



Network

PNM-A13022RV

13MP AI IR Panoramic Camera



Key Features

- Max.13MP panoramic stitching image
- Horizontal 194°, Vertical 93° field of view
- H.265/H.264/MJPEG Max. 30fps
- Analytics events based on AI engine:
 - Object detection (Person/Face/Vehicle/License plate),
 - IVA (Virtual line/Area, Enter/Exit, Loitering, Direction, Intrusion),
 - Slip&Fall detection, Face mask detection,
 - Social distancing detection, Motion detection
- Business intelligence based on AI engine:
 - People/Vehicle/Crowd counting, Queue management, Heatmap
- Support BestShot and full attributes
- WiseNR II (Based on AI engine), WiseStream (Based on AI engine)
- WiseIR: IR viewable length 20m(65.6ft)
- IP66, NEMA4X, IK10
- Device certificate(Hanwha Vision Root CA),
Secure storage (Secure element with FIPS 140-3 level3/CC EAL6+ certified)

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Specifications

Video		
Imaging Device	Size	1/2.8"
	Type	CMOS
Resolution		5120x2592, 4112x2080, 3240x1640, 2940x1488, 2560x1296, 2016x1016, 1600x800, 1424x720, 1280x648, 1016x512, 832x480, 832x416, 800x600, 640x480
Max. Framerate	H.265/H.264	30fps/25fps(60Hz/50Hz)
	MJPEG	30fps
Min. Illumination (Lux)	Color(1/30sec, 30IRE)	0.1
	BW(1/30sec, 30IRE)	0.01
Video Out		USB: Micro USB Type C
Lens		
Focal Length (mm)		3.06
Max Aperture Ratio (F number)	Wide	1.6
Angular Field of View	Horizontal	194°
	Vertical	93°
Min. Object Distance		5m(16.4ft)
Focus Control		Fixed
Pan / Tilt / Rotate		
Pan / Tilt / Rotate Range	Pan	0°~360°
	Tilt	0°~50°
Operational		
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
Motion Detection	Quantity	8ea
	Shape	8point Polygonal zones

Operational

Privacy Masking	Quantity	32ea
	Shape	4point Quadrangle zones
	Color / Option	Gray, Green, Red, Blue, Black, White
Gain Control		Low, Middle, High
White Balance		ATW, AWC, Manual, Indoor, Outdoor
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	In/Out	2 configurable I/O ports
	Others	Support extra 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, 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	20m(65.62ft) 4 individual zones with Automatic/Manual level adjustment
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), Motion detection, Face mask detection, Social distancing detection, Slip & fall detection
	Normal	Defocus detection, Tampering, Audio detection, Virtual area(Appear/Disappear)
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 u-law /G.726 selectable,G.726(ADPCM) 8kHz,G.711 8kHz, G.726: 16kbps,24kbps,32kbps,40kbps, AAC-LC: 48kbps at 16kHz, OPUS: 48kHz(64kbps)

Network

Smart Codec		Manual, 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 4 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, 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		Optional (needs gateway)

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
Security Certificate		Secure element(FIPS 140-3 level3, CC EAL6+), Consumer IoT Security Standard (ETSI EN 303 645)

General

Memory	RAM	8GB
	Flash	8GB eMMC
Edge Storage	Micro SD/SDHC/SDXC	Max. 1TB x 2slot(Total 2TB)

Environmental & Electrical

Operating Condition	Temperature	-40°C~-55°C(-40°F~+131°F)
	Humidity	0~100% RH(condensing)
Storage Condition	Temperature	-50°C~+60°C(-58°F~+140°F)
	Humidity	0~90% RH(non-condensing)
EPA(Effective Projected Area)		0.0286 m ²
Input Voltage		PoE+(IEEE802.3at, Class4), 12VDC
Power Consumption	PoE	Max 22.3W, typical 11.5W
	12VDC	Max 20.0W, typical 10.0W

Environmental & Electrical

Power Redundance Failover	Support
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Mechanical

Color	White
Material	Aluminum, Hard-coated dome
RAL Code	RAL9003
Product Dimensions	ø253x170mm(9.96x6.69")
Product Weight	2,800g(6.17lb)
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 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

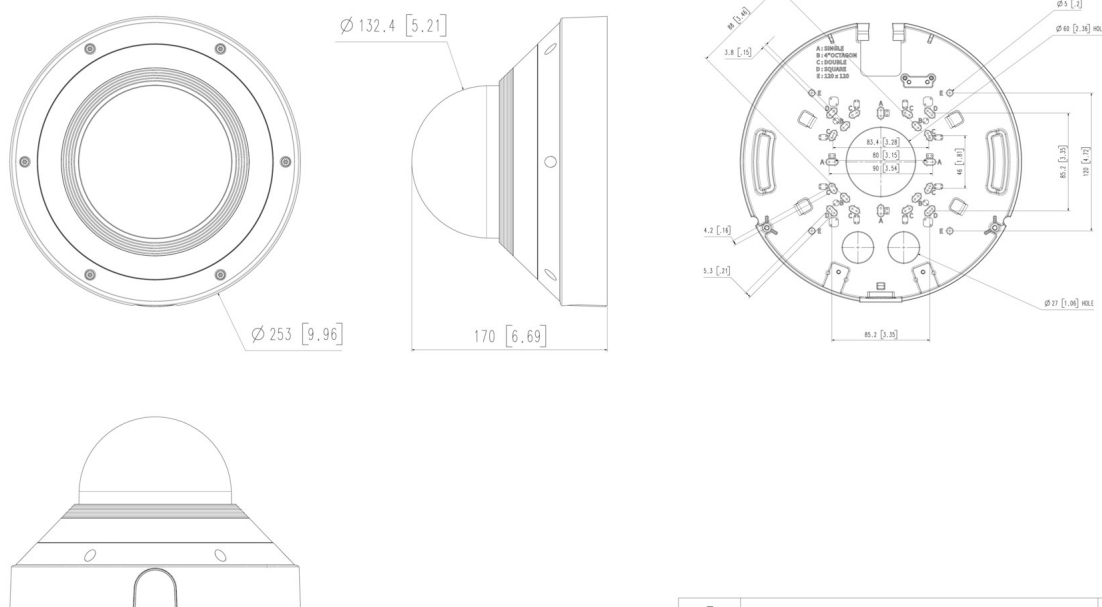
DORI (EN62676-4 standard)

Detect (25PPM/ 8PPF)	Wide	43.8m(143.85ft)
Observe (63PPM/ 19PPF)	Wide	17.5m(57.54ft)
Recognize (125PPM/ 38PPF)	Wide	8.8m(28.77ft)
Identify (250PPM/ 76PPF)	Wide	4.4m(14.39ft)

13MP AI IR Panoramic Camera



Unit: mm [inch]



3		
2		
1	PNM-A13022RV	'25.09.23
No.	MODEL NAME	DATE
Unit:mm[inch]	SCALE:1/1	