



SIP48D4V/MZ28120-H



and vehicle targets classification alarms to front- and back-end devices. The system focuses on human and vehicle targets, vastly improving alarm efficiency and effectiveness.

- High quality imaging with 8 MP resolution
- Motorized varifocal lens for easy installation and monitoring
- Efficient H.265+ compression technology
- Clear imaging against strong backlight due to 120 dB true WDR technology
- Focus on human and vehicle targets classification based on deep learning
- Audio and alarm interface available
- Water and dust resistant (IP67) and vandal-resistant (IK10)

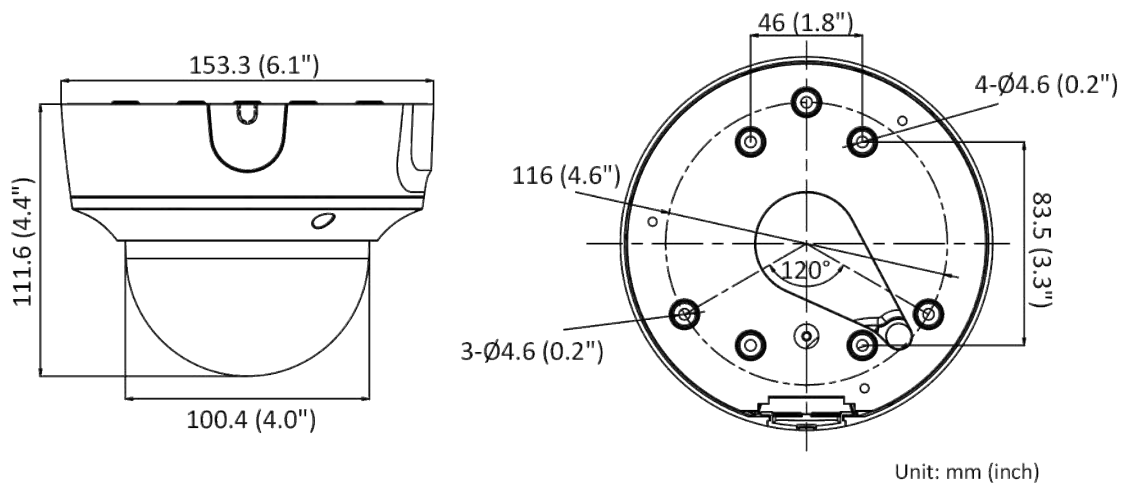
## ■ Specification

| Camera                 |                                                                                                                     |
|------------------------|---------------------------------------------------------------------------------------------------------------------|
| Image Sensor           | 1/2.8" Progressive Scan CMOS                                                                                        |
| Min. Illumination      | Color: 0.005 Lux @ (F1.6, AGC ON), B/W: 0 Lux with IR                                                               |
| Shutter Speed          | 1/3 s to 1/100,000 s                                                                                                |
| Slow Shutter           | Yes                                                                                                                 |
| P/N                    | P/N                                                                                                                 |
| Wide Dynamic Range     | 120 dB                                                                                                              |
| Day & Night            | IR cut filter                                                                                                       |
| Angle Adjustment       | Pan: 0° to 355°, tilt: 0° to 75°, rotate: 0° to 355°                                                                |
| Lens                   |                                                                                                                     |
| Lens Type              | Varifocal lens, motorized lens, 2.8 to 12 mm                                                                        |
| Focal Length & FOV     | 2.8 to 12 mm, horizontal FOV 108° to 30°, vertical FOV 56° to 17°, diagonal FOV 131° to 35°                         |
| Lens Mount             | Ø14                                                                                                                 |
| Iris Type              | Fixed                                                                                                               |
| Aperture               | F1.6                                                                                                                |
| DORI                   |                                                                                                                     |
| DORI                   | 2.8 to 12 mm: D: 97 m to 290 m, O: 38 m to 115 m, R: 19 m to 58 m, I: 9 m to 29 m                                   |
| Illuminator            |                                                                                                                     |
| Supplement Light Type  | IR                                                                                                                  |
| Smart Supplement Light | Yes                                                                                                                 |
| IR Wavelength          | 850 nm                                                                                                              |
| IR Range               | Up to 40 m                                                                                                          |
| Video                  |                                                                                                                     |
| Max. Resolution        | 3840 × 2160                                                                                                         |
| Main Stream            | 50 Hz: 20 fps (3840 × 2160)<br>25 fps (3200 × 1800, 2688 × 1520, 1920 × 1080, 1280 × 720)                           |
|                        | 60 Hz: 20 fps (3840 × 2160)<br>30 fps (3200 × 1800, 2688 × 1520, 1920 × 1080, 1280 × 720)                           |
| Sub Stream             | 50 Hz: 25 fps (640 × 480, 640 × 360)                                                                                |
|                        | 60 Hz: 30 fps (640 × 480, 640 × 360)                                                                                |
| Third Stream           | 50 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360)                                                       |
|                        | 60 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360)<br>*Third stream is supported under certain settings. |
| Video Compression      | Main stream: H.265/H.264/H.264+/H.265+                                                                              |
|                        | Sub-stream: H.265/H.264/MJPEG<br>Third stream: H.265/H.264<br>*Third stream is supported under certain settings.    |
| Video Bit Rate         | 32 Kbps to 16 Mbps                                                                                                  |
| H.264 Type             | Baseline Profile/Main Profile/High Profile                                                                          |
| H.265 Type             | Main Profile                                                                                                        |
| H.264+                 | Main stream supports                                                                                                |
| H.265+                 | Main stream supports                                                                                                |

|                               |                                                                                                                                                                                                                                                                                                 |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bit Rate Control              | CBR/VBR                                                                                                                                                                                                                                                                                         |
| Scalable Video Coding (SVC)   | H.264 and H.265 encoding                                                                                                                                                                                                                                                                        |
| Region of Interest (ROI)      | 1 fixed region for main stream and sub-stream                                                                                                                                                                                                                                                   |
| <b>Audio</b>                  |                                                                                                                                                                                                                                                                                                 |
| Audio Compression             | G.711ulaw/G.711alaw/G.722.1/G.726/MP2L2/PCM/MP3/AAC                                                                                                                                                                                                                                             |
| Audio Bit Rate                | 64 Kbps (G.711ulaw/G.711alaw)/16 Kbps (G.722.1)/16 Kbps (G.726)/16 Kbps to 64 Kbps (AAC)/32 to 192 Kbps (MP2L2)/8 to 320 Kbps (MP3)                                                                                                                                                             |
| Audio Sampling Rate           | 8 kHz/16 kHz/32 kHz/44.1 kHz/48 kHz                                                                                                                                                                                                                                                             |
| Environment Noise Filtering   | Yes                                                                                                                                                                                                                                                                                             |
| <b>Network</b>                |                                                                                                                                                                                                                                                                                                 |
| Protocols                     | TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv4, IPv6, UDP, Bonjour, SSL/TLS, PPPoE, SNMP                                                                                                                                                  |
| Simultaneous Live View        | Up to 6 channels                                                                                                                                                                                                                                                                                |
| API                           | Open Network Video Interface (Profile S, Profile G), ISAPI, SDK                                                                                                                                                                                                                                 |
| User/Host                     | Up to 32 users. 3 user levels: administrator, operator and user                                                                                                                                                                                                                                 |
| Security                      | Password protection, complicated password, HTTPS encryption, IP address filter, Security Audit Log, basic and digest authentication for HTTP/HTTPS, TLS 1.1/1.2, WSSE and digest authentication for Open Network Video Interface                                                                |
| Network Storage               | NAS (NFS, SMB/CIFS), auto network replenishment (ANR)                                                                                                                                                                                                                                           |
| Client                        | iVMS-4200                                                                                                                                                                                                                                                                                       |
| Web Browser                   | Plug-in required live view: IE 10, IE 11<br>Plug-in free live view : Chrome 57.0+, Firefox 52.0+<br>Local service: Chrome 57.0+, Firefox 52.0+                                                                                                                                                  |
| <b>Image</b>                  |                                                                                                                                                                                                                                                                                                 |
| Image Parameters Switch       | Yes                                                                                                                                                                                                                                                                                             |
| Image Settings                | Rotate, mirror, privacy mask, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser                                                                                                                                                     |
| Day/Night Switch              | Day, Night, Auto, Schedule                                                                                                                                                                                                                                                                      |
| Image Enhancement             | BLC, HLC, 3D DNR                                                                                                                                                                                                                                                                                |
| SNR                           | ≥ 52 dB                                                                                                                                                                                                                                                                                         |
| <b>Interface</b>              |                                                                                                                                                                                                                                                                                                 |
| Ethernet Interface            | 1 RJ45 10 M/100 M self-adaptive Ethernet port                                                                                                                                                                                                                                                   |
| On-board Storage              | Built-in memory card slot, support micro SD card, up to 256 GB                                                                                                                                                                                                                                  |
| Audio                         | 1 input (line in), two-core terminal block, max. input amplitude: 3.3 Vpp, input impedance: 4.7 K $\Omega$ , interface type: non-equilibrium;<br>1 output (line out), two-core terminal block, max. output amplitude: 3.3 Vpp, output impedance: 100 $\Omega$ , interface type: non-equilibrium |
| Alarm                         | 1 input, 1 output (max. 24 VDC/24 VAC, 1 A)                                                                                                                                                                                                                                                     |
| Hardware Reset                | Yes                                                                                                                                                                                                                                                                                             |
| <b>Event</b>                  |                                                                                                                                                                                                                                                                                                 |
| Basic Event                   | Motion detection (human and vehicle targets classification), video tampering alarm, exception                                                                                                                                                                                                   |
| Face Detection                | Yes                                                                                                                                                                                                                                                                                             |
| <b>Deep Learning Function</b> |                                                                                                                                                                                                                                                                                                 |
| Perimeter Protection          | Line crossing detection, intrusion detection<br>Supports human and vehicle targets classification                                                                                                                                                                                               |

| General                          |                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Linkage Method                   | Upload to FTP/memory card/NAS, notify surveillance center, trigger recording, trigger capture, send email                                                                                                                                                                                                                                               |
| Camera Material                  | Upper cover and base: metal<br>Bubble: plastic                                                                                                                                                                                                                                                                                                          |
| Camera Dimension                 | Ø153.3 mm × 111.6 mm (Ø6.1" × 4.4")                                                                                                                                                                                                                                                                                                                     |
| Package Dimension                | 244 mm × 174 mm × 173 mm (9.7" × 6.9" × 6.9")                                                                                                                                                                                                                                                                                                           |
| Camera Weight                    | Approx. 855 g (1.9 lb.)                                                                                                                                                                                                                                                                                                                                 |
| With Package Weight              | Approx. 1469 g (3.1 lb.)                                                                                                                                                                                                                                                                                                                                |
| Storage Conditions               | -30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)                                                                                                                                                                                                                                                                               |
| Startup and Operating Conditions | -30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)                                                                                                                                                                                                                                                                               |
| Web Client Language              | 33 languages<br>English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil), Ukrainian |
| General Function                 | Anti-flicker, heartbeat, password reset via email, pixel counter                                                                                                                                                                                                                                                                                        |
| Firmware Version                 | V5.5.113                                                                                                                                                                                                                                                                                                                                                |
| Software Reset                   | Yes                                                                                                                                                                                                                                                                                                                                                     |
| Power Consumption and Current    | 12 VDC, 0.88 A, max. 10.5 W<br>PoE (802.3af, 36 V to 57 V), 0.35 A to 0.22 A, max. 12.5 W                                                                                                                                                                                                                                                               |
| Power Supply                     | 12 VDC ± 25%, reverse polarity protection<br>PoE: 802.3af, Class 3                                                                                                                                                                                                                                                                                      |
| Power Interface                  | Ø5.5 mm coaxial power plug                                                                                                                                                                                                                                                                                                                              |
| Approval                         |                                                                                                                                                                                                                                                                                                                                                         |
| EMC                              | FCC (47 CFR Part 15, Subpart B); CE-EMC (EN 55032: 2015, EN 61000-3-2: 2014, EN 61000-3-3: 2013, EN 50130-4: 2011 +A1: 2014); RCM (AS/NZS CISPR 32: 2015); IC (ICES-003: Issue 6, 2016); KC (KN 32: 2015, KN 35: 2015)                                                                                                                                  |
| Safety                           | UL (UL 60950-1); CB (IEC 60950-1:2005 + Am 1:2009 + Am 2:2013); CE-LVD (EN 60950-1:2005 + Am 1:2009 + Am 2:2013)                                                                                                                                                                                                                                        |
| Environment                      | CE-RoHS (2011/65/EU); WEEE (2012/19/EU); Reach (Regulation (EC) No 1907/2006)                                                                                                                                                                                                                                                                           |
| Protection                       | IP67 (IEC 60529-2013), IK10 (IEC 62262:2002)                                                                                                                                                                                                                                                                                                            |

## ■ Dimension



## ■ Accessory

### ■ Optional

**ES1280ZJ-DM55**  
Junction Box

