

TR-DF4420-EX(SS304)

316L 4MP 20x Explosion-proof Network Speed Dome



Key Features

- Ex-mark: ATEX: Ex II 2GD Ex db IIC T6 Gb /Ex tb IIIC T80°C Db; IECEx: Ex db IIC T6 Gb /Ex tb IIIC T80°C Db
- 316L stainless steel
- High quality imaging with 4 MP resolution
- Supports H.265 video compression
- 120 dB WDR, 3D DNR
- 20 × optical zoom, focal length 4.8 mm to 96 mm
- Water and dust resistant (IP68)

Introduction

This robust camera delivers exceptional image quality with its high-resolution sensor and advanced imaging technologies, ensuring clear video even in harsh lighting or weather conditions. Its infrared capabilities allow for effective 24/7 monitoring, while the explosion-proof design ensures uncompromised safety and durability.

Specifications

Camera sensor

Sensor Size	1/2.8" Progressive Scan CMOS
Max. Resolution	2560 × 1440
Color Sensitivity	Color: 0.005 Lux @ (F1.6, AGC ON), B/W: 0.001 Lux @ (F1.6, AGC ON)
Day & Night	IR cut filter
Shutter Speed	1/1 s to 1/30,000 s
Zoom	20× optical, 16× digital
Slow Shutter	Yes

Camera lens

Lens Focal Length	4.8 to 96 mm
Focal Length & FOV	Horizontal: 55° to 2.6°, Vertical: 30.6° to 1.5°, Diagonal field: 60.5° to 3.0°
Aperture	F1.6
Lens Mount	M12
Focus	Auto, semi-auto, manual
Zoom Speed	Approx. 2.9 s

PTZ

Movement Range (Pan)	360° endless
Movement Range (Tilt)	0° to 90°, auto flip
Pan Speed	Configurable from 0.1° to 160°/s, preset speed: 160°/s

Tilt Speed	Configurable from 0.1° to 120°/s, preset speed 120°/s
Presets	300, support preset freezing
Patrol Scan	8 patrols, up to 32 presets for each patrol
Pattern Scan	4 pattern scans, record time over 10 minutes for each scan
Park Action	Preset / Pattern Scan / Patrol Scan / Auto Scan / Tilt Scan / Random Scan / Frame Scan / Panorama Scan
Control Features	Proportional Pan, 3D positioning, PTZ status display, power-off memory
Scheduled Task	Preset, pattern scan, patrol scan, auto scan, tilt scan, random scan, frame scan, panorama scan, dome reboot, dome adjust, aux output

Video

Wide Dynamic Range (WDR)	120 dB
SNR	≥ 52 dB
Image Enhancement	BLC, HLC, 3D DNR, Optical Defog, regional exposure, regional focus
Image Settings	Saturation, brightness, sharpness, contrast
Privacy Mask	Mask color or mosaic configurable, up to 24 programmable polygon privacy masks
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, MJPEG
Simultaneous Live View	Up to 20 channels
Scalable Video Coding (SVC)	H.264 and H.265 encoding
Region of Interest (ROI)	8 fixed regions for each stream
Audio Type	Mono sound
Audio Compression	G.711/G.722.1/G.726/MP2L2/PCM/AAC-LC/MP3
Environment Noise Filtering	Yes

Frame Rate

Main Stream	50 Hz: 25 fps (2560 × 1440, 1920 × 1080, 1280 × 960, 1280 × 720) 60 Hz: 30 fps (2560 × 1440, 1920 × 1080, 1280 × 960, 1280 × 720)
Sub-Stream	50 Hz: 25 fps (704 × 576, 640 × 480, 352 × 288) 60 Hz: 30 fps (704 × 480, 640 × 480, 352 × 240)
Third Stream	50 Hz: 25 fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 576, 640 × 480, 352 × 288) 60 Hz: 30 fps (1920 × 1080, 1280 × 960, 1280 × 720, 704 × 480, 640 × 480, 352 × 240)

Network

Ethernet Interface	1 RJ45 10 M/100 M self-adaptive Ethernet port
Protocols	802.1X, QoS, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTCP, RTP, UDP, IGMP, ICMP, DHCP, PPPoE, Bonjour
User/Host	Up to 32 users 3 user levels: administrator, operator, and user
Web Browser	Chrome80+, Firefox80+, Safari13+, Edge89+
Network Storage	NAS (NFS, SMB/CIFS), auto network replenishment (ANR)
Security	Host authentication (MAC address), IP address filter, 802.1X authentication (EAP-TLS, EAP-LEAP, EAP-MD5), Password protection, complicated password

I/O interface

On-board Storage	No
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Alarm	1 input + 1 output
Cable Length	1.8 m (5.91 ft.)
Demist	Yes

Features & Performance

Basic Event	Motion detection, video tampering alarm, alarm input and output, exception (IP address conflict, HDD full, illegal login, HDD error, network disconnected, Abnormal Reboot)
Smart Event	Intrusion detection, Line crossing detection, region entrance detection, region exiting detection, unattended baggage detection, object removal detection, Face detection
General Function	Mirror, password protection, watermark, IP address filter
Event Actions	Upload to FTP/NAS/memory card, notify surveillance center, send email, trigger alarm output, trigger recording, and PTZ actions (such as preset, patrol scan, pattern scan) Manual tracking, panorama tracking
API	Open Network Video Interface (Profile S, Profile G, Profile T),ISAPI,SDK

General

Dimension	Ø 184 mm × 264.2 mm (Ø 7.2" × 10.4")
Weight	Approx. 8 kg (17.64 lb.)
Material	Stainless steel SUS304
Power supply	12 VDC ± 25%, max. 7 W, PoE (802.3af), Class A, 36 to 57 V, max. 7 W
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

Environmental

Operating Temperature	-30 °C to +60 °C (-22 °F to +140 °F)
Humidity	Less than 95% non condensing

Approval

Protection	IP68 (IEC 60529-2013), TVS 6000 V lightning protection, surge protection and voltage transient protection
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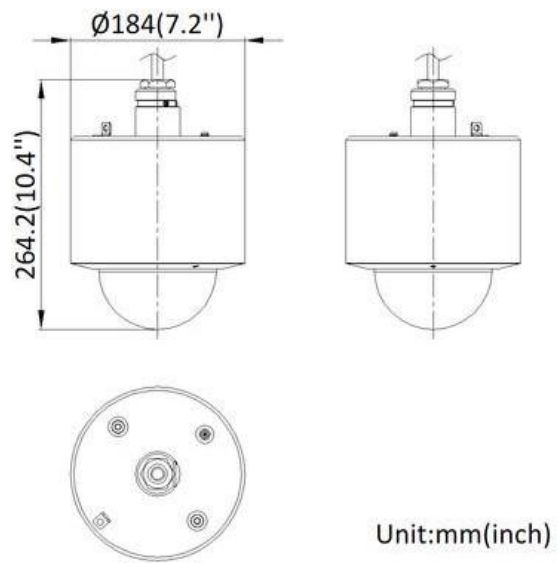
DORI

DORI (Detect, Observe, Recognize, Identify) distance gives the general idea of the camera ability to distinguish persons or objects within its field of view.

It is calculated based on the camera sensor specification and the criteria given by EN 62676 -4: 2015.

DORI	Detect	Observe	Recognize	Identify
Definition	25 px/m	63 px/m	125 px/m	250 px/m
Distance (Tele)	1280 m (4198.4 ft)	507.9 m (1665.9 ft)	256 m (839.68 ft)	128 m (419.84 ft)

Dimension



Accessory

Included bracket	Flexible Conduit G3/4	Junction Box	Junction Box
			

Note: Specifications are subject to change without notice.