

DK-H3

HDTV digital color camera



The new DK-H3 HDTV special application camera is ideal for graphics stand, point of view and remote observation applications. Images of the highest quality and stability are assured with the three 2/3" 2.2 million pixels CCDs and a 1.8M gates single chip DSP. This high-tech DSP, offering 30-bit maximum accuracy, was designed for Hitachi's broadcast camera line to outperform traditional analog signal processing. The DK-H3's functions can easily be controlled remotely from a personal computer or remote control unit. Protocol is readily available to users wishing to build custom software control applications.

pin connector

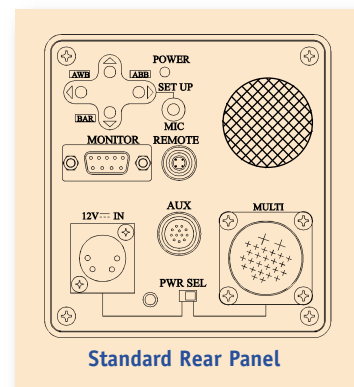
AUX connector (HR10A-10R-12PB)		LENS connector (HR10A-10R-12SB)	
Pin No.	Signal Name	Pin No.	Signal Name
1	GND	1	N/C
2	N/C	2	N/C
3	ZOOM	3	GND
4	FOCUS	4	ENF AUTO
5	GND	5	IRIS CONT
6	HD IN	6	DC 12V output
7	VD IN	7	IRIS POS
8	AUX 1	8	IRIS A/R
9	AUX 2	9	EXETEND
10	GND	10	N/C
11	N/C	11	N/C
12	GND	12	N/C

pin arrangement

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

12V-IN connector	
Pin No.	Signal Name
1	DC +12V input
2	RXD/SD input
3	TXD/SD output
4	GND

Monitor connector (D-Sub) (SDEB-9S)	
Pin No.	Signal Name
1	GND
2	WE Ou
3	R/Pr Video out
4	G/Y Video out
5	B/Pb Video out
6	N/C
7	Trinary Sync out
8	HD Out
9	VD Out



features

- > **New DSP**
 - The new 1.8 million gate DSP with 20 to 30-bit resolution, provides the ultimate in video quality and low power consumption.
- > **Hi Resolution**
 - The three 2/3-inch 2.2 million pixel CCDs with microlenses and digital signal processing deliver 1100 lines horizontal resolution (Y channel).
- > **Small & light weight head**
- Image enhancements from digital processing**
 - Dyna chroma and auto-knee
 - Flesh tone detail, etc...
 - Variable detail boost frequency
 - 6 vector independently variable masking and linear matrix masking
- > **Versatile CCD drive functions**
 - Seven 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.
 - Charge control (CC) frame mode improves vertical resolution.
 - Image lag is reduced by controlling the shutter with respect to the video field.
 - Long time integration mode is capable of field and frame integration (however, external picture memory is required to obtain a viewable picture).
- > **Improved operational ease**
 - Real-time auto white balance detects and automatically compensates for changes in the scene color temperature.
 - A variable white gate permits selection of the area from which real-time auto white balance samples the image. Any light source outside the sampled area will have no effect on the setting of balance.
 - Intelligent automatic level control (ALC)
 - Digital light metering utilizes a scene into seven divided sensing areas and an iris gate area with variable size and position.
 - Two mode gain control AGC and 3-position programmable high gain switch
- > **Bi-directional data transfer**
 - 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 be registered allowing multiple cameras to be controlled from a single computer.
- > **Auxiliary connector for external control**
 - A simple control box can be connected to the AUX connector for externally controlling the lens zoom/focus and motorized pan/tilt head from a personal computer.
- > **Three applications files (standard, observe, microscope)**
 - User settable DTL, masking, knee, and other functions.
- > **Remote filter wheel (option: FD-Z5)**
 - The optical filter wheel can be controlled. (RS-232 C)
- > **Microphone input (3.5φ jack) equipment**

specifications

CCD	2/3" 2.2m pixels IT-CCD
Total pixels	2010(H)x1086(V)
Effective pixels	1920(H)x1080(V)
Effective image area	9.6x5.4mm
Aspect ratio	16:9
Scan format	1125/2:1 interlace
Scan frequency	Hor.: 33.71625KHz Ver.: 59.94Hz
Horizontal resolution	1000 lines: Y out
Standard sensitivity	2000 lx / F8
Minimum illumination	16 lx (100%, F1.4, + 12dB)
S/N	50 dB Y out
Filter wheel	3200K,5600K,5600k, + 1/6ND
Shutter PRESET	1/100,250,500,1000,2000,4000,10000 s
Lock Scan	1/60.27 to 1/11250 s (1H step)
AES	OFF to 1/1,000 s (1H step)
Long term integration	1/30 to approx. 8 s (Field or Frame integration)
Power supply voltage	12 VDC
Power consumption	approx. 22 W
Dimensions (WXHXD)	98mm x 105mm x 180mm
Weight (g)	approx. 1,500G (3.3 lb.)
Ambient temperature	
(operating)	-10° to +45° C
(storage)	-20° to +60° C

Input signals

Genlock (multi-pin connector)	Trinary sync 0.6 Vp-p ± 3dB, 75Ω
	Binary sync 0.3 ± 0.1 Vp-p, 75Ω
	HD VD (nega) 2Vp-p ± 3dB, 75Ω

Output signals

Video output (multi-pin/monitor connector) (change by menu)	YG 1.0Vp-p, 75Ω
	PB/B 0.7 Vp-p, 75Ω
	PR/R 0.7 Vp, 75Ω
Sync output (multi-pin/monitor connector)	Trinary sync 0.6 Vp-p, 75Ω
	Binary sync 0.3 Vp-p, 75Ω
	HD VD (nega) 2 Vp-p, 75Ω
	WE (nega) TTL (monitor connector)

Siral data input/output (4-pin connector) (internal switch)

1.5 Vp-p ± 3dB, high (for RC-Z3)
RS-232C (for Personal Computer)

Audio output (multi-pin connector)

-20dBm, 600Ω /-60 dBu, high impedance

standard composition

Camera head DK-H3	1
Lens Mount Cap	1
Remote Plug (HR10-7P-4P)	1
Operation Manual	1

options

Camera control panel	RC-Z3
AC adaptor	IA-60a (I.D.X.)
RS-232C adaptor	JU-Z2
Remote filter wheel	FD-Z5

recommended

Remote control 15x zoom (Fujinon)	HA15X8BERD
Remote control 16x zoom (Canon)	HJ16X8B4 IAS