TDPTZ4MP25IRS-4G

4MP 25x Starlight IR 4G PTZ AI Network Camera

· 1/2.8" 4Megapixel CMOS

· Support 4G

· Powerful 25x optical zoom

· Starlight technology

· Max.25/30fps@4M

· Perimeter Protection

· Support PoE+

· IR distance up to 328Ft.

· SMD

· IP66

| False Alarm Filter | WDR | 0.005Lux | ICR D/N | IP66 | PoE+ | 4G |

AI series products adopt the most advanced AI technologies, including deep learning algorithms that primarily target people and vehicles, which provides higher flexibility and accuracy for end-users. This enables the TOUGHDOG AI series to offer various advanced applications such as Face Recognition, ANPR, Metadata, People Counting, traffic data statistics, etc. The complete lineup of TOUGHDOG AI includes network (PTZ) cameras, network video recorders, servers, and more devices. Beyond seeing the world, the power of AI allows devices to perceive the environment and understand the world in a better way.

System Overview

TOUGHDOG PTZ AI network camera adopts advanced CNN deep learning al-gorithms to support Perimeter Protection with high accuracy. This cam-era possess wide monitor range, PFA algorithm that can always present a clear, focused image while zooming. The camera has very excellent low light performance due to adopting the latest starlight technology. The camera is equipped with smooth control, high quality image and good protection, which make it can meet most of the requirements of video surveillance applications.

Functions

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.

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 (120 dB) optimizes both the bright and dark areas of a scene at the same time to provide usable video.

Perimeter Protection
Automatically filtering out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improving alarm accuracy.

Environmental
TOUGHDOG cameras operate in extreme temperature environments, rated for use in temperatures from-40 °C to +70 °C (-40 °F to +158 °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 6KV lightning rating,which provides effective protection for both the camera and its structure against lightning.

Interoperability
The camera conforms to the ONVIF (Open Network Video Interface Forum) specifications, ensuring interoperability between network video products regardless of manufacturer.

PFA Technology
PFA technology has innovatively introduced new methods of judgment to ensure the accuracy and predictability of the direction of subject distance adjustment. The result is a set of advanced focusing algorithms. PFA ensures clarity of the image throughout the process of zooming and shortens focus time. The realization of PFA technology substantially improves user experience and increases product value.

SMD
With Deep-Learning Algorithm, TOUGHDOG SMD filters the motion detection alarm triggered by non-concerned target and recognize human and vehicle effectively, sending alarms when human and vehicle intrudes.

4G Transmission
The camera supports 4G signal transmission and the following network types: LTE/WCDMA/GSM. And it supports the following frequency band respectively:
LTE FDD: Band 1/2/3/4/7; WCDMA: Dual-band Band 1/2; GSM: 1800Hz/1900MHz

ONVIF

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Technical Specification

Camera

Image Sensor	1/2.8" STARVIS™ CMOS
Effective Pixels	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@F1.6 B/W: 0.0005Lux@F1.6 0Lux@F1.6 (IR light on)
IR Distance	100 m (328.08 ft)
IR On/Off Control	Zoom Prio/Manual/SmartIR
IR LEDs Number	4

Lens

Focal Length	4.8 mm–120 mm
Max. Aperture	F1.6–F4.0
Field of View	H: 60.0°–2.5°; V: 30.8°–2.2°; D: 66.7°–2.9°
Optical Zoom	25x
Focus Control	Auto/Semi-Auto/Manual
Close Focus Distance	0.1 m–1.5 m (0.33 ft–4.92 ft)
Iris Control	Auto/Manual

DORI Distance	Detect	Observe	Recognize	Identify
	2540 m (8333.33 ft)	1016 m (3333.33 ft)	508 m (1666.67 ft)	254 m (833.33 ft)

PTZ

Pan/Tilt Range	Pan: 0°–360° (endless) Tilt: -15°–90° (auto flip 180°)
Manual Control Speed	Pan: 0.1°–200°/s Tilt: 0.1°–120°/s
Preset Speed	Pan: 240°/s Tilt: 200°/s
Presets	300
Tour	8 (up to 32 presets per tour)
Pattern Number	5
Scanning Number	5
Speed Adjustment	Support
Power-off Memory	Support
Idle Motion	Preset/Tour/Pattern/Scanning
Protocol	DH-SD Pelco-P/D (auto recognition)

General Intelligence

Event Trigger	Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly
General Intelligence	Object Abandoned/Missing

Artificial Intelligence

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	Support
Video Metadata	Support human, motor vehicle and non-motor vehicle image capture.

Video

Compression	H.265+/H.265/H.264+/H.264/MJPEG (sub stream)
Streaming Capability	3 streams
Resolution	4M (2560 x 1440); 3M (2048 x 1536); 1080P (1920 x 1080); 1.3M (1280 x 960); 720P (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240)
Frame Rate	Main stream: 4MP/3MP/1080P/1.3MP/720P (1–25fps) Sub stream 1: D1/CIF (1–25fps) Sub stream 2: 1080P/1.3M/720P (1–25fps)
Bit Rate Control	Variable Bit Rate/Constant Bit Rate
Bit Rate	H.265/H.264: 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	Ultra DNR (2D/3D)
Motion Detection	Support
Region of Interest	Support
Electronic Image Stabilization	Support
Electronic Defog	Support
Digital Zoom	16x
Flip	180°
Privacy Masking	Up to 24 areas, and up to 8 areas in the same view

Audio

Compression	G.711a; G.711Mu; AAC; G.722.1; G.726; MPEG2-Layer2; G.729

Network

Ethernet	RJ-45 (10/100Base-T)
4G Network Type	LTE/WCDMA/GSM

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4G Frequency Band	LTE FDD: Band 1/2/3/4/7 WCDMA: Dual-band Band 1/2 GSM: 1800Hz/1900MHz
Protocol	IPv4; IPv6; HTTP; HTTPS; SSL; TCP/IP; UDP; UPnP; ICMP; IGMP; SNMPv1/v2c/v3(MIB-2); ARP; RTCP; RTSP; RTP; SMTP; NTP; DHCP; DNS; PPPOE; DDNS; FTP; IP Filter; QoS; Bonjour; 802.1x
Interoperability	ONVIF Profile S&G; CGI
Streaming Method	Unicast/Multicast
User/Host	19
Edge Storage	NAS; Local PC; Micro SD card (256G)
Browser	IE7 and newer versions Chrome 45 and earlier versions Firefox 52 and earlier versions Safari (no version restrictions)
Management Software	Smart PSS; DSS; DMSS
Smart Phone	IOS/Android

Certification

Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4-2014 UL: UL60950-1+CAN/CSA C22.2, No. 60950-1

Port

Audio In	1
Audio Out	1
Alarm Port	2/1

Power

Power Supply	DC 12V/3A PoE+ (802.3at)
Power Consumption	13W 21W (IR on)

Environment

Operating Temperature	-40°C to +70°C (-40°F to +158°F)
Operating Humidity	≤95%
Ingress Protection	IP66; TVS 6000V lightning proof; Surge protection

Structure

Casing	Aluminium alloy ADC12
Dimensions	Φ160 mm × 295 mm (6.30" × 11.61")
Net Weight	3 kg (6.61 lb)
Gross Weight	4.8kg (10.58lb)

Accessories		Wall Mount
		Mount Adapter
		Power Adapter
		Power Box
		Ceiling Mount
		Water-proof Junction Box
		Pole Mount
		Corner Mount
		Parapet Mount

Accessories

Included:

Wall Mount

Optional:

Mount Adapter

Power Adapter

Power Box

Ceiling Mount

Water-proof Junction Box
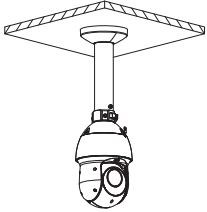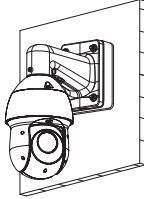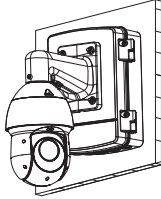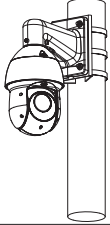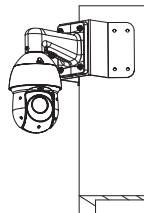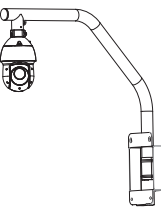

Pole Mount

Corner Mount

Parapet Mount

Ordering Information

Type	Model	Description
4MP PTZ Camera		4MP 25x Starlight IR 4G PTZ AI Network Camera, WDR, 4G, PAL
		4MP 25x Starlight IR 4G PTZ AI Network Camera, WDR, 4G, NTSC
		4MP 25x Starlight IR 4G PTZ AI Network Camera, WDR, 4G, PAL
		4MP 25x Starlight IR 4G PTZ AI Network Camera, WDR, 4G, NTSC

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Ceiling Mount	Junction Mount	Power Box Mount
Pole Mount	Corner Mount	Parapet Mount

Dimensions (mm [inch])

50.0[1.97]

109.3[4.30]

295.4[11.63]

139.5[5.49]

φ160.0[6.30]

TOUGHDOG SECURITY™