TDOEIA4302SA-AI

4MP WDR IR Eyeball Network

· 4MP, 1/3" CMOS image sensor, low illuminance, high image definition
· Outputs 4MP (2560 × 1440)@25/30 fps, Max. supports 4MP
  (2688 × 1520) @ 20 fps
· H.265 codec, high compression rate, ultra-low bit rate
· Built-in IR LED, max IR distance: 30 m
· ROI, SMART H.264/H.265, flexible coding, applicable to various
  bandwidth and storage environments
· Rotation mode, WDR, 3D DNR, HLC, BLC, digital watermarking,
  applicable to various monitoring scenes
· Intelligent detection: Intrusion, tripwire
· Abnormality detection: Motion detection, video tampering,no SD card,
  SD card full, SD card error, network disconnected, IP conflict, illegal
  access, voltage detection
· Supports max. 256 GB Micro SD card, built-in Mic
· 12V DC/PoE power support
· IP67 protection

4Mp | H.265+ | WDR | Starlight | IVS | IP67

Functions

Smart (H.265+ & H.264+)
Adopting advanced algorithm of auto stream control according to the environment, TOUGHDOG smart encoding technology realizes the higher efficiency than (H.265 & H.264), providing high-quality video, and reducing the cost of storage and transmission.

Wide dynamic range (WDR)
TOUGHDOG adopts advanced Wide Dynamic Range (WDR) technology. You can get clear details in the environment of strong brightness contrast. In high brightness and back- light environment, bright region and dark region with strong light source, you can also get clear images.

Starlight
TOUGHDOG Starlight technology mainly applies to the environment of low illumination, and it can provide clear colorful video. Even in the envi-ronment of min. illumination, the technology can guarantee the good image effect.

Intelligent Video Analysis (IVS)
With advanced video algorithm, TOUGHDOG camera supports intelligent detection, such as tripwire and intrusion and so on.

Protection (IP67, wide voltage)
IP67: The camera passes a series of strict test on dust and soak. It has dust-proof function, and the enclosure can works normal after soaking in 1 m deep water for 30 minutes.
Wide voltage: The camera allows ±30% input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

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Technical Specification

Camera

Image Sensor	1/3" 4Megapixel progressive CMOS
Effective Pixels	2688 (H) × 1520 (V)
ROM	128 MB
RAM	128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100000 s
Min. Illumination	0.008 Lux @ F1.6
IR Distance	30 m (98.43 ft)
IR On/Off Control	Auto/Manual
IR LEDs Number	2
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–78° Rotation: 0°–360°

Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	2.8 mm
Max. Aperture	F1.6
Field of View	2.8 mm: Pan: 102.0° Tilt: 55.0° Diagonal: 121.0°
Iris Type	Fixed aperture
Close Focus Distance	2.8 mm: 0.9 m (2.95 ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	56 m (183.73 ft)	22.4 m (73.49 ft)	11.2 m (36.75 ft)	5.6 m (18.37 ft)

Smart event

General IVS Analytics	Tripwire; intrusion

Video

Video Compression	H.265; H.264; H.264B; MJPEG
Smart Codec	Yes
Video Frame Rate	Main stream: 2688 × 1520 (1 fps-20 fps) 2560 × 1440 (1 fps-25/30 fps) Sub stream: 704 × 576 (1 fps-25 fps) 704 × 480 (1 fps-30 fps)
Stream Capability	2 streams

Resolution	2688 × 1520 (2688 × 1520); 2560 × 1440 (2560 × 1440); 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–6144 Kbps H.265: 12 Kbps–6144 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 DNR
Motion Detection	OFF/ON (4 areas, rectangular)
Region of Interest(RoI)	Yes (4 areas)
Smart IR	Yes
Image Rotation	0°/90°/180°/270° (Supports 90°/270° with 1080p resolution and lower.)
Mirror	Yes
Privacy Masking	4 areas

Audio

Built-in MIC	Yes
Audio Compression	G.711A; G.711Mu; G.726; AAC

Network

Network	RJ-45 (10/100 Base-T)
Protocol	IPv4; IPv6; HTTP; HTTPS; TCP; UDP; ARP; RTP ; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; PPPoE; 802.1x; Bonjour
Interoperability	ONVIF(Profile S/Profile G/Profile T);CGI; P2P; Milestone; Genetec
User/Host	20
Edge Storage	TOUGHDOG Cloud; FTP; SFTP; Micro SD Card (support max. 256 GB); NAS
Browser	IE Chrome Firefox
Management Software	TD-SMS; DSS; ToughDog Viewer Pro
Mobile Phone	IOS; Android

Certification

Certifications	CE-LVD: EN60950-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07

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Power

Power Supply	12V DC/PoE (802.3af)
Power Consumption	< 6.6W

Environment

Operating Conditions	-40°C to +60°C (-40°F to +140°F)/less than ≤ 95% RH
Storage Temperature	-40°C to +60°C (-40°F to +140°F)
Protection	IP67

Structure

Casing	Metal + Plastic
Dimensions	(3.97" × Φ4.33")
Net Weight	0.39 kg (0.9 lb)
Gross Weight	0.56 kg (1.2 lb)

Ordering Information

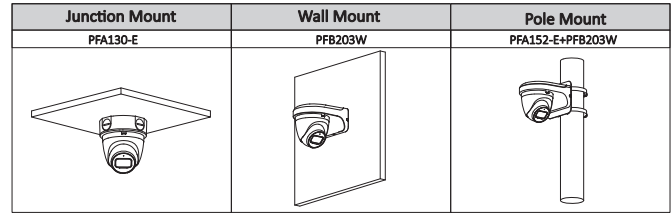| Type	Part Number	Description
Accessories (optional)	PFA130-E	Junction Box
	PFB204W	Wall Mount
	PFA152-E	Pole Mount

Accessories

Optional:

PFA130-E
Junction Box

PFB204W
Wall Mount

PFA152-E
Pole Mount

Dimensions (mm[inch])