

# Sony Security Products

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Quick Reference 

## Table of Contents

Hybrid Camera Solutions	3
IP Mini Dome Cameras	5
IP Rapid Dome and PTZ Cameras	7
IP Fixed Cameras	9
Analog Fixed Cameras	11
Analog Mini Dome Cameras	12
Surveillance Video Encoders	13
Network Surveillance Recording Servers	15
Intelligent Monitoring Software	16
XI's - Wide Area Monitoring Solutions	17
Glossary	18

# Hybrid Camera Solutions

## IPELA HYBRID™- Sony's IP and Analog-over-Coax Technology\* - Offers Cost-effective and Environmentally-friendly Retrofit Solutions for Existing Analog CCTV Systems

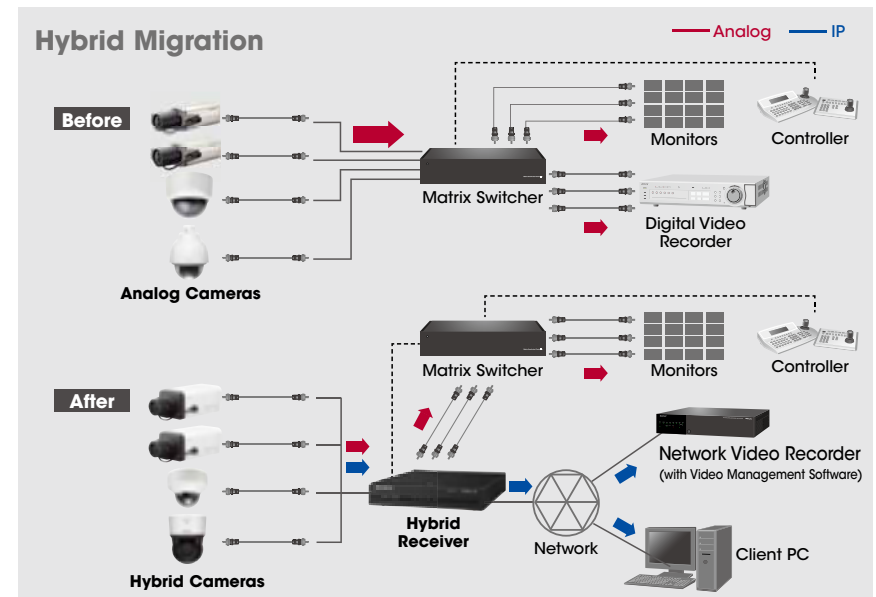
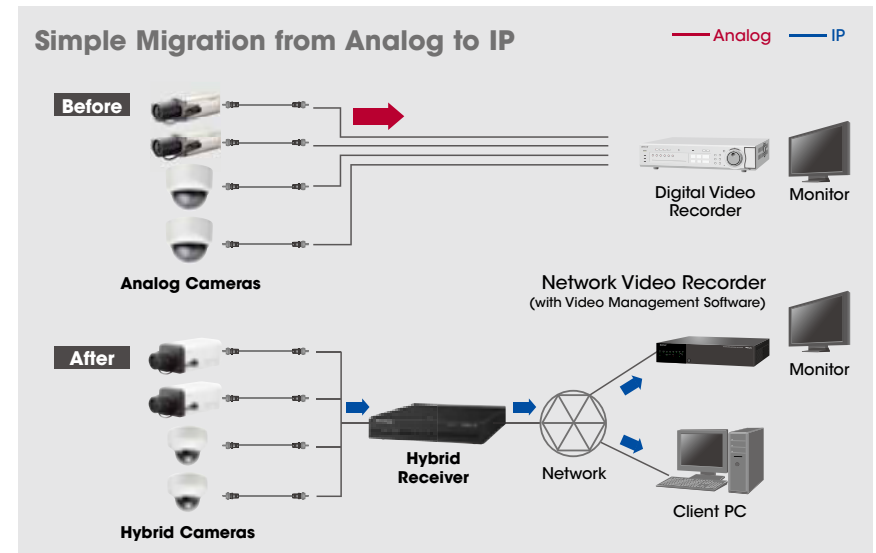
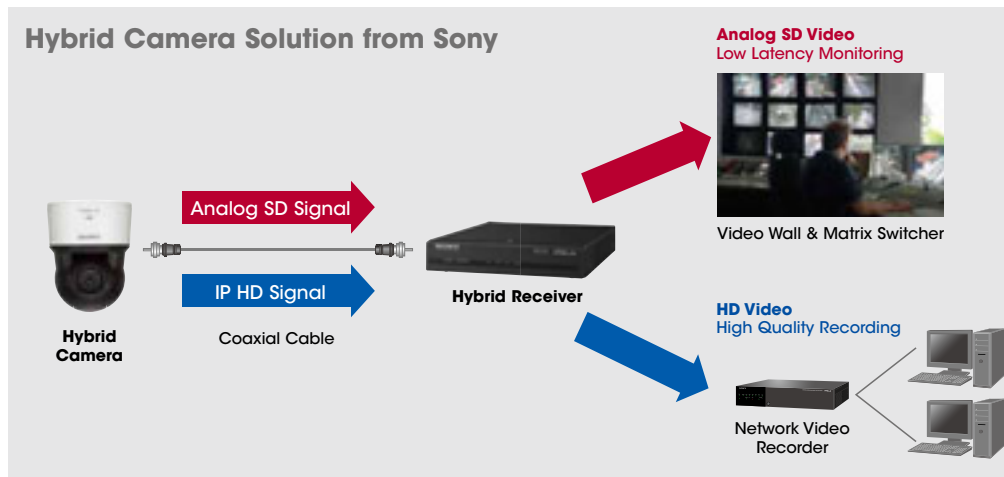
Sony offers a new video surveillance technology that can simultaneously transmit both IP and analog signals on a single coaxial cable. It allows customers to easily migrate to HD IP video surveillance systems with minimal investment, utilizing their existing analog infrastructure. Based on this technology - IPELA HYBRID - Sony offers solutions that comprise hybrid cameras along with four-channel receivers as their counterparts.

These unique solutions deliver the following advantages:

























- Cost-effective and environmentally-friendly surveillance systems that can be easily migrated from an analog CCTV system to an IP network-based system, making the most of any existing surveillance infrastructure (eg, coaxial cables, local power supplies, matrix switchers, controllers, and video wall monitors)
- Simultaneous use of IP HD video and analog SD video
- Utilization of the advanced features and functionalities offered by IP network cameras
- Extended cable length of up to 300 m (1,000 feet)\*\*
- Minimized latency of analog video for live monitoring

Sony's hybrid camera solutions can be used in a wide variety of surveillance applications, and in locations such as commercial facilities, financial institutions, office buildings, casinos, airports, government-related facilities, and schools.

\* Sony's IP and analog-over-coax technology is developed based on Intersil Corporation's SLOC™ (Security Link Over Coax) technology.  
 \*\* Cable length varies according to cable grade.



# Hybrid Cameras



Model name	Z Series				
	SNC-ZB550	SNC-ZM551	SNC-ZM550	SNC-ZR550	SNC-ZP550
	Hybrid Fixed Camera	Hybrid Vandal Mini Dome Camera	Hybrid Mini Dome Camera	Hybrid Rapid Dome Camera	Hybrid PTZ Camera
					
Video compression format	H.264/MPEG-4/JPEG				
Codec streaming capability	Dual streaming (Any combination with H.264/MPEG-4/JPEG, including multiple streams of the same format)				
Computer display format	<b>HD</b> (*)	<b>HD</b> (*)	<b>HD</b> (*)	<b>HD</b> (*)	<b>HD</b> (*)
Maximum resolution (IP)	1280 x 1024 (1.3 Mega)	1280 x 1024 (1.3 Mega)	1280 x 1024 (1.3 Mega)	1280 x 720	1280 x 720
					
Analog video output	NTSC standard/PAL standard (selectable)				
Vandal resistant	No	<b>IK10</b>	No	No	No
Horizontal viewing angle	96.5° to 33.9°	85.4° to 31.2°	85.4° to 31.2°	55.9° to 2.1°	55.9° to 2.1°
Zoom ratio	2.9x optical zoom	2.9x optical zoom	2.9x optical zoom	28x optical zoom	28x optical zoom
Focal length	f=2.8 to 8 mm	f=3.1 to 8.9 mm	f=3.1 to 8.9 mm	f=3.5 to 98 mm	f=3.5 to 98 mm
Lens type	CS mount lens	Built-in variable focal lens	Built-in variable focal lens	Auto-focus zoom lens	Auto-focus zoom lens
Image device	1/3 type progressive scan Exmor CMOS sensor	1/3 type progressive scan Exmor CMOS sensor	1/3 type progressive scan Exmor CMOS sensor	1/4 type Exmor CMOS sensor	1/4 type Exmor CMOS sensor
	<b>Exmor.</b>	<b>Exmor.</b>	<b>Exmor.</b>	<b>Exmor.</b>	<b>Exmor.</b>
Minimum illumination	Color: 0.50 lx, B/W: 0.30 lx (F1.2/AGC 42dB/50IRE (IP))	Color: 0.50 lx, B/W: 0.30 lx (F1.2/AGC 42dB/50IRE (IP))	Color: 0.50 lx, B/W: 0.30 lx (F1.2/AGC 42dB/50IRE (IP))	Color: 0.7 lx (F1.35/AGC ON/shutter 1/30 s/30 IRE (IP)), B/W: 0.07 lx (F1.35/AGC ON/shutter 1/30 s/30 IRE (IP))	Color: 0.7 lx (F1.35/AGC ON/shutter 1/30 s/30 IRE (IP)), B/W: 0.07 lx (F1.35/AGC ON/shutter 1/30 s/30 IRE (IP))
Maximum frame rate	30 fps H.264/MPEG-4/JPEG at 1280 x 720	30 fps H.264/MPEG-4/JPEG at 1280 x 720	30 fps H.264/MPEG-4/JPEG at 1280 x 720	30 fps H.264/MPEG-4/JPEG	30 fps H.264/MPEG-4/JPEG
Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Wide-D	No	No	No	<b>DynaView™</b>	<b>DynaView</b>
Noise reduction	No	Yes	Yes	Yes	Yes
Card slots	No	No	No	SD card x 1	SD card x 1
Wireless capability	No	No	No	No	No
DEPA™ (Intelligence)					
ONVIF™ software					
Rapid Dome or PTZ	No	No	No	 Rapid Dome	 PTZ
Pan angle	No	No	No	 360 degrees endless rotation	 340 degrees
Tilt angle	No	No	No	-105° to +105° (210° tilt)	-15° to +90°
Power requirements	AC 24 V, DC 12 V	AC 24 V, DC 12 V	AC 24 V, DC 12 V	hPoE, AC 24 V (*)	hPoE, AC 24 V (*)
Dimensions	2 7/8 x 2 1/2 x 7 7/8 inches (72 x 63 x 197 mm) with lens, not including projecting parts	ø5 5/8 x 4 3/4 inches (ø140 x 119 mm)	ø5 5/8 x 4 3/4 inches (ø140 x 118 mm)	ø5 7/8 x 7 5/8 inches (ø147.4 x 190.9 mm)	ø5 7/8 x 7 5/8 inches (ø147.4 x 190.9 mm)

(\*) Definition of HD: More than 720p with H.264 streaming capability of more than 30 fps.


































(\*\*) When selecting the IP and Analog-over-Coax mode, the power supply supports only AC 24 V.

All cameras in this sheet comply with UL2044.

# Hybrid Camera Receivers













Model name	Z Series	
	SNCA-ZX104	SNCA-ZP104
	4CH Hybrid Camera Receiver	4CH Hybrid Camera Receiver
		
Number of supported hybrid camera	4	
Camera input	BNC x 4	
Analog video output	BNC x 4	
Network port	RJ45 x 1 (100Base-TX/10Base-T)	
Serial interface	RS-485 x 1	No
Supported Serial PTZ control protocol	Pelco-D	No
Power requirements	DC 12 V (AC 100 V to AC 127 V, AC 200 V to AC 240 V, 50/60 Hz for AC adaptor)	
Power consumption	Approx. 8.5 W/9.0 W (AC 100 V/AC 240 V) with AC adaptor	
Dimensions (W x H x D)	8 1/3 x 1 3/4 x 9 7/8 inches (210 x 44 x 250 mm) not including projecting parts	

# IP Mini Dome Cameras

Model name	V Series			E Series			X Series		V Series		
	SNC-DH280	SNC-DH240T	SNC-DH240	SNC-DH260	SNC-DH220T	SNC-DH220	SNC-DH210T	SNC-DH210	SNC-DH180	SNC-DH140T	SNC-DH140
											
Video compression format	H.264/MPEG-4/JPEG										
Codec streaming capability	Dual streaming (Any combination with H.264/MPEG-4/JPEG, including multiple streams of the same format)										
Computer display format											
Maximum resolution	1920 x 1440 (3 Mega)	1920 x 1440 (3 Mega)	1920 x 1440 (3 Mega)	1920 x 1440 (3 Mega)	1920 x 1440 (3 Mega)	1920 x 1440 (3 Mega)	2048 x 1536 (3 Mega)	2048 x 1536 (3 Mega)	1280 x 1024 (1.3 Mega)	1280 x 1024 (1.3 Mega)	1280 x 1024 (1.3 Mega)
Outdoor use/Ingress protection	Yes/IP66	No	No	Yes/IP66	No	No	No	No	Yes/IP66	No	No
Vandal resistant	IK10	IK10	No	IK10	IK10	No	IK10	No	IK10	IK10	No
IR illuminators	IR	No	No	IR	No	No	No	No	IR	No	No
Horizontal viewing angle	88.5° to 32.3°	88.5° to 32.3°	88.5° to 32.3°	88.5° to 32.3°	88.5° to 32.3°	88.5° to 32.3°	86°	88°	85.4° to 31.2°	85.4° to 31.2°	85.4° to 31.2°
Optical zoom ratio	2.9x optical zoom	2.9x optical zoom	2.9x optical zoom	2.9x optical zoom	2.9x optical zoom	2.9x optical zoom	Fixed focal lens	Fixed focal lens	2.9x optical zoom	2.9x optical zoom	2.9x optical zoom
Focal length	f=3.1 to 8.9 mm	f=3.1 to 8.9 mm	f=3.1 to 8.9 mm	f=3.1 to 8.9 mm	f=3.1 to 8.9 mm	f=3.1 to 8.9 mm	f=3.3	f=3.3	f=3.1 to 8.9 mm	f=3.1 to 8.9 mm	f=3.1 to 8.9 mm
Imager	1/2.8-type progressive scan Exmor CMOS sensor Exmor.	1/2.8-type progressive scan Exmor CMOS sensor Exmor.	1/2.8-type progressive scan Exmor CMOS sensor Exmor.	1/2.8-type progressive scan Exmor CMOS sensor Exmor.	1/2.8-type progressive scan Exmor CMOS sensor Exmor.	1/2.8-type progressive scan Exmor CMOS sensor Exmor.	1/2.8-type progressive scan Exmor CMOS sensor Exmor.	1/2.8-type progressive scan Exmor CMOS sensor Exmor.	1/3-type progressive scan Exmor CMOS sensor Exmor.	1/3-type progressive scan Exmor CMOS sensor Exmor.	1/3-type progressive scan Exmor CMOS sensor Exmor.
Minimum illumination	Color: 0.4 lx, B/W: 0 lx (IR ON) (F1.2/View-DR OFF/XDNR ON-Middle/VE OFF/AGC High/50 IRE [IP])	Color: 0.4 lx, B/W: 0.25 lx (F1.2 View-DR OFF/XDNR ON-Middle/VE OFF/AGC High/50 IRE [IP])	Color: 0.4 lx, B/W: 0.25 lx (F1.2 View-DR OFF/XDNR ON-Middle/VE OFF/AGC High/50 IRE [IP])	Color: 0.7 lx, B/W: 0 lx (IR ON) (F1.2/AGC 42 dB/50 IRE [IP])	Color: 0.7 lx, B/W: 0.45 lx (F1.2/AGC 42 dB/50 IRE [IP])	Color: 0.7 lx, B/W: 0.45 lx (F1.2/AGC 42 dB/50 IRE [IP])	2.3 lx (AGC 38 dB/50 IRE [IP])	2.0 lx (AGC 38dB/50 IRE [IP])	Color: 0.2 lx, B/W: 0 lx (IR ON) (F1.2 View-DR OFF/XDNR ON-Middle/VE OFF/AGC High/50 IRE [IP])	Color: 0.2 lx, B/W: 0.1 lx (F1.2 View-DR OFF/XDNR ON-Middle/VE OFF/AGC High/50 IRE [IP])	Color: 0.2 lx, B/W: 0.1 lx (F1.2 View-DR OFF/XDNR ON-Middle/VE OFF/AGC High/50 IRE [IP])
Maximum frame rate	30 fps H.264 at 1920 x 1080; 20 fps MPEG-4 at 1920 x 1080; 16 fps JPEG at 1920 x 1080	30 fps H.264 at 1920 x 1080; 20 fps MPEG-4 at 1920 x 1080; 16 fps JPEG at 1920 x 1080	30 fps H.264 at 1920 x 1080; 20 fps MPEG-4 at 1920 x 1080; 16 fps JPEG at 1920 x 1080	30 fps H.264 at 1920 x 1080; 20 fps MPEG-4 at 1920 x 1080; 16 fps JPEG at 1920 x 1080	30 fps H.264 at 1920 x 1080; 20 fps MPEG-4 at 1920 x 1080; 16 fps JPEG at 1920 x 1080	30 fps H.264 at 1920 x 1080; 20 fps MPEG-4 at 1920 x 1080; 16 fps JPEG at 1920 x 1080	30 fps H.264/MPEG-4/JPEG at 1280 x 720; 15 fps H.264/MPEG-4/JPEG at 1920 x 1080	30 fps H.264/MPEG-4/JPEG at 1280 x 720	30 fps H.264/MPEG-4/JPEG at 1280 x 720	30 fps H.264/MPEG-4/JPEG at 1280 x 720	30 fps H.264/MPEG-4/JPEG at 1280 x 720
Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Electrical D/N	Electrical D/N	Day/Night	Day/Night	Day/Night
Wide-D Visibility Enhancer (VE)	Yes/View-DR Yes/VE	Yes/View-DR Yes/VE	Yes/View-DR Yes/VE	No	No	No	No	No	Yes/View-DR Yes/VE	Yes/View-DR Yes/VE	Yes/View-DR Yes/VE
Noise reduction	XDNR	XDNR	XDNR	Yes	Yes	Yes	Yes	Yes	XDNR	XDNR	XDNR
Card slot(s)	No	No	No	No	No	No	No	No	No	No	No
Wireless capability	No	No	No	No	No	No	No	No	No	No	No
Composite video output	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DEPA (Intelligence)											
Audio Capability	Yes	Yes	Yes	No	No	No	No	No	Yes	Yes	Yes
ONVIF software	ONVIF	ONVIF	ONVIF	ONVIF	ONVIF	ONVIF	ONVIF	ONVIF	ONVIF	ONVIF	ONVIF
Power requirement	AC 24 V, DC 12 V, PoE (Class 0)	AC 24 V, DC 12 V, PoE (Class 0)	AC 24 V, DC 12 V, PoE (Class 0)	AC 24 V, DC 12 V, PoE (Class 0)	AC 24 V, DC 12 V, PoE (Class 2)	AC 24 V, DC 12 V, PoE (Class 2)	AC 24 V, DC 12 V, PoE (Class 1)	AC 24 V, DC 12 V, PoE (Class 1)	AC 24 V, DC 12 V, PoE (Class 0)	AC 24 V, DC 12 V, PoE (Class 0)	AC 24 V, DC 12 V, PoE (Class 0)
Power consumption	29 W max.	10.2 W max.	10.2 W max.	12.9 W max.	6 W max.	6 W max.	2.4 W max.	2.4 W max.	28 W max.	8 W max.	10.2 W max.
Dimensions	ø6 5/8 x 4 3/4 inches (166 x 119 mm)	ø5 5/8 x 4 3/4 inches (140 x 119 mm)	ø5 5/8 x 4 3/4 inches (140 x 118 mm)	ø6 5/8 x 4 3/4 inches (166 x 119 mm)	ø5 5/8 x 4 3/4 inches (140 x 119 mm)	ø5 5/8 x 4 3/4 inches (140 x 118 mm)	ø4 1/4 x 2 1/4 inches (106 x 56.5 mm)	ø4 1/4 x 2 1/8 inches (106 x 50.5 mm)	ø6 5/8 x 4 3/4 inches (166 x 119 mm)	ø5 5/8 x 4 3/4 inches (140 x 119 mm)	ø5 5/8 x 4 3/4 inches (140 x 118 mm)

(\*) Definition of HD: More than 720p with H.264 streaming capability at more than 30 fps.































# IP Mini Dome Cameras

Model name	E Series			X Series		SNC-EM521	SNC-EM520
	SNC-DH160	SNC-DH120T	SNC-DH120	SNC-DH110T	SNC-DH110		
Video compression format	H.264/MPEG-4/JPEG						
Codec streaming capability	Dual streaming (Any combination with H.264/MPEG-4/JPEG, including multiple streams of the same format)						
Computer display format	<b>HD</b> <sup>(*)</sup>	<b>HD</b> <sup>(*)</sup>	<b>HD</b> <sup>(*)</sup>	<b>HD</b> <sup>(*)</sup>	<b>HD</b> <sup>(*)</sup>	SD	SD
Maximum resolution	1280 x 1024 (1.3 Mega) 	1280 x 1024 (1.3 Mega) 	1280 x 1024 (1.3 Mega) 	1280 x 960 (1.3 Mega) 	1280 x 960 (1.3 Mega) 	800 x 600	800 x 600
Outdoor use/ Ingress protection	Yes/ <b>IP66</b>	No	No	No	No	No	No
Vandal resistant	<b>IK10</b>	<b>IK10</b>	No	<b>IK10</b>	No	<b>IK10</b>	No
IR illuminators	<b>IR</b>	No	No	No	No	No	No
Horizontal viewing angle	85.4° to 31.2°	85.4° to 31.2°	85.4° to 31.2°	79°	80.7°	85.4° to 31.2°	85.4° to 31.2°
Zoom ratio	2.9x optical zoom	2.9x optical zoom	2.9x optical zoom	Fixed focal lens	Fixed focal lens	2.9x optical zoom	2.9x optical zoom
Focal length	f=3.1 to 8.9 mm	f=3.1 to 8.9 mm	f=3.1 to 8.9 mm	f=2.34	f=2.34	f=3.1 to 8.9 mm	f=3.1 to 8.9 mm
Image device	1/3-type progressive scan Exmor CMOS sensor <b>Exmor.</b>	1/3-type progressive scan Exmor CMOS sensor <b>Exmor.</b>	1/3-type progressive scan Exmor CMOS sensor <b>Exmor.</b>	1/3.8-type progressive scan CMOS sensor	1/3.8-type progressive scan CMOS sensor	1/3-type progressive scan Exmor CMOS sensor <b>Exmor.</b>	1/3-type progressive scan Exmor CMOS sensor <b>Exmor.</b>
Minimum illumination	Color: 0.5 lx, B/W: 0 lx (IR ON) (F1.2/AGC 42 dB/50 IRE [IP])	Color: 0.5 lx, B/W: 0.3 lx (F1.2/AGC 42 dB/50 IRE [IP])	Color: 0.5 lx, B/W: 0.3 lx (F1.2/AGC 42 dB/50 IRE [IP])	5.5 lx (AGC 30 dB/50 IRE [IP])	5.0 lx (AGC 30 dB/50 IRE [IP])	Color: 0.5 lx, B/W: 0.3 lx (F1.2/AGC ON/50IRE [IP])	Color: 0.5 lx, B/W: 0.3 lx (F1.2/AGC ON/50IRE [IP])
Maximum frame rate	30 fps H.264/MPEG-4/ JPEG at 1280 x 720	30 fps H.264/MPEG-4/ JPEG at 1280 x 720	30 fps H.264/MPEG-4/ JPEG at 1280 x 720	30 fps H.264/MPEG-4/ JPEG at 1280 x 960/ 1280 x 720	30 fps H.264/MPEG-4/ JPEG at 1280 x 960/ 1280 x 720	30 fps	30 fps
Day/Night	Day/Night	Day/Night	Day/Night	Electrical D/N	Electrical D/N	Day/Night	Day/Night
Wide-D Visibility Enhancer (VE)	No	No	No	No	No	No	No
Noise reduction	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Card slot(s)	No	No	No	No	No	No	No
Wireless capability	No	No	No	No	No	No	No
Composite video output	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DEPA (Intelligence)							
Audio Capability	No	No	No	No	No	No	No
ONVIF software	<b>ONVIF</b>	<b>ONVIF</b>	<b>ONVIF</b>	<b>ONVIF</b>	<b>ONVIF</b>	<b>ONVIF</b>	<b>ONVIF</b>
Power requirement	PoE (Class 0)	PoE (Class 2)	PoE (Class 2)	PoE (Class 1)	PoE (Class 1)	PoE (Class 2)	PoE (Class 2)
Power consumption	12.9 W max.	6 W max.	6 W max.	2.4 W max.	2.4 W max.	6 W max.	6 W max.
Dimensions	ø6 5/8 x 4 3/4 inches (166 x 119 mm)	ø5 5/8 x 4 3/4 inches (140 x 119 mm)	ø5 5/8 x 4 3/4 inches (140 x 118 mm)	ø4 1/4 x 2 1/4 inches (106 x 56.5 mm)	ø4 1/4 x 2 1/8 inches (106 x 50.5 mm)	ø5 5/8 x 4 3/4 inches (140 x 119 mm)	ø5 5/8 x 4 3/4 inches (140 x 118 mm)

(\*) Definition of HD: More than 720p with H.264 streaming capability at more than 30 fps.

# IP Rapid Dome and PTZ Cameras

P/T/Z: Pan/Tilt/Zoom

Model name	E Series				SNC-RH1 64	SNC-RH1 24
	SNC-ER580	SNC-EP580	SNC-ER550	SNC-EP550		
Video compression format	H.264/MPEG-4/JPEG					
Codec streaming capability	Dual streaming (Any combination with H.264/MPEG-4/JPEG, including multiple streams of the same format)					
Computer display format						
Maximum resolution	1920 x 1080 	1920 x 1080 	1280 x 720 	1280 x 720 	1280 x 720 	1280 x 720 
Outdoor use/ Ingress protection	No	No	No	No	Yes/IP66	No
Vandal resistant	No	No	No	No	IK10	No
Horizontal viewing angle	55.4° to 2.9°	55.4° to 2.9°	55.9° to 2.1°	55.9° to 2.1°	50° to 5.4°	50° to 5.4°
Zoom ratio	20X optical zoom	20X optical zoom	28X optical zoom	28X optical zoom	10x optical zoom	10x optical zoom
Focal length	f=4.7 to 94 mm	f=4.7 to 94 mm	f=3.5 to 98 mm	f=3.5 to 98 mm	f=5.1 to 51 mm	f=5.1 to 51 mm
Image device	1/2.8-type Exmor CMOS sensor <b>Exmor.</b>	1/2.8-type Exmor CMOS sensor <b>Exmor.</b>	1/4-type Exmor CMOS sensor <b>Exmor.</b>	1/4-type Exmor CMOS sensor <b>Exmor.</b>	1/3-type HD CMOS sensor	1/3-type HD CMOS sensor
Minimum illumination	Color: 1.7 lx, B/W: 0.07 lx (F1.6, shutter 1/30sec, AGC ON, 50IRE[IP])	Color: 1.7 lx, B/W: 0.07 lx (F1.6, shutter 1/30sec, AGC ON, 50IRE[IP])	Color: 2.0 lx (Tentative)	Color: 2.0 lx (Tentative)	Color: 2.1 lx, B/W: 0.19 lx (XDNR ON, VE ON, Slow Shutter OFF, 50 IRE [IP])	Color: 1.9 lx, B/W: 0.17 lx (XDNR ON, VE ON, Slow Shutter OFF, 50 IRE [IP])
Maximum frame rate	30 fps H.264 at 1920 x 1080; 20 fps MPEG-4 at 1920 x 1080; 16 fps JPEG at 1920 x 1080	30 fps H.264 at 1920 x 1080; 20 fps MPEG-4 at 1920 x 1080; 16 fps JPEG at 1920 x 1080	30 fps H.264/ MPEG-4/JPEG	30 fps H.264/ MPEG-4/JPEG	30 fps H.264/ MPEG-4/JPEG at 1280 x 720	30 fps H.264/ MPEG-4/JPEG at 1280 x 720
Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Wide-D Visibility Enhancer (VE)	Yes/ <b>DynaView</b>	Yes/ <b>DynaView</b>	Yes/ <b>DynaView</b>	Yes/ <b>DynaView</b>	Yes/VE	Yes/VE
Noise reduction	Yes	Yes	Yes	Yes	XDNR	XDNR
Card slot(s)	SD card x1	SD card x1	SD card x1	SD card x1	CF card x1	CF card x1
Wireless capability	No	No	No	No	Yes (option)	Yes (option)
Composite video output	No	No	No	No	Yes	Yes
DEPA (Intelligence)						
Audio Capability	No	No	No	No	Yes	Yes
ONVIF software						
Rapid Dome or PTZ	Rapid Dome 	PTZ 	Rapid Dome 	PTZ 	Rapid Dome 	Rapid Dome 
Pan angle	360 degrees endless rotation	340 degrees	360 degrees endless rotation	340 degrees	360° endless	360° endless
Tilt angle	-105° to +105° (210° tilt)	-15° to +90°	-105° to +105° (210° tilt)	-15° to +90°	-105° to +105° (210° tilt)	-105° to +105° (210° tilt)
Quick Release mechanism	No	No	No	No	Quick Release	Quick Release
Power requirement	AC 24 V, <b>HPoE (Class 4)</b>	AC 24 V, <b>HPoE (Class 4)</b>	AC 24 V, <b>HPoE (Class 4)</b>	AC 24 V, <b>HPoE (Class 4)</b>	AC 24 V	AC 24 V, DC 12 V, <b>HPoE (Class 4)</b>
Power consumption	25 W max.	25 W max.	25 W max.	25 W max.	80 W max.	25 W max.
Dimensions	ø 5 7/8 x 7 5/8 inches (147.4 x 190.9 mm)	ø 5 7/8 x 7 5/8 inches (147.4 x 190.9 mm)	ø 5 7/8 x 7 5/8 inches (147.4 x 190.9 mm)	ø 5 7/8 x 7 5/8 inches (147.4 x 190.9 mm)	ø 9 3/8 x 13 5/8 inches (238 x 346 mm)	ø 6 1/8 x 9 inches (154 x 226 mm)

(\*1) Definition of HD: More than 720p with H.264 streaming capability of more than 30 fps.

# IP Rapid Dome and PTZ Cameras

P/T/Z: Pan/Tilt/Zoom

Model name	E Series										
	SNC-ER520	SNC-EP520	SNC-RS86N	SNC-RS84N	SNC-RS46N	SNC-RS44N	SNC-RX570N	SNC-RX550N	SNC-RX530N	SNC-RZ50N	SNC-RZ25N
											
Video compression format	H.264/MPEG-4/JPEG						H.264/MPEG-4/JPEG				MPEG-4/JPEG
Codec streaming capability	Dual streaming (Any combination with H.264/MPEG-4/JPEG, including multiple streams of the same format)		Triple streaming (Any combination with H.264/MPEG-4/JPEG, including multiple streams of the same format)				Dual streaming (MPEG-4 and JPEG combination only)				Single streaming (MPEG4/JPEG selectable)
Computer display format	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD	SD
Maximum resolution	720 x 480	720 x 480	704 x 480	704 x 480	704 x 480	704 x 480	704 x 480	704 x 480	704 x 480	704 x 480	640 x 480
Outdoor use/Ingress protection	No	No	Yes/IP66	Yes/IP66	No	No	No	No	No	No	No
Vandal resistant	No	No	IK10	IK10	No	No	No	No	No	No	No
Horizontal viewing angle	57.8° to 1.7°	57.8° to 1.7°	57.8° to 1.7°	48.0° to 2.8°	57.8° to 1.7°	48.0° to 2.8°	57.8° to 1.7°	54.2° to 2.2°	48.0° to 2.8°	42.0° to 1.7°	48° to 2.7°
Zoom ratio	36x optical zoom	36x optical zoom	36x optical zoom	18x optical zoom	36x optical zoom	18x optical zoom	36x optical zoom	26x optical zoom	18x optical zoom	18x optical zoom	18x optical zoom
Focal length	f=3.4 to 122.4 mm	f=3.4 to 122.4 mm	f=3.4 to 122.4 mm	f=4.1 to 73.8 mm	f=3.4 to 122.4 mm	f=4.1 to 73.8 mm	f=3.4 to 122.4 mm	f=3.5 to 91 mm	f=4.1 to 73.8 mm	f=3.5 to 91 mm	f=4.1 to 73.8 mm
Image device	1/4-type EXview HAD CCD	1/4-type EXview HAD CCD	1/4-type Exwave HAD CCD sensor	1/4-type Exwave HAD CCD sensor	1/4-type Exwave HAD CCD sensor	1/4-type Exwave HAD CCD sensor	1/4-type Exwave HAD CCD sensor	1/4-type Exwave HAD CCD sensor	1/4-type Exwave HAD CCD sensor	1/4-type Super HAD CCD sensor	1/4-type Exwave HAD CCD sensor
Minimum illumination	Color: 1.4 lx, B/W: 0.15 lx (F1.6, shutter 1/60sec, AGC ON, 50 IRE [IP])	Color: 1.4 lx, B/W: 0.15 lx (F1.6, shutter 1/60sec, AGC ON, 50 IRE [IP])	Color: 0.8 lx, B/W: 0.09 lx (50 IRE, XDNR ON, VE ON, Slow Shutter OFF)	Color: 0.4 lx, B/W: 0.09 lx (50 IRE, XDNR ON, VE ON, Slow Shutter OFF)	Color: 0.7 lx, B/W: 0.08 lx (50 IRE, XDNR ON, VE ON, Slow Shutter OFF)	Color: 0.4 lx, B/W: 0.15 lx (50 IRE, F1.6, AGC ON)	Color: 1.4 lx, B/W: 0.15 lx (50 IRE, F1.6, AGC ON)	Color: 1 lx, B/W: 0.15 lx (50 IRE, F1.6, AGC ON)	Color: 0.7 lx (50 IRE, F1.4, AGC ON), B/W: 0.15 lx (50 IRE, F1.4, AGC ON)	Color: 2.2 lx, B/W: 0.3 lx (50 IRE, F1.6, AGC ON)	Color: 0.7 lx, B/W: 0.06 lx (50 IRE, F1.4, AGC ON)
Maximum frame rate	30 fps H.264/MPEG-4/JPEG	30 fps H.264/MPEG-4/JPEG	30 fps H.264/MPEG-4/JPEG at 720 x 480 resolution	30 fps H.264/MPEG-4/JPEG at 720 x 480 resolution	30 fps H.264/MPEG-4/JPEG at 720 x 480 resolution	30 fps H.264/MPEG-4/JPEG at 720 x 480 resolution	30 fps JPEG/MPEG-4 at 704 x 480 resolution; 10 fps H.264 at 704 x 480 resolution	30 fps JPEG/MPEG-4 at 704 x 480 resolution; 10 fps H.264 at 704 x 480 resolution	30 fps JPEG/MPEG-4 at 704 x 480 resolution; 10 fps H.264 at 704 x 480 resolution	30 fps JPEG/MPEG-4 at 704 x 480 resolution; 10 fps H.264 at 704 x 480 resolution	18 fps JPEG or 15 fps MPEG-4 at VGA resolution; 30 fps JPEG or MPEG-4 at QVGA resolution
Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Wide-D Visibility Enhancer (VE)	Yes/ <b>DynaView</b>	Yes/ <b>DynaView</b>	Yes/ <b>DynaView</b>	Yes/ <b>DynaView</b>	Yes/ <b>DynaView</b>	Yes/ <b>DynaView</b>	Yes/ <b>DynaView</b>	Yes/ <b>DynaView</b>	No	No	No
Noise reduction	Yes	Yes	XDNR	XDNR	XDNR	XDNR	No	Yes	Yes	Yes	No
Card slot(s)	SD card x1	SD card x1	CF card x1	CF card x1	CF card x1	CF card x1	PC card x1, Memory Stick® x1	PC card x1, Memory Stick x1	PC card x1, Memory Stick x1	PC card x1, CF card x1	CF card x1
Wireless capability	No	No	Yes (option)	Yes (option)	Yes (option)	Yes (option)	Yes (option)	Yes (option)	Yes (option)	Yes (option)	Yes (option)
Composite video output	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DEPA (Intelligence)											
Audio Capability	No	No	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
ONVIF software							No	No	No	No	No
Rapid Dome or PTZ	PTZ 	PTZ 	Rapid Dome 	Rapid Dome 	Rapid Dome 	Rapid Dome 	Rapid Dome 	Rapid Dome 	Rapid Dome 	PTZ 	PTZ 
Pan angle	360° endless	340 degrees	360° endless	360° endless	360° endless	360° endless	360° endless	360° endless	360° endless	-170° to +170°	-170° to +170°
Tilt angle	-105° to +105° (210° tilt)	-15° to +90°	-105° to +105° (210° tilt)	-105° to +105° (210° tilt)	-105° to +105° (210° tilt)	-105° to +105° (210° tilt)	0° to -90°	0° to -90°	0° to -90°	0° to +115°	0° to +120°
Quick Release mechanism	No	No	Quick Release	Quick Release	Quick Release	Quick Release	No	No	No	No	No
Power requirement	AC 24 V, HPoE (Class 4)	AC 24 V, HPoE (Class 4)	AC 24 V	AC 24 V	AC 24 V, DC 12 V, HPoE (Class 4) (*)	AC 24 V, DC 12 V, HPoE (Class 4) (*)	AC 24 V, DC 12 V	AC 24 V, DC 12 V	AC 24 V, DC 12 V	DC 12 V	AC 24 V, DC 12 V
Power consumption	25 W max.	25 W max.	78 W max.	78 W max.	23 W max.	23 W max.	25 W max.	25 W max.	25 W max.	20 W max.	17 W max.
Dimensions	ø 5 7/8 x 7 5/8 inches (147.4 x 190.9 mm)	ø 5 7/8 x 7 5/8 inches (147.4 x 190.9 mm)	ø 9 3/8 x 13 5/8 inches (238 x 344 mm)	ø 9 3/8 x 13 5/8 inches (238 x 344 mm)	ø 6 1/8 x 9 inches (154 x 226 mm)	ø 6 1/8 x 9 inches (154 x 226 mm)	6 3/8 x 6 3/8 x 9 1/8 inches (160 x 160 x 230 mm)	6 3/8 x 6 3/8 x 9 1/8 inches (160 x 160 x 230 mm)	6 3/8 x 6 3/8 x 9 1/8 inches (160 x 160 x 230 mm)	5 5/8 x 6 5/8 x 5 5/8 inches (140 x 166 x 142 mm)	5 5/8 x 8 7/8 x 5 7/8 inches (140 x 200 x 148 mm)






# IP Fixed Cameras

Model name	V Series		E Series		X Series	V Series		E Series		X Series
	SNC-CH280	SNC-CH240	SNC-CH260	SNC-CH220	SNC-CH210	SNC-CH180	SNC-CH140	SNC-CH160	SNC-CH120	SNC-CH110
Video compression format	H.264/MPEG-4/JPEG									
Codec streaming capability	Dual streaming (Any combination with H.264/MPEG-4/JPEG, including multiple streams of the same format)									
Computer display format										
Maximum resolution	1920 x 1440 (3 Mega)	1920 x 1440 (3 Mega)	1920 x 1440 (3 Mega)	1920 x 1440 (3 Mega)	2048 x 1536 (3 Mega)	1280 x 1024 (1.3 Mega)	1280 x 1024 (1.3 Mega)	1280 x 1024 (1.3 Mega)	1280 x 1024 (1.3 Mega)	1280 x 960 (1.3 Mega)
Outdoor use/Ingress protection	Yes/IP66	No	Yes/IP66	No	No	Yes/IP66	No	Yes/IP66	No	No
IR illuminators	IR	No	IR	No	No	IR	No	IR	No	No
Horizontal viewing angle	88.5° to 32.3°	101.2° to 47.0°	88.5° to 32.3°	101.2° to 47.0°	88°	85.4° to 31.2°	96.5° to 33.9°	85.4° to 31.2°	96.5° to 33.9°	80.7°
Zoom ratio	2.9x optical zoom	2.1x optical zoom	2.9x optical zoom	2.1x optical zoom	Fixed focal lens	2.9x optical zoom	2.9x optical zoom	2.9x optical zoom	2.9x optical zoom	Fixed focal lens
Focal length	f=3.1 to 8.9 mm	f=2.8 to 6 mm	f=3.1 to 8.9 mm	f=2.8 to 6 mm	f=3.3 mm	f=3.1 to 8.9 mm	f=2.8 to 8 mm	f=3.1 to 8.9 mm	f=2.8 to 8 mm	f=2.34
Lens mount	Built-in	CS mount	Built-in	CS mount	Built-in	Built-in	CS mount	Built-in	CS mount	Built-in
Image device	1/2.8-type progressive scan Exmor™ CMOS Sensor <b>Exmor.</b>	1/2.8-type progressive scan Exmor™ CMOS Sensor <b>Exmor.</b>	1/2.8-type progressive scan Exmor™ CMOS Sensor <b>Exmor.</b>	1/2.8-type progressive scan Exmor™ CMOS Sensor <b>Exmor.</b>	1/2.8-type progressive scan Exmor™ CMOS Sensor <b>Exmor.</b>	1/3-type progressive scan Exmor CMOS Sensor <b>Exmor.</b>	1/3-type progressive scan Exmor CMOS Sensor <b>Exmor.</b>	1/3-type progressive scan Exmor CMOS Sensor <b>Exmor.</b>	1/3-type progressive scan Exmor CMOS Sensor <b>Exmor.</b>	1/3.8-type progressive scan CMOS sensor
Minimum illumination	Color: 0.4 lx, B/W: 0 lx (IR ON) (F1.2/View-DR™ OFF/XDNR ON-Middle/VE OFF/AGC High/50 IRE [IP])	Color: 0.4 lx, B/W: 0.25 lx (F1.3/View-DR OFF/XDNR ON-Middle/VE OFF/AGC High/50 IRE [IP])	Color: 0.7 lx, B/W: 0 lx (IR ON) (F1.2/AGC 42dB / 50IRE [IP])	Color: 0.7 lx, B/W: 0.45 lx (F1.3/AGC 42 dB/50 IRE [IP])	2.0 lx (AGC 38 dB/50 IRE [IP])	Color: 0.22 lx, B/W: 0 lx (IR ON) (F1.2/View-DR OFF/XDNR ON-Middle/VE OFF/AGC High/50 IRE [IP])	Color: 0.2 lx, B/W: 0.1 lx (F1.2/View-DR OFF/XDNR ON-Middle/VE OFF/AGC High/50 IRE [IP])	Color: 0.5 lx, B/W: 0 lx (IR ON) (F1.2/AGC 42 dB/50 IRE [IP])	Color: 0.5 lx, B/W: 0.3 lx (F1.2/AGC 42 dB/50 IRE [IP])	5.0 lx (AGC 30 dB/50 IRE [IP])
Maximum frame rate	30 fps H.264 at 1920 x 1080; 20 fps MPEG-4 at 1920 x 1080; 16 fps JPEG at 1920 x 1080	30 fps H.264 at 1920 x 1080; 20 fps MPEG-4 at 1920 x 1080; 16 fps JPEG at 1920 x 1080	30 fps H.264 at 1920 x 1080; 20 fps MPEG-4 at 1920 x 1080; 16 fps JPEG at 1920 x 1080	30 fps H.264 at 1920 x 1080; 20 fps MPEG-4 at 1920 x 1080; 16 fps JPEG at 1920 x 1080	30 fps H.264/MPEG-4/JPEG at 1280 x 720; 15 fps H.264/MPEG-4/JPEG at 1920 x 1080	30 fps H.264/JPEG/MPEG-4 at 1280 x 720	30 fps H.264/JPEG/MPEG-4 at 1280 x 720	30 fps H.264/JPEG/MPEG-4 at 1280 x 720	30 fps H.264/JPEG/MPEG-4 at 1280 x 720	30 fps H.264/MPEG-4/JPEG at 1280 x 960/1280 x 720
Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Electrical D/N	Day/Night	Day/Night	Day/Night	Day/Night	Electrical D/N
Wide-D Visibility Enhancer (VE)	Yes//Yes/VE	Yes//Yes/VE	No	No	No	Yes//Yes/VE	Yes//Yes/VE	No	No	No
Noise reduction	XDNR™ technology	XDNR technology	Yes	Yes	No	XDNR technology	XDNR technology	Yes	Yes	Yes
Card slot(s)	CF card x1	CF card x1	No	No	No	CF card x1	CF card x1	No	No	No
Wireless capability	Yes (option)	Yes (option)	No	No	No	Yes (option)	Yes (option)	No	No	No
Composite video output	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DEPA (Intelligence)										
Audio Capability	Yes	Yes	No	No	No	Yes	Yes	No	No	No
ONVIF software										
Power requirement	AC 24 V, DC 12 V, PoE (Class 0)	AC 24 V, DC 12 V, PoE (Class 0)	PoE (Class 0)	PoE (Class 2)	PoE (Class 1)	AC 24 V, DC 12 V, PoE (Class 0)	AC 24 V, DC 12 V, PoE (Class 0)	PoE (Class 0)	PoE (Class 2)	PoE (Class 1)
Power consumption	33 W max.	11.2 W max.	11.2 W max.	5 W max.	2.4 W max.	30 W max.	9 W max.	12.9 W max.	5 W max.	2.4 W max.
Dimensions	ø3 3/4 x 7 3/8 inches (93 x 186 mm)	2 7/8 x 2 1/2 x 7 7/8 inches (72 x 63 x 197.3 mm) with lens, not including projecting parts	ø3 3/4 x 7 3/8 inches (93 x 186 mm)	2 7/8 x 2 1/2 x 7 7/8 inches (72 x 63 x 197.3 mm) with lens, not including projecting parts	ø1 3/4 x 3 3/4 inches (44 x 93 mm)	ø3 3/4 x 7 3/8 inches (93 x 186 mm)	2 7/8 x 2 1/2 x 7 7/8 inches (72 x 63 x 197 mm) with lens, not including projecting parts	ø3 3/4 x 7 3/8 inches (93 x 186 mm)	2 7/8 x 2 1/2 x 7 7/8 inches (72 x 63 x 197 mm) with lens, not including projecting parts	ø1 3/4 x 3 3/4 inches (44 x 93 mm)

(\*) Definition of HD: More than 720p with H.264 streaming capability at more than 30 fps.

# IP Fixed Cameras

Model name	SNC-EB520
	
Video compression format	H.264/MPEG-4/JPEG
Codec streaming capability	Dual streaming (Any combination with H.264/MPEG-4/JPEG including multiple streams of the same format)
Computer display format	SD
Maximum resolution	800 x 600
Outdoor use/ Ingress protection	No
IR illuminators	No
Horizontal viewing angle	89.2 ° to 34.6 °
Zoom ratio	2.6x optical zoom
Focal length	f=3.0 to 8 mm
Lens mount	CS mount lens
Image device	1/3-type progressive scan Exmor CMOS sensor <b>Exmor.</b>
Minimum illumination	Color: 0.47 lx, B/W: 0.27 lx (F1.0/AGC ON /50IRE [IP])
Maximum frame rate	30 fps
Day/Night	Day/Night
Wide-D	No
Visibility Enhancer (VE)	No
Noise reduction	Yes
Card slot(s)	No
Wireless capability	No
Composite video output	Yes
DEPA (Intelligence)	
Audio Capability	No
ONVIF software	
Power requirement	PoE (Class 2)
Power consumption	5 W max.
Dimensions	2 7/8 x 2 1/2 x 7 7/8 inches (72 x 63 x 187.8 mm) with lens, not including projecting parts

# Series Features At a Glance

## X Series = Affordable HD with Fixed Focal Lens

- Extremely discreet, small footprint and cost effective indoor HD camera line
- 1080p Exmor® HD CMOS and 720p HD CMOS models (3MP/1.3MP modes)
- Dual Stream, Triple Codec: H.264/MPEG4/JPEG
- High Quality Pan Focal Lens
- Fixed Wide Angle Lens
- IK10 ratings on vandal resistant models: SNC-DH210T, SNC-DH110T
- POE only for single cable installation

## E Series = Economical HD with Varifocal Lens

- Economical cost down version of V series cameras
- 1080p and 720p HD models. (3MP/2MP/1.3MP modes)
- Dual Stream, Triple Codec: H.264/MPEG4/JPEG
- Exmor HD CMOS Sensor. High Speed, Low Noise image sensor
- Auto Back Focus on all E series. EZ Focus, local and remote
- Motorized Zoom Adjustments on Mini Dome and Bullet cameras EZ Zoom, local and remote
- Analog output and ball joint mechanism for quick and easy installation
- True Day/Night cameras with IR cut filter removal in B/W mode
- IK10 ratings on vandal resistant models: SNC-DH120T, SNC-DH220T, SNC-DH160, SNC-DH260
- IP66 rating on outdoor ready models with built-in IR. SNC-DH160, SNC-DH260, SNC-CH160, SNC-CH260
- POE only for single cable installation

## V Series = Value Added Premium HD with Varifocal Lens

- Top-of-the-line cameras with value added features
- 1080p and 720p HD models. (3MP/1.3MP modes.)
- Dual Stream, Triple Codec: H.264/MPEG4/JPEG
- Exmor HD CMOS Sensor. High Speed, Low Noise image sensor
- View-DR™ Technology: Ultra Wide Dynamic Range for clear images in high contrast lighting conditions
- XDNR™ Technology: 2D/3D Dynamic Noise Reduction for better clarity with virtually no motion blur
- DEPA™ Advanced: built-in camera analytics
- 2-Way Audio with Echo Cancellation and Voice Alert function
- Auto Back Focus on all V series. EZ Focus, local and remote
- Motorized Zoom Adjustments on Mini Dome and Bullet cameras EZ Zoom, local and remote
- Analog output and ball joint mechanism for quick and easy installation. Full Video output
- True Day/Night cameras with IR cut filter removal in B/W mode
- IK10 ratings on vandal resistant models: SNC-DH140T, SNC-DH240T, SNC-DH180, SNC-DH280
- IP66 rating on outdoor ready models with built-in IR: SNC-DH180, SNC-DH280, SNC-CH180, SNC-CH280
- AC24/DC12/POE for flexible power options







## Z Series = IP and Analog-over-Coax Technology for Existing Analog CCTV Systems

- Cost-effective and environmentally-friendly surveillance systems that can be easily migrated from an analog CCTV system to an IP network-based system, making the most of any existing surveillance infrastructure
- Simultaneous use of IP HD video and analog SD video
- Utilization of the advanced features and functionalities offered by IP network cameras
- Extended cable length of up to 1,000 feet (300m)\*
- Minimized latency of analog video for live monitoring


\*Cable length varies according to cable grade.

All cameras in this sheet comply with UL2044.

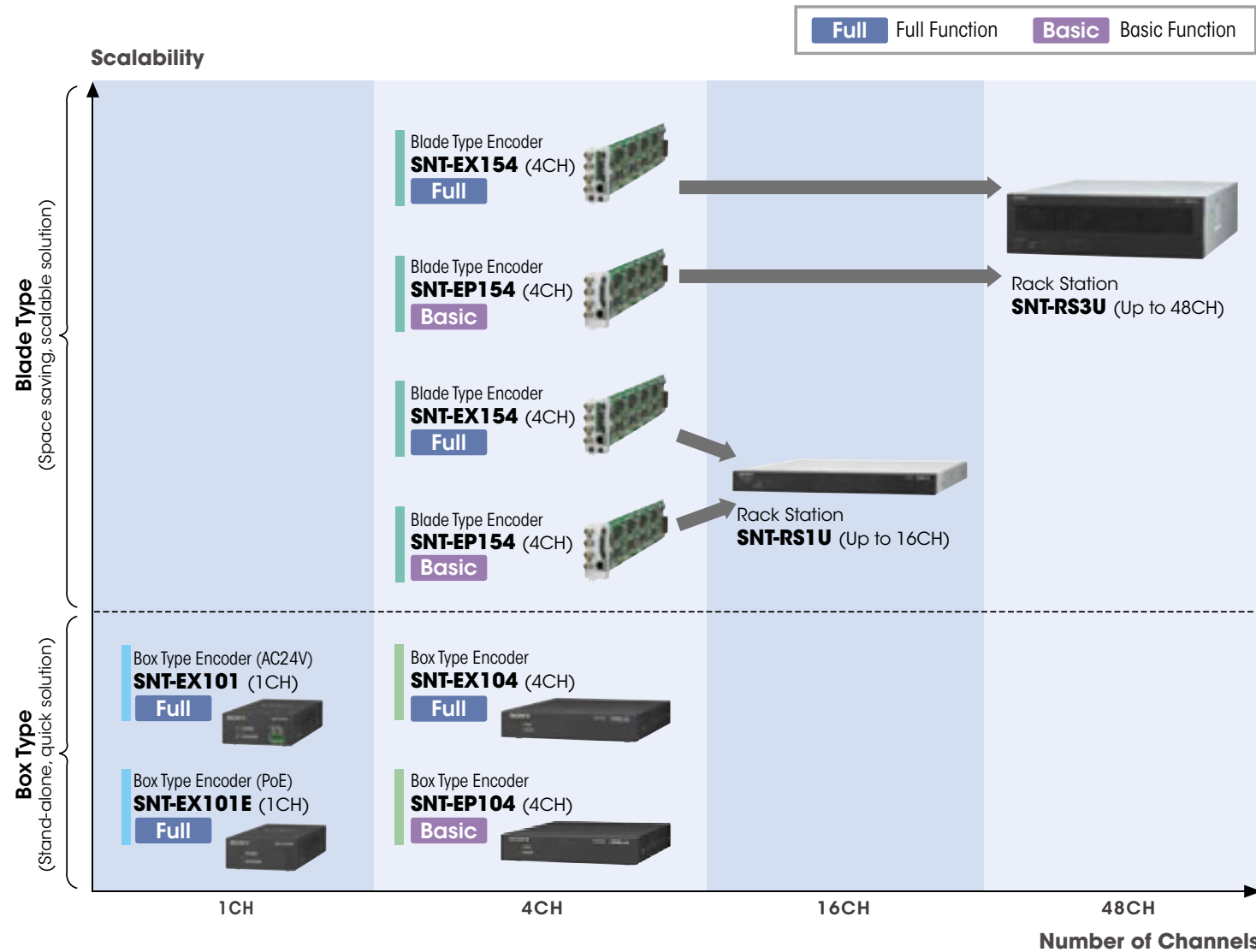
# Analog Fixed Cameras

Model name	SSC-FB560	SSC-FB530	SSC-G213A	SSC-G113A	SSC-G203A	SSC-G103A
						
	Optional CS mount lens available	Optional CS mount lens available	Optional CS mount lens available	Optional CS mount lens available	Optional CS mount lens available	Optional CS mount lens available
Image device	1/3-Type "Super HAD™ CCD II" <b>Super HAD CCD II</b>	1/3-Type "Super HAD CCD II" <b>Super HAD CCD II</b>	1/3-type "EXview™ HAD CCD II" <b>EXview HAD CCD II</b>	1/3-type "EXview HAD CCD II" <b>EXview HAD CCD II</b>	1/3-Type "Super HAD CCD II" <b>Super HAD CCD II</b>	1/3-Type "Super HAD CCD II" <b>Super HAD CCD II</b>
Number of effective pixels (H x V)	480,000 pixels (976x494)	480,000 pixels (976x494)	480,000 pixels (976x494)	480,000 pixels (976x494)	380,000 pixels (768 x 494)	380,000 pixels (768 x 494)
Signal system	NTSC standard	NTSC standard	NTSC standard	NTSC standard	NTSC standard	NTSC standard
Horizontal resolution	700 TV lines (sharp mode)	700 TV lines (sharp mode)	650 TV lines	650 TV lines	540 TV lines	540 TV lines
IR illuminators	No	No	No	No	No	No
Minimum illumination	Color: 0.08 lx, B/W: 0.01 lx (F1.2/AGC ON/50 IRE) Color: 0.05 lx, B/W: 0.006 lx (F1.2/AGC ON/30 IRE)	Color: 0.08 lx, B/W: 0.05 lx (F1.2/AGC ON/50 IRE) Color: 0.05 lx, B/W: 0.03 lx (F1.2/AGC ON/30 IRE)	Color: 0.15 lx, B/W: 0.01 lx (F1.2, AGC ON, 50 IRE); Color: 0.08 lx, B/W: 0.003 lx (F1.2, AGC ON, 30 IRE)	Color: 0.15 lx, B/W: 0.1 lx (F1.2, 50 IRE); Color: 0.08 lx, B/W: 0.03 lx (F1.2, 30IRE)	Color: 0.15 lx, B/W: 0.01 lx (F1.2, AGC ON, 50 IRE); Color: 0.08 lx, B/W: 0.003 lx (F1.2, AGC ON, 30 IRE)	Color: 0.15 lx, B/W: 0.1 lx (F1.2, 50 IRE); Color: 0.08 lx, B/W: 0.03 lx (F1.2, 30 IRE)
Day/Night	Day/Night	Electrical D/N	Day/Night	Electrical D/N	Day/Night	Electrical D/N
Wide Dynamic	Yes/DynaViewSX	Yes/DynaViewSX	No	No	No	No
Synchronization	Internal/AC line lock selectable	Internal/AC line lock selectable	Internal/AC line lock selectable	Internal/AC line lock selectable	Internal/AC line lock selectable	Internal/AC line lock selectable
Lens type (optional)	CS mount lens	CS mount lens	CS mount lens	CS mount lens	CS mount lens	CS mount lens
Power requirement	AC 24 V ±10%, DC 12 V ±10%	AC 24 V ±10%, DC 12 V ±10%	AC 24 V ±10 %, DC 12 V ±10 %	AC 24 V ±10 %, DC 12 V ±10 %	AC 24 V ±10 %, DC 12 V ±10 %	AC 24 V ±10 %, DC 12 V ±10 %
Operating temperature	14 F° to 122 F° (-10 °C to +50 °C)	14 F° to 122 F° (-10 °C to +50 °C)	14 F° to 122 F° (-10 °C to +50 °C)	14 F° to 122 F° (-10 °C to +50 °C)	14 F° to 122 F° (-10 °C to +50 °C)	14 F° to 122 F° (-10 °C to +50 °C)
Dimensions	2 1/2 x 2 1/4 x 3 1/2 inches (63 x 57 x 88 mm) without lens, not including projecting parts)	2 1/2 x 2 1/4 x 3 1/2 inches (63 x 57 x 88 mm) without lens, not including projecting parts)	4 3/4 x 2 1/2 x 2 3/8 inches (117.6 x 63.2 x 57.2 mm) without lens, not including projecting parts)	4 3/4 x 2 1/2 x 2 3/8 inches (117.6 x 63.2 x 57.2 mm) without lens, not including projecting parts)	4 3/4 x 2 1/2 x 2 3/8 inches (117.6 x 63.2 x 57.2 mm) without lens, not including projecting parts)	4 3/4 x 2 1/2 x 2 3/8 inches (117.6 x 63.2 x 57.2 mm) without lens, not including projecting parts)

# Analog Mini Dome Cameras

Model name	SSC-FM560	SSC-FM530	SSC-N24A	SSC-N21A	SSC-N14A	SSC-N13A	SSC-N22A	SSC-N20A	SSC-N12A	SSC-N11A
										
Image device	1/3-Type "Super HAD CCD II" <i>Super HAD CCD II.</i>	1/3-Type "Super HAD CCD II" <i>Super HAD CCD II.</i>	1/3-type "EXview HAD CCD II" <i>EXview HAD CCD II.</i>	1/3-type "EXview HAD CCD II" <i>EXview HAD CCD II.</i>	1/3-type "EXview HAD CCD II" <i>EXview HAD CCD II.</i>	1/3-type "EXview HAD CCD II" <i>EXview HAD CCD II.</i>	1/3-type "EXview HAD CCD II" <i>EXview HAD CCD II.</i>	1/3-type "EXview HAD CCD II" <i>EXview HAD CCD II.</i>	1/3-Type "Super HAD CCD II" <i>Super HAD CCD II.</i>	1/3-Type "Super HAD CCD II" <i>Super HAD CCD II.</i>
Number of effective pixels (H x V)	480,000 pixels (976 x 494)	480,000 pixels (976 x 494)	480,000 pixels (976 x 494)	480,000 pixels (976 x 494)	480,000 pixels (976 x 494)	480,000 pixels (976 x 494)	380,000 pixels (768 x 494)	380,000 pixels (768 x 494)	380,000 pixels (768 x 494)	380,000 pixels (768 x 494)
Signal system	NTSC standard	NTSC standard	NTSC standard	NTSC standard	NTSC standard	NTSC standard	NTSC standard	NTSC standard	NTSC standard	NTSC standard
Horizontal resolution	700 TV lines (sharp mode)	700 TV lines (sharp mode)	650 TV lines	650 TV lines	650 TV lines	650 TV lines	540 TV lines	540 TV lines	540 TV lines	540 TV lines
Minimum illumination	Color: 0.1 lx, B/W: 0.01 lx (F1.2, 50 IRE); Color: 0.06 lx, B/W: 0.006 lx (F1.2, 30 IRE)	Color: 0.1 lx, B/W: 0.07 lx (F1.2, 50 IRE); Color: 0.06 lx, B/W: 0.05 lx (F1.2, 30 IRE)	Color: 0.15 lx, B/W: 0.01 lx (F1.2, 50 IRE); Color: 0.08 lx, B/W: 0.003 lx (F1.2, 30 IRE)	Color: 0.15 lx, B/W: 0.1 lx (F1.2, 50 IRE); Color: 0.08 lx, B/W: 0.03 lx (F1.2, 30 IRE)	Color: 0.3 lx, B/W: 0.2 lx (F2.0, 50 IRE); Color: 0.18 lx, B/W: 0.07 lx (F2.0, 30 IRE)	Color: 0.4 lx, B/W: 0.25 lx (F2.0, 50 IRE); Color: 0.2 lx, B/W: 0.08 lx (F2.0, 30 IRE)	Color: 0.15 lx, B/W: 0.01 lx (F1.2, 50 IRE); Color: 0.08 lx, B/W: 0.003 lx (F1.2, 30 IRE)	Color: 0.15 lx, B/W: 0.1 lx (F1.2, 50 IRE); Color: 0.08 lx, B/W: 0.03 lx (F1.2, 30 IRE)	Color: 0.3 lx, B/W: 0.2 lx (F2.0, 50 IRE); Color: 0.18 lx, B/W: 0.07 lx (F2.0, 30 IRE)	Color: 0.55 lx, B/W: 0.3 lx (F2.0, 50 IRE); Color: 0.35 lx, B/W: 0.2 lx (F2.0, 30 IRE)
Day/Night	Day/Night	Electrical D/N	Day/Night	Electrical D/N	Electrical D/N	Electrical D/N	Day/Night	Electrical D/N	Electrical D/N	Electrical D/N
Synchronization	Internal/AC line lock selectable	Internal/AC line lock selectable	Internal/AC line lock selectable	Internal/AC line lock selectable	Internal lock	Internal lock	Internal/AC line lock selectable	Internal/AC line lock selectable	Internal lock	Internal lock
Lens type	Built-in variable focal lens	Built-in variable focal lens	Built-in variable focal lens	Built-in variable focal lens	Mono-focal lens	Mono-focal lens	Built-in variable focal lens	Built-in variable focal lens	Mono-focal lens	Mono-focal lens
Horizontal viewing angle	101.8° to 27.4°	99.5° to 27.4°	101.8 degree to 27.4 degree	99.5 degree to 27.4 degree	46 degree	95.9 degree	101.8 degree to 27.4 degree	99.5 degree to 27.4 degree	46 degree	95.9 degree
Focal length	f=2.8 to 10.5 mm	f=2.8 to 10.5 mm	f=2.8 to 10.5 mm	f=2.8 to 10.5 mm	f=6.0 mm	f=3.0 mm	f=2.8 to 10.5 mm	f=2.8 to 10.5 mm	f=6.0 mm	f=3.0 mm
Pan angle	355°	355°	355 degree	355 degree	340 degree	340 degree	355 degree	355 degree	340 degree	340 degree
Tilt angle	±77°	±77°	±77 degree	±77 degree	±75 degree	±45.3 degree	±77 degree	±77 degree	±75 degree	±45.3 degree
Swivel rotation	350°	350°	350 degree	350 degree	340 degree	340 degree	350 degree	350 degree	340 degree	340 degree
Power requirement	AC 24 V ±10%, DC 12 V ±10%	AC 24 V ±10%, DC 12 V ±10%	AC24 V ±10%, DC12 V ±10%	AC24 V ±10%, DC12 V ±10%	DC12 V ±10%	DC12 V ±10%	AC24 V ±10%, DC12 V ±10%	AC24 V ±10%, DC12 V ±10%	DC12 V ±10%	DC12 V ±10%
Operating temperature	14 °F to 122 °F (-10 °C to +50 °C)	14 °F to 122 °F (-10 °C to +50 °C)	14 °F to 122 °F (-10 °C to +50 °C)	14 °F to 122 °F (-10 °C to +50 °C)	14 °F to 122 °F (-10 °C to +50 °C)	14 °F to 122 °F (-10 °C to +50 °C)	14 °F to 122 °F (-10 °C to +50 °C)	14 °F to 122 °F (-10 °C to +50 °C)	14 °F to 122 °F (-10 °C to +50 °C)	14 °F to 122 °F (-10 °C to +50 °C)
Dimensions	4 7/8 x 3 1/2 inches (ø121.6 x 86.5 mm)	4 7/8 x 3 1/2 inches (ø121.6 x 86.5 mm)	ø 4 7/8 x 3 1/2 inches (ø121.6 mm x 86.5 mm)	ø 4 7/8 x 3 1/2 inches (ø121.6 mm x 86.5 mm)	ø 3 3/8 inches x 2 1/2 inches (ø 85.2mm x 63.5 mm)	ø 3 3/8 inches x 2 1/8 inches (ø 84 mm x 53 mm)	ø 4 7/8 x 3 1/2 inches (ø121.6 mm x 86.5 mm)	ø 4 7/8 x 3 1/2 inches (ø121.6 mm x 86.5 mm)	ø 3 3/8 inches x 2 1/2 inches (ø 85.2mm x 63.5 mm)	ø 3 3/8 inches x 2 1/8 inches (ø 84 mm x 53 mm)

# Surveillance Video Encoders



## Rack Station



### SNT-RS1U

Accepts up to 4 blade encoders (up to 16 ch)  
Universal power capability  
AC 100V - AC240V, 50/60 Hz



### SNT-RS3U











Accepts up to 12 blade encoders (up to 48 ch)  
Universal power capability  
AC 100V - AC240V, 50/60 Hz

## Optional Accessory



### SNTA-RP1


Redundant Power Supply Unit (for SNT-RS3U only)

	Full Function				Basic Function	
	1CH Box		4CH Box	4CH Blade	4CH Box	4CH Blade
	SNT-EX101	SNT-EX101E	SNT-EX104	SNT-EX154	SNT-EP104	SNT-EP154
						
<b>Codec image size (HxV)</b>	D1 (NTSC: 720 x 480), VGA (640 x 480), CIF (384 x 288), QVGA (320 x 240)	D1 (NTSC: 720 x 480), VGA (640 x 480), CIF (384 x 288), QVGA (320 x 240)	D1 (NTSC: 720 x 480), VGA (640 x 480), CIF (384 x 288), QVGA (320 x 240)	D1 (NTSC: 720 x 480), VGA (640 x 480), CIF (384 x 288), QVGA (320 x 240)	D1 (NTSC: 720 x 480), VGA (640 x 480), CIF (384 x 288), QVGA (320 x 240)	D1 (NTSC: 720 x 480), VGA (640 x 480), CIF (384 x 288), QVGA (320 x 240)
<b>Video compression format</b>	H.264, MPEG-4, JPEG	H.264, MPEG-4, JPEG	H.264, MPEG-4, JPEG	H.264, MPEG-4, JPEG	H.264, MPEG-4, JPEG	H.264, MPEG-4, JPEG
<b>Codec streaming capability</b>	Dual streaming (Any combination with JPEG/MPEG-4/H.264, including multiple streams of the same format)	Dual streaming (Any combination with JPEG/MPEG-4/H.264, including multiple streams of the same format)	Dual streaming (Any combination with JPEG/MPEG-4/H.264, including multiple streams of the same format)	Dual streaming (Any combination with JPEG/MPEG-4/H.264, including multiple streams of the same format)	Dual streaming (Any combination with JPEG/MPEG-4/H.264, including multiple streams of the same format)	Dual streaming (Any combination with JPEG/MPEG-4/H.264, including multiple streams of the same format)
<b>Maximum frame rate</b>	H.264/MPEG-4/JPEG: 30fps (NTSC: 720 x 480)	H.264/MPEG-4/JPEG: 30fps (NTSC: 720 x 480)	H.264/MPEG-4/JPEG: 30fps (NTSC: 720 x 480)	H.264/MPEG-4/JPEG: 30fps (NTSC: 720 x 480)	H.264/MPEG-4/JPEG: 30fps (NTSC: 720 x 480)	H.264/MPEG-4/JPEG: 30fps (NTSC: 720 x 480)
<b>PTZ control</b>	Yes	Yes	Yes	Yes	No	No
<b>Visibility Enhancer</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Noise reduction</b>	<a href="#">XDNR</a>	<a href="#">XDNR</a>	<a href="#">XDNR</a>	<a href="#">XDNR</a>	<a href="#">XDNR</a>	<a href="#">XDNR</a>
<b>Coaxitron® control</b>	Yes	Yes	Yes	Yes	No	No
<b>Serial interface</b>	RS-422/RS-485	RS-422/RS-485	RS-485	RS-485	-	-
<b>USB memory slots</b>	x 1*1	x 1*1	x 4*1	-	-	-
<b>Sensor input</b>	x 2	x 2	x 4	x 4	-	-
<b>Alarm output</b>	x 2	x 2	x 4	x 4	-	-
<b>Audio interface (IN/OUT)</b>	IN x 1, OUT x 1	IN x 1, OUT x 1	IN x 4, OUT x 4	IN x 1, OUT x 1	-	-
<b>Audio support</b>	Yes - Full Duplex	Yes - Full Duplex	Yes - Full Duplex	Yes - Full Duplex	No	No
<b>DEPA Advanced (Intelligence)</b>					No	No
<b>Dimensions (W x H x D)</b>	2 7/8 x 1 3/8 x 6 1/8 inches (73 x 34 x 155 mm)	2 7/8 x 1 3/8 x 6 1/8 inches (73 x 34 x 155 mm)	8 3/8 x 1 3/4 x 9 7/8 inches (210 x 44 x 250 mm)	3 1/8 x 1 3/8 x 15 1/8 inches (78 x 34 x 382 mm)	8 3/8 x 1 3/4 x 9 7/8 inches (210 x 44 x 250 mm)	3 1/8 x 1 3/8 x 15 1/8 inches (78 x 34 x 382 mm)
<b>Power requirements</b>	AC 24V in, with loop through output Input: AC 24V, +/- 20%	PoE (Class 2)	DC12 V	From Rack Station	DC12 V	From Rack Station

\*1 USB slots are inside the chassis, not on the front or rear panels.

These products include software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (<http://www.openssl.org>)

# Network Surveillance Recording Servers

	NSR-500	NSR-S20 (2TB)	NSR-S20 (Without HDD)	NSR-S10 (1TB)	NSR-S10 (Without HDD)
					
<b>Video/Recording</b>					
Number of cameras supported	Max. 16 (Max. 24ch w/NSBK-CLO5) (IP/Analog total)	Max. 8		Max. 4	
Number of analog cameras	Option (NSBK-EB05)	No		No	
Video compression (IP camera)	H.264 / MPEG-4 / JPEG	H.264/MPEG-4/JPEG		H.264/MPEG-4/JPEG	
Video compression (Analog camera)	Option (NSBK-EB05)	No		No	
Recording frame rate	480fps (at H.264, Full-HD, 4Mbps)	120fps (at H.264, Full-HD, 4Mbps)		60fps (at H.264, Full-HD, 4Mbps)	
Hard disk drives (Physical capacity)	Up to 12TB (2TB x 6)	2TB	No HDD	1TB (1TB x1)	No HDD
Hard disk drives (RAID level)	RAID 0, 1, 10 (1+0), 5, 5+hot spare	No		No	
Optical disc drive	No	No		No	
Expansion storage	iSCSI storage (max. 16TB)	e-SATA storage (max. 4TB)		e-SATA storage (max. 4TB)	
<b>Video Output</b>					
Monitor OUT 1	Analog RGB (D-sub 15-pin) x 1	Analog RGB (D-sub 15-pin) x 1		Analog RGB (D-sub 15-pin) x 1	
Monitor OUT 2	No	No		No	
<b>Audio Output</b>					
Audio OUT	Stereo mini jack x 1	Terminal connector x 1		Terminal connector x 1	
<b>Sensor Input/Alarm Output</b>					
Sensor input	Compatible with DC3.3V to 24V, photo coupler input x 8 (insulated from main unit)	Terminal connector x 4		Terminal connector x 4	
Alarm output	Max. DC 24V/ 1A, mechanical relay output x 8 (insulated from main unit)	Terminal connector x 1		Terminal connector x 1	
<b>Other Interfaces</b>					
Ethernet	1000BASE-T/100BASE-TX/10BASE-T x 2	1000BASE-T/100BASE-TX/10BASE-T x 2		1000BASE-T/100BASE-TX/10BASE-T x 2	
USB	USB2.0 x 2 (Front), USB2.0 x 2 (Rear)	USB2.0 x 1 (Front), USB2.0 x 2 (Rear)		USB2.0 x 1 (Front), USB2.0 x 2 (Rear)	
Serial interface (for UPS)	RS-232C : D-sub 9-pin x 1	No		No	
Serial interface (for analog camera control)	RS-232C : D-sub 9pin x 1, RS-422/485 x 1 (when installing NSBK-EB05) *2	No		No	
<b>General</b>					
Dimensions (W x H x D)	17 3/8 x 3 1/2 x 15 1/2 inches (440 x 89 x 392mm) * excluding protrusions	9 3/4 x 2 1/8 x 6 3/8 inches (245 x 53 x 160mm) * excluding protrusions		9 3/4 x 2 1/8 x 6 3/8 inches (245 x 53 x 160mm) * excluding protrusions	
Weight	Approx. 20 lb 12 oz (9.4Kg) (Without HDD model)	Approx. 3 lb 1 oz (1.4 Kg)	Approx. 1 lb 12oz (0.8 Kg)	Approx. 3 lb 1oz (1.4 Kg)	Approx. 1 lb 12oz (0.8 Kg)
Power requirements	100V to 127V AC / 200V to 240V (50/60Hz)	DC 12V (AC adapter: 100V to 240V AC, 50/60Hz)		DC 12V (AC adapter: 100V to 240V AC, 50/60Hz)	
Power consumption	max. 250W (100-240V 3.5-1.5A)	Approx. 36W		Approx. 36W	
Operating temperature	41 to 104°F (5 to 40°C)	41 to 104°F (5 to 40°C)		41 to 104°F (5 to 40°C)	
Operation humidity	20 to 80% (no condensing)	20% to 80%		20% to 80%	
Optional accessories	NSBK-DH05, NSBK-EB05, NSBK-CLO5, NSBK-HS05:01, NSBK-HS05:02, RM-NS1000	-		-	

\*1: More than one connector cannot be used at a time. \*2: VISCA and Pelco-D are supported, and recorded. So display out is used for making settings.

# Intelligent Monitoring Software

## RealShot™ Manager Advanced and RealShot Manager Lite



	IMZ-NS101	IMZ-NS104	IMZ-NS109	IMZ-NS116	IMZ-NS132	RSM Lite (Free Software)
	RSM Advanced with 1 camera license	RSM Advanced with 4 camera licenses	RSM Advanced with 9 camera licenses	RSM Advanced with 16 camera licenses	RSM Advanced with 32 camera licenses	RSM Lite with 9 camera licenses
<b>Specifications</b>						
Video compression	H.264/MPEG-4/JPEG					
Audio compression	G.711/G.726					
Number of clients to be connected (Recommendation) *1	10					3
Number of cameras to be supported	1 *2	4 *2	9 *2	16 *2	32	9
Number of audio to be supported	1	4	9	16	32	9-Sony cameras only
<b>System Requirements</b>						
Operating system	Windows 7 Professional, Windows 7 Enterprise, Windows Vista® Business SP2 (32 bit), Windows Vista® Enterprise SP2 (32 bit), Windows® XP Professional SP3 (32 bit), Windows® Server 2003 Standard Edition SP2(32bit), Windows® Server 2008 Standard Edition SP2 (32 bit), Windows Server 2008 R2 Standard					
CPU	Intel Core™ 2Duo 2.0-GHz or higher					
Main memory	1 GB or more (2 GB Recommended)					
HDD	2 GB spare capacity					
Video card	1024 x 768, 16/24 bit color					
Network interface card (NIC)	100BASE-TX or higher					
Display (Resolution)	1024 x 768 or higher					
Optional accessories	RM-NS1000 (System Controller)					

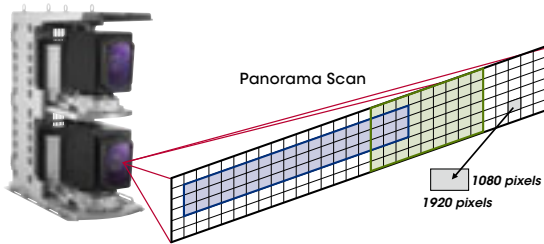
\*1: The figures in the table are recommended numbers of clients to assure high performance. It is technically possible to connect more clients to a server, but such increase may deteriorate the overall performance.

\*2: It is possible to operate with combining multiple licenses.



# XI's - Wide Area Monitoring Solutions

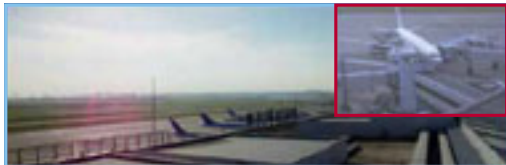
The Sony XI's wide area monitoring system acts as 'extra eyes' to monitor for potentially threatening activities 24/7/365.



The XI's system efficiently captures images over an extremely wide area from a single location. It can analyze the changes or movement in a large panoramic image using a sophisticated detection algorithm. This enables the operator to quickly check situation detail, and take appropriate action.

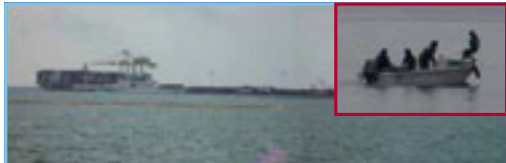
## Application Examples

### Airport



- Fence (Perimeter) Surveillance
- Coastal Surveillance
- Critical Area Protection
- FOD (Foreign Object Debris) Detection

### Port / Coastal Guard



- Vessel Traffic Control (Monitoring)
- Accident Recording
- Coastal Surveillance
- Detection of Swimmers

### Defense / Border



- Intruder Base Protection
- Coastal Surveillance
- Border Protection

	XIS-3420 HD Camera System	XIS-3310 Thermal Camera System
	*Option	*Option
	XIS-31HCX HD Camera	XIS-31NT Thermal Camera
Image Sensor		
Size	1/2-inch	-
Type	HD, 3CCD	Uncooled pyroelectric element (VOx)
Picture size (H x V)	1440 x 1080	640 x 480
NETD	-	Camera: <0.2 °C, Imager: <0.075 °C
Camera		
Shutter speed	2 to 1/10000 sec.	-
Gain	-3 to +48 dB	Yes (DC level control)
White balance	One Push/Auto/Manual	-
Black balance	One Push/Manual	-
Minimum illumination	0.014 lx (F3, +48 dB gain, Slow shutter; 64 Frame)	0 lx
Camera Pan/Tilt range	Pan angle: -135° to +135° Tilt angle: -21.5° to +10°	Pan angle: -135° to +135° Tilt angle: -21.5° to +10°
Camera Pan/Tilt speed	Pan speed: 180°/sec Tilt speed: 30°/sec	Pan speed: 180°/sec Tilt speed: 30°/sec
Lens		
Zoom ratio	19x optical zoom	-
Focal length	f = 12.7 to 241 mm	100 mm
F-number	F3 (Wide), F3.9 (Tele)	F1.4
Minimum object distance	1 m to ∞	10 m to ∞
General		
Weight	Less than 90 lb 6 oz (45 kg)	
Dimensions (W x H x D)	12 1/8 x 17 1/4 x 34 5/8 inches (307 x 438 x 876 mm)	12 1/8 x 17 1/4 x 31 3/4 inches (307 x 438 x 804 mm)
Power requirements	UC: AC 120 V SY: AC 100 to 120 V E: AC 220 to 240 V	
Power consumption	190 W	180 W
Operating temperature	-4°F to +122°F (-20°C to +50°C) (-4°F to +14°F / -20°C to -10°C: constant power on)	
Dust/Water protection	IEC60529 (IP66)	

# Glossary

## IP66

The "IP" of IP66 stands for Ingress Protection, and its two-digit number shows the durability rating of equipment for outdoor use. The first digit of IP66 relates to the ingress protection against dust, and "6" means "dust tight". The second digit of IP66 relates to the ingress protection against water, and "6" means protected against "heavy jet sprays," such as conditions that can be encountered in hurricanes.

## IK10

The IK rating system classifies the level of protection provided by electrical appliances against external impacts from the outside. An IK10-rated camera can withstand the impact of 20 Joules, meaning the camera will withstand the impact of a 5 kg weight dropped on it from a height of 40 cm.

## Day/Night

A day/night camera has two modes of operation: a day mode and a night mode. The camera switches from day mode (Color) to night mode (B/W) by replacing its infrared-cut filter with a clear filter. In night mode, the camera becomes sensitive to near-IR light and is capable of reproducing images even when the scene is not visible to the naked eye.

## Electrical D/N

Electrical D/N is a technology to make the image more visible in low-light conditions by removing the chroma signal to produce a B/W image.

## Wide-D

State-of-the-art technologies to expand the video dynamic range of the camera to improve the visibility of images even in extremely high-contrast environments. Wide-D is a powerful feature to compensate for scenes with extremely poor contrast.

## View-DR™ Technology



View-DR is Sony's latest technology to produce images with an extremely wide dynamic range. View-DR is a combination of Sony's full-capture Wide-D technology, the high-speed Exmor CMOS sensor, and Visibility Enhancer (VE). The full-capture Wide-D technology used in View-DR technology uses an electronic shutter to capture multiple images, to reproduce each frame. One image is taken using a 'standard' exposure time and either one or three images are taken using very short exposure times depending on the camera type. With the newly developed View-DR algorithm, all of the electrons converted from the captured light is fully used by the imager, which is quite different from DynaView technology and some other Wide-D technologies in the industry that discard approximately 1/2 of the electrons. As a result, View-DR nearly doubles the sensitivity compared to conventional Wide-D technologies. To capture multiple HD resolution images at a very high speed, the "Exmor" CMOS sensor was adopted because of its high-speed readout characteristics. During the process of combining multiple images, the Visibility Enhancer (VE) is employed to provide a high level of chrominance and luminance. With View-DR, the monitored images become very visible – sometimes even more than when viewed with our naked eyes.

## Visibility Enhancer (VE)

VE is one of Sony's new technologies that optimizes contrast and makes a scene more visible. It is ideal for scenes where objects are hard to recognize due to severe backlight or shadows. VE optimizes the brightness and color reproduction of an image dynamically on a pixel-by-pixel basis while continuously adapting to the scene. Technically, VE stretches the contrast in both the backlight portions and the shadows within the given dynamic range, which is different from Wide-D. VE also contributes to the high sensitivity of the camera. By combining VE with XDNR, the camera can reproduce clear and bright images in very low-light conditions, while keeping noise at a minimal level.

## XDNR™ Technology (eXcellent Dynamic Noise Reduction)

XDNR is Sony's latest technology for noise reduction in IP security cameras. XDNR utilizes 2D and 3D noise reduction methods adaptively to scenes. Under low-light conditions, XDNR technology provides clear images for both moving objects and still portions of the image, using 2DNR and 3DNR, respectively. This method provides clear images while minimizing motion blur which is a challenge in any outdoor surveillance monitoring applications, such as in parking lots.

## DEPA™ System



With a Sony DEPA system, DEPA-enabled cameras send not only video images but also related metadata, including object data (size and position) to the DEPA-enabled recorder. Since part of the image processing is done on the camera side, the load to the recorder can be reduced enabling camera expansion. Conventional video analytic systems, on the other hand, process images solely on the recorder side often causing CPU overload.

## DEPA Advanced



DEPA Advanced is an enhanced DEPA technology. Unlike DEPA, a camera incorporating DEPA Advanced completes the entire DEPA analysis such as intrusion detection with a virtual borderline on the camera side, and sends only an alarm to the recorder. Enhancements also include a tamper alarm, shadow cancellation, a beam intrusion detector, and audio analysis. Since the analytic processing is completed in the camera, end users can benefit from DEPA Advanced because it can be easily integrated with a variety of recorders and/or video management solutions.

## ONVIF™ Software



ONVIF software defines a common protocol for the exchange of information between different network video devices regardless of manufacturer, and achieves greater interoperability in multi-vendor network video systems.

## PoE (Power-over-Ethernet, IEEE 802.3af)

PoE enables networked devices to receive power up to 12.95 W from PoE-enabled equipment through the same Ethernet cable that transports data. It provides substantial savings in installation costs and can simplify the installation process.

## hPoE (High PoE, IEEE 802.3at)

hPoE enables networked devices to receive power up to 25 W from hPoE-enabled equipment through the same Ethernet cable that transports data. hPoE is useful especially for PTZ/Rapid Dome cameras that require motor control.

## 3-Year Warranty for HD Network Cameras Encoders and Accessories

The Sony Security Products 3-year warranty covers labor and materials for repair of defective IPELA™ 'SNC' cameras, 'SNT' encoders and 'UNI' accessories purchased within the United States on or after July 1, 2010. Offer excludes discontinued models and accessories for a period of three years from the date of purchase. For more details, please visit [sony.com/security](http://sony.com/security) or contact your Sony Sales Representative.

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S-IP2120-B (MK10872V1)

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