# DS-2DF7A836IXG-EL
## 7A Series 8MP 36X DarkFighter IR Network Speed Dome

**DarkFighter 2.0**

Hikvision DS-2DF7A836IXG-EL(Y) 8 MP 36 × IR Network Speed Dome adopts 1/1.8" progressive scan CMOS chip. With the 36 × optical zoom lens, the camera offers more details over expansive areas.

This series of cameras can be widely used for wide ranges of high-definition, such as the rivers, forests, roads, railways, airports, ports, squares, parks, scenic spots, stations and large venues, etc.

Hikvision has been dedicated to develop products with security since established.

Hikvision always follows security by design principle and has adopted many methods of security technologies into our product development lifecycle, including terminal security, data security, application security, network security, and privacy protection. In the meantime, the security technologies used by Hikvision are all in compliance with local applicable laws and safety regulations. These security measures could enhance product's cyber security protection capability and protect your devices as well as your data from malicious cyber attacks.

- 1/1.8" Progressive Scan CMOS
- High quality imaging with 8 MP resolution
- 36 × optical zoom and 16 × digital zoom provide close up views over expansive areas
- Excellent low-light performance via DarkFighter 2.0 technology
- Clear imaging against strong back light due to 140 dB AWDR technology
- Supports rapid focus
- Smart Pan-Tilt Correction
- Built-in gyroscope to ensure stable image output
- Water and dust resistant (IP67), vandal proof (IK10) and corrosion resistant (NEMA 4X, optional)

## ▪ Specification

| Camera | |
|---|---|
| Image Sensor | 1/1.8 "　progressive scan CMOS |
| Max. Resolution | 3840 × 2160 |
| Min. Illumination | Color: 0.0005 Lux @ (F1.2, AGC ON),B/W: 0.0001 Lux @ (F1.2, AGC ON),0 Lux with IR |
| Shutter Speed | 1/30 s to 1/30,000 s |
| Day & Night | ICR |
| Zoom | 36 × optical,16 × digital |
| Slow Shutter | yes |
| **Lens** | |
| Focal Length | 6.0 mm to 216 mm |
| FOV | Horizontal field of view: 59.1° to 2.0°, vertical field of view: 34.1° to 1.1°, diagonal field of view: 67.1° to 2.3° |
| Focus | Auto,semi-auto,manual,rapid focus |
| Aperture | F1.2 |
| Zoom Speed | Approx. 4.5 s |
| **Illuminator** | |
| Supplement Light Range | IR distance: up to 300 m |
| **PTZ** | |
| Movement Range (Pan) | 360° |
| Movement Range (Tilt) | -20° to 90° (auto flip) |
| Pan Speed | Pan speed: configurable from 0.1° to 550°/s, preset speed: 550°/s,Up to MAX 700°/s |
| Tilt Speed | Tilt speed: configurable from 0.1° to 300°/s, preset speed 300°/s,Up to MAX 300°/s |
| Proportional Pan | yes |
| Presets | 300 |
| Preset Freezing | yes |
| Patrol Scan | 8 patrols, up to 32 presets for each patrol |
| Park Action | Preset,patrol scan |
| 3D Positioning | yes |
| PTZ Status Display | yes |
| Scheduled Task | Preset,patrol scan,dome reboot,dome adjust,aux output |
| Power-off Memory | yes |
| **Video** | |
| Sub-Stream | 50 Hz: 25 fps (704 × 576, 640 × 480, 352 × 288)<br>60 Hz: 30 fps (704 × 480, 640 × 480, 352 × 240) |
| Main Stream | 50 Hz: 100 fps (1920 × 1080) 50 fps (3840 × 2160, 3072 × 1728, 2560 × 1440, 1280 × 720) 60 Hz: 120 fps (1920 × 1080) 60 fps (3840 × 2160, 3072 × 1728, 2560 × 1440, 1280 × 720) *High frame rate is supported under monitoring mode only. |
| Third Stream | 50 Hz: 25 fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 576, 640 × 480, 352 × 288)<br>60 Hz: 30 fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 480, 640 × 480, 352 × 240) |
| Video Compression | Main stream: H.265+/H.265/H.264+/ H.264,<br>Sub-stream:　H.265/H.264/MJPEG,<br>Third stream: H.265/H.264/MJPEG |
| Video Bit Rate | 32 Kbps to 16384 Kbps |
| H.264 Type | baseline profile\|\|main profile\|\|high profile |

| H.265 Type | main profile |
|---|---|
| Scalable Video Coding (SVC) | yes |
| Region of Interest (ROI) | fixed region |
| **Audio** | |
| Audio Compression | G.711,G.722.1,G.726,MP2L2,PCM,AAC-LC |
| Audio Bit Rate | 64 Kbps (G.711)/16 Kbps (G.722.1)/16 Kbps (G.726)/32 to 192 Kbps (MP2L2)16 Kbps to 64 Kbps(AAC-LC) |
| **Network** | |
| Protocols | IPv4/IPv6,HTTP,HTTPS,802.1x,Qos,FTP,SMTP,UPnP,SNMP,DNS,DDNS,NTP,RTSP,RTCP,RTP,TCP/IP,UDP,IGMP,ICMP,DHCP,PPPoE,Bonjour,WebSocket,WebSockets |
| Simultaneous Live View | Up to 20 channels |
| API | ONVIF (Profile S, Profile G, Profile T, Profile M),ISAPI,SDK,ISUP |
| User/Host | Up to 32 users. 3 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 1.3,host authentication (MAC address),TPM 2.0 (FIPS 140-2 level 2) |
| Network Storage | NAS (NFS, SMB/CIFS) |
| Client | iVMS-4200,Hik-Connect,HikCentral Pro |
| Web Browser | IE11, Chrome 57.0+, Firefox 52.0+, Safari 11+ |
| **Image** | |
| Day/Night Switch | day, night, auto, scheduled-switch |
| Wide Dynamic Range (WDR) | 140 dB WDR |
| SNR | ≥52dB |
| Defog | yes |
| Image Stabilization | EIS (Built-in gyroscope to improve EIS performance) |
| Image Enhancement | BLC, HLC, 3D DNR |
| Privacy Mask | mask color or mosaic configurable,24 programmable polygon privacy masks |
| Regional Focus | yes |
| Regional Exposure | yes |
| **Interface** | |
| Video Output | CVBS: 1.0 V[p-p]/75 Ω, PAL/NTSC, BNC connector |
| Ethernet Interface | RJ45, self-adaptive 10M/100M Ethernet port |
| Audio | 1 input (line in), max. input amplitude: 2-2.4 vpp, input impedance: 1 KΩ ± 10%, 1 output (line out), line level, output impedance: 600 Ω |
| Alarm | 7 alarm inputs, 2 alarm outputs |
| RS-485 | HIKVISION, Pelco-P, Pelco-D, self-adaptive |
| On-board Storage | Built-in memory card slot, support microSD/microSDHC/microSDXC card, up to 1 TB. |
| **Event** | |
| Basic Event | Motion detection,video tampering alarm,exception (network disconnected, IP address conflict, illegal login, HDD full, HDD error),alarm input and output,vandal-proof alam,audio exception detection,unattended baggage detection, object removal detection |
| Linkage | Upload to FTP/NAS/memory card,notify surveillance center,send email,trigger recording,and PTZ actions (such as preset, patrol scan) |

| **Deep Learning Function** | |
|---|---|
| Face Capture | Detects up to 30 faces simultaneously, <br> Uploads face with background and closed-up face pictures,Supports detecting, tracking, capturing, grading, selecting of face in motion, and outputs the best face picture |
| Perimeter Protection | Line crossing detection, region entrance detection, intrusion detection, region exiting detection |
| Multi-Target-Type Detection | Supports simultaneous detection and capture of human body, face and vehicle, <br> Gets 7 face features, 14 human body features and 8 vehicle features |
| Face Comparison | Up to 10 face libraries. 30000 faces for each library. 150000 faces in total, <br> Recognizes face identity via face modeling, grading and comparing to those in face library, <br> Supports face library encryption |
| Road Traffic and Vehicle Detection | Smart Function: <br> Support license plate recognition of vehicles and motorcycles (only in checkpoint scenario) <br> Support vehicle attribute detection, including vehicle type, color, brand, driving direction, etc. <br> Support vehicle and non-vehicle counting <br> Blocklist and allowlist: up to 10,000 records <br> LPR Countries/Regions: <br> 4 areas (Europe, Middle East, Asia-Pacific, Africa) and more than 124 countries/regions <br> Accuracy (Under recommended installation and lighting conditions): <br> License plate recognition rate ≥98% <br> Capture rate ≥99% <br> Driving direction accuracy rate ≥98% <br> Vehicle Capture Speed: <br> Front installation in checkpoint scenario: up to 120 km/h <br> Side installation: up to 80 km/h <br> Capture Mode: License Plate and Vehicle Mode, Vehicle Priority Mode |
| **Linkage and Tracking** | |
| Smart Tracking | Manual tracking, auto-tracking 3.0 |
| Object Tracking | Support person arming. When the device detects the armed face or human body in the monitoring scene, it triggers alarms, and tracks and captures the target. During the tracking, the target location and other related information are uploaded. |
| **General** | |
| Power | 36 VDC± 25%, max. 90 W (Max. 52 W, including max. 6.4 W for IR and max. 8 W for heater) <br> PoE 802.3bt, type4, class8, max. 90W (Max. 52 W, including max. 6.4 W for IR and max. 8 W for heater) |
| Dimension | Ø214.95 mm × 297.1 mm (Ø8.46" × 11.7") |
| Weight | Approx. 5 kg (11.02 lb.) |
| Operating Condition | Temperature: -40°C to 70°C (-40°F to 158°F) , Humidity: ≤ 95% |
| General Function | mirror, password protection, watermark, IP address filter |

| 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 | CE-EMC (EN 55032:2015, EN 61000-3-2:2019, EN 61000-3-3: 2013, EN 50130-4:2011 +A1: 2014),IC VoC (ICES-003: Issue 6, 2019),RCM (AS/NZS CISPR 32: 2015),KC (KN 32: 2015, KN 35: 2015) |
| Safety | CB (IEC 62368-1: 2014 + A11),CE-LVD (EN 62368-1: 2014/A11: 2017),LOA (IEC/EN 60950-1) |
| Environment | CE-RoHS (2011/65/EU); WEEE (2012/19/EU); Reach (Regulation (EC) No 1907/2006) |
| Protection | Lightning Protection, Surge Protection and Voltage Transient Protection,±6kV Line to Gnd, ±3kV Line to Line,IEC61000-4-5\|\|IP67 Standard\|\|IK10 |
| Anti-Corrosion Protection | -Y: NEMA 4X (NEMA 250-2018) |

## ▪ DORI

The DORI (detect, observe, recognize, identify) distance gives the general idea of the camera ability to distinguish persons or objects within its field of view. It is calculated based on the camera sensor specification and the criteria given by EN 62676-4: 2015.

| DORI | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|
| Definition | 25 px/m | 63 px/m | 125 px/m | 250 px/m |
| Distance(Tele) | 4320.0 m (14173.2 feet) | 1714.3 m (5624.3 feet) | 864.0 m (2834.6 feet) | 432.0 m (1417.3 feet) |

## ▪ 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.
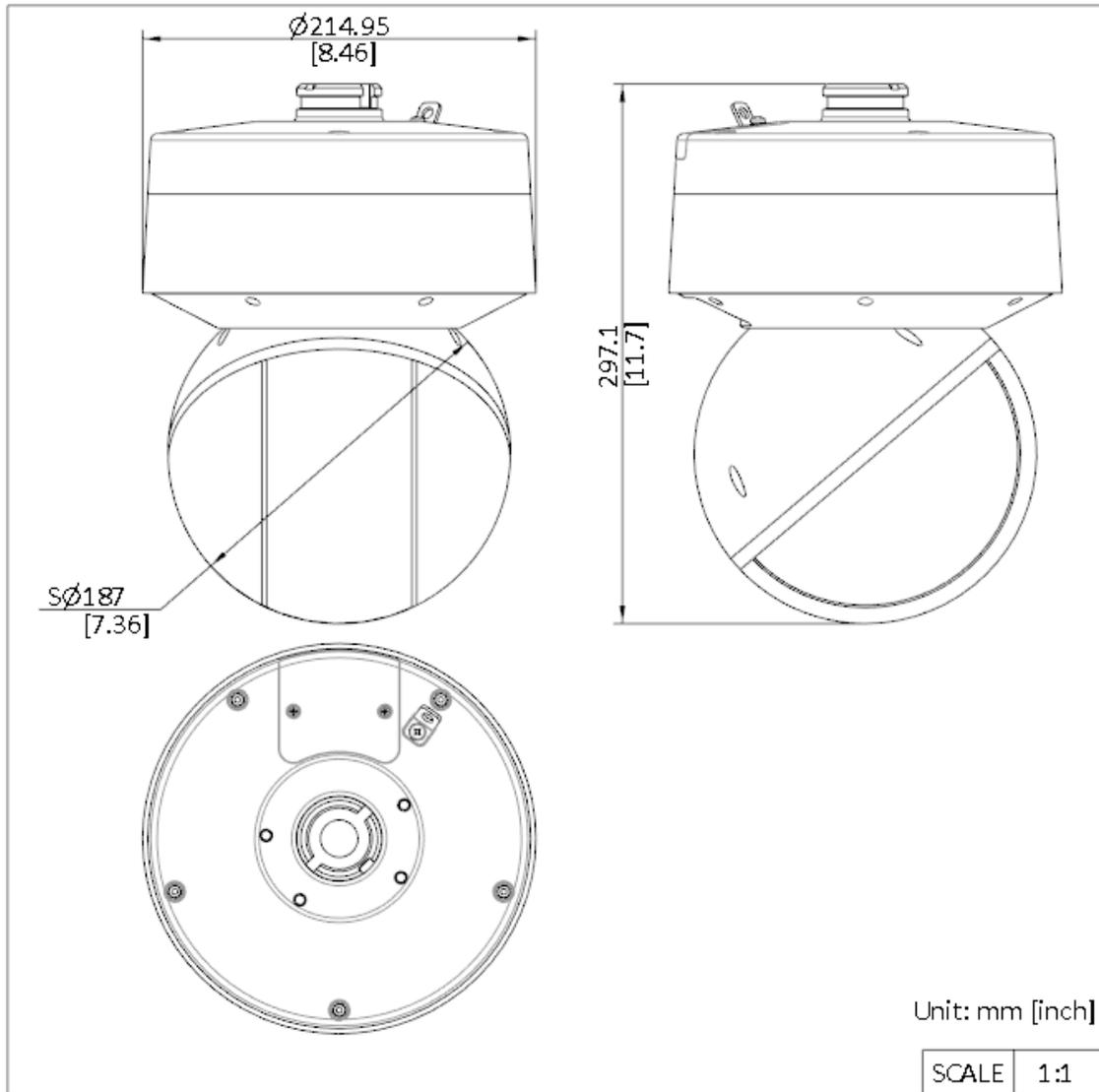
DS-2DF7A836IXG-ELY has MODERATE protection. DS-2DF7A836IXG-EL has NO SPECIFIC protection.

| 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-2DF7A836IXG-EL

## ▪ Dimension

Ø214.95
[8.46]

297.1
[11.7]

SØ187
[7.36]

Unit: mm [inch]

SCALE 1:1

▪ **Accessory**

▪ **Optional**

| DS-2HZ9SDF37G-Y | DS-4660ZJ-PC | DS-4612ZJ-PA | DS-1674ZJ-P | DS-1684ZJ-P |
| --- | --- | --- | --- | --- |

| DS-1673ZJ-P | DS-4650ZJ-PC | DS-4603ZJ-PA | DS-1276ZJ-P |
| --- | --- | --- | --- |

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