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SNC-VM642R

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

Overview

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

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This minidome network camera delivers Full HD quality images around the clock – indoors or outside. The vandal- and weather-resistant SNC-VM642R 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. Video can be captured at a high maximum frame rate of 60fps – allowing smoother, more accurate viewing of moving objects such as people or vehicles.

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-VM642R can clearly capture objects in total darkness at distances up to 100m (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-VM642R is simplified by the same familiar user interface, usability and form factor as previous-generation Sony V Series cameras. The totally sealed minidome unit assures dependable operation in challenging indoor and outdoor environments. It's capable of operating in extreme temperatures. The camera's vandal-resistant design meets the IK10 standard (protection against mechanical impact), and is IP66 rated for protection against water and dust.

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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

- **Capture smooth, fluid movement at 60fps**

  Video images can be captured at a high frame rate of 60fps, allowing precise analysis when stepping through recorded footage frame by frame. It's ideal for applications like city surveillance where it's essential to see what's happening with split-second accuracy.

- **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 100m (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 temperature range. Ideal for outdoor use, it is IP66 rated, water-proof and dust-tight.

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Technical 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
● Pan/Tilt/Rotation Angle (manual)	±192° -7 ° to +75 ° -99 ° to +180 °
● IR Illuminator	Yes Wave length (typical): 850 nm , IR LED: 20 pieces)
● IR Working Distance (50 IRE)	60 m 197 ft.
● IR Working Distance (30 IRE)	100 m 328 ft.
● White-light LED Illuminator	No

Camera Features

● Day/Night	True D/N
● Day/Night linked with Easy Focus	Yes

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● e-Flip	Yes
● Image Rotate	90°, 270°
● Mirroring	Yes
● Wide-D	View-DR
● 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

Video

● 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
● Multi streaming Capability	Yes (3)
● Number of Clients	20

Intelligent Video/Audio Analytics

● Analytics Architecture	DEPA Advanced
● Intelligent Motion Detection	Yes

● Face Detection		Yes
● Tamper Alarm		Yes
● Scene Analytics		Passing, Intrusion, Left Object Detection, Removed Object Detection

Audio	
● Compression Format	G.711/G.726/AAC (16 kHz, 48 kHz)

System Requirements	
● Operating System	Windows 7 (32/64 bit) Ultimate, Professional Edition Windows 8.1 Pro (32/64 bit) Windows 10 Pro (32/64 bit)
● Processor	Intel Corei7 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 Support	Yes
● ONVIF Conformance	Profile S
● Authentication	IEEE802.1X

Interface	
● Analog Video Output	BNC x1, 1.0 Vp-p, 75 Ω, unbalance, sync negative 700 TV lines (analog video)*2
● Analog Monitor Output for Setup	Phono jack x1
● Microphone Input	Mini jack (monaural)
● Line Input	Mini jack (monaural)
● Line Output	Mini jack (monaural) Maximum output level: 1 Vrms
● Network Port	10BASE-T/100BASE-TX (RJ-45)
● Alarm Input (Sensor Input)	x2, make contact, break contact
● Alarm Output	x2, AC 24V/DC 24 V, 1 A (mechanical relay outputs electrically isolated from the camera)
● Card Slots	SD x 1
● Confirmed SD Card Type	Max. 256GB *3

General	
● Power Requirements	12 V DC ± 10% 24 V AC ± 20%, 50 Hz/60 Hz IEEE802.3at compliant (PoE/PoE+ system)

● Power Consumption	Max. 22 W (AC 24 V/DC 12 V) Max. 18 W (IEEE802.3at (PoE+)) Max. 12.8 W (IEEE802.3af(PoE))
● Operating Temperature	-40°C to +60°C (IR Off, PoE+, AC 24 V, DC 12 V) -40°C to +50°C (IR On, PoE+, AC 24 V, DC 12 V) -10°C to +60°C (IR Off, PoE) -10°C to +50°C (IR On, PoE) -40°F to +140°F (IR Off, PoE+, AC 24 V, DC 12 V) -40°F to +122°F (IR On, PoE+, AC 24 V, DC 12 V) 14°F to +140°F (IR Off, PoE) 14°F to 122°F (IR On, PoE)
● Cold Start Temperature	-30°C to +60°C (IR Off, PoE+, AC 24 V, DC 12 V) -30°C to +50°C (IR On, PoE+, AC 24 V, DC 12 V) 0°C to +60°C (IR Off, PoE) 0°C to +50°C (IR On, PoE) -22°F to +140°F (IR Off, PoE+, AC 24 V, DC 12 V) -22°F to +122°F (IR On, PoE+, AC 24 V, DC 12 V) 32°F to +140°F (IR Off, PoE) 32°F to 122°F (IR On, PoE)
● Storage Temperature	-20°C to + 60°C -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	φ 166 x 128 mm φ 6 5/8 inches x 5 1/8 inches
● Mass	Approx. 1830 g Approx. 4 lb 0.6 oz
● External Material	Upper case: ADC12 Lower case: ADC12 Dome cover: PC Cap:PC
● External Color	Top cover: Munsell 4.4BG 8.4/0.2 Lower case: Munsell 4.4BG 8.4/0.2 Cap: Munsell 4.4BG 8.4/0.2
● Safety Regulations	JATE Technical Standard (LAN) UL2044, IEC60950-1 (CB) VCCI (Class A), FCC (Class A), IC (Class A) Emission: EN55032 (Class A) Immunity: EN55024+ EN50130-4 Emission: AS/NZS CISPR32 (Class A) KC 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.

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Accessories

Housings

UNI-CMA1

Aluminium Corner Mount Adaptor

UNI-MDB3

Pendant bracket

Mounting Hardware

UNI-BBB2

Connection Box with Wall/Pole Mount Adaptor

UNI-WMB1

Gooseneck wall mount

Other Accessories

SCA-M30

High quality, ceiling microphone for IP security cameras.

SCA-S30

High quality active outdoor loudspeaker for use with Sony's IP cameras

SNCA-WP602

Weather Protector

Power Supplies

SNCA-HPOE1

Single port, high-power Gigabit PoE midspan

SD Cards for IP Security Cameras

SD Cards For IP Security Cameras

Sony's Edge Storage Solution for IP Security Cameras