



Network

Dome

XNV-A9085R

8MP IR Outdoor Vandal Dome AI Camera



Key Features

- Powered by WN9 with X-Plus design
- Outdoor network AI IR dome camera
- 5MP resolution at 30 FPS
- 4.4–9.3mm (2.1x) motorized varifocal lens with 113°–47° field of view
- H.265, H.264, and MJPEG codec support
- IR viewable length up to 50 m (164.04 ft)
- USB-C port for easy installation
- Day and night operation with ICR
- ExtremeWDR (120 dB)
- Hard-coated dome bubble
- Digital image stabilization with built-in gyro sensor
- Handover support
- AI-based WiseStream
- WiseNR II using AI engine
- Dynamic privacy masking
- IVA events based on AI engine
 - Motion detection
 - Object detection
 - Line crossing
 - IVA area
 - Slip and fall
 - Sound classification

Compatible Devices



SBP-180HWM1



SBD-180PMW



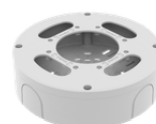
SBP-180C



SBP-180CMB



SBP-180CMS



SBV-180BW



SBV-180WW



SBP-060S



SBP-140CMB



SBP-115PFA



SBP-150CMP



SBP-300CMI



SBP-300CMP



SBP-300CMTS



SBP-300CMTW



SBP-300CMW1



SBP-900CMP



SBP-900CMW



SBP-C15H



SBP-C15NP



SBP-C15P



SBP-C35H



SBP-150CMI



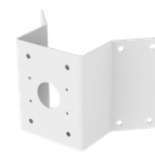
SBP-150NBW



SBP-150PMW



SBP-150S



SBP-156KMW



SBP-156LMW1



SHD-1370FPW



SBP-250WMW



SBP-400WMW



SPP-C45W

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Specifications

Video		
Imaging Device	Size	1/1.8"
	Type	CMOS
Resolution		3840x2160, 3328x1872, 3072x1728, 2688x1512, 2592x1944, 2560x1440, 1920x1080, 1600x1200, 1280x960, 1280x720, 1024x768, 800x600, 640x480, 640x360, 320x240, 320x180
Max. Framerate	H.265/H.264	30fps/25fps(60Hz/50Hz)
	MJPEG	30fps(@8MP Max. 5fps)
Min. Illumination (Lux)	Color(1/30sec, 30IRE)	0.04
	BW(1/30sec, 30IRE)	0.004
Video Out		USB: USB Type C. Preview and installation ONLY. Requires WiFi dongle.
Lens		
Focal Length (mm)		4.4~9.3
Zoom Ratio	Optical	2.1x
Max Aperture Ratio (F number)	Wide	1.3
	Tele	2.15
Angular Field of View	Horizontal	113°~47°
	Vertical	58°~26°
	Diagonal	138°~54°
Min. Object Distance		0.5m(1.64ft)
Focus Control		Simple focus
Lens Type		P iris(IR corrected)
Pan / Tilt / Rotate		
Pan / Tilt / Rotate Range	Pan	0°~360°
	Tilt	-45°~85°
	Rotate	0°~355°
Operational		
Day & Night		Auto(ICR)
Backlight Compensation		BLC, HLC, WDR, SSDR

Operational

Wide Dynamic Range (dB)		120
Digital Noise Reduction		WiseNR II (Based on AI engine), SSNR V
Digital Image Stabilization		Support
Defog		Support
Motion Detection	Quantity	8ea
	Shape	8point Polygonal zones
Privacy Masking	Quantity	32ea
	Shape	8point Polygonal zones
	Color / Option	Gray, Green, Red, Blue, Black, White, Mosaic, Purple, Yellow
	Dynamic Privacy Masking: Color / Option	Gray, Green, Red, Blue, Black, White, Mosaic, Purple, Yellow
Gain Control		Off, Max gain, Manual
White Balance		ATW, NarrowATW, AWC, Manual, Indoor, Outdoor
LDC		Support(Fill/stretch mode)
Electronic Shutter	Mode	Minimum, Maximum, Anti flicker, Prefer shutter control(Based on AI engine)
	Speed Range	2~1/30,000sec
Video Rotation		Flip, Mirror, Hallway view(90°/270°)
Alarm Interface	In/Out	2 configurable I/O ports
	Others	12VDC output, Support extra alarm I/O via optional I/O box
Alarm Triggers		Analytics, Network disconnect, Alarm input, Time schedule, MQTT subscription, Case tampering, Day/Night, Storage disruption
Alarm Events When Alarm Trigger Occurred		File upload(image): e-mail/FTP/SFTP, File upload(video clip): FTP/SFTP, Notification: e-mail, Recording: SD/SDHC/SDXC or NAS recording at event triggers,Alarm output, Handover: PTZ preset,send message by HTTP/HTTPS/TCP,Audio clip playback, MQTT: publication
Audio In		Selectable(mic in/line in)
Audio Out		Line out
Light Type		IR LED
Light Viewable Length	IR	WiseIR PoE+: 50m(164.04ft) PoE: 30m(98.43ft)
IR Wavelength		850nm

Analytics

Classified Object Type		Person, Face, Vehicle, License plate
Attributes	Person	Upper/Lower clothes color, Gender, Bag
	Vehicle	Type(car, bus, truck, motorcycle, bicycle), Color
	Face	Age, Gender, Face mask, Glasses
Similarity Search		Support
Thumbnail		BestShot

Analytics

Analytics Events	Based on AI Engine	Object detection, Virtual line(Crossing/Direction), Motion detection, Face mask detection, Social distancing detection, Slip & fall detection, Virtual area(Loitering/Intrusion/Enter/Exit/Appear/Disappear), Advanced loitering detection, Tailgating detection
	Normal	Defocus detection, Tampering, Audio detection, Shock detection
Business Intelligence	Based on AI Engine	People counting, Queue management, Heatmap, Vehicle counting, Crowd counting

Network

Ethernet		Metal shielded RJ-45(10/100/1000BASE-T)
Video Compression		H.265/H.264: Main/Baseline/High, MJPEG
Audio Compression		G.711(PCM): 8kHz(64kbps), G.726(ADPCM): 8kHz(16/24/32/40kbps), AAC-LC: 16kHz(48kbps), OPUS: 48kHz(64kbps)
Smart Codec		WiseStream(Based on AI engine)
Bitrate Control		H.265/H.264: CBR or VBR, MJPEG: VBR
Streaming	Unicast	Up to 20 users
	Multicast	Support
	Multiple Streaming	Up to 5 profiles, 3 virtual channel support
Protocol		IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SFTP, SMTP, ICMP, IGMPv2, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, CDP, SRTP(TCP, UDP Unicast), MQTT, Syslog
Application Programming Interface	ONVIF	S, G, T, M
	Others	SUNAPI(HTTP API), Hanwha Vision Open Platform
Direct Cloud Connection		Support

Security

OS / Firmware Protect		Encrypted firmware, Secure boot, Signed firmware
User authentication		Digest authentication, Prevent brute-force attack
Network authentication		IEEE 802.1X(EAP-TLS, EAP-LEAP, EAP-PEAP, MSCHAPv2)
Secure Communication		HTTPS, WSS(WebSocket Secure), SRTP
Access Control		IP-based access control, MAC-based access control, Auto logout
Data Protect		Encryption credentials, Encrypt compress for live recording file export
Audit		Access / System / Event Log management
Device ID		Device certificate(Hanwha Vision Root CA)
Secure Storage		SDcard partition encrypt(AES-256), Secure element
Supply Chain Security		SBOM
Security Certificate		Secure element(FIPS 140-3 level3, CC EAL6+), Consumer IoT Security Standard (ETSI EN 303 645)

General

SoC	Type	Wisenet 9
	Dual NPU	Support
Memory	RAM	4GB
	Flash	8GB eMMC
Edge Storage	Micro SD/SDHC/SDXC	Max. 1TB x 2slot(Total 2TB)
Edge Storage(OnCloud)	Micro SD/SDHC/SDXC	Max. 1TB x 2slots (Total 2TB) *Hanwha Vision branded microSD cards have been certified and recommended for OnCloud edge recording.

Environmental & Electrical

Operating Condition	Temperature	-50°C~+60°C(-58°F~+140°F)
	Humidity	0~100% RH(condensing)
	Others	+74°C(+165°F)(Max) based on NEMA-TS 2(2.2.7), Start up should be done at above -30°C, Humidity control with AIR vent
Storage Condition	Temperature	-50°C~+60°C(-58°F~+140°F)
	Humidity	0~90% RH(non-condensing)
EPA(Effective Projected Area)		0.017m ²
Input Voltage		PoE(IEEE802.3af, Class3), PoE+(IEEE802.3at, Class4), 12VDC
Power Consumption	PoE	PoE+: Max. 19.7W, typical 9.4W PoE: Max. 11.6W,typical 8.3W
	12VDC	Max 20.6W, typical 9.5W
WisePower		Power mode, Power monitoring

Mechanical

Color		White
Material		Aluminum, Hard-coated dome
Material Management	Declaration	RoHS(EU RoHS directive 2011/65/EU and IEC/EN 63000:2018), REACH(Regulation (EC) No. 1907/2006), Conflict mineral policy(Section 1502 of US Dodd Frank Act)
RAL Code		RAL9003
Product Dimensions		ø180x125mm(ø7.09x4.92")
Product Weight		1,860g(4.10lb)
Compatible Conduit Hole		19.1mm(3/4")(M25)
Compatible Gang Box		Single, Double, 4" Octagon, Square

Certifications & Standards

EMC	FCC 47 CFR 15 Subpart B Class A, ICES-3(A)/NMB-3(A), CE/UKCA - EN55032 Class A, EN 50130-4, EN 61000-3-2, EN 61000-3-3, VCCI CISPR 32 Class A, RCM AS-NZS CISPR 32 Class A, KS C 9832 Class A, KS C 9835
Safety	UL 62368-1, CAN/CSA C22.2 NO. 62368-1, IEC 62471
Environment	IEC/EN 63000, IEC 60529 IP66, IEC 60529 IP67, ISO 20653 IP6K9K, IEC 62262 IK11, NEMA TS 2-2013 (2.2.7, 2.2.8, 2.2.9), NEMA 250 type 4X, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78

DORI (EN62676-4 standard)

Detect (25PPM/ 8PPF)	Wide	50.8m(166.77ft)
	Tele	176.6m(579.49ft)
Observe (63PPM/ 19PPF)	Wide	20.3m(66.71ft)
	Tele	70.7m(231.80ft)
Recognize (125PPM/ 38PPF)	Wide	10.2m(33.35ft)
	Tele	35.3m(115.90ft)
Identify (250PPM/ 76PPF)	Wide	5.1m(16.68ft)
	Tele	17.7m(57.95ft)

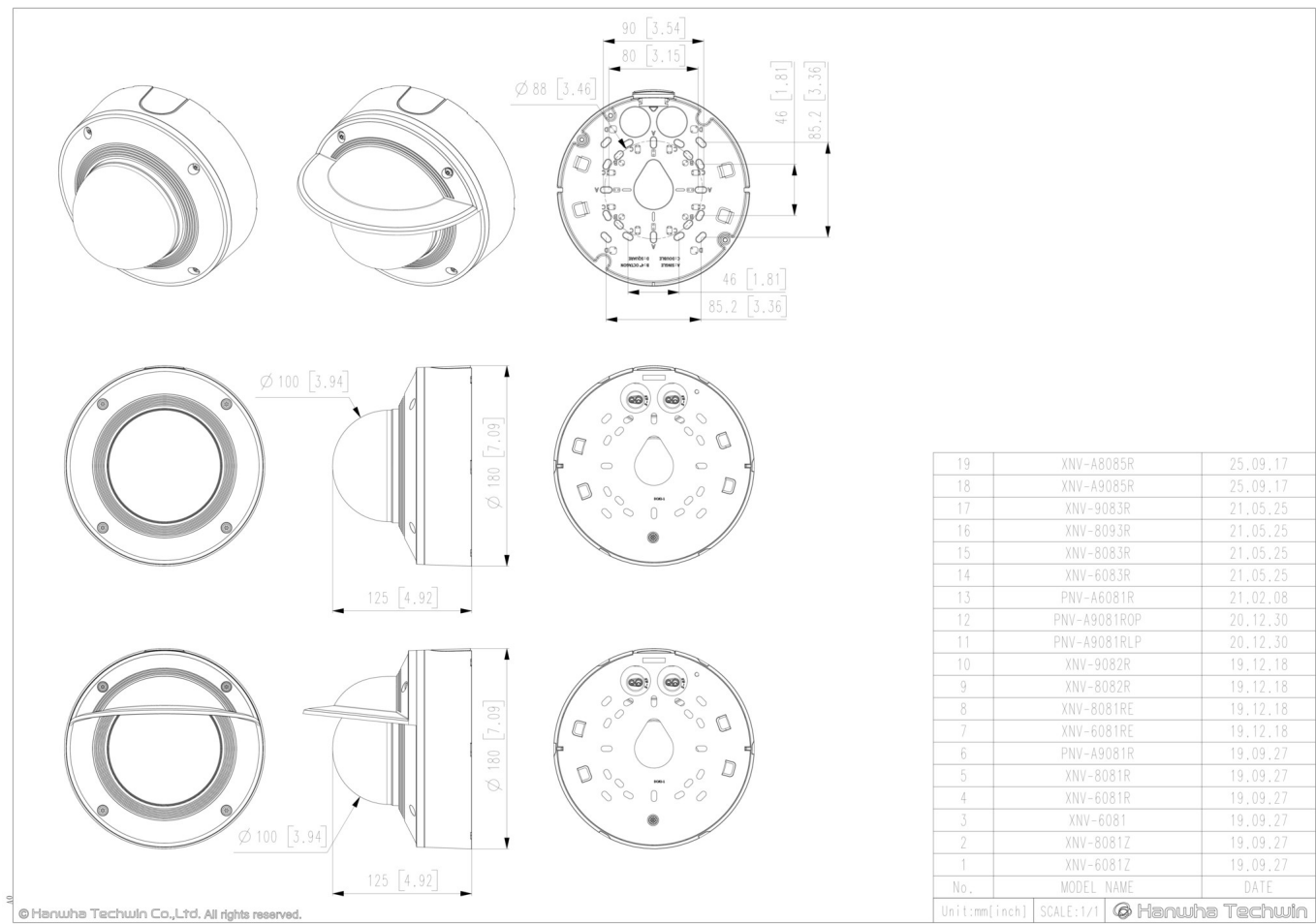
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Camera



CAD

Unit: mm [inch]



19	XNV-A8085R	25.09.17
18	XNV-A9085R	25.09.17
17	XNV-9083R	21.05.25
16	XNV-8093R	21.05.25
15	XNV-8083R	21.05.25
14	XNV-6083R	21.05.25
13	PNV-A6081R	21.02.08
12	PNV-A9081ROP	20.12.30
11	PNV-A9081RLP	20.12.30
10	XNV-9082R	19.12.18
9	XNV-8082R	19.12.18
8	XNV-8081RE	19.12.18
7	XNV-6081RE	19.12.18
6	PNV-A9081R	19.09.27
5	XNV-8081R	19.09.27
4	XNV-6081R	19.09.27
3	XNV-6081	19.09.27
2	XNV-8081Z	19.09.27
1	XNV-6081Z	19.09.27
No.	MODEL NAME	DATE
Unit:mm[inch]		SCALE:1/1
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