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HV - HD 30

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Color Camera Specification

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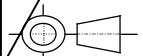
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MODEL HV-HD30				TOLERANCE		Prod. Code - Order No.	
DESIGNED	DATE	APPROVED	DATE	UNIT	TITLE	REV.	0
CHECKED	DATE	STORED	DATE				
Hitachi Kokusai Electric							
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1. Overview

The Hitachi color camera HV-HD30 is an HDTV multi format camera that supports the 1080i or 720p scan formats. The HV-HD30 is a small box type camera by combination between newly developed 1/3 inch C-MOS image sensor, C-mount prism and the Hitachi's digital signal processing technology. And the camera has HD-SDI output that is a standard interface in broadcast, so the camera can fit for variety of applications.

2. Feature

(1) Newly developed 1.3 million pixels C-MOS image sensor

Newly developed C-MOS image sensor's picture is very clear by 60 fps (or 50 fps) progressive scan. And the sensor does not have vertical smear, so the picture is not adversely affected even if high light objects appear in the picture.

(2) Multi format

Switchable between 1080i and 720p HDTV output.

(3) Small size

Since the lens mount is C-mount, a commonly used lens mount in the industrial field, the HV-HD30 is a very compact HDTV camera that has an HD-SDI output. The HV-HD30 also has an adjustment of flange back, so the camera can be used with many type of lens.

(4) Picture quality improvement functions

- Knee
- Flare
- Master black
- Black and Gain control for R channel and B channel
- Dynachroma
- Masking
- DTL

(5) Electronic shutter

- Preset (6 position)
- Lock scan
- AES (Auto Electric Shutter)

(6) Auto control function

- Auto white balance
- ALC (In combination of gain, iris, and shutter)
- ASC(Auto Shading Compensation, Vertical shading only)

(7) Bi-directional data transfer

A personal computer can be connected directly (RS-232C) for remotely controlling the camera functions. The camera mode data is transmitted back to the computer to allow very precise camera control. In multiple camera systems, each camera can be assigned an ID number to enable controlling multiple cameras from a single computer.

3. Specification

(1) Scan system

1080/59.94i , 1080/50i , 720/59.94p , 720/50p

(2) Image sensor

1/3-inch C-MOS image sensor

Total pixels 1312(H) x 1032(V)

Effective pixels 1280(H) x 720(V)

Effective image area 4.99 mm(H) x 2.81 mm(V)

(3) Imaging system

R, G, B 3-CMOS

(4) Optical system

1/2-inch, F1.6 prism

(5) Lens mount

C-mount (flange back 17.526 mm in air)

(6) Horizontal resolution

720 TV line

(7) Standard sensitivity

F5.6 (2000lx, 3200K, reflection ratio 89.9%)

(8) S/N

50dB

(9) Minimum illumination

10 lx (F1.6, Gain +18dB, Video level 350mV)

(10) Geometric distortion

Full screen 0% (not including lens characteristics)

(11) Registration

Full screen within 0.05% (not including lens characteristics)

(12) Gain

0dB to +18dB 1dB step

(13) Shutter

Preset 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000

Variable

1/60 to 1/5600 (@59.94Hz, 4H (approx. 90ms) step)

1/50 to 1/4600 (@50.00Hz, 4H (approx. 100ms) step)

(14) Gamma

From 0.35 to 0.55 adjustable

ON/OFF

(15) DTL function

DTL level, DTL frequency, Level dependent, Crisp, Balance, Flesh tone

(16) Scene file

4 Scene file

(17) Color bar

ARIB bar

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(18) Power supply voltage
12V DC (Stable operation at 10.5 to 15 VDC)

(19) Power consumption

approx. 6W

(20) Dimension

65mm(W) x 65mm(H) x 125mm(D)

(21) Mass

Approx. 450g

(22) Ambient temperature Operation -10 to 45 °C

B

Storage -20 to 60 °C

A

B

4. Standard composition

Color camera HV-HD30 1

Lens mount sheet 1

DC power plug 1

Lens plug 1

Operation manual 1

C

C

5. Input and output signals

(1) Input signals

HD, VD, SYNC(3 state), Serial data

(2) Output signals

HD-SDI(0.8Vp-p 1.485GHz)

Analog Video output R, G, B(700mVp-p)

Y(1Vp-p), Pb, Pr(700mVp-p)

D

HD, VD, SYNC(3 state), Serial data, Lens iris control

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6. Pin assignment of connectors

D-SUB

Pin number	Signal name
1	R/PR
2	G/Y
3	B/PB
4	NC
5	GND
6	GND
7	GND
8	GND
9	UNREG +12V in
10	NC
11	GND
12	RXD
13	HD IN/HD OUT/ SYNC OUT
14	VD IN / VD OUT
15	TXD

REMOTE

Pin number	Signal name
1	UNREG +12V OUT
2	RXD
3	TXD
4	GND

POWER

Pin number	Signal name
A	GND
B	UNREG +12V IN
C	NC

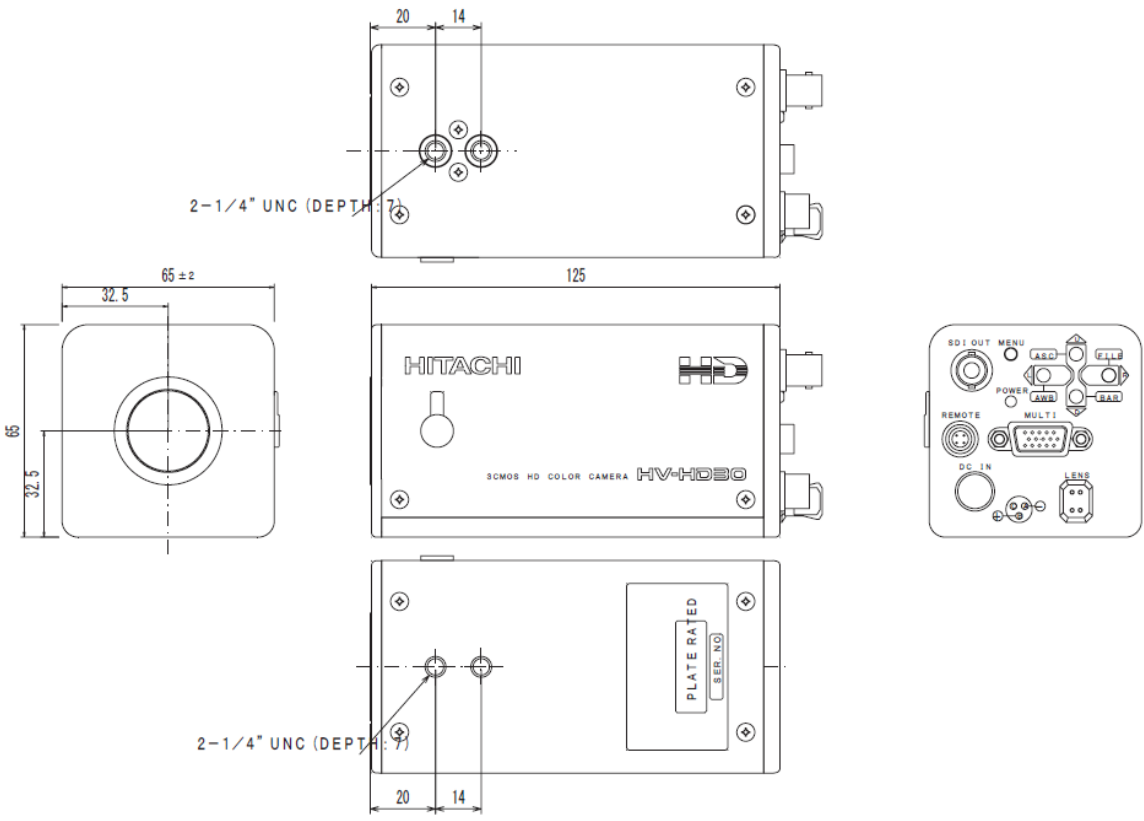
LENS

Pin number	Signal name
1	UNREG +12V OUT
2	NC
3	IRIS CONT
4	GND

7. Dimensions

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8. Accessory

Camera control box
 Junction box

RC-Z3
 JU-Z2

9. System

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