |
| AW-UE150AW/K*3 | AW-UE50W/K | AW-HE20W/K*4 |
| AW-UE150W/K | AW-UE40W/K | AW-UE4WG/KG |
| AW-UE100W/K | AW-UE30W/K*3 | |
| AW-HE145W/K | | **Outdoor Model** |
| | | AW-UR100 |

For details, see the Panasonic website ( https://pro-av.panasonic.net/en/ ).

## Specifications

•This specification is only a partial list, please check our website for details.

| | | Normal Mode | NDI HB mode*5, 6 |
|---|---|---|---|
| Video Input | 3G-SDI*7 | 4 or 3 | |
| | HDMI*7 | 1(3G-SDI: 4) or 2(3G-SDI: 3) | |
| | SRT | 2 | – |
| | NDI® HX1/NDI® HX2*1 | | – |
| | NDI® High Bandwidth*1 | 2 (Alpha channels supported) | 4 (Alpha channels supported) |
| Video Output | 3G-SDI | 2 | |
| | HDMI | 1 | |
| | USB Type-C | 1 (USB Video Class / USB Audio Class supported) | |
| | SRT | 2 | – |
| | NDI® High Bandwidth*1 | | 1 |
| | RTMP/RTMPS | | – |
| Video Format | 3G-SDI | 1080/59.94p, 50p, 29.97p, 25p, 24p, 23.98p 1080/59.94i, 50i, 720/59.94p, 50p | |
| | NDI® High Bandwidth*1 | 1080/59.94p, 50p, 29.97p, 25p, 24p, 23.98p, 59.94i, 50i 720/59.94p, 50p | |
| | NDI® HX1/NDI® HX2*1 | 1080/60fps, 50fps, 30fps, 25fps, 24fps 720p/60fps, 50fps | |
| | USB Type-C*8 | 1920x1080/60fps, 50fps, 30fps, 25fps, 24fps 1280x720/60fps, 50fps, 30fps, 25fps, 24fps | |
| Audio | | IN:RCA × 2, OUT: ⌀3.5 mm TRS | |
| Frame Synchronizer | | Equipped with SDI input terminal and HDMI input terminal. | |
| Format Converter | | Equipped with SDI input terminal. | |
| Simple Color Corrector | | Equipped with SDI input terminal and HDMI input terminal. | |
| Up / Down Convert | | Support | |
| Scaler Function | | Equipped with HDMI input and output terminal, USB Type-C terminal. | |
| i / p Convertion Function | | Equipped with USB Type-C terminal. | |
| Keyer | | 2 (PinP,  Linear key, Luminance key, Chroma key*9) | |
| AUX | | 2 | |
| Genlock | | BB, Tri-level Sync and internal synchronization. | |
| PTZ Link | | RP Link (AW-RP60/ RP150)*10, TSL5.0 | |
| Video Memory | | Still x 2 | |
| Shot Memory | | Max. 12 presets | |
| USB Type-C | | USB3.2 Gen1 (for UVC/UAC), no BUS power | |
| USB Type-A | | USB2.0 (for USB Memory) BUS Power | |
| Dimensions (W x H x D)(excluding protrusions) | | 254 mm x 175 mm x 67 mm (10 inches x 6-7/8 inches x 2-5/8 inches) | |
| Mass | | Approx. 1.8 kg (3.96 lbs) | |
| Power Requirement | | 16 V DC | |
| Power Consumption | | 48 W | |

*1: NDI® is a video connectivity technology and is registered as a trademark by Vizrt NDI AB in the United States and other countries. *2: USB Video Class(UVC): A standard for connecting video-handling devices such as webcams to a computer via USB. USB Audio Class(UAC): A standard for connecting audio-handling devices to a computer via USB. *3: Scheduled from end January 2025. *4: Discontinued or limited stock. *5: Scheduled from January 2025 with firmware update. *6: Abbreviated for mode name; NDI HB refers to NDI® High Bandwidth. *7: SDI and HDMI input 1 are exclusive. *8: 1080i systems can be converted to 1080p for output via UVC. *9: Chroma key can only be selected from keyer 1. *10: Tally control supports 3 colors (R/G/Y).

For more information, please visit Panasonic web site
https://pro-av.panasonic.net/en/products/av-hsw10/

Specifications are subject to change without notice.

SP-C-HSW10ENU2 202501