

## SNC-XM637

Minidome 1080p/30 fps Camera  
Powered by IPELA ENGINE EX™ -  
X Series



### Overview

#### **Powered by IPELA ENGINE EX™: ideal for video surveillance on board trains**

The rugged SNC-XM637 minidome IP camera has been specifically designed for use in video security and surveillance applications on board trains, where its compact form and flat finish help it blend neatly into its surroundings.

Full 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. Extra intelligence is added by DEPA Advanced Intelligent Video Analytics that can intelligently trigger an alarm based on user-defined rules.

Full HD pictures from the wide-angle (113 degree horizontal field of view) lens are fine-tuned by Sony's IPELA ENGINE EX™ processing engine. This delivers wide dynamic range and cuts noise for crisp, clear results – even in less-than-perfect lighting conditions. Built-in image stabilisation reduces the effects of vibration, making it easier to see what's happening. As an extra refinement, a built-in microphone captures audio that can be recorded along with video for live monitoring or later analysis.

The camera supports image rotation, enabling a vertical image format also known as corridor view, ideal for video security and surveillance applications in corridors and hallways. This extra mode electronically flips the camera image through a quarter turn, presenting a correctly oriented 9:16 vertical 'portrait' view at Full HD resolution and no wasted pixels.

For even greater flexibility, there is a choice of three optional lenses to accommodate a wide range of (83°, 51° and 25°) horizontal viewing angle requirements.

## Features

### **See every detail with Full HD quality**

The sensitive, high-resolution Exmor CMOS sensor captures crisp, detail-packed Full HD (1920 x 1080) video images.

### **Wide angle lens**

A very wide horizontal viewing angle of 113 degrees makes the camera ideal for video monitoring inside the confines of a train carriage.

### **Latest generation imaging power**

High quality imaging is assured by Sony's unique IPELA ENGINE EX signal processing platform that combines powerful signal processing with intelligent video analytics technologies. 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 90 dB, capturing objects clearly and adaptively –

even with harsh backlighting or sun-drenched highlights.

### **Excellent low-light sensitivity**

The camera is capable of capturing clear images in very low light conditions: minimum illumination of 0.3 lx in Colour mode and 0.3 lx in B/W mode (at 50 IRE).

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

Electronic Day/Night function automatically switches the camera between Day (colour) and Night (B/W) modes, depending on light levels.

### **Steadier, more stable images**

The in-built image stabiliser reduces the effects of camera shake or mechanical vibration for steadier images with reduced blur.

### **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.

### **Automatic edge recording to memory card**

Edge Storage allows recording of video and audio directly to an optional SD/SDHC card for later analysis.

### **Built-in microphone**

Capture crisp, clear audio to hear what's happening in the camera's vicinity.

### **Power over Ethernet with rugged M12 connector**

The camera is powered using PoE (IEEE 802.3af) via an industrial grade M12 connector, simplifying integration in a train carriage

and eliminating the need for additional power cables.

### **Flexible installation with three-axis lens adjustment**

This allows the lens unit to be turned in pan, tilt and rotate axes for easy and versatile camera angle adjustment.

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

Ideal for use in indoor or outdoor areas, the camera can operate over a wide range of temperatures from -25°C to +50°C. It is vandal resistant with an IK10 impact rating and is IP66 rated against ingress by water and dust. A tamper alarm provides further protection against unwanted interference.

### **View with your smartphone**

Securely access the camera using a smartphone or tablet (Android or iOS) to view images remotely.

### **Easy IP network configuration**

Configuration of network settings is made quick and simple using the supplied SNC Easy IP Setup 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

1/2.9-type progressive scan Exmor

	CMOS sensor
Number of Effective Pixels	Approx. 2.14 Megapixels
Minimum Illumination (50 IRE)	Color: 0.3 lx (F2.0, View-DR OFF, VE OFF, AGC ON, 1/30 s, 30 fps) B/W: 0.3 lx (F2.0, View-DR Off, VE Off, AGC On, 1/30 s, 30 fps)
Minimum Illumination (30 IRE)	Color: 0.18 lx (F2.0, View-DR Off, VE Off, AGC On, 1/30 s, 30 fps) B/W: 0.18 lx (F2.0, View-DR Off, VE Off, AGC On, 1/30 s, 30 fps)
Dynamic Range	Equivalent to 90 dB with View-DR technology
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
Lens	Fixed lens
	Digital zoom 4x

Zoom Ratio	Total zoom 4x
Horizontal Viewing Angle	113°
Vertical Viewing Angle	61°
Viewing Tilt Angle	151°
Focal Length	f = 2.8 mm
F-Number	F2.0
Pan/Tilt/Rotation Angle (manual)	±30° 0° to +90° -175° to +175°

## Camera Features

Day/Night	Electronic D/N
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
Compatibility with Cloud Service	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
	English, Japanese, Chinese

Menu Language	(simplified), Chinese (traditional), French, Spanish, German, Italian, Korean, Portuguese, Russian, Arabic, Hindi, Vietnamese, Thai
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Smartphone viewer	Yes
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## 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)
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Compression Format	H.264 (High/Main/Baseline Profile), JPEG
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Maximum Frame Rate	H.264: 30 fps (1920 x 1080) JPEG: 30 fps (1920 x 1080)
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Bitrate Control Mode	CBR/VBR (selectable)
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Range of Bit Rate Setting	64 Kbps to 32 Mbps
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Solid PTZ	Yes
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Adaptive Rate Control	H.264
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Bandwidth Control	JPEG
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Multi streaming	Yes (3)
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## Capability

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Number of Clients	20
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## Intelligent Video/Audio Analytics

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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

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

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Operating System	Windows XP (32 bit) Professional Edition Windows Vista (32 bit) Ultimate, Business Edition Windows 7 (32/64 bit) Ultimate,
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	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, SMTP over HTTP, IPv6, HTTPS, FTP (client), SNMP (v1, v2c, v3), SSL *SSM (Source Specific Multicast) is supported.
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Number of IP Address/Mac ADDRESS	1
QoS	DSCP
Multicast Streaming Support	Yes
ONVIF Conformance	Profile S, Profile T
Authentication	IEEE802.1X

## Interface

Microphone Input	Built-in microphone
Network Port	10BASE-T/100BASE-TX (M12)
Card Slots	SD x 1
Confirmed SD Card Type	SDHC (no support for SDXC)

## General

Power Requirements	IEEE 802.3af compliant (PoE system)
Power Consumption	10 W (heater enabled) 3.8 W (heater disabled, equivalent to PoE CLASS 1)

Operating Temperature	-25 °C to +50 °C -13°F to +122°F
Cold Start Temperature	-20 °C -4°F
Storage Temperature	-30 °C to + 60 °C -22 °F to + 140 °F
Operating Humidity	20 % to 80 %
Storage Humidity	20 % to 80 %
Built-in Heater	Yes
Heater Working Temperature	0 °C or less 32 °F or less
Dimensions *1	φ114 mm x 47 mm 4 1/2 inches x 1 7/8 inches
Mass	Approx. 275 g Approx. 9.7 oz
External Material	Top cover/Dome cover : PC (Polycarbonate)
External Color	Top cover: Munsell 4.4BG 8.4/0.2
Fire Retardant	UL2044
	JATE Technical standard (LAN)

Safety Regulations	<p>UL2044, UL50, IEC60950-1 (CB), IEC60529, IEC62262          VCCI Class B, FCC Class B, IC Class B,          Emission: EN55022 (Class B) + EN50130-4          Immunity: EN55022 (Class B) + EN55024,          Emission: AS/NZS CISPR22 (Class B)          EAC (GOST-R)</p>
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Supplied Accessories	<p>CD-ROM (supplied programs) (1)          Installation Manual (1)          Template (1)          Safety regulations (1)          Warranty booklet (1)          Lens adjusting tool (1)          Wrench (1)</p>
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## Notes

*1	The values for dimensions are approximate.
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## Gallery

