# Thermal & Optical Bi-spectrum Network Dome Camera

#### TIC3612SA-F2-4F3AC-I1



#### Features

- Thermal & amp; Optical dual spectrum image, dual video with single IP address, adaptable to more various scenes
- 1/2.8" target surface, high sensitivity sensor, satisfy the need of starlight monitoring
- Thermal module support reliable fire detection, smoking detection and fire shield area
- Thermal module supports temperature detection and cold&hot spot tracking which highlights the abnormal temperature, and link to alarm
- Thermal & amp; Optical dual spectrum smart intrusion prevention: cross line, enter area, leave area, intrusion
- Optical module supports smog recognition, which can help with fire alarm reconfirm
- Support picture in picture mode, real time contrast live, more convenient and clear
- Support audio and light alarm, with red and blue warning lights built in
- Ultra 265, H.265, H.264, MJPEG
- Max 2688\*1520@30fps in the optical module and Max 960P@30fps in the thermal module
- DC12V±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				
Camera	·				
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	Video Compression Ultra 265, H.265, H.264, MJPEG				

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Video Dit D-t-	129 Khang to 16 Million				
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				
Image					
White Balance	Auto, Outdoor, Fine Tune, Sodium Lamp, Locked, Auto2				
Digital Noise Reduction	2D/3D DNR				
Flip	Flip Normal, Flip Vertical, Flip Horizontal, 180°, 90° Clockwise, 90° Anti-clockwise				
Defog	Digital Defog N/A				
Intelligent					
Smart Intrusion Prevention	Cross line detection, intrusion detection (support false alarm filtering and the classification of human, non-motor vehicle and vehicle)				
Smoke and Fire Detection	Support N/A				
Temperature Measurement Accuracy		$\pm 8$ °C ( $\pm 14.4$ °F) or $\pm 8\%$ (whichever is greater)			
Temperature Range	Selectable between -20 °C to 150 °C (-4 °F to 3 °F) and 100 °C to 550 °C (212 °F to 1022 °F)				
Events					
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				
Audio					
Audio Compression	G.711U, G.711A				
Audio Bitrate	128 Kbps				
Two-way Audio	Support				
Suppression	Support				
Sampling Rate	16KHZ				
Storage					

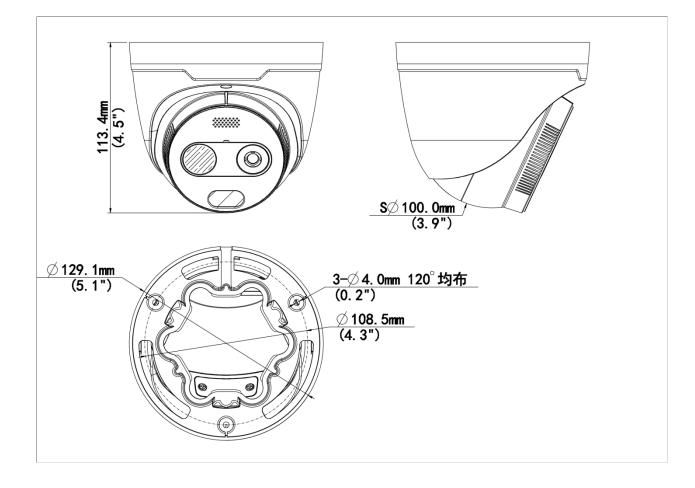
### DATASHEET

Edge Storage	Micro SD, up to 512 GB			
Network Storage	ANR			
Network				
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+			
Interface				
Built-in Mic	Support			
Built-in Speaker	Support			
Audio I/O	1 Input: impedance 1 kΩ, amplitude 2.5 V [p-p], 1 Output: impedance 600 Ω, amplitude 2 V [p-p]			
Alarm I/O	2/2			
Serial Port	1 channel RS485 interface			
Network	1 × RJ45 10 M/100 M Base-TX Ethernet			
Video Output	N/A	1 BNC (For debugging)		
Certification				
EMC	CE-EMC (EN 55032: 2015+A1:2020,EN 61000-3-3: 2021,EN 50130-4:2011+A1:2014) FCC (FCC CFR 47 part15 B, ANSI C63.4-2014)	2013+A1: 2019,EN IEC 61000-3-2: 2019+A1:		
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)			
General				
Power	DC12V(±25%), PoE(IEEE802.3af)			
Power Consumption	Max 12W			
Power Interface	Ø5.5 mm coaxial power plug			
Dimensions	Φ129 x 114 mm(Φ5.08" x 4.49")(Φ x H)			
Weight	0.72kg(1.6lb)			
Working Environment	-40 °C to 70 °C (-40 °F to 158 °F), Humidity: $\leq$ 95% RH (non-condensing)			

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Storage Environment	-40 °C to 70 °C (-40 °F to 158 °F), Humidity: $\leq$ 95% RH (non-condensing)
Surge Protection	6 KV
Reset Button	Support
RTC	Support
Web Client Language	1 Language: English
Live View	
Maximum Bitstream	35
Maximum Bandwidth	50 Mbps
OSD Font	Vector
OSD Color	Support
OSD Character Number	40
Other	
Corridor Mode	Support
Software Version	Q6202

### **Dimensions**



#### Accessories

TR-JB03-H-IN

(Support wiring from behind)



TR-JB07/WM03-F-IN

TR-A01-IN

Junction Box for Metal Turret Camera Wall Mounting Assembling Bracket wi th Back Hole for 3 Inch Hemisphere

NPT 3/4" Waterproof Cable Gland





### **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 Ra nge (Vehicles: 4 .0 × 1.4 m)	Recognition Ra nge (Humans: 1. 8 × 0.5 m)	Identification R ange (Vehicles: 1.4 × 4.0 m)	Identification Rang e (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 Ran ge (Vehicles:4.0 × 1.4 m)	SIP Detection Ran ge (Humans:1.8 × 0.5 m)	Fire Detection Ran ge (target: 0.1x 0.1 m)	Smoking detection (target: cigarette bu tt)	Temperature detection (t arget: 0.1m x 0.1m)
2.1mm	42m	21m	9m	1m	3.5m
3mm	60m	30m	13m	2m	8m
7mm	140m	70m	29m	5m	20m

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