

## DS-2CD2086G2H-I(U)

8 MP AcuSense Powered-by-Darkfighter Fixed Mini Bullet Network Camera

AcuSense

Powered by

**DarkFighter**



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.

- High quality imaging with 8 MP resolution
- Excellent low-light performance via powered-by-DarkFighter technology
- Clear imaging against strong back light due to 120 dB WDR technology
- Efficient H.265+ compression technology
- Focus on human and vehicle classification based on deep learning
- -U: Built-in microphone for real-time audio security
- Water and dust resistant (IP67)

## ▪ Specification

| Camera                      |                                                                                                                                                                                      |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Image Sensor                | 1/1.8" Progressive Scan CMOS                                                                                                                                                         |
| Max. Resolution             | 3840 × 2160                                                                                                                                                                          |
| Min. Illumination           | Color: 0.0008 Lux @ (F1.0, 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 360°, tilt: 0° to 90°, rotate: 0° to 360°                                                                                                                                 |
| Lens                        |                                                                                                                                                                                      |
| Lens Type                   | Fixed focal lens, 2.8 and 4 mm optional                                                                                                                                              |
| Focal Length & FOV          | 2.8 mm, horizontal FOV 105.1°, vertical FOV 54.8°, diagonal FOV 128.2°<br>4 mm, horizontal FOV 90.0°, vertical FOV 45.8°, diagonal FOV 109.4°                                        |
| Lens Mount                  | M16                                                                                                                                                                                  |
| Iris Type                   | Fixed                                                                                                                                                                                |
| Aperture                    | F1.0                                                                                                                                                                                 |
| Depth of Field              | 2.8 mm: 3.3 m to ∞<br>4 mm: 3.8 m to ∞                                                                                                                                               |
| DORI                        |                                                                                                                                                                                      |
| DORI                        | 2.8 mm: D: 89 m, O: 35 m, R: 17 m, I: 8 m<br>4 mm: D: 109 m, O: 43 m, R: 21 m, I: 10 m                                                                                               |
| Illuminator                 |                                                                                                                                                                                      |
| Supplement Light Type       | IR                                                                                                                                                                                   |
| Supplement Light Range      | Up to 40 m                                                                                                                                                                           |
| Smart Supplement Light      | Yes                                                                                                                                                                                  |
| IR Wavelength               | 850 nm                                                                                                                                                                               |
| Video                       |                                                                                                                                                                                      |
| Main Stream                 | 50 Hz:<br>25 fps (3840 × 2160, 3200 × 1800, 2688 × 1520, 1920 × 1080, 1280 × 720)<br>60 Hz:<br>24 fps (3840 × 2160)<br>30 fps (3200 × 1800, 2688 × 1520, 1920 × 1080, 1280 × 720)    |
| Sub-Stream                  | 50 Hz: 25 fps (1280 × 720, 640 × 480, 640 × 360)<br>60 Hz: 30 fps (1280 × 720, 640 × 480, 640 × 360)                                                                                 |
| Third Stream                | 50 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360)<br>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+,<br>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                                                                                                                                                                         |
| 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             | -U: G.711/G.722.1/G.726/MP2L2/PCM/MP3/AAC-LC                                                                                                                                                                                                                                                                                                                                          |
| Audio Bit Rate                | -U: 64 Kbps (G.711ulaw/G.711alaw)/16 Kbps (G.722.1)/16 Kbps (G.726)/16 Kbps to 64 Kbps (AAC-LC)/32 to 192 Kbps (MP2L2)/8 to 320 Kbps (MP3)                                                                                                                                                                                                                                            |
| Audio Sampling Rate           | -U: 8 kHz/16 kHz/32 kHz/44.1 kHz/48 kHz                                                                                                                                                                                                                                                                                                                                               |
| Environment Noise Filtering   | -U: Yes                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Network</b>                |                                                                                                                                                                                                                                                                                                                                                                                       |
| Protocols                     | TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv4, IPv6, UDP, Bonjour, SSL/TLS, PPPoE, SNMP, WebSocket, WebSockets, SRTP, SFTP                                                                                                                                                                                               |
| 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<br>3 user levels: administrator, operator, and user                                                                                                                                                                                                                                                                                                                    |
| Security                      | Password protection, complicated password, HTTPS encryption, 802.1X authentication (EAP-TLS, EAP-LEAP, EAP-MD5), watermark, IP address filter, basic and digest authentication for HTTP/HTTPS, WSSE and digest authentication for Open Network Video Interface, RTP/RTSP over HTTPS, control timeout settings, security audit log, TLS 1.1/1.2/1.3, host authentication (MAC address) |
| Network Storage               | NAS (NFS, SMB/CIFS), Auto Network Replenishment (ANR)                                                                                                                                                                                                                                                                                                                                 |
| 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+, Edge 89+,<br>Local service: Chrome 57.0+, Firefox 52.0+, Edge 89+                                                                                                                                                                                                                   |
| <b>Image</b>                  |                                                                                                                                                                                                                                                                                                                                                                                       |
| 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                                                                                                                                                                                                                                                                                                                                                            |
| Image Enhancement             | BLC, HLC, 3D DNR                                                                                                                                                                                                                                                                                                                                                                      |
| SNR                           | ≥ 52 dB                                                                                                                                                                                                                                                                                                                                                                               |
| Wide Dynamic Range (WDR)      | 120 dB                                                                                                                                                                                                                                                                                                                                                                                |
| Privacy Mask                  | 4 programmable polygon privacy masks                                                                                                                                                                                                                                                                                                                                                  |
| <b>Interface</b>              |                                                                                                                                                                                                                                                                                                                                                                                       |
| 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 GB                                                                                                                                                                                                                                                                                                     |
| Built-in Microphone           | -U: Yes                                                                                                                                                                                                                                                                                                                                                                               |
| Reset Key                     | Yes                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Event</b>                  |                                                                                                                                                                                                                                                                                                                                                                                       |
| Basic Event                   | Motion detection (support alarm triggering by specified target types (human and vehicle)), video tampering alarm, exception                                                                                                                                                                                                                                                           |
| Linkage                       | Upload to FTP/NAS/memory card, notify surveillance center, send email, trigger recording, trigger capture                                                                                                                                                                                                                                                                             |
| Smart Event                   | Scene change detection                                                                                                                                                                                                                                                                                                                                                                |
| <b>Deep Learning Function</b> |                                                                                                                                                                                                                                                                                                                                                                                       |
| Face Capture                  | Yes                                                                                                                                                                                                                                                                                                                                                                                   |

|                                  |                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Perimeter Protection             | Line crossing, intrusion, region entrance, region exiting<br>Support alarm triggering by specified target types (human and vehicle)                                                                                                                                                                                                                   |
| <b>General</b>                   |                                                                                                                                                                                                                                                                                                                                                       |
| Power                            | 12 VDC $\pm$ 25%, 0.58 A, max. 7 W, $\varnothing$ 5.5 mm coaxial power plug, reverse polarity protection,<br>PoE: IEEE 802.3af, Class 3, max. 8.5 W                                                                                                                                                                                                   |
| Material                         | Front cover: metal, body: metal, bracket: Metal                                                                                                                                                                                                                                                                                                       |
| Dimension                        | $\varnothing$ 74.4 mm $\times$ 179.2 mm ( $\varnothing$ 2.9" $\times$ 7.1")                                                                                                                                                                                                                                                                           |
| Package Dimension                | 234 mm $\times$ 120 mm $\times$ 117 mm (9.2" $\times$ 4.7" $\times$ 4.6")                                                                                                                                                                                                                                                                             |
| Weight                           | Approx. 525 g (1.2 lb.)                                                                                                                                                                                                                                                                                                                               |
| With Package Weight              | Approx. 750 g (1.7 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, mirror, password reset via email, pixel counter, anti-banding                                                                                                                                                                                                                                                                              |
| 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 |
| <b>Approval</b>                  |                                                                                                                                                                                                                                                                                                                                                       |
| EMC                              | CE-EMC: EN 55032: 2015, EN 61000-3-2:2019, EN 61000-3-3: 2013+A1:2019, EN 50130-4: 2011 +A1: 2014,<br>IC: ICES-003: Issue 7,<br>RCM: AS/NZS CISPR 32: 2015                                                                                                                                                                                            |
| Safety                           | CB: IEC 62368-1: 2014+A11,<br>CE-LVD: EN 62368-1: 2014/A11: 2017                                                                                                                                                                                                                                                                                      |
| Environment                      | CE-RoHS: 2011/65/EU,<br>WEEE: 2012/19/EU,<br>Reach: Regulation (EC) No 1907/2006                                                                                                                                                                                                                                                                      |
| Protection                       | IP67: IEC 60529-2013                                                                                                                                                                                                                                                                                                                                  |

## ▪ 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.

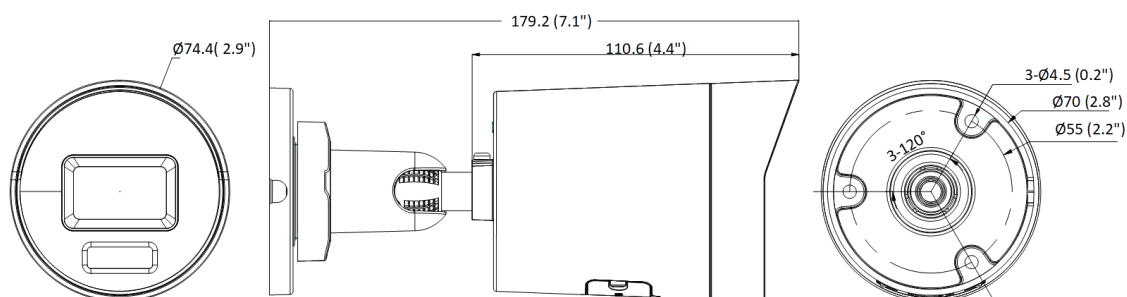
This model has NO SPECIFIC PROTECTION.

| 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-2CD2086G2H-I(2.8mm)  
DS-2CD2086G2H-I(4mm)  
DS-2CD2086G2H-IU(2.8mm)/Black  
DS-2CD2086G2H-IU(2.8mm)  
DS-2CD2086G2H-IU(4mm)

## Dimension



Unit: mm (inch)

## Accessory

### Optional

| DS-1275ZJ-SUS<br>Vertical Pole Mount                                                | DS-1276ZJ-SUS<br>Corner Mount                                                       | DS-1280ZJ-XS<br>Junction Box                                                          |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |
| DS-1275ZJ-SUS(Black)<br>Vertical Pole Mount                                         | DS-1276ZJ-SUS(Black)<br>Corner Mount                                                | DS-1280ZJ-XS(Black)<br>Junction Box                                                   |
|  |  |   |

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