

High performance HD 30x optical zoom chassis camera with defog functionality

- High Definition 720p
- 30x Optical Zoom Lens
- Defog
- Minimum Sensitivity 0.5lx
- Electronic Image Stabilization
- 2 Methods Wide Dynamic Range

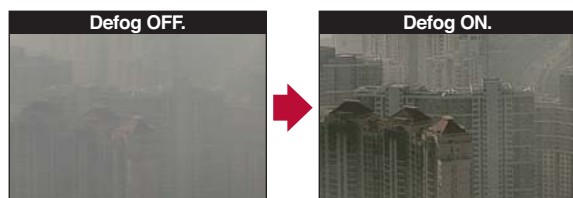
Made in Japan>>> **Features****HD high resolution camera with 30x optical zoom lens**

The DI-SC120R camera employs a 1/3" CCD sensor that outputs a 1280 x 720 high definition image. The camera supports all usage scenarios, from outdoor to indoor monitoring and surveillance.

The zoom functionality enables 30x optical zoom in high definition and achieves swift subject tracking through Hitachi's unique high speed auto focusing system. High resolution and high power zoom facilitate the accurate capturing of video providing important evidence in many applications, including urban surveillance, license plate capture from distant vehicles, train movement, particulars of people's features and clothes, and more. In addition, the camera technology enhances situational awareness by delivering clearer video of incidents taking place.

**Equipped with Defog real-time image processing**

The DI-SC120R includes a new feature, defog, that the camera processes in real time. Images are resolved for highly magnified stable images in foggy conditions such as urban surveillance, traffic monitoring and pole mounted applications. The camera measures each pixel for fog thickness and applies contrast to the image to offer a uniform image.

**Minimum subject illumination of 0.5lx**

Hitachi has combined its proprietary Digital Signal Processor(DSP) to a high sensitivity CCD sensor and 30x lens to achieve a minimum subject illumination of 0.5lx.

On top of this, the picture processing engine onboard the DSP improves image clarity and reduces noise.

▶ **Other low illumination technology**

- | Frame Noise Reduction
- | Digital Slow Shutter
- | White Spot Reduction
- | Removable IR Cut Filter

Electronic Image Stabilization (EIS)

Electronic image stabilization compensates for vibration or movement of the camera, automatically minimizing image blur.

This provides for a great range of potential applications including outdoor pole mount installations where previously the zoom magnification may have made images unusable due to vibration or camera shake causing motion blur of the images.

Wide Dynamic Range

Images in which the luminous intensity varies greatly indoors and outdoors, at the entrance of a building for example, are prone to the occurrence of whiteout or loss of dark detail, reducing visibility. The Hitachi DI-SC120R employs enhanced automatic Wide Dynamic Range correction functionality in order to improve visibility in these conditions. Two methods are used, resulting in double the effectiveness of the previous model (VK-S655N). The first method uses a composite of images taken at two different shutter speeds, while the second employs a contrast offset that corrects the contrast for an image pixel by pixel. This enabled improved recognition of the subject even in areas of extremely large differences in illumination.

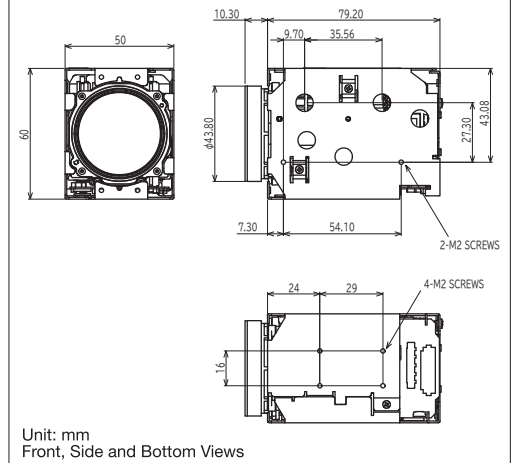
Other Key Features

- | Dual Protocol(AFP/EAP)
- | 3-D Privacy Masking
- | Wide operating Temperature range - 10 to 60 degree C
- | Motion Detection
- | 16 bit Digital Output
- | Digital Image Flip
- | Frame Noise Reduction
- | Low Power Consumption
- | RoHS Compliant

Specifications

		DI-SC120R
CCD Image Sensor	Image Size	6mm Dia. (TYPE 1/3)
	Total Pixels	1348 x 746
	Effective Pixels	1296 x 736
	Progressive Scan	YES
Lens	Output Pixels,Frame Rate	1280 (H) x 720 (V)/30P, 25P
	Optical Zoom	30X (f=4.4 — 132mm)
	Practical f-value	4.4 — 132mm
	Practical H.angle	62.9° (w) — 2.2° (t)
	F-value	F1.4 (w) — F4.6 (t)
Focus	Zoom Speed (Normal/High)	4.9s / 3.9s
	Auto	VAF
	Manual (Far/Near)	Provided (soft)
IR Removable	Focal Range (setting)	infinity - 1.5m(t) - 0.01m(w)
	Auto	Pro.AER, Pro.AER +
Durability	Manual (ON/OFF)	Provided (soft)
	Zoom / Focus / Iris	500k cycles
	IR Removable	50k cycles
DSP		DSP8 + FPGA
-Serial Interface-	Method : speed	RS-232C : 57.6k / 38.4k / 19.2k / 9.6k / 4.8k bps
	Command Protocol	EAP(Echo control based on Address Protocol)/ AFP(Ack control based on Function Protocol)
-Functions-	RS-232C logic voltage level	3.3V
	Digital Slow Shutter	YES w/o WDR
	Wide Dynamic Range	OFF/WDR/AD-WDR/Contrast offset
	Image Freeze	OFF/ON
	Mirror	OFF/ON
	Vertical Invert	OFF/ON
	Image Reverse	OFF/ON
	Privacy Masking	OFF/ON [8 zone 3-D (4/1screen)]
	Motion Detect	OFF/ON
	Motion Tracking	YES (area assignable)
	Frame Noise Reduction	OFF/ON
	Various customizable settings	YES [Preset store (max.111), WB tuning]
	White Spot Reduction	YES
	Slow AE Response	1x - 254x
Defog		OFF/ON
Digital Zoom (Zoom Magnification)		OFF/ON (max. 2X)
Electronic Image Stabilization		OFF/ON (Digital Zoom max. 1.3X)
Electrical Shutter	Auto	ProAE (1/30s - 1/30,000s)
	Auto (+ Digital slow shutter)	ProAE+ (1/4s - 1/30,000s)
	Manual (Shutter priority)	1/4s - 1/10,000s
Iris		Auto/offset
	BLC	OFF/ON
White Balance		Auto/Manual
Resolution Horizontal (Typ.)		600 TVL (720P)
Min. Sensitivity (Typ.)	IR-cut ON (1/30s)	0.5 lx
	IR-cut ON (1/4s)	0.1 lx
	IR-cut OFF (1/4s)	0.005 lx
	Condition	F1.4 (w) , 350mV equivalent
Sync System		Internal
Power (@25°C)	Supplied voltage	9 — 12V DC
	Supplied current (@9V) all motors inactive	330 mA
	Supplied current (@9V) Focus/Zoom motors active	420 mA
	Supplied current max. (@9V) Focus/Zoom/IR motors active	650 mA
	Consumption max. (@9V)	5.9 W
	Video Output (Digital)	YUV422 (Y8bit + C8bit + HSYNC + VSYNC + Clock)
Dimensions (W x H x D)		50 x 60 x 89.5mm (w/ M-case)(excluding projection)
Weight		Approx. 260g (w/ M-case)
No. of Connectors		2 (36pin FFC/40pin Micro Coaxial)
Operating Temp. (Recommended)		-10 — 60°C (0 — 40°C)

Outer Dimensions



Micro coaxial cable can be used for digital interface.

Micro coaxial cable available options.

No.	Model	Length	Model Number
1	Micro coaxial 40pin	60mm	40MCC060
2	0.4mm pitch	120mm	40MCL120

•Design and specifications are subject to change without notice.

•The expanded image and comparison photos in this catalog are simulations.

HITACHI
Hitachi, Ltd. Tokyo Japan

Hitachi America, Ltd.
900 Hitachi Way, Chula Vista, CA 91914-3556
Paul.watkins@hal.hitachi.com
Kevin.Burleson-Webb@hal.hitachi.com
http://www.hitachi-america.us/products/consumer/digitalmedia/hitachi_links/index.html

Hitachi Home Electronics Asia (S) Pte. Ltd.
438A Alexandra Road #01-01/02/03,
Alexandra Technopark, Singapore 119967
Tel: +65-6536-2520 Fax: +65-6536-2521
<http://www.hitachiconsumer.com>

Hitachi Europe, Ltd.
7th Floor, 40 Holborn Viaduct
London EC1N 2PB, United Kingdom
Tel: +44 1628 585715 Fax: +44 1628 585757
chassis.cameras@hitachi-eu.com
<http://www.hitachi.eu>

Hitachi Sales Corporation of Taiwan
2nd F1., No. 65 Nanking E Rd.,
Sec. 3 Taipei, 104 Taiwan
Tel: +866 (02) 2516 0500 Fax: +866 (02) 2516 0512