

**Preliminary****HDTV digital color camera**

# DK-H31



The new DK-H31 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 1.8 million-gate gates single chip DSP. This high-tech DSP, offering 30-bit accuracy, was designed for Hitachi's broadcast camera line to outperform traditional analog signal processing. The DK-H31's functions can easily be controlled remotely from a personal computer or dedicated control panel. Command and communications protocol are available to users wishing to build custom software control applications.

## Features

### ● High S/N with HD-SDI

Outstanding Signal-to-noise ratio >54dB measured on the HD-SDI (1080i) output.

### ● 12-bit ADC with the latest generation Hitachi DSP

High dynamic range and color fidelity are achieved by employing 12-bit analog-to-digital converters on the RGB CCDs' outputs. Hitachi is leading developer for High performance CPU & DSP in Broadcast Fields. Hitachi's highest 0.18µm VLSIC processor with 3 million gates. 30-bit internal processing to provides high dynamic range with superb video stability, Maintenance Free

### ● High Resolution

The three 2/3-inch 2.2million pixel CCDs with microlenses and digital signal processing deliver >1000 TV 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

- Six 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.

### ● 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 7 divided sensing areas and an iris gate area with variable size and position.
- 2 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).

Pre-programmed files also allow the user to adjust Detail, Masking, knee, and other functions.

### ● Remote filter wheel

The optical filter wheel can be controlled with RS232C command protocol.

## Standard composition

Camera head DK-H31	1
Lens Mount Cap	1
Operation Manual	1

## Options

Camera control panel	RC-Z3/RU-3300N
AC adaptor	IA-60a (I.D.X)

## Specifications

CCD	2/3" 2.2 M pixels IT-CCD
Total pixels	2010(H) x 1086(V)
Effective pixels	1920(H) x 1080(V)
Effective image area	9.6x5.4 mm
Aspect ratio	16:9
Scan format	1125 / 2:1 interlaced
Scan frequency	Hor. :33.71625KHz(28.125khz) Ver. :59.94Hz(50Hz)
Horizontal resolution	1000TV lines Y out
Standard sensitivity	2000 lx / F8
Minimum illumination	0.05 lx (F1.4, +18dB, Integration mode)
S/N	54 dB HD-SDI out
Filter wheel	3200K, 5600K, 5600K +1/16ND, 5600K +1/64ND
Shutter	PRESET 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000(S)
Lock Scan	1/62 to 1/985 s
AES	OFF to 1/1000 s
Power supply voltage	12 V DC
Power consumption	approx. 20 W
Dimensions (W x H x D)	99 mm x 105 mm x 155 mm
Mass	approx. 1.5kg
Ambient temperature	(operating) 0 to +40 °C (storage) -20 to +60 °C

### Input signals

Genlock (BNC connector)	Tri-level sync 0.6 Vp-p ±6dB, 75Ω
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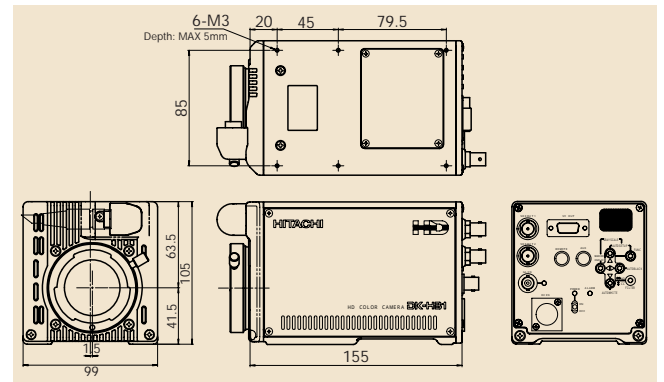
### Output signals

HD-SDI 2 output (BNC connector)	0.8 Vp-p, 75Ω
Video output (monitor connector) (selection by menu)	Y or G 1.0 Vp-p (with sync), 75Ω PB or B 0.7 Vp-p, 75Ω PR or R 0.7 Vp-p, 75Ω Tri-level sync 0.6 Vp-p, 75Ω

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

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

## Dimensions



**CAUTION:** To ensure safe operation, please read the instruction manual before using this product.

These Specifications are subject to change without notice.

## Hitachi Kokusai Electric Inc.

Head Office : 14-20 Higashi-Nakano 3-choume, Nakano-ku, Tokyo 164-8511, Japan  
Phone : +81(0) 3-3368-6111, Fax : +81(0) 3-3365-9119  
URL : <http://www.h-kokusai.com>

Beijing Office : Beijing Fortune Building 5, Dong San Huan Bei-lu, Chao Yang District, Beijing, 100029 China  
Phone : +86(0) 10-6590-8155/8156, Fax : +86(0) 10-6590-8757

Hitachi Denshi America, Ltd. URL : <http://www.hitachidenshi.com>  
Headquarters and Northeast Office : 150 Crossways Park Drive, Woodbury, New York 11797, U. S. A.  
Phone : (+1) 516-921-7200, Fax : (+1) 516-496-3718

West Office : 371 Van Ness Way, Suite 120 Torrance, CA 90501, U. S. A.  
Phone : (+1) 310-328-6116, Fax : (+1) 310-328-6252

Midwest Sales : Phone : (+1) 330-334-4115, Fax : (+1) 516-496-3718  
Service : (+1) 989-345-5379

South Sales : Phone : (+1) 770-972-4724, Fax : (+1) 516-496-3718

Parts Center : Phone : (+1) 516-682-4435, Fax : (+1) 516-921-0993

Latin Sales : Phone : (+1) 516-682-4420, Fax : (+1) 516-496-3718

Hitachi Denshi Canada, Ltd. URL : <http://www.hitachidenshi.ca>

Head Office : 1 Select Avenue Unit#12 Scarborough, Ontario M1V 5J3, Canada

Phone : (+1) 416-299-5900, Fax : (+1) 416-299-0450

Eastern Office : 5795 Chemin St. Francois St. Laurent, Quebec H4S 1B6, Canada

Phone : (+1) 514-332-6687, Fax : (+1) 514-335-1664

### Hitachi Denshi (Europa) GmbH

Head Office : Weiskircher Straße 88, Jügesheim D-63110 Rodgau, Germany  
Phone : +49(0) 6106-69920, Fax : +49(0) 6106-16906  
URL : [www.hitachi-service.net](http://www.hitachi-service.net)  
General email address : [webmaster@hitachi-denshi.de](mailto:webmaster@hitachi-denshi.de)

### Hitachi Denshi (U. K.) Ltd.

Head Office : Windsor House, Britannia Road, Waltham Cross, Hertfordshire EN8 7NX, United Kingdom  
Phone : +44(0) 945-121-2177, Fax : +44(0) 945-121-2180  
Leeds Office : Brookfield House, Selby Road, Garforth, Leeds LS25 1NB, United Kingdom  
Phone : +44(0) 113-287-4400, Fax : +44(0) 113-287-4260  
URL : [www.hitachi-denshi-uk.com](http://www.hitachi-denshi-uk.com)  
General email address : [sales@hitachi-denshi-uk.com](mailto:sales@hitachi-denshi-uk.com)



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