



## 1080p HDR studio camera system

## **AK-HC3900**

Designed for broadcasting, event and is equipped with a large sensor for high sensitivity and video quality. By combining with AK-HCU250PJ/PSJ/ HCU250EJ/ESJ Camera Control Unit (CCU) and the AK-HRP250GJ Remote Operation Panel (ROP), it is possible to construct a long-distance optical Fiber transmission studio camera system at low cost.

## **Key Features**

Includes a large 4K-CMOS sensor, and achieves a high sensitivity ofF10 (2000 lx) and low noise with an S/N ratio of 62 dB (when using the High Sense Mode).

Includes CAC (Chromatic Aberration Compensation), skew reduction, and DRS (Dynamic Range Stretcher) functions.

Includes Digital Extender function (2x).

Supports HDR/BT.709 in HD mode as standard and HDR/BT.2020 in 4K mode. \*When 4K upgrade kit is installed on AK-HC3900G and the AK-HCU250

4K upgrade enables 4K video to be output with a horizontal resolution of 2,000 TV lines. \*When 4K upgrade kit is installed on AK-HC3900G and the AK-HCU250









## AK-HC3900

https://ap.connect.panasonic.com/vn/vi/ak-hc3900

DC 190 V When AK-HCL250PJ/HCL250PJ HCL250SJ is connected]   Sew / Minasurmus when connecting to an external 12 V and including supply to and external 12 V and including supply to an external 12 V and including supply to an external 12 V and including supply to and and including supply to and external 12 V and including supply to and including supply to and including supply to and including supply to an external value of the sex supply supply 12 V and	General -> Power Supply	DC 12 V (when using an external power supply)
externally connected devices) 92 W (maximum, when AK-HCU250PJH-CU250PSJH-CU250ESJ is connected and including supply to an externally connected devices)  Seneral -> Operating Temperature 1 -> 0.0° Cit of \$C (4.4° to 113.4°) Preheasting required under a temperature 0°C (32.4°) or below)  Seneral -> Departing Humidity Seneral -> Survage Temperature 2 -> 20° Cit of \$C (-4.4° to 140.9°) Seneral -> Weight Approx. 4.0 big (8.80 lbs.) (body only, excluding the accessories)  Seneral -> Weight Approx. 4.0 big (8.80 lbs.) (body only, excluding the accessories)  Seneral -> Discussions Wish 11.14 million poles, MOS Sensor  Camera Unit -> Pickup Device  Lin 1.14 million poles, MOS Sensor  Camera Unit -> Optical Filter -> ND Clear 1.44, 1716, 1764  Camera Unit -> Sensitivity (HIGHS SINS) Filt of 59.94 Hz/PT (50 Hz) 2000 bit, 3200 K, when white reflectivity is 89.9%  Camera Unit -> Sensitivity (HIGHS SINS) Filt of 59.94 Hz/PT (50 Hz) 2000 bit, 3200 K, when white reflectivity is 89.9%  Camera Unit -> Optical Filter -> ND Clear 1.44, 1716, 1764  Camera Unit -> Optical Filter -> ND Clear 1.44, 1716, 1764  Camera Unit -> Optical Filter -> ND Clear 1.44, 1716, 1764  Camera Unit -> Optical Filter -> ND Clear 1.44, 1716, 1764  Camera Unit -> Optical Filter -> ND Clear 1.44, 1716, 1764  Camera Unit -> Optical Filter -> ND Clear 1.44, 1716, 1766  Camera Unit -> Optical Filter -> ND Clear 1.44, 1716, 1766  Camera Unit -> Optical Filter -> ND Clear 1.44, 1716, 1766  Camera Unit -> Optical Filter -> ND Clear 1.44, 1716, 1766  Camera Unit -> Optical Filter -> ND Clear 1.44, 1716, 1766  Camera Unit -> Optical Filter -> ND Clear 1.44, 1716, 1766  Camera Unit -> Optical Filter -> ND Clear 1.44, 1716, 1766  Camera Unit -> Optical Filter -> ND Clear 1.44, 1716, 1766  Camera Unit -> Optical Filter -> ND Clear 1.44, 1716, 1766  Clear 1.44, 1766, 1766  Clear 1.44, 1766, 1766  Clear 1.44, 1766, 1766  Clear 1.44, 1766, 1766  Clear 1.44, 1766	seneral-> rower supply	
and including supply to an externally connected devices)  and including supply to an externally connected devices)  deneral - Operating Temperature  and including supply to an externally connected devices)  deneral - Operating Humidity  S8% or less (relative humidity)  Wish Imm. x4.267 mm. x0.39 mm  (S-31/32 inches x 10-17/32 inches x 14-17/32 inches) (excluding protrusions)  1.1.4 million pibets, MOS Sensor  Camera Unit - No pibetal filter -> ND  Clear, 1/4, 17/5, 17/6  Camera Unit -> Sensitivity  ws shooting modes  HIGH S8NS F10 (S9.94 Hz)F11 (S0 Hz)  (MORMAL) F6 S94 Hz)F11 (S0 Hz)F11 (S0 Hz	General -> Power Consumption	externally connected devices)
10		
Perheating required under a temperature 0°C (32 °F) or below)	Seneral -> Operating Temperature	
	central a operating remperature	
Approx. 4.0 kg (8.8 0 lbs.) floody only, excluding the accessories)	General -> Operating Humidity	85% or less (relative humidity)
Second   Wilson   W	General -> Storage Temperature	−20 °C to 60 °C (−4 °F to 140 °F)
(6-31/32 inches x 10-17/32 inches x 14-17/32 inches) (excluding protrusions)  Camera Unit -> Optical Filter -> ND  Clear 1/4, 17/6, 17/64  Camera Unit -> Control Filter -> ND  Clear 1/4, 17/6, 17/64  Camera Unit -> Control Filter -> ND  Clear 1/4, 17/6, 17/64  Camera Unit -> Control Filter -> ND  Clear 1/4, 17/6, 17/64  Camera Unit -> Sensitivity  IncoRMAL] F6 (59.94 HzyF11 (50 Hz)  Camera Unit -> Horizontal Resolution - 2000 TV lines or above (center, when using AK-HUC01)  Camera Unit -> Horizontal Resolution - 1000 TV lines or above (center, when using AK-HUC01)  Camera Unit -> Horizontal Resolution - 1000 TV lines or above (center, when using AK-HUC01)  Camera Unit -> Horizontal Modulation 50% or above (27.5 MHz)  Camera Unit -> STN  6.2 dB or above  Camera Unit -> Gain Switching ->  6.3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  Clear 10 Init -> Shutter Speed ->  17/100, 17/120, 17/125, 17/250, 17/500, 17/1000, 17/500, 17/2000  Control Sp-94]/159.94p] mode  Camera Unit -> Shutter Speed ->  17/60, 17/100, 17/120, 17/125, 17/250, 17/500, 17/1000, 17/500, 17/2000  29.97p] mode  Camera Unit -> Shutter Speed ->  17/48, 17/50, 17/60, 17/60, 17/100, 17/120, 17/25, 17/250, 17/500, 17/1000, 17/500, 17/2000  29.97p] mode  Camera Unit -> Shutter Speed ->  17/48, 17/50, 17/60, 17/60, 17/60, 17/100, 17/125, 17/250, 17/500, 17/1000, 17/500, 17/2000  29.97p] mode  Camera Unit -> Shutter Speed ->  17/48, 17/50, 17/60, 17/60, 17/60, 17/120, 17/25, 17/250, 17/500, 17/1000, 17/500, 17/2000  29.97p] mode  Camera Unit -> Shutter Speed ->  17/48, 17/50, 17/60, 17/60, 17/60, 17/100, 17/125, 17/250, 17/500, 17/1000, 17/500, 17/2000  29.97p] mode  Camera Unit -> Shutter Speed ->  17/48, 17/50, 17/60, 17/60, 17/60, 17/100, 17/125, 17/250, 17/500, 17/1000, 17/500, 17/2000  29.97p] mode  Camera Unit -> Shutter Speed ->  17/48, 17/50, 17/60, 17/60, 17/60, 17/120, 17/25, 17/250, 17/500, 17/1000, 17/500, 17/2000  29.97p] mode  Camera Unit -> Shutter Speed ->  17/48, 17/50, 17/60, 17/60, 17/120, 17/25, 17/250, 17/500, 17/1000, 17/15		
Camera Unit -> Pickup Device   11.14 million pixels, MGS Sensor   23-type bayonet	General -> Dimensions	
Camera Unit -> Optical Filter -> ND	Camera Unit -> Dickup Device	
Camera Unit -> Lens Mount	·	·
We shooting modes   (Hick SENS) F10 (59.)4 Hz/F11 (50 Hz) (2000 lx, 3200 K, when white reflectivity is 89.9%   (Hick SENS) F10 (59.)4 Hz/F7 (50 Hz) 2000 lx, 3200 K, when white reflectivity is 89.9%   (Hick SENS) F10 (59.)4 Hz/F7 (50 Hz) 2000 lx, 3200 K, when white reflectivity is 89.9%   (Hick SENS) F10 (59.94 Hz/F7 (50 Hz) 2000 lx, 3200 K, when white reflectivity is 89.9%   (Hick SENS)	· · · · · · · · · · · · · · · · · · ·	
[MORMAL] Fic (93.94 H2/F7 (50 Hz) 2000 k, 3200 K, when white reflectivity is 89.9% camera Unit > Horizontal Resolution - 2000 TV lines or above (center, when using AK-HUCO1)  4.4K  Camera Unit > Horizontal Resolution - 1000 TV lines or above (center)  +10  Camera Unit > Horizontal Resolution - 1000 TV lines or above (center)  +10  Camera Unit > Horizontal Modulation-50% or above (27.5 MHz)  Camera Unit > Sain Switching > -6, -3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -16H SKNS  -16H SKNS  -17 - 3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -16H SKNS  -2 - 4, -3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 12, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 12, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 12, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 12, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 12, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 12, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 12, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 12, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 12, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 12, 24, 27, 30, 33, 36  -2 - 3, 0, 3, 6, 9, 12, 15, 18, 12, 24, 27, 30, 33, 36  -2 - 3, 0, 3,		** *
Camera Unit > Horizontal Resolution - 2000 TV lines or above (center, when using AK-HUC01)	•	[HIGH SENS] F10 (59.94 Hz)/F11 (50 Hz)
Add		·
Annabe	→ 4K	
Camera Unit -> Horizontal Modulation 50% or above (27.5 MHz)		n-1000 TV lines or above (center)
Camera Unit -> Gain Switching ->   -6, -3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36	Camera Unit -> S/N	62 dB or above
A	Camera Unit -> Horizontal Modulatio	on 50% or above (27.5 MHz)
A	_	-6, -3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36
	_	-6, -3, 0, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36
1,48, 1/50, 1/60, 1/96, 1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000	•	1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000
29.97p  mode   Camera Unit -> Shutter Speed -> [25p] 1/48, 1/50, 1/60, 1/96, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000 mode   Camera Unit -> Shutter Speed ->   1/48, 1/50, 1/60, 1/96, 1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000   23.98p] mode   1920 × 1080/59,94p/50p/29.97p/25p/23.98p   when using AK-HUC01   3840 × 2160/59,94p/50p/29.97p/25p/23.98p   When using AK-HUC01   3840 × 2160/59,94p/50p/29.97p/25p/23.98p   When using AK-HUC01   3840 × 2160/59.94p/50p/29.97p/25p/23.98p   When using AK-HUC01   When using AK-	•	1/60, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000
Marca   Mar	[29.97p] mode	
23.98p  mode		p] 1/48, 1/50, 1/60, 1/96, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000
*when using AK-HUCO1 3840 x 2160/59.94p/50p/29.97p/25p/23.98p  Wideo Input/Output -> < HD-SDI1 > BNC x 1  Terminal 3G/1.5G-SDI: 0.8 V [p-p], 75 Ω  Wideo Input/Output -> < AUX > BNC x 1  Terminal Functions as terminal / terminal by switching the setting in the menu : 3G/1.5G-SDI: 0.8 V [p-p], 75 Ω  Wideo Input/Output -> < MIC 2 > KLR x 1, 3-pin (female)  Terminal // switchable : 0 dBu : -60 dBu, -40 dBu, or -20 dBu menu can be selected  Audio Input/Output -> < MIC > XLR x 1, 3-pin (female)  Terminal (front) // switchable : 0 dBu : -60 dBu, -40 dBu, or -20 dBu menu can be selected  Audio Input/Output -> < MIC > Deter Input/Output -> < OPT FIBER > Optical composite connector x 1  Terminal Other Input/Output -> < LENS > 12-pin x 1  Terminal Other Input/Output -> < VF > Terminal 20-pin x 1  Other Input/Output -> < VF > Terminal 29-pin x 1  Terear)  Other Input/Output -> < VF > Terminal 29-pin x 1  Terear)  Other Input/Output -> < VF > Terminal 29-pin x 1  Terear)	•	1/48, 1/50, 1/60, 1/96, 1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000
3840 x 2160/59.94p/50p/29.97p/25p/23.98p	Camera Unit	· · · · · ·
Video Input/Output - > < HD-SDI1 > BNC x 1		•
Serminal   3G/1.5G-SDI: 0.8 V [p-p], 75 Ω	Video Innut/Outnut - > < UD-SDI1 >	
Video Input/Output - > < HD-SDI2 > BNC x 1   3G/1.5G-SDI: 0.8 V [p-p], 75 Ω     Video Input/Output - > < AUX > BNC x 1   Functions as terminal/ terminal by switching the setting in the menu   : 3G/1.5G-SDI: 0.8 V [p-p], 75 Ω   : VBS signal 1 V [	· · · · · · · · · · · · · · · · · · ·	
Serminal   3G/1.5G-SDI: 0.8 V [p-p], 75 Ω		
Functions as terminal/ terminal by switching the setting in the menu : 3G/1.5G-SDI: 0.8 V [p-p], 75 Ω : VBS signal 1 V [p-p], 75 Ω  Audio Input/Output - > < MIC 2 > XLR x 1, 3-pin (female)  Ferminal  // switchable : 0 dBu : -60 dBu, -40 dBu, or -20 dBu menu can be selected  Audio Input/Output - > < MIC > XLR x 1, 3-pin (female)  Ferminal (front)  // switchable : 0 dBu : -60 dBu, -40 dBu, or -20 dBu menu can be selected  Intercom - > < INTERCOM1 > Terminal XLR x 1, 5-pin, female type  Other Input/Output - > < OPT FIBER > Optical composite connector x 1  Ferminal  Other Input/Output - > < LENS > 12-pin x 1  Ferminal  Other Input/Output - > < VF > Terminal 20-pin x 1  Other Input/Output - > < VF > Terminal 29-pin x 1  Other Input/Output - > < VF > Terminal 29-pin x 1  Other Input/Output - > < VF > Terminal 29-pin x 1  Other Input/Output - > < VF > Terminal 29-pin x 1  Other Input/Output - > < VF > Terminal 29-pin x 1  Other Input/Output - > < VF > Terminal 29-pin x 1  Other Input/Output - > < VF > Terminal 29-pin x 1  Other Input/Output - > < VF > Terminal 29-pin x 1	•	3G/1.5G-SDI: 0.8 V [p-p], 75 Ω
: 3G/1.5G-SDI: 0.8 V [p-p], 75 Ω : VBS signal 1 V [p-p], 75 Ω  Audio Input/Output - > < MIC 2 > XLR x 1, 3-pin (female)  Terminal	· ·	BNC x 1
VBS signal 1 V [p-p], 75 Ω   Audio Input/Output - > < MIC 2 > XLR x 1, 3-pin (female)	Terminal	, , , ,
Audio Input/Output -> < MIC 2 > XLR x 1, 3-pin (female)  // switchable : 0 dBu : -60 dBu, -40 dBu, or -20 dBu menu can be selected  Audio Input/Output -> < MIC > XLR x 1, 3-pin (female)  // switchable : 0 dBu : -60 dBu, -40 dBu, or -20 dBu menu can be selected  Audio Input/Output -> < MIC > XLR x 1, 3-pin (female) // switchable : 0 dBu : -60 dBu, -40 dBu, or -20 dBu menu can be selected  Intercom -> < INTERCOM1 > Terminal XLR x 1, 5-pin, female type Other Input/Output -> < OPT FIBER > Optical composite connector x 1  Terminal  Other Input/Output -> < LENS > 12-pin x 1  Terminal  Other Input/Output -> < VF > Terminal 20-pin x 1  Other Input/Output -> < VF > Terminal 29-pin x 1  Other Input/Output -> < VF > Terminal 29-pin x 1  Other Input/Output -> < DC IN > XLR x 1, 4-pin, DC 12 V		
Intercom	Audio Innut/Outnut - > < MIC 2 >	
: 0 dBu		
Audio Input/Output - > < MIC > XLR x 1, 3-pin (female)  // switchable : 0 dBu : -60 dBu, -40 dBu, or -20 dBu menu can be selected  Intercom - > < INTERCOM1 > Terminal XLR x 1, 5-pin, female type  Other Input/Output - > < OPT FIBER > Optical composite connector x 1  Terminal  Other Input/Output - > < LENS > 12-pin x 1  Terminal  Other Input/Output - > < VF > Terminal 20-pin x 1  Other Input/Output - > < VF > Terminal 29-pin x 1  (rear)  Other Input/Output - > < OD IN > XLR x 1, 4-pin, DC 12 V	•	
Intercom		: -60 dBu, -40 dBu, or -20 dBu menu can be selected
: 0 dBu : -60 dBu, -40 dBu, or -20 dBu menu can be selected  (Intercom - > < INTERCOM1 > Terminal XLR x 1, 5-pin, female type  Other Input/Output - > < OPT FIBER > Optical composite connector x 1  Terminal  Other Input/Output - > < LENS > 12-pin x 1  Terminal  Other Input/Output - > < VF > Terminal 20-pin x 1  Other Input/Output - > < VF > Terminal 29-pin x 1  (rear)  Other Input/Output - > < OD IN > XLR x 1, 4-pin, DC 12 V		
:-60 dBu, -40 dBu, or -20 dBu menu can be selected  intercom - > < INTERCOM1 > Terminal XLR x 1, 5-pin, female type  Other Input/Output - > < OPT FIBER > Optical composite connector x 1  ferminal  Other Input/Output - > < LENS > 12-pin x 1  ferminal  Other Input/Output - > < VF > Terminal 20-pin x 1  Other Input/Output - > < VF > Terminal 29-pin x 1  rear)  Other Input/Output - > < OC IN > XLR x 1, 4-pin, DC 12 V	โerminal (front)	
Intercom - > < INTERCOM1 > Terminal XLR x 1, 5-pin, female type  Other Input/Output - > < OPT FIBER > Optical composite connector x 1  Ferminal  Other Input/Output - > < LENS > 12-pin x 1  Ferminal  Other Input/Output - > < VF > Terminal 20-pin x 1  Other Input/Output - > < VF > Terminal 29-pin x 1  rear)  Other Input/Output - > < OC IN > XLR x 1, 4-pin, DC 12 V		
Otter Input/Output - > < OPT FIBER > Optical composite connector x 1  Ferminal Other Input/Output - > < LENS > 12-pin x 1  Ferminal Other Input/Output - > < VF > Terminal 20-pin x 1  Other Input/Output - > < VF > Terminal 29-pin x 1  rear) Other Input/Output - > < OC IN > XLR x 1, 4-pin, DC 12 V	intercom - > < INTEDCOM4 > Tor	
Terminal Other Input/Output - > < LENS > 12-pin x 1 Terminal Other Input/Output - > < VF > Terminal 20-pin x 1 Other Input/Output - > < VF > Terminal 29-pin x 1 Tear) Other Input/Output - > < OC IN > XLR x 1, 4-pin, DC 12 V		
Other Input/Output - > < LENS > 12-pin x 1  Terminal Other Input/Output - > < VF > Terminal 20-pin x 1  Other Input/Output - > < VF > Terminal 29-pin x 1  (rear) Other Input/Output - > < DC IN > XLR x 1, 4-pin, DC 12 V		opaca. composice connector x i
Other Input/Output - > < VF > Terminal 20-pin x 1 Other Input/Output - > < VF > Terminal 29-pin x 1 (rear) Other Input/Output - > < DC IN > XLR x 1, 4-pin, DC 12 V	Other Input/Output - > < LENS >	12-pin x 1
Other Input/Output - > < VF > Terminal 29-pin x 1 (rear) Other Input/Output - > < DC IN > XLR x 1, 4-pin, DC 12 V		<b>a</b> l20-pin x 1
Other Input/Output - > < DC IN > XLR x 1, 4-pin, DC 12 V	Other Input/Output - > < VF > Termin	·
Terminal	Other Input/Output - > < DC IN >	XLR x 1, 4-pin, DC 12 V

Other Input/Output - > < LAN > Terminal

RJ-45 x 1