

TDPTZ4MP4IRS

4M 4x Starlight IR Network PTZ Camera



- 1/2.8" 4Megapixel STARVIS™ CMOS
- Starlight technology
- Max. 25/30fps@4MP
- 4x optical zoom
- Face Detection, People Counting, Perimeter Protection
- IR distance up to 15m
- SMD Plus
- PoE
- IP66, IK08



System Overview

TOUGHDOG PTZ camera adopts advanced CNN deep learning algorithms to support perimeter protection with high accuracy. The camera is equipped with smooth control, high quality image, and good protection, meeting compact size demands of video surveillance applications.

Functions

People Counting

People Counting function uses advanced image processing technology to capture depth information from within images. The camera pairs this information with deep learning algorithms to analyze and detect human bodies and track target objects in real time. The camera provides statistics for separate individuals' entrance and exit with up to 95% counting accuracy.

Starlight Technology

For challenging low-light applications, TOUGHDOG's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light down to 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

Environmental

TOUGHDOG cameras operate in extreme temperature environments, rated for use in temperatures from -30 °C to +60 °C (-22 °F to +140 °F) with 95% humidity. Subjected to rigorous dust and water immersion tests and certified to the IP66 Ingress Protection rating makes it suitable for demanding outdoor applications.

Protection

The camera allows for $\pm 15\%$ input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 6KV lightning rating provides effective protection for both the camera and its structure against lightning.

Wide Dynamic Range

The camera achieves vivid images, even in the most intense contrast lighting conditions, using industry-leading wide dynamic range (WDR) technology. For applications with both bright and low lighting conditions that change quickly, True WDR optimizes both the bright and dark areas of a scene at the same time to provide usable video.

H.265+

H.265+ is the optimized implementation of the H.265 codec that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression.

Technical Specification				
Camera				
Image Sensor	1/2.8" STARVIS™ CMOS			
Pixel	4MP			
Max. Resolution	2560 (H) × 1440 (V)			
ROM	4GB			
RAM	1GB			
Electronic Shutter Speed	1/1 s–1/30,000 s			
Scanning System	Progressive			
Min. Illumination	Color: 0.005Lux@F1.8 B/W: 0.0005Lux@F1.8 0Lux (IR light on)			
Illumination Distance	15 m (49.21 ft)			
Illuminator On/Off Control	Zoom Prio/Manual/SmartIR			
Illuminator Number	3			
Lens				
Focal Length	2.8 mm–12 mm			
Max. Aperture	F1.8–F2.7			
Field of View	H: 31.6°–96.9° V: 17.8°–51.4° D: 36.4°–116.2°			
Optical Zoom	4x			
Focus Control	Auto/Semi-Auto/Manual			
Close Focus Distance	0.2 m–0.5 m (0.66 ft–1.64 ft)			
Iris Control	Auto			
DORI Distance	Detect	Observe	Recognize	Identify
	147.0 m (482.28 ft)	58.8 m (192.91 ft)	29.4 m (96.46 ft)	14.7 m (48.23 ft)
PTZ				
Pan/Tilt Range	Pan: 0°–355° Tilt: 5°–90°			
Manual Control Speed	Pan: 0.1°/s–70°/s Tilt: 0.1°/s–30°/s			
Preset Speed	Pan: 80°/s Tilt: 40°/s			
Presets	300			
Tour	8 (up to 32 presets per tour)			
Speed Adjustment	Support			
Power-off Memory	Support			
Idle Motion	Preset/Tour			
General Intelligence				
Event Trigger	Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly			
IVS	Object Abandoned/Missing			

Artificial Intelligence				
People Counting	Count people entering and exiting the area (crossing people counting); count people staying in the area (in-area people counting); display and export reports by day, week and month.			
Perimeter Protection	Tripwire and intrusion. Support alarm triggering by target types (human and vehicle). Support filtering false alarms caused by animals, rustling leaves, bright lights, etc.			
SMD Plus	Support			
Face Detection	Support			
Video				
Compression	H.265; H.264BaselineProfile; H.264MainProfile; H.264HighProfile; MJPEG (Sub Stream); H.265+; H.264+			
Streaming Capability	3 streams			
Resolution	4M (2560 x 1440); 3M (2048 x 1536); 1080P (1920 x 1080); 1.3M (1280 x 960); 720P (1280 x 720); D1 (704 x 576/704 x 480); CIF (352 x 288/352 x 240)			
Frame Rate	Main stream: 4M/3M (1–25/30fps), 1080P/1.3M/720P (1–25/30fps) Sub stream 1: D1/CIF (1–25/30fps) Sub stream 2: 720P (1–25/30fps), D1/CIF (1–25/30fps)			
Bit Rate Control	Variable Bit Rate/Constant Bit Rate			
Bit Rate	H.264/H.265/MJPEG: 3 kbps–20480 kbps			
Day/Night	Auto (ICR)/Color/B/W			
BLC	Support			
WDR	120 dB			
HLC	Support			
White Balance	Auto/Indoor/Outdoor/Track/Manual/Sodium lamp/Natural light/Street lamp			
Gain Control	Auto/Manual			
Noise Reduction	2D/3D			
Motion Detection	Support			
Region of Interest (RoI)	Support			
Electronic Image Stabilization	Support			
Electronic Defog	Support			
Digital Zoom	16x			
Flip	0°/180°			
Privacy Masking	Up to 24 areas, and up to 8 areas in the same view			
Audio				
Compression	G.711a; G.711Mu; G.726; AAC; MPEG2-Layer2; G.722.1; G.729; G.723			
Network				
Ethernet	RJ-45 (10/100Base-T)			
Protocol	IPv4; IPv6; HTTP; HTTPS; 802.1x; Qos; FTP; SMTP; UPnP; SNMPv1/v2c/v3(MIB-2); DNS; DDNS; NTP; RTSP; RTP; TCP; UDP; IGMP; ICMP; DHCP; PPPoE; ARP; RTCP			
Interoperability	ONVIF Profile S&G&T; CGI			
Streaming Method	Unicast/Multicast			

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User/Host	20
Storage	FTP; Micro SD card (256G); P2P
Browser	IE; Chrome; Firefox; Safari (no version restriction)
Management Software	SmartPSS DSS
Mobile Phone	iOS/Android

Certification

Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4-2014 UL62368-1+CAN/CSA C22.2, No. 62368-1
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Port

Audio Input	1(Line in; bare wire or built in Mic)
Audio Output	1

Power

Power Supply	DC12V/1.5A±15% PoE (802.3af)
Power Consumption	3W 8.5W (IR on)

Environment

Operating Temperature	-30°C to +60°C (-22°F to 140°F)
Operating Humidity	≤95%
Protection	IK08; IP66; TVS 6000V lightning proof; surge protection

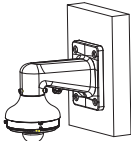
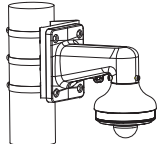
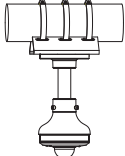
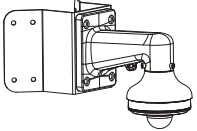
Structure

Dimensions	Φ128.0 mm × 65.4 mm (5.04" × 2.57")
Net Weight	0.485 kg (1.06 lb)
Gross Weight	0.7 kg (1.54 lb)

Accessories

Optional:

		
PFA107	PFB303W	PFA120
		
PFA140	PFA150	PFA151

CeilingMount (1)	WallMount	CeilingMount (2)
		
PoleMount (1)	PoleMount (2)	CornerMount
		

Dimensions (mm[inch])

