

Anexo 1.

Detalles	Modelo por instalar	Coordenadas
C.NORTE LA AMISTAD D01-AM-CN-IP10	PNM-C34404RQPZ	9.010475, -79.542514
C.NORTE PATACON D02-CP-CN-IP14	PNM-C34404RQPZ	9.033747, -79.535569
C.NORTE TRANSÍSTMICA D01-TR-CN-IP70	PNM-C34404RQPZ	9.060230, -79.508460
C.NORTE BRISAS DEL GOLF D07-BG-CN-IP34	PNM-C34404RQPZ	9.082228, -79.461303
C.SUR ATLAPA D04-AT-CS-IP22	PNM-C34404RQPZ	8.990906, -79.495734
C.SUR HIPODROMO D02-HI-CS-IP14	PNM-C34404RQPZ	9.025897, -79.467690
C.SUR FINAL RIANDE D11-CR-CS-IP110 PTZ	PNM-C34404RQPZ	9.068561, -79.403856
C.ESTE VILLA LOBOS D01-VB-CE-IP10	PNM-C34404RQPZ	9.085643, -79.443170
C.ESTE PANAMERICANA D02-PA-CE-IP14	PNM-C34404RQPZ	9.099136, -79.391152
C. NORTE LA AMISTAD D02-AM-CN-IP14	PTZ XNP-C9310R	9.014080, -79.543602
C. NORTE BRISAS DEL GOLF D05-BG-CN-IP26	PTZ XNP-C9310R	9.081294, -79.468903
C. SUR HIPODROMO D03-HI-CS-IP18	PTZ XNP-C9310R	9.028292, -79.458412
C. SUR PAITILLA TUNEL F02-TU-CS-IP14	PTZ XNP-C9310R	8.979881, -79.514343
C. NORTE MARTIN SOSA F01-MS-CN-IP26	PNO-A9311R	8.980653, -79.542129
C. NORTE LA FULA F05-FU-CN-IP80	PNO-A9311R	9.071312, -79.487978

Anexo1.

Se presenta las 36 vistas fijas que se ocuparían con las cámaras Multisensor modelo: Hanwha PNM-C34404RQPZ.

- Para los 4 puntos propuesto para el Corredor Norte:



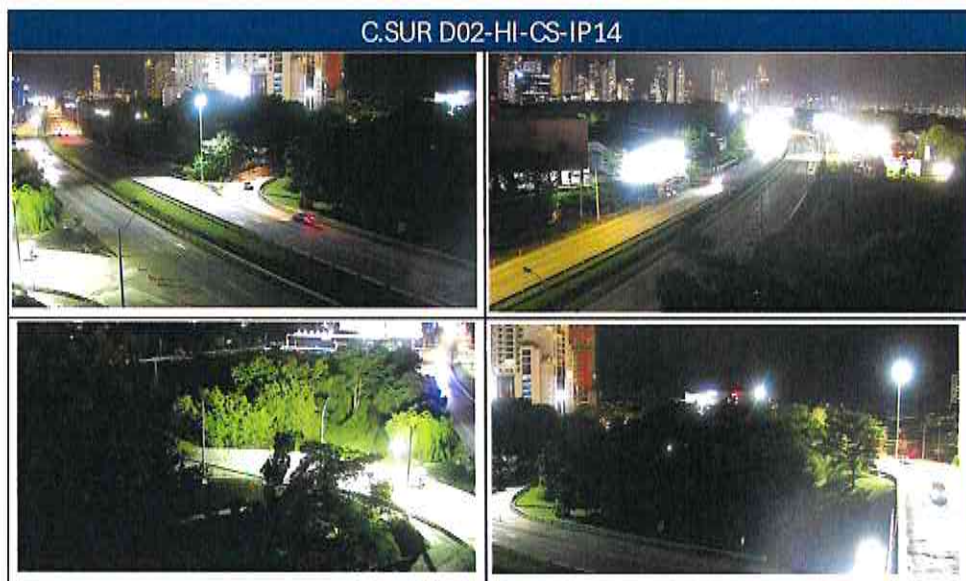
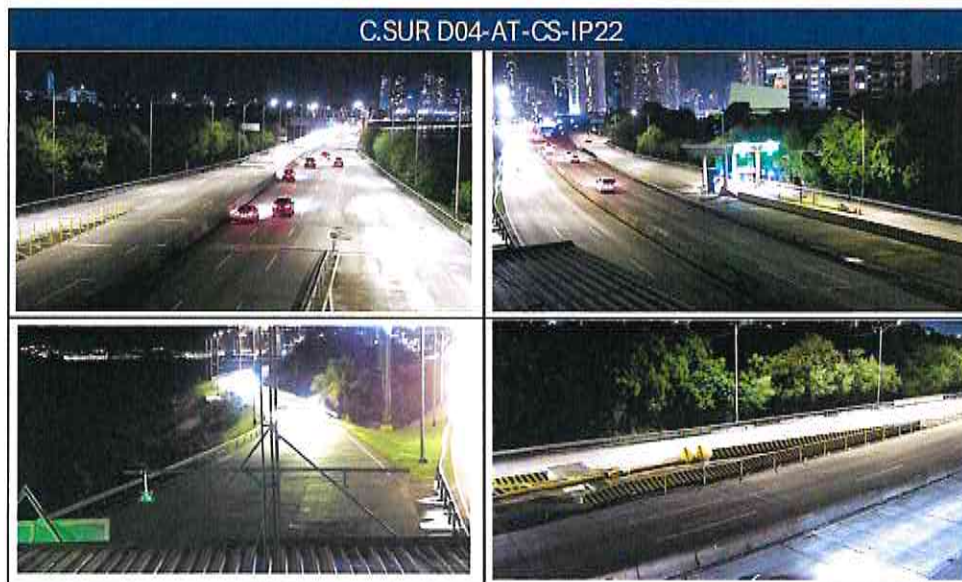
C.NORTE TRANSÍSTMICA D01-TR-CN-IP70



C.NORTE D07-BG-CN-IP34



- Para los 3 puntos propuesto para el Corredor Sur:



C.SUR D11-CR-CS-IP110 PTZ



- Para los 2 puntos propuesto para el Corredor Este:

C.ESTE D02-PA-CE-IP14





Nota: Tomar en cuenta que la 5ta vista de cada una de estas 9 cámaras sería una PTZ, las cuales tienen la capacidad de ser movidas según requerimiento en tiempo real por lo cual podría ocupar cualquiera de estas vistas o incluso otra de acuerdo con lo que el usuario requiera.

Adicionalmente estas serían los puntos sobre los cuales se colocarían las 4 cámaras PTZ + 2 FIJA que por temas técnicos deben ser reemplazadas:

- D02-AM-CN-IP14 (PTZ)
- D05-BG-CN-IP26 (PTZ)
- D03-HI-CS-IP18 (PTZ)
- F02-TU-CS-IP14 (PTZ)
- F01-MS-CN-IP26 (FIJA)
- F05-FU-CN-IP80 (FIJA)



Network

PNM-C34404RQPZ

4K 4Ch PTRZ + 2MP 40x PTZ AI Camera

ERC

UL LISTED

ROHS

CE

FC

Key Features

- 360° Analytics events based on AI engine: Classified object (Person/Face/Vehicle/License plate)
- 360° Attributes search (Vehicle type: Car/Bus/Truck/Motorcycle/Bicycle)
- AI based loitering detection and line crossing detection
- AI based WiseNR II, Auto prefer shutter control, WiseStreamIII
- AI based smart zoom and advanced hand over
- PTRZ remote adjustment
- New design
- Expansion of alarm/audio features
- Next level cybersecurity (TPM 2.0 with FIPS 140-2 level2)
- Reinforced durability (IP66, IK10, NEMA4X)

Compatible Devices

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SPM-4210

PNM-C34404RQPZ

4K 4Ch PTRZ + 2MP 40x PTZ AI Camera



Specifications

Video		4CH camera	4CH camera	4CH camera	4CH camera	PTZ
Imaging Device	Size	1/2.8"				
	Type	CMOS				
Resolution		3840x2160, 1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240	3840x2160, 1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240	3840x2160, 1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240	3840x2160, 1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240	1920x1080, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240
Max. Framerate	H.265/H.264	15fps/15fps(60Hz/50Hz)	15fps/15fps(60Hz/50Hz)	15fps/15fps(60Hz/50Hz)	15fps/15fps(60Hz/50Hz)	30fps/30fps(60Hz/50Hz)
	MJPEG	15fps(@8MP Max, 5fps)	15fps(@8MP Max, 5fps)	15fps(@8MP Max, 5fps)	15fps(@8MP Max, 5fps)	30fps
	Others	Max. 20fps when AI off(MJPEG@8MP Max. 5fps)	Max. 20fps when AI off(MJPEG@8MP Max. 5fps)	Max. 20fps when AI off(MJPEG@8MP Max. 5fps)	Max. 20fps when AI off(MJPEG@8MP Max. 5fps)	
Min. Illumination (Lux)	Color(1/30sec, 30IRE)	0.1	0.1	0.1	0.1	0.05
	BW(1/30sec, 30IRE)	0.01	0.01	0.01	0.01	0.005

Lens

Focal Length (mm)		3.3~5.7	3.3~5.7	3.3~5.7	3.3~5.7mm	4.25~170
Zoom Ratio	Optical	1.7x		1.7x		40x
	Digital					32x
Max Aperture Ratio (F number)	Wide	1.5	1.5	1.5	1.5	1.6
	Tele	1.9	1.9	1.9	1.9	4.95
Angular Field of View	Horizontal	109°~56°	109°~56°	109°~56°	109°~56°	65.66°~1.88°
	Vertical	55°~31°	55°~31°	55°~31°	55°~31°	39.40°~1.09°
	Diagonal	136°~65°	136°~65°	136°~65°	136°~65°	
Min. Object Distance		1.3m(4.27ft)	1.3m(4.27ft)	1.3m(4.27ft)	1.3m(4.27ft)	5m(16.4ft)
Focus Control		Simple focus	Simple focus	Simple focus	Simple focus	Oneshot AF, Focus save
Lens Type		Fixed iris	Fixed iris	Fixed iris	Fixed iris	DC auto iris

Pan / Tilt / Rotate

Pan / Tilt / Rotate Range	Pan	0°~360°	0°~360°	0°~360°	0°~360°	360° Endless
	Tilt	9°~65°	9°~65°	9°~65°	9°~65°	0°~110°
	Rotate	0°~90°	0°~90°	0°~90°	0°~90°	
	Others	Remote adjustment(Max. 200cycles), Tilt angle with Shield IR: 40°~65°	Remote adjustment(Max. 200cycles), Tilt angle with Shield IR: 40°~65°	Remote adjustment(Max. 200cycles), Tilt angle with Shield IR: 40°~65°	Remote adjustment(Max. 200cycles), Tilt angle with Shield IR: 40°~65°	
Pan Speed	Preset					Max. 700°/sec
	Manual					0.024°/sec~250°/sec
Tilt Speed	Preset					Max. 500°/sec
	Manual					0.024°/sec~250°/sec
Sequence						Preset(300ea), Swing, Group(6ea), Trace, Tour, Auto Run, Schedule
Preset Accuracy						Up to ±0.1°, Pan/Tilt correction

Operational

Direction Indicator						Support
Day & Night		Auto(ICR)				
Backlight Compensation		BLC, WDR, SDR	BLC, WDR, SDR	BLC, WDR, SDR	BLC, WDR, SDR	BLC, HLC, WDR, SDR
Wide Dynamic Range (dB)		120	120	120	120	150
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	6ea	6ea	6ea	6ea	32ea
	Shape	Rectangular zones	Rectangular zones	Rectangular zones	Rectangular zones	4point Quadrangle zones
	Color / Option	Gray, Black, White	Gray, Black, White	Gray, Black, White	Gray, Black, White	Gray, Green, Red, Blue, Black, White, Mosaic
Gain Control		Low, Middle, High	Low, Middle, High	Low, Middle, High		Off, Max gain, Manual
White Balance		ATW, AWC, Manual, Indoor, Outdoor	ATW, AWC, Manual, Indoor, Outdoor	ATW, AWC, Manual, Indoor, Outdoor		ATW, NarrowATW, AWC, Manual, Indoor, Outdoor, Mercury, Sodium
LDC		Support	Support			

Operational

Electronic Shutter	Mode	Minimum, Maximum, Anti flicker, Prefer shutter control(Based on AI engine)				
	Speed Range	2~1/12,000sec				
Video Rotation		Flip, Mirror, Hallway view(90°/270°) - Each channel separately	Flip, Mirror, Hallway view(90°/270°) - Each channel separately	Flip, Mirror, Hallway view(90°/270°) - Each channel separately	Flip, Mirror, Hallway view(90°/270°) - Each channel separately	Flip&Mirror
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				
Alarm Events When Alarm Trigger Occurred		File upload(image): e-mail/FTP, 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,Smart zoom				
Audio In		Support via optional I/O box				
Audio Out		Support via optional I/O box				
Light Type		IR LED				
Light Viewable Length	IR	20m(65.62ft)	20m(65.62ft)	20m(65.62ft)	20m(65.62ft)	200m(656.17ft)
IR Wavelength		850nm				
Water Removal						Support(Spin Dry, Lens heater)
Auto Tracking						Object auto tracking(Person/Vehicle), Target lock tracking

Analytics

Classified Object Type		Person, Face, Vehicle, License plate	Person, Face, Vehicle, License plate	Person, Face, Vehicle, License plate	Person, Face, Vehicle, License plate	
Attributes	Person	None, Upper/Lower clothes color	None, Upper/Lower clothes color	None, Upper/Lower clothes color	None, Upper/Lower clothes color	
	Vehicle	Type(car, bus, truck, motorcycle, bicycle), Color	Type(car, bus, truck, motorcycle, bicycle), Color	Type(car, bus, truck, motorcycle, bicycle), Color	Type(car, bus, truck, motorcycle, bicycle), Color	
Thumbnail		BestShot	BestShot	BestShot	BestShot	
Analytics Events	Based on AI Engine	Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit)	Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit)	Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit)	Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit)	
	Normal	Defocus detection, Motion detection, Tampering, Virtual area(Appear/Disappear)	Defocus detection, Motion detection, Tampering, Virtual area(Appear/Disappear)	Defocus detection, Motion detection, Tampering, Virtual area(Appear/Disappear)	Defocus detection, Motion detection, Tampering, Virtual area(Appear/Disappear)	Motion detection, Tampering, Fog detection, Virtual line(Crossing/Direction)

Network

Ethernet		Metal shielded RJ-45(10/100/1000BASE-T)				
Video Compression		H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/High, MJPEG	H.265/H.264: Main/Baseline/High, MJPEG
Smart Codec		Manual, WiseStreamIII				
Bitrate Control		H.265/H.264: CBR or VBR, MJPEG: VBR				
Streaming	Unicast	Up to 10 users	Up to 10 users	Up to 10 users	Up to 10 users	Up to 20 users
	Multicast	Support	Support	Support	Support	Support
	Multiple Streaming	Up to 3 profiles	Up to 3 profiles	Up to 3 profiles	Up to 3 profiles	Up to 10 profiles
Protocol		IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, SRTP(TCP, UDP Unicast), MQTT				
Application Programming Interface	ONVIF	S, 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				
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				
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		TPM(Trusted platform module), SDcard partition encrypt(AES-256)				
Security Certificate		Consumer IoT Security Standard (ETSI EN 303 645), Security Built-in Process Certification (IEC 62443-4-1)				

General

Memory	RAM	8GB	8GB	8GB	8GB	4GB
	Flash	1GB	1GB	1GB	1GB	512MB
Edge Storage	Micro SD/SDHC/SDXC	Max. 512GB x 2slot(Total 1TB)				
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	-40°C~+50°C(-40°F~+122°F)
	Humidity	0~95% RH(non-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)
EPA(Effective Projected Area)		0.075
Input Voltage		PoE++(IEEE802.3bt type4, Class8)
Power Consumption	PoE	Max. 64W, typical 45W

Mechanical

Color	White
Material	Aluminum
RAL Code	RAL9003
Product Dimensions	ø379.8x301.9mm(14.95x11.89")
Product Weight	7,900g(17.42lb)

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
Safety	UL 62368-1, CAN/CSA C22.2 NO. 62368-1, IEC 62471
Environment	IEC/EN 63000, IEC 60529 IP66, IEC 62262 IK10, NEMA 250 type 4X

DORI (EN62676-4 standard)

Detect (25PPM/8PPF)	Wide	54.8m(179.73ft)	54.8m(179.73ft)	54.8m(179.73ft)	54.8m(179.73ft)	59.5m(195.3ft)
	Tele	144.4m(473.88ft)	144.4m(473.88ft)	144.4m(473.88ft)	144.4m(473.88ft)	2340.4m(7678.4ft)
Observe (63PPM/19PPF)	Wide	21.9m(71.89ft)	21.9m(71.89ft)	21.9m(71.89ft)	21.9m(71.89ft)	23.8m(78.1ft)
	Tele	57.8m(189.55ft)	57.8m(189.55ft)	57.8m(189.55ft)	57.8m(189.55ft)	936.2m(3071.4ft)
Recognize (125PPM/38PPF)	Wide	11.0m(35.95ft)	11.0m(35.95ft)	11.0m(35.95ft)	11.0m(35.95ft)	11.9m(39.1ft)
	Tele	28.9m(94.78ft)	28.9m(94.78ft)	28.9m(94.78ft)	28.9m(94.78ft)	468.1m(1535.7ft)
Identify (250PPM/76PPF)	Wide	5.5m(17.97ft)	5.5m(17.97ft)	5.5m(17.97ft)	5.5m(17.97ft)	6.0m(19.5ft)
	Tele	14.4m(47.39ft)	14.4m(47.39ft)	14.4m(47.39ft)	14.4m(47.39ft)	234.0m(767.8ft)

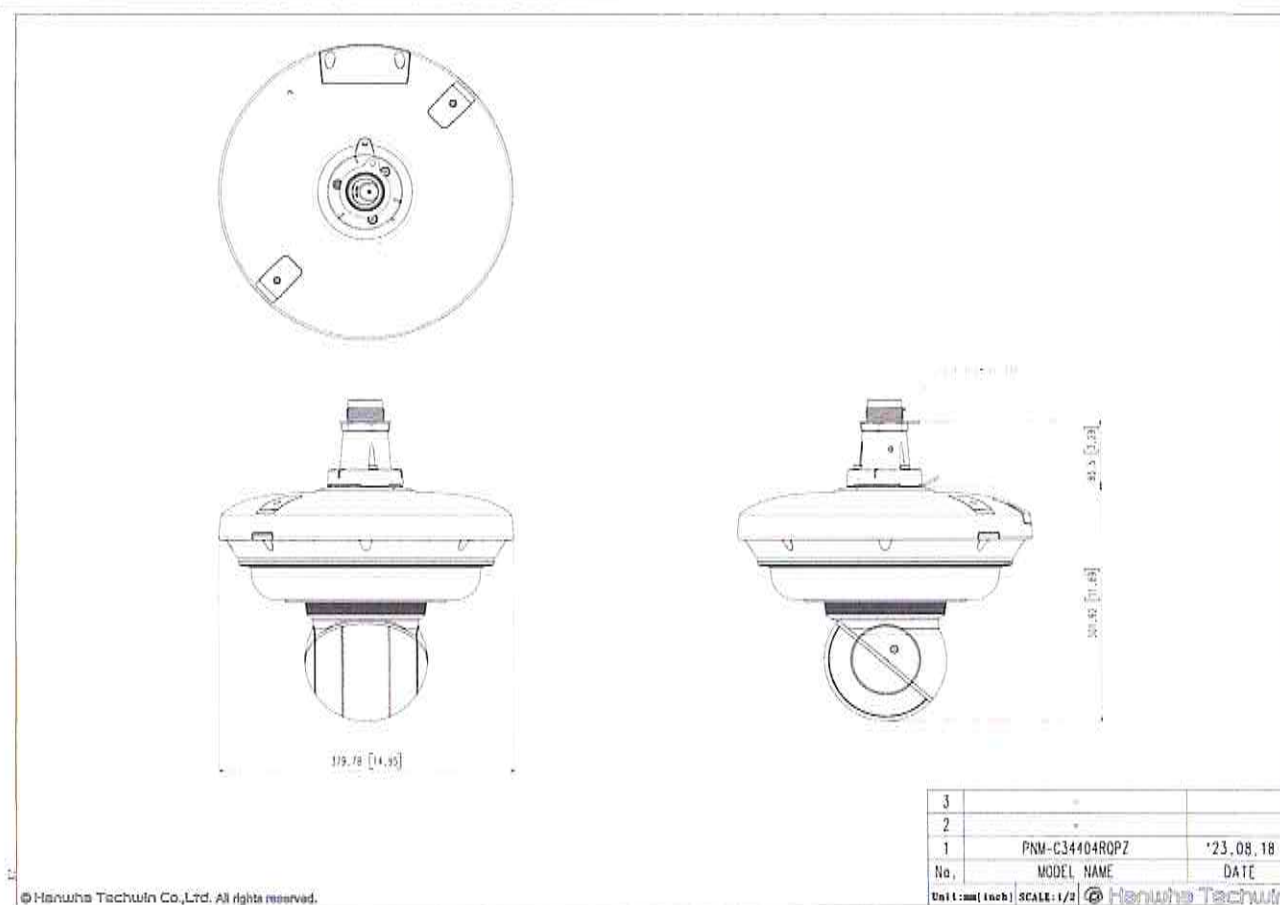
PNM-C34404RQPZ

4K 4Ch PTRZ + 2MP 40x PTZ AI
Camera



CAD

Unit: mm (inch)



XNP-C9310R

4K 31x AI FOCUS IR PTZ Camera



Specifications

Video

Imaging Device	Size	1/1.8"
	Type	CMOS
Resolution	3840x2160, 2592x1944, 2592x1464, 1920x1080, 1600x1200, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240	
Max. Framerate	H.265/H.264	30fps/25fps(60Hz/50Hz)
	MJPEG	30fps(@8MP Max. 5fps)
Min. Illumination (Lux)	Color(1/30sec, 30IRE)	0.06
	BW(1/30sec, 30IRE)	0.006

Lens

Focal Length (mm)	6.91 - 214.7	
Zoom Ratio	Optical	31x
	Digital	32x
Max Aperture Ratio (F number)	Wide	1.36
	Tele	4.6
Angular Field of View	Horizontal	60.6°~2.59°
	Vertical	35.1°~1.45°
	Diagonal	68.8°~2.97°
Min. Object Distance	3m(9.84ft)	
Focus Control	Auto, Manual, Oneshot AF, Focus save, Focus scan, Wise auto focus	
Lens Type	P Iris(IR corrected)	

Pan / Tilt / Rotate

Pan / Tilt / Rotate Range	Pan	360° Endless
	Tilt	90°--20°
Pan Speed	Preset	Max. 550°/sec
	Manual	0.024°/sec~200°/sec
Tilt Speed	Preset	Max. 550°/sec
	Manual	0.024°/sec~200°/sec

Pan / Tilt / Rotate

Sequence	Preset(300ea), Swing, Group(6ea), Trace, Tour, Auto Run, Schedule
Preset Accuracy	±0.05°

Operational

Direction Indicator		Support
Day & Night		Auto(ICR)
Backlight Compensation		BLC, HLC, WDR, SSDR
Wide Dynamic Range (dB)		120
Digital Noise Reduction		WiseNR II (Based on AI engine), SSNR V
Digital Image Stabilization		Support(built-in gyro sensor)
Defog		Support
Motion Detection	Quantity	8ea
	Shape	8point Polygonal zones
Privacy Masking	Quantity	32ea
	Shape	4point Quadrangle zones
	Color / Option	Gray, Green, Red, Blue, Black, White, Mosaic
Gain Control		Off, Max gain, Manual
White Balance		ATW, NarrowATW, AWC, Manual, Indoor, Outdoor, Mercury, Sodium
Electronic Shutter	Mode	Minimum, Maximum, Anti flicker, Prefer shutter control(Based on AI engine)
	Speed Range	2~1/12,000sec
Video Rotation		Flip&Mirror
Alarm Interface	Others	Support alarm I/O via optional I/O box
Alarm Triggers		Analytics, Network disconnect, Alarm input, Time schedule, MQTT subscription
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	Wise IR 250m(820ft)
IR Wavelength		850nm
Water Removal		Support(Spin Dry, Lens heater)
Auto Tracking		Support, Object auto tracking(Person/Vehicle), Target lock tracking

Analytics

Classified Object Type	Person, Face, Vehicle, License plate
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Analytics

Attributes	Vehicle	Type(car, bus, truck, motorcycle, bicycle)
Thumbnail		DetectionShot
Analytics Events	Based on AI Engine	Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit), Motion detection
	Normal	Tampering, Fog detection, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear)

Network

Ethernet		Metal shielded RJ-45(10/100BASE-T)
Video Compression		H.265/H.264: Main/Baseline/High, MJPEG
Smart Codec		Manual, WiseStreamIII
Bitrate Control		H.265/H.264: CBR or VBR, MJPEG: VBR
Streaming	Unicast	Up to 20 users
	Multicast	Support
	Multiple Streaming	Up to 10 profiles
Protocol		IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SFTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, CDP, SRTP(TCP, UDP Unicast), MQTT, NTCIP 1205
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
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		TPM(Trusted platform module), HTPM(Hanwha Trusted Platform Module), SDcard partition encrypt(AES-256)
Security Certificate		TPM 2.0 with FIPS 140-2 level2

General

Memory	RAM	4GB
	Flash	512MB
Edge Storage	Micro SD/SDHC/SDXC	Max. 512GB x 2slot(Total 1TB)

Environmental & Electrical

Operating Condition	Temperature	-50°C~+55°C(-58°F~+131°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)
Input Voltage		HPoE(IEEE802.3bt type4, Class8)
Power Consumption	PoE	Max. 62W, typical 23W

Mechanical

Color	White, Black
Material	Aluminum, PC(Polycarbonate), Hard-coated dome
RAL Code	RAL9003, RAL9005
Product Dimensions	ø188x264.9mm(7.40x10.47")
Product Weight	4,400g(9.70lb)

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, IEC 62262 IK10, NEMA TS 2-2013 (2.2.7, 2.2.8, 2.2.9), NEMA 250 type 4X

DORI (EN62676-4 standard)

Detect (25PPM/ 8PPF)	Wide	131.4m(431.19ft)
	Tele	3397.3m(11146.16ft)
Observe (63PPM/ 19PPF)	Wide	52.6m(172.48ft)
	Tele	1358.9m(4458.46ft)
Recognize (125PPM/ 38PPF)	Wide	26.3m(86.24ft)
	Tele	679.5m(2229.23ft)
Identify (250PPM/ 76PPF)	Wide	13.1m(43.12ft)
	Tele	339.7m(1114.62ft)

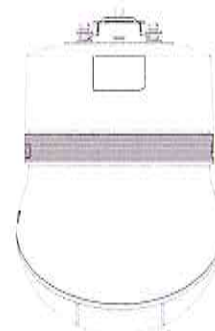
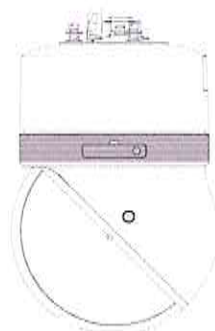
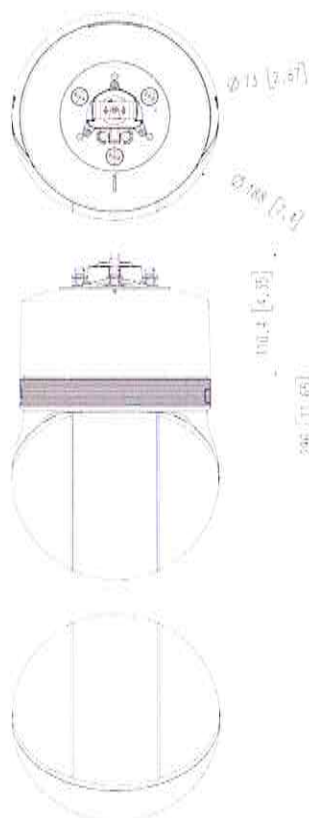
XNP-C9310R

4K 31x AI FOCUS IR PTZ Camera



CAD

Unit: mm [inch]



3			
2		XNP-C7310R	
1		XNP-C9310R	'23.10.17
No.		MODEL NAME	DATE
Unit:mm [inch]	SCALE:1/1	@Hanwha Vision	



Network

Bullet

PNO-A9311R

4K AI IR Bullet Camera



Key Features

- Maximum 4K resolution
- 6.91~214.7mm (31x) zoom
- IR viewable length 70m(229.66ft)
- Color: 0.075Lux(F1.36, 1/30sec, 30IRE) / BW: 0.0075Lux(F1.36, 1/30sec, 30IRE), 0Lux(IR LED on)
- Day & Night(ICR), WDR(120dB), WiseNR II (Using AI engine), prefer shutter
- H.265, H.264, MJPEG codec, WiseStream II, WiseStream III (Using AI engine)
- Object Classification, Attributes and BestShot
- Vehicle counting, Crowd counting, Slip & Fall detection
- Reinforced durability (IP66/IP67, IK10, NEMA4X)
- ONVIF Profile S/G/T/M, SUNAPI(HTTP API), Wisenet open platform
- Next level cybersecurity (TPM with FIPS 140-2 level2)

PNO-A9311R

4K AI IR Bullet Camera



Specifications

Video

Imaging Device	Size	1/1.8"
	Type	CMOS
Resolution	3840x2160, 3072x1728, 2688x1520, 2592x1944, 2560x1440, 2048x1536, 1920x1080, 1600x1200, 1280x1024, 1280x960, 1280x720, 1024x768, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360	
Max. Framerate	H.265/H.264	30fps/25fps(60Hz/50Hz)
	MJPEG	30fps
Min. Illumination (Lux)	Color(1/30sec, 30IRE)	0.075
	BW(1/30sec, 30IRE)	0.0075
Video Out	CVBS: 1.0 Vp-p / 75Ω composite for installation, USB: Micro USB Type B	

Lens

Focal Length (mm)	6.91~214.7	
Zoom Ratio	Optical	31x
Max Aperture Ratio (F number)	Wide	1.36
	Tele	4.6
Angular Field of View	Horizontal	60.92°~2.2°
	Vertical	35.26°~1.24°
	Diagonal	69.18°~2.52°
Min. Object Distance	3m(9.84ft)	
Focus Control	Simple focus	
Lens Type	P iris(IR corrected)	

Operational

Day & Night	Auto(ICR)
Backlight Compensation	BLC, WDR, SSDR
Wide Dynamic Range (dB)	120
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V
Digital Image Stabilization	Support(built-in gyro sensor)

Operational

Motion Detection	Quantity	8ea
	Shape	8point Polygonal zones
Privacy Masking	Quantity	3ea
	Shape	Rectangular zones
	Color / Option	Gray, Black, White
Gain Control		Low, Middle, High
White Balance		ATW, AWC, Manual, Indoor, Outdoor
LDC		Support
Electronic Shutter	Mode	Minimum, Maximum, Anti flicker, Prefer shutter control(Based on AI engine)
	Speed Range	1/5~1/12,000sec
Video Rotation		Flip, Mirror, Hallway view(90°/270°)
Alarm Interface	In/Out	2 configurable I/O ports
	Others	12VDC output
Alarm Triggers		Analytics, Network disconnect, Alarm input, App event, Time schedule, MQTT subscription
Alarm Events When Alarm Trigger Occurred		File upload(image): e-mail/FTP, 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 70m(229.66ft)
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 Events	Based on AI Engine	Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit), Face mask detection, Social distancing detection, Slip & fall detection
	Normal	Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear), WiseDetector for adding custom objects
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)
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Network

Video Compression		H.265/H.264: Main/High, MJPEG
Audio Compression		G.711 u-law /G.726 selectable, G.726(ADPCM) 8kHz, G.711 8kHz, G.726: 16kbps, 24kbps, 32kbps, 40kbps, AAC-LC: 48kbps at 16kHz
Smart Codec		Manual, WiseStreamIII
Bitrate Control		H.265/H.264: CBR or VBR, MJPEG: VBR
Streaming	Unicast	Up to 6 users
	Multicast	Support
	Multiple Streaming	Up to 6 profiles
Protocol		IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, SRTP(TCP, UDP Unicast), MQTT
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
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		TPM(Trusted platform module), SDcard partition encrypt(AES-256)
Security Certificate		TPM 2.0 with FIPS 140-2 level2

General

Memory	RAM	4GB
	Flash	1GB
Edge Storage	Micro SD/SDHC/SDXC	Max. 256GB x 2slot(Total 512GB)

Environmental & Electrical

Operating Condition	Temperature	-40°C~+55°C(-40°F~+131°F)
	Humidity	0~100% RH(condensing)
	Others	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)
Input Voltage		PoE+(IEEE802.3at, Class4), 12VDC

Environmental & Electrical

Power Consumption	PoE	Max 25.5W, typical 14.0W
	12VDC	Max 24.0W, typical 12.7W

Mechanical

Color	White
Material	Aluminum
RAL Code	RAL9003
Product Dimensions	ø136.2x358.7mm(ø5.36x14.12")(Without sunshield)
Product Weight	3,200g(7.05lb)
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
Safety	UL 62368-1, CAN/CSA C22.2 NO. 62368-1, IEC 62471
Environment	IEC/EN 63000, IEC 60529 IP66, IEC 60529 IP67, IEC 62262 IK10

DORI (EN62676-4 standard)

Detect (25PPM/ 8PPF)	Wide	130.6m(428.4ft)
	Tele	4,000m(13,122ft)
Observe (63PPM/ 19PPF)	Wide	52.2m(171.4ft)
	Tele	1600m(5,249ft)
Recognize (125PPM/ 38PPF)	Wide	26.1m(85.7ft)
	Tele	800m(2,625ft)
Identify (250PPM/ 76PPF)	Wide	13.1m(42.8ft)
	Tele	400m(1,312ft)

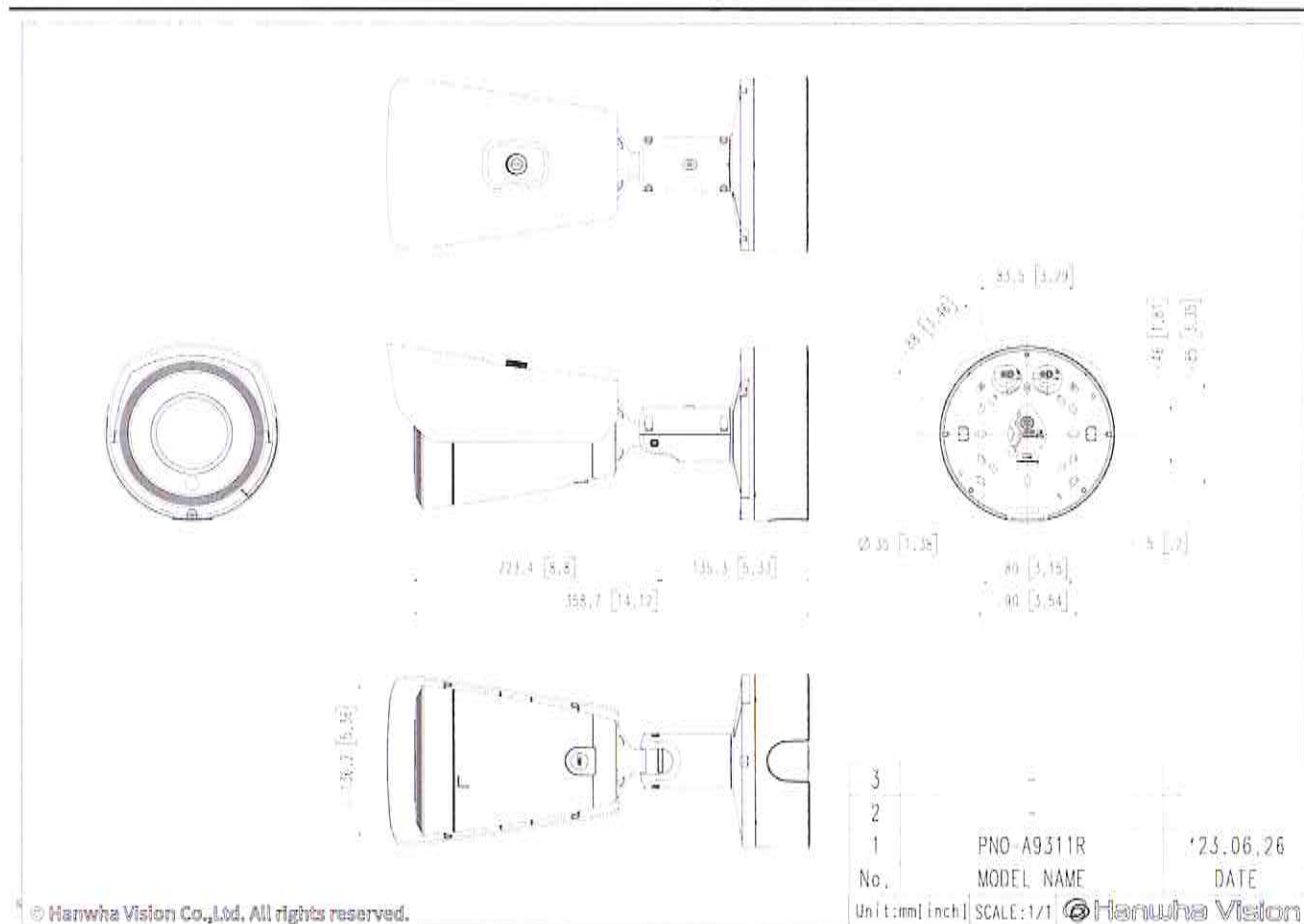
PNO-A9311R

4K AI IR Bullet Camera



CAD

Unit: mm [inch]





Network

PTZ

XNP-C9310R

4K 31x AI FOCUS IR PTZ Camera

ERC

UL LISTED

RoHS

CE

FC

Key Features

- Maximum 4K resolution
- 6.91 - 214.7mm(31x) motorised varifocal
- IR viewable length Wise IR 250m(820ft)
- Color: 0.06 Lux(F1.36, 1/30sec, 30 IRE) / BW: 0.006 Lux(F1.36, IR LED Off), 0Lux (IR LED On)
- Day & Night(ICR), WDR(120dB), WiseNR II (Using AI engine), prefer shutter
- H.265, H.264, MJPEG codec, WiseStream II, WiseStreamIII (Using AI engine)
- DIS with built-in Gyro sensor
- Reinforced durability (IP66/IP67, IK10, NEMA4X)
- ONVIF Profile S/G/T/M, SUNAPI(HTTP API), Wisenet open platform
- Next level cybersecurity (TPM with FIPS 140-2 level2)
- Quick zoom, Wise auto focus(AI based), Focus scan