



Network

## PNM-9022V

8MP Panoramic Camera



### Key Features

- Max. 2MP x 4CH
- 209° Mode, 180° Mode support
- 2.8mm fixed focal lens x 4
- H.265/H.264 : Max. 30fps
- MJPEG : Max. 30fps
- extreme WDR (120dB)
- H.265, H.264, MJPEG codec, WiseStreamII supported
- Digital PTZ Support (2CH)
- Tampering, Heatmap
- IP66, IK10, NEMA4X

### Compatible Devices



SBP-300LMW



SBP-300MMW1



SBP-300KMW



SBP-300BW



SBP-300PMW



SBP-276HMW



SBP-300MMW



SBP-390MMW2



SBP-300NBW



SBP-300CMW

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8MP Panoramic Camera



## Specifications

### Video

Imaging Device	Size	1/2.8"
	Type	CMOS
Resolution	4608x1800, 4096x1800, 4032x1576, 3584x1576, 3456x1352, 3072x1352, 2864x1124, 2560x1124, 2304x900, 2048x900, 1728x676, 1536x676, 1152x452, 1024x452, 720x576, 560x224, 512x224	
Max. Framerate	H.265/H.264	30fps/25fps(60Hz/50Hz)
	MJPEG	30fps
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)	2.8	
Max Aperture Ratio (F number)	Wide	1.6
Angular Field of View	Horizontal	209°
	Vertical	83.3°
Min. Object Distance	1.5m(4.92ft)	
Focus Control	Fixed	

### Pan / Tilt / Rotate

Pan / Tilt / Rotate Range	Pan	0°~355°
	Tilt	0°~60°

### Operational

Day & Night	Auto(ICR)
Backlight Compensation	BLC, HLC, WDR, SDR
Wide Dynamic Range (dB)	120
Digital Noise Reduction	SSNR V
Defog	Support

## Operational

<b>Motion Detection</b>	Quantity	8ea
	Shape	8point Polygonal zones
<b>Privacy Masking</b>	Quantity	32ea
	Shape	Polygonal zones
	Color / Option	Gray, Green, Red, Blue, Black, White, Mosaic
<b>Gain Control</b>		Low, Middle, High
<b>White Balance</b>		ATW, AWC, Manual, Indoor, Outdoor
<b>Electronic Shutter</b>	Mode	Minimum, Maximum, Anti flicker
	Speed Range	2~1/12,000sec
<b>Digital PTZ</b>		Support
<b>Video Rotation</b>		Flip, Mirror
<b>Alarm Interface</b>	In/Out	2 configurable I/O ports
<b>Alarm Triggers</b>		Analytics, Network disconnect, Alarm input
<b>Alarm Events When Alarm Trigger Occurred</b>		File upload(image): e-mail/FTP, Notification: e-mail, Recording: SD/SDHC/SDXC or NAS recording at event triggers,Alarm output
<b>Audio In</b>		Selectable(mic in/line in)
<b>Audio Out</b>		Line out

## Analytics

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

## Network

<b>Ethernet</b>		Metal shielded RJ-45(10/100BASE-T)
<b>Video Compression</b>		H.265/H.264: Main/Baseline/High, MJPEG
<b>Audio Compression</b>		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
<b>Smart Codec</b>		Manual, WiseStream II
<b>Bitrate Control</b>		H.265/H.264: CBR or VBR, MJPEG: VBR
<b>Streaming</b>	Unicast	Up to 20 users
	Multicast	Support
	Multiple Streaming	Up to 10 profiles
<b>Protocol</b>		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, SRTP(TCP, UDP Unicast), PIM-SM

## Network

Application Programming Interface	ONVIF	S, G, T
	Others	SUNAPI(HTTP API), Hanwha Vision Open Platform
Direct Cloud Connection		Optional (needs gateway)

## 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	SDcard partition encrypt(AES-256)

## General

Memory	RAM	4GB
	Flash	512MB
Edge Storage	Micro SD/SDHC/SDXC	Max. 512GB x 2slot(Total 1TB)

## Environmental & Electrical

Operating Condition	Temperature	-40°C~+55°C(-40°F~+131°F)
	Humidity	0~95% RH(non-condensing)
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. 18W, typical 10.4W
	12VDC	Max. 16W, typical 9W

## Mechanical

Color	White
Material	Aluminum
RAL Code	RAL9003
Product Dimensions	ø253x165mm(9.96x6.5")
Product Weight	3,200g(7.05lb)
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
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CAD

Unit: mm [inch]

