

# DS-2CD3786G2-IZS 8 MP AcuSense IR Varifocal Dome Network Camera



Empowered by deep learning algorithms, Hikvision AcuSense technology brings human 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.

- Supports Hikvision Embedded Open Platform (HEOP) and importing third party applications
- Supports 1.5 Tops computing power, 40 MB system memory, 350 MB smart RAM, and 2 GB eMMC storage for sharing resources
- High quality imaging with 8 MP resolution
- Excellent low-light performance with powered-by-DarkFighter technology
- Clear imaging against strong backlight due to 120 dB true WDR technology
- Efficient H.265+ compression technology
- Focus on human and vehicle targets classification based on deep learning
- 3D DNR technology delivers clean and sharp images
- Motorized varifocal lens for easy installation
- Water and dust resistant (IP66) and vandal-resistant (IK10)



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# Specification

| Camera                  |  |  |  |  |  |  |
|-------------------------|--|--|--|--|--|--|
| Image Sensor            | 1/1.8" Progressive Scan CMOS   |  |  |  |  |  |
| Max. Resolution         | 3840 × 2160  |  |  |  |  |  |
| Min. Illumination       | Color: 0.003 Lux @ (F1.6, AGC ON), B/W: 0 Lux with IR                                  |  |  |  |  |  |
| Shutter Time            | 1/3 s to 1/100,000 s   |  |  |  |  |  |
| 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, 2.7 to 13.5 mm and 7 to 35 mm optional                 |  |  |  |  |  |
|                         | 2.7 to 13.5 mm: horizontal FOV 108° to 46°, vertical FOV 58° to 26°, diagonal FOV 127° |  |  |  |  |  |
| Focal Length & FOV      | to 52°   |  |  |  |  |  |
|                         | 7 to 35 mm: horizontal FOV 42° to 15°, vertical FOV 23° to 9°, diagonal FOV 49° to 17° |  |  |  |  |  |
| Lens Mount              | 2.7 to 13.5 mm: Ø14; 7 to 35 mm: Integrated  |  |  |  |  |  |
| Iris Type               | Auto-iris  |  |  |  |  |  |
| Focus                   | Auto, Semi-auto, Manual  |  |  |  |  |  |
| Aperture                | F1.6   |  |  |  |  |  |
| DORI                    |  |  |  |  |  |  |
| DORI                    | 2.7 to 13.5 mm: D: 86 to 192 m, O: 34 to 76 m, R: 17 to 38 m, I: 8 to 19 m             |  |  |  |  |  |
| DORI                    | 7 to 35 mm: D: 218 to 580 m, O: 86 to 230 m, R: 43 to 116 m, I: 21 to 58 m             |  |  |  |  |  |
| Illuminator             |  |  |  |  |  |  |
| Supplement Light Type   | IR   |  |  |  |  |  |
| Supplement Light Range  | 2.7 to 13.5 mm: up to 40 m; 7 to 35 mm: up to 50 m                                     |  |  |  |  |  |
| Smart Supplement Light  | Yes  |  |  |  |  |  |
| IR Wavelength           | 850 nm   |  |  |  |  |  |
| HEOP                    |  |  |  |  |  |  |
|                         | Memory: 40 MB,   |  |  |  |  |  |
| Open Resources          | Smart RAM: 350 MB,   |  |  |  |  |  |
|                         | eMMC: 2 GB   |  |  |  |  |  |
| Computing Power         | 1.5 TOPS   |  |  |  |  |  |
| Open Capability         | HEOP 2.0 OpendevSDK  |  |  |  |  |  |
| Deep Learning Structure | Caffe, PyTorch, TensorFlow, PaddlePaddle, ONNX   |  |  |  |  |  |
| Programming Language    | C, C++   |  |  |  |  |  |
| Video                   |  |  |  |  |  |  |
|                         | 50 Hz:   |  |  |  |  |  |
| Main Stream             | 25 fps (3840 × 2160, 3200 × 1800, 2688 × 1520, 1920 × 1080, 1280 × 720)                |  |  |  |  |  |
|                         | 60 Hz:   |  |  |  |  |  |
|                         | 24 fps (3840 × 2160)   |  |  |  |  |  |
|                         | 30 fps (3200 × 1800, 2688 × 1520, 1920 × 1080, 1280 × 720)                             |  |  |  |  |  |
| Sub-Stream              | 50 Hz: 25 fps (1280 × 720, 640 × 480, 640 × 360)                                       |  |  |  |  |  |
|                         | 60 Hz: 30 fps (1280 × 720, 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)                          |  |  |  |  |  |



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| Fourth Stream               | 50 Hz: 10 fps (1280 × 720, 640 × 480, 640 × 360)<br>60 Hz: 10 fps (1280 × 720, 640 × 480, 640 × 360) |  |  |  |  |
|-----------------------------|--|--|--|--|--|
|                             | Main stream: H.265/H.264/H.264+/H.265+,  |  |  |  |  |
|                             | Sub-stream: H.265/H.264/MJPEG,   |  |  |  |  |
| Video Compression           | Third stream: H.265/H.264,   |  |  |  |  |
|                             | Fourth stream: H.265/H.264/MJPEG   |  |  |  |  |
| 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)    |  |  |  |  |  |
| Target Cropping             | 5 fixed regions for main stream and sub-stream<br>Yes  |  |  |  |  |
| Audio                       | 165  |  |  |  |  |
| Audio Compression           | G.711/G.722.1/G.726/MP2L2/PCM/MP3/AAC-LC   |  |  |  |  |
| Audio Compression           |  |  |  |  |  |
| 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                     |  |  |  |  |  |
|                             | TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP, UPnP, SMTP,                         |  |  |  |  |
| Protocols                   | IGMP, 802.1X, QoS, IPv4, IPv6, UDP, Bonjour, SSL/TLS, PPPoE, SFTP, ARP, SNMP,                        |  |  |  |  |
|                             | WebSocket, WebSockets, SRTP  |  |  |  |  |
| Simultaneous Live View      | Up to 6 channels   |  |  |  |  |
| API                         | ONVIF (Profile S, Profile G, Profile T), ISAPI, SDK, ISUP  |  |  |  |  |
| User/Host                   | Up to 32 users   |  |  |  |  |
|                             | 3 user levels: administrator, operator, and user   |  |  |  |  |
|                             | Password protection, complicated password, HTTPS encryption, 802.1X authentication                   |  |  |  |  |
|                             | (EAP-TLS, EAP-LEAP, EAP-MD5), watermark, IP address filter, basic and digest                         |  |  |  |  |
| Security                    | authentication for HTTP/HTTPS, WSSE and digest authentication for ONVIF, RTP/RTSP                    |  |  |  |  |
|                             | over HTTPS, control timeout settings, security audit log, TLS 1.1/1.2/1.3, host                      |  |  |  |  |
|                             | authentication (MAC address)   |  |  |  |  |
|                             | NAS (NFS, SMB/CIFS), Auto Network Replenishment (ANR),   |  |  |  |  |
| Network Storage             | Together with high-end Hikvision memory card, memory card encryption and health                      |  |  |  |  |
|                             | detection are supported.   |  |  |  |  |
| Client                      | iVMS-4200, Hik-Connect, Hik-Central  |  |  |  |  |
|                             | Plug-in required live view: IE 10, IE 11,  |  |  |  |  |
| Web Browser                 | Plug-in free live view: Chrome 57.0+, Firefox 52.0+, Edge 89+,                                       |  |  |  |  |
|                             | Local service: Chrome 57.0+, Firefox 52.0+, Edge 89+   |  |  |  |  |
| 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   |  |  |  |  |
|                             | age Enhancement BLC, HLC, 3D DNR, Defog  |  |  |  |  |



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| SNR                    | ≥ 52 dB   |  |  |  |  |
|------------------------|---|--|--|--|--|
| -                      |   |  |  |  |  |
| Privacy Mask           | 4 programmable polygon privacy masks  |  |  |  |  |
| 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 card, up to 512 G        |  |  |  |  |
|                        | 1 input (line in), 3.5 mm connector, max. input amplitude: 3.3 Vpp, input impedance:    |  |  |  |  |
| Audio                  | 4.7 KΩ, interface type: non-equilibrium,  |  |  |  |  |
|                        | 1 output (line out), 3.5 mm connector, 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)   |  |  |  |  |
| Reset Key              | Yes   |  |  |  |  |
| Event                  |   |  |  |  |  |
| Basic Event            | Motion detection (support alarm triggering by specified target types (human and         |  |  |  |  |
|                        | vehicle)), video tampering alarm, exception   |  |  |  |  |
|                        | Line crossing detection, intrusion detection, region entrance detection, region exiting |  |  |  |  |
| Smart Event            | detection (support alarm triggered by specified target types (human and vehicle)),      |  |  |  |  |
|                        | scene change detection, audio exception detection, defocus detection                    |  |  |  |  |
| Linkogo                | Upload to FTP/NAS/memory card, notify surveillance center, send email, trigger alarm    |  |  |  |  |
| Linkage                | output, trigger recording, trigger capture, audible warning                             |  |  |  |  |
| Deep Learning Function |   |  |  |  |  |
| Face Capture           | Yes   |  |  |  |  |
| People Counting        | Yes   |  |  |  |  |
| General                |   |  |  |  |  |
| -                      | 12 VDC ± 25%, 1.25 A, max. 15 W, two-core terminal block,                               |  |  |  |  |
| Power                  | PoE: IEEE 802.3at, Class 4, max. 18 W   |  |  |  |  |
| Material               | Metal   |  |  |  |  |
| Dimension              | Ø153.5 mm × 133.1 mm (Ø6.0" × 5.2")   |  |  |  |  |
| Package Dimension      | 244 mm × 174 mm × 173 mm (9.6" × 6.9" × 6.8")   |  |  |  |  |
| Weight                 | Approx. 885 g (1.9 lb.)   |  |  |  |  |
| With Package Weight    | Approx. 1750 g (3.9 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)               |  |  |  |  |
| General Function       | Heartbeat, anti-banding, mirror, flash log, password reset via email, pixel counter     |  |  |  |  |
|                        | 33 languages: English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, |  |  |  |  |
|                        | Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish,   |  |  |  |  |
| Language               | Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, |  |  |  |  |
|                        | Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil), Ukrainian         |  |  |  |  |
| Approval               |   |  |  |  |  |
|                        | CE-EMC: EN 55032: 2015, EN 61000-3-2:2019, EN 61000-3-3: 2013+A1:2019, EN               |  |  |  |  |
| EMC                    | 50130-4: 2011 +A1: 2014,  |  |  |  |  |
|                        | IC: ICES-003: Issue 7,  |  |  |  |  |
|                        | KC: KN32: 2015, KN35: 2015  |  |  |  |  |
|                        | NG. NINJZ. ZULJ, NINJJ. ZULJ  |  |  |  |  |



| Safety      | UL: UL 62368-1,                                |  |  |
|-------------|--|--|--|
|             | CB: IEC 62368-1: 2014+A11,                     |  |  |
|             | CE-LVD: EN 62368-1: 2014/A11: 2017,            |  |  |
|             | BIS: IS 13252 (Part 1): 2010/IEC 60950-1: 2005 |  |  |
|             | CE-RoHS: 2011/65/EU,                           |  |  |
| Environment | WEEE: 2012/19/EU,                              |  |  |
|             | Reach: Regulation (EC) No 1907/2006            |  |  |
| Protection  | IP66: IEC 60529-2013, IK10: IEC 62262:2002     |  |  |

## 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.

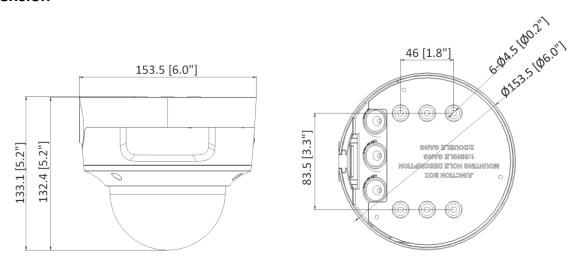
This model has NO SPECIFIC PROTECTION.

| Level                  | Description   |  |  |
|------------------------|---|--|--|
| Top-level protection   | Hikvision products at this level are equipped for use in areas where professional anti-<br>corrosion protection is a must. Typical application scenarios include coastlines, docks,<br>chemical plants, and more.   |  |  |
| Moderate protection    | Hikvision products at this level are equipped for use in areas with moderate anti-<br>corrosion demands. Typical application scenarios include coastal areas about 2<br>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-<br>corrosion protection is needed.   |  |  |

#### Available Model

DS-2CD3786G2-IZS (2.7 to 13.5 mm) (H) DS-2CD3786G2-IZS (7 to 35 mm) (H)

#### Dimension



Unit: mm (inch)



### Accessory

### Optional

| DS-1473ZJ-155B<br>Wall Mount | DS-1476ZJ-SUS<br>Corner Mount        | DS-1253ZJ-L<br>Rain Shade | DS-1471ZJ-155<br>Pendant Mount | DS-1227ZJ-DM37<br>In-Ceiling Mount |
|------------------------------|--------------------------------------|---------------------------|--------------------------------|------------------------------------|
| e                            |                                      |                           |                                |                                    |
| DS-1473ZJ-155<br>Wall Mount  | DS-1475ZJ-SUS<br>Vertical Pole Mount |                           |                                |                                    |
|                              |                                      |                           |                                |                                    |

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