

# Thermal & Optical Bi-spectrum Network Dome Camera

TIC3612SA



## Features

- Thermal & 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 & 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

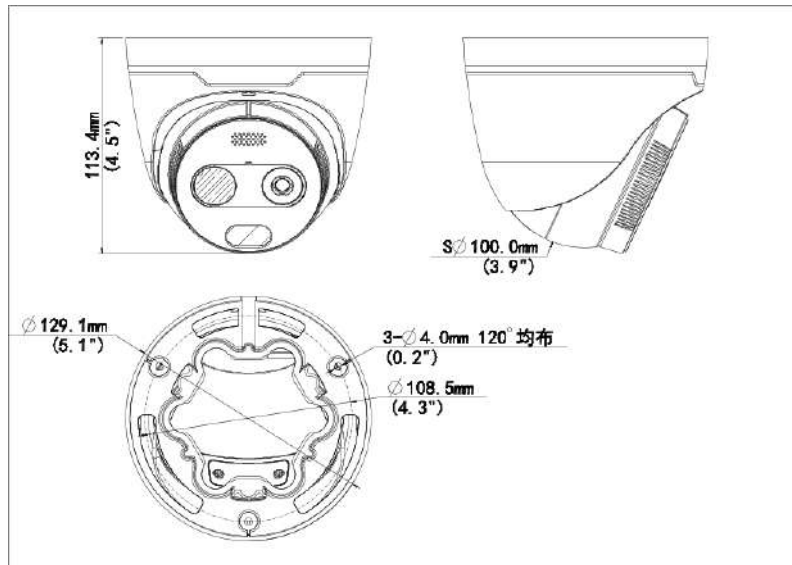
Camera	Description
Sensor—Optical	1/2.8" CMOS
Min. Illumination—Optical	TIC3612SA-F2-4F3AC-I1:Colour: 0.01 lux (F2.0, AGC ON) B/W: 0.005 lux(F2.0,AGC ON) 0 lux with IR TIC3612SA-F7-4F6AC-I1/TIC3612SA-F3-4F4AC-I1:Colour: 0.003 lux (F1.6, AGC ON) B/W: 0.002lux(F1.6,AGC ON) 0 lux with IR
Day/Night—Optical	IR-cut filter with auto switch (ICR)
Sensor—Thermal	Vanadium Oxide Uncooled Focal Plane Arrays
Original Resolution—Thermal	256*192
NETD	< 50 mk @ F1.0 @ 25 °C
Shutter	Auto/Manual, 1 ~ 1/100000s
WDR	120dB
S/N	>56dB
Lens	Description
Lens Type-Optical	TIC3612SA-F2-4F3AC-I1:2.6 mm TIC3612SA-F7-4F6AC-I1:6.0 mm TIC3612SA-F3-4F4AC-I1:4mm
Iris—Optical	F1.6
Lens Type-Thermal	TIC3612SA-F2-4F3AC-I1:2.1 mm TIC3612SA-F7-4F6AC-I1:7.0 mm TIC3612SA-F3-4F4AC-I1:3mm
DORI	Description
DORI Distance (Detect) — Optical	TIC3612SA-F2-4F3AC-I1:58.5m(191.9ft) TIC3612SA-F7-4F6AC-I1:135.0m(442.9ft) TIC3612SA-F3-4F4AC-I1:90.0m(295.3ft)
DORI Distance (Observe) —	TIC3612SA-F2-4F3AC-I1:23.4m(76.8ft)

Optical	TIC3612SA-F7-4F6AC-I1:54.0m(177.2ft) TIC3612SA-F3-4F4AC-I1:36.0m(118.1ft)
DORI Distance (Recognize) — Optical	TIC3612SA-F2-4F3AC-I1:11.7m(38.4ft) TIC3612SA-F7-4F6AC-I1:27.0m(88.6ft) TIC3612SA-F3-4F4AC-I1:18.0m(59.1ft)
DORI Distance (Identify) — Optical	TIC3612SA-F2-4F3AC-I1:5.9m(19.2ft) TIC3612SA-F7-4F6AC-I1:13.5m(44.3ft) TIC3612SA-F3-4F4AC-I1:9.0m(29.5ft)
<b>Illuminator</b>	Description
IR Range-Optical	30m
Light On/Off Control	Auto/Manual
<b>Video</b>	Description
Video Compression	Ultra 265; H.265; H.264; MJPEG
Video Resolution—Optical	4MP(2688*1520), Max 30fps
Video Resolution—Thermal	960P(1280*960), Max 30fps
Video Bit Rate	128 Kbps ~ 16 Mbps
U-code	Support
ROI	Up to 8 areas
Video Stream	Triple Streams
OSD	Up to 8 OSDs
Privacy Mask	Up to 8 areas (8 blacks/ 8 mosaics)
<b>Image</b>	Description
White Balance	Auto; Outdoor; Fine Tune; Sodium Lamp; Locked; Auto2
Digital Noise Reduction	2D/3D DNR
Flip	Normal; Flip Vertical; Flip Horizontal; 180°; 90°Clockwise; 90°Anti-clockwise
Defog	Digital Defog
Palette—Thermal	white hot; lava; iron oxide red; hot iron; medical; arctic; rainbow 1; rainbow 2; rainbow 3; depict hot; ice hot; black hot; mazarine; fusion; red hot; green hot; color 1; color 2; rain; puce
<b>Intelligent</b>	Description
Smart Intrusion Prevention	Thermal or Optical channel: Support False Alarm Filtering: Line Crossing Detection, Intrusion Detection, Enter Area Detection, Leave Area Detection
Smoke and Fire Detection	Optical channel support detecting smoke directly or helping in double-check the fire alarm

Temperature Measurement Accuracy	$\pm 8^{\circ}\text{C}$ ( $\pm 14.4^{\circ}\text{F}$ ) or $\pm 8\%$ (whichever is greater)
Temperature Range	Selectable between $-20^{\circ}\text{C} \sim 150^{\circ}\text{C}$ ( $-4^{\circ}\text{F} \sim 302^{\circ}\text{F}$ ) and $100^{\circ}\text{C} \sim 550^{\circ}\text{C}$ ( $212^{\circ}\text{F} \sim 1022^{\circ}\text{F}$ )
Temperature Detection—Thermal	Thermal channel supports rule-based temperature measurements. Supports real-time display of the highest, lowest, and average temperatures in the rule-defined area on the screen
Smoking Detection—Thermal	Thermal channel supports the detection of smoking behavior in the environment
<b>Events</b>	<b>Description</b>
Fire Detection	Thermal channel supports the detection of fire point in the environment
Basic Detection—Optical	Motion Detection; Tampering Alarm; Audio Detection
General Function	Watermark; IP Address Filtering; Access Policy; ARP Protection; RTSP Authentication; User Authentication; HTTP Authentication; Alarm Input; Alarm Output
<b>Audio</b>	<b>Description</b>
Audio Compression	G.711U; G.711A
Audio Bitrate	128 Kbps
Two-way Audio	Support
Suppression	Support
Sampling Rate	16KHZ
<b>Storage</b>	<b>Description</b>
Edge Storage	Micro SD, up to 512 GB
Network Storage	ANR
<b>Network</b>	<b>Description</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
User/Host	Up to 32 users. 3 user levels: administrator, common user and operator
Client	EZStation; EZLive; EZView
Web Browser	Plug-in required live view: IE 10 and above, Chrome 45 and above, Firefox 52 and above, Edge 79 and above
<b>Interface</b>	<b>Description</b>
Audio I/O	1/1
Alarm I/O	2/2
Serial Port	1 channel RS485 interface

Built-in Mic	Support
Built-in Speaker	Support
Network	1 x RJ45 10M/100M Base-TX Ethernet
Video Output	Supported (Thermal module)
<b>General</b>	<b>Description</b>
Power	DC12V(±25%), PoE(IEEE802.3af)
Power Consumption	Max 12W
Power Interface	Ø 5.5 mm coaxial power plug
Dimensions	Φ 129mm*114mm
Weight	0.72kg(1.6lb)
Working Environment	-40 °C ~ 70 °C (-40 °F ~ 158 °F), Humidity: ≤95% RH (non-condensing)
Surge Protection	6KV
<b>Certification</b>	<b>Description</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)

## Dimensions



## 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)
2.1mm	207m	83m	52m
3mm	296m	119m	74m
7mm	690m	277m	173m

## 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: 0.5m)
2.1mm	42m	21m	9m
3mm	60m	30m	13m
7mm	140m	70m	29m

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