

HV-D20

HIGH-PERFORMANCE, MULTI PURPOSE
1/2" C-MOUNT 3CCD COLOR CAMERA



MAJOR FEATURE

● C-mount

The camera uses a C mount lens, which is the de facto standard in the industry.

● One chip LSI

Hitachi's leading edge processing technology (0.18 μm , internal core 1.8V drive, and 3 million gates) is contained on a single newly developed ultra LSI chip. The system is compact and consumes very little power.

● High picture quality

High resolution and sensitivity are achieved through the use of advanced CCD technology and three 1/2 inch 470,000-pixel CCD's. Together with the 12-bit A/D converter and 14-bit internal processor, a horizontal resolution of 800 TV lines and 62dB signal to noise (S/N) are obtained with the use of the new digital noise reduction system (DNR). Clear low noise images area obtained even in high gain mode.

● 6 color independent masking

The user can adjust hue and saturation of the three primary color (R, G, B) and complementary color (Mg, Ye, Cy) independently.

● Auto Shading Compensation (ASC)

The ASC function can automatically compensate for color shading errors caused by interaction between the lens and prism assembly in C-Mount optical systems. Three modes of shading are provided and can be selected according to the cameras application, a color shading mode, a two-dimensional luminance-shading mode, or a flat shading mode.

● Intelligent ALC (Auto Level Control)

Unattended operation under a wide range of illumination levels is possible with the selection of the auto mode from the main menu. The built-in microprocessor controls the gain (AGC) function, the auto electronic shutter (AES), and auto iris function so the proper video level is maintained over a wide range of light levels.

● RS-232C Interface

Control of camera functions and storage of setup data can be performed with the use of a personal computer through the use of the RS-232C interface.

Specifications

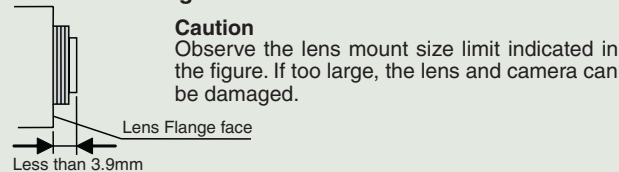
Color system	PAL
Optical system	1/2" f1.6 prism
Imaging system	RGB system, 3CCDs
Imaging device	1/2" CCD
Total number of pixels	795(H)×596(V)
Effective number of pixels	752(H)×582(V)
Sensing area	6.35(H)×4.78(V)
Scanning system	2:1 interlace
Sync system	Internal/external (VBS, BBS or HD/VD)
Horizontal resolution	800 TV lines, luminance signal center (Y out and DTL off)
S/N	62dB type (DNR on), 59dB type (DNR off) (Y OUT, γ=1, DTL off, Gain 0 dB)
Standard sensitivity	2000 lx, F11
Minimum illumination	0.4 lx (50IRE, F1.6, GAIN+24dB, DIGITAL GAIN +12dB)
Vertical contour correction	2H
Lens mount	C mount (flangeback: 17.526mm in air)
Sensitivity selection	AGC (0 to +24dB) or GAIN (0 to +24dB step 1dB or step 3dB on remote control menu)
CCD drive function	
Preset	1/60, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000 1/10,000, 1/20,000, 1/40,000, 1/100,000 second
Lockscan	1/50.31 to 1/2024 second (step 1H), to 1/100,000 second (step approx. 10% video level)
AES	Off to 1/100,000 second
Long integration	1/25 to approx. 8 seconds (1 frame steps) (External image memory needed for continuous image)
Power supply voltage	12 V DC rated (Stable operation at 10.5 to 15V DC)
Power consumption	Approx. 5.0 W
Dimensions	65(W)×65(H)×130(D)
Mass	Approx. 450g (not including lens)
Operating ambient temperature	-10 to 45 °C
Storage ambient temperature	-20 to 60 °C

Input and output signals

Input signal conditions	
Genlock input (MULTI connector)	VBS 1.0 Vp-p±3 dB or black burst/75 Ω (sync 0.3±0.1Vp-p, burst 0.3±0.1Vp-p) HD/VD 2 to 5 Vp-p, negative
External trigger input (MULTI connector)	Low 0 VDC, High 2 to 5 VDC
Serial data input (REMOTE connector) *1	1.5 Vp-p±3dB/High (when connected to RC-Z3, JU-C20, JU-Z2) RS-232C level (when connected to personal computer)
Output signal ratings	
Component video output (BNC, MULTI connector)	VBS 1.0 Vp-p/75Ω
Y/C output (MULTI connector)	Y : 1.0 Vp-p/75Ω C : 0.3 Vp-p (burst)/75Ω
Component output (MULTI connector)	Y : 1.0 Vp-p/75Ω R-Y : 0.7 Vp-p/75Ω B-Y : 0.7 Vp-p/75Ω
RGB output (MULTI connector)	R : 0.7 Vp-p/75Ω G : 0.7 Vp-p/75Ω B : 0.7 Vp-p/75Ω
Sync outputs (MULTI connector)	HD/VD : 2 Vp-p/75Ω Sync : 2 Vp-p/75Ω
Serial data output (REMOTE, MULTI connector) *1	1.5 Vp-p/Low (when connected to RC-Z3, JU-C20, JU-Z2) RS-232C level (when connected to personal computer)
Lens iris control output (Lens connector, manual override)	1.5V (closed) to 5.5V (open) or 2.5V (closed) to 7.5V (open) Selectable

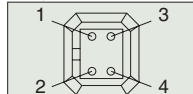
*1 Set internal switches according to connected equipment.

When lens using



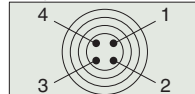
Pin arrangement

LENS connector
(plug : E4-191J-100)



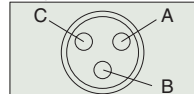
Pin.No.	Signal
1	UNREG +12V OUT
2	NC
3	IRIS CONT/VIDEO
4	GND

REMOTE connector
(plug : HR 10A-7P-4P)



Pin.No.	Signal
1	UNREG +12V OUT
2	RXD/SD IN
3	TXD/SD OUT
4	GND

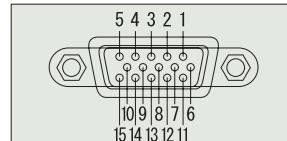
12V IN connector
(plug : R03-P3F)



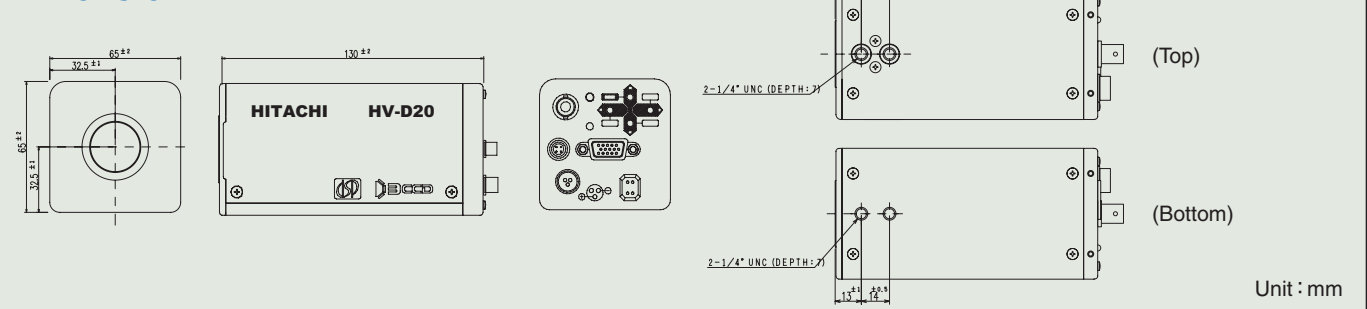
Pin.No.	Signal
A	GND
B	UNREG +12V
C	NC

Hi-Density 15-pin connector
(Plug : KEC-15P (Housing))
(Plug : JK-SP2140 (Pin contact))
(Plug : JK-C151C (Cover, inch))
(Plug : JK-C152C (Cover, miri))
(Screw : No.4-40UNC (inch))
(Screw : M2.6x0.45 (miri))

Pin.No.	Signal	Pin.No.	Signal	Pin.No.	Signal
1	R/R-Y/C OUT	6	VIDEO GND	11	GND
2	G/Y/Y OUT	7	VIDEO GND	12	RXD
3	B/B-Y/VBS2	8	VIDEO GND	13	HD IN/HD OUT/SYNC OUT
4	WE OUT	9	UNREG +12V IN	14	VD IN/VD OUT/GL IN
5	GND	10	TRIG IN	15	TXD



Dimension



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

These Specifications are subject to change without notice.

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CERTIFICATE No. JMI-0062
ISO 9001/BS 5750Pt1
EN 29001/JS Z9901