

Network

# PNM-9031RV

15MP Panoramic Camera

## Key Features

- Max. 15MP 192° panoramic stitching image
- Panoramic channel
- IR viewable length Maximum 20m (65.6ft), WiseIR
- 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)

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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. Preview and installation ONLY. Requires WiFi dongle. |

### Lens

| | | |
|---|---|---|
| **Focal Length (mm)** | | 4.3 |
| **Max Aperture Ratio (F number)** | Wide | 1.6 |
| **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, SSDR |
| **Wide Dynamic Range (dB)** | | 120 |
| **Digital Noise Reduction** | | SSNR V |
| **Motion Detection** | Quantity | 8ea |
| | Shape | 8point Polygonal zones |

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## 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 | 1/5~1/12,000sec |
| **Video Rotation** | | Flip, Mirror |
| **Alarm Interface** | In/Out | 2 configurable I/O ports |
| **Alarm Triggers** | | Analytics, Network disconnect, Alarm input, Time schedule, MQTT subscription |
| **Alarm Events When Alarm Trigger Occurred** | | File upload(image): e-mail/FTP,<br>Notification: e-mail,<br>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: Main,<br>H.264: Main/High,MJPEG |
| **Audio Compression** | | G.711 u-law /G.726 selectable,G.726(ADPCM) 8kHz,G.711 8kHz,<br>G.726: 16kbps,24kbps,32kbps,40kbps,<br>AAC-LC: 48kbps at 16kHz |
| **Smart Codec** | | Manual, WiseStream II |
| **Bitrate Control** | | H.265/H.264: CBR or VBR,<br>MJPEG: VBR |
| **Streaming** | Unicast | Up to 15 users |
| | Multicast | Support |
| | Multiple Streaming | Up to 3 profiles |
| **Protocol** | | IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMPv2, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, PIM-SM |

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## 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 |

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## Certifications & Standards

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

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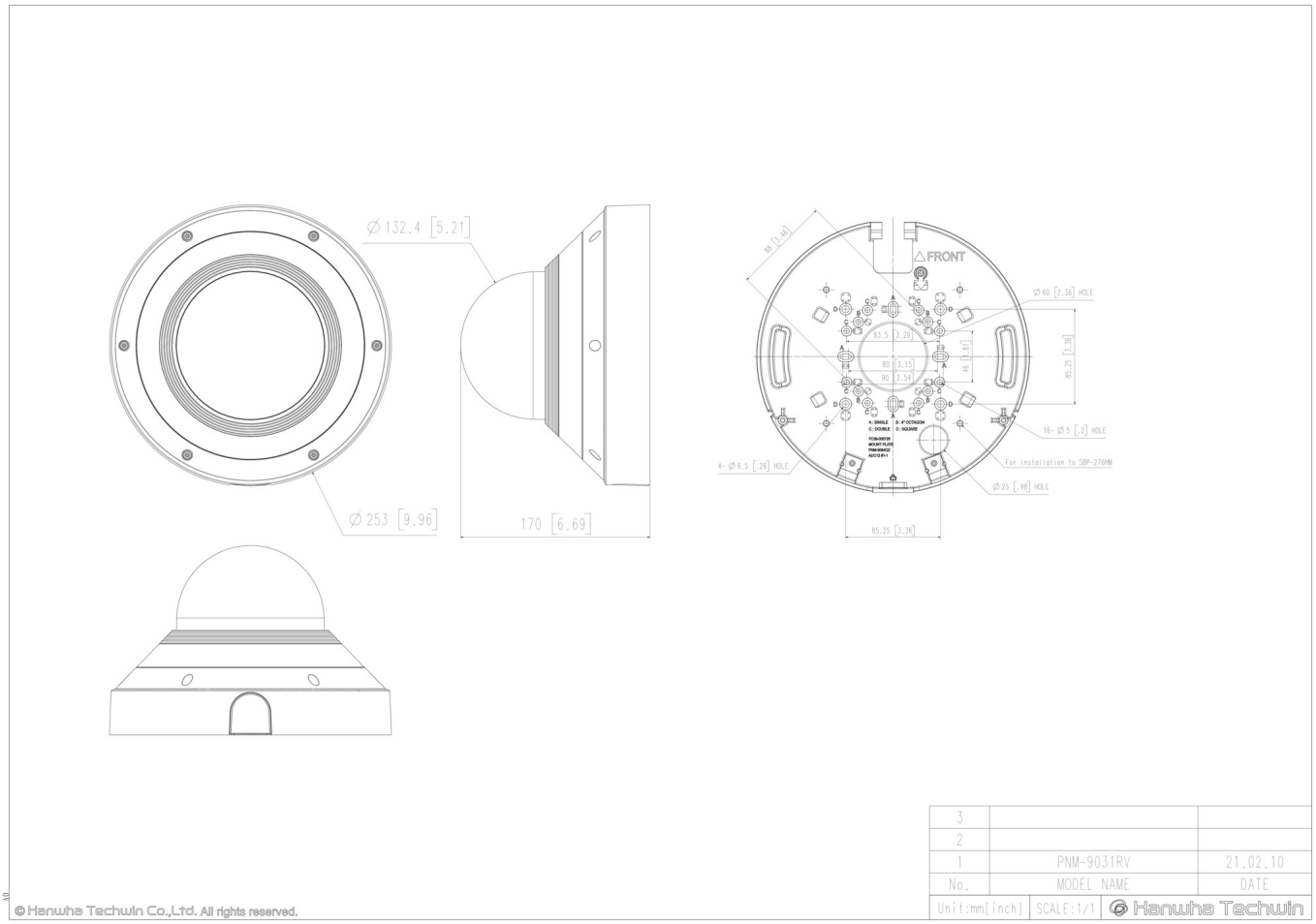
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## CAD

**Unit:** mm [inch]




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