

TDODIY550L2-AI

5MP FIXED-FOCAL DOME NETWORK CAMERA



Series Overview

With starlight solution and deep learning algorithm, TOUGHDOG network camera has various intelligent functions, including face capture, perimeter protection and people counting, which greatly improve the accuracy of video analysis. The series camera supports dust-proof function, waterproof function and vandal-proof function, complying with the standards of IP67 and IK10 (Supported by some select models).

Functions

Smart Dual Illumination

TOUGHDOG Smart Dual Illumination technology adopts deep learning algorithm to detect targets. Usually, the IR illumination is on at night; when the target appears in the monitoring area, the white light is on, and the camera records the full-color video and information of key events. That is, the camera links snapshot and video with full-color image. When the target is out of the monitoring area, the white light is off and the IR illumination is on, which reduces light pollution efficiently.

Face Detection

TOUGHDOG Face Detection technology can detect the face in the image. With deep learning algorithm, the technology supports detecting, track-ing, capturing and selecting the best face image, and then outputs face snapshot.

People Counting

With deep learning algorithm, TOUGHDOG People Counting technology can track and process moving human body targets to realize the accurate statistics of enter No., leave No., and In Area No. Working with manage-ment platform, it outputs yearly/monthly/weekly/daily reports to meet your requirements.

- 5MP, 1/2.7" CMOS image sensor, low illuminance, high image definition
- Outputs max. 5MP (2592 × 1944) @20 fps, and supports 2688×1520 (2688 × 1520) @25/30 fps
- H.265 codec, high compression rate, ultra-low bit rate
- Built-in high-efficiency warm light and IR LED, and Max. IR distance: 50 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, fast moving (the three functions support the classification and accurate detection of vehicle and human), abandoned object, missing object, loitering detection, people gathering, parking detection, heat map and face detection.
- Abnormality detection: Motion detection, video tampering, scene changing, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.
- Sound and light alarm linkage. When the alarm is triggered, the sound and light will be linked.
- Alarm: 1 in, 1 out; audio: 1 in, 1 out; supports max. 256 G Micro SD card, built-in Mic and speaker.
- 12V DC/PoE power supply
- IP67, IK10 protection



Siren And Light Active Deterrence

TOUGHDOG siren and light active deterrence network camera supports the light alarm and voice alarm when perimeter event occurs, to realize the deterrence and effective intervention. The camera is built in multiple voices for selection, and supports customized voice importing.

One-tap Disarming

TOUGHDOG One-tap Disarming function, which is convenient and easy for operation, is the switch for event linkage. Customers can close and recover event linkage through mobile App, which meets multi-scenarios needs.

Protection (IP67, IK10, 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.

IK10: The enclosure can stand the punch more than 5 times from a 5 kg hammer falling from a height of 40 cm (Impact energy is 20J).

Wide voltage: The camera allows ±30% input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

Technical Specification

Camera	
Image Sensor	1/2.7"5Megapixel progressive CMOS
Max. Resolution	2592 (H) × 1944 (V)
ROM	128 M
RAM	512 M
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.005 Lux
S/N Ratio	>56 dB
Illumination Distance	2.8 mm: 30 m (98.4 ft) 3.6 mm: 30 m (98.4 ft) 6 mm: 50 m (164.0 ft)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	2 (IR LED); 1 (Warm light)
Pan/Tilt/Rotation Range	Pan: 0°–355° Tilt: 0°–80° Rotation: 0°–355°

Lens					
Lens Type		Fixed-focal			
Mount Type		M12			
Focal Length		2.8 mm; 3.6 mm; 6 mm			
Max. Aperture		2.8 mm: F1.6 3.6 mm: F1.6 6 mm: F1.6			
Field of View		2.8 mm: Horizontal 98° × Vertical 71° × Diagonal 129° 3.6 mm: Horizontal 80° × Vertical 58° × Diagonal 107° 6 mm: Horizontal 50° × Vertical 37° × Diagonal 64°			
Iris Type		Auto			
Close Focus Distance		2.8 mm: 0.9 m (3.0 ft) 3.6 mm: 1.6 m (5.2 ft) 6 mm: 3.2 m (10.5 ft)			
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8mm	56.0 m (183.7 ft)	22.4 m (73.5 ft)	11.2 m (36.7 ft)	5.6 m (18.4 ft)
	3.6mm	80.0 m (262.5 ft)	32.0 m (105.0 ft)	16.0 m (52.5 ft)	8.0 m (26.2 ft)
	6mm	120.0 m (393.7 ft)	48.0 m (157.5 ft)	24.0 m (78.7 ft)	12.0 m (39.4 ft)

Smart event	
IVS	Abandoned object; missing object
Heat Map	Yes

Professional, intelligent	
IVS (Perimeter Protection)	Tripwire; intrusion; fast moving (the three functions support the classification and accurate detection of vehicle and human); loitering detection; people gathering; parking detection

Face Detection	Face detection; track; optimization; snapshot; face enhancement; face exposure; face matting setting; face, single inch photo; three snapshot methods: real-time snapshot, optimization snapshot, quality priority; face angle filter; optimization time setting
People Counting	Support the counting of enter number, leave number and pass numbe, and displaying and outputting yearly/monthly/daily reports.support people counting in area,
Intelligent 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 H265+/H264+
Video Frame Rate	PAL Main stream: 2592 × 1944 @1-20 fps/2688 × 1520 @1-25 fps Sub stream: 704 × 576 @1-25 fps Third stream: 1920 × 1080 @1-11 fps NTSC Main stream: 2592 × 1944 @1-20 fps/2688 × 1520 @1-30 fps Sub stream: 704 × 576 @1-30 fps Third stream: 1920 × 1080 @1 fps
Stream Capability	3 streams
Resolution	5M (2592 × 1944); 4M (2688 × 1520); 4M (2560 × 1440); 3M (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
Scene Self-adaptation	Yes
White Balance	Auto/natural/street lamp/outdoor/manual/regional custom
Gain Control	Auto/Manual
Noise Reduction	3D DNR
Motion Detection	OFF/ON (4 areas)
Region of Interest (RoI)	Yes (4 areas)
Smart Illumination	Yes
Defog	Yes
Image Rotation	0°/90°/180°/270°
Mirror	Yes
Privacy Masking	4 areas

Audio	
Built-in MIC	Yes

Audio Compression	PCM; G.711a; G.711Mu; G.726; AAC; MPEG2-Layer2; G.722.1; G.729; G.723
-------------------	---

Alarm

Alarm Event	No SD card; SD card full; SD card error; service life warning; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; fast moving; abandoned object; missing object; loitering detection; people gathering; parking detection; scene changing; audio detection; voltage detection; defocus detection; external alarm; face detection; people counting in area; stay alarm; people counting; people No. exception detection; safety exception; light alarm; sound alarm (21 built-in sounds and custom voices importing)
-------------	--

Network

Network	RJ-45 (10/100 Base-T)
SDK and API	Yes
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; SAMBA; PPPoE; 802.1x; SNMP
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; Milestone; Genetec
User/Host	20 (Total bandwidth: 80 M)
Storage	TOUGHDOG Cloud (only supported by TOUGHDOG version); FTP; SFTP; Micro SD card (Support max. 256-G)
Browser	IE: IE8, IE9, IE11 Chrome Firefox
Management Software	Smart PSS; DSS; DMSS
Mobile Phone	IOS; Android

Certification

Certification	CE-LVD: EN62368-1 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
---------------	--

Port

Audio Input	1 channel (RAC port)
Audio Output	1 channel (RAC port)
Alarm Input	1 channel in: 5mA 3V–5V DC
Alarm Output	1 channel out: 300mA 12V DC

Power

Power Supply	12V DC/PoE
Power Consumption	<8.6W

Environment

Operating Conditions	–40°C to +60°C (–40°F to +140°F)/Less than 95% RH
Storage Conditions	–40°C to +60°C (–40°F to +140°F)
Protection Grade	IP67; IK10

Structure

Casing	Metal
--------	-------

Dimensions	105 mm × Φ126 mm (4.1" × Φ5.0")
Net Weight	716.4 g (1.6 lb)
Gross Weight	929.7 g (2.0 lb)

Ordering Information

Type	Description
5MP Camera	5MP Fixed-focal Dome Network Camera, PAL
	5MP Fixed-focal Dome Network Camera, NTSC
Accessories (optional)	Junction Box
	Rain Shade
	Wall Mount
	Pole Mount
	Mount Adapter
	Celling Mount
	12V DC/1A Power Adapter
	Single-port Long Reach Ethernet over Coax Extender
	Integrated Mount Tester
	TLC SD Card

Accessories

Optional:



Junction Box



Rain Shade



Wall Mount



Pole Mount



Mount Adapter



Celling Mount



DC12V1A Power Adapter



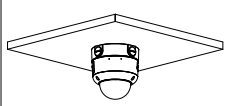
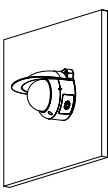
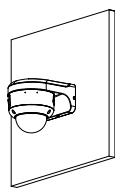
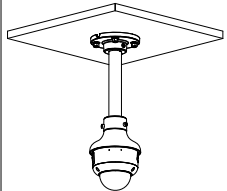
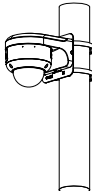
Single-port long reach ethernet over coax extender



Integrated Mount tester



TLC SD card

Junction Mount	Wall Mount	Wall Mount
		
Ceiling Mount	Pole Mount (Vertical)	
		

Dimensions (mm/inch)

