

HV-D5W

Remote HDTV digital color camera



The Hitachi HV-D5W digital 3-CCD color camera offers a switchable 16:9/4:3 aspect ratio. The 2/3-inch IT CCD provides 510,000 pixels and along with Hitachi's exclusive 13-bit digital processing produces outstanding video quality. In addition, precision CCD matching and low-noise circuit design take the HV-D5W to new levels in terms of resolution and signal to noise ratio. Microprocessor control is used for automatic, camera control and remote control functions. The host of high performance functions and features of the HV-D5W provides the quality and versatility necessary to meet a broad range of applications.

pin connector

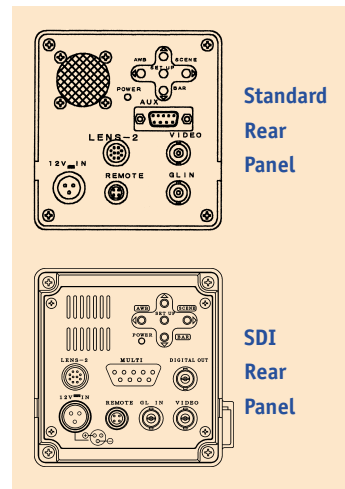
LENS connector (HR10A-10R-12SB) front		LENS 2 connector (HR10A-10R-12PB) rear	
Pin No.	Signal Name	Pin No.	Signal Name
1	N/C	1	Short Pin 2,10,11
2	N/C	2	Short Pin 1,10,11
3	GND	3	GND
4	ENF AUTO out	4	N/C
5	IRIS CONT out	5	N/C
6	+12V output	6	N/C
7	IRIS POS input	7	N/C
8	IRIS A/R output	8	FOCUS output
9	N/C	9	ZOOM output
10	N/C	10	Short Pin 1,2,11
11	N/C	11	Short Pin 1,2,10
12	N/C	12	N/C

pin arrangement

Remote connector (HR10A-7R-4S)	
Pin No.	Signal Name
1	+12V output
2	RXD/SD input
3	TXD/SD output
4	GND

12V-IN connector (RM12BRD-3PH)	
Pin No.	Signal Name
1	+12V input
2	GND
3	NC

Multi connector (SDEB-9S)	
Pin No.	Signal Name
1	GND
2	WE
3	R/R-Y/C output
4	G/Y output
5	B/B-Y output
6	VBS output
7	SYNC output
8	HD output
9	VD output



features

- > **High Resolution**
 - The three 2/3-inch 510,000 pixel CCDs (16:9 wide aspect) and digital double sampling deliver 750 lines of horizontal resolution (luminance channel).
- > **Switchable 16:9/4:3 aspect ratio**
 - The switchable aspect ratio enables flexible program production.
- > **New DSP**
 - Hitachi's state-of-the-art DSP technology has produced a single 230,000 gates LSI chip providing digital video processing and encoding for the camera. The single-chip DSP lowers power consumption, increases stability and reduces size compared to analog designs.
- > **High S/N**
 - The outstanding 65 dB signal to noise ratio due to the low noise circuit technology and the new digital noise reduction technology used. Clear images can now be obtained even in high gain modes.
- > **High sensitivity**
 - Standard sensitivity is 2000 lx, F11. In addition, the +18 dB high gain mode and +12 dB ultra gain function can raise the gain up to +30 dB to enable pickup at a minimum illumination of 0.8 lx (F1.4).
- > **Versatile CCD drive functions**
 - 5 preset electronic shutter speeds.
 - Lock scan mode allows flicker-free pickup of a screen display having a different scanning frequency than the camera.
 - Automatic electronic shutter (AES) mode sets the video signal to a fixed level without changing the lens iris.
 - Charge control (CC) frame mode improves vertical resolution. Image lag is reduced by controlling the shutter with respect to the video field.
- > **Image enhancements from digital processing**
 - Dyna chroma and auto-knee
 - Wide dynamic range is achieved by improving color loss in high luminosity signals and automatically compressing highly luminous signals.
 - 6 vectors independently variable masking and linear matrix masking Linear matrix masking compensates for overall color reproduction, while 6 vector variable masking allows precise independent hue and saturation adjustment of individual colors.
- > **Improved operational ease**
 - Auto iris peak/average response and video level adjustments can be set from menu screen.
 - Scene color temperature changes are detected and corrected in real time with automatic white balance compensation.
- > **Bi-directional data transfer function**
 - An RS-232C input is provided on the camera head to allow remote control from a personal computer. An ID number for each camera can also be registered to allow multiple cameras to be controlled from a single computer.
- > **Serial digital output (option: DI-D5)**
 - High quality digital component signals can be sent to other digital video equipment with a single coaxial cable. The EDH (error detection and handling) is added to the output for the detection of transmission errors at the receiving equipment.
- > **Remote filter wheel (option: FD-Z2)**
 - The optical filter wheel can be remotely controlled utilizing the RS-232 C

specifications

Color system	NTSC
Optical system	2/3-inch F1.4 prism
Aspect ratio	16:9/4:3 switchable
Pickup system	R, G, B 3-CCD
Imaging devices	2/3-inch IT CCDS
Total Pixels	1020 (H) x 505 (V)
Effective pixels	948 (H) x 485 (V)
Effective image area	9.48 (H) x 5.335 (V) mm
Horizontal resolution	750 TV lines (Y signal center)
S/N	65 dB typical (gamma: 1, DTL: off, sensitivity: 0 dB, Y signal, DNR: ON)
Standard sensitivity	2000 lx, F11
Minimum illumination	0.8 lx (F1.4, GAIN: MAX, ULTRA GAIN: ON)
Gamma correction	0.45 or 1.0
Lens mount	2/3-inch bayonet
Maximum gain	-3db to +18dB +12dB (ULTRA GAIN)
Shutter Preset	1/100, 1/250, 1/500, 1/1000, 1/2000 second
Lock scan	1/60.38 to 1/2000 second
AES	Off to approx. 1/1000 second (continuous 1 H steps to 4 F stops)
Filter wheel	3200K, 5600K, 5600K + 1/16ND
Scene file	4 Scene
Power supply voltage	12 V DC (10.5 V to 17 V DC)
Power consumption	Approx. 12 W
Ambient temperature	
Operating	-10° to +45° C
Storage	-20° to +60° C
Dimensions	98 (W) x 105 (H) x 180 (D) mm
Mass	Approx. 1.5 kg (3.3 lb.)

Input signals

Genlock input (BNC)	VBS: 1.0Vp-p 3dB or Black Burst, 75 ohms (Sync: 0.3 ±0.1 Vp-p, burst 0.3 ±0.1 Vp-p)
Serial data input (4 pin)	1.5 Vp-p ±3dB high impedance or RS-232C level

Digital output signal ratings (built-in DI-D5)

Composite video output (BNC)	VBS: 1.0 Vp-p, 75 ohms
Serial digital output (BNC)	Based on SMPTE259M-C, 0.8Vp-p/75ohms
Serial data output (4 pin)	1.5 Vp-p/low or RS-232C level

standard composition and options

Camera head	HV-D5W
SDI adaptor	DI-D5 (option)
Remote filter wheel	FD-Z5 (option)