



Network

Dome

XNV-A9016R

4K Outdoor Compact IR Network Dome Camera



Key Features

- 8MP Image Resolution
- 3mm Focal Length
- 25m IR Length
- IP66, IK10 Rated
- 4K @ 30fps
- Triple Codec Support: H.265, H.264, and MJPEG
- Advanced WDR (120dB)
- Built-in IR Viewable Length: 25m (82ft)
- AI-based Object Classification (Person, Face, Vehicle, License Plate) with Attribute Extraction
- BestShot Optimized Thumbnail for Efficient Search
- Edge Analytics Powered by Integrated AI Engine
- Advanced Dynamic Privacy Masking (Multi-color & Mosaic options)
- IK10 / IP66
- USB Port for easy setup

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Specifications

Video		
Imaging Device	Size	1/2.8"
	Type	CMOS
Resolution		3840x2160, 3328x1872, 3072x1728, 2688x1512, 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)	0.1
	BW(1/30sec, 30IRE)	0.01
Video Out		USB: USB Type C. Preview and installation ONLY. Requires WiFi dongle.
Lens		
Focal Length (mm)		3.0
Max Aperture Ratio (F number)	Wide	1.6
	Tele	1.6
Angular Field of View	Horizontal	108°
	Vertical	59°
	Diagonal	127°
Min. Object Distance		0.4m(1.31ft)
Focus Control		Manual
Lens Type		Fixed iris
Pan / Tilt / Rotate		
Pan / Tilt / Rotate Range	Pan	0°~351°
	Tilt	0°~64°
	Rotate	±90°
Operational		
Day & Night		Auto(ICR)
Backlight Compensation		BLC, HLC, WDR, SDR
Wide Dynamic Range (dB)		120

Operational

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	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
Digital PTZ		Support
Video Rotation		Flip, Mirror, Hallway view(90°/270°)
Alarm Interface	Others	Support alarm I/O via optional I/O box
Alarm Triggers		Analytics, Network disconnect, Alarm input, App event, Time schedule, MQTT subscription, 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, MQTT: publication
Audio In		Support via optional I/O box
Audio Out		Support via optional I/O box
Light Type		IR LED
Light Viewable Length	IR	25m(82.02ft)
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
Thumbnail		BestShot

Analytics

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

Network

Ethernet		Metal shielded RJ-45(10/100BASE-T)
Video Compression		H.265/H.264: Main/Baseline/High, MJPEG
Smart Codec		Manual, WiseStream(Based on AI engine)
Bitrate Control		H.265/H.264: CBR or VBR, MJPEG: VBR, MJPEG: VBR
Streaming	Unicast	Up to 20 users
	Multicast	Support
	Multiple Streaming	Up to 5 profiles
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, PIM-SM, SMTP(StartTLS), 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, 802.1AE(MACsec)
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

Memory	RAM	4GB
	Flash	8GB eMMC

General

Edge Storage	Micro SD/SDHC/SDXC	Max. 1TB x 1slot
Edge Storage(OnCloud)	Micro SD/SDHC/SDXC	Max. 1TB x 1slot *Hanwha Vision branded microSD cards have been certified and recommended for OnCloud edge recording.

Environmental & Electrical

Operating Condition	Temperature	-40°C~+50°C(-40°F~+122°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
Storage Condition	Temperature	-50°C~+60°C(-58°F~+140°F)
	Humidity	0~90% RH(non-condensing)
Input Voltage		PoE(IEEE802.3af, Class3)
Power Consumption	PoE	Max. 10.0W, typical 7.7W
WisePower		Power monitoring, Eco mode

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		ø120x65.5mm(ø4.72x2.58")
Product Weight		555g(1.22b)

Certifications & Standards

EMC	None, 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
Environment	IEC/EN 63000, IEC 60529 IP66, IEC 62262 IK10, 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

AI Detection Distance

Person(1.8m/5.9ft)	Wide	up to 35m(113ft)
Vehicle(1.45m/4.8ft)	Wide	up to 46m(150ft)

DORI (EN62676-4 standard)

Detect (25PPM/ 8PPF)	Wide	55.8m(183.07ft)
Observe (63PPM/ 19PPF)	Wide	22.3m(73.23ft)
Recognize (125PPM/ 38PPF)	Wide	11.2m(36.61ft)
Identify (250PPM/ 76PPF)	Wide	5.6m(18.31ft)

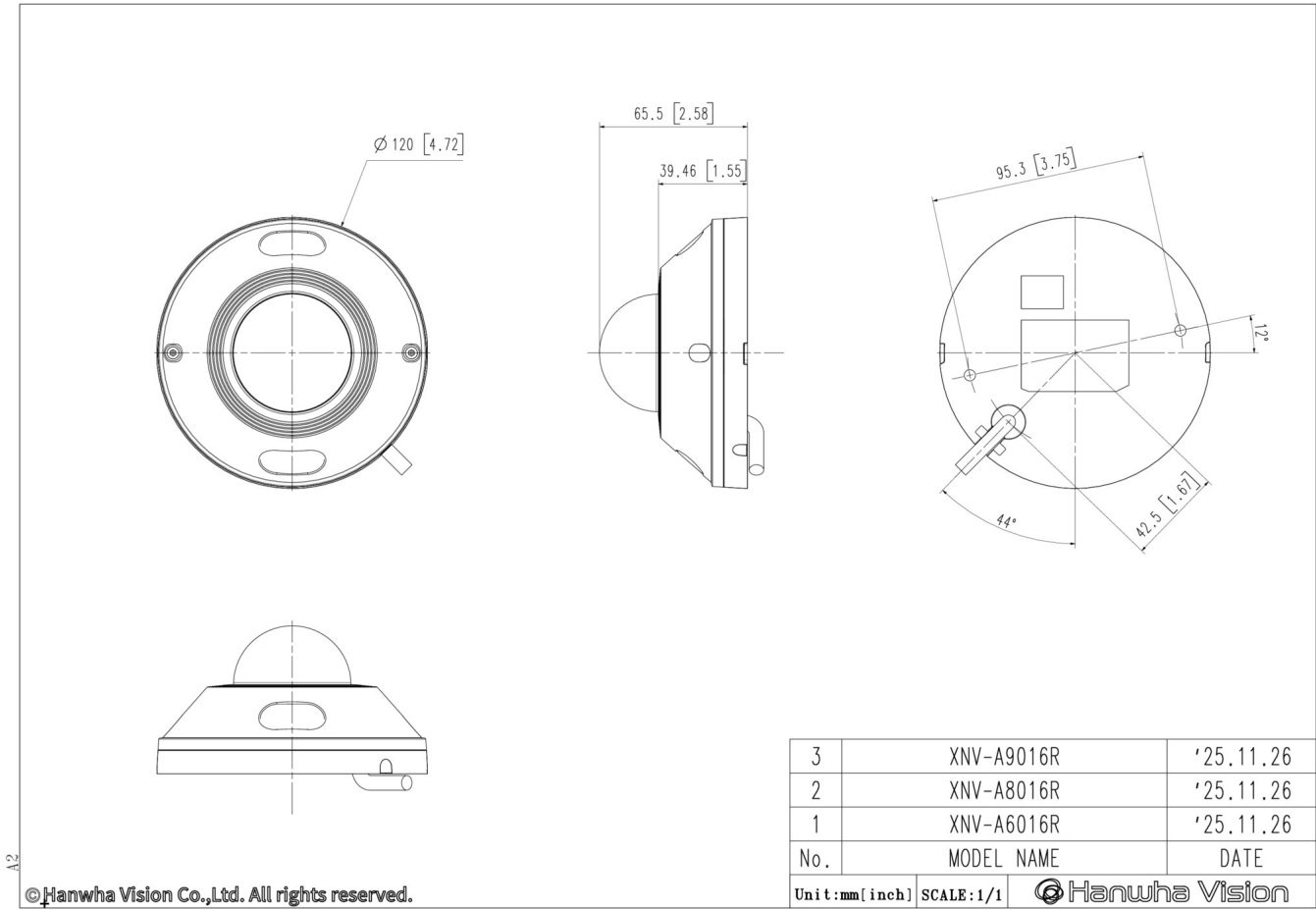
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Dome Camera



CAD

Unit: mm [inch]



Compatible Devices



SBP-120HWMW



SBP-140CMB



SBP-180CMB



SBP-180CMS



SBP-150CMP



SBP-300CMP



SBP-900CMP



SBP-C15H



SBP-C15P



SBP-150CMI



SBP-300CMI



SBP-300CMW1



SBP-900CMW



SBP-300CMTW



SBP-300CMTS



SBP-125WMW1



SBP-250WMW



SBP-300WMW



SBP-400WMW



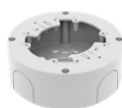
SBP-115PFA



SBV-140TMW



SBD-110GP1



SBV-140BW



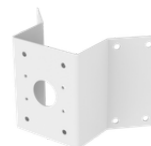
SBV-140WW



SBD-140PMW



SBD-140PMB



SBP-156KMW



SBD-140KMB



SBP-156LMW1



SBP-050NBW