

# PNF-9010R/9010RV/9010RVM

4K Fisheye Camera

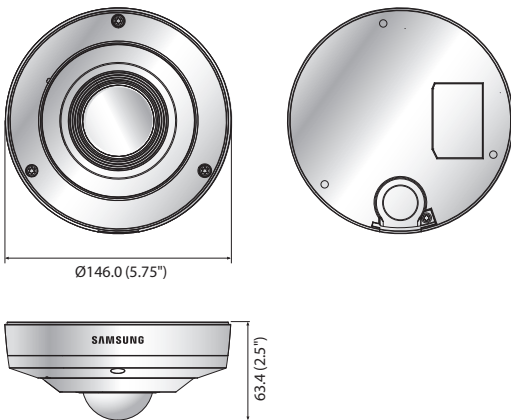


## Key Features

- Max. 12 megapixel (4000 x 3000) resolution
- H.265, H.264, MJPEG codec
- Variable view mode (Fishyeye, Single panorama, Double panorama, Quad view etc)
- On board dewarping, Digital PTZ (16x) / Bi-directional audio
- True WDR (120dB), WiseStream
- People counting, Heatmap, Defocus detection
- M12 connector (PNF-9010RVM)
- IK10, IP66 (PNF-9010RV/9010RVM)
- micro SD/SDHC/SDXC (Max. 128GB), PoE

## Dimensions

Unit : mm (inch)



## PNF-9010R/9010RV/9010RVM

<b>VIDEO</b>	
Imaging Device	1/1.7" 12.4M CMOS
Total Pixels / Effective Pixels	4,168 x 3,062 / 2,992 x 2,992
Scanning System	Progressive
Min. Illumination	Color : 0.3Lux (F2.2, 30IRE), B/W : 0Lux (IR LED on)
S/N Ratio	50dB
Video Output	CVBS : 1.0Vpp / 75Ω composite, 714 x 480(N), 702 x 576(P), for installation DIP connector type
<b>LENS</b>	
Focal length / Max. Aperture Ratio	2.1mm fixed / F2.2
Angular Field of View	H : 180° / V : 180° / D : 180°
Min. Object Distance	0.5m (1.64ft)
Focus Control	Simple focus / Manual - Remote control via network
Lens Type / Mount Type	Fixed lens / Board type
<b>OPERATIONAL</b>	
Viewable Length	15m (49.21ft)
Camera Title	Off / On (Displayed up to 60 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 (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNR (2D+3D noise filter) (Off / On)
Defog	Off / Auto / Manual
Motion Detection	Off / On (8ea polygonal zones)
Privacy Masking	Off / On (8ea, Polygonal) - Color : Gray / Green / Red / Blue / Black / White
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Digital Zoom	16x, Digital PTZ (Preset, Group)
Flip / Mirror	Off / On
Intelligent Video Analytics	Tampering, Virtual Line, Enter/Exit, (Dis)Appear, Audio detection, Defocus detection
Alarm I/O	Input 1ea / Output 1ea
Alarm Triggers	Alarm input, Motion detection, Video analytics, Audio detection, Network disconnect, SD card error, NAS error
Alarm Events	File upload via FTP and E-mail, Notification via E-mail, local storage (SD/SDHC/ SDXC) or NAS recording at event triggers, External output
Viewing Composition	Camera side : Fisheye, Single panorama, Double panorama, Fisheye + 4 PTZ Quad view, Fisheye + 8 PTZ
Pixel Counter	Support (Plug-in viewer only)
<b>NETWORK</b>	
Ethernet	RJ-45 (10/100/1000BASE-T)
Video Compression Format	H.265/H.264/MJPEG
Resolution	Fisheye : 4000 x 3000, 2992 x 2992, 2560 x 2560, 2048 x 2048, 1280 x 1280, 640 x 640 Double panorama : 2560 x 1440, 1920 x 1080, 1280 x 720, 640 x 360 Single panorama : 2560 x 1440, 1920 x 1080, 1280 x 720, 704 x 576, 640 x 360 Quad view : 2560 x 1920, 2048 x 1536, 1600 x 1200, 1280 x 960, 1024 x 768, 800 x 600, 640 x 480
Max. Framerate	H.265/H.264 : 20fps@4000 x 3000, 25fps@under 2992 x 2992, MJPEG : Max. 15fps
Smart Codec	Manual mode (Area-based : 5ea)
WiseStream	Support
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 10 profiles)
Audio In	Selectable (Mic in / Line in / Built-in mic) Supply voltage : 2.5VDC (4mA), Input impedance : approx. 2K Ohm
Audio Out	Line out (3.5mm mono jack), Max output level : 1 Vrms
Audio Compression Format	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 16KHz
Audio Communication	Bi-directional
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP(RTS), NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour, SIP
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication (EAP-TLS, EAP-LEAP)
Streaming Method	Unicast / Multicast
Max. User Access	20 users at unicast mode SD/SDHC/SDXC (up to 128GB)
Edge Storage	- Motion Images recorded in the SD/SDHC/SDXC memory card can be downloaded - Camera can detect automatically when the memory is connected - Memory status display (normal/error/active/formatting/lock) NAS (Network Attached Storage), Local PC for instant recording (Plug-in viewer only)
Application Programming Interface	ONVIF profile S/G, SUNAPI (HTTP API) v2.0, Wisenet Open Platform
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
<b>ENVIRONMENTAL</b>	
Operating Temperature / Humidity	PNF-9010R : -10°C ~ +55°C (+14°F ~ +131°F) / Less than 90% RH PNF-9010RV/9010RVM : -40°C ~ +55°C (-40°F ~ +131°F) / Less than 90% RH * Start up should be done at above -35°C (-31°F)
Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH
Ingress Protection / Vandal Resistance	IP66 (PNF-9010RV/9010RVM) / IK10
<b>ELECTRICAL</b>	
Input Voltage / Current	12V DC ±10%, PoE (IEEE802.3af, Class3)
Power Consumption	12V DC : Max. 11W, PoE : 12W (PNF-9010R), 12V DC : Max. 12W, PoE : 12.95W (PNF-9010RV/9010RVM)
<b>MECHANICAL</b>	
Color / Material	Ivory / Plastic (PNF-9010R), Metal (PNF-9010RV/9010RVM)
Dimensions (WxH)	Ø146.0 x 63.4mm (Ø5.75" x 2.5")
Weight	805g (1.77 lb) (PNF-9010R), 810g (1.79 lb) (PNF-9010RV), 815g (1.8 lb) (PNF-9010RVM)

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