# Product Spec Sheet from Rentex

## Panasonic AV-HS410 HD / SD Multi-Format Live Switcher

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| **Video Format** | **HD:** 1080/59.94i, 1080/50i, 1080/24PsF*2, 080/23.98PsF*2, 720/59.94p, 720/50p<br>**SD:** 480/59.94i, 576/50i |
| **Video Processing** | Y:CB:CR 4:2:2, 10 bit (8 bit for video memory) /RGB 4:4:4, 8 bit |
| **ME** | 1ME |
| **Video Input*** | **Standard SDI:**<br>BNC x 8 (IN 1 to 8) (Up-convert support with IN 5 to 8)<br>HD (SMPTE292M)/SD (SMPTE259M) standard, 0.8 V<br>[p-p] ±10 % (75 Ω)<br><br>**Standard DVI-D:**<br>1 line, DVI-D x 1 (Analog input signals are not supported)<br><br>**Optional:**<br>Maximum of 4 inputs (IN A1, A2, B1, B2) (Up to 2 optional boards may be inserted into the 2 input/output optional slots) |
| **Video Output*3** | **Standard SDI:**<br>5 lines, BNC x 6 (OUT 1 to 5 x each, 2 output distribution for OUT 1)<br>HD (SMPTE292M)/SD (SMPTE259M) standard,<br>0.8 V [p-p] ±10 % (75 Ω)<br><br>**Standard DVI-D:**<br>1 line, DVI-D x 1 (Analog output signals are not supported)<br><br>**Optional:**<br>Maximum of 4 outputs (OUT A1, A2, B1, B2)<br>(Up to 2 optional boards may be inserted into the 2 input/ output optional slots) |
| **Reference Input/Output** | GENLOCK mode: Black burst or Tri-level Sync input signals (with loop-through)<br>Internal sync mode: Black burst output signals x 2<br>• Same field frequencies as those of the system formats supported.<br>• With the 1080/24PsF format, only GENLOCK mode supported.<br>• With the 1080/23.98PsF format, black burst with 10F-ID (SMPTE318M standard met) or TRI signals supported. |

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| **Interface** | EDITOR: DD-sub 9 pin x 1, RS-422<br>COM: D-sub 9 pin x 1, RS-422<br>TALLY/GPI: D-sub15 pin x 2 (IN 8, OUT 19, ALARM OUT 1)<br>LAN: RJ45, 10 BASE-T/100 BASE-TX |
| **SD Memory Card** | Capacity: Maximum 32 GB (SDHC Memory Card compatible)<br>Still image file/movie clip file/shot memory/event memory: Loading/saving,<br>Setup data: backup |
| **BKGD** | Wipe/DVE Pattern: Wipe x 16, Squeeze x 16, Slide x 8, 3D x 12<br>Transition Type: Cut, Mix, Wipe (including DVE) |
| **Keyer** | Number of Keys: 1<br>Key Type: Linear key, Luminance key, Chroma key, Full key*8<br>Transition Type: Cut, Mix, Wipe (including DVE)<br>Wipe/DVE Pattern: Wipe x 16, Squeeze x 16, Slide x 8, 3D x 12 |
| **DSK** | Number of Keys: 1<br>Key Type: Linear key, Luminance key<br>Transition Type: Mix |
| **P in P** | Number of PinP: 2<br>Transition Type: Mix |
| **AUX BUS** | AUX Bus 1 to 4*4 |
| **Input Function** | Frame Synchronizer: IN 1 to 9 (IN 9 is always-on)*5<br>Freeze: IN 1 to 9*5<br>Up-Converter: IN5 to 8*5<br>Video Processing: IN1 to 8* |
| **Output Function** | MultiViewer: 1 system, Labels, Tally indication, Split-screen (9 Patterns: 4, 5a/5b, 6a/6b, 9, 10a/10b and 16 sections)<br>Other Function: Phase adjustment, Chroma key sample marker, Down converter (SDI output board only) |
| **Video Memory** | 2 systems: still images and movie clips (The data for the images stored in the frame memories can be retained even when the power is turned off by saving it in the flash memory*9 area which is incorporated inside the unit.) |
| **Memory Function** | Shot memory, Event memory, Effect dissolve function |
| **Power Requirement** | AC 100 V to 240 V, 50 Hz/60 Hz, 88 W |
| **Operating Temperature** | 0 °C to 40 °C (32 °F to 104 °F) |
| **Operating Humidity** | 10 % to 90 % (no condensation) |
| **Dimensions (WxHxD)** | 17-5/16" x 6-7/32" x 14-7/32" (excluding protrusions) |
| **Weight** | 6.2 kg (13.669 lbs) |

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**Notes:**

*1: 1080/24PsF and 23.98PsF are not compatible with optional boards AV-HS04 M1, M2, M3, M4, M5, M6, M7, M7D and M8.

*2: 1080/24PsF and 23.98PsF are not compatible with optional boards AV-HS04 M1, M2, M3, M4, M5, M6 and M7.

*3: For information on input/output signals, see page 10, "Input Formats."

*4: AUX BUS 1 is compatible with MIX transition.

*5: Specifications for IN A1, A2, B1, and B2 depend on the specs of the mounted optional equipment.

*6: Maximum 20 channels may be simultaneously displayed on two screens.

*7: May store and recall up to 10 presets (per camera) with current Panasonic pan-tilt systems.

*8: May also be used for DSK applications by changing the key layer.

*9: Plans call for supporting this function in the future.

*10: OSD, MV frames, Labels, Tally indications, Audio Level Meters, and Camera setting information are not shown on SDI-OUT 1.

*11: OSD, MV frames, Labels, Tally indications, Audio Level Meters, and Camera setting information for MultiViewer Display are not stored in the Frame Memory.

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