DHI-IPMECS-2234-IZ

Dahua 4MP Access ANPR Kit

- High-performance CMOS image sensor and processor that supports continuously extracting metadata 24/7.
- Continuously extracts metadata 24/7, and the vehicle capture rate and license plate recognition rate both reach 99.9%.
- Seamlessly switches between its embedded warm light and IR illuminator, and automatically turns on and off, and adjusts its brightness based on the environment, reducing light pollution and power consumption.
- The RS-485 port is used to connect to peripherals, such as barriers and radars, to obtain the working status of devices in real time, and perform remote operations and device health management.
- The intelligent defogging technology prevents the glass from freezing and fogging over, allowing the device to work in all weather conditions.
- Uniquely designed to consume very little power and is IP54 rated.
- Easily adapts to scenarios through its motorized vari-focal lens.

System Overview

The Access ANPR Kit Series contains AI chips and the advanced Starlight CMOS image sensor. Combined with the third-generation deep learning parking algorithms, cameras in this series perform detection 24/7 and take snapshots of motor and non-motor vehicles. They also extract attributes such as the model, logo, series and color of vehicles. They are ideal for scenes that use the same barrier to control vehicle entry and exit, as they take snapshots using video algorithms. These cameras are also easy to install and deploy. The integrated LED display further simplifies activities, as you can customize the content to be displayed on it, set up voice broadcasts and display QR codes that are sent from the platform. It is a great solution for scenes that require unattended management.

Functions

Vivid Images

With its intuitive CMOS image sensor, the camera has WDR, a high signal-to-noise ratio, and is highly sensitive, producing vivid images 24/7, making it ideal for use in the traffic industry.

Smart Illumination

The built-in 485 illuminator can be controlled through the webpage. It supports the normally open and normally closed alarm output modes, and easily adapts to scenes by adjusting itself according to the brightness of the environment.

Impressive Performance

The high-performance CPU processor extracts and analyzes information on motor and non-motor vehicles in real time, providing valuable information on their features. This information is useful for effective decision making.

Easy Installation

Easy to install and commission, the camera has an LED illuminator and motorized vari-focal lens embedded in its structure.

Brightness Control

The brightness can be manually adjusted through the camera I/O or automatically adjusted based on the surrounding environment.

Scene

Suitable for shopping malls, hospitals, schools, communities, office buildings and stations.

Technical Specification

Camera

Image Sensor	1/1.8" CMOS
Image Resolution	2688 (H) × 1520 (V) (OSD black edge is not included)
Electronic Shutter Speed	Auto/Manual 1/25 s–1/10,000 s
Max. Detection Speed	60 km/h
Min. Illumination	0.001 lux@F1.4 (Color, 30 IRE) 0.0002 lux@F1.4 (B/W, 30 IRE) 0 lux (Illuminator on)
ROM	4 GB
RAM	2 GB
S/N Ratio	>56 dB
Scanning System	Progressive scanning

Lens

Focal Length	2.7 mm–12 mm
Field of View	H: 98.1°–46.1°; V: 54.0°–26.0°; D: 114.6°–52.8°
Focus Control	Auto, area focus, manual
Number of Lens	1
Lens Type	Motorized vari-focal
Max. Aperture	1.6
Iris Control	Fixed

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	60.4 m (198.16 ft)	24.2 m (79.40 ft)	12.1 m (39.70 ft)	6.0 m (19.69 ft)
	T	128.7 m (422.24 ft)	51.5 m (168.96 ft)	25.7 m (84.32 ft)	12.9 m (42.32 ft)

Illuminator

Illuminator Number	3 (White LED illuminator with IR light)
Illuminator Color Temperature	3000 K
Illuminator Brightness Adjustment	Auto, manual
Illuminator On/Off Control	Auto, manual
Illumination Distance	8 m (26.25 ft)
Smart Illumination	According to the brightness of the environment, the camera automatically adjusts the intensity of its light to reveal the details of moving targets. Devices with warm light can automatically adjust the light intensity according to the time.
Infrared Wavelength	850 nm

Video

Video Resolution	Main stream: 4MP (2688 × 1520)/1080p (1920 × 1080)/720p (1280 × 720) Sub stream: 960H (960 × 576)/D1 (704 × 576)
Video Frame Rate	PAL: Main stream (2688 × 1520@25 fps, 1920 ×1080@25 fps, 1280 × 720@25 fps), sub stream (960 ×576@25 fps, 704 × 576@25 fps)

Video Compression	H.264H; H.264B; H.265; MJPEG; H.264M
Video Bit Rate	H.264B: 2,179 kbps–13,074 kbps; H.264M: 2,179 kbps–13,074 kbps; H.264H: 2,179 kbps–13,074 kbps; H.265: 2,179 kbps–13,074 kbps; MJPEG: 6,537 kbps–39,223 kbps
Scene Self-adaptation (SSA)	Yes
Gain Control	Manual; Auto
Noise Reduction	3D NR
Region of Interest (RoI)	Yes, 3
Image Tampering Prevention	Yes. Watermarks can be added to videos and images. The watermark can also be verified.
Privacy Masking	Yes
Bit Rate Control	CBR/VBR

Network

Network Protocol	HTTP; Https; 802.1x; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP; DHCP; DNS; IPv4/v6; NTP; SFTP; DDNS; SNMP; PPPoE
API	Yes
SDK	Yes
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; ITSAPI; P2P
Management Software	DSS Express; DSS Pro
Security	Username and password; MAC address; HTTPS; IEEE 802.1x; network access control
Browser	Plug in: IE 9, 10, 11. Chrome 52 and earlier versions Firefox 42 and earlier versions No plug in: Chrome 92 and later versions

Image

Image Encoding Format	JPEG
Image Setting	Brightness; contrast; saturation; gamma; sharpness; gain; white balance
Day/Night	IR filter, support three modes: color, B/W, auto
WDR	140 dB
HLC	Yes
BLC	Yes
White Balance	Auto; Regional Custom; Manual; Outdoor; Natural; Street Lamp
Digital Detail Enhancement (DDE)	Yes
OSD Overlay	Supports overlay of time, address (position of channel), lane (number/direction), plate (number and color), vehicle (color and type)

Audio

Audio Port	Yes

Port

Audio Input	1 channel (terminal)

Audio Output	1 channel (terminal)
Network Port	1 × RJ-45 100/1000 Mbps Ethernet port
Storage	TF card holder + direct plug
Alarm Input	3 channel, optocoupler input (wet node on-off value: 5 V)
Alarm Output	2 channel, relay output (2 A, 30 VDC/0.5 A, 125 VAC), which can connect to devices such as barriers
RS-485	2 channel
Reset Button	Yes
Number of Memory Slots	1

Performance

Maximum Number of Passed Vehicles	10000
Max. Number of Connections	10

Function

Blocklist/Allowlist	Allowlist: 110,000 Blocklist: 110,000
Basic Event	Alarms for events of no storage card, storage card no space, storage card error, network disconnection, IP conflict, and illegal access.
Alarm Linkage	Upload to FTP/Memory card, notify monitoring center, send e-mail, trigger alert output.
Capture Distance	2.5 m–6 m (8.20 ft–19.69 ft)
Detected Width	3 m–4 m (9.84 ft–13.12 ft)
Storage	Built-in one TF card port; TF card (up to 256 GB)
Screen Bad Pixel Detection	Yes

Intelligence

AI Recognition	Recognizes vehicle types, vehicle signs, vehicle color, vehicle plate, vehicle without plate.
Video Metadata	Displays the intelligent frame, plate and vehicle paths.
Vehicle Brand	Recognizes 147 vehicle logos.
Vehicle Color	Recognizes 12 colors: Grey, black, white, silver, blue, green, purple, red, orange, pink, brown, and yellow.
Vehicle Type Recognition	Recognizes 10 vehicle types: Large Bus, Heavy Truck, Medium Truck, Sedan, Van, Light Truck, Medium Bus, SUV, MPV, Pickup

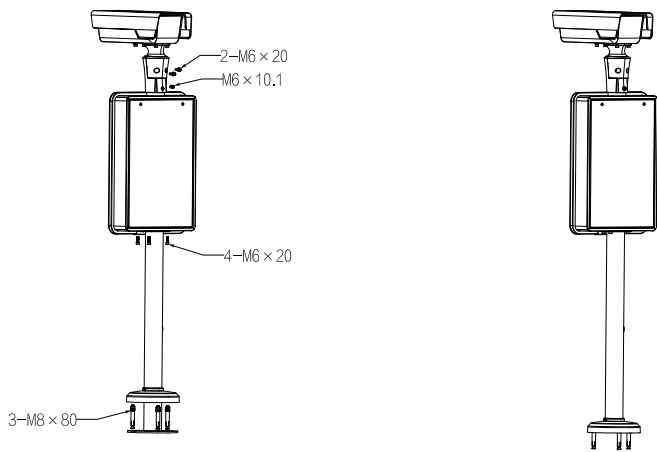|	
Country and Region Supported by ANPR	Baseline support: 10 options (80 countries) General: Supports universal characters GCC (U.A.E., Saudi Arabia, Morocco, Oman, Iraq, Egypt, Jordan, Qatar, Kuwait, Bahrain, Lebanon) South Africa: Zambia, Uganda, Equatorial Guinea, Mauritius South Asia Region (India Region) : India, Maldives Europe (Netherlands, France, Germany, Britain, Italy, Poland, Belgium, Bulgaria, Serbia, Slovakia, Spain, Denmark, Turkey, Israel, Czech Republic, Bosnia and Herzegovina, Switzerland, Austria, Hungary, Romania, Lithuania, Latvia, Sweden, Estonia, Portugal, Greece, Slovenia, Luxembourg, Palestine, Lebanon, Ireland, Finland, Norway, Croatia, North Macedonia) SADC (Uruguay, Paraguay, Brazil, Argentina, Chile, Colombia, Peru, Ecuador, Guyana, Bolivia) Mexico and other countries: Mexico, Costa Rica, Curacao, Guatemala Russian-speaking regions (Russia, Ukraine, Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan, Moldova, Lithuania, Latvia, Georgia, Azerbaijan, Turkmenistan) North America (United States, Canada) North Africa Region Collection: Tunisia, Morocco, Algeria, Libya The baseline algorithm is supported for the following 19 countries: Republic of Korea, Indonesia, Singapore, Cambodia, Australia, Thailand, Bassett, Nigeria, Pakistan, Viet Nam, Mongolia, Bangladesh, Myanmar, Philippines, Laos, Iraq, Japan, Maldives, Nepal
Capture Rate	In the recommended installation and lighting condition, the vehicle capture rate ≥ 99%
Recognition Rate	In the recommended installation and lighting condition, the recognition rate for positive and departing vehicles≥ 96%; the recognition rate for European vehicle plates ≥ 98%

General

Power Supply	100–240 VAC
Power Consumption	Max: 70 W
Defog (Glass Heating)	Automatic defog
Protection	IP54
Anti-corrosion Level	Basic Protection
Material	Metal + plastic
Product Dimensions	380.9 mm × 320.0 mm × 1423.9 mm (15.00" × 12.60" × 56.06")
Packaging Dimensions	905.0 mm × 510.0 mm × 220.0 mm (35.63" × 20.08" × 8.66")
Net Weight	1.40 kg (30.91 lb)
Gross Weight	1.73 kg (38.23 lb)
Storage Humidity	≤95% (RH), non-condensing
Storage Temperature	−40 °C to +70 °C (−40 °F to +158 °F)
Operating Temperature	−30 °C to +65 °C (−22 °F to +149 °F)
Operating Humidity	10%–95% (RH), non-condensing
Certifications	CE UKCA
Display Screen Type	LED
Display Screen Dimensions	480.0 mm × 320.0 mm × 82.0 mm (18.90" × 12.60" × 3.23")
Display Color	RGB full color
Pixels Configuration	p4 distance

Screen Resolution	64 (H) × 64 (V)
Display Screen Lifespan	5,000 h
Display Screen Brightness	≥1500cd/m²

Ordering Information

Type	Model	Description
Access ANPR Kit Series	DHI-IPMECS-2234-IZ	Dahua 4MP Access ANPR Kit

Installation

Dimensions (mm [inch])