

Network

# PNM-A13022RV

13MP AI IR Panoramic Camera

## Key Features

- 194° Horizontal FOV
- 13MP Image Resolution
- 20m IR Length
- 93° Vertical FOV
- H.265/H.264/MJPEG Max 30fps
- Object detection, Intelligent Video Analytics, Slip & Fall detection, Facemask detection, Social distancing detection, Motion detection
- People/Vehicle/Crowd counting, Queue management, Heatmap
- BestShot and full attributes
- IP66, NEMA4X, IK10

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13MP AI IR Panoramic Camera



## Specifications

### Video

| | | |
|---|---|---|
| **Imaging Device** | Size | 1/2.8" |
| | Type | CMOS |
| **Resolution** | | 5120x2592, 4112x2080, 3240x1640, 2940x1488, 2560x1296, 2016x1016, 1600x800, 1424x720, 1280x648, 1016x512, 832x480, 832x416, 800x600, 640x480 |
| **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: USB Type C. Preview and installation ONLY. Requires WiFi dongle. |

### Lens

| | | |
|---|---|---|
| **Focal Length (mm)** | | 3.06 |
| **Max Aperture Ratio (F number)** | Wide | 1.6 |
| **Angular Field of View** | Horizontal | 194° |
| | Vertical | 93° |
| **Min. Object Distance** | | 5m(16.4ft) |
| **Focus Control** | | Fixed |

### Pan / Tilt / Rotate

| | | |
|---|---|---|
| **Pan / Tilt / Rotate Range** | Pan | 0°~360° |
| | Tilt | 0°~50° |

### Operational

| | | |
|---|---|---|
| **Day & Night** | | Auto(ICR) |
| **Backlight Compensation** | | BLC, HLC, WDR, SSDR |
| **Wide Dynamic Range (dB)** | | 120 |
| **Digital Noise Reduction** | | WiseNR II (Based on AI engine), SSNR V |
| **Motion Detection** | Quantity | 8ea |
| | Shape | 8point Polygonal zones |

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## Operational

| | | |
|---|---|---|
| **Privacy Masking** | Quantity | 4ea |
| | Shape | Polygonal 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, Prefer shutter control(Based on AI engine) |
| | Speed Range | 2~1/12,000sec |
| **Video Rotation** | | Flip, Mirror |
| **Alarm Interface** | In/Out | 2 configurable I/O ports |
| | Others | Support extra alarm I/O via optional I/O box |
| **Alarm Triggers** | | Analytics, Network disconnect, Alarm input, Time schedule, MQTT subscription |
| **Alarm Events When Alarm Trigger Occurred** | | File upload(image): e-mail/FTP/SFTP,<br>File upload(video clip): FTP/SFTP,<br>Recording: SD/SDHC/SDXC or NAS recording at event triggers,Alarm output,<br>Handover: PTZ preset,send message by HTTP/HTTPS/TCP,Audio clip playback,<br>MQTT: publication |
| **Audio In** | | Selectable(mic in/line in) |
| **Audio Out** | | Line out |
| **Light Type** | | IR LED |
| **Light Viewable Length** | IR | 20m(65.62ft) 4 individual zones with Automatic/Manual level adjustment |
| **IR Wavelength** | | 850nm |

## Analytics

| | | |
|---|---|---|
| **Classified Object Type** | | Person, Face, Vehicle, License plate |
| **Attributes** | Person | Upper/Lower clothes color, Gender, Bag |
| | Vehicle | Type(car, bus, truck, motorcycle, bicycle), Color |
| | Face | Age, Gender, Face mask, Glasses |
| **Thumbnail** | | BestShot |
| **Analytics Events** | Based on AI Engine | Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit), Motion detection, Face mask detection, Social distancing detection, Slip & fall detection |
| | Normal | Defocus detection, Tampering, Audio detection, Virtual area(Appear/Disappear) |
| **Business Intelligence** | Based on AI Engine | People counting, Queue management, Heatmap, Vehicle counting, Crowd counting |

## Network

| | |
|---|---|
| **Ethernet** | Metal shielded RJ-45(10/100/1000BASE-T) |
| **Video Compression** | H.265: Main,<br>H.264: Main/Baseline/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,<br>OPUS: 48kHz(64kbps) |

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## Network

| | | |
|---|---|---|
| **Smart Codec** | | Manual, WiseStream(Based on AI engine) |
| **Bitrate Control** | | H.265/H.264: CBR or VBR,<br>MJPEG: VBR |
| **Streaming** | Unicast | Up to 20 users |
| | Multicast | Support |
| | Multiple Streaming | Up to 4 profiles, 3 virtual channel support |
| **Protocol** | | IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SFTP, SMTP, ICMP, IGMPv2, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, SRTP(TCP, UDP Unicast), MQTT |
| **Application Programming Interface** | ONVIF | S, G, T, M |
| | Others | SUNAPI(HTTP API), Hanwha Vision Open Platform |
| **Direct Cloud Connection** | | Support |

## Security

| | |
|---|---|
| **OS / Firmware Protect** | Encrypted firmware, Secure boot, Signed firmware |
| **User authentication** | Digest authentication, Prevent brute-force attack |
| **Network authentication** | IEEE 802.1X(EAP-TLS, EAP-LEAP, EAP-PEAP, MSCHAPv2) |
| **Secure Communication** | HTTPS, WSS(WebSocket Secure), SRTP, 802.1AE(MACsec) |
| **Access Control** | IP-based access control, MAC-based access control, Auto logout |
| **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), Secure element |
| **Security Certificate** | Secure element(FIPS 140-3 level3, CC EAL6+), Consumer IoT Security Standard (ETSI EN 303 645) |

## General

| | | |
|---|---|---|
| **SoC** | Type | NT98692 |
| **Memory** | RAM | 8GB |
| | Flash | 8GB eMMC |
| **Edge Storage** | Micro SD/SDHC/SDXC | Max. 1TB x 2slot(Total 2TB) |

## Environmental & Electrical

| | | |
|---|---|---|
| **Operating Condition** | Temperature | -40°C~+55°C(-40°F~+131°F) |
| | Humidity | 0~100% RH(condensing) |
| **Storage Condition** | Temperature | -50°C~+60°C(-58°F~+140°F) |
| | Humidity | 0~90% RH(non-condensing) |
| **EPA(Effective Projected Area)** | | 0.0286 ㎡ |
| **Input Voltage** | | PoE+(IEEE802.3at, Class4), 12VDC |

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## Environmental & Electrical

| | | |
|---|---|---|
| **Power Consumption** | PoE | Max 22.3W, typical 11.5W |
| | 12VDC | Max 20.0W, typical 10.0W |
| **Power Redundance Failover** | | Support |

## Mechanical

| | |
|---|---|
| **Color** | White |
| **Material** | Aluminum, Hard-coated dome |
| **RAL Code** | RAL9003 |
| **Product Dimensions** | ø253x170mm(9.96x6.69") |
| **Product Weight** | 2,800g(6.17lb) |
| **Compatible Conduit Hole** | 19.1mm(3/4")(M25) |
| **Compatible Gang Box** | Single, Double, 4" Octagon, Square |

## Certifications & Standards

| | |
|---|---|
| **EMC** | FCC 47 CFR 15 Subpart B Class A, ICES-3(A)/NMB-3(A), CE/UKCA - EN55032 Class A, EN 50130-4, EN 61000-3-2, EN 61000-3-3, VCCI CISPR 32 Class A, RCM AS-NZS CISPR 32 Class A, KS C 9832 Class A, KS C 9835 |
| **Safety** | UL 62368-1, CAN/CSA C22.2 NO. 62368-1, IEC 62471 |
| **Environment** | IEC/EN 63000, IEC 60529 IP66, IEC 62262 IK10, NEMA 250 type 4X, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78 |

## AI Detection Distance

| | | |
|---|---|---|
| **Person(1.8m/5.9ft)** | Wide | up to 25m(84ft) |
| **Vehicle(1.45m/4.8ft)** | Wide | up to 34m(113ft) |

## DORI (EN62676-4 standard)

| | | |
|---|---|---|
| **Detect (25PPM/ 8PPF)** | Wide | 43.8m(143.85ft) |
| **Observe (63PPM/ 19PPF)** | Wide | 17.5m(57.54ft) |
| **Recognize (125PPM/ 38PPF)** | Wide | 8.8m(28.77ft) |
| **Identify (250PPM/ 76PPF)** | Wide | 4.4m(14.39ft) |

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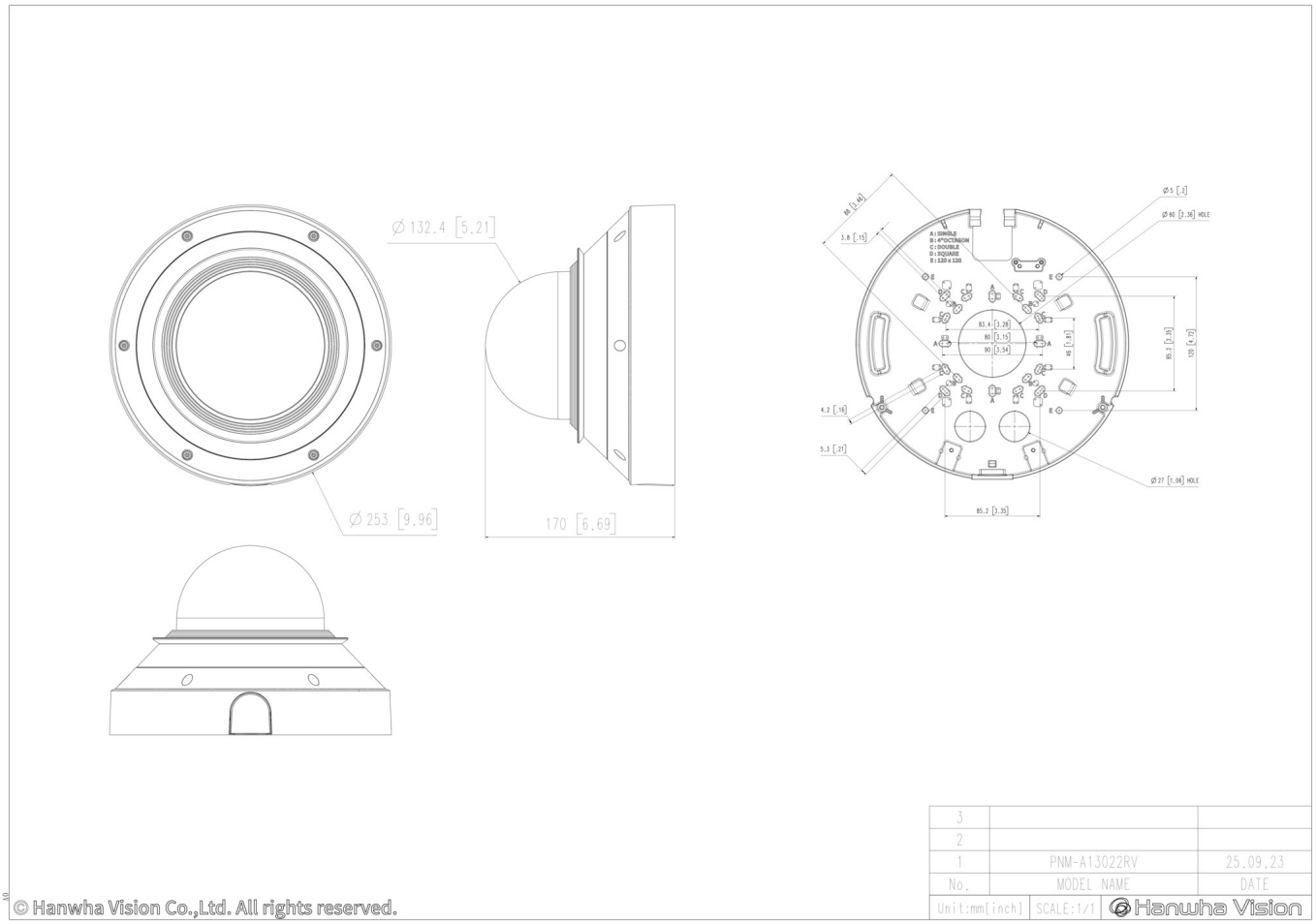
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## CAD

**Unit:** mm [inch]




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## Compatible Devices


SBP-250HMW


SBP-140CMB


SBP-180CMB


SBP-180CMS


SBP-150CMP


SBP-300CMP


SBP-900CMP


SBP-C15H


SBP-C15P


SBP-C15NP


SBP-C35H


SBP-150CMI


SBP-300CMI


SBP-300CMW1


SBP-900CMW


SBP-300CMTW


SBP-300CMTS


SBP-250WMW


SBP-400WMW


SBP-115PFA


SBP-150PMW


SBP-156KMW


SBP-156LMW1


SBP-150NBW


SBP-060BA


SBP-250C


SBP-300WMW


SBP-300WMW1


SBP-300BW1


SBP-300PMW2


SBP-300KMW1


SBP-300LMW


SBP-300NBW

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