

TR-CD3683G2-MZ(2.8-12mm)

4 MP DarkFighter Varifocal Bullet Network Camera



Key Features

- Supports 1.5 Tops computing power, 60 MB system memory, 400 MB smart RAM, and 2 GB eMMC storage for sharing resources
- High quality imaging with 4 MP resolution
- Clear imaging against strong back light due to 140 dB WDR technology
- Motorized varifocal lens for easy installation
- Efficient H.265+ compression technology to save bandwidth and storage
- Focus on human and vehicle targets classification based on deep learning
- Water and dust resistant (IP67) and vandal proof (IK10)

Introduction

Powered by advanced deep learning algorithms, this camera delivers precise classification of human and vehicle targets across both front-end and back-end systems. By focusing exclusively on relevant targets, the device significantly enhances alarm accuracy and operational efficiency in complex environments.

All integrated security measures comply with local regulatory requirements and international standards, ensuring enhanced defense against cyber threats and unauthorized access. These protections help safeguard both user data and system integrity across mission-critical deployments.

Specifications

Camera sensor

Sensor Size	1/1.8" Progressive Scan CMOS
Max. Resolution	2688 × 1520
Color Sensitivity	Color: 0.0014 Lux @ (F1.4, AGC ON),B/W: 0 Lux with IR
Day & Night	IR cut filter
Shutter Speed	1/3 s to 1/100,000 s

Camera lens

Lens Focal Length	Varifocal lens, motorized lens, 2.8 to 12 mm and 8 to 32 mm optional
Focal Length & FOV	2.8 to 12 mm: Horizontal 114° to 41.8°, Vertical 59.3° to 23.6°, Diagonal 141.3° to 48.1° 8 to 32 mm: Horizontal 42.5° to 15.2°, Vertical 23.4° to 8.7°, Diagonal 49.7° to 17.3°
Angle Adjustment	Pan: 0° to 355°, tilt: 0° to 90°, rotate: 0° to 360°
Iris Type	P-iris
Focus	Auto, Semi-auto, Manual
Aperture	2.8 to 12 mm: F1.4; 8 to 32 mm: F1.7
DORI	2.8 to 12 mm: D: 60 to 149 m, O: 23.8 to 59.1 m, R: 12 to 29.8 m, I: 6 to 14.9 m 8 to 32 mm: D: 150.3 to 400 m, O: 59.7 to 158.7 m, R: 30.1 to 80 m, I: 15 to 40 m

Supplement Light

Supplement Light Type	IR
Supplement Light Distance	2.8 to 12 mm: Up to 60 m; 8 to 32 mm: Up to 80 m

Wavelength	850 nm
Smart Supplement Light	Yes

Video & Audio

Wide Dynamic Range (WDR)	140 dB
SNR	≥ 52 dB
Image Enhancement	BLC, HLC, 3D DNR, Defog
Image Settings	Rotate mode,saturation,brightness,contrast,sharpness,gain,white balance,adjustable by client software or web browser
Video Compression	Main stream: H.265/H.264/H.264+/H.265+, Sub-stream: H.265/H.264/MJPEG, Third stream: H.265/H.264, Fourth stream: H.265/H.264/MJPEG
Day/Night Switch	Day, Night, Auto, Schedule
Privacy Mask	4 programmable polygon privacy masks
Simultaneous Live View	Up to 6 channels
Region of Interest (ROI)	5 fixed regions for main stream and sub-stream
Scalable Video Coding (SVC)	H.264 and H.265 encoding
Video Bit Rate	32 Kbps to 8 Mbps
Audio Type	Mono sound
Audio Compression	G.711/G.722.1/G.726/MP2L2/PCM/MP3/AAC-LC
Audio Bit Rate	64 Kbps (G.711ulaw/G.711alaw)/16 Kbps (G.722.1)/16 Kbps (G.726)/32 to 192 Kbps (MP2L2)/8 to 320 Kbps (MP3)/16 to 64 Kbps (AAC-LC)
Environment Noise Filtering	Yes
e-PTZ	Support Preset and Auto Tracking settings

Frame Rate

Main Stream	50 Hz: 25 fps (2688 × 1520, 1920 × 1080, 1280 × 720) 60 Hz: 30 fps (2688 × 1520, 1920 × 1080, 1280 × 720)
Sub Stream	50 Hz: 25 fps (1280 × 720, 640 × 480, 640 × 360) 60 Hz: 30 fps (1280 × 720, 640 × 480, 640 × 360)
Third Stream	50 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360) 60 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360)
Fourth Stream	50 Hz: 10 fps (1280 × 720, 640 × 480, 640 × 360) 60 Hz: 10 fps (1280 × 720, 640 × 480, 640 × 360)

Network

Ethernet Interface	1 RJ45 10 M/100 M self-adaptive Ethernet port
Protocols	TCP/IP, ICMP, DHCP, DNS, DDNS, RTP, RTSP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv4, IPv6, UDP, Bonjour, SSL/TLS, PPPoE, SFTP, ARP, SNMP, WebSocket, WebSockets
User/Host	Up to 32 users; 3 user levels: administrator, operator, and user
Web Browser	Plug-in required live view: IE 10, IE 11, Plug-in free live view: Chrome 57.0+, Firefox 52.0+, Edge 89+, Local service: Chrome 57.0+, Firefox 52.0+, Edge 89+
Network Storage	NAS (NFS, SMB/CIFS), Auto Network Replenishment (ANR)

Security	Password protection, complicated password, cryption, 802.1X authentication (EAP-TLS, EAP-LEAP, EAP-MD5), watermark, IP address filter, basic and digest authentication, WSSE and digest authentication for Open Network Video Interface, RTP/RTSP , control timeout settings, security audit log, TLS 1.1/1.2/1.3, host authentication (MAC address)
----------	--

I/O interface

On-Board Storage	Built-in memory card slot, support microSD/microSDHC/microSDXC card, up to 512 GB
Alarm	3 inputs, 3 outputs (max. 24 VDC/24 VAC, 1 A)
Audio	1 line in + 1 line out
Reset Key	Yes
Video Output	1 Vp-p Composite Output (75 Ω/CVBS) (Only for debugging)
Power Input	Two-core terminal block
Power Output	12 VDC, max. 100 mA
RS-485	1 RS-485 (Half duplex, Pelco-P, Pelco-D, self-adaptive)
Heater	Yes

Features & Performance

Basic Event	Motion detection, line crossing, intrusion, region entrance, region exiting (support alarm triggering by specified target types (human and vehicle)), video tampering alarm, exception
Smart Event	Scene change detection, audio exception detection, defocus detection, unattended baggage detection, object removal detection
General Function	Heartbeat, anti-banding, mirror, flash log, password reset via email, pixel counter
Deep Learning Function	Face capture, people counting, perimeter protection
Event Actions	Upload to NAS/memory card, notify surveillance center, send email, trigger alarm output, trigger recording, trigger capture, audible warning
API	ONVIF (Profile S, Profile G, Profile T), ISAPI, SDK, ISUP

HEOP

Open Resources	Memory: 60 MB, Smart RAM: 400 MB, eMMC: 2 GB
Computing Power	1.5 TOPS
Open Capability	HEOP 2.0 OpendevSDK
Deep Learning Structure	Caffe, PyTorch, TensorFlow, PaddlePaddle, ONNX
Programming Language	C, C++

General

Dimension	Ø 105 mm × 340.7 mm (Ø 4.1" × 13.4")
Weight	Approx. 1455 g (2.9 lb.)
Material	Aluminum alloy body
Available Languages	33 languages: English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil), Ukrainian
Power supply	12 VDC ± 25%, 1.20 A, max. 14 W, two-core terminal block, 24 VAC ± 20%, 1.03 A, max. 14 W, PoE: IEEE 802.3at, Class 4, max. 17 W

Environmental

Operating Temperature	-40 °C to 60 °C (-40 °F to 140 °F)
Humidity	Less than 95% (non-condensing)

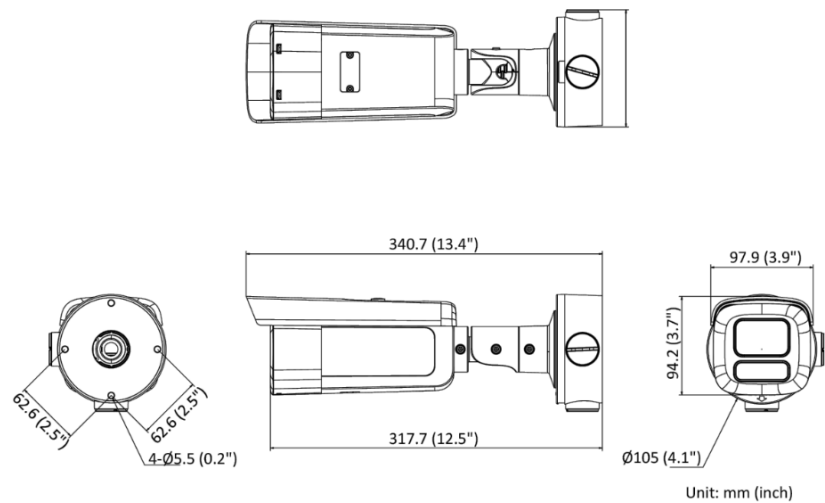
Approval

Protection	IP67: IEC 60529-2013, IK10: IEC 62262:2002
------------	--

Available Model

- TR-CD3683G2-MZ(2.8-12mm)
- TR-CD3683G2-MZ(8-32mm)

Dimension



Accessory

Corner mount	Vertical pole mount	Vertical pole mount
		

Note: Specifications are subject to change without notice.