

# Thermal & Optical Bi-spectrum Network Dome Camera

TIC3612SA-F2-4F3AC-I1



## Features

- Thermal & optical dual-spectrum image, dual video with single IP address, adaptable to various scenes
- 1/2.8" target surface, high sensitivity sensor, suitable for starlight monitoring
- Thermal module supports reliable fire detection and fire shield area
- Thermal module supports temperature detection and cold&hot spot tracking, which highlights abnormal temperatures and links to alarm
- Thermal & optical dual-spectrum smart intrusion prevention can be enabled simultaneously : cross line, enter area, leave area, intrusion
- Optical module supports smog recognition, which can help with fire alarm reconfirmation
- Supports picture-in-picture mode, real-time contrast live, more convenient and clear
- Supports audio and light alarm, with red and blue warning lights built in
- Ultra 265, H.265, H.264, MJPEG
- Max 2688 × 1520@30 fps in the optical module and max 960P@30 fps in the thermal module
- DC 12 V ± 25% or PoE power supply
- Alarm 2 in and 2 out, audio 1 in and 1 out, micro SD, up to 512 GB

## Specifications

Channel	Optical	Thermal
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**Camera**

Original Resolution	N/A	256 × 192
Sensor	1/2.8" CMOS	Vanadium oxide uncooled focal plane arrays
Min. Illumination	Colour: 0.01 lux (F1.6, AGC ON) B/W: 0.005 lux(F1.6,AGC ON) 0 lux with IR	N/A
Day/Night	IR-cut filter with auto switch (ICR)	N/A
Pixel Size	N/A	12 um
NETD	< 50 mk@F1.0@25 °C	
Shutter	Auto/Manual, 1 to 1/100000 s	
WDR	120 dB	
S/N	>56 dB	

**Lens**

Focal Length	2.6 mm	2.1 mm
Iris	F1.6	F1.0
Field of View (H)	108.5°	88.8°
Field of View (V)	70.7°	63.7°
Field of View (D)	133.5°	109.2°

**DORI**

DORI Distance (Detect)	58.5m(191.9ft)	N/A
DORI Distance (Observe)	23.4m(76.8ft)	N/A
DORI Distance (Recognize)	11.7m(38.4ft)	N/A
DORI Distance (Identify)	5.9m(19.2ft)	N/A

**Illuminator**

Wavelength	750 nm	N/A
Illumination Distance (IR)	30m	N/A
Light On/Off Control	Auto/Manual	N/A

**Video**

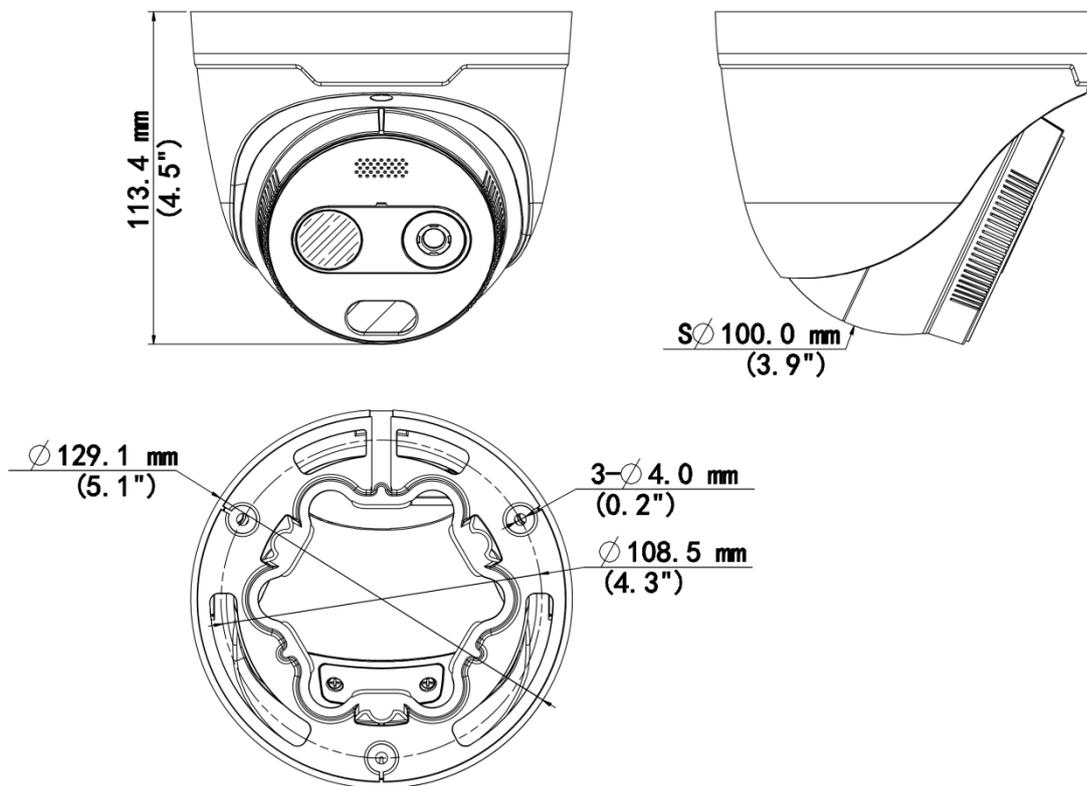
Frame Rate	4MP(2688*1520), Max 30fps	960P(1280*960), Max 30fps
Video Compression	Ultra 265, H.265, H.264, MJPEG	
Video Bit Rate	128 Kbps to 16 Mbps	
U-code	Support	
ROI	Support	
Video Stream	Triple streams	
OSD	Up to 8 OSDs	

Privacy Mask	Up to 8 areas (8 blacks/ 8 mosaics)	N/A
<b>Image</b>		
White Balance	Auto, Outdoor, Fine tune, Sodium lamp, Locked, Auto2	N/A
Digital Noise Reduction	2D/3D DNR	
Flip	Normal, Flip vertical, Flip horizontal, 180°, 90° Clockwise, 90° Anti-clockwise	
Defog	Digital defog	N/A
Palette	N/A	lava, medical, arctic, mazarine, fusion, rain, puce, white hot, iron oxide red, hot iron, rainbow 1, rainbow 2, rainbow 3, depict hot, ice hot, black hot, red hot, green hot, color 1, color 2
<b>Intelligent</b>		
Smart Intrusion Prevention	Cross line detection, intrusion detection (support false alarm filtering and the classification of human, non-motor vehicle and vehicle)	Cross line detection, intrusion detection, enter area detection, leave area detection (support false alarm filtering and the classification of human and vehicle)
Smoke Detection	Support	N/A
Temperature Measurement Accuracy		±8 °C (±14.4 °F) or ±8% (whichever is greater)
Temperature Range		Selectable between -20 °C to 150 °C (-4 °F to 302 °F) and 100 °C to 550 °C (212 °F to 1022 °F)
<b>Events</b>		
Fire Detection	N/A	Support
Basic Detection	Motion detection, Tampering alarm, Audio detection	N/A
General Function	Watermark, IP address filtering, Access policy, ARP protection, RTSP authentication, User authentication, HTTP authentication, Alarm input, Alarm output	
<b>Audio</b>		
Audio Compression	G.711U, G.711A	
Audio Bitrate	128 Kbps	
Two-way Audio	Support	
Suppression	Support	
Sampling Rate	16KHZ	
<b>Storage</b>		
Edge Storage	Micro SD, up to 512 GB	
Network Storage	ANR	
<b>Network</b>		
Protocols	IGMP, RTP, SMTP, IPv4, IPv6, ICMP, ARP, TCP, UDP, DHCP, PPPoE, RTSP, RTCP, RTMP, DNS, DDNS, NTP, FTP, UPnP, HTTP, HTTPS, 802.1x, SNMP, QoS, SSL/TLS, SSH	
Compatible Integration	ONVIF (Profile S, Profile G, Profile T), API, SDK	
User/Host	Up to 32 users. 3 user levels: administrator, common user and operator	

Client	EZStation, UNV-Link, UNV-Link Pro	
Web Browser	Plug-in required live view: IE 10+, Chrome 45+, Firefox 52+, Edge 79+	
<b>Interface</b>		
Built-in Mic	Support	
Built-in Speaker	Support	
Audio I/O	1 Input: impedance 1 k $\Omega$ , amplitude 2.5 V [p-p], 1 Output: impedance 600 $\Omega$ , amplitude 2 V [p-p]	
Alarm I/O	2/2	
Serial Port	1 channel RS485 interface	
Network	1 $\times$ RJ45 10 M/100 M Base-TX Ethernet	
Video Output	N/A	1 BNC (for debugging)
<b>Certification</b>		
EMC	CE-EMC (EN 55032: 2015+A1:2020, EN 61000-3-3: 2013+A1: 2019, EN IEC 61000-3-2: 2019+A1: 2021, EN 50130-4:2011+A1:2014) FCC (FCC CFR 47 part15 B, ANSI C63.4-2014)	
Safety	CE LVD (EN IEC 62368-1:2020+A11:2020) UL (UL 62368-1, 2nd Ed., Issue Date: 2014-12-01)	
Environment	CE-RoHS (2011/65/EU;(EU)2015/863); WEEE (2012/19/EU); Reach (Regulation (EC) No 1907/2006)	
Protection	IP67 (IEC 60529:1989+AMD1:1999+AMD2:2013)	
<b>General</b>		
Power	DC12V( $\pm$ 25%), PoE(IEEE802.3af)	
Power Consumption	Max 12W	
Power Interface	$\varnothing$ 5.5 mm coaxial power plug	
Dimensions	$\Phi$ 129 x 114 mm( $\Phi$ 5.08" x 4.49")( $\Phi$ x H)	
Weight	0.72kg(1.6lb)	
Working Environment	-40 $^{\circ}$ C to 70 $^{\circ}$ C (-40 $^{\circ}$ F to 158 $^{\circ}$ F), Humidity: $\leq$ 95% RH (non-condensing)	
Storage Environment	-40 $^{\circ}$ C to 70 $^{\circ}$ C (-40 $^{\circ}$ F to 158 $^{\circ}$ F), Humidity: $\leq$ 95% RH (non-condensing)	
Surge Protection	6 KV	
Reset Button	Support	
RTC	Support	
Web Client Language	22 Languages: Traditional Chinese, English, Simplified Chinese, Polish, German, Russian, French, Korean, Dutch, Czech, Portuguese (Europe), Portuguese (Brazil), Japanese, Thai, Turkish, Spanish (Latin America), Spanish (Europe), Hungarian, Italian, Vietnamese, Arabic, Slovak	
<b>Live View</b>		
Maximum Bitstream	35	
Maximum Bandwidth	50 Mbps	
OSD Font	Vector	
OSD Color	Support	

OSD Character Number	40
<b>Other</b>	
Corridor Mode	Support
Software Version	Q6202

## Dimensions



## Accessories

TR-JB03-H-IN

Junction Box for Metal Turret Camera(Support wiring from behind)



TR-JB07/WM03-F-IN

Wall Mounting Assembling Bracket with Back Hole for 3 Inch Hemisphere



TR-A01-IN

NPT 3/4" Waterproof Cable Gland



TR-UP06-IN

Universal Pole Mounting Bracket



TR-WM03-B-IN

Wall Mounting Assembling Bracket for 3 Inch Hemisphere



TR-UC08-C

Bullet&amp;Dome Corner Mounting Bracket



## DRI Description

The optimal detection, recognition, and identification distances are calculated according to Johnson's Criteria.

Detection Range: In order to distinguish an object from the background, the object must be covered by 1.5 or more pixels.

Recognition Range: In order to classify the object (animal, human, vehicle, etc.), the object must be covered by 6 or more pixels.

Identification Range: In order to identify the object and describe it in details, the object must be covered by 12 or more pixels.

## DRI Range Table

Lens	Detection Range (Vehicles:4.0 × 1.4 m)	Detection Range (Humans:1.8 × 0.5 m)	Recognition Range (Vehicles: 4.0 × 1.4 m)	Recognition Range (Humans: 1.8 × 0.5 m)	Identification Range (Vehicles: 1.4 × 4.0 m)	Identification Range (Humans: 1.8 × 0.5 m)
2.1mm	207m	83m	52m	21m	30m	12m
3mm	296m	119m	74m	30m	49m	17m
7mm	690m	277m	173m	69m	99m	40m

## Smart Function Table(Thermal)

Lens	SIP Detection Range (Vehicles:4.0 × 1.4 m)	SIP Detection Range (Humans:1.8 × 0.5 m)	Fire Detection Range (target: 0.1x 0.1 m)	Temperature detection (target: 0.1m × 0.1m)
2.1mm	42m	21m	9m	3.5m
3mm	60m	30m	13m	8m
7mm	140m	70m	29m	20m

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