

# PNM-9000VQ

8M to 20M H.265 Multi-directional Camera

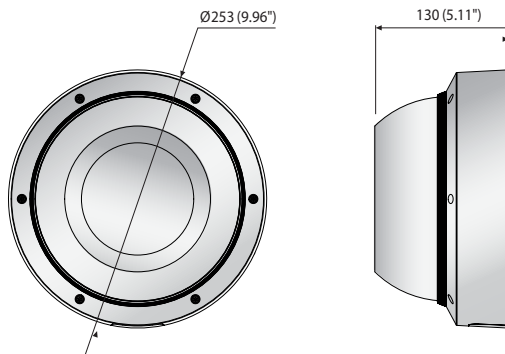


## Key Features

- Exchangeable 4ea x 2MP / 5MP lens modules  
8MP to 20MP resolution depend on the combination of lens modules
- Max. 60fps@2M, Max. 30fps@5M (H.265 / H.264)
- WDR 150dB with 2MP lens module, 120dB with 5MP lens module
- 2.4mm, 2.8mm, 3.6mm, 6mm fixed lens (2MP module)
- 3.7mm, 4.6mm, 7mm fixed lens (5MP module)
- H.265, H.264, MJPEG codec, Multi streaming support
- Video analytics, WiseStreamII
- IP66, IK10, SD / SDHC / SDXC memory 4 slots

## Dimensions

Unit : mm (inch)



## Accessories (Optional)



**PNM-9000VQ**

<b>VIDEO</b>	
Imaging Device	(See the optional lens)
Total Pixels	(See the optional lens)
Effective Pixels	(See the optional lens)
Scanning System	(See the optional lens)
Min. Illumination	(See the optional lens)
S / N Ratio	(See the optional lens)
Video Out	CVBS : 1.0 Vp-p / 75Ω composite, 720x480 (N), 720x576 (P), for installation
<b>OPERATIONAL</b>	
Camera Title	On / Off (Displayed up to 85 characters) - 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	Auto (Electrical) / Color / B/W / Schedule
Backlight Compensation	Off / BLC / HLC (Masking / Dimming) / WDR
Contrast Enhancement	SSDR (On / Off)
Digital Noise Reduction	SSNR5 (2D+3D noise filter) (On / Off)
Digital Image Stabilization	On / Off
Defog	Off / Auto / Manual
Motion Detection	On / Off (8ea, 8 point polygonal zones)
Privacy Masking	On / Off (32ea, polygonal zones) - Color : Grey / Green / Red / Blue / Black / White - Mosaic
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor (Included Mercury & Sodium)
Contrast	Level adjustment
LDC	On / Off (5 levels with Min / Max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1 / 12,000sec)
Digital Zoom	24x
Flip / Mirror	On / Off, Hallway view : 90° / 270°
Intelligent Video Analytics	Tampering, Loitering, Directional detection, Fog detection, Virtual line, Enter / Exit, Appear / Disappear, Face detection, Motion detection, Defocus detection
Alarm Triggers	Motion detection, Video analytics, Network disconnect
Alarm Events	File upload via FTP, E-Mail / Notification via E-Mail Local storage (SD / SDHC / SDXC) at event triggers
Pixel Counter	Support
<b>NETWORK</b>	
Ethernet	RJ-45 (10 / 100 / 1000 BASE-T)
Video Compression Format	H.265 / H.264 (MPEG-4 Part 10 / AVC) : Main / Baseline / High, Motion JPEG
Resolution	5MP : 2560 x 1920, 2560 x 1440, 1920 x 1080, 1600 x 1200, 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, 320 x 240 2MP : 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 : 2M Max. 60fps, 5M 30fps at all resolutions Motion JPEG : Max. 30fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream II	Support
Video Quality Adjustment	H.264 / H.265 : Target bitrate level control MJPEG : Target bitrate level control
Bitrate Control Method	H.264 / H.265 : CBR or VBR MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
IP	IPv4, IPv6

**PNM-9000VQ**

<b>Protocol</b>	TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3 (MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour, LLDP
<b>Security</b>	HTTPS (SSL) login authentication, Digest login authentication. IP address filtering, User access log, 802.1X authentication (EAP-TLS, EAP-LEAP)
<b>Streaming Method</b>	Unicast / Multicast
<b>Max. User Access</b>	20 users at Unicast mode
<b>Edge Storage</b>	SD / SDHC / SDXC 4 slots (Each CH) - Motion Images recorded in the SD / SDHC / SDXC memory card can be downloaded. - Local PC for instant recording
<b>Application Programming Interface</b>	ONVIF Profile S SUNAPI (HTTP API)
<b>Webpage Language</b>	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
<b>Web Viewer</b>	Supported OS: Windows 7, 8, 10, Mac OS X 10.10, 10.11, 10.12 Non-plugin Webviewer supported browser : Google Chrome 54, MS Edge 38, Mozilla Firefox 49(Windows 64bit only), Apple Safari 9 (Mac OS X only)
<b>Central Management Software</b>	SmartViewer, SSM
<b>ENVIRONMENTAL</b>	
<b>Operating Temperature / Humidity</b>	-40°C ~ +55°C (-40°F ~ +131°F) / Less than 90% RH
<b>Storage Temperature / Humidity</b>	-50°C ~ +60°C (-58°F ~ +140°F) / Less than 90% RH
<b>Ingress Protection</b>	IP66
<b>Vandal Resistance</b>	IK10
<b>ELECTRICAL</b>	
<b>Input Voltage / Current</b>	PoE+ (IEEE802.3at)
<b>Power Consumption</b>	25.5W
<b>MECHANICAL</b>	
<b>Color / Material</b>	Ivory / Metal
<b>Dimension (W x H x D)</b>	Ø 253 x 130 mm (Ø 9.96" x 5.12")
<b>Weight</b>	3.0 kg (6.7 lb)
<b>OPTIONAL LENS</b>	
<b>SLA-2M2400Q</b>	1 / 2.8" 2MP, 2.4mm, H: 135.4°/V: 71.2°/D: 161.6°
<b>SLA-2M2800Q</b>	1 / 2.8" 2MP, 2.8mm, H: 107.4°/V: 62.2°/D: 122.0°
<b>SLA-2M3600Q</b>	1 / 2.8" 2MP, 3.6mm, H: 94.8°/V: 49.3°/D: 114.3°
<b>SLA-2M6000Q</b>	1 / 2.8" 2MP, 6.0mm, H: 50.4°/V: 28.8°/D: 58.1°
<b>SLA-5M3700Q</b>	1 / 1.8" 5MP, 3.7mm, H: 97.5°/V: 71.9°/D: 126.2°
<b>SLA-5M4600Q</b>	1 / 1.8" 5MP, 4.6mm, H: 77.9°/V: 57.9°/D: 98.7°
<b>SLA-5M7000Q</b>	1 / 1.8" 5MP, 7.0mm, H: 50.7°/V: 37.8°/D: 63.8°

\* The latest product information / specification can be found at [hanwha-security.com](http://hanwha-security.com)

\* Design and specifications are subject to change without notice.

\* Wisenet is the proprietary brand of **Hanwha Techwin**, formerly known as Samsung Techwin.

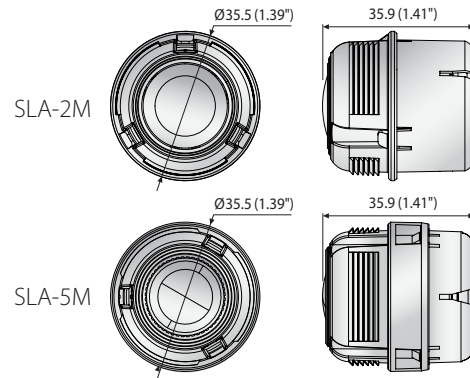
# SLA-2M2400Q/2800Q/3600Q/6000Q SLA-5M3700Q/4600Q/7000Q

Exchangeable 2MP / 5MP lenses for PNM-9000VQ



## Dimensions

Unit : mm (inch)



## Key Features

- 0.055Lux@F2.0 Color, B/W (2MP lenses)
- 0.16Lux@F1.6 Color, B/W (5MP lenses)
- Selectable lens options :
  - 2.4 / 2.8 / 3.6 / 6.0mm fixed lens (2MP)
  - 3.7 / 4.6 / 7.0mm fixed lens (5MP)

	SLA-2M2400Q	SLA-2M2800Q	SLA-2M3600Q	SLA-2M6000Q
<b>VIDEO</b>				
Imaging Device	1 / 2.8" 2M CMOS	1 / 2.8" 2M CMOS	1 / 2.8" 2M CMOS	1 / 2.8" 2M CMOS
Total Pixels	1945 (H) x 1109 (V) 2.16M	1945 (H) x 1109 (V) 2.16M	1945 (H) x 1109 (V) 2.16M	1945 (H) x 1109 (V) 2.16M
Effective Pixels	1945 (H) x 1097 (V) 2.13M	1945 (H) x 1097 (V) 2.13M	1945 (H) x 1097 (V) 2.13M	1945 (H) x 1097 (V) 2.13M
Scanning System	Progressive scan	Progressive scan	Progressive scan	Progressive scan
Min. Illumination	Color : 0.055 Lux (F2.0, 1 / 30sec, 30IRE) B/W : 0.055 Lux (F2.0, 1 / 30sec, 30IRE)	Color : 0.055 Lux (F2.0, 1 / 30sec, 30IRE) B/W : 0.055 Lux (F2.0, 1 / 30sec, 30IRE)	Color : 0.055 Lux (F2.0, 1 / 30sec, 30IRE) B/W : 0.055 Lux (F2.0, 1 / 30sec, 30IRE)	Color : 0.055 Lux (F2.0, 1 / 30sec, 30IRE) B/W : 0.055 Lux (F2.0, 1 / 30sec, 30IRE)
S / N Ratio	50dB	50dB	50dB	50dB
Wide Dynamic Range	150dB	150dB	150dB	150dB
Day & Night	Electrical	Electrical	Electrical	Electrical
<b>LENS</b>				
Focal Length (Zoom Ratio)	2.4mm	2.8mm	3.6mm	6mm
Max. Aperture Ratio	F2.0	F2.0	F2.0	F2.0
Angular Field of View	H : 135.4°, V : 71.2°, D : 161.6°	H : 107.4°, V : 62.2°, D : 122.0°	H : 94.8°, V : 49.3°, D : 114.3°	H : 50.4°, V : 28.8°, D : 58.1°
Lens Type	Fixed focal	Fixed focal	Fixed focal	Fixed focal
Mount Type	M12 Lens module with main unit	M12 Lens module with main unit	M12 Lens module with main unit	M12 Lens module with main unit
<b>PAN/TILT/ROTATE</b>				
Pan / Tilt / Rotate Range	-90°~+90° / 62° / -180°~+180°	-90°~+90° / 40°~89° / -180°~+180°	-90°~+90° / 37°~89° / -180°~+180°	-90°~+90° / 30°~89° / -180°~+180°
<b>MECHANICAL</b>				
Color / Material	Black / Plastic	Black / Plastic	Black / Plastic	Black / Plastic
Dimension (W x H x D)	Ø 35.5 x 35.9 mm (Ø 1.39" x 1.41")	Ø 35.5 x 35.9 mm (Ø 1.39" x 1.41")	Ø 35.5 x 35.9 mm (Ø 1.39" x 1.41")	Ø 35.5 x 35.9 mm (Ø 1.39" x 1.41")
Weight	30g (0.07 lb)	30g (0.07 lb)	30g (0.07 lb)	30g (0.07 lb)

	SLA-5M3700Q	SLA-5M4600Q	SLA-5M7000Q
<b>VIDEO</b>			
Imaging Device	1 / 1.8" 5M CMOS	1 / 1.8" 5M CMOS	1 / 1.8" 5M CMOS
Total Pixels	3096 (H) x 2094 (V)	3096 (H) x 2094 (V)	3096 (H) x 2094 (V)
Effective Pixels	2616 (H) x 1976 (V)	2616 (H) x 1976 (V)	2616 (H) x 1976 (V)
Scanning System	Progressive scan	Progressive scan	Progressive scan
Min. Illumination	Color : 0.055 Lux (F2.0, 1 / 30sec, 30IRE) B/W : 0.055 Lux (F2.0, 1 / 30sec, 30IRE)	Color : 0.16 Lux (F1.6, 1 / 30sec, 30IRE) B/W : 0.16 Lux (F1.6, 1 / 30sec, 30IRE)	Color : 0.16 Lux (F1.6, 1 / 30sec, 30IRE) B/W : 0.16 Lux (F1.6, 1 / 30sec, 30IRE)
S / N Ratio	50dB	50dB	50dB
Wide Dynamic Range	120dB	120dB	120dB
Day & Night	Electrical	Electrical	Electrical
<b>LENS</b>			
Focal Length (Zoom Ratio)	3.7mm	4.6mm	7mm
Max. Aperture Ratio	F1.6	F1.6	F1.6
Angular Field of View	H : 97.5°, V : 71.9°, D : 126.2°	H : 77.9°, V : 57.9°, D : 98.7°	H : 50.7°, V : 37.8°, D : 63.8°
Lens Type	Fixed focal	Fixed focal	Fixed focal
Mount Type	M12 Lens module with main unit	M12 Lens module with main unit	M12 Lens module with main unit
<b>PAN/TILT/ROTATE</b>			
Pan / Tilt / Rotate Range	-90°~+90° / 59°~66° / -180°~+180°	-90°~+90° / 50°~80° / -180°~+180°	-90°~+90° / 40°~89° / -180°~+180°
<b>MECHANICAL</b>			
Color / Material	Black / Plastic	Black / Plastic	Black / Plastic
Dimension (W x H x D)	Ø 35.5 x 35.9 mm (Ø 1.39" x 1.41")	Ø 35.5 x 35.9 mm (Ø 1.39" x 1.41")	Ø 35.5 x 35.9 mm (Ø 1.39" x 1.41")
Weight	35g (0.08 lb)	35g (0.08 lb)	35g (0.08 lb)