- 8-MP 1/2.7" CMOS image sensor, low lum inance, and high de finition image.
- Outputs max. 8 MP (3840 × 2160) @20 fps, and supports 2688 × 1520 (2688 × 1520) @25/30 fps.
- H.265 codec, high compre ssion rate, ultra-low bit rate.
- Built-in IR LED, and the max. illuminatio n distance is 30 m.
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Rotation mod e, WDR, 3D NR, HLC, BLC, digital watermarking, applic able to various monitoring scenes.
- Intelligent monitoring: Intrusion, tripwire (the two functions support the classification and a ccurate detectio n of vehicle a nd human).
- Abnormality detection: Motion detection, vi deo tampering, audio detection, no SD card, SD card full, SD card error, network disconnection, IP con flict, illegal a ccess, and voltag e detection.
- Supports max. 256 G Micro SD card; built in MIC.
- 12 VDC/PoE power s upply.
- IP67 protection.
- SMD Plus.

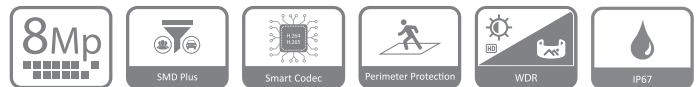| 8Mp | SMD Plus | Smart Codec | Perimeter Protection | WDR | IP67 |

Functions

SMD Plus
With intelligent algorithm, TD Smart Motion Detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

Smart H.265+ & Smart H.264+
With advanced scene-adaptive rate control algorithm, TD smart encoding technology realizes the higher encoding efficiency than H.265 and H.264, provides high-qual ity video, a nd reduc es the cost of storage and transmission.

Perimeter Protection
With deep learning algorithm, TD Perimeter Protection technology can recogniz e human and vehicle accurately. In restricted area (such as pedestrian area and vehicle area), t he false alarms of intelligent detection based on target type (such as tripwire, intrusion) are largely reduced.

WDR
With advanced Wide Dynamic Range (WDR) technology, TD network camera provides clear det ails in th e environment of strong brightness contrast. The bright and dark area can get clear vid eo even in high brightness envir onment or with backlight shadow.

Cyber Security
TD network cameras employ a series of security technologies, including security authentication and authorization, access control protocols, trusted protection, encrypted transmission and encrypted storage. These t echnologies improve the camera's defense ag ainst external cyber threats and prevent malicious programs from compromi sing th e device.

Protection (IP67, Wide Voltage)
IP67: The camera passes a series of strict test on dust and so ak. It has dust-proof function, and the enclosure can work normally after soaking in 1 m deep water for 30 minutes.
Wide voltage: The camera allows ±30% (for so me power supplies) input voltage tolerance (wide voltage range), and it is widely applied to outdoor enviro nment with instable voltage.

TDOEIA8302SA-AI

Technical Specification

Camera

Image Sensor	1/2.7" CMOS
Max. Resolution	3840 (H) × 2160 (V)
ROM	128 MB
RAM	256 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.009 lux@F2.0 (Color, 30 IRE) 0.0009 lux@F2.0 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	>56 dB
Illumination Distance	98 ft (IR)
Illuminator On/Off Control	Auto; Manual
Illuminator Number	1 (IR LED)
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–78° Rotation: 0°–360°

Lens

Lens Type	Fixed-focal
Lens Mount	M12
Focal Length	2.8 mm
Max. Aperture	F2.0
Field of View	2.8 mm: H: 106°; V: 56°; D: 125°
Iris Control	Fixed
Close Focus Distance	2.8 mm: 1.3 m (4.27 ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	88.0 m (288.71 ft)	35.2 m (115.49 ft)	17.6 m (57.74 ft)	8.8 m (28.87 ft)

Intelligence

IVS (Perimeter Protection)	Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human)
Smart Search	Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos

Video

Video Compression	H.265; H.264; H.264H; H.264B; MJPEG (Only supported by the sub stream)
Smart Codec	Smart H.265+; Smart H.264+
Video Frame Rate	Main stream: 3840 × 2160@(1–20 fps)/2688 × 1520@(1–25/30 fps) sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 fps) *The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected to the total encoding capacity.

Stream Capability	2 streams
Resolution	3840 × 2160 (3840 × 2160); 3072 × 2048 (3072 × 2048); 3072 ×1728 (3072 × 1728); 2880 × 1620 (2880 × 1620); 2688 × 1520 (2688 × 1520); 3M (2048 × 1536); 2304 × 1296 (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 32 kbps–8192 kbps H.265: 12 kbps–8192 kbps
Day/Night	Auto(ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
White Balance	Auto; natural; street lamp; outdoor; manual; regional custom
Gain Control	Auto; Manual
Noise Reduction	3D NR
Motion Detection	OFF/ON (4 areas, rectangular)
Region of Interest (RoI)	Yes (4 areas)
Smart Illumination	Yes
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 2688 × 1520 resolution and lower)
Mirror	Yes
Privacy Masking	4 areas

Audio

Built-in MIC	Yes
Audio Compression	G.711a; G.711Mu; PCM; G.726

Alarm

Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; audio detection; voltage detection; SMD; security exception

Network

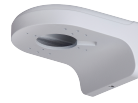|	
Network Port	RJ-45 (10/100 Base-T)
SDK and API	Yes
Network Protocol	IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; PPPoE; Boujour
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; P2P; Milestone
User/Host	20 (Total bandwidth: 48 M)
Storage	FTP; SFTP; Micro SD card (support max. 256 GB); NAS
Browser	IE Chrome Firefox
Management Software	Smart PSS; DSS; DMSS
Mobile Client	iOS; Android

Cyber Security	Configuration encryption; Trusted execution; Digest; Security logs; WSSE; Account lockout; syslog; Video encryption; 802.1x; IP/MAC filtering; HTTPS; Trusted upgrade; Trusted boot; Firmware encryption; Generation and importing of X.509 certification

Certification

Certifications	CE-LVD: EN62368-1; CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU; FCC: 47 CFR FCC Part 15, Subpart B; UL/CUL: UL62368-1 & CAN/CSA C22.2 No. 62368-1-14

Power

Power Supply	12 VDC/PoE (802.3af)
Power Consumption	Basic: 2.7 W (12 VDC); 3.4 W (PoE) Max. (H.265+ max. resolution + max. stream+ WDR + IR intensity + IVS): 4.5 W (12 VDC); 5.4 W (PoE)

Environment

Operating Temperature	−40 °C to +55 °C (−40 °F to +131 °F)
Operating Humidity	≤95%
Storage Temperature	−40 °C to +60 °C (−40 °F to +140 °F)
Storage Humidity	≤95%
Protection	IP67

Structure

Casing Material	Inner core: Metal Cover: Metal Decoration ring: Plastic Quick install mounting plate: Metal
Product Dimensions	99.1 mm × Φ121.9 mm (3.90"× Φ4.80")
Net Weight	0.48 kg (1.06 lb)
Gross Weight	0.68 kg (1.50 lb)

Ordering Information

Type	Model	Description
8MP Camera	TDOEIA8302SA-AI	8MP IR Fixed-focal Eyeball Network Camera
Accessories (Optional)	PFA139	Water-proof Junction Box
	PFB204W	Water-proof Wall Mount Bracket

Accessories

Optional:

PFA139
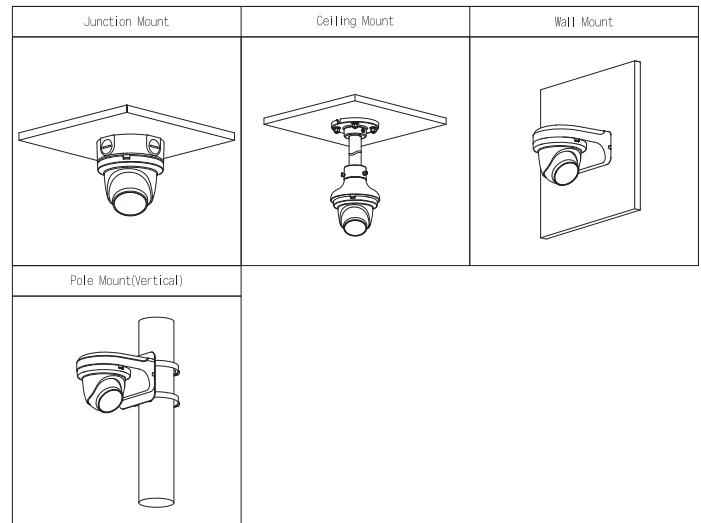Water-proof
Junction Box

PFB204W
Water-proof
Wall Mount Bracket

Dimensions (mm[inch])