Hanwha Vision

Network   Fisheye

QNF-C9010V
12MP AI Fisheye Camera

Key Features

- 1/1.6" 12MP CMOS
- 1.76mm fixed stereo graphic type lens
- Color: 0.02Lux(F1.8, 1/30sec), BW: 0.001Lux(F1.8, 1/30sec)
- Digital Rotation
- Resolution/Framerate
- Original view: Max. 20fps@3008x3008
- Double panorama: Max. 20fps@3584x1792
- Single panorama: Max. 20fps@3584x896
- Quad view: Max. 20fps@3584x2688
- Q1/Q2/Q3/Q4(4:3): Max. 20fps@1792x1344
- Day & Night (ICR), WDR (120dB), WiseNR II (Using AI engine)
- H.265, H.264, MJPEG, WiseStreamIII (Using AI engine)
- Analytics events based on AI engine
- Object detection (Person/Vehicle)
- Color Attribute, BestShot
- Motion detection, Virtual line (Crossing/Direction),
Virtual area (Loitering/Intrusion/Enter/Exit)
- IP66, IK10, NEMA4X

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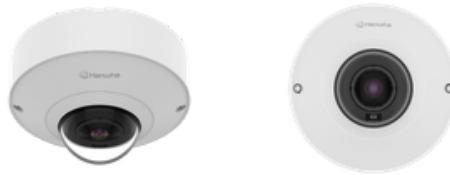
Specifications

Video

Imaging Device	Size	1/1.6"
	Type	CMOS
Resolution		3584x2688, 3584x1792, 3584x896, 3008x3008, 2560x2560, 2048x1536, 1920x1920, 1920x960, 1920x480, 1792x1344, 1504x1504, 1280x1280, 1280x640, 1280x320, 1024x768, 1024x512, 1024x256, 800x800, 768x576, 640x640, 640x320, 640x160, 512x384, 480x480
Max. Framerate	H.265/H.264	20fps/20fps(60Hz/50Hz)
	MJPEG	5fps
Min. Illumination (Lux)	Color(1/30sec, 30IRE)	0.02
	BW(1/30sec, 30IRE)	0.001
Video Out		USB: Micro USB Type B. Preview and installation ONLY. Requires WiFi dongle.

Lens

Focal Length (mm)		1.76
Max Aperture Ratio (F number)	Wide	F1.8
Angular Field of View	Horizontal	185°
	Vertical	185°
	Diagonal	185°
Min. Object Distance		0.5m(1.64ft)

Pan / Tilt / Rotate

Pan / Tilt / Rotate Range	Others	Digital Rotation

Operational

Day & Night		Auto(ICR)
Backlight Compensation		BLC, 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
Gain Control		Low, Middle, High
White Balance		ATW, AWC, Manual, Indoor, Outdoor
Electronic Shutter	Mode	Minimum, Maximum, Anti flicker
	Speed Range	1/5~1/12,000sec
Digital PTZ		Support
Video Rotation		Flip, Mirror
Alarm Triggers		Analytics, Network disconnect
Alarm Events When Alarm Trigger Occurred		File upload(image): e-mail/FTP/SFTP, Notification: e-mail, Recording: SD/SDHC/SDXC or NAS recording at event triggers, Handover: PTZ preset,send message by HTTP/HTTPS/TCP, MQTT: publication

Analytics

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

Network

Ethernet		RJ-45(10/100BASE-T)
Video Compression		H.265/H.264: Main/High, MJPEG
Smart Codec		Manual, WiseStream(Based on AI engine)
Bitrate Control		H.265/H.264: CBR or VBR, MJPEG: VBR, MJPEG: VBR
Streaming	Unicast	Up to 20 users
	Multicast	Support
	Multiple Streaming	Up to 5 profiles
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
Application Programming Interface	ONVIF	S, G, T, M
	Others	SUNAPI(HTTP API), Hanwha Vision Open Platform
Direct Cloud Connection		Support

Hanwha Vision

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
Data Protect	Encryption credentials
Audit	Access / System / Event Log management
Device ID	Device certificate(Hanwha Vision Root CA)
Secure Storage	SDcard partition encrypt(AES-256)

General

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

Environmental & Electrical

Operating Condition	Temperature	-40°C~+55°C(-40°F~+131°F)
	Humidity	0~100% RH(condensing)
	Others	Start up should be done at above -30°C
Storage Condition	Temperature	-50°C~+60°C(-58°F~+140°F)
	Humidity	0~95% RH(non-condensing)
Input Voltage		PoE(IEEE802.3af, Class3)
Power Consumption	PoE	Max 6.7W, typical 4.8W

Mechanical

Color	White
Material	Aluminum
RAL Code	RAL9003
Product Dimensions	ø120x72.3mm(ø4.7x2.85")
Product Weight	583g(1.28lb)

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	36.9m(121.03ft)
Observe (63PPM/ 19PPF)	Wide	14.8m(48.42ft)
Recognize (125PPM/ 38PPF)	Wide	7.4m(24.21ft)
Identify (250PPM/ 76PPF)	Wide	3.7m(12.10ft)

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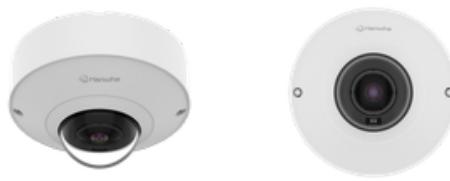
CAD

Unit: mm [inch]

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Reference image

2X TR10
Ø 105.0 [4.13]

51.64 [2.03]

49.37 [1.94]
72.30 [2.85]

95.30 [3.75]

120.0 [4.72]
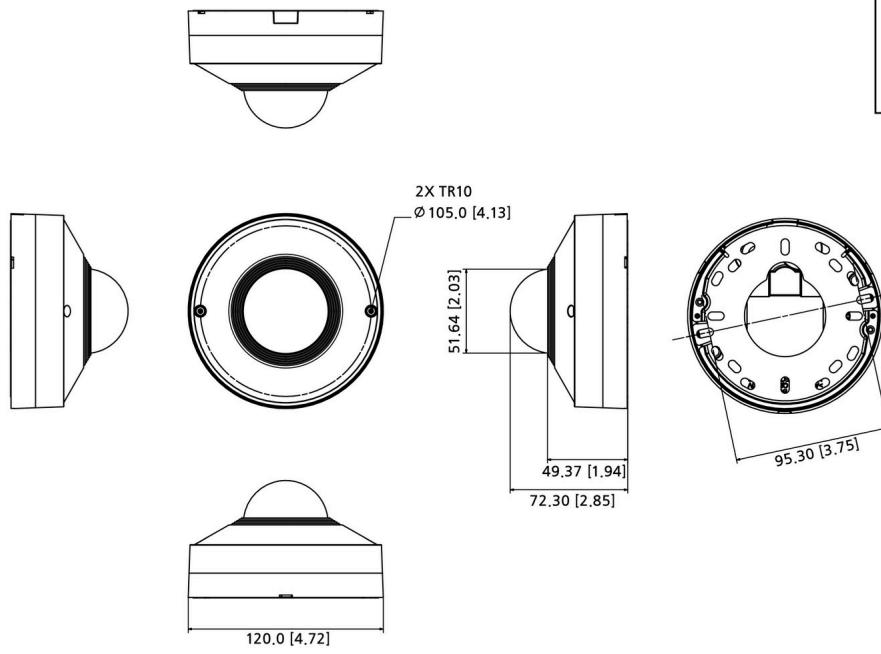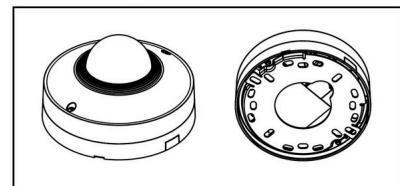
STANDARD GANG		
A	SINGLE	83.5 [3.29]
B	4"OCTAGON	88.0[3.46]
C' C"	DOUBLE	83.5 [3.29] X 46.0 [1.81]

A

C"

B

C'

A

Ø 50.0 [1.97]
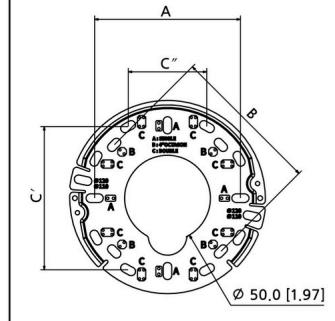
Revision	V1.0
Revision Date	25/05/19
Paper Size	A1
Unit	mm [inch]
Scale	1:1

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