

# DHI-ITC416-PL8I-IZ

Dahua 4MP Access ANPR Camera



## System Overview

Equipped with a high-performance CMOS image sensor and processor, Dahua 4MP Access ANPR Camera continuously extracts metadata 24/7. It adopts intelligent deep learning algorithms that allow it to recognize unlicensed vehicles, vehicle types and vehicle colors. This low power consumption camera also has an all in one structure with an embedded RS-485 IR illuminator that allow it to easily adapt to scenarios. It also supports floor standing installation, making it easy to install.

## Functions

### Intelligent Recognition

Supports recognizing plate numbers and colors, and vehicle colors and types.

### 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.

### 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.

- High-performance CMOS image sensor and processor that supports continuously extracting metadata 24/7.
- Adopts intelligent deep learning algorithms and supports recognition of unlicensed vehicles and the type, brand and color of vehicles.
- Built-in signal port, data port, and communication port assist in controlling external devices such as entry and exit barriers.
- Built-in LED for simplified installation and commissioning.
- All-in-one structure with junction box and bracket, and it is also low power consumption.
- IP54 rated.
- Easily adapts to scenarios through its motorized vari-focal lens.

### 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.

### Modular Design

With its all-in-one design, the camera is low power consumption and has an embedded module that is divided into the mainboard and 2 illuminators.

### Easy Installation and Commissioning

Highly convenient, the device can be configured through a single network port and supports floor-standing installation, making it easy to install and commission.

## Scene

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

## Technical Specification

### Camera

Image Sensor	1/1.8" CMOS
Image Resolution	2688 × 1520
Electronic Shutter Speed	Auto/Manual 1/25s~1/10,000s
Max. Detection Speed	20 km/h
Min. Illumination	0.001 Lux@F1.8 (Color, 30 IRE) 0.0002 Lux@F1.8 (B/W, 30 IRE) 0 Lux (Illuminator on)
ROM	1 GB
RAM	4 GB
S/N Ratio	>56 dB
Scanning System	Progressive scanning

### Lens

Focal Length	2.7 mm–12 mm				
Field of View	H: 115° (W)–47° (T) V: 62° (W)–27° (T) D: 137° (W)–54° (T)				
Focus Control	Auto, area focus, manual				
Number of Lens	1				
Lens Type	Motorized Vari-focal				
Max. Aperture	1.8				
Iris Control	DC-Iris				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	57.5 m (198.16 ft)	23.0 m (188.65 ft)	11.5 m (75.46 ft)	5.8 m (19.03 ft)
	T	130.8 m (429.13 ft)	52.3 m (171.59 ft)	26.2 m (85.96 ft)	13.1 m (42.98 ft)

### Illuminator

Illuminator Number	3 (above) + 16 (below), IR
Illuminator On/Off Control	Auto; manual
Illuminator Type	IR
Illumination Distance	ANPR: 10 m (32.81 ft) Video monitoring: 20 m (65.62 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.
Infrared Wavelength	850 nm

### Video

Video Resolution	Main stream: 4M (2688 × 1520)/1080p (1920 × 1080)/720p (1280 × 720) Sub stream: 720p (1280 × 720)/960H (960 × 576, 960 × 480)/D1 (704 × 576, 704 × 480)/CIF (352 × 288, 352 × 240)
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Stream	PAL: Main stream (2688 × 1520@25 fps, 1920 × 1080@25 fps, 1280 × 720@25 fps), sub stream (1280 × 720@25 fps, 960 × 576@25 fps, 704 × 576@25 fps, 352 × 288@25 fps); NTSC: Main stream (2688 × 1520@30 fps, 1920 × 1080@30 fps, 1280 × 720@30 fps), sub stream (1280 × 720@30 fps, 960 × 480@30 fps, 704 × 408@30 fps, 352 × 240@30 fps)
Video Compression	H.264H; H.264B; H.264M by default; 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 ROI)
Image Tampering Prevention	Yes. Watermarks can be added to videos and images for verification.
Bit Rate Control	CBR; VBR

### Function

Storage	Built-in TF card port. Supports Kingston 16 G, 32 G, 64 G, 128 G, 256 G; Dahua card 16 G, 32 G, 64 G, 128 G, 256 G; SanDisk 16 G, 32 G, 64 G, 128 G, 256 G
Restricted List/Trusted List	Allowlist: 110,000; Blocklist: 110,000
Basic Event	Alarms for events of defocus, 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, and trigger alert output and snapshot.
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)

### 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 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 (speed, color, type)

## Audio

Audio Port	Yes
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## Audio

Audio Output	1 channel (RCA port)
Network Port	1 × RJ-45, 10/100/1000 Mbps self-adaptive Ethernet port
Alarm Input	2, optocoupler input (wet node on-off value: 5 V)
Alarm Output	2, relay output (2A 30 VDC/0.5 A 125 VAC), which can connect to devices such as barriers
RS-485	1 Channel (half duplex, transparent, DHRS, com port push)
Reset Button	Yes
Wiegand	1 Channel, SHA-1 26 bit

## Performance

Maximum Number of Passed Vehicles	10,000
Max. Number of Connections	10

## Intelligence

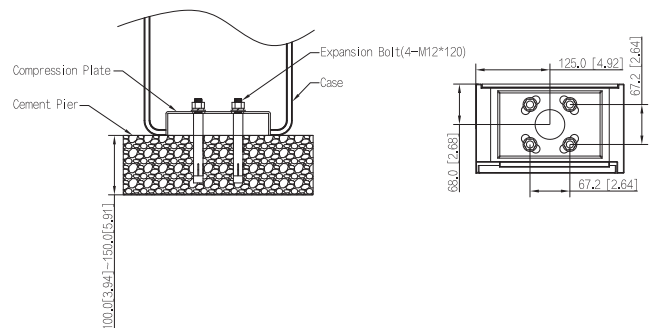
AI Recognition	Recognizes vehicle types, vehicle signs, vehicle color, vehicle plate, plate, vehicle without plate.
Video Metadata	Displays the intelligent frame, plate and vehicle paths.
Vehicle Brand	Recognizes 147 vehicle logos.
Vehicle Color	Recognizes 12 colors: Grey, black, white, silver, blue, green, purple, red, orange, pink, brown, and yellow.
Vehicle Type Recognition	Recognizes 9 vehicle types: Large Bus, Heavy Truck, Medium Truck, Sedan, Van, Light Truck, Medium Bus, SUV, MPV, Pickup
Country and Region Supported by ANPR	<p>Baseline support:</p> <p>GCC (U.A.E., Saudi Arabia, Morocco, Oman, Iraq, Egypt, Jordan, Qatar, Kuwait, Bahrain, Lebanon)</p> <p>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)</p> <p>Russian-speaking regions (Russia, Ukraine, Kyrgyzstan, Uzbekistan, Moldova, Lithuania, Latvia, Georgia, Azerbaijan, Turkmenistan)</p> <p>SADC (Uruguay, Paraguay, Brazil, Argentina, Chile, Colombia, Peru, Ecuador, Guyana)</p> <p>North America (United States, Canada)</p> <p>Can be customized:</p> <p>Mongolia, Japan, Philippines, Vietnam, Laos, Cambodia, Myanmar, Thailand, Malaysia, Singapore, Indonesia, Bangladesh, India, Pakistan, Curacao, Mexico, Guatemala, Costa Rica, Australia, New Zealand, Tunisia, Algeria, Ethiopia, Tanzania, Uganda, Equatorial Guinea, Japan, Zambia, Mozambique, South Africa, Mauritius</p>

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	12 VDC, 3 A
Power Consumption	No lighting <6 W Lighting <28 W
Protection	IP54
Material	Metal plate + glass
Product Dimensions	254.0 mm × 221.0 mm × 711.0 mm (10" × 8.70" × 27.99")
Packaging Dimensions	842.0 mm × 387.0 mm × 369.0 mm (33.15" × 15.24" × 14.53")
Net Weight	13 kg (28.66 lb)
Gross Weight	16.6 kg (36.60 lb)
Storage Humidity	-40 °C to +70 °C (-40 °F to +158 °F)
Storage Temperature	≤ 95% (non-condensing)
Operating Temperature	-30 °C to +65 °C (-22 °F to +149 °F)
Operating Humidity	10%–90% (non-condensing)
Certifications	CE-EMC; CE-LVD

## Installation



Dimensions (mm [inch])

