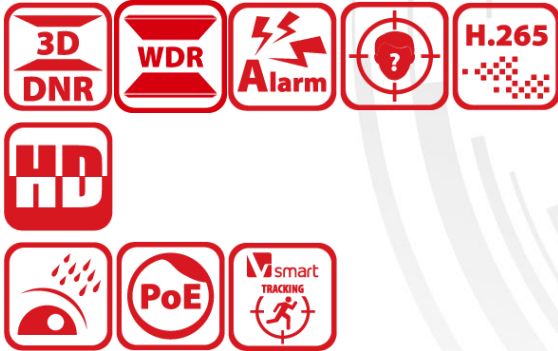# HIKVISION®

DS-2DF7C445IXR-AEL(PE)
4 MP 45 × IR Network Speed Dome

Hikvision DS-2DF7C445IXR-AEL(PE) 4 MP 45 × IR Network Speed Dome adopts 1/1.8" progressive scan CMOS chip. With the 45 × 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 rivers, forests, roads, railways, airports, ports, squares, parks, scenic spots, stations and large venues, etc.

- 1/1.8" Progressive Scan CMOS
- High quality imaging with 4 MP resolution
- Excellent low-light performance with powered-by-DarkFighter technology
- 45× optical zoom and 16× digital zoom provide close up views over expansive areas
- 120 dB WDR, 3D DNR, HLC, Smart IR
- Expansive night view with up to 300 m IR distance
- Supports rapid focus
- Water and dust resistant (IP66)

▪ 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)	4020 m (13189 ft)	1595.2 m (5233.6 ft)	804 m (2637.8 ft)	402 m (1318.9 ft)

▪ Specification

Camera	
Image Sensor	1/1.8" progressive scan CMOS
Min. Illumination	Color: 0.005 Lux @ (F1.5, AGC ON), B/W: 0.0005 Lux @ (F1.5, AGC ON), 0 Lux with IR
Shutter Speed	1/3 s to 1/30,000 s
Slow Shutter	Yes
Day & Night	IR cut filter
HLC	Yes
Zoom	45 × optical, 16 × digital
Max. Resolution	2560 × 1440
Lens	
FOV	Horizontal field of view: 63.3° to 1.8°
	Vertical field of view: 37.6° to 1.1°
	Diagonal field of view: 70.8° to 2.1°
Focus / Iris control	Auto, semi-auto, manual, rapid focus / Auto, manual
Zoom Speed	Approx. 8.5 s
Focal Length	5.9 to 265.5 mm
Aperture	Max. F1.5
Illuminator	
Supplement Light Type	IR
Supplement Light Range	Up to 300 m
PTZ	
Movement Range (Pan)	360°
Movement Range (Tilt)	-20° to 90° (auto flip 180°)
Pan Speed	Pan speed: configurable from 0.1° to 160°/s; preset speed: 240°/s
Tilt Speed	Tilt speed: configurable from 0.1° to 120°/s, preset speed 200°/s
Proportional Pan	Yes
Presets	300
Patrol Scan	8 patrols, up to 32 presets for each patrol
Pattern Scan	4 pattern scans, record time over 10 minutes for each scan
Power-off Memory	Yes
Park Action	Preset, pattern scan, patrol scan, auto scan, tilt scan, random scan, frame scan, panorama scan
3D Positioning	Yes
PTZ Status Display	Yes
Preset Freezing	Yes

Scheduled Task	Preset, pattern scan, patrol scan, auto scan, tilt scan, random scan, frame scan, panorama scan, dome reboot, dome adjust, aux output
Video	
Main Stream	50 Hz: 25 fps (2560 × 1440, 1920 × 1080, 1280 × 960, 1280 × 720), 60 Hz: 30 fps (2560 × 1440, 1920 × 1080, 1280 × 960, 1280 × 720)
Sub-Stream	50 Hz: 25 fps (704 × 576, 640 × 480, 352 × 288); 60 Hz: 30 fps (704 × 480, 640 × 480, 352 × 240)
Third Stream	50 Hz: 25 fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 576, 640 × 480, 352 × 288); 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 Sub-stream: H.265/H.264/MJPEG Third stream: H.265/H.264/MJPEG
Video Bit Rate / Control	32 Kbps to 16384 Kbps / CBR, VBR
H.264 Type	Baseline profile, main profile, high profile
H.265 Type	Main profile
Scalable Video Coding (SVC)	H.264 and H.265 encoding
Region of Interest (ROI)	8 fixed regions for each stream
Audio	
Audio Compression	G.711alaw, G.711ulaw, G.722.1, G.726, MP2L2, PCM
Audio Bit Rate	MP2L2: 32 kbps, 40 kbps, 48 kbps, 56 kbps, 64 kbps, 80 kbps, 96 kbps, 112 kbps, 128 kbps, 144 kbps, 160 kbps
Network	
Network Storage	NAS (NFS, SMB/CIFS), ANR
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
API	Open Network Video Interface (Profile S, Profile G, Profile T), ISAPI, SDK
User/Host	Up to 32 users. 3 user levels: administrator, operator, and user
Security	Password protection, complicated password, HTTPS encryption, 802.1X authentication, watermark, IP address filter, control timeout settings, security audit log, TLS 1.2, host authentication (MAC address)
Client	iVMS-4200, HikCentral, Hik-Connect
Web Browser	IE11, Chrome 57.0+, Firefox 52.0+, Safari 11+
Image	
Image Enhancement	BLC, HLC, 3D DNR
Wide Dynamic Range (WDR)	120 dB
Defog	Digital defog
Image Stabilization	EIS (Built-in gyroscope to improve EIS performance)
Regional Exposure	Yes
Regional Focus	Yes
Image Settings	Saturation, brightness, contrast, sharpness, gain, and white balance adjustable by client software or web browser
Image Parameters Switch	Yes
Privacy Mask	24 programmable polygon privacy masks, mask color or mosaic configurable
SNR	≥ 52 dB

Interface	
Ethernet Interface	1 RJ45 10M/100M self-adaptive Ethernet port
On-board Storage	Built-in memory card slot, support microSD/microSDHC/microSDXC card, up to 256 GB
Alarm	7 inputs, 2 outputs
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
RS-485	1 RS-485 (Half duplex, HIKVISION, Pelco-P, Pelco-D, self-adaptive)
Event	
Basic Event	Motion detection, video tampering alarm, exception, alarm input and output
Smart Event	Line crossing detection, intrusion detection, region entrance detection, region exiting detection, unattended baggage detection, object removal detection, audio exception detection
Smart Tracking	Manual tracking, auto-tracking
Alarm Linkage	Upload to FTP/NAS/memory card, notify surveillance center, send email, trigger alarm output, trigger recording, and PTZ actions (such as preset, patrol scan, pattern scan)
Deep Learning Function	
Face Capture	Detects up to 15 faces simultaneously. Supports detecting, capturing, grading, selecting of face in motion, and outputs the best face picture
General	
Power	24 VAC, 3.0 A, 50/60 Hz & Hi-PoE, 42.5 to 57 VDC, 1.41 A (Max. 40 W, includes max. 16 W for IR and max. 10 W for heater)
General Function	Mirror, password protection
Operating Condition	-40 °C to 70 °C (-40 °F to 158 °F). Humidity 95% or less (non-condensing)
Dimension	Ø 226 mm × 354 mm (Ø 8.90" × 13.94")
Weight	Approx. 5.0 kg (11.02 lb.)
Approval	
EMC	FCC SDoC (47 CFR Part 15, Subpart B); CE-EMC (EN 55032: 2015, EN 61000-3-2: 2019, EN 61000-3-3: 2013, EN 50130-4: 2011 +A1: 2014); RCM (AS/NZS CISPR 32: 2015); IC VoC (ICES-003: Issue 6, 2019); KC (KN 32: 2015, KN 35: 2015)
Safety	UL (UL 62368-1) CB (IEC 60950-1:2005 + Am 1:2009 + Am 2:2013, IEC 62368-1:2014); CE-LVD (EN 62368-1:2014+A11:2017), BIS (IS 13252(Part 1):2010+A1:2013+A2:2015); LOA (SANS IEC60950-1)
Environment	CE-RoHS (2011/65/EU); WEEE (2012/19/EU); Reach (Regulation (EC) No 1907/2006)
Protection	IP66 (IEC 60529-2013), TVS 6000V lightning protection, surge protection and voltage transient protection

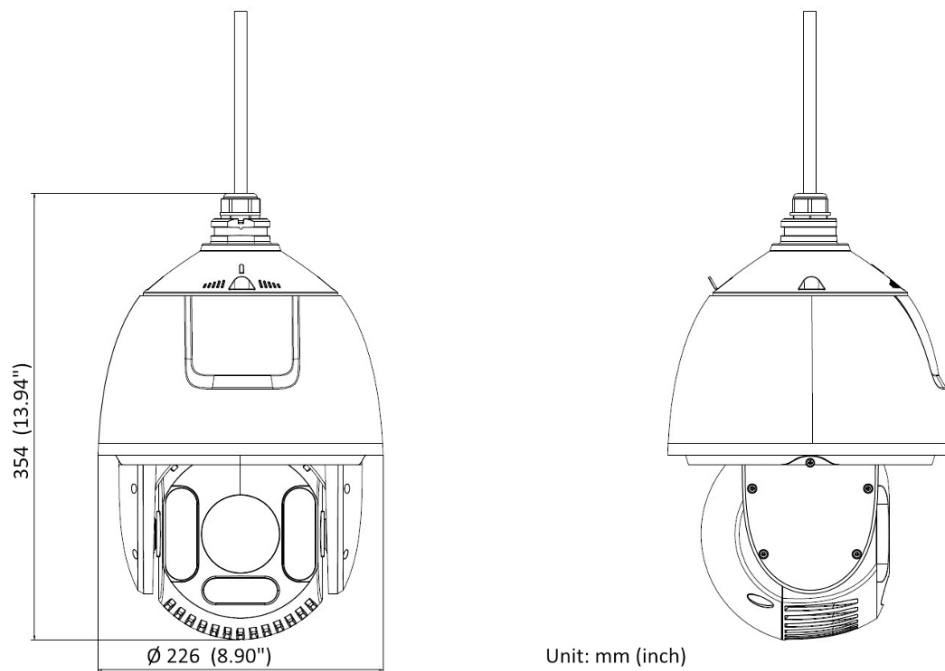▪ **Available Model**

DS-2DF7C445IXR-AEL(PE)

▪ 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.

▪ Dimension

354 (13.94")

Ø 226 (8.90")

Unit: mm (inch)

▪ Accessory

▪ Optional

DS-1602ZJ	DS-1602ZJ-pole	DS-1602ZJ-corner	DS-1661ZJ

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