Network | Multi-sensor

PNM-C9022RV

8MP IR Panoramic Camera

Key Features

- Max. 8MP panoramic stitching image
- IR viewable length Maximum 20m (65.6ft), WiseIR
- H.265/H.264/MJPEG Max. 20fps
- H.265, H.264, MJPEG codec
- Day & Night (ICR), extremeWDR (120 dB)
- Hard-coated dome bubble
- WiseNR II (Based on AI engine), WiseStreamIII (Based on AI engine)
- Analytics events based on AI engine : Object classification(Person/Vehicle)
- Analytics events : Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Virtual area(Appear/Disappear)
- IP66, IK10, NEMA 250 type 4X

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Specifications

Video	
Imaging Device	1/2.8" CMOS(x4)
Resolution	5120X1568, 3648X1152, 2560X784, 1280X392
Max. Framerate	H.265/H.264: Max. 20fps(60Hz/50Hz) MJPEG: Max. 20fps(60Hz/50Hz)
Min. Illumination	Color: 0.1Lux(F2.0, 1/30sec) BW: 0.01Lux(F2.0, 1/30sec), 0Lux(IR LED on)
Video Out	USB: Micro USB Type B, 1280x720 for installation

Lens	
Focal Length (Zoom Ratio)	2.8mm fixed focal(x4)
Max. Aperture Ratio	F2.0
Angular Field of View	H: 209° / V: 60°
Min. Object Distance	5m(16.4ft)
Focus Control	Fixed

Pan / Tilt / Rotate	
Pan / Tilt / Rotate Range	0°~360° / 0°~65° / -

Operational	
Camera Title	Displayed up to 85 characters
Day & Night	Auto(ICR)
Backlight Compensation	BLC, WDR, SSDR
Wide Dynamic Range	120dB
Digital Noise Reduction	WiseNR II (Based on AI engine), SSNR V
Motion Detection	8ea, 8point Polygonal zones
Privacy Masking	10ea, Rectangular zones - Color: Gray, Green, Red, Blue, Black, White
Gain Control	Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
Electronic Shutter Speed	Minimum / Maximum / Prefer / Anti flicker(2~1/12,000sec) Auto prefer shutter control(Based on AI engine)
Video Rotation	Flip, Mirror
Analytics	Classified object type: Person/Vehicle Attributes: Not support Support BestShot Analytics events based on AI engine - Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit) Analytics events - Defocus detection, Motion detection, Tampering, Audio detection, Sound classification, Virtual area(Appear/Disappear)
Alarm I/O	2 configurable I/O ports
Alarm Triggers	Analytics, Network disconnect, Alarm input, App event, Time schedule

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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
Audio In	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm
Audio Out	Line out, Max.output level: 1Vrms
IR Viewable Length	WiseIR 20m(65.62ft) 4 individual zones with Automatic/Manual level adjustment

Network

Ethernet	Metal shielded RJ-45(10/100/1000BASE-T)
Video Compression	H.265/H.264: Main/Baseline/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(5ea area), WiseStream II , WiseStreamIII(Based on AI engine)
Bitrate Control	H.264/H.265: CBR or VBR MJPEG: VBR
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 3 profiles, 2 virtual channel support)
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)
Security	HTTPS(SSL) Login Authentication Digest Login Authentication IP Address Filtering User access log 802.1X Authentication(EAP-TLS, EAP-LEAP, EAP-PEAP MSCHAPv2) Device Certificate(Hanwha Private Root CA, pre-installed) Secure OS/Boot/Storage, Verify firmware forgery TPM 2.0 with FIPS 140-2 level2
Application Programming Interface	ONVIF Profile S/G/T/M SUNAPI(HTTP API) Wisenet open platform

General

Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Portuguese, Czech, Polish, Turkish, Dutch, Greek, Hungarian
Edge Storage	Micro SD/SDHC/SDXC 2slot Max. 1TB(512GBx2)
Memory	4GB RAM, 512MB Flash

Environmental & Electrical

Operating Temperature / Humidity	-40°C~+55°C(-40°F~+131°F) / 0~95% RH(non-condensing)
Storage Temperature / Humidity	-50°C~+60°C(-58°F~+140°F) / 0~90% RH
Certification	IP66, NEMA4X, IK10
Input Voltage	PoE+(IEEE802.3at, Class4), 12VDC
Power Consumption	PoE+: Max 24.5W, typical 11.3W 12VDC: Max 22.0W, typical 10.4W Power redundancy failover

Mechanical

Color / Material	White / Aluminum
RAL Code	RAL9003
Product Dimensions / Weight	ø253x170mm(9.96"x6.69"), 2900g(6.39lb)

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Compatible Conduit hole / Gangbox	3/4"(M25) Single, Double, 4"Octagon, Square
Hanging Mount (Dome)	SBP-276HMW

Certifications & Standards

EMC	FCC 47 CFR 15 Subpart B Class A ICES-3(A)/NMB-3(A) CE/UKCA - EN 55032 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/EN 62471
Environment	IEC/EN 63000 IEC/EN 60529 IP66, IEC/EN 62262 IK10 NEMA 250 type 4X

DORI (EN62676-4 standard)

Detect (25PPM/ 8PPF)	52.2m(171.25ft)
Observe (63PPM/ 19PPF)	20.9m(68.50ft)
Recognize (125PPM/ 38PPF)	10.4m(34.25ft)
Identify (250PPM/ 76PPF)	5.2m(17.13ft)

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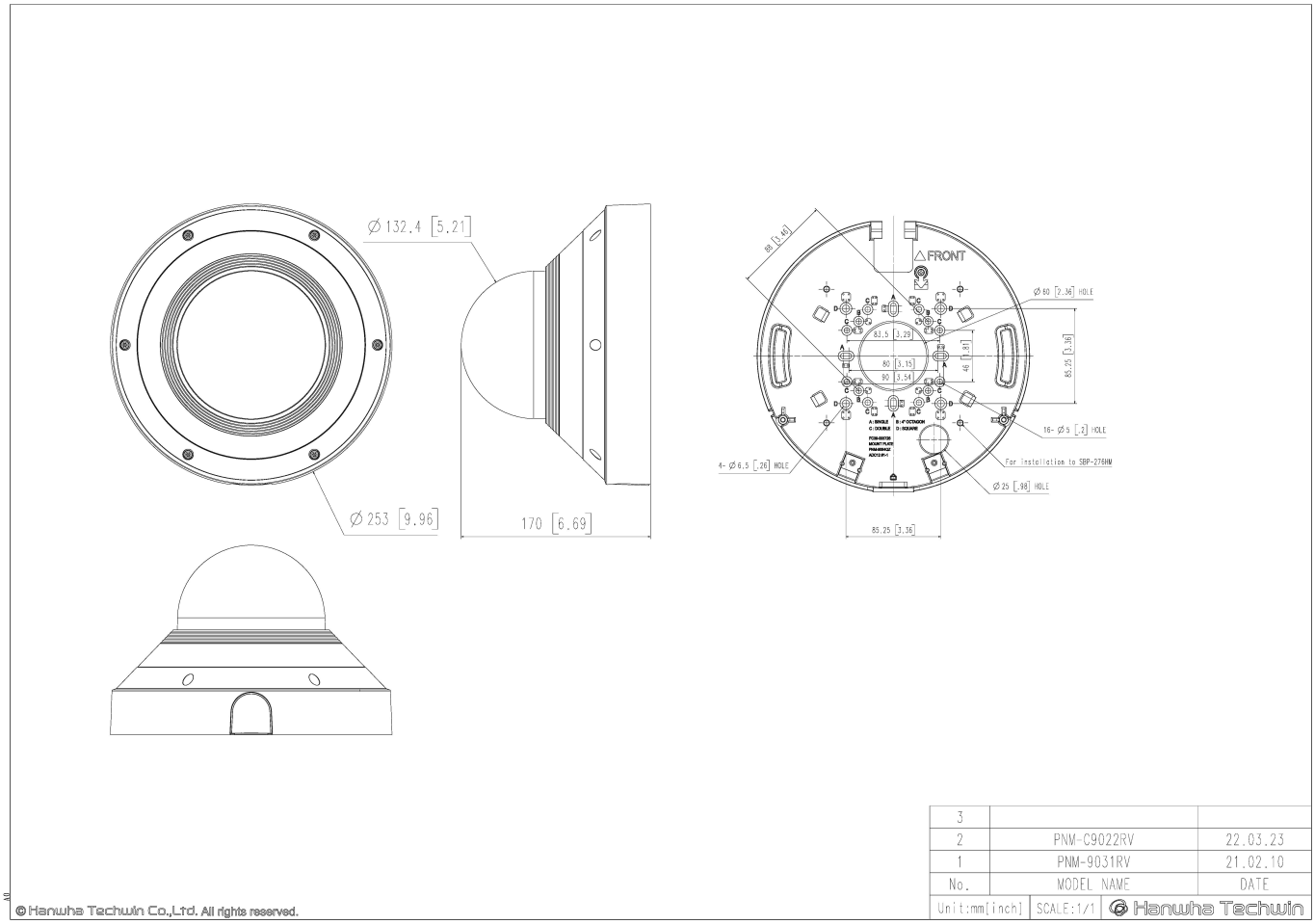
CAD

Unit:mm [inch]



No.	MODEL NAME	DATE
3		
2	PNM-C9022RV	22.03.23
1	PNM-9031RV	21.02.10

Unit:mm[inch] | SCALE:1/1 | Hanwha Techwin

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