

## SNC-EM642R

Outdoor ruggedised minidome  
Full HD IP Network Camera with  
IR (E-Series)



### Overview

**Tough, round-the-clock surveillance in all weathers, with excellent Full HD quality and high sensitivity, plus image stabilisation and Advanced IR technology**

This minidome network camera delivers Full HD quality images around the clock – indoors or outside. The vandal- and weather-resistant SNC-EM642R is ideal for a wide range of demanding security, surveillance and monitoring applications, from banks, factories, shopping malls and offices to airports, car parks and transportation systems.

The camera captures crisp, low-noise Full HD images, even in challenging low-light conditions. The sensitive 1/2.8" type Exmor R CMOS image sensor is teamed with XDNR processing, improving low-light performance and achieving the minimum illumination of 0.006 lux (30 IRE) in colour mode.

View-DR expands dynamic range for significantly improved imaging in high-contrast and strongly backlit scenes, like sun-drenched offices or car park entrances. Image stabilisation keeps video images crisp and clear, even when the camera is subject to vibration on a mounting pole or bracket.

The camera can see in conditions of complete darkness, with

built-in IR (infrared) illumination that's coupled with Advanced IR technology to capture near and far-away objects without overexposure. The SNC-EM642R can clearly capture objects in total darkness at distances up to 60m (30 IRE) from the camera.

The addition of SD card edge storage allows video/audio data to be recorded directly by the camera when triggered by an alarm event. This provides valuable redundancy in the event of temporary network failure: recording to the network server resumes automatically when normal network connection is restored.

Installation of the SNC-EM642R is simplified by the same familiar user interface, usability and form factor as previous-generation Sony E Series cameras. The totally sealed minidome unit assures dependable operation in challenging indoor and outdoor environments. It's capable of operating in extreme temperatures (from -40°C to +50°C with PoE+, or from -30°C to +50°C with PoE). The camera's vandal-resistant design meets the IK10 standard (protection against mechanical impact), and is IP66 rated for protection against water and dust.

## Features

### **Built to effortlessly handle tough conditions**

The camera's vandal-resistant design meets IK10 standards (protection against mechanical impact). IP66-rated waterproof and dust-tight, the camera is ideal for outdoor surveillance, as well as damp or humid indoor environments where water ingress may be encountered.

### **See every scene clearly with Full HD image quality**

View fine detail in a wide range of everyday video security and surveillance environments, from retail spaces to banks and schools. The sensitive 1/2.8" type Exmor R CMOS image sensor is teamed with XDNR processing, improving low-light performance

and achieving the minimum illumination of 0.006 lux (30 IRE) in colour mode.

### **Steadier, more stable video footage**

The in-built image stabiliser minimises the effects of camera shake – for example when the camera's pole mounted or subject to mechanical vibration. With clearer, more stable video images it's easier to see what's happening in any scene.

### **Don't miss that crucial moment with Intelligent Motion Detection and Face Detection**

In-built motion detection can trigger a range of actions, from storage and transfer of images to sounding of external alarms. False alarms caused by noise, weather and environment noise are minimised by a smart processing algorithm. Human face detection is also supported, allowing rapid indexing of recordings to find events where a face is visible in the scene.

### **Clear pictures in total darkness with Advanced IR**

Built-in IR illuminators assist with clearly capturing objects in total darkness at distances up to 60m (30 IRE) from the camera. View-DR technology ensures that clear black-and-white images can be seen both near and far from the camera without overexposure.

### **Better pictures, day or night**

True D/N (Day/Night) function automatically switches the camera to Day or Night mode, depending on ambient light levels.

### **Optimum picture quality in any situation**

A choice of selectable picture modes optimises camera settings for best picture quality in a wide range of applications and lighting environments.

### **Recording quality to suit your network**

Select CBR (constant bitrate), VBR (variable bitrate) or VBR-with-cap compression modes for optimised recording quality depending on IP network conditions.

## **Edge recording on SD card for reliable operation**

SD card edge storage allows video/audio data to be recorded directly by the camera when triggered by an alarm event. This provides valuable redundancy in the event of temporary network failure: recording to the network server resumes automatically when normal network connection is restored.

## **Detect in confidence with Edge-based Analytics**

Powerful DEPA Advanced video analytics enhances Intelligent Motion Detection with rule-based alarm triggers, providing alerts with object filters like 'passing' and 'intrusion' to further reduce false alarms.

## **Reduce cabling costs with Power Over Ethernet (PoE)**

Power over Ethernet (PoE) allows the camera be powered by the same Ethernet cable that's used for data transfer, reducing installation complexity and costs.

## **View and control with your smartphone**

Remotely view live camera images with your Android or iOS smartphone or tablet. You don't even need to download a special app.

## **ONVIF (Open Network Video Interface Forum) compliance**

Support for ONVIF simplifies interoperability with other network video devices. The ONVIF (Open Network Video Interface Forum) defines a common protocol for the exchange of information between network video devices, including automatic device discovery and video streaming.

## **Quick, easy installation**

Quick, easy adjustment of focus and zoom settings simplifies installation while reducing maintenance time. Configuration of network settings is made simple with the supplied SNC Easy IP Setup Guide application.

## Dependable all-weather operation

The camera can operate reliably over a wide -30 to +50°C temperature range. Ideal for outdoor use, it is IP66 rated, water-proof and dust-tight.

## Specifications

Camera	
Image Sensor	1/2.8-type progressive scan Exmor R CMOS sensor
Number of Effective Pixels	Approx. 2.13 Megapixels
Signal System	NTSC/PAL (switchable)
Sync System	Internal synchronization
Minimum Illumination (50 IRE)	Color: 0.01 lx (F1.2, View-DR Off, VE Off, AGC On, 1/30 s, 30 fps) B/W: 0 lx (IR LED On)
Minimum Illumination (30 IRE)	Color: 0.006 lx (F1.2, View-DR Off, VE Off, AGC On, 1/30 s, 30 fps) B/W: 0 lx (IR LED On)
Dynamic Range	Equivalent to 90 dB with View-DR technology
S/N Ratio (Gain 0 dB)	More than 50 dB
Gain	Auto

Shutter Speed	1/1 s to 1/10,000 s
Exposure Control	Exposure compensation, Shutter speed, Iris
White Balance	ATW, ATW-PRO, Fluorescent lamp, Mercury lamp, Sodium vapour lamp, Metal halide lamp, White LED, One push WB, Manual, Indoor, Outdoor
Lens	CS-mount varifocal lens
Easy Zoom	Yes
Zoom Ratio	Optical zoom 3x Digital zoom 4x Total zoom 12x
Easy Focus for Setup	Yes
Horizontal Viewing Angle	105.3° to 35.6°
Vertical Viewing Angle	56.9° to 20.1°
Focal Length	f = 3.0 mm to 9.0 mm
F-Number	F1.2 (Wide) to F2.1 (Tele)
Minimum Object Distance	300 mm
	±192°

Pan/Tilt/Rotation Angle (manual)	-7° to +75° -99° to +180°
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IR Illuminator	Yes Wave length (typical): 850 nm , IR LED: 20 pieces)
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IR Working Distance (50 IRE)	40 m 131 ft.
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IR Working Distance (30 IRE)	60 m 197 ft.
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White-light LED Illuminator	No
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## Camera Features

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Day/Night	True D/N
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Day/Night linked with Easy Focus	Yes
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e-Flip	Yes
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Image Rotate	90°, 270°
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Mirroring	Yes
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Wide-D	View-DR
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Tone Correction	Visibility Enhancer
Noise Reduction	XDNR
Image Stabilizer	Electronic
Picture Mode	Yes
Privacy Masking (number)	20
Privacy Masking (shape)	Quadrangle formed by any four corner points
Privacy Masking (color/effect)	Opaque 14 colors (Black, White, Red, Green, Blue, Cyan, Yellow, Magenta, Gray (6 scales)), Mosaic
Edge Storage	Yes
Voice Alert	Yes
Vandal Resistant	IK10
Ingress Protection	IP66
Superimpose Number	3 independent positions for characters (Codec, Date & Time, Event, Text (Max. 64 characters)), 1 independent position for a logo mark
Superimpose Language	English



Menu Language	English, Japanese, Chinese (simplified), Chinese (traditional), French, Spanish, German, Italian, Korean, Portuguese, Russian, Arabic, Hindi, Vietnamese, Thai, Turkish, Polish
<h2>Video</h2>	
Resolution	1920 x 1080, 1280 x 720, 1024 x 576, 720 x 576, 720 x 480, 704 x 576, 640 x 480, 640 x 360, 352 x 288, 320 x 184 (H.264, JPEG)
Compression Format	H.264 (High/Main/Baseline Profile), JPEG
Maximum Frame Rate	H.264: 60 fps (1920 x 1080) JPEG: 60 fps (1280 x 720)
Bitrate Control Mode	CBR/VBR (selectable)
Range of Bit Rate Setting	64 Kbps to 32 Mbps
Solid PTZ	Yes
e-Varifocal	Yes
Adaptive Rate Control	H.264

Bandwidth Control	JPEG
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Multi streaming Capability	Yes (3)
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Number of Clients	20
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## Intelligent Video/Audio Analytics

Analytics Architecture	DEPA Advanced
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Intelligent Motion Detection	Yes
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Face Detection	Yes
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Tamper Alarm	Yes
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Scene Analytics	Passing, Intrusion, Left Object Detection, Removed Object Detection
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## Audio

Compression Format	G.711/G.726/AAC (16 kHz, 48 kHz)
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## System Requirements

Operating System	Windows 7 (32/64 bit) Ultimate, Professional Edition Windows 8.1 Pro (32/64 bit)
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	Windows 10 Pro (32/64 bit)
Processor	Intel Core i7 2.8 GHz or higher
Memory	2 GB or more
Web Browser	Microsoft Internet Explorer Ver. 11.0 Firefox Ver. 50.1 (plug-in free viewer only) Google Chrome Ver. 55.0 (plug-in free viewer only)
SNC toolbox	Yes
SNC toolbox mobile	Yes

## Network

Protocols	IPv4, TCP, UDP, ARP, ICMP, IGMP*, HTTP, DHCP, DNS, NTP, RTP/RTCP, RTSP over TCP, SMTP over HTTP, IPv6, HTTPS, FTP (client), SNMP (v1, v2c, v3), SSL
	*SSM (Source Specific Multicast) is supported.
QoS	DSCP
Multicast Streaming	Yes

## Support

ONVIF Conformance	Profile S, Profile T
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Authentication	IEEE802.1X
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## Interface

Analog Video Output	BNC x1, 1.0 Vp-p, 75 Ω, unbalance, sync negative 700 TV lines (analog video)*2
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Analog Monitor Output for Setup	Phono jack x1
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Microphone Input	Mini jack (monaural)
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Line Input	Mini jack (monaural)
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Line Output	Mini jack (monaural) Maximum output level: 1 Vrms
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Network Port	10BASE-T/100BASE-TX (RJ-45)
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Card Slots	SD x 1
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Confirmed SD Card Type	Max. 256GB *3
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## General

IEEE802.3at compliant (PoE/PoE+)

Power Requirements	system)
Power Consumption	<p>Max. 18 W (IEEE802.3at (PoE+))          Max. 12.8 W (IEEE802.3af (PoE))</p>
Operating Temperature	<p>-40°C to +50°C (PoE+)          -30°C to +50°C (PoE)          *If the camera is installed in high-temperature environments and subjected to direct sunlight, it is highly recommended to use the optional SNCA-WP602 Weather Protector.</p> <p>-40°F to +122°F (PoE+)          -22°F to +122°F (PoE)          *If the camera is installed in high-temperature environments and subjected to direct sunlight, it is highly recommended to use the optional SNCA-WP602 Weather Protector.</p>
Cold Start Temperature	<p>-30°C to +50°C (PoE+)          -20°C to +50°C (PoE)          -22°F to +122°F (PoE+)          -4°F to +122°F (PoE)</p>
	-20°C to + 60°C

Storage Temperature	-4°F to + 140°F
Operating Humidity	20 % to 90 % (no condensation)
Storage Humidity	20 % to 80 % (no condensation)
Built-in Heater	Yes
Dimensions (W x H x D)*1	<p>φ166 x 128 mm</p> <p>φ6 5/8 inches x 5 1/8 inches</p>
Mass	<p>Approx.1740 g</p> <p>Approx. 3 lb 13 oz</p>
External Material	<p>Upper case: ADC12</p> <p>Lower case: ADC12</p> <p>Dome cover: PC</p> <p>Cap:PC</p>
External Color	<p>Top cover: Munsell 4.4BG 8.4/0.2</p> <p>Lower case: Munsell 4.4BG 8.4/0.2</p> <p>Cap: Munsell 4.4BG 8.4/0.2</p>
Safety Regulations	<p>UL2044, IEC60950-1 (CB)</p> <p>VCCI (Class A), FCC (Class A), IC (Class A)</p> <p>Emission: EN55032 (Class A)</p> <p>Immunity: EN55024+ EN50130-4</p> <p>Emission: AS/NZS CISPR32 (Class A)</p> <p>KC</p>

## EMC-TR

Supplied Accessories	Bracket (1) Template (1) Wire rope (1) Wrench (1) Camera unit mounting screws (4) Screw (M4 × 8) (2) Safety Regulations (1) Cable holder (for conduit) (1) LAN cable holder (1) Operating Instructions - Download site Information (1)
Optional Accessories	YT-ICB45 (In-ceiling Bracket) SNCA-WP602(Weather Protector)

## Notes

\*1 The values for dimensions are approximate.

\*2 Monitor display ratio 4:3

\*3 The maximum number of event recording in the SD card is 4000. It may not use the full capacity of the SD card, depending on the limitation set for the event recording.





## Gallery

