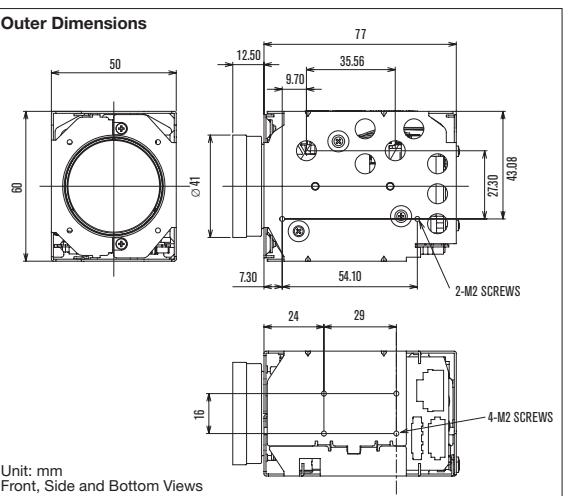


Specifications

Signal Format	VK-S654N (NTSC)	VK-S654EN (PAL)
CCD Image Sensor		
Image Size	4.5mm Dia. (TYPE 1/4)	
Total Pixels	410k (811 x 508)	470k (795 x 596)
Effective Pixels	380k (768 x 494)	440k (752 x 582)
Progressive Scan	YES	
Lens Optical		
Zoom Magnification	35X	
Practical f-value	3.4-119mm	
Practical Horizontal Angle	58.2'(w)* 1.8'(t)	
F-value	F1.4(w) - F4.2(t)	
Zoom Speed (Manual)	4.6s*6.6s (soft)	
(In Preset : Trace / No-)	3.2s/2.0s (soft)	
Focus		
Auto	VAF	
Manual (Far/Near)	Provided	
Focal Range (Setting)	infinity-1.5m(t) - 0.01m(w)* (soft)	
Removable IR Cut Filter		
Auto	Pro. AER+* (OFF - ON - 1/4* - 1/4k) Pro. AER+* (OFF - ON - 1/3* - 1/4k)	
Manual (ON/OFF)	Provided (soft)	
Durability		
Zoom/Focus/Iris	500k cycles	
IR Removable	50k cycles	
DSP Functions	DSP-8	
Digital Slow Shutter	YES w/o WDR	
Frame Output	OFF*/ON (soft)	
Wide Dynamic Range	OFF*/ON (Auto* [offset] /Manual) (soft)	
Frame Noise Reduction	OFF/ON* (soft)	
Image Stabilizer	OFF/ON (Digital Zoom max. 1.3X)	
Image Reverse	OFF/ON (soft)	
Mirror	OFF/ON (soft)	
Vertical Invert	OFF/ON (soft)	
Image Freeze	OFF/ON (soft)	
B&W	OFF/ON (soft)	
Privacy Masking	OFF/ON* [2zone 2-D* / 8zone 3-D (4/1 screen)] (soft)	
Fixed Privacy Masking	OFF*/ON [optional:12 x 24 units] (soft)	
Title Display	OFF*/ON [24 characters] (soft)	
Motion Detect	OFF*/ON (soft)	
Various Customizable Settings	YES [preset store (max.111), WB tuning]	
Dynamic Spot Cancel	YES	
Slow Response AE	1x* - 254x	
Digital Zoom		
Zoom Magnification	OFF*/ON (soft : max. 12X)	
Electrical Shutter		
Auto	Pro. AE (1/60 - 1/4ks)	Pro. AE (1/50 - 1/4ks)
Auto (+DS Shutter)	Pro. AE+* (1/2-1/4* - 1/4ks:Seamless)	Pro. AE+* (1/1.5-1/3* - 1/4ks:Seamless)
Manual	Shutter priority 1/1-1/30ks:soft	Shutter priority 1/0.75-1/30ks:soft
	Exposure priority F1.4 - F32 : soft	
Manual (Sensitivity)	AGC priority 0 - 30 dB : soft	
Iris	64X, 32X, 16X, 8X, 4X, 2X (soft)	
BLC (in WDR OFF mode)	Auto* (offset: soft)	
White Balance	OFF*/ON (soft)	
Horizontal Resolution	Auto* (manu: soft)	
Normal (1/60s)(NTSC)/(1/50s)(PAL)	typ.540 min.520 TVL	
Luminance S/N Ratio	More than 50 dB	
Min. Sensitivity (Typical)		
IR-cut ON (1/60s)(NTSC)/(1/50s)(PAL)	1.0 lx	
IR-cut ON (1/4s)(NTSC)/(1/3s)(PAL)	0.1 lx	
IR-cut OFF (1/4s)(NTSC)/(1/3s)(PAL)	Approx. 0.01 lx (B/W)	
Condition	(F1.4(w), 50IRE)	
Sync System	Internal/Line-Lock (60Hz)	Internal/Line-Lock (50Hz)
Power		
Supplied Voltage	9 - 12V DC	
Supplied Current @9V	290mA	
Max. @9V	380mA	
Consumption @9V	2.6W	
Max. @9V	3.4W	
Video Output (NTSC/PAL)	VBS:1.0Vp-p, Y/C Output	
Video Output (digital output)	YUV422 8bit output (REC656 type)	
Dimension (W x H x D)	50 x 60 x 89.5mm (w/ M-case)	
Weight	Approx. 250g (w/ M-case)	
No. of Connectors	4 [(9pin/4pin : Analog Output) , (24pin/30pin : Digital Output)]	
Operating Temp. (Recommended)	0°C - 60°C (0°C - 40°C)	

* Default mode.



Zoom chassis camera VK-S654N/EN





High-performance digital surveillance camera with 35x optical zoom

Advanced digital signal processing (DSP) technology ensures outstanding color reproduction and low light performance, capable of capturing details such as facial features, clothing, and automobile colors that can serve as vital evidence. Setting a new standard for imaging quality, night or day, the Hitachi VK-S654N/EN marks another phase in the evolution of high-quality digital surveillance systems.

35x optical zoom lens with 12x digital zoom



A newly designed 35x auto-focus optical zoom lens delivers enhanced resolution, clearly capturing subject details at a distance. Proprietary Hitachi auto-focus control makes it possible to track rapidly moving subjects, while the addition of a 12x

digital zoom delivers a maximum zoom factor of 420x. The improved lens design produces crisp clear details, even in peripheral areas of the image.

Outstanding color reproduction



Advanced digital signal processing ensures outstanding color reproduction. Characterized by superior ability to accumulate available light, the high-performance CCD produces sharp, clear images even in challenging lighting conditions. And accurate color reproduction enhances security performance in a variety of surveillance scenarios. This digital surveillance camera can capture details such as facial features, clothing, and automobile colors clearly and accurately, producing true-to-life surveillance images that can serve as vital evidence.

Technology for low-light performance

High-performance CCD teams with digital signal processing to achieve outstanding low-light performance, capable of capturing images in standard mode at a minimum subject illumination of 1.0 lx.

Frame noise reduction



Hitachi's frame noise reduction minimizes random noise and after-images often associated with moving subjects, making this high-performance unit suited to a variety of surveillance scenarios. Producing clear, sharp images even in challenging low-light conditions, this technology also facilitates image compression in network camera systems.

Digital slow shutter

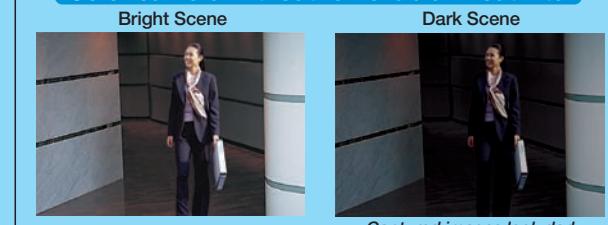
Digital processing boosts sensitivity to a maximum of 1/1 second exposure time, making it possible to capture bright, clear images in a variety of lighting situations.

Removable IR cut filter

VK-S654N/EN with removable IR cut filter



Color camera without removable IR cut filter



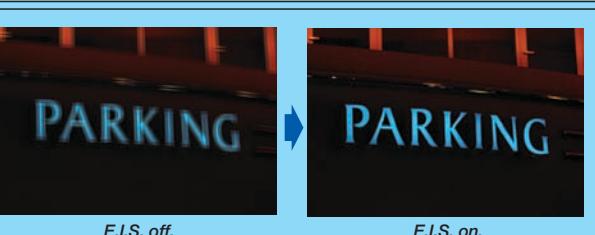
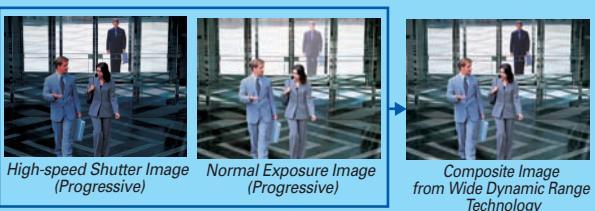
In daylight conditions, the IR cut filter ensures clear, high-quality color images. At night or in other very low light situations, the IR cut filter is automatically removed to allow capture of bright, high-contrast black and white images.

Engineered for exceptional image quality

Wide dynamic range

When a surveillance scene includes bright and dark areas, alternate images are captured at optimum exposure for both levels of illumination, and the resulting two fields are combined into a single frame. This produces clear, glare-free images in a variety of lighting conditions, such as entrances with varying levels of indoor/outdoor illumination and situations where backlighting can make it difficult to identify facial features.

Operation of Hitachi Dynamic Range Technology



Progressive scanning

Conventional surveillance camera systems using interlaced scanning are not capable of producing clearly identifiable images of moving cars or people. The interlace method uses two scans to create a single image frame, producing jumpy, poorly defined images when still images are pulled from the video feed. Progressive scanning incorporated in the Hitachi VK-S654N/EN records the frame in a single sequential scan, creating sharp, high resolution still images, with clearly defined lines and contours.

Electronic image stabilization

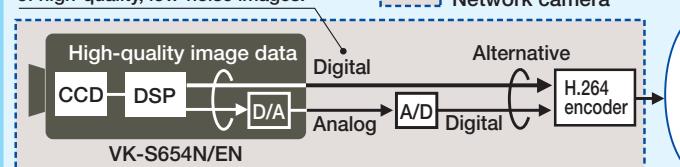
Based on Hitachi's track record of pioneering image stabilization technology, electronic image stabilization compensates for vibration or movement of the camera, automatically minimizing image blur.

Digital output ensures exceptional image quality

The Hitachi VK-S654N/EN relies on digital output to ensure lossless, noise-free image data, maximizing camera performance and preserving the exceptional quality of captured images.

Zoom chassis camera incorporated in network camera

Digital output ensures transmission of high-quality, low-noise images.



Digital output is a REC656 data stream (YUV422, synchronous embedded 8-bit signal, interlaced output), compatible with a large number of encoder ICs.

Digital output frequency & resolution*

	VK-S654N(NTSC)	VK-S654N(PAL)
Clock frequency	28.6MHz	28.5MHz
Output resolution	752(H) X 480(V)	736(H) X 576(V)

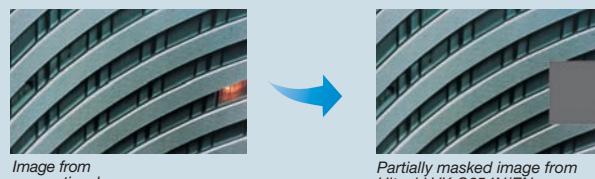
*Due to high-resolution CCD (NTSC 410K/PAL 470K), frequency and resolution differ from REC656 specifications.



Micro coaxial cable can be used for digital interface.

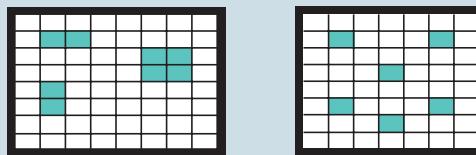
Full range of basic visual surveillance functions

Privacy zone masking function



This function makes it possible to mask the camera's view of areas subject to privacy concerns, such as windows and entrances. The position and size of the mask is maintained, even when the camera pans, tilts or zooms, making this unit particularly suitable for surveillance of public areas.

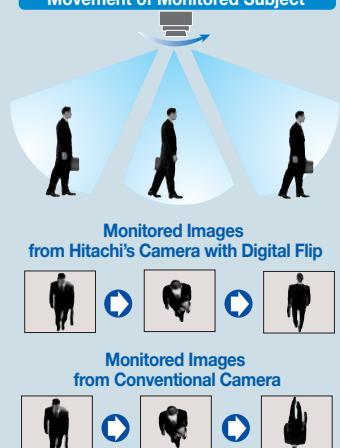
Motion detection



This function triggers an alarm when motion is detected in designated areas of the surveillance frame. Motion detection can be activated in as many as eight frame blocks out of a total of 64.

Digital image flip

Movement of Monitored Subject



Images can be flipped vertically or horizontally, enabling tracking of subjects moving underneath the camera in a single continuous shot.

Built with the environment in mind

The RoHS-compliant VK-S654N/EN meets guidelines for permissible levels of lead, mercury, cadmium, hexavalent chrome, PPBs and PBDE, making it an eco-friendly way to implement high-tech surveillance.

Compatibility facilitates system upgrades

The VK-S654N/EN offers effortless upward compatibility with the VK-S654R/ER, making it easy to upgrade and incorporate the latest technical advances in your surveillance systems.