



Network

Dome

## PND-A6081RF

2MP AI IR Dome Camera



### Key Features

- Maximum 2MP resolution, Up to 120fps
- 0.007Lux@F1.3, 1/30sec. (Color), 0Lux (B/W, IR LED on)
- Day & Night (ICR), WDR (120dB), WiseNR II (Using AI engine)
- H.265, H.264, MJPEG, WiseStream II, WiseStreamIII (Using AI engine)
- Video Analytics based on AI
  - Object detection and classification (Person, Face, Vehicle, License Plate)
  - Face mask detection, Social distancing detection
  - Attribute, BestShot
- TPM with FIPS 140-2 level2, Secure boot, Verify firmware forgery
- System requirements
  - SSM v2.10.8 or later, Genetec plugin v1.0 or later, Milestone plugin v1.0.2 or later, NVR model (XRN-6410DB4/B4, XRN-3210B4)
- Hard-coated dome bubble, IP52, IK10, Plenum rate

### Compatible Devices



Occupancy  
Monitoring  
Application

SPB-FCD85W

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## Specifications

Video		
Imaging Device	Size	1/2"
	Type	CMOS
Resolution	720x480, 1280x960, 1024x768, 1920x1080, 720x576, 640x360, 640x480, 800x600, 800x448, 1280x720, 1280x1024	
Max. Framerate	H.265/H.264	120fps/100fps(60Hz/50Hz)
	MJPEG	15fps
	Others	Max. 60/50fps(60Hz/50Hz) when AI on
Min. Illumination (Lux)	Color(1/30sec, 30IRE)	0.007
	BW(1/30sec, 30IRE)	0.0007
Video Out	CVBS: 1.0 Vp-p / 75Ω composite for installation, USB: Micro USB Type B	
Lens		
Focal Length (mm)	4.38~9.33	
Zoom Ratio	Optical	2.13x
Max Aperture Ratio (F number)	Wide	1.3
	Tele	2.15
Angular Field of View	Horizontal	103.1°~44.5°
	Vertical	54.2°~24.9°
	Diagonal	124°~51.1°
Min. Object Distance	0.5m(1.64ft)	
Focus Control	Simple focus	
Lens Type	P iris(IR corrected)	
Pan / Tilt / Rotate		
Pan / Tilt / Rotate Range	Pan	0°~360°
	Tilt	-45°~85°
	Rotate	0°~355°
Operational		
Day & Night	Auto(ICR)	

## Operational

<b>Backlight Compensation</b>		WDR, BLC, SDR
<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(built-in gyro sensor)
<b>Motion Detection</b>	Quantity	8ea
	Shape	8point Polygonal zones
<b>Privacy Masking</b>	Quantity	6ea
	Shape	Rectangular zones
	Color / Option	White, Black, Gray
<b>Gain Control</b>		Middle, High, Low
<b>White Balance</b>		ATW, Outdoor, Indoor, Manual, AWC
<b>LDC</b>		Support
<b>Electronic Shutter</b>	Mode	Anti flicker, Maximum, Minimum, Prefer shutter control(Based on AI engine)
	Speed Range	1/5~1/12,000sec
<b>Video Rotation</b>		Mirror, Hallway view(90°/270°), Flip
<b>Alarm Interface</b>	In/Out	2 configurable I/O ports
	Others	12VDC output
<b>Alarm Triggers</b>		Alarm input, Analytics, MQTT subscription, Network disconnect, Time schedule, App event
<b>Alarm Events When Alarm Trigger Occurred</b>		Notification: e-mail, Audio clip playback, File upload(image): e-mail/FTP, MQTT: publication, Handover: PTZ preset, send message by HTTP/HTTPS/TCP, Recording: SD/SDHC/SDXC or NAS recording at event triggers, Alarm output
<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 40m(131.23ft)
<b>IR Wavelength</b>		850nm

## Analytics

<b>Classified Object Type</b>		Vehicle, Face, License plate, Person
<b>Attributes</b>	Person	Bag, Upper/Lower clothes color, Gender
	Vehicle	Color, Type(car, bus, truck, motorcycle, bicycle)
	Face	Face mask, Glasses, Age, Gender
<b>Thumbnail</b>		BestShot
<b>Analytics Events</b>	Based on AI Engine	Face mask detection, Object detection, Social distancing detection, Slip & fall detection, Virtual area(Loitering/Intrusion/Enter/Exit), Virtual line(Crossing/Direction)
	Normal	Defocus detection, Sound classification, Tampering, Shock detection, Motion detection, WiseDetector for adding custom objects, Audio detection, Virtual area(Appear/Disappear)

## Analytics

<b>Business Intelligence</b>	Based on AI Engine	Queue management, Vehicle counting, Crowd counting, Heatmap, People counting
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## Network

<b>Ethernet</b>		Metal shielded RJ-45(10/100/1000BASE-T)
<b>Video Compression</b>		H.265/H.264: Main/High, MJPEG
<b>Audio Compression</b>		AAC-LC: 48Kbps at 16KHz, G.711 u-law /G.726 selectable, G.726: 16Kbps, 24Kbps, 32Kbps, 40Kbps, G.726(ADPCM) 8KHz, G.711 8KHz
<b>Smart Codec</b>		Manual, WiseStreamIII
<b>Bitrate Control</b>		H.265/H.264: CBR or VBR, MJPEG: VBR
<b>Streaming</b>	Unicast	Up to 6 users
	Multicast	Support
	Multiple Streaming	Up to 6 profiles
<b>Protocol</b>		ARP, RTP(UDP), IPv4, HTTPS, FTP, NTP, TCP/IP, DHCP, RTCP, IPv6, UDP/IP, Bonjour, DNS, SNMPv1/v2c/v3(MIB-2), RTP(TCP), SSL/TLS, QoS, SMTP, DDNS, IGMP, HTTP, UPnP, LLDP, MQTT, RTSP, ICMP, SRTP(TCP, UDP Unicast)
<b>Application Programming Interface</b>	ONVIF	T, M, G, S
	Others	SUNAPI(HTTP API), Hanwha Vision Open Platform

## Security

<b>OS / Firmware Protect</b>		Secure boot, Encrypted firmware, Signed firmware
<b>User authentication</b>		Digest authentication, Prevent brute-force attack
<b>Network authentication</b>		IEEE 802.1X(EAP-TLS, EAP-LEAP, EAP-PEAP, MSCHAPv2)
<b>Secure Communication</b>		WSS(WebSocket Secure), SRTP, HTTPS
<b>Access Control</b>		IP-based access control
<b>Data Protect</b>		Encrypt compress for live recording file export, Encryption credentials
<b>Audit</b>		Access / System / Event Log management
<b>Device ID</b>		Device certificate(Hanwha Vision Root CA)
<b>Secure Storage</b>		SDcard partition encrypt(AES-256), TPM(Trusted platform module)
<b>Security Certificate</b>		TPM 2.0 with FIPS 140-2 level2

## General

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

## Environmental & Electrical

<b>Operating Condition</b>	Temperature	-25°C~+50°C(-13°F~+122°F)
	Humidity	0~90% RH(non-condensing)
<b>Storage Condition</b>	Temperature	-50°C~+60°C(-58°F~+140°F)
	Humidity	0~90% RH(non-condensing)

## Environmental & Electrical

Input Voltage		12VDC, PoE+(IEEE802.3at, Class4)
Power Consumption	PoE	Max 19.50W, typical 16.00W
	12VDC	Max 17.00W, typical 13.50W

## Mechanical

Color	White
Material	Aluminum, Hard-coated dome
RAL Code	RAL9003
Product Dimensions	Ø205x163mm(8.07x4.92")
Product Weight	1,950g(4.30lb)

## Certifications & Standards

EMC	CE/UKCA - EN55032 Class A, EN 50130-4, EN 61000-3-2, EN 61000-3-3, FCC 47 CFR 15 Subpart B Class A, RCM AS-NZS CISPR 32 Class A, ICES-3(A)/NMB-3(A), KS C 9832 Class A, KS C 9835, VCCI CISPR 32 Class A
Safety	UL 62368-1, CAN/CSA C22.2 NO. 62368-1, IEC 62471
Environment	IEC/EN 63000, IEC 62262 IK10, IEC 60529 IP52

## DORI (EN62676-4 standard)

Detect (25PPM/ 8PPF)	Wide	30.0m(98.43ft)
	Tele	95.0m(311.82ft)
Observe (63PPM/ 19PPF)	Wide	12.0m(39.37ft)
	Tele	38.0m(124.73ft)
Recognize (125PPM/ 38PPF)	Wide	6.0m(19.69ft)
	Tele	19.0m(62.36ft)
Identify (250PPM/ 76PPF)	Wide	3.0m(9.84ft)
	Tele	9.5m(31.18ft)

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## CAD

Unit: mm [inch]

