

SAMSUNG
wiSeNET



wiSeNET Q series

Comparison Chart

Wisenet Q series



WISENET Q
QNO-7080R



WISENET Q
QND-7080R



WISENET Q
QNV-7080R



WISENET Q
QNO-7010R/7020R/7030R



WISENET Q
QND-7010R/7020R/7030R



WISENET Q
QNV-7010R/7020R/7030R

	Resolution	4MP	4MP	4MP	4MP	4MP	4MP
VIDEO	Imaging Device	1/3" 4M CMOS	1/3" 4M CMOS	1/3" 4M CMOS	1/3" 4M CMOS	1/3" 4M CMOS	1/3" 4M CMOS
	Video Compression Format	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
	Resolution / Max. Frame Rate	4M / 20fps, 2M / 30fps	4M / 20fps, 2M / 30fps	4M / 20fps, 2M / 30fps	4M / 20fps, 2M / 30fps	4M / 20fps, 2M / 30fps	4M / 20fps, 2M / 30fps
	Streaming Capacity	Multiple (Up to 3 profiles)	Multiple (Up to 3 profiles)	Multiple (Up to 3 profiles)	Multiple (Up to 3 profiles)	Multiple (Up to 3 profiles)	Multiple (Up to 3 profiles)
	Max. User Access	6 (Unicast)	6 (Unicast)	6 (Unicast)	6 (Unicast)	6 (Unicast)	6 (Unicast)
	Min. Illumination (30 IRE)	Color: 0.15Lux, B/W: 0Lux (IR LED on)	Color: 0.15Lux, B/W: 0Lux (IR LED on)	Color: 0.15Lux, B/W: 0Lux (IR LED on)	Color: 0.5Lux (7010R), 0.4Lux (7020R), 0.3Lux (7030R) B/W: 0Lux (IR LED on)	Color: 0.5Lux (7010R), 0.4Lux (7020R), 0.3Lux (7030R) B/W: 0Lux (IR LED on)	Color: 0.5Lux (7010R), 0.4Lux (7020R), 0.3Lux (7030R) B/W: 0Lux (IR LED on)
	Lens	2.8 ~ 12mm (4.3x) Motorized V/F	2.8 ~ 12mm (4.3x) Motorized V/F	2.8 ~ 12mm (4.3x) Motorized V/F	2.8mm fixed (F2.2) (7010R) 3.6mm fixed (F2.2) (7020R) 6mm fixed (F2.2) (7030R)	2.8mm fixed (F2.2) (7010R) 3.6mm fixed (F2.2) (7020R) 6mm fixed (F2.2) (7030R)	2.8mm fixed (F2.0) (7010R) 3.6mm fixed (F2.2) (7020R) 6mm fixed (F2.2) (7030R)
OPERATIONAL	Angular Field of View	H: 109.7° ~ 26.0° / V: 60.8° ~ 15.2° / D: 131.3° ~ 30.1°	H: 109.7° ~ 26.0° / V: 60.8° ~ 15.2° / D: 131.3° ~ 30.1°	H: 109.7° ~ 26.0° / V: 60.8° ~ 15.2° / D: 131.3° ~ 30.1°	H: 110.0° / V: 63.0° / D: 128.0° (7010R) H: 81.0° / V: 45.0° / D: 95.0° (7020R) H: 53.0° / V: 31.0° / D: 62.0° (7030R)	H: 110.0° / V: 63.0° / D: 128.0° (7010R) H: 81.0° / V: 45.0° / D: 95.0° (7020R) H: 53.0° / V: 31.0° / D: 62.0° (7030R)	H: 111.0° / V: 63.0° / D: 133.0° (7010R) H: 81.0° / V: 45.0° / D: 95.0° (7020R) H: 53.0° / V: 31.0° / D: 62.0° (7030R)
	Focus Control	Simple focus (Motorized V/F) / Manual, Remote control via network	Simple focus (Motorized V/F) / Manual, Remote control via network	Simple focus (Motorized V/F) / Manual, Remote control via network	-	-	-
FEATURES	IR Viewable Length	30m (98.43ft)	20m (65.62ft)	30m (98.43ft)	20m (65.62ft) (7010R) 25m (82.02ft) (7020R) 30m (98.43ft) (7030R)	20m (65.62ft)	20m (65.62ft) (7010R) 25m (82.02ft) (7020R) 30m (98.43ft) (7030R)
	Pan / Tilt / Rotate	-	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	-	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
	Day & Night	True (ICR)	True (ICR)	True (ICR)	True (ICR)	True (ICR)	True (ICR)
	Backlight Compensation	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)
	Digital Noise Reduction	SSNR	SSNR	SSNR	SSNR	SSNR	SSNR
FEATURES	Intelligent Video Analytics	Motion detection with metadata, Tampering, Defocus detection	Motion detection with metadata, Tampering, Defocus detection	Motion detection with metadata, Tampering, Defocus detection	Motion detection with metadata, Tampering, Defocus detection	Motion detection with metadata, Tampering, Defocus detection	Motion detection with metadata, Tampering, Defocus detection
	Protocol	ONVIF profile S & G, SUNAPI (HTTP API)	ONVIF profile S & G, SUNAPI (HTTP API)	ONVIF profile S & G, SUNAPI (HTTP API)	ONVIF profile S & G, SUNAPI (HTTP API)	ONVIF profile S & G, SUNAPI (HTTP API)	ONVIF profile S & G, SUNAPI (HTTP API)
	Alarm I/O	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1
	Audio	Uni-directional	Uni-directional	Uni-directional	Uni-directional	Uni-directional	Uni-directional
	Edge Storage	micro SD/SDHC/SDXC Max. 128G, NAS	micro SD/SDHC/SDXC Max. 128G, NAS	micro SD/SDHC/SDXC Max. 128G, NAS	micro SD/SDHC/SDXC Max. 128G, NAS	micro SD/SDHC/SDXC Max. 128G, NAS	micro SD/SDHC/SDXC Max. 128G, NAS
	Environment Protection	IP66, IK10	-	IP66, IK10	IP66, IK10	IK8	IP66, IK10
	Operating Temperature	-30°C ~ +55°C (-22°F ~ +131°F) *Start up above -20°C (-4°F)	-10°C ~ +55°C (+14°F ~ +131°F)	-30°C ~ +55°C (-22°F ~ +131°F) *Start up above -20°C (-4°F)	-30°C ~ +55°C (-22°F ~ +131°F) *Start up above -20°C (-4°F)	-10°C ~ +55°C (+14°F ~ +131°F)	-30°C ~ +55°C (-22°F ~ +131°F) *Start up above -20°C (-4°F)
	Power	Max. 8W (PoE), Max. 7W (DC 12V)	Max. 7.2W (PoE), Max. 6.4W (DC 12V)	Max. 7.2W (PoE), Max. 6.4W (DC 12V)	Max. 7W (PoE), Max. 6W (DC 12V)	Max. 7W (PoE), Max. 5.8W (DC 12V) (7010R) Max. 6.5W (PoE), Max. 5.4W (DC 12V) (7020R/7030R)	Max. 7W (PoE), Max. 5.8W (DC 12V) (7010R) Max. 6.8W (PoE), Max. 5.7W (DC 12V) (7020R/7030R)
	Dimensions (WxHxD) / Weight	Ø70.0 x 246.0mm (Ø2.76" x 9.69") (Without sunshield) 750g (1.65 lb)	Ø119.8 x 98.8mm (Ø4.72" x 3.89") 355g (0.78 lb)	Ø137.0 x 106.1mm (Ø5.39" x 4.18") 680g (1.5 lb)	Ø70.0 x 246.0mm (Ø2.76" x 9.69") (Without sunshield) 730g (1.61 lb)	Ø110.0 x 86.0mm (Ø4.33" x 3.39") 290g (0.64 lb)	Ø120.3 x 91.7mm (Ø4.74" x 3.61") 490g (1.08 lb)
	Additional Features	Lens Distortion Correction, Hallway view, WiseStream	Lens Distortion Correction, Hallway view, WiseStream	Lens Distortion Correction, Hallway view, WiseStream	Lens Distortion Correction, Hallway view, WiseStream	Lens Distortion Correction, Hallway view, WiseStream	Lens Distortion Correction, Hallway view, WiseStream

Comparison Chart

Wisenet Q series



WISENET Q
QNO-6070R



WISENET Q
QND-6070R



WISENET Q
QNV-6070R



WISENET Q
QNO-6010R/6020R/6030R



WISENET Q
QND-6010R/6020R/6030R



WISENET Q
QNV-6010R/6020R/6030R

		2MP	2MP	2MP	2MP	2MP	2MP
VIDEO	Resolution	2MP	2MP	2MP	2MP	2MP	2MP
	Imaging Device	1/2.9" 2.19M CMOS	1/2.9" 2.19M CMOS	1/2.9" 2.19M CMOS	1/2.9" 2.19M CMOS	1/2.9" 2.19M CMOS	1/2.9" 2.19M CMOS
	Video Compression Format	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG	H.265, H.264, MJPEG
	Resolution / Max. Frame Rate	2M / 30fps	2M / 30fps	2M / 30fps	2M / 30fps	2M / 30fps	2M / 30fps
	Streaming Capacity	Multiple (Up to 3 profiles)	Multiple (Up to 3 profiles)	Multiple (Up to 3 profiles)	Multiple (Up to 3 profiles)	Multiple (Up to 3 profiles)	Multiple (Up to 3 profiles)
	Max. User Access	6 (Unicast)	6 (Unicast)	6 (Unicast)	6 (Unicast)	6 (Unicast)	6 (Unicast)
	Min. Illumination (30 IRE)	Color : 0.095Lux, B/W : 0Lux (IR LED on)	Color : 0.095Lux, B/W : 0Lux (IR LED on)	Color : 0.095Lux, B/W : 0Lux (IR LED on)	Color : 0.15Lux B/W : 0Lux (IR LED on)	Color : 0.15Lux B/W : 0Lux (IR LED on)	Color : 0.15Lux B/W : 0Lux (IR LED on)
	Lens	2.8 ~ 12mm (4.3x) Manual V/F	2.8 ~ 12mm (4.3x) Manual V/F	2.8 ~ 12mm (4.3x) Manual V/F	2.8mm fixed (F2.0) (6010R) 3.6mm fixed (F1.8) (6020R) 6mm fixed (F1.8) (6030R)	2.8mm fixed (F1.8) (6010R) 3.6mm fixed (F1.8) (6020R) 6mm fixed (F1.8) (6030R)	2.8mm fixed (F1.8) (6010R) 3.6mm fixed (F1.8) (6020R) 6mm fixed (F1.8) (6030R)
OPERATIONAL	Angular Field of View	H : 103.8° ~ 32.4° / V : 53.7° ~ 18.4° / D : 121.9° ~ 37.1°	H : 103.8° ~ 32.4° / V : 53.7° ~ 18.4° / D : 121.9° ~ 37.1°	H : 103.8° ~ 32.4° / V : 53.7° ~ 18.4° / D : 121.9° ~ 37.1°	H : 116.0° / V : 62.0° / D : 137.0° (6010R) H : 86.48° / V : 46.22° / D : 102.44° (6020R) H : 52.54° / V : 28.86° / D : 61.14° (6030R)	H : 110.0° / V : 61.0° / D : 125.0° (6010R) H : 86.48° / V : 46.22° / D : 102.44° (6020R) H : 52.54° / V : 28.86° / D : 61.14° (6030R)	H : 110.0° / V : 61.0° / D : 125.0° (6010R) H : 86.48° / V : 46.22° / D : 102.44° (6020R) H : 52.54° / V : 28.86° / D : 61.14° (6030R)
	Focus Control	Manual	Manual	Manual	-	-	-
OPERATIONAL	IR Viewable Length	30m (98.43ft)	20m (65.62ft)	30m (98.43ft)	20m (65.62ft) (6010R) 25m (82.02ft) (6020R) 30m (98.43ft) (6030R)	20m (65.62ft)	20m (65.62ft) (6010R) 25m (82.02ft) (6020R) 30m (98.43ft) (6030R)
	Pan / Tilt / Rotate	-	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	-	0° ~ 350° / 0° ~ 67° / 0° ~ 355°	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
	Day & Night	True (ICR)	True (ICR)	True (ICR)	True (ICR)	True (ICR)	True (ICR)
	Backlight Compensation	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)	WDR (120dB)
	Digital Noise Reduction	SSNR	SSNR	SSNR	SSNR	SSNR	SSNR
FEATURES	Intelligent Video Analytics	Motion detection with metadata, Tampering, Defocus detection	Motion detection with metadata, Tampering, Defocus detection	Motion detection with metadata, Tampering, Defocus detection	Motion detection with metadata, Tampering, Defocus detection	Motion detection with metadata, Tampering, Defocus detection	Motion detection with metadata, Tampering, Defocus detection
	Protocol	ONVIF profile S & G, SUNAPI (HTTP API)	ONVIF profile S & G, SUNAPI (HTTP API)	ONVIF profile S & G, SUNAPI (HTTP API)	ONVIF profile S & G, SUNAPI (HTTP API)	ONVIF profile S & G, SUNAPI (HTTP API)	ONVIF profile S & G, SUNAPI (HTTP API)
	Alarm I/O	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1
	Audio	Uni-directional	Uni-directional	Uni-directional	Uni-directional	Uni-directional	Uni-directional
	Edge Storage	micro SD/SDHC/SDXC Max. 128G, NAS	micro SD/SDHC/SDXC Max. 128G, NAS	micro SD/SDHC/SDXC Max. 128G, NAS	micro SD/SDHC/SDXC Max. 128G, NAS	micro SD/SDHC/SDXC Max. 128G, NAS	micro SD/SDHC/SDXC Max. 128G, NAS
	Environment Protection	IP66, IK10	-	IP66, IK10	IP66, IK10	IK8	IP66, IK10
	Operating Temperature	-30°C ~ +55°C (-22°F ~ +131°F) *Start up above -20°C (-4°F)	-10°C ~ +55°C (+14°F ~ +131°F)	-30°C ~ +55°C (-22°F ~ +131°F) *Start up above -20°C (-4°F)	-30°C ~ +55°C (-22°F ~ +131°F) *Start up above -20°C (-4°F)	-10°C ~ +55°C (+14°F ~ +131°F)	-30°C ~ +55°C (-22°F ~ +131°F) *Start up above -20°C (-4°F)
	Power	Max. 8W (PoE), Max. 7W (DC 12V)	Max. 6.7W (PoE), Max. 5.5W (DC 12V)	Max. 6.7W (PoE), Max. 5.5W (DC 12V)	Max. 7W (PoE), Max. 6W (DC 12V)	Max. 7W (PoE), Max. 5.8W (DC 12V) (6010R) Max. 6.5W (PoE), Max. 5.43W (DC 12V) (6020R/6030R)	Max. 7W (PoE), Max. 5.8W (DC 12V) (6010R) Max. 6.8W (PoE), Max. 5.7W (DC 12V) (6020R/6030R)
	Dimensions (WxHxD) / Weight	Ø70.0 x 246.0mm (Ø2.76" x 9.69") (Without sunshield) 730g (1.61 lb)	Ø119.8 x 98.8mm (Ø4.72" x 3.89") 325g (0.72 lb)	Ø137.0 x 106.1mm (Ø5.39" x 4.18") 660g (1.46 lb)	Ø70.0 x 246.0mm (Ø2.76" x 9.69") (Without sunshield) 730g (1.61 lb)	Ø110.0 x 86.0mm (Ø4.33" x 3.39") 290g (0.64 lb)	Ø120.3 x 91.7mm (Ø4.74" x 3.61") 490g (1.08 lb)
	Additional Features	Lens Distortion Correction, Hallway view, WiseStream	Lens Distortion Correction, Hallway view, WiseStream	Lens Distortion Correction, Hallway view, WiseStream	Lens Distortion Correction, Hallway view, WiseStream	Lens Distortion Correction, Hallway view, WiseStream	Lens Distortion Correction, Hallway view, WiseStream

WISeNET Q series

The newly launched professional Q series is an affordable product line that offers simple and essential features that are ideal in securing small to medium sized applications.

Quality compact cameras with essential features

- 2Megapixel and 4Megapixel resolution
- H.265, H.264, MJPEG
- Framerate Max. 20fps@4M, Max. 30fps@2M
- WiseStream
- Hallway view (Rotate 90°/270°)
- LDC (Lens Distortion Correction)
- True WDR (120dB)
- Motion detection, Defocus detection, Tampering
- Audio-in, Alarm-in/out support
- Edge storage (micro SD/SDHC/SDXC 128GB, NAS)
- PoE / DC dual power
- IP66/IK10 (Outdoor cameras)
- Compact design



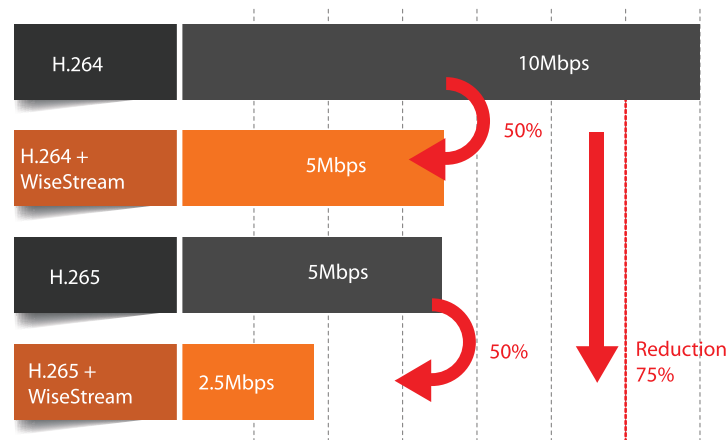
Complete line-up of indoor and outdoor cameras

Wisenet Q series offers a wide range of indoor and outdoor Bullet / Dome / Vandal cameras that cover multiple applications such as retail, banking, offices, transportation and more while delivering sharp and clear image quality.

	BULLET		DOME		IR VANDAL	
	Fixed IR	V/F IR	Fixed IR	V/F IR	Fixed IR	V/F IR
4MP	 QNO-7010R/7020R/7030R	 QNO-7080R	 QND-7010R/7020R/7030R	 QND-7080R	 QNV-7010R/7020R/7030R	 QNV-7080R
2MP	 QNO-6010R/6020R/6030R	 QNO-6070R	 QND-6010R/6020R/6030R	 QND-6070R	 QNV-6010R/6020R/6030R	 QNV-6070R

Improved bandwidth efficiency with WiseStream with H.265

Wisenet Q series camera's streaming performance is greatly enhanced by applying an advanced compression technology called WiseStream. WiseStream can reduce bandwidth by 50% by using dynamic technology, and when combined with high efficiency video coding (H.265), the bandwidth efficiency can be improved by up to 75% compared to current H.264 technology.

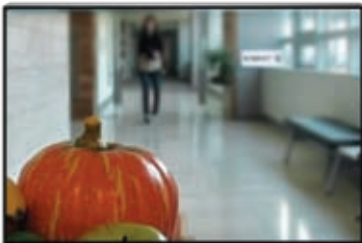


Defocus detection

The entire Wisenet Q series support defocus detection, which helps to recognise when an image is out of focus and significantly improves efficiency. The user can also adjust the optimal focus remotely via the network (4MP Varifocal product), reducing the installation / optimisation time of the camera.

1

Detect Defocus



2

Alarm Out



3

Focus Control



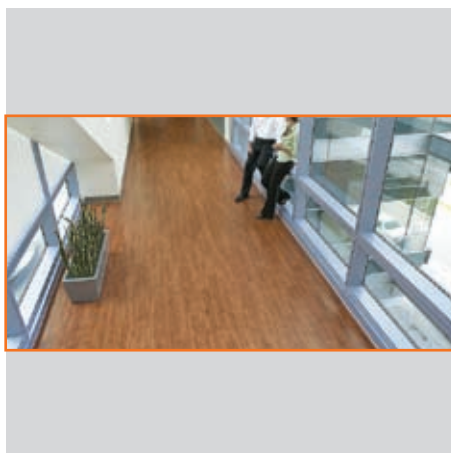
Lens options

The Wisenet Q series come with a fixed 2.8mm, 3.6mm and 6.0mm lens. If you prefer a wider surveillance range, you can use the 2.8mm lens option and if the object is smaller or located further away from the camera there is a 6.0mm option as well.

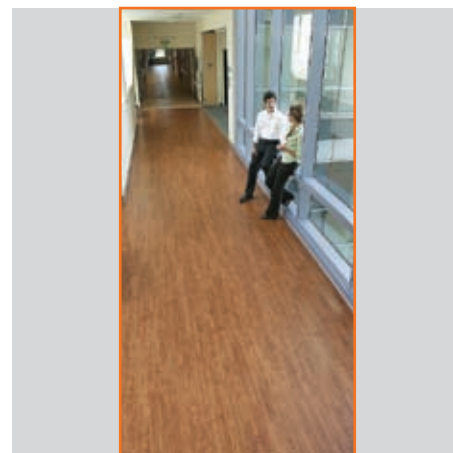


Hallway view for monitoring vertical shaped areas

In a vertical shaped environment, such as corridors, hallways, tunnels, or aisles, traditional horizontal shaped videos focus on unnecessary edges of the area causing bandwidth and storage waste. The Hallway view, 3 : 4 and 9 : 16 aspect ratio image is created : a vertically oriented video that maximizes image quality in narrow locations.



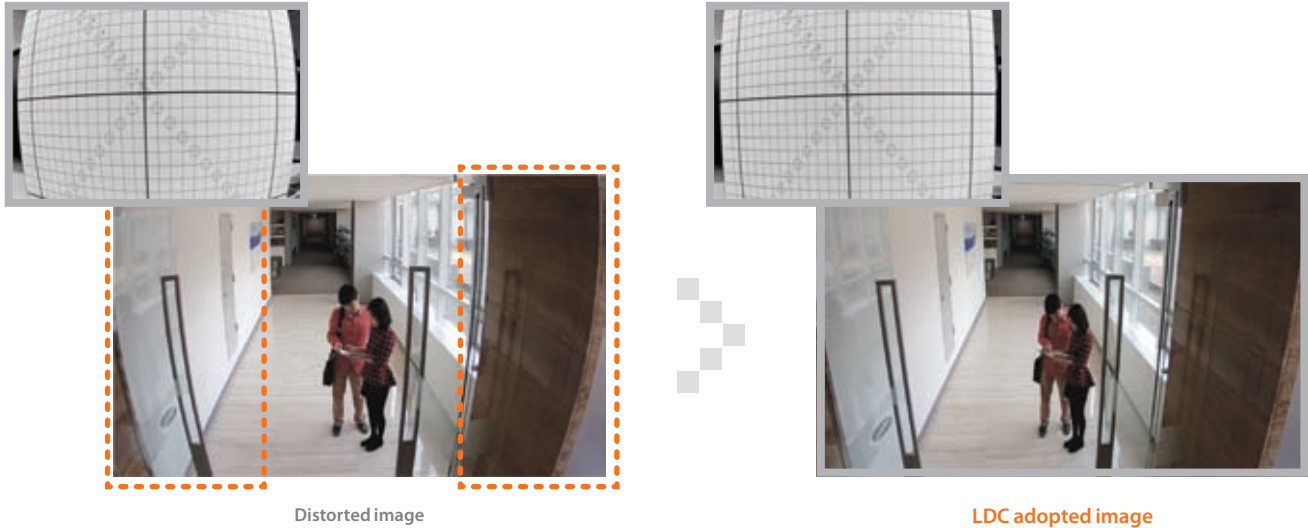
Conventional



Hallway view

Minimize image distortion by Lens Distortion Correction

Lens Distortion typically appears in videos causing straight lines close to the edge to curve outwards. With Lens Distortion Correction technology, available on the Wisenet Q series, imperfections in images are easily repaired.



Perfect for small to medium sized applications

The complete line of Wisenet Q series has the ability to solve small to medium sized application challenges.

- Save both installation costs and time by using the Wisenet Q series together with our PoE NVRs to create a suitable solution for small to medium sized applications.
- Install cameras on entrances / lobbies, parking lots, elevators, hallways, aisles and more.

This professional line of surveillance cameras will enable you to create a secure environment to meet your needs.



QNO-7080R

4M Network IR Bullet Camera

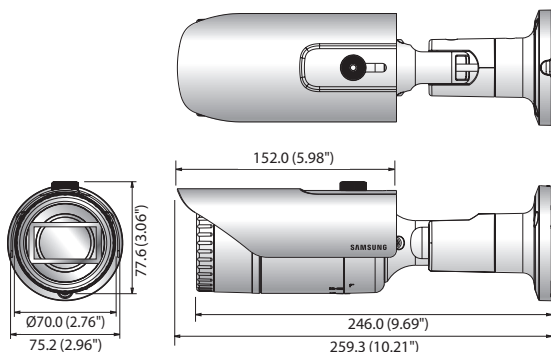


Key Features

- Max. 4megapixel resolution
- 2.8 ~ 12mm (4.3x) motorized varifocal lens
- Max. 20fps@4M, Max.30fps@2M all resolutions
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (120dB)
- Motion detection, Tampering, Defocus detection
- micro SD/SDHC/SDXC memory slot (Max. 128GB), PoE / 12V DC
- IR viewable length 30m, IP66, IK10
- Hallway view support
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



Accessories (Optional)



SBO-100B1



SBP-302PM

QNO-7080R

VIDEO	
Imaging Device	1/3" 4M CMOS
Total Pixels	2,720(H) x 1,536(V)
Effective Pixels	2,688(H) x 1,520(V)
Scanning System	Progressive
Min. Illumination	Color : 0.15Lux (30IRE), B/W : 0Lux (IR LED on)
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) motorized varifocal
Max. Aperture Ratio	F1.4
Angular Field of View	H : 109.7° ~ 26.0° / V : 60.8° ~ 15.2° / D : 131.3° ~ 30.1°
Focus Control	Simple focus (Motorized V/F) / Manual, Remote control via network
Lens Type	DC auto iris
Mount Type	Board type
OPERATIONAL	
IR Viewable Length	30m (98.43ft)
Camera Title	Off / On (Displayed up to 20 characters per line) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	True Day & Night
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Digital Noise Reduction	SSNR (Off / On)
Motion Detection	Off / On (4ea polygonal zones)
Privacy Masking	Off / On (6ea rectangular zones)
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Flip / Mirror / Hallway view
Intelligent Video Analytics	Motion detection with metadata, Tampering, Defocus detection
Alarm I/O	Input 1 / Output 1
Alarm Triggers	Motion detection, Tampering detection, SD card error, NAS error, Alarm input, Defocus detection
Alarm Events	File upload via FTP and E-mail, Local storage recording at event, Notification via E-mail, External output
Pixel Counter	Support (Plug-in viewer only)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265, H.264, MJPEG
Resolution	2592 x 1520, 2560 x 1440 (16:9), 2304 x 1296, 1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265/H.264 : Max. 20fps at 4M, Max. 30fps at 2M all resolutions, MJPEG : Max. 15fps
Smart Codec	WiseStream
Video Quality Adjustment	H.265/H.264 : Target bitrate level control, MJPEG : Quality level control
Bitrate Control Method	H.265/H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 3 profiles)
Audio I/O	Line in
Audio Compression Format	G.711 u-law / G.726 selectable G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps
Audio Communication	Uni-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
Streaming Method	Unicast / Multicast
Max. User Access	6 users at unicast mode
Storage	micro SD/SDHC/SDXC (Max. 128GB), NAS - Motion images recorded in the SD memory card can be downloaded - Manual recording at local PC
Application Programming Interface	ONVIF Profile S/G, SUNAPI (HTTP API)
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungary, Greek
Web Viewer	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.9, 10.10, 10.11 Plug-in free Webviewer - Supported Browser : Google Chrome 47, MS Edge 20 Plug-in Webviewer - Supported Browser : MS Explore 11, Mozilla Firefox 43, Apple Safari 9 * Mac OS X only
Central Management Software	SmartViewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH * Start up should be done at above -20°C (-4°F)
Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Ingress Protection	IP66
Vandal Resistance	IK10
ELECTRICAL	
Input Voltage / Current	PoE (IEEE802.3af, Class3) / 12V DC
Power Consumption	Max. 8W (PoE), Max. 7W (12V DC)
MECHANICAL	
Color / Material	Dark gray / Metal
Dimensions (WxH)	Ø70.0 x 246.0mm (Ø2.76" x 9.69") (Without sunshield)
Weight	750g (1.65 lb)

* The latest product information / sepecification can be found at hanwha-security.com

QND-7080R

4M Network IR Dome Camera

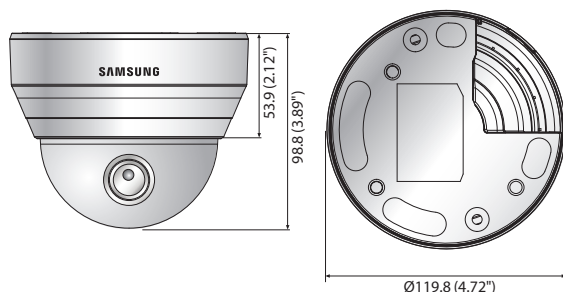


Key Features

- Max. 4megapixel resolution
- 2.8 ~ 12mm (4.3x) motorized varifocal lens
- Max. 20fps@4M, Max.30fps@2M all resolutions
- H.265, H.264, MJPEG codec supported
- Day & Night (ICR), WDR (120dB)
- Motion detection, Tampering, Defocus detection
- micro SD/SDHC/SDXC memory slot (Max. 128GB), PoE / 12V DC
- IR viewable length 20m
- Hallway view support
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



Accessories (Optional)



QND-7080R

VIDEO	
Imaging Device	1/3" 4M CMOS
Total Pixels	2,720(H) x 1,536(V)
Effective Pixels	2,688(H) x 1,520(V)
Scanning System	Progressive
Min. Illumination	Color : 0.15Lux (30IRE), B/W : 0Lux (IR LED on)
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) motorized varifocal
Max. Aperture Ratio	F1.4
Angular Field of View	H : 109.7° ~ 26.0° / V : 60.8° ~ 15.2° / D : 131.3° ~ 30.1°
Focus Control	Simple focus (Motorized V/F) / Manual, Remote control via network
Lens Type	DC auto iris
Mount Type	Board type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	20m (65.62ft)
Camera Title	Off / On (Displayed up to 20 characters per line) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	True Day & Night
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Digital Noise Reduction	SSNR (Off / On)
Motion Detection	Off / On (4ea polygonal zones)
Privacy Masking	Off / On (6ea rectangular zones)
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Flip / Mirror / Hallway view
Intelligent Video Analytics	Motion detection with metadata, Tampering, Defocus detection
Alarm I/O	Input 1 / Output 1
Alarm Triggers	Motion detection, Tampering detection, SD card error, NAS error, Alarm input, Defocus detection
Alarm Events	File upload via FTP and E-mail, Local storage recording at event, Notification via E-mail, External output
Pixel Counter	Support (Plug-in viewer only)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265, H.264, MJPEG
Resolution	2592 x 1520, 2560 x 1440 (16:9), 2304 x 1296, 1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265/H.264 : Max. 20fps at 4M, Max. 30fps at 2M all resolutions, MJPEG : Max. 15fps
Smart Codec	WiseStream
Video Quality Adjustment	H.265/H.264 : Target bitrate level control, MJPEG : Quality level control
Bitrate Control Method	H.265/H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 3 profiles)
Audio I/O	Built-in mic
Audio Compression Format	G.711 u-law / G.726 selectable G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps
Audio Communication	Uni-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3 (MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTPS (SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
Streaming Method	Unicast / Multicast
Max. User Access	6 users at unicast mode
Storage	micro SD/SDHC/SDXC (Max. 128GB), NAS - Motion images recorded in the SD memory card can be downloaded - Manual recording at local PC
Application Programming Interface	ONVIF Profile S/G, SUNAPI (HTTP API)
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungary, Greek
Web Viewer	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.9, 10.10, 10.11 Plug-in free Webviewer - Supported Browser : Google Chrome 47, MS Edge 20 Plug-in Webviewer - Supported Browser : MS Explore 11, Mozilla Firefox 43, Apple Safari 9 * Mac OS X only
Central Management Software	SmartViewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F) / Less than 90% RH
Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
ELECTRICAL	
Input Voltage / Current	PoE (IEEE802.3af, Class3) / 12V DC
Power Consumption	Max. 7.2W (PoE), Max. 6.4W (12V DC)
MECHANICAL	
Color / Material	Ivory / Plastic
Dimensions (WxH)	Ø119.8 x 98.8mm (Ø4.72" x 3.89")
Weight	355g (0.78 lb)

* The latest product information / sepecification can be found at hanwha-security.com

QNV-7080R

4M Vandal-Resistant Network IR Dome Camera

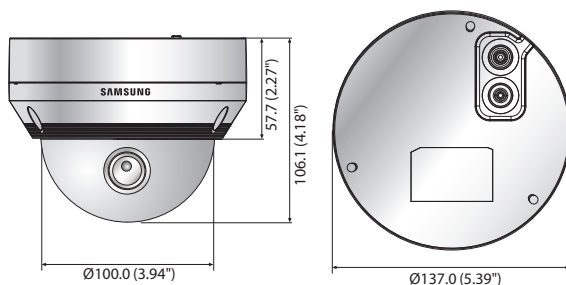


Key Features

- Max. 4megapixel resolution
- 2.8 ~ 12mm (4.3x) motorized varifocal lens
- Max. 20fps@4M resolutions, Max. 30fps@2M resolutions
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Day & Night (ICR), WDR (120dB)
- Motion detection, Tampering, Defocus detection
- micro SD/SDHC/SDXC memory slot (Max. 128GB), PoE / 12V DC
- IR viewable length 30m, IP66, IK10
- Hallway view support
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



Accessories (Optional)



QNV-7080R

VIDEO	
Imaging Device	1/3" 4M CMOS
Total Pixels	2,720(H) x 1,536(V)
Effective Pixels	2,688(H) x 1,520(V)
Scanning System	Progressive
Min. Illumination	Color : 0.15Lux (30IRE), B/W : 0Lux (IR LED on)
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) motorized varifocal
Max. Aperture Ratio	F1.4
Angular Field of View	H : 109.7° ~ 26.0° / V : 60.8° ~ 15.2° / D : 131.3° ~ 30.1°
Focus Control	Simple focus (Motorized V/F) / Manual, Remote control via network
Lens Type	DC auto iris
Mount Type	Board type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	30m (98.43ft)
Camera Title	Off / On (Displayed up to 20 characters per line) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	True Day & Night
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Digital Noise Reduction	SSNR (Off / On)
Motion Detection	Off / On (4ea polygonal zones)
Privacy Masking	Off / On (6ea rectangular zones)
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Flip / Mirror / Hallway view
Intelligent Video Analytics	Motion detection with metadata, Tampering, Defocus detection
Alarm I/O	Input 1 / Output 1
Alarm Triggers	Motion detection, Tampering detection, SD card error, NAS error, Alarm input, Defocus detection
Alarm Events	File upload via FTP and E-mail, Local storage recording at event, Notification via E-mail, External output
Pixel Counter	Support (Plug-in viewer only)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265, H.264, MJPEG
Resolution	2592 x 1520, 2560 x 1440 (16:9), 2304 x 1296, 1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265/H.264 : Max. 20fps at 4M, Max. 30fps at 2M all resolutions, MJPEG : Max. 15fps
Smart Codec	WiseStream
Video Quality Adjustment	H.265/H.264 : Target bitrate level control, MJPEG : Quality level control
Bitrate Control Method	H.265/H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 3 profiles)
Audio I/O	Line in
Audio Compression Format	G.711 u-law / G.726 selectable G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps
Audio Communication	Uni-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
Streaming Method	Unicast / Multicast
Max. User Access	6 users at unicast mode
Storage	micro SD/SDHC/SDXC (Max. 128GB), NAS - Motion images recorded in the SD memory card can be downloaded - Manual recording at local PC
Application Programming Interface	ONVIF Profile S/G, SUNAPI (HTTP API)
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungary, Greek
Web Viewer	Supported OS : Windows 7, 8, 10, Mac OS X 10.9, 10.10, 10.11 Plug-in free Webviewer - Supported Browser : Google Chrome 47, MS Edge 20 Plug-in Webviewer - Supported Browser : MS Explore 11, Mozilla Firefox 43, Apple Safari 9 * Mac OS X only
Central Management Software	SmartViewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH * Start up should be done at above -20°C (-4°F)
Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Ingress Protection / Vandal Resistance	IP66 / IK10
ELECTRICAL	
Input Voltage / Current	PoE (IEEE802.3af, Class3) / 12V DC
Power Consumption	Max. 7.2W (PoE), Max. 6.4W (12V DC)
MECHANICAL	
Color / Material	Ivory / Metal
Dimensions (WxH)	Ø137.0 x 106.1mm (Ø5.39" x 4.18")
Weight	680g (1.5 lb)

* The latest product information / sepecification can be found at hanwha-security.com

QNO-7010R/7020R/7030R

4M Network IR Bullet Camera

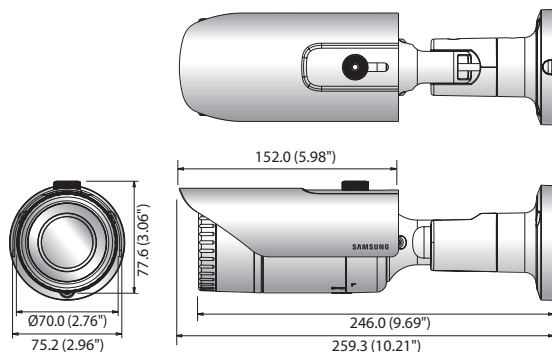


Key Features

- Max. 4megapixel resolution
- Built-in 2.8mm fixed lens (QNO-7010R)
3.6mm fixed lens (QNO-7020R)
6mm fixed lens (QNO-7030R)
- Max. 20fps@4M, Max. 30fps@under 2M (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Motion detection, Tampering, Defocus detection
- micro SD/SDHC/SDXC memory slot (Max. 128GB), PoE / 12V DC
- IR viewable length 20m (QNO-7010R), 25m (QNO-7020R)
30m (QNO-7030R)
- Hallway view, WiseStream support, IP66, IK10
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



Accessories (Optional)



SBO-100B1



SBP-302PM

QNO-7010R/7020R/7030R

VIDEO	
Imaging Device	1/3" 4M CMOS
Total Pixels	2,720(H) x 1,536(V)
Effective Pixels	2,688(H) x 1,520(V)
Scanning System	Progressive
Min. Illumination	Color : 0.5Lux (QNO-7010R), 0.4Lux (QNO-7020R), 0.3Lux (QNO-7030R) B/W : 0Lux (IR LED on)
LENS	
Focal Length (Zoom Ratio)	2.8mm fixed (QNO-7010R), 3.6mm fixed (QNO-7020R), 6mm fixed (QNO-7030R)
Max. Aperture Ratio	F2.2
Angular Field of View	H : 110.0° / V : 63.0° / D : 128.0° (QNO-7010R) H : 81.0° / V : 45.0° / D : 95.0° (QNO-7020R) H : 53.0° / V : 31.0° / D : 62.0° (QNO-7030R)
Lens Type	Fixed
Mount Type	Board type
OPERATIONAL	
IR Viewable Length	20m (65.62ft) : QNO-7010R, 25m (82.02ft) : QNO-7020R, 30m (98.43ft) : QNO-7030R
Camera Title	Off / On (Displayed up to 20 characters per line) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	True Day & Night
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Digital Noise Reduction	SSNR (Off / On)
Motion Detection	Off / On (4ea polygonal zones)
Privacy Masking	Off / On (6ea rectangular zones)
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Flip / Mirror / Hallway view
Intelligent Video Analytics	Motion detection with metadata, Tampering, Defocus detection
Alarm I/O	Input 1 / Output 1
Alarm Triggers	Motion detection, Tampering detection, SD card error, NAS error, Alarm input, Defocus detection
Alarm Events	File upload via FTP and E-mail, Local storage recording at event, Notification via E-mail, External output
Pixel Counter	Support (Plug-in viewer only)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265, H.264, MJPEG
Resolution	2592 x 1520, 2560 x 1440 (16 : 9), 2304 x 1296, 1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265/H.264 : Max. 20fps at 4M, Max. 30fps at under 2M MJPEG : Max. 15fps
Smart Codec	WiseStream
Video Quality Adjustment	H.265/H.264 : Target bitrate level control, MJPEG : Quality level control
Bitrate Control Method	H.265/H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 3 profiles)
Audio I/O	Line in
Audio Compression Format	G.711 u-law / G.726 selectable G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps
Audio Communication	Uni-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTSPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
Streaming Method	Unicast / Multicast
Max. User Access	6 users at unicast mode
Storage	micro SD/SDHC/SDXC (Max. 128GB), NAS - Motion images recorded in the SD memory card can be downloaded - Manual recording at local PC
Application Programming Interface	ONVIF Profile S/G, SUNAPI (HTTP API)
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Portuguese, Turkish, Polish, Czech, Dutch, Hungarian, Greek
Supported OS	Windows 7, 8.1, 10, Mac OS X 10.9, 10.10, 10.11
Web Viewer	Plug-in free Webviewer - Supported Browser : Google Chrome 47, MS Edge 20 Plug-in Webviewer - Supported Browser : MS Explore 11, Mozilla Firefox 43, Apple Safari 9 * Mac OS X only
SmartViewer	SmartViewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH * Start up should be done at above -20°C (-4°F)
Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Ingress Protection	IP66
Vandal Resistance	IK10
ELECTRICAL	
Input Voltage / Current	PoE (IEEE802.3af, Class3) / 12V DC
Power Consumption	Max. 7W (PoE), Max. 6W (12V DC)
MECHANICAL	
Color / Material	Dark gray / Metal
Dimensions (WxH)	Ø70.0 x 246.0mm (Ø2.76" x 9.69") (Without sunshield)
Weight	730g (1.61 lb)

* The latest product information / sepecification can be found at hanwha-security.com

QND-7010R/7020R/7030R

4M Network IR Dome Camera



QND-7010R

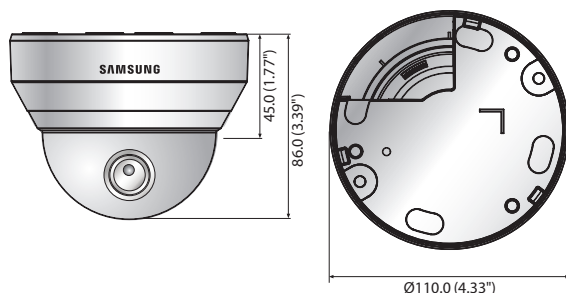
QND-7020R/7030R

Key Features

- Max. 4megapixel resolution
- Built-in 2.8mm fixed lens (QND-7010R)
3.6mm fixed lens (QND-7020R)
6mm fixed lens (QND-7030R)
- Max. 20fps@4M, Max. 30fps@under 2M (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Motion detection, Tampering, Defocus detection
- micro SD/SDHC/SDXC memory slot (Max. 128GB), PoE / 12V DC
- IR viewable length 20m, IK08
- Hallway view, WiseStream support
- LDC support (Lens Distortion Correction)

Dimensions

Unit: mm (inch)



Accessories (Optional)



QND-7010R/7020R/7030R	
VIDEO	
Imaging Device	1/3" 4M CMOS
Total Pixels	2,720(H) x 1,536(V)
Effective Pixels	2,688(H) x 1,520(V)
Scanning System	Progressive
Min. Illumination	Color : 0.5Lux (QND-7010R), 0.4Lux (QND-7020R), 0.3Lux (QND-7030R) B/W : 0Lux (IR LED on)
LENS	
Focal Length (Zoom Ratio)	2.8mm fixed (QND-7010R), 3.6mm fixed (QND-7020R), 6mm fixed (QND-7030R)
Max. Aperture Ratio	F2.2
Angular Field of View	H : 110.0° / V : 63.0° / D : 128.0° (QND-7010R) H : 81.0° / V : 45.0° / D : 95.0° (QND-7020R) H : 53.0° / V : 31.0° / D : 62.0° (QND-7030R)
Lens Type	Fixed
Mount Type	Board type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	20m (65.62ft)
Camera Title	Off / On (Displayed up to 20 characters per line) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	True Day & Night
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Digital Noise Reduction	SSNR (Off / On)
Motion Detection	Off / On (4ea polygonal zones)
Privacy Masking	Off / On (6ea rectangular zones)
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Flip / Mirror / Hallway view
Intelligent Video Analytics	Motion detection with metadata, Tampering, Defocus detection
Alarm I/O	Input 1 / Output 1
Alarm Triggers	Motion detection, Tampering detection, SD card error, NAS error, Alarm input, Defocus detection
Alarm Events	File upload via FTP and E-mail, Local storage recording at event, Notification via E-mail, External output
Pixel Counter	Support (Plug-in viewer only)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265, H.264, MJPEG
Resolution	2592 x 1520, 2560 x 1440 (16:9), 2304 x 1296, 1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265/H.264 : Max. 20fps at 4M, Max. 30fps at under 2M MJPEG : Max. 15fps
Smart Codec	WiseStream
Video Quality Adjustment	H.265/H.264 : Target bitrate level control, MJPEG : Quality level control
Bitrate Control Method	H.265/H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 3 profiles)
Audio I/O	Built-in mic
Audio Compression Format	G.711 u-law / G.726 selectable G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps
Audio Communication	Uni-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
Streaming Method	Unicast / Multicast
Max. User Access	6 users at unicast mode
Storage	micro SD/SDHC/SDXC (Max. 128GB), NAS - Motion images recorded in the SD memory card can be downloaded - Manual recording at local PC
Application Programming Interface	ONVIF Profile S/G, SUNAPI (HTTP API)
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Portuguese, Turkish, Polish, Czech, Dutch, Hungarian, Greek Supported OS : Windows 7, 8.1, 10, Mac OS X 10.9, 10.10, 10.11 Plug-in free Webviewer - Supported Browser : Google Chrome 47, MS Edge 20 Plug-in Webviewer - Supported Browser : MS Explore 11, Mozilla Firefox 43, Apple Safari 9 * Mac OS X only
Web Viewer	SmartViewer
Central Management Software	
ENVIRONMENTAL	
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F) / Less than 90% RH
Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Vandal Resistance	IK08
ELECTRICAL	
Input Voltage / Current	PoE (IEEE802.3af, Class3) / 12V DC
Power Consumption	Max. 7W (PoE), Max. 5.8W (12V DC) : QND-7010R Max. 6.5W (PoE), Max. 5.43W (12V DC) : QND-7020R/7030R
MECHANICAL	
Color / Material	Ivory / Plastic
Dimensions (WxH)	Ø110.0 x 86.0mm (Ø4.33" x 3.39")
Weight	290g (0.64 lb)

* The latest product information / specification can be found at hanwha-security.com

QNV-7010R/7020R/7030R

4M Vandal-Resistant Network IR Dome Camera



QNV-7010R

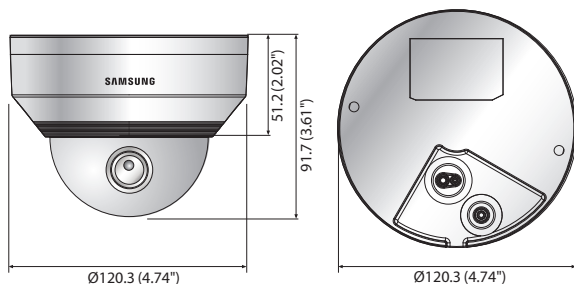
QNV-7020R/7030R

Key Features

- Max. 4megapixel resolution
- Built-in 2.8mm fixed lens (QNV-7010R)
3.6mm fixed lens (QNV-7020R)
6mm fixed lens (QNV-7030R)
- Max. 20fps@4M, Max. 30fps@under 2M (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Motion detection, Tampering, Defocus detection
- micro SD/SDHC/SDXC memory slot (Max. 128GB), PoE / 12V DC
- IR viewable length 20m (QNV-7010R), 25m (QNV-7020R)
30m (QNV-7030R)
- Hallway view, WiseStream support, IP66, IK10
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



Accessories (Optional)



QNV-7010R/7020R/7030R	
VIDEO	
Imaging Device	1/3" 4M CMOS
Total Pixels	2,720(H) x 1,536(V)
Effective Pixels	2,688(H) x 1,520(V)
Scanning System	Progressive
Min. Illumination	Color : 0.5Lux (QNV-7010R), 0.4Lux (QNV-7020R), 0.3Lux (QNV-7030R) B/W : 0Lux (IR LED on)
LENS	
Focal Length (Zoom Ratio)	2.8mm fixed (QNV-7010R), 3.6mm fixed (QNV-7020R), 6mm fixed (QNV-7030R)
Max. Aperture Ratio	F2.0 (QNV-7010R), F2.2 (QNV-7020R/7030R)
Angular Field of View	H : 111.0° / V : 63.0° / D : 133.0° (QNV-7010R) H : 81.0° / V : 45.0° / D : 95.0° (QNV-7020R) H : 53.0° / V : 31.0° / D : 62.0° (QNV-7030R)
Lens Type	Fixed
Mount Type	Board type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	20m (65.62ft) : QNV-7010R, 25m (82.02ft) : QNV-7020R, 30m (98.43ft) : QNV-7030R
Camera Title	Off / On (Displayed up to 20 characters per line) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	True Day & Night
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Digital Noise Reduction	SSNR (Off / On)
Motion Detection	Off / On (4ea polygonal zones)
Privacy Masking	Off / On (6ea rectangular zones)
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Flip / Mirror / Hallway view
Intelligent Video Analytics	Motion detection with metadata, Tampering, Defocus detection
Alarm I/O	Input 1 / Output 1
Alarm Triggers	Motion detection, Tampering detection, SD card error, NAS error, Alarm input, Defocus detection
Alarm Events	File upload via FTP and E-mail, Local storage recording at event, Notification via E-mail, External output
Pixel Counter	Support (Plug-in viewer only)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265, H.264, MJPEG
Resolution	2592 x 1520, 2560 x 1440 (16:9), 2304 x 1296, 1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265/H.264 : Max. 20fps at 4M, Max. 30fps at under 2M MJPEG : Max. 15fps
Smart Codec	WiseStream
Video Quality Adjustment	H.265/H.264 : Target bitrate level control, MJPEG : Quality level control
Bitrate Control Method	H.265/H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 3 profiles)
Audio I/O	Line in
Audio Compression Format	G.711 u-law / G.726 selectable G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps
Audio Communication	Uni-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
Streaming Method	Unicast / Multicast
Max. User Access	6 users at unicast mode
Storage	micro SD/SDHC/SDXC (Max. 128GB), NAS - Motion images recorded in the SD memory card can be downloaded - Manual recording at local PC
Application Programming Interface	ONVIF Profile S/G, SUNAPI (HTTP API)
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Portuguese, Turkish, Polish, Czech, Dutch, Hungarian, Greek Supported OS : Windows 7, 8.1, 10, Mac OS X 10.9, 10.10, 10.11 Plug-in free Webviewer
Web Viewer	- Supported Browser : Google Chrome 47, MS Edge 20 Plug-in Webviewer - Supported Browser : MS Explore 11, Mozilla Firefox 43, Apple Safari 9 * Mac OS X only
Central Management Software	SmartViewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH * Start up should be done at above -20°C (-4°F)
Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Ingress Protection	IP66
Vandal Resistance	IK10
ELECTRICAL	
Input Voltage / Current	PoE (IEEE802.3af, Class3) / 12V DC
Power Consumption	Max. 7W (PoE), Max. 5.8W (12V DC) : QNV-7010R Max. 6.8W (PoE), Max. 5.7W (12V DC) : QNV-7020R/7030R
MECHANICAL	
Color / Material	Ivory / Metal
Dimensions (WxH)	Ø120.3 x 91.7mm (Ø4.74" x 3.61")
Weight	490g (1.08 lb)

* The latest product information / sepecification can be found at hanwha-security.com

QNO-6070R

2M Network IR Bullet Camera

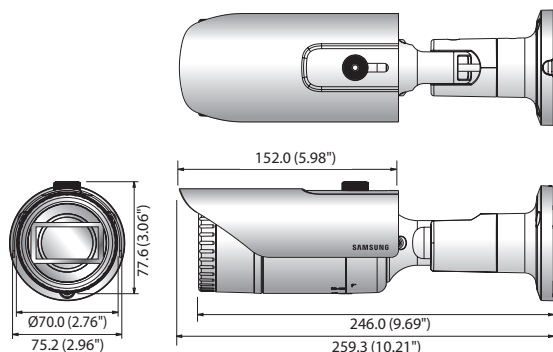


Key Features

- Max. 2megapixel (1920 x 1080) resolution
- 2.8 ~ 12mm (4.3x) varifocal lens
- Max. 30fps@2M all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Motion detection, Tampering, Defocus detection
- micro SD/SDHC/SDXC memory slot (Max. 128GB), PoE / 12V DC
- IR viewable length 30m, IP66, IK10
- Hallway view support
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



Accessories (Optional)



SBO-100B1



SBP-302PM

QNO-6070RN/P

VIDEO	
Imaging Device	1/2.9" 2.19M CMOS
Total Pixels	2,000(H) x 1,121(V)
Effective Pixels	1,984(H) x 1,105(V)
Scanning System	Progressive
Min. Illumination	Color : 0.095Lux (30IRE), B/W : 0Lux (IR LED on)
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) manual
Max. Aperture Ratio	F1.4
Angular Field of View	H : 103.8° ~ 32.4° / V : 53.7° ~ 18.4° / D : 121.9° ~ 37.1°
Focus Control	Manual
Lens Type	DC auto iris
Mount Type	Board type
OPERATIONAL	
IR Viewable Length	30m (98.43ft)
Camera Title	Off / On (Displayed up to 20 characters per line) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	True Day & Night
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Digital Noise Reduction	SSNR (Off / On)
Motion Detection	Off / On (4ea polygonal zones)
Privacy Masking	Off / On (6ea rectangular zones)
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Flip / Mirror / Hallway view
Intelligent Video Analytics	Motion detection with metadata, Tampering, Defocus detection
Alarm I/O	Input 1 / Output 1
Alarm Triggers	Motion detection, Tampering detection, SD card error, NAS error, Alarm input, Defocus detection
Alarm Events	File upload via FTP and E-mail, Local storage recording at event, Notification via E-mail, External output
Pixel Counter	Support (Plug-in viewer only)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265, H.264, MJPEG
Resolution	1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 720 x 576, 720 x 480, 640 x 480, 320 x 240
Max. Framerate	H.265/H.264 : Max. 30fps at 2M all resolutions, MJPEG : 15fps
Smart Codec	WiseStream
Video Quality Adjustment	H.265/H.264 : Target bitrate level control, MJPEG : Quality level control
Bitrate Control Method	H.265/H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 3 profiles)
Audio I/O	Line in
Audio Compression Format	G.711 u-law / G.726 selectable G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps
Audio Communication	Uni-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
Streaming Method	Unicast / Multicast
Max. User Access	6 users at unicast mode
Storage	micro SD/SDHC/SDXC (Max. 128GB), NAS - Motion images recorded in the SD memory card can be downloaded - Manual recording at local PC
Application Programming Interface	ONVIF Profile S/G, SUNAPI (HTTP API)
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungary, Greek
Web Viewer	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.9, 10.10, 10.11 Plug-in free Webviewer - Supported Browser : Google Chrome 47, MS Edge 20 Plug-in Webviewer - Supported Browser : MS Explore 11, Mozilla Firefox 43, Apple Safari 9 * Mac OS X only
Central Management Software	SmartViewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH * Start up should be done at above -20°C (-4°F)
Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Ingress Protection	IP66
Vandal Resistance	IK10
ELECTRICAL	
Input Voltage / Current	PoE (IEEE802.3af, Class3) / 12V DC
Power Consumption	Max. 8W (PoE), Max. 7W (12V DC)
MECHANICAL	
Color / Material	Dark gray / Metal
Dimensions (WxH)	Ø70.0 x 246.0mm (Ø2.76" x 9.69") (Without sunshield)
Weight	730g (1.61 lb)

* The latest product information / sepecification can be found at hanwha-security.com

QND-6070R

2M Network IR Dome Camera

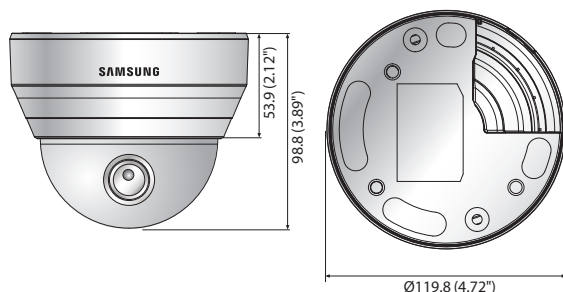


Key Features

- Max. 2megapixel (1920 x 1080) resolution
- 2.8 ~ 12mm (4.3x) varifocal lens
- Max. 30fps@2M all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Motion detection, Tampering, Defocus detection
- micro SD/SDHC/SDXC memory slot (Max. 128GB), PoE / 12V DC
- IR viewable length 20m
- Hallway view support (Rotate 90°/270°)
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



Accessories (Optional)



QND-6070RN/P

VIDEO	
Imaging Device	1/2.9" 2.19M CMOS
Total Pixels	2,000(H) x 1,121(V)
Effective Pixels	1,984(H) x 1,105(V)
Scanning System	Progressive
Min. Illumination	Color : 0.095Lux (30IRE), B/W : 0Lux (IR LED on)
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) manual
Max. Aperture Ratio	F1.4
Angular Field of View	H : 103.8° ~ 32.4° / V : 53.7° ~ 18.4° / D : 121.9° ~ 37.1°
Focus Control	Manual
Lens Type	DC auto iris
Mount Type	Board type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	20m (65.62ft)
Camera Title	Off / On (Displayed up to 20 characters per line) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	True Day & Night
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Digital Noise Reduction	SSNR (Off / On)
Motion Detection	Off / On (4ea polygonal zones)
Privacy Masking	Off / On (6ea rectangular zones)
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Flip / Mirror / Hallway view
Intelligent Video Analytics	Motion detection with metadata, Tampering, Defocus detection
Alarm I/O	Input 1 / Output 1
Alarm Triggers	Motion detection, Tampering detection, SD card error, NAS error, Alarm input, Defocus detection
Alarm Events	File upload via FTP and E-mail, Local storage recording at event, Notification via E-mail, External output
Pixel Counter	Support (Plug-in viewer only)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265, H.264, MJPEG
Resolution	1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 720 x 576, 720 x 480, 640 x 480, 320 x 240
Max. Framerate	H.265/H.264 : Max. 30fps at 2M all resolutions, MJPEG : 15fps
Smart Codec	WiseStream
Video Quality Adjustment	H.265/H.264 : Target bitrate level control, MJPEG : Quality level control
Bitrate Control Method	H.265/H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 3 profiles)
Audio I/O	Built-in mic
Audio Compression Format	G.711 u-law / G.726 selectable G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps
Audio Communication	Uni-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3 (MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS (SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
Streaming Method	Unicast / Multicast
Max. User Access	6 users at unicast mode
Storage	micro SD/SDHC/SDXC (Max. 128GB), NAS - Motion images recorded in the SD memory card can be downloaded - Manual recording at local PC
Application Programming Interface	ONVIF Profile S/G, SUNAPI (HTTP API)
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungary, Greek
Web Viewer	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.9, 10.10, 10.11 Plug-in free Webviewer - Supported Browser : Google Chrome 47, MS Edge 20 Plug-in Webviewer - Supported Browser : MS Explore 11, Mozilla Firefox 43, Apple Safari 9 * Mac OS X only
Central Management Software	SmartViewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F) / Less than 90% RH
Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
ELECTRICAL	
Input Voltage / Current	PoE (IEEE802.3af, Class3) / 12V DC
Power Consumption	Max. 6.7W (PoE), Max. 5.5W (12V DC)
MECHANICAL	
Color / Material	Ivory / Plastic
Dimensions (WxH)	Ø119.8 x 98.8mm (Ø4.72" x 3.89")
Weight	325g (0.72 lb)

* The latest product information / sepecification can be found at hanwha-security.com

QNV-6070R

2M Vandal-Resistant Network IR Dome Camera

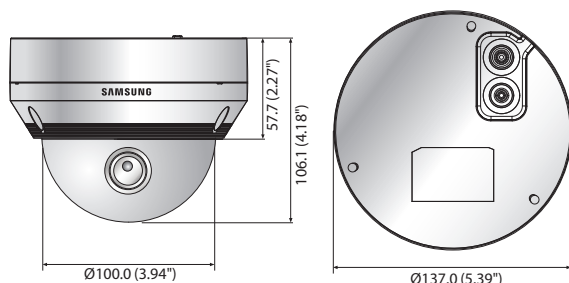


Key Features

- Max. 2megapixel (1920 x 1080) resolution
- 2.8 ~ 12mm (4.3x) varifocal lens
- Max. 30fps@2M all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Motion detection, Tampering, Defocus detection
- micro SD/SDHC/SDXC memory slot (Max. 128GB), PoE / 12V DC
- IR viewable length 30m, IP66, IK10
- Hallway view support (Rotate 90°/270°)
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



Accessories (Optional)



QNV-6070RN/P

VIDEO	
Imaging Device	1/2.9" 2.19M CMOS
Total Pixels	2,000(H) x 1,121(V)
Effective Pixels	1,984(H) x 1,105(V)
Scanning System	Progressive
Min. Illumination	Color : 0.095Lux (30IRE), B/W : 0Lux (IR LED on)
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 12mm (4.3x) manual
Max. Aperture Ratio	F1.4
Angular Field of View	H : 103.8° ~ 32.4° / V : 53.7° ~ 18.4° / D : 121.9° ~ 37.1°
Focus Control	Manual
Lens Type	DC auto iris
Mount Type	Board type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	30m (98.43ft)
Camera Title	Off / On (Displayed up to 20 characters per line) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	True Day & Night
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Digital Noise Reduction	SSNR (Off / On)
Motion Detection	Off / On (4ea polygonal zones)
Privacy Masking	Off / On (6ea rectangular zones)
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Flip / Mirror / Hallway view
Intelligent Video Analytics	Motion detection with metadata, Tampering, Defocus detection
Alarm I/O	Input 1 / Output 1
Alarm Triggers	Motion detection, Tampering detection, SD card error, NAS error, Alarm input, Defocus detection
Alarm Events	File upload via FTP and E-mail, Local storage recording at event, Notification via E-mail, External output
Pixel Counter	Support (Plug-in viewer only)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265, H.264, MJPEG
Resolution	1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 720 x 576, 720 x 480, 640 x 480, 320 x 240
Max. Framerate	H.265/H.264 : Max. 30fps at 2M all resolutions, MJPEG : 15fps
Smart Codec	WiseStream
Video Quality Adjustment	H.265/H.264 : Target bitrate level control, MJPEG : Quality level control
Bitrate Control Method	H.265/H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 3 profiles)
Audio I/O	Line in
Audio Compression Format	G.711 u-law / G.726 selectable G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps
Audio Communication	Uni-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3 (MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS (SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
Streaming Method	Unicast / Multicast
Max. User Access	6 users at unicast mode
Storage	micro SD/SDHC/SDXC (Max. 128GB), NAS - Motion images recorded in the SD memory card can be downloaded - Manual recording at local PC
Application Programming Interface	ONVIF Profile S/G, SUNAPI (HTTP API)
Webpage Language	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungary, Greek
Web Viewer	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.9, 10.10, 10.11 Plug-in free Webviewer - Supported Browser : Google Chrome 47, MS Edge 20 Plug-in Webviewer - Supported Browser : MS Explore 11, Mozilla Firefox 43, Apple Safari 9 * Mac OS X only
Central Management Software	SmartViewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH * Start up should be done at above -20°C (-4°F)
Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Ingress Protection	IP66
Vandal Resistance	IK10
ELECTRICAL	
Input Voltage / Current	PoE (IEEE802.3af, Class3) / 12V DC
Power Consumption	Max. 6.7W (PoE), Max. 5.5W (12V DC)
MECHANICAL	
Color / Material	Ivory / Metal
Dimensions (WxH)	Ø137.0 x 106.1mm (Ø5.39" x 4.18")
Weight	660g (1.46 lb)

* The latest product information / sepecification can be found at hanwha-security.com

QNO-6010R/6020R/6030R

2M Network IR Bullet Camera

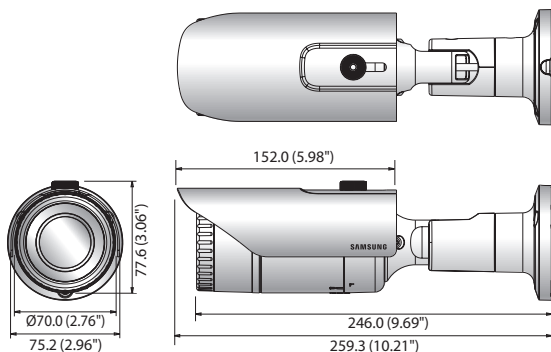


Key Features

- Max. 2megapixel (1920 x 1080) resolution
- Built-in 2.8mm fixed lens (QNO-6010R)
3.6mm fixed lens (QNO-6020R)
6mm fixed lens (QNO-6030R)
- Max. 30fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Motion detection, Tampering, Defocus detection
- micro SD/SDHC/SDXC memory slot (Max. 128GB), PoE / 12V DC
- IR viewable length 20m (QNO-6010R), 25m (QNO-6020R)
30m (QNO-6030R)
- Hallway view, WiseStream support, IP66, IK10
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



Accessories (Optional)



SBO-100B1



SBP-302PM

QNO-6010R/6020R/6030R

VIDEO	
Imaging Device	1/2.9" 2.19M CMOS
Total Pixels	2,000(H) x 1,121(V)
Effective Pixels	1,984(H) x 1,105(V)
Scanning System	Progressive
Min. Illumination	Color : 0.15Lux, B/W : 0Lux (IR LED on)
LENS	
Focal Length (Zoom Ratio)	2.8mm fixed (QNO-6010R), 3.6mm fixed (QNO-6020R), 6mm fixed (QNO-6030R)
Max. Aperture Ratio	F2.0 (QNO-6010R), F1.8 (QNO-6020R/6030R)
Angular Field of View	H : 116.0° / V : 62.0° / D : 137.0° (QNO-6010R) H : 86.48° / V : 46.22° / D : 102.44° (QNO-6020R) H : 52.54° / V : 28.86° / D : 61.14° (QNO-6030R)
Lens Type	Fixed
Mount Type	Board type
OPERATIONAL	
IR Viewable Length	20m (65.62ft) : QNO-6010R, 25m (82.02ft) : QNO-6020R, 30m (98.43ft) : QNO-6030R
Camera Title	Off / On (Displayed up to 20 characters per line) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	True Day & Night
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Digital Noise Reduction	SSNR (Off / On)
Motion Detection	Off / On (4ea polygonal zones)
Privacy Masking	Off / On (6ea rectangular zones)
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Flip / Mirror / Hallway view
Intelligent Video Analytics	Motion detection with metadata, Tampering, Defocus detection
Alarm I/O	Input 1 / Output 1
Alarm Triggers	Motion detection, Tampering detection, SD card error, NAS error, Alarm input, Defocus detection
Alarm Events	File upload via FTP and E-mail, Local storage recording at event, Notification via E-mail, External output
Pixel Counter	Support (Plug-in viewer only)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265, H.264, MJPEG
Resolution	1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265/H.264 : Max. 30fps at all resolutions, MJPEG : Max. 15fps
Smart Codec	WiseStream
Video Quality Adjustment	H.265/H.264 : Target bitrate level control, MJPEG : Quality level control
Bitrate Control Method	H.265/H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 3 profiles)
Audio I/O	Line in
Audio Compression Format	G.711 u-law / G.726 selectable G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps
Audio Communication	Uni-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
Streaming Method	Unicast / Multicast
Max. User Access	6 users at unicast mode
Storage	micro SD/SDHC/SDXC (Max. 128GB), NAS - Motion images recorded in the SD memory card can be downloaded - Manual recording at local PC
Application Programming Interface	ONVIF Profile S/G, SUNAPI (HTTP API)
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Portuguese, Turkish, Polish, Czech, Dutch, Hungary, Greek
Web Viewer	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.9, 10.10, 10.11 Plug-in free Webviewer - Supported Browser : Google Chrome 47, MS Edge 20 Plug-in Webviewer - Supported Browser : MS Explore 11, Mozilla Firefox 43, Apple Safari 9 * Mac OS X only
Central Management Software	SmartViewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH * Start up should be done at above -20°C (-4°F)
Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Ingress Protection	IP66
Vandal Resistance	IK10
ELECTRICAL	
Input Voltage / Current	PoE (IEEE802.3af, Class3) / 12V DC
Power Consumption	Max. 7W (PoE), Max. 6W (12V DC)
MECHANICAL	
Color / Material	Dark gray / Metal
Dimensions (WxH)	Ø70.0 x 246.0mm (Ø2.76" x 9.69") (Without sunshield)
Weight	730g (1.61 lb)

* The latest product information / sepecification can be found at hanwha-security.com

QND-6010R/6020R/6030R

2M Network IR Dome Camera



QND-6010R

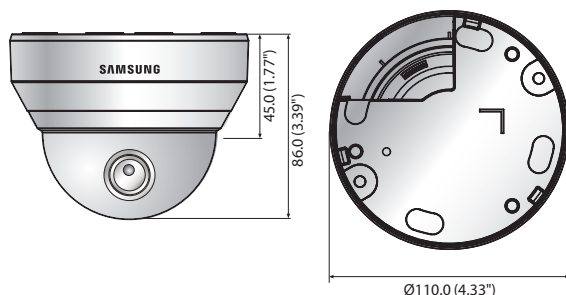
QND-6020R/6030R

Key Features

- Max. 2megapixel (1920 x 1080) resolution
- Built-in 2.8mm fixed lens (QND-6010R)
3.6mm fixed lens (QND-6020R)
6mm fixed lens (QND-6030R)
- Max. 30fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Motion detection, Tampering, Defocus detection
- micro SD/SDHC/SDXC memory slot (Max. 128GB), PoE / 12V DC
- IR viewable length 20m, IK08
- Hallway view, WiseStream support
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



Accessories (Optional)



QND-6010R/6020R/6030R

VIDEO	
Imaging Device	1/2.9" 2.19M CMOS
Total Pixels	2,000(H) x 1,121(V)
Effective Pixels	1,984(H) x 1,105(V)
Scanning System	Progressive
Min. Illumination	Color : 0.15Lux, B/W : 0Lux (IR LED on)
LENS	
Focal Length (Zoom Ratio)	2.8mm fixed (QND-6010R), 3.6mm fixed (QND-6020R), 6mm fixed (QND-6030R)
Max. Aperture Ratio	F1.8
Angular Field of View	H : 110.0° / V : 61.0° / D : 125.0° (QND-6010R) H : 86.48° / V : 46.22° / D : 102.44° (QND-6020R) H : 52.54° / V : 28.86° / D : 61.14° (QND-6030R)
Lens Type	Fixed
Mount Type	Board type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	20m (65.62ft)
Camera Title	Off / On (Displayed up to 20 characters per line) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	True Day & Night
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Digital Noise Reduction	SSNR (Off / On)
Motion Detection	Off / On (4ea polygonal zones)
Privacy Masking	Off / On (6ea rectangular zones)
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Flip / Mirror / Hallway view
Intelligent Video Analytics	Motion detection with metadata, Tampering, Defocus detection
Alarm I/O	Input 1 / Output 1
Alarm Triggers	Motion detection, Tampering detection, SD card error, NAS error, Alarm input, Defocus detection
Alarm Events	File upload via FTP and E-mail, Local storage recording at event, Notification via E-mail, External output
Pixel Counter	Support (Plug-in viewer only)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265, H.264, MJPEG
Resolution	1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265/H.264 : Max. 30fps at all resolutions, MJPEG : Max. 15fps
Smart Codec	WiseStream
Video Quality Adjustment	H.265/H.264 : Target bitrate level control, MJPEG : Quality level control
Bitrate Control Method	H.265/H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 3 profiles)
Audio I/O	Built-in mic
Audio Compression Format	G.711 u-law / G.726 selectable G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps
Audio Communication	Uni-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
Streaming Method	Unicast / Multicast
Max. User Access	6 users at unicast mode
Storage	micro SD/SDHC/SDXC (Max. 128GB), NAS - Motion images recorded in the SD memory card can be downloaded - Manual recording at local PC
Application Programming Interface	ONVIF Profile S/G, SUNAPI (HTTP API)
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Portuguese, Turkish, Polish, Czech, Dutch, Hungary, Greek
Web Viewer	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.9, 10.10, 10.11 Plug-in free Webviewer - Supported Browser : Google Chrome 47, MS Edge 20 Plug-in Webviewer - Supported Browser : MS Explore 11, Mozilla Firefox 43, Apple Safari 9 * Mac OS X only SmartViewer
Central Management Software	
ENVIRONMENTAL	
Operating Temperature / Humidity	-10°C ~ +55°C (+14°F ~ +131°F) / Less than 90% RH
Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Vandal Resistance	IK08
ELECTRICAL	
Input Voltage / Current	PoE (IEEE802.3af, Class3) / 12V DC
Power Consumption	Max. 7W (PoE), Max. 5.8W (12V DC) : QND-6010R Max. 6.5W (PoE), Max. 5.43W (12V DC) : QND-6020R/6030R
MECHANICAL	
Color / Material	Ivory / Plastic
Dimensions (WxH)	Ø110.0 x 86.0mm (Ø4.33" x 3.39")
Weight	290g (0.64 lb)

* The latest product information / sepecification can be found at hanwha-security.com

QNV-6010R/6020R/6030R

2M Vandal-Resistant Network IR Dome Camera



QNV-6010R

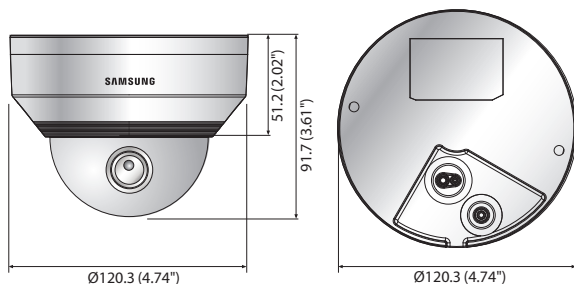
QNV-6020R/6030R

Key Features

- Max. 2megapixel (1920 x 1080) resolution
- Built-in 2.8mm fixed lens (QNV-6010R)
3.6mm fixed lens (QNV-6020R)
6mm fixed lens (QNV-6030R)
- Max. 30fps@all resolutions (H.265/H.264)
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Motion detection, Tampering, Defocus detection
- micro SD/SDHC/SDXC memory slot (Max. 128GB), PoE / 12V DC
- IR viewable length 20m (QNV-6010R), 25m (QNV-6020R)
30m (QNV-6030R)
- Hallway view, WiseStream support, IP66, IK10
- LDC support (Lens Distortion Correction)

Dimensions

Unit : mm (inch)



Accessories (Optional)



QNV-6010R/6020R/6030R	
VIDEO	
Imaging Device	1/2.9" 2.19M CMOS
Total Pixels	2,000(H) x 1,121(V)
Effective Pixels	1,984(H) x 1,105(V)
Scanning System	Progressive
Min. Illumination	Color : 0.15Lux, B/W : 0Lux (IR LED on)
LENS	
Focal Length (Zoom Ratio)	2.8mm fixed (QNV-6010R), 3.6mm fixed (QNV-6020R), 6mm fixed (QNV-6030R)
Max. Aperture Ratio	F1.8
Angular Field of View	H : 110.0° / V : 61.0° / D : 125.0° (QNV-6010R) H : 86.48° / V : 46.22° / D : 102.44° (QNV-6020R) H : 52.54° / V : 28.86° / D : 61.14° (QNV-6030R)
Lens Type	Fixed
Mount Type	Board type
PAN / TILT / ROTATE	
Pan / Tilt / Rotate Range	0° ~ 350° / 0° ~ 67° / 0° ~ 355°
OPERATIONAL	
IR Viewable Length	20m (65.62ft) : QNV-6010R, 25m (82.02ft) : QNV-6020R, 30m (98.43ft) : QNV-6030R
Camera Title	Off / On (Displayed up to 20 characters per line) - W/W : English / Numeric / Special characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	True Day & Night
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Digital Noise Reduction	SSNR (Off / On)
Motion Detection	Off / On (4ea polygonal zones)
Privacy Masking	Off / On (6ea rectangular zones)
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC (Lens Distortion Correction)	Off / On (5 levels with min / max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Flip / Mirror / Hallway view
Intelligent Video Analytics	Motion detection with metadata, Tampering, Defocus detection
Alarm I/O	Input 1 / Output 1
Alarm Triggers	Motion detection, Tampering detection, SD card error, NAS error, Alarm input, Defocus detection
Alarm Events	File upload via FTP and E-mail, Local storage recording at event, Notification via E-mail, External output
Pixel Counter	Support (Plug-in viewer only)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.265, H.264, MJPEG
Resolution	1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 448, 720 x 576, 720 x 480, 640 x 480, 640 x 360, 320 x 240
Max. Framerate	H.265/H.264 : Max. 30fps at all resolutions, MJPEG : Max. 15fps
Smart Codec	WiseStream
Video Quality Adjustment	H.265/H.264 : Target bitrate level control, MJPEG : Quality level control
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Streaming Capability	Multiple streaming (Up to 3 profiles)
Audio I/O	Line in
Audio Compression Format	G.711 u-law / G.726 selectable G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps
Audio Communication	Uni-directional audio
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Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
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Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Portuguese, Turkish, Polish, Czech, Dutch, Hungary, Greek
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ENVIRONMENTAL	
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH * Start up should be done at above -20°C (-4°F)
Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Ingress Protection / Vandal Resistance	IP66 / IK10
ELECTRICAL	
Input Voltage / Current	PoE (IEEE802.3af, Class3) / 12V DC
Power Consumption	Max. 7W (PoE), Max. 5.8W (12V DC) : QNV-6010R Max. 6.8W (PoE), Max. 5.7W (12V DC) : QNV-6020R/6030R
MECHANICAL	
Color / Material	Ivory / Metal
Dimensions (WxH)	Ø120.3 x 91.7mm (Ø4.74" x 3.61")
Weight	490g (1.08 lb)

* The latest product information / sepecification can be found at hanwha-security.com

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