

## SNC-XM636

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-XM636 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 (83 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 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 two optional lenses to accommodate a wide range of (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.

### **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<br>(50 IRE) | Color: 0.3 lx (F2.2, View-DR OFF, VE OFF, AGC ON, 1/30 s, 30 fps)<br>B/W: 0.3 lx (F2.2, View-DR Off, VE Off, AGC On, 1/30 s, 30 fps)   |
| Minimum Illumination<br>(30 IRE) | Color: 0.18 lx (F2.2, View-DR Off, VE Off, AGC On, 1/30 s, 30 fps)<br>B/W: 0.18 lx (F2.2, 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   |
| Zoom Ratio                       | Digital zoom 4x<br>Total zoom 4x   |
| Horizontal Viewing Angle         | 83°  |

|                                  |                                      |
|----------------------------------|--------------------------------------|
| Vertical Viewing Angle           | 45°                                  |
| Viewing Tilt Angle               | 135°                                 |
| Focal Length                     | f = 3.8 mm                           |
| F-Number                         | F2.2                                 |
| Pan/Tilt/Rotation Angle (manual) | ±30°<br>0° to +90°<br>-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  |
| 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: 30 fps (1920 x 1080)  
JPEG: 30 fps (1920 x 1080)

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

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<br>Windows Vista (32 bit) Ultimate, Business Edition<br>Windows 7 (32/64 bit) Ultimate, Professional Edition<br>Windows 8 Pro (32/64 bit)<br>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<br>Firefox Ver. 19.02 (plug-in free viewer only)<br>Safari Ver. 5.1 (plug-in free viewer only)<br>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<br>*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

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

-20 °C

|                            |  |
|----------------------------|--|
| Temperature                | -4°F   |
| Storage Temperature        | -30 °C to + 60 °C<br>-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<br>32 °F or less  |
| Dimensions *1              | φ114 mm x 47 mm<br>4 1/2 inches x 1 7/8 inches   |
| Mass                       | Approx. 275 g<br>Approx. 9.7 oz  |
| External Material          | Top cover/Dome cover : PC<br>(Polycarbonate)   |
| External Color             | Top cover: Munsell 4.4BG 8.4/0.2   |
| Fire Retardant             | UL2044   |
| Safety Regulations         | JATE Technical standard (LAN)<br>UL2044, UL50, IEC60950-1<br>(CB),IEC60529, IEC62262<br>VCCI Class B, FCC Class B, IC Class<br>B,<br>Emission: EN55022 (Class B) + |

EN50130-4  
 Immunity: EN55022 (Class B) +  
 EN55024,  
 Emission: AS/NZS CISPR22 (Class  
 B)  
 EAC (GOST-R)

|                      |  |
|----------------------|--|
| Supplied Accessories | CD-ROM (supplied programs) (1)<br>Installation Manual (1)<br>Template (1)<br>Safety regulations (1)<br>Warranty booklet (1)<br>Lens adjusting tool (1)<br>Wrench (1) |
|----------------------|--|

## Notes

\*1 The values for dimensions are approximate.

## Gallery

