



Network

Dome

# QNV-C8023R

5MP AI IR Vandal Dome Camera



## Key Features

- Max. 5MP resolution
- Color: 0.05Lux(F1.6, 1/30sec), BW: 0.005Lux(F1.6, 1/30sec, 30IRE)
- Maximum 30fps@5MP (H.265/H.264)
- IR viewable length 30m (98.42ft)
- Day & Night (ICR), WDR (120dB), WiseNR II (Using AI engine)
- H.265, H.264, MJPEG, WiseStreamIII (Using AI engine)
- Dynamic Privacy Masking (Person/Vehicle)
- Analytics events based on AI engine (NPU) :
  - Object detection (Person/Vehicle - car, truck, bus, bicycle, motorcycle),
  - Color Attribute, BestShot
  - Motion detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit)
- Hard-coated dome bubble/ IP66, IK10
- PoE: Max 8.1W

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## Specifications

### Video

Imaging Device	Size	1/2.8"
	Type	CMOS
Resolution	2592x1944, 2560x1440, 1920x1080, 1280x960, 1280x720, 800x600, 800x448, 720x576, 720x480, 640x480, 640x360, 320x240	
Max. Framerate	H.265/H.264	30fps/25fps(60Hz/50Hz)
	MJPEG	30fps(@5MP Max. 5fps)
Min. Illumination (Lux)	Color(1/30sec, 30IRE)	0.05
	BW(1/30sec, 30IRE)	0.005
Video Out	USB: Micro USB Type B. Preview and installation ONLY. Requires WiFi dongle.	

### Lens

Focal Length (mm)	4.0	
Max Aperture Ratio (F number)	Wide	1.6
Angular Field of View	Horizontal	80°
	Vertical	59°
	Diagonal	102°
Min. Object Distance	0.5m(1.64ft)	
Focus Control	Fixed	
Lens Type	Fixed iris	
Mount Type	M12	

### Pan / Tilt / Rotate

Pan / Tilt / Rotate Range	Pan	0°~355°
	Tilt	-30°~75°
	Rotate	0°~355°

### Operational

Day & Night	Auto(ICR)
Backlight Compensation	BLC, WDR, SDR
Wide Dynamic Range (dB)	120

## Operational

<b>Digital Noise Reduction</b>		WiseNR II (Based on AI engine), SSNR V
<b>Motion Detection</b>	Quantity	8ea
	Shape	8point Polygonal zones
<b>Privacy Masking</b>	Quantity	32ea
	Shape	4point Quadrangle zones
	Color / Option	Gray, Green, Red, Blue, Black, White
	Dynamic Privacy Masking: Color / Option	Mosaic
<b>Gain Control</b>		Low, Middle, High
<b>White Balance</b>		ATW, AWC, Manual, Indoor, Outdoor
<b>LDC</b>		Support
<b>Electronic Shutter</b>	Mode	Minimum, Maximum, Anti flicker, Prefer shutter control(Based on AI engine)
	Speed Range	1/5~1/25,000sec
<b>Video Rotation</b>		Flip, Mirror, Hallway view(90°/270°)
<b>Alarm Interface</b>	In/Out	Input 1ea, Output 1ea
	Others	Support alarm I/O through an optional cable
<b>Alarm Triggers</b>		Analytics, Network disconnect, Alarm input, MQTT subscription
<b>Alarm Events When Alarm Trigger Occurred</b>		File upload(image): e-mail/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	30m(98.42ft)
<b>IR Wavelength</b>		850nm

## Analytics

<b>Classified Object Type</b>		Person, Vehicle
<b>Attributes</b>	Person	Upper/Lower clothes color
	Vehicle	Type(car, bus, truck, motorcycle, bicycle), Color
<b>Thumbnail</b>		BestShot
<b>Analytics Events</b>	Based on AI Engine	Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit), Motion detection
	Normal	Defocus detection, Tampering, Virtual area(Appear/Disappear)
<b>Business Intelligence</b>	Based on AI Engine	People counting, Queue management, Heatmap, Vehicle counting

## Network

<b>Ethernet</b>	RJ-45(10/100BASE-T)
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## Network

<b>Video Compression</b>		H.265/H.264: Main/High, MJPEG
<b>Audio Compression</b>		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
<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 20 users
	Multicast	Support
	Multiple Streaming	Up to 5 profiles
<b>Protocol</b>		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
<b>Application Programming Interface</b>	ONVIF	S, G, T, M
	Others	SUNAPI(HTTP API), Hanwha Vision Open Platform
<b>Direct Cloud Connection</b>		Support

## Security

<b>OS / Firmware Protect</b>	Encrypted firmware, Secure boot, 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>	HTTPS, WSS(WebSocket Secure), SRTP
<b>Access Control</b>	IP-based access control
<b>Data Protect</b>	Encryption credentials, Encrypt compress for live recording file export
<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)

## General

<b>Memory</b>	RAM	2GB
	Flash	1GB
<b>Edge Storage</b>	Micro SD/SDHC/SDXC	Max. 256GB x 1slot
<b>Edge Storage(OnCloud)</b>	Micro SD/SDHC/SDXC	Max. 1TB x 1slot *Hanwha Vision branded microSD cards have been certified and recommended for OnCloud edge recording.

## Environmental & Electrical

<b>Operating Condition</b>	Temperature	-30°C~+55°C(-22°F~+131°F)
	Humidity	0~100% RH(condensing)
	Others	Start up should be done at above -30°C, Humidity control with AIR vent
<b>Storage Condition</b>	Temperature	-50°C~+60°C(-58°F~+140°F)
	Humidity	0~95% RH(non-condensing)

### Environmental & Electrical

Input Voltage		PoE(IEEE802.3af, Class3)
Power Consumption	PoE	Max. 8.1W, typical 4.0W

### Mechanical

Color	White
Material	Aluminum
RAL Code	RAL9003
Product Dimensions	ø120x97.5mm(ø4.72x3.84")
Product Weight	579g(1.27 lb)
Compatible Gang Box	Single, Double, 4" Octagon

### 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

### DORI (EN62676-4 standard)

Detect (25PPM/ 8PPF)	Wide	61.8m(202.7ft)
Observe (63PPM/ 19PPF)	Wide	24.7m(81.1ft)
Recognize (125PPM/ 38PPF)	Wide	12.4m(40.5ft)
Identify (250PPM/ 76PPF)	Wide	6.2m(20.3ft)

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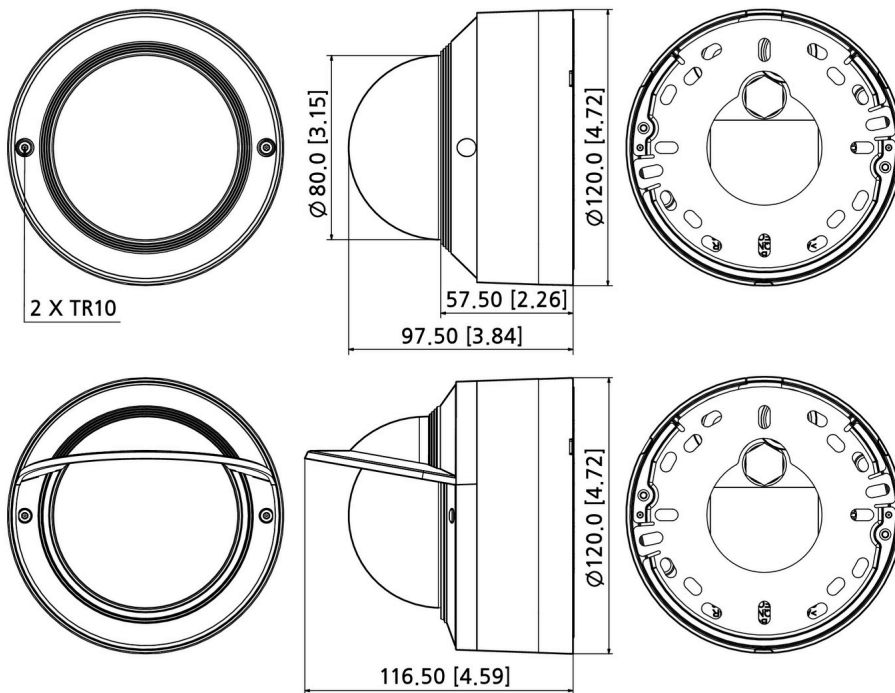
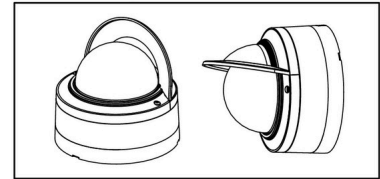


CAD

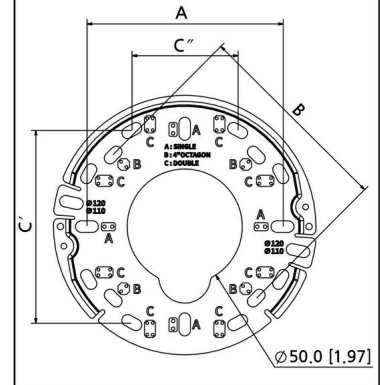
Unit: mm [inch]

## QNV-C8013R\_C8023R OUTDOOR VANDAL CAMERA

Reference image



STANDARD GANG		
A	SINGLE	83.5 [3.29]
B	4" OCTAGON	88.0 [3.46]
C' C"	DOUBLE	83.5 [3.29] X 46.0 [1.81]



Revision	V1.0
Revision Date	24/12/20
Paper Size	A2
Unit	mm [inch]
Scale	1:1

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