

SNC-VM602R

Outdoor IR Ruggedized 720p/60
fps Camera Powered by IPELA
ENGINE EX™ - V Series



Overview

Tough, round-the-clock surveillance with HD picture quality, IR illumination and high frame rates.

This ruggedized minidome camera delivers HD quality video images around the clock in tough environments – indoors or outside in harsh weather.

The vandal- and weather-resistant SNC-VM602R 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.

HD picture quality is assured by the sensitive, high-resolution Exmor™ CMOS sensor that's teamed with Sony's latest-generation IPELA ENGINE EX signal processing system. Every scene looks clearer, sharper and more detailed – even in challenging low-light conditions or with harsh backlighting where other cameras struggle. Extra intelligence is added by DEPA Advanced Intelligent Video Analytics that can intelligently trigger an alarm based on user-defined rules.

High frame rate recording captures fast-moving action at a smooth 60 frames per second - making it easier to follow exactly what's happening in front of the camera.

On-board image stabilisation helps keep images crisp, clear and minimizes the effects of mechanical vibration, even if the camera's buffeted by wind on an outdoor pole or overlooking a busy motorway.

This 'single box' solution also includes built-in IR (infrared) illumination, allowing viewing of objects up to 30m from the camera in complete darkness.

PoE (Power over Ethernet) capability carries IP video and power over a single connection cable, while easy focus and zoom adjustment further reduces installation time and maintenance costs.

Capable of operating in temperatures from -40C to +60C, the totally sealed minidome unit assures dependable operation in challenging indoor and outdoor environments. For even greater resilience, IK10-rated vandal resistance is teamed with an IP66 rating for waterproof/dust resistance.

Features

See every detail with HD quality

The camera's sensitive, high-resolution Exmor CMOS sensor captures crisply detailed HD (720 x 1024) video images at HD 720P and up to (1280 x 1024) with a high frame rate (up to 60fps).

Latest generation imaging power

Class-leading imaging is assured by Sony's unique IPELA ENGINE EX signal processing platform. XDNR (Excellent Dynamic Noise Reduction) assures clear low-light images, while Visibility Enhancer (VE) dynamically optimises brightness and colour reproduction on a pixel-by-pixel basis. Extra intelligence is added by DEPA Advanced analytics with face detection that can trigger alarms based on user-determined rules.

Wide dynamic range

Innovative View-DR technology achieves a dynamic range equivalent to 130 dB, capturing objects clearly and adaptively – even with harsh backlighting or sun-drenched highlights.

Always ready for action, even in the dark

Built-in IR (infrared) illuminators give a clear view in complete darkness (0 lx) of objects at a distance of up to 30m (50 IRE) from the camera. Using View DR and high quality IR, images can be captured 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.

Capture smooth, fluid movement

Video images can be captured at a high frame rate of 60 fps: ideal for applications like casinos or banks where it's essential to see what's happening with split-second accuracy.

Steadier, more stable images

Mechanical vibration – caused by gusts of wind or a busy road bridge – can cause blurred, hard to see images. The in-built image stabiliser reduces the effects of camera shake for crisper, clearer images.

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.

Automatic recording to memory card

Edge Storage automatically records video and audio directly to an optional micro SD/SDHC card for later analysis. Recording can be triggered manually, or automatically in response to an alarm event, if there's an attempt to tamper with the camera or in the event of network connection being temporarily lost.

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.

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.

Flexible powering options with PoE

The camera can be powered by AC 24V or DC 12V to suit a wide range of installation requirements. In addition, support for Power over Ethernet (IEEE 802.3af/IEEE 802.3at-compliant (PoE/PoE+)) simplifies installation by eliminating the need for additional power cables.

View with your smartphone

Securely access the camera using a smartphone or tablet to view images remotely and adjust settings.

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.

ONVIF (Open Network Video Interface Forum) compliance

Support for ONVIF simplifies integration with a wide range of VMS platforms and hardware, providing video streaming and camera control. 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.

Specifications

Camera

Image Sensor	1/3-type progressive scan Exmor CMOS sensor
Number of Effective Pixels	Approx. 1.37 Megapixels
Signal System	NTSC/PAL (switchable)
Sync System	Internal synchronization
Minimum Illumination (50 IRE)	Color: 0.05 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: 0.03 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 130 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

White Balance	ATW, ATW-PRO, Fluorescent lamp, Mercury lamp, Sodium vapour lamp, Metal halide lamp, White LED, One push WB, Manual, Indoor, Outdoor
Lens	Built-in varifocal lens
Easy Zoom	Yes
Zoom Ratio	Optical zoom 3x Digital zoom 4x Total zoom 12x
Easy Focus for Setup	Yes
Horizontal Viewing Angle	92.9° to 31.8°
Vertical Viewing Angle	73.1° to 25.5°
Viewing Tilt Angle	121.5°
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)
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IR Working Distance	30 m (50 IRE) 98 ft. (50 IRE)
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Camera Features

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
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Noise Reduction	XDNR
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Image Stabilizer	Electronic
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Picture Mode	Yes
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Privacy Masking (number)	20
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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
Compatibility with Cloud Service	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

Smartphone viewer Yes

Video

Resolution 1280 x 1024, 1280 x 960, 1024 x 768, 1280 x 720, 800 x 600, 720 x 576, 720 x 480, 704 x 576, 640 x 480, 352 x 288, 320 x 240 (H.264, JPEG)

Compression Format H.264 (High/Main/Baseline Profile), JPEG

Maximum Frame Rate H.264: 60 fps (1280 x 1024)
JPEG: 60 fps (1280 x 1024)

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 XP (32 bit) Professional
Edition
Windows Vista (32 bit) Ultimate,
Business Edition
Windows 7 (32/64 bit) Ultimate,
Professional Edition
Windows 8 Pro (32/64 bit)

	Windows 8.1 Pro (32/64 bit)
Processor	Intel Corei7 2.8 GHz or higher
Memory	2 GB or more
Web Browser	Microsoft Internet Explorer Ver. 7.0, Ver. 8.0, Ver. 9.0, Ver. 10.0, Ver. 11.0 Firefox Ver. 19.02 (plug-in free viewer only) Safari Ver. 5.1 (plug-in free viewer only) Google Chrome Ver. 25.0 (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, RTSP over HTTP, SMTP, IPv6, HTTPS, SNMP (v1, v2c, v3), FTP (client), SSL *SSM (Source Specific Multicast) is supported.
Number of IP Address/Mac	1

ADDRESS

QoS	DSCP
Multicast Streaming Support	Yes
ONVIF Conformance	Profile S, Profile T
Authentication	IEEE802.1X

Interface

Analog Video Output	BNC x1 600 TV lines (analog video) *1
Analog Monitor Output for Setup	Phono jack x1
Microphone Input	Mini jack (monaural)
Line Input	Mini jack (monaural)
Line Output	Mini jack (monaural)
Network Port	10BASE-T/100BASE-TX (RJ-45)
Alarm Input (Sensor Input)	x2
Alarm Output	x2 (mechanical relay outputs electrically isolated from the camera)

Card Slots SD x1

Confirmed SD Card Type Max. 64 GB

General

Power Requirements 12 V DC \pm 10% 24 V AC \pm 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/at (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 (PoE+, AC 24 V, DC 12 V) 0°C (PoE)
-22°F (PoE+, AC 24 V, DC 12 V) 32°F (PoE)

Storage Temperature	-20 °C to + 60 °C -4 °F to + 140 °F
Operating Humidity	20 % to 90 %(no condensation)
Storage Humidity	20 % to 95 %(no condensation)
Built-in Heater	Yes
Dimensions *2	φ166 x 128 mm φ6 5/8 inches x 5 1/8 inches
Mass	1730 g 3 lb 13 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
Fire Retardant	UL2044
Safety Regulations	JATE Technical standard (LAN) UL2044, IEC60950-1 (CB) VCCI (Class A), FCC (Class A), IC (Class A) Emission: EN55022 (Class A) + EN50130-4

Immunity: EN55022 (Class A) +
 EN55024
 Emission: AS/NZS CISPR22 (Class
 A)
 KCC
 EMC-TR

Supplied Accessories	CD-ROM (supplied programs) (1) Bracket (1) Template (1) Wire rope (1) Wrench (1) Camera unit mounting screws (4) Screw (M4 × 8) (2) Installation Manual (1) Safety Regulations (1) Cable holder (for conduit) (1) LAN cable holder (1)
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Optional Accessories	YT-ICB45 (In-ceiling Bracket) SNCA-WP602(Weather Protector)
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Notes

*1	Monitor display ratio 4:3
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*2	The values for dimensions are approximate.
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products



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