

SNC-VM631

Vandal-resistant Minidome
1080p/60 fps Camera Powered
by IPELA ENGINE EX™ - V Series



Overview

Certified as IK10 impact resistant, the SNC-VM631 minidome network camera delivers a new range of features and level of performance for a Full HD surveillance camera, with a maximum resolution of 1920 x 1080 and improved sensitivity thanks to a new Exmor CMOS sensor.

The SNC-VM631 features the IPELA ENGINE EX signal processing system, providing advanced features such as high frame rate, and improved image processing with View-DR, XDNR and DEPA Advanced. The high frame rate mode – 60 fps and 50 fps – delivers smoother, more natural movement in the video. View-DR at 90 dB captures objects clearly even under very harsh lighting conditions, such as strong backlight or high contrast conditions. XDNR (eXcellent Dynamic Noise Reduction) delivers clear, low-noise, images in low light conditions. DEPA Advanced Intelligent Video and Audio Analytics triggers alarms according to user-defined rules. In-camera analytics are enhanced by additional features such as face detection, left object and removed object detection.

The camera SNC-VM631 offers a high sensitivity, with a minimum illumination of 0.1 lx in Colour mode and 0.07 lx in B/W mode. It can be powered by PoE (IEEE 802.3af-compliant), by AC 24 V +/- 20% or by DC 12 V +/- 10%, for easy installation.

Features

Excellent 1080p/60 fps Full HD picture quality

Gain the huge surveillance benefits of excellent picture quality with 1080p/60 fps Full HD, with up to 1920 x 1080 maximum resolution.

High quality and low noise images with Exmor CMOS sensor

Derived from Sony's broadcast range, the high resolution Exmor CMOS sensor improves image acquisition with its low noise characteristics.

Unique features from IPELA ENGINE EX signal processing system

IPELA ENGINE EX delivers high frame rate capability of up to 60 fps*, View-DR, XDNR (eXcellent Dynamic Noise Reduction) and DEPA Advanced Intelligent Video and Audio Analytics.

*Note: high frame-rate mode and ViewDR cannot be used at the same time.

DEPA delivers intelligent, customisable image capture and alarm triggering

The Sony DEPA platform offers intelligent video analytics, delivered through a combination of the intelligence built into the camera and the rules and filters that determine which images should be recorded and when an alarm should be triggered.

Vandal-resistant

The camera's vandal-resistant design meets the IK10 standard (protection against mechanical impact).

Operates at low minimum illumination

The SNC-VM631 operates at a minimum illumination of 0.1 lx in Colour mode (F1.2, View-DR OFF, VE OFF, AGC ON, 1/30 s, 30 fps) and 0.07 lx in B/W mode at 50 IRE and 30 fps.

Multiple video and audio codecs

The SNC-VM631 supports H.264 (High/Main/Baseline Profile) /JPEG video codecs and AAC (16 kHz/48 kHz)/G.726/G.711 audio codecs.

True Day/Night function for optimised images in all light conditions

Day/Night function automatically switches the camera between Day (colour) and Night (B/W) modes, depending on the light level. In Night mode, the IR-cut filter is removed so that the camera becomes sensitive to near-IR light and can reproduce images not visible to the naked eye.

ONVIF compliance for compatibility and confidence

The camera conforms to ONVIF (Open Network Video Interface Forum), the widely-accepted protocol for information exchange between network video devices, giving you confidence in its breadth and ease of compatibility.

Specifications

Camera	
Image Sensor	1/2.9-type progressive scan Exmor CMOS sensor
Number of Effective Pixels	Approx. 2.14 Megapixels
Signal System	NTSC/PAL (switchable)
Sync System	Internal synchronization
	Color: 0.1 lx (F1.2, View-DR Off, VE)

Minimum Illumination (50 IRE)	Off, AGC On, 1/30 s, 30 fps) B/W: 0.07 lx (F1.2, View-DR Off, VE Off, AGC On, 1/30 s, 30 fps)
Minimum Illumination (30 IRE)	Color: 0.06 lx (F1.2, View-DR Off, VE Off, AGC On, 1/30 s, 30 fps) B/W: 0.05 lx (F1.2, View-DR Off, VE Off, AGC On, 1/30 s, 30 fps)
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
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	105.3° to 35.6°
Vertical Viewing Angle	56.9° to 20.1°
Viewing Tilt Angle	127.6°
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 +99°

Camera Features

Day/Night	True D/N
Day/Night linked with Easy Focus	Yes
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
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
Smartphone viewer	Yes

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
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

Windows XP (32 bit) Professional Edition
Windows Vista (32 bit) Ultimate,

Operating System	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 Core i7 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, SMTP over HTTP, IPv6, HTTPS, FTP (client), SNMP (v1, v2c, v3), SSL
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*SSM (Source Specific Multicast) is supported.

Number of IP Address/Mac ADDRESS	1
QoS	DSCP
Multicast Streaming Support	Yes
ONVIF Conformance	Profile S, Profile T
Authentication	IEEE802.1X

Interface

Analog Video Output	BNC x1, 1.0 Vp-p, 75 Ω, unbalance, sync negative 700 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) 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 x1
Confirmed SD Card Type	4/8/16/32 GB SDHC (no support for SDXC)

General

Power Requirements	IEEE 802.3af compliant (PoE system), DC 12 V \pm 10%, AC 24 V \pm 20%
Power Consumption	6.0 W max.
Operating Temperature	-10°C to +50°C 14°F to 122°F
Cold Start Temperature	0°C to +50°C 32°F to 122°F
Storage Temperature	-20 °C to + 60 °C -4 °F to + 140 °F

Operating Humidity	20 % to 80 %
Storage Humidity	20 % to 95 %
Dimensions *2	φ148 x 108 mm φ5 7/8 inches x 4 3/8 inches
Mass	Approx. 800 g Approximate 1 lb 12 oz
External Material	Top cover: ABS + PC Dome cover: PC
External Color	Top cover: 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
	CD-ROM (supplied programs) (1)

Supplied Accessories	Installation Manual (1)
	Template (1)
	Audio cable (1)
	I/O cable (1)
	BNC cable (1)
	Power input cable (1)
	Screw M3 (1)
	Wrench (1)
	Bracket (1)
	Wire rope (1)
Safety regulations (1)	

Optional Accessories	YT-ICB600 (In-ceiling Bracket)
	YT-LD600S (Smoke Dome Cover)

Notes

*1 Monitor display ratio 4:3

*2 The values for dimensions are approximate.

Gallery

