

4K Premium fisheye



WISeNET P_{series}

PNF-9010R / 9010RV / 9010RVM

- Max. 9Megapixel resolution
- H.265, H.264, MJPEG codec
- Max. 25fps@ 9M(H.265, H.264), Max. 20fps@ 12M
- IR viewable distance 15m
- WiseStream support
- Variable view modes, Simple focus support
- People counting, Heat mapping
- IK10(Indoor/Outdoor), IP66(Outdoor)

Exceptional image quality of 4K Ultra HD

The Wisenet P series provides an enhanced surveillance system by producing outstanding 4K picture clarity so you can observe the finest of details.



Improved Bandwidth with our new WiseStream technology

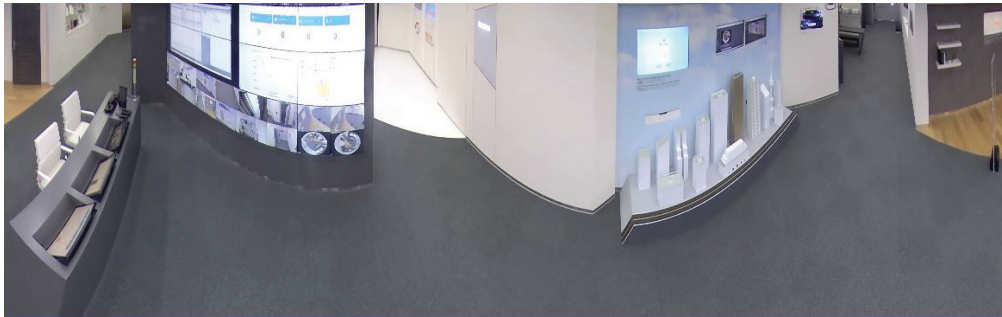
Wisenet P series camera's streaming performance is greatly enhanced by applying an advanced compression technology called WiseStream. WiseStream can reduce bandwidth by 50% by using dynamic technology, and when combined with high efficiency video coding (H.265), the bandwidth efficiency can be improved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



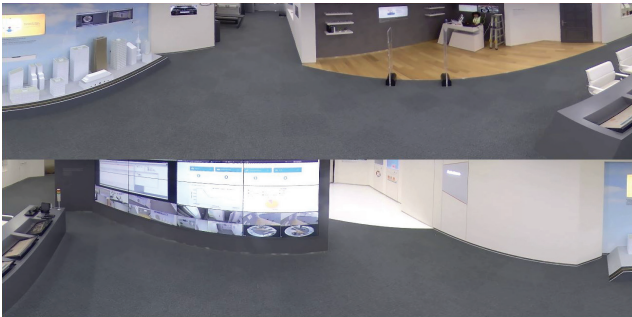
Variable display modes

The new fisheye cameras in the Wisenet P series offer more than six display modes including single fisheye, single panorama, double panorama, 1 panorama + 2 PTZ, 1 fisheye + 3 PTZ and quad view mode.

* Variable display modes support in SSM



Single Panorama



Double Panorama



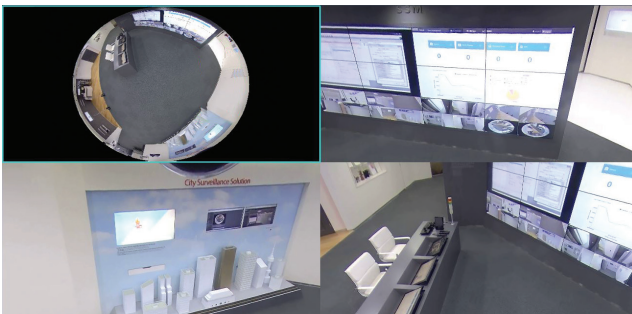
Panorama + 2PTZ



Fisheye



Quad view



Fisheye + 3PTZ



Fisheye + 8PTZ

360°/180° panoramic view without blind spots

Equipped with a fisheye lens for 180° panoramic view or 360° surround view without blind spots, the camera is able to provide coverage of wide, open areas, such as retail stores, shopping malls, offices, railways and more.



Fisheye



Single Panorama

Onboard dewarping streaming

The new fisheye cameras support three dewarping modes including single panorama, double panorama, quad view.



Single Panorama



Double Panorama



Quad view

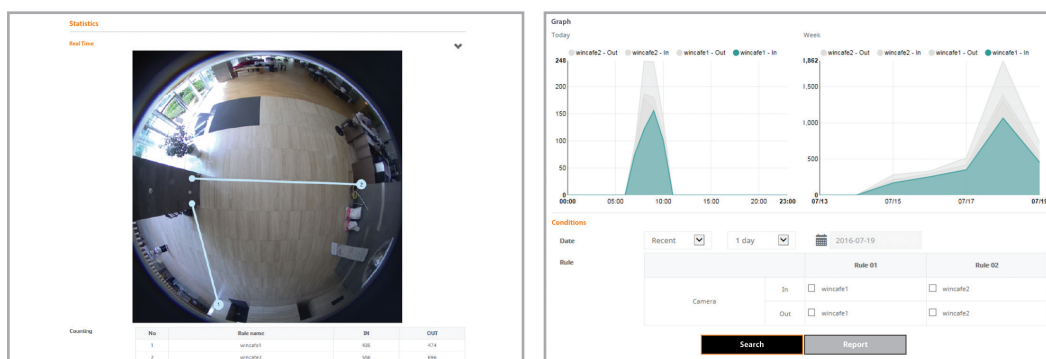
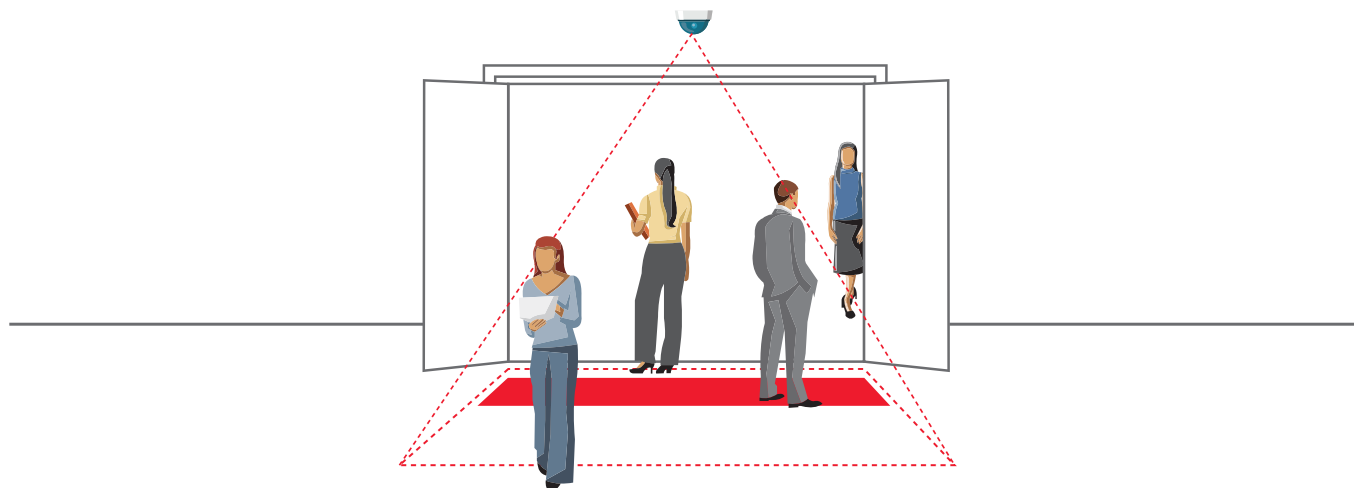
Easy to install with Simple Focus feature

The Simple Focus feature is able to auto-focus with the touch of a button during the installation process.

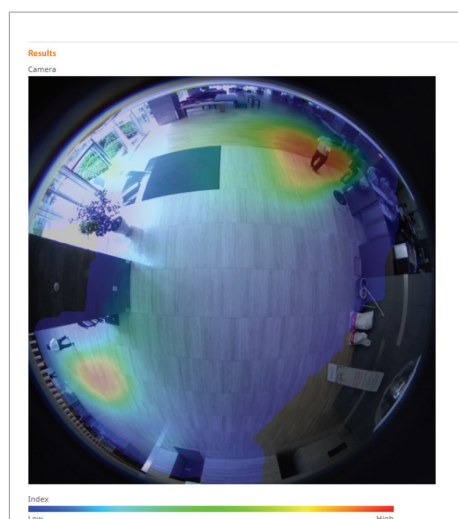


People Counting and Heat Mapping

Premium fisheye cameras have a business intelligence function that offers retailers the opportunity to measure store efficiency. People Counting and Heat Mapping Applications display hotspots within a store, which allow marketing personnel to identify the busiest times of the day, helping them manage customer flow and understand buying patterns.



People counting



Heatmap

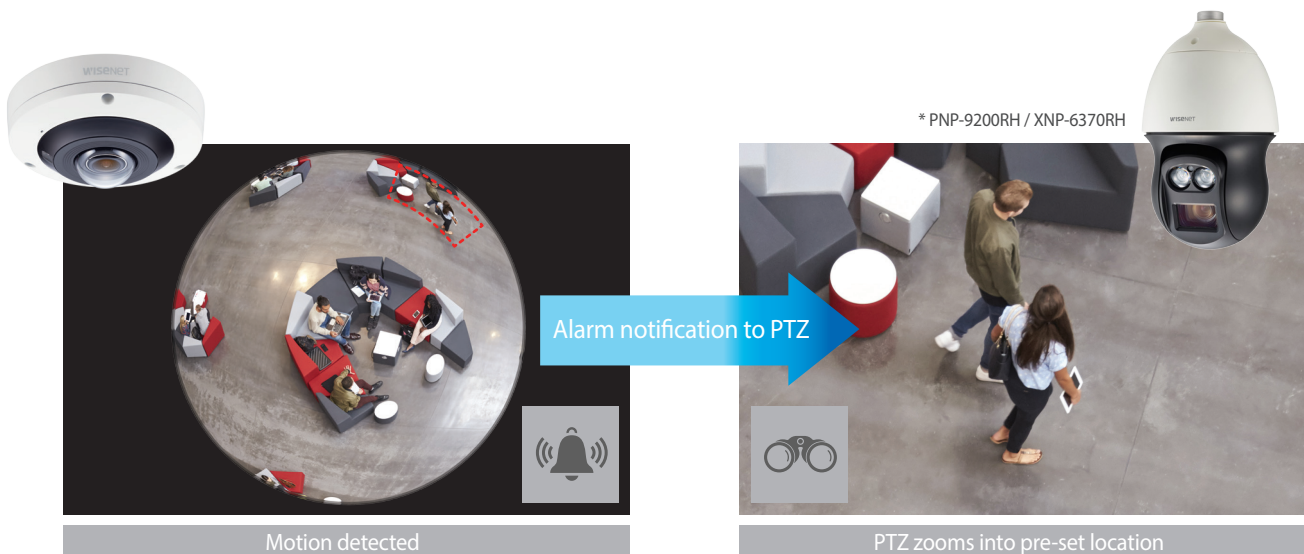
Durable in any extreme environmental conditions with Built-in MIC

PNF-9010RV and PNR-9010RVM are designed to function even in the most extreme environmental condition. With the Built-in MIC, it can fully operate in a temperature range between -40° and 55° , as well as in wet or very humid conditions.



Handover to PTZ

Wisenet PTZ hand-over feature allows a PTZ camera* to receive an alarm(motion detection) from a fisheye camera on the same IP video surveillance system. Once the notification is received, the PTZ camera will zoom into the assigned camera pre-set location. This feature improves the efficiency of the surveillance system by decreasing the reliance on the system operator on tracking events, and by increasing the likelihood that critical events in a surveillance area will be captured and recorded. * PNP-9200RH (Nov 2016) / XNP-6370RH (Jan 2017)



PNF-9010R/9010RV/9010RVM

4K Fisheye Camera

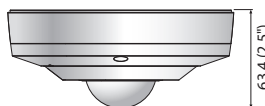
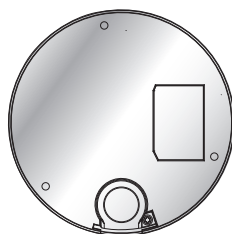
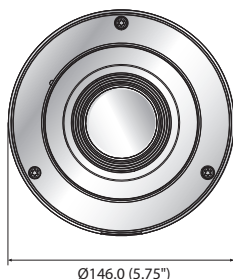


Key Features

- Max.12megapixel (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

VIDEO	
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 : 1.0 Vpp / 75Ω composite, 714 x 480(N), 702 x 576(P), for installation DIP connector type
LENS	
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
OPERATIONAL	
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 Support (Plug-in viewer only)
NETWORK	
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 3 profiles) Selectable (Mic in / Line in / Built-in mic)
Audio In	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), RTP(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, 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) - 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)
Edge Storage	
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 SmartViewer
Central Management Software	
ENVIRONMENTAL	
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
ELECTRICAL	
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)
MECHANICAL	
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 / sepecification can be found at hanwha-security.com

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