

**iDS-2CD7A46G0/H-IZHS(Y)****4 MP IR Varifocal Bullet Network Camera ANPR Function**

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.

Designed over Hikvision Embedded Open Platform (HEOP) 2.0, support ANPR, signed by Hikvision, that let work together with different companies or factories, providing and ensure a total integration for different markets as safe city, intelligent traffic systems and others.

- Hikvision's Embedded Open Platform 2.0
- ANPR VCA function supported by HEOP platform
- Supports 2 Tops computing power, 150 MB system memory, 1024 MB smart RAM, and 2 GB eMMC storage for sharing resources
- High quality imaging with 4 MP resolution
- Excellent low-light performance via Dark Fighter technology
- Clear imaging against strong back light due to 140 dB WDR technology
- Efficient H.265+ compression technology to save bandwidth and storage
- 5 streams to meet a wide variety of applications
- Water and dust resistant (IP67) and vandal proof (IK10)

## ■ Specification

### Camera

Image Sensor	1/1.8" Progressive Scan CMOS
Max. Resolution	2688 × 1520
Min. Illumination	Color: 0.0005 Lux @ (F1.2, AGC ON), B/W: 0.0001 Lux @ (F1.2, AGC ON), B/W: 0 Lux with IR
Shutter Time	1 s to 1/100,000 s
Day & Night	IR cut filter

### Lens

Focal Length & FOV	2.8 to 12 mm, horizontal FOV 114.6° to 41.8°, vertical FOV 59.3° to 23.6°, diagonal FOV 141.3° to 48.1° 8 to 32 mm, horizontal FOV 42.5° to 15.2°, vertical FOV 23.4° to 8.7°, diagonal FOV 49.7° to 17.3°
Focus	Auto, Semi-auto, Manual
Iris Type	P-iris
Aperture	2.8 to 12 mm: F1.2, 8 to 32 mm: F1.6

### DORI

DORI	2.8 to 12 mm: D: 149.0 m, O: 59.1 m, R: 29.8 m, I: 14.9 m 8 to 32 mm: D: 400 m, O: 158.7 m, R: 80 m, I: 40 m
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### Illuminator

Supplement Light Type	IR
Supplement Light Range	2.8 to 12 mm: Monitoring: 50 m; 8 to 32 mm: Monitoring: 100 m
Smart Supplement Light	Yes
IR Wavelength	850 nm

### HEOP

Open Resources	Memory: 150 MB, Smart RAM: 1024 MB, eMMC: 2 GB
Computing Power	2 TOPS
Open Capability	HEOP 2.0 OpendevSDK
Deep Learning Structure	Caffe, PyTorch, TensorFlow
Programming Language	C, C++

### Video

Main Stream	50 Hz: 25 fps (2688 × 1520, 2560 × 1440, 1920 × 1080, 1280 × 720) 60 Hz: 30 fps (2688 × 1520, 2560 × 1440, 1920 × 1080, 1280 × 720)
Sub-Stream	50 Hz: 25 fps (704 × 576, 640 × 480) 60 Hz: 30 fps (704 × 480, 640 × 480)
Third Stream	50 Hz: 25 fps (1920 × 1080, 1280 × 720, 704 × 576, 640 × 480) 60 Hz: 30 fps (1920 × 1080, 1280 × 720, 704 × 480, 640 × 480)
Fourth Stream	50 Hz: 25 fps (704 × 576, 640 × 480) 60 Hz: 30 fps (704 × 480, 640 × 480)
Fifth Stream	50 Hz: 25 fps (704 × 576, 640 × 480) 60 Hz: 30 fps (704 × 480, 640 × 480)

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, Fourth stream: H.265/H.264/MJPEG, Fifth stream: H.265/H.264/MJPEG
Video Bit Rate	32 Kbps to 8 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)	4 fixed regions for each stream
Target Cropping	Yes
<b>Audio</b>	
Audio Type	Mono sound
Audio Compression	G.711/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
<b>Network</b>	
Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, PPPoE, NTP, UPnP, SMTP, SNMP, IGMP, 802.1X, QoS, IPv4/v6, UDP, ARP, Bonjour, WebSocket, WebSockets
Simultaneous Live View	Up to 20 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, 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, TLS 1.2, TLS 1.3, host authentication (MAC address), FIPS 140-2 supported by factory. Encryption: HTTPS encryption, support TLS/SSL and AES 128 bits on transmission and data storage (by customization), safe start and IoT supported by customization
Client	iVMS-4200, Hik-Connect
Web Browser	Plug-in required live view: IE 10, IE 11, Plug-in free live view: Chrome 57.0+, Firefox 52.0+, Edge 89+, Safari 11+, Local service: Chrome 57.0+, Firefox 52.0+, Edge 89+
Network Storage	NAS (NFS, SMB/CIFS), Auto Network Replenishment (ANR), Together with high-end Hikvision memory card, memory card encryption and healthdetection are supported.
<b>Image</b>	
Image Parameters Switch	Yes
Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, AGC, white balance, adjustable by client software or web browser
Day/Night Switch	Day, Night, Auto, Schedule, Alarm Trigger
Wide Dynamic Range (WDR)	140 dB
Image Enhancement	BLC, HLC, 3D DNR, Defog
Privacy Mask	8 programmable polygon privacy masks, mask color or mosaic configurable

SNR	≥ 52 dB
Picture Overlay	LOGO picture can be overlaid on video with 128 × 128 24 bit bmp format.
<b>Interface</b>	
Video Output	1 Vp-p Composite Output (75 Ω/CVBS) (Only for debugging)
Ethernet Interface	1 RJ45 10 M/100 M/1000 M self-adaptive Ethernet port
On-Board Storage	Built-in memory card slot, support microSD/microSDHC/microSDXC card, up to 256 GB
Audio	1 input (line in), 3.5 mm connector, three-contact, max. input amplitude: 3.3 Vpp, input impedance: 4.7 KΩ, interface type: non-equilibrium, 1 output (line out), 3.5 mm connector, three-contact, max. output amplitude: 3.3 Vpp, output impedance: 100 Ω, interface type: non-equilibrium, mono sound
Alarm	2 inputs, 2 outputs (max. 24 VDC/24 VAC, 1 A)
RS-485	1 RS-485 (Half duplex, HIKVISION, Pelco-P, Pelco-D, self-adaptive)
Reset Key	Yes
Power Output	12 VDC, max. 100 mA
<b>Event</b>	
Basic Event	Motion detection, video tampering alarm, network disconnected, IP address conflict, illegal login, HDD full, HDD error, abnormal restart, video quality diagnosis
Smart Event	scene change detection, audio exception detection, defocus detection
Linkage	Upload to FTP/NAS/memory card, notify surveillance center, send email, trigger alarm output, trigger recording, trigger capture, audible warning
<b>ANPR Function</b>	
Accuracy (Under recommended installation and lighting conditions)	Capture rate > 99%, Vehicle moving direction recognition accuracy > 98.5%, LPR accuracy > 98%, Mistaken capture rate < 2%
Smart function	Traffic flow, Lane change, Wrong-way driving
No License or hiding Plate Detection	Supported
Motorcycle LPR	Supported
Vehicle Type	Car, Van, Bus, Truck, Light Truck, SUV(MPV), Pickup, Motorcycle, Tricycle
Vehicle Color	Red, yellow, green, blue, pink, purple, cyan, brown, white, grey, black, Recognizable at daytime only.
Capture Speed Range	0 to 120 km/h
LPR duplication or cloned	Supported by camera, by time, by location, by area managed by front end device or software. Detects the type of the vehicle and provide a report if the captured LPR don't belongs to the initial vehicle where the plate was read.
LPR Countries/Regions	Middle East: The United Arab Emirates (Abu Dhabi, Ajman, Dubai, Fujairah, Ras Al Khaimah, Sharjah and Umm Al Quwain), Qatar, Iraq, Egypt, Jordan, Kuwait, Saudi Arabia  America: Canada, Argentina, Chile, Paraguay, Uruguay, El Salvador, Bolivia, Colombia, Brazil, Ecuador, Peru, Mexico, Panama, Costa Rica, Trinidad and Tobago, the Dominican Republic, Guatemala  Europe: Turkey, Croatia, Slovakia, Czech Republic, Bulgaria, the Republic of North Macedonia, Hungary, Greece, Poland, France, Netherlands, Switzerland, Spain, the UK, Ireland, Germany, Italy, Austria, Israel, Palestinian, Belgium, Luxembourg, Albania, Kosovo, Serbia, Romania, Montenegro, Denmark, Finland, Sweden, Slovenia, Portugal  Africa: Nigeria, Kenya, Ivory Coast, South Africa, Tanzania, Mauritius, Morocco,

	Tunisia, Sierra Leone, Zambia, Ghana, Zimbabwe, Uganda, Angola, Ethiopia, Senegal
Vehicle Manufacturer	ASHOK LEYLAND, AUDI, ASTON MARTIN, ACURA, ALFA ROMEO, ARCFOX, BAIC, BEIBEN TRUCK, BLUECAR, BEDFORD, BENZ, BMW, BYD, BUFORI, BUICK, BENTLY, BUGATTI, BORGWARD, CADILLAC, CELIS, CHEVROLET, CITROEN, CHERY, CHRYSLER, CHANGAN, CATERHAM, CONQUEST, DAIHATSU, DMC, DS, DACIA, DODGE, DONGWO, DONGFENG, DAEWOO, FORD, FORO, FORNASARI, FERRARI, FUQI, FIAT, FISKER, FOTON, FAW, FORLAND, FUSO, FORCE MOTORS, FARALLI MAZZANTI, GAC, GREAT WALL, GMC, GEELY, HYUNDAI, HENNESSEY, HINO, HONDA, HAVAL, HONGQI, ISUZU, INFINITI, IVECO, IAT, IM, JAC, JBC, JEEP, JAGUAR, JMC, JETOUR, JETTA, KIA, KTM, LEVC, LEXUS, LAND ROVER, LINCOLN, LAMBORGHINI, LOTUS, LUXGEN, LEVDEO, LEOPAARD, LYNK & CO, LADA, LORINSER, LAND WIND, MAN TRUCKS, MAXUS, MG, MINI, MAHINDRA, MITSUOKA, MASERATI, MEIYA, MCLAREN, MAYBACH, MAZDA, MORGAN, MITSUBISHI, MUSTANG, MANSORY, MODERN, NOMA, NISSAN, NORINCO, NEOPLAN, NIO, NETA, OPEL, ORA, OUSHANG, PERODUA, PORSCHE, PEUGEOT, PGO, PROTON, PAGANI, POLESTAR, POCCO, QOROS, RAM, ROLLS-ROYCE, RENAULT, ROEWE, ROHENS, RANZ, RUILAN, RADAR, RENAULT SAMSUNG, SAAB, SCANIA, SCION, SMART, SML ISUZU, SUZUKI, SAIC DATONG, SUBARU, SKODA, SEAT, SWM, SANY, SSANGYONG, SOJEN, SILVER, SATE, SOL, SKYWORTH, SGMW, SITECH DEV, TATA, TANKAR, TESLA, TRUMPCHI, TECHART, TOYOTA, UD, UAES, VOLKSWAGEN, VINFAST, VENUCIA, VOLVO, VOYAH, XCMG, YUTONG, YAMAHA, ZHONGHUA, ZOTYE, ZHINUO, ZEEKR, ZENVO
<b>General</b>	
Power	12 VDC ± 20%, 1.4 A, max. 16.8 W, three-core terminal block, reverse polarity protection, PoE: IEEE 802.3at, Type 2, Class 4, 42.5 V to 57 V, 0.48 A to 0.36 A, max. 20 W
Material	Aluminum alloy body
Dimension	Ø140 mm × 351 mm (Ø5.5" × 13.8")
Package Dimension	405 × 190 × 180 mm (15.9" × 7.5" × 7.1")
Weight	Approx. 1955 g (2.0 lb.)
With Package Weight	Approx. 3093 g (3.0 lb.)
Storage Conditions	-30 °C to 60 °C (-22 °F to 140 °F). Humidity 95% or less (non-condensing)
Startup and Operating Conditions	-40 °C to 60 °C (-40 °F to 140 °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
General Function	Heartbeat, one-key reset, mirror, password protection, pixel counter, anti-banding
Cable Length	0.25 m (0.8 ft.)
<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, EN50121-4, RCM: AS/NZS CISPR 32: 2015, IC: ICES-003: Issue 7, KC: KN32: 2015, KN35: 2015

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, LOA: IEC/EN 60950-1
Environment	CE-RoHS: 2011/65/EU, WEEE: 2012/19/EU, Reach: Regulation (EC) No 1907/2006
Protection	IP67: IEC 60529-2013, IK10: IEC 62262:2002
Anti-Corrosion Protection	-Y: NEMA 4X (NEMA 250-2018)
Other	PVC FREE

## ▪ 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.

With -Y model: This model has MODERATE PROTECTION.

Without -Y model: This model has NO SPECIFIC PROTECTION.

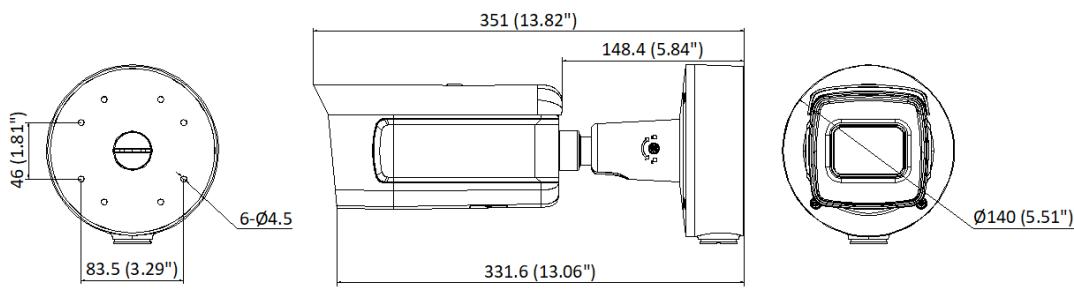
Level	Description
Top-level protection	Hikvision products at this level are equipped for use in areas where professional anti-corrosion protection is a must. Typical application scenarios include coastlines, docks, chemical plants, and more.
Moderate protection	Hikvision products at this level are equipped 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

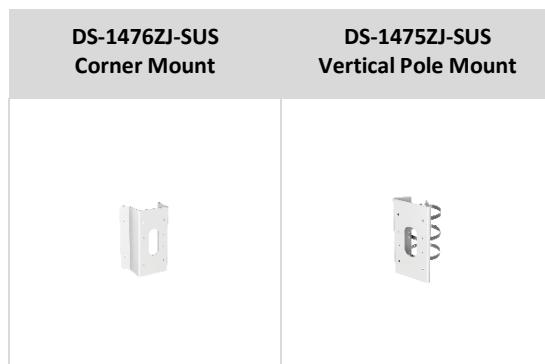
iDS-2CD7A46G0/H-IZHSY(2.8-12mm)

iDS-2CD7A46G0/H-IZHSY(8-32mm)

## ▪ Dimension



Unit: mm (inch)

**▪ Accessory****▪ Optional****Headquarters**

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