



Network

# PNM-9031RV

15MP Panoramic Camera



## Key Features

- Max. 15MP 192° panoramic stitching image
- Panoramic channel
- IR viewable length Maximum 20m (65.6ft), WiselR
- H.265 / H.264 : Max. 20fps
- MJPEG : Max. 15fps
- H.265, H.264, MJPEG codec, WiseStreamII supported
- Motion, Defocus detection, Virtual line, Enter / Exit
- (Dis)Appear, Audio detection, Motion detection, Handover, Heatmap
- microSD/SDHC/SDXC 2 slots, PoE+
- IP66, IK10, NEMA4X
- TPM 2.0 (FIPS 140-2 level 2)

# PNM-9031RV

15MP Panoramic Camera



## Specifications

### Video

Imaging Device	Size	1/2.8"
	Type	CMOS
Resolution	6720x2240, 5952x1984, 4992x1664, 3840x1280, 3072x1024, 1920x640, 1152x384	
Max. Framerate	H.265/H.264	20fps/20fps(60Hz/50Hz)
	MJPEG	15fps
Min. Illumination (Lux)	Color(1/30sec, 30IRE)	0.1
	BW(1/30sec, 30IRE)	0.01
Video Out	USB: Micro USB Type B	

### Lens

Focal Length (mm)	4.3	
Max Aperture Ratio (F number)	Wide	1.6
	Angular Field of View	
Angular Field of View	Horizontal	195.3°~197.0°
	Vertical	63.6°
Min. Object Distance	5m(16.4ft)	
Focus Control	Fixed	

### Pan / Tilt / Rotate

Pan / Tilt / Rotate Range	Pan	0°~360°
	Tilt	0°~60°

### Operational

Day & Night	Auto(ICR)	
Backlight Compensation	BLC, WDR, SDR	
Wide Dynamic Range (dB)	120	
Digital Noise Reduction	SSNR V	
Motion Detection	Quantity	8ea
	Shape	8point Polygonal zones

## Operational

Privacy Masking	Quantity	6ea
	Shape	Rectangular zones
	Color / Option	Gray, Green, Red, Blue, Black, White
Gain Control		Low, Middle, High
White Balance		ATW, AWC, Manual, Indoor, Outdoor
Electronic Shutter	Mode	Minimum, Maximum, Anti flicker
	Speed Range	2~1/12,000sec
Video Rotation		Flip, Mirror
Alarm Interface	In/Out	2 configurable I/O ports
Alarm Triggers		Analytics, Network disconnect, Alarm input
Alarm Events When Alarm Trigger Occurred		File upload(image): e-mail/FTP, Notification: e-mail, Recording: SD/SDHC/SDXC or NAS recording at event triggers, Alarm output
Audio In		Selectable(mic in/line in)
Audio Out		Line out
Light Type		IR LED
Light Viewable Length	IR	WiseIR 20m(65.62ft) 4 individual zones with Automatic and Manual level adjustment
IR Wavelength		850nm

## Analytics

Analytics Events	Normal	Defocus detection, Motion detection, Tampering, Audio detection, Virtual area(Intrusion/Enter/Exit), Virtual area(Appear/Disappear), Virtual line(Crossing Direction)
Business Intelligence	Normal	Heatmap

## Network

Ethernet		Metal shielded RJ-45(10/100/1000BASE-T)
Video Compression		H.265/H.264: Main/Baseline/High, MJPEG
Audio Compression		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
Smart Codec		Manual, WiseStream II
Bitrate Control		H.265/H.264: CBR or VBR, MJPEG: VBR
Streaming	Unicast	Up to 15 users
	Multicast	Support
	Multiple Streaming	Up to 5 profiles
Protocol		IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, PIM-SM

## Network

Application Programming Interface	ONVIF	S, G, T
	Others	SUNAPI(HTTP API)

## Security

User authentication	Digest authentication
Network authentication	IEEE 802.1X(EAP-TLS, EAP-LEAP)
Secure Communication	HTTPS
Access Control	IP-based access control
Data Protect	Encryption credentials, Encrypt compress for live recording file export
Audit	Access / System / Event Log management
Device ID	Device certificate(Hanwha Vision Root CA)
Secure Storage	TPM(Trusted platform module), SDcard partition encrypt(AES-256)
Security Certificate	TPM 2.0 with FIPS 140-2 level2

## General

Memory	RAM	8GB
	Flash	4GB
Edge Storage	Micro SD/SDHC/SDXC	Max. 256GB x 2slot(Total 512GB)

## Environmental & Electrical

Operating Condition	Temperature	-40°C~+55°C(-40°F~+131°F)
	Humidity	0~95% RH(non-condensing)
	Others	Start up should be done at above -30°C
Storage Condition	Temperature	-50°C~+60°C(-58°F~+140°F)
	Humidity	0~90% RH(non-condensing)
Input Voltage		PoE+(IEEE802.3at, Class4), 12VDC
Power Consumption	PoE	Max. 23.5W, typical 18W
	12VDC	Max. 20.5W, typical 16W

## Mechanical

Color	White
Material	Aluminum
RAL Code	RAL9003
Product Dimensions	ø253x170mm(9.96x6.69")
Product Weight	2,900g(6.39lb)
Compatible Conduit Hole	19.1mm(3/4")(M25)
Compatible Gang Box	Single, Double, 4" Octagon, Square

---

### Certifications & Standards

---

Environment	IEC 60529 IP66, IEC 62262 IK10, NEMA 250 type 4X
-------------	--

# PNM-9031RV

15MP Panoramic Camera



**CAD**

Unit: mm [inch]

