# HIKVISION®

**DarkFighter**✦

Empowered by deep learning algorithms, Hikvision AcuSense technology brings human or vehicle target classification alarms to front- and back-end devices. The system can greatly reduce false alarms generated by targets other than humans or vehicles, vastly improving alarm efficiency and effectiveness.

- Supports Hikvision Embedded Open Platform (HEOP) and importing third party applications

- Supports 1.5 TOPS computing power, 60 MB system memory, 400 MB smart RAM, and 2 GB eMMC storage for sharing resources

- Efficient H.265+ compression technology

- 180° fisheye view

- High quality imaging with 5 MP resolution

- Up to 4 live view display modes

- Clear imaging against strong back light due to 120 dB true WDR technology

## ▪ Specification

| Camera | |
|---|---|
| Image Sensor | 1/2.7" Progressive Scan CMOS |
| Max. Resolution | 2592 × 1944 |
| Min. Illumination | Color: 0.017 Lux @ (F2.25, AGC ON),B/W: 0 Lux with IR |
| Shutter Time | 1/3 s to 1/100,000 s |
| Day & Night | IR cut filter |
| **Lens** | |
| Lens Type | Fixed focal lens, 1.05 mm |
| Focal Length & FOV | 1.05 mm, horizional FOV: 180°, vertical FOV: 180°, diagonal FOV: 180° |
| Lens Mount | M12 |
| Iris Type | Fixed |
| Aperture | F2.25 |
| Depth of Field | 0.1 m to ∞ |
| **DORI** | |
| DORI | D: 21 m, O: 8 m, R: 4 m, I: 2 m |
| **Illuminator** | |
| Supplement Light Type | IR |
| Supplement Light Range | Up to 8 m |
| Smart Supplement Light | Yes |
| IR Wavelength | 850 nm |
| **HEOP** | |
| Open Resources | Memory: 60 MB; Smart RAM: 400 MB; eMMC: 2 GB |
| Computing Power | 1.5 TOPS |
| Deep Learning Structure | Caffe; PyTorch; TensorFlow |
| Programming Language | C; C++ |
| **Video** | |
| Main Stream | 50 Hz: 25 fps (2592 × 1944, 2688 × 1520, 1920 × 1080, 1280 × 720) 60 Hz: 24 fps (2592 × 1944) 30 fps (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) |
| Fourth Stream | 50 Hz: 10 fps (1280 × 720, 640 × 480, 640 × 360) 60 Hz: 10 fps (1280 × 720, 640 × 480, 640 × 360) |
| Video Compression | Main stream: H.265/H.264/H.264+/H.265+ Sub-stream: H.265/H.264/MJPEG Third stream: H.265/H.264 Fourth stream: H.265/H.264/MJPEG *Third stream and fourth stream are 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 |
| Bit Rate Control | CBR/VBR |
| Scalable Video Coding (SVC) | H.264 and H.265 encoding |
| Region of Interest (ROI) | 5 fixed regions for main stream and sub-stream |
| Target Cropping | Yes |
| **Fisheye Display** | |
| Mount Type | Support wall/table/ceiling mounting |
| **Audio** | |
| Audio Compression | G.711ulaw/G.711alaw/G.722.1/G.726/MP2L2/PCM/MP3/AAC-LC |
| Audio Bit Rate | 64 Kbps (G.711ulaw/G.711alaw)/16 Kbps (G.722.1)/16 Kbps (G.726)/32 to 192 Kbps (MP2L2)/8 to 320 Kbps (MP3)/16 to 64 Kbps (AAC-LC) |
| Audio Sampling Rate | 8 kHz/16 kHz/32 kHz/44.1 kHz/48 kHz |
| Environment Noise Filtering | Yes |
| **Network** | |
| 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, SFTP, ARP, SNMP |
| Simultaneous Live View | Up to 6 channels |
| API | Open Network Video Interface (Profile S, Profile G, Profile T), ISAPI, SDK, ISUP |
| 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 1.2, WSSE and digest authentication for Open Network Video Interface, memory card encryption, SFTP encryption, SRTP encryption |
| Network Storage | NAS (NFS, SMB/CIFS), auto network replenishment (ANR)<br>Together with high-end Hikvision memory card, memory card encryption and health detection are supported. |
| Client | iVMS-4200, Hik-Connect, Hik-Central |
| 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+ |
| **Image** | |
| Image Parameters Switch | Yes |
| Image Settings | Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser |
| Day/Night Switch | Day, Night, Auto, Schedule |
| Wide Dynamic Range (WDR) | 120 dB |
| Image Enhancement | BLC, HLC, 3D DNR |
| SNR | ≥ 52 dB |
| **Interface** | |
| Ethernet Interface | 1 RJ45 10 M/100 M self-adaptive Ethernet port |
| On-Board Storage | Built-in memory card slot, support microSD/microSDHC/microSDXC/TF card, up to 256 GB |
| Built-in Microphone | -U: Yes |

| | |
|---|---|
| Audio | 1 input(s) (line in), four-core terminal block, max. input amplitude: 3.3 Vpp, input impedance: 4.7 KΩ, interface type: non-equilibrium, 1 output(s) (line out), four-core terminal block, max. output amplitude: 3.3 Vpp, output impedance: 100 Ω, interface type: non-equilibrium |
| Alarm | 1 input, 1 output (max. 12 VDC, 30 mA) |
| RS-485 | 1 RS-485 (Half duplex, HIKVISION, Pelco-P, Pelco-D, self-adaptive) |
| Reset Key | Yes |
| **Event** | |
| Basic Event | Video tampering alarm, exception |
| Smart Event | Line crossing detection, intrusion detection, region entrance detection, region exiting detection (support alarm triggered by specified target types (human and vehicle)) Unattended baggage detection, object removal detection, scene change detection, audio exception detection |
| Linkage | Upload to NAS/memory card/FTP, notify surveillance center, send email, trigger recording, trigger capture, trigger alarm output, audible warning |
| **Deep Learning Function** | |
| Face Capture | Yes |
| **General** | |
| Power | 12 VDC ± 25%, 0.50 A, max. 6 W,Ø5.5 mm coaxial power plug, PoE: 802.3af, Class 3, 36 V to 57 V, 0.20 A to 0.13 A, max. 7.5 W |
| Dimension | Ø119.9 mm × 41.2 mm (Ø4.7" × 1.6") |
| Package Dimension | 150 mm × 125 mm × 99 mm (5.9" × 4.9" × 3.9") |
| Weight | Approx. 320 g (0.7 lb.) |
| With Package Weight | Approx. 510 g (1.1 lb.) |
| Storage Conditions | -10 °C to 50 °C (-14 °F to 122 °F). Humidity 95% or less (non-condensing) |
| General Function | Anti-banding, heartbeat, mirror, privacy mask, flash log, password reset via email, pixel counter |
| Startup and Operating Conditions | -10 °C to 50 °C (-14 °F to 122 °F). Humidity 95% or less (non-condensing) |
| Language | 33 languages: 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 |
| **Approval** | |
| EMC | FCC: 47 CFR Part 15, Subpart B, CE-EMC: EN 55032: 2015, EN 61000-3-2:2019, EN 61000-3-3: 2013+A1:2019, EN 50130-4: 2011 +A1: 2014, RCM: AS/NZS CISPR 32: 2015 |
| Safety | UL: UL 62368-1, CB: IEC 62368-1: 2014+A11, CE-LVD: EN 62368-1: 2014/A11: 2017 |
| Environment | CE-RoHS: 2011/65/EU, WEEE: 2012/19/EU, Reach: Regulation (EC) No 1907/2006 |

## ▪ Typical Application

Hikvision products are classified into three levels according to their anti-corrosion performance. Refer to the following description to choose for your using environment.
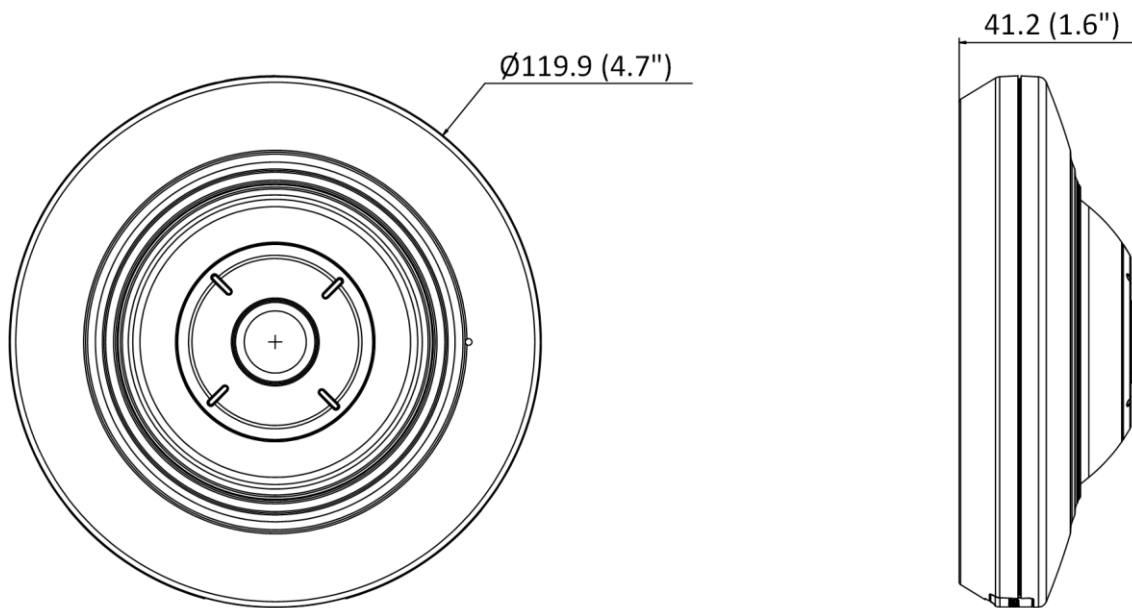
This model has NO SPECIFIC PROTECTION.

| Level | Description |
|---|---|
| Top-level protection | Hikvision products at this level are equipped for use in areas where professional anti-corrosion protection is a must. Typical application scenarios include coastlines, docks, chemical plants, and more. |
| Moderate protection | Hikvision products at this level are equipped for use in areas with moderate anti-corrosion demands. Typical application scenarios include coastal areas about 2 kilometers (1.24 miles) away from coastlines, as well as areas affected by acid rain. |
| No specific protection | Hikvision products at this level are equipped for use in areas where no specific anti-corrosion protection is needed. |

## ▪ Available Model

DS-2CD3956G2-ISU (1.05 mm)

## ▪ Dimension



Unit: mm (inch)

## ▪ Accessory

### ▪ Optional

| DS-1297ZJ-M<br>PP1-M<br>**Pendant Mount** | DS-1294ZJ<br>WM-C<br>**Wal Mount** | DS-1281ZJ-DM27<br>AB-FE2<br>**Inclined Ceiling**<br><br>**Junction Box** | DS-1299ZJ<br>PP2<br>**Pendant Mount** | DS-1297ZJ<br>PP1<br>**Pendant Mount** |
|---|---|---|---|---|
|  |  |  |  |  |

| DS-1297ZJ-ES<br>PP1-ES<br>**Pendant Mount** |
|---|
|  |

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