



Network

Dome

# PND-A7082RV

4MP AI Indoor Dome Camera



## Key Features

- 4MP AI Indoor Vandal Dome Camera
- Maximum 4MP resolution (1/1.8" sensor)
- 4.6~9.35mm(2.0x) motorized varifocal
- Long range WiselR distance up to 60m (196.85ft)
- Color: 0.03Lux(F1.3, 1/30sec, 30IRE)
- BW: 0.003Lux(F1.3, 1/30sec, 30IRE)
- 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
- Business intelligence based on AI engine : People/Vehicle/Crowd counting, Queue management, Heatmap
- Support BestShot and full attributes
- Support Dynamic Privacy Masking
- AI-based Image enhancement
- extremeWDR, WiseNR II (Based on AI engine), WiseStream(Based on AI engine)
- Support Wisepower(Power monitoring)
- Device certificate(Hanwha Vision Root CA), Secure storage(Secure element with FIPS 140-3 level3/CC EAL6+ certified), SBOM
- 2 SD slots edge storage
- IP52, IK10

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## Specifications

### Video

Imaging Device	Size	1/1.8"
	Type	CMOS
Resolution	2592x1520, 2560x1440, 1920x1080, 1600x1200, 1280x960, 1280x720, 1024x768, 800x600, 640x480, 640x360, 320x240, 320x180	
Max. Framerate	H.265/H.264	60fps/50fps(60Hz/50Hz)(WDR off) / 30fps/25fps(60Hz/50Hz)(WDR on)
	MJPEG	30fps(@4MP Max. 5fps)
Min. Illumination (Lux)	Color(1/30sec, 30IRE)	0.03
	BW(1/30sec, 30IRE)	0.003
Video Out	USB: Micro USB Type C	

### Lens

Focal Length (mm)	4.6~9.35mm	
Zoom Ratio	Optical	2.0x
Max Aperture Ratio (F number)	Wide	1.3
	Tele	2.15
Angular Field of View	Horizontal	105°~47°
	Vertical	58°~27°
	Diagonal	128°~55°
Min. Object Distance	1.5m(4.92ft)	
Focus Control	Simple focus	
Lens Type	P iris(IR corrected)	

### Pan / Tilt / Rotate

Pan / Tilt / Rotate Range	Pan	0°~350°
	Tilt	-45°~85°
	Rotate	0°~355°

### Operational

Day & Night	Auto(ICR)
Backlight Compensation	BLC, HLC, WDR, SDR

## Operational

<b>Wide Dynamic Range (dB)</b>		120
<b>Digital Noise Reduction</b>		WiseNR II (Based on AI engine), SSNR V
<b>Digital Image Stabilization</b>		Support
<b>Defog</b>		Support
<b>Motion Detection</b>	Quantity	8ea
	Shape	8point Polygonal zones
<b>Privacy Masking</b>	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
<b>Gain Control</b>		Off, Max gain, Manual
<b>White Balance</b>		ATW, NarrowATW, AWC, Manual, Indoor, Outdoor
<b>LDC</b>		Support(Fill/stretch mode)
<b>Electronic Shutter</b>	Mode	Minimum, Maximum, Anti flicker, Prefer shutter control(Based on AI engine)
	Speed Range	2~1/30,000sec
<b>Video Rotation</b>		Flip, Mirror, Hallway view(90°/270°)
<b>Alarm Interface</b>	In/Out	2 configurable I/O ports
	Others	12VDC output, Support extra alarm I/O via optional I/O box
<b>Alarm Triggers</b>		Analytics, Network disconnect, Alarm input, Time schedule, MQTT subscription, Case tampering, Day/Night, Storage disruption
<b>Alarm Events When Alarm Trigger Occurred</b>		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
<b>Audio In</b>		Selectable(mic in/line in)
<b>Audio Out</b>		Line out
<b>Light Type</b>		IR LED
<b>Light Viewable Length</b>	IR	WiseIR 60m(196.85ft)
<b>IR Wavelength</b>		850nm

## Analytics

<b>Classified Object Type</b>		Person, Face, Vehicle, License plate
<b>Attributes</b>	Person	Upper/Lower clothes color, Gender, Bag
	Vehicle	Type(car, bus, truck, motorcycle, bicycle), Color
	Face	Age, Gender, Face mask, Glasses
<b>Thumbnail</b>		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)
	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, IGMP, 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	-25°C~+50°C(-13°F~+122°F)
	Humidity	0~100% RH(condensing)
	Others	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)		0.0148m <sup>2</sup>
Input Voltage		PoE+(IEEE802.3at, Class4), 12VDC
Power Consumption	PoE	Max. 15.0W, typical 9.0W
	12VDC	Max. 12.7W, typical 7.8W
Wisepower		Power monitoring
Power Redundance Failover		Support

## Mechanical

Color	White
Material	Aluminum, Hard-coated dome
RAL Code	RAL9003
Product Dimensions	ø160x125mm(ø6.30x4.92")
Product Weight	1550g(3.42lb)
Compatible Conduit Hole	12.7mm(1/2")(M20)
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 IP52, IEC 62262 IK10, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78

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**DORI (EN62676-4 standard)**

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<b>Detect (25PPM/ 8PPF)</b>	Wide	39.8m(130.51ft)
	Tele	119.2m(391.15ft)
<b>Observe (63PPM/ 19PPF)</b>	Wide	15.9m(52.20ft)
	Tele	47.7m(156.46ft)
<b>Recognize (125PPM/ 38PPF)</b>	Wide	8.0m(26.10ft)
	Tele	23.8m(78.23ft)
<b>Identify (250PPM/ 76PPF)</b>	Wide	4.0m(13.05ft)
	Tele	11.9m(39.12ft)

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**CAD**

Unit: mm [inch]

2	PND-A7082RV	'25.03.11
1	PND-A9082RV	'25.03.11
No.	MODEL NAME	DATE
Unit:mm[inch] SCALE:1/1		Hanwha Vision

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