# Thermal & Optical Bi-spectrum Network Dome Camera

## TIC3612SA-F3-4F4AC-I1



| Lighthunter | WDR | Ultra H.265 | fire detection | Smart Intrusion Prevention | Built-in Mic | IP 67 | POE |

## 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&amp;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
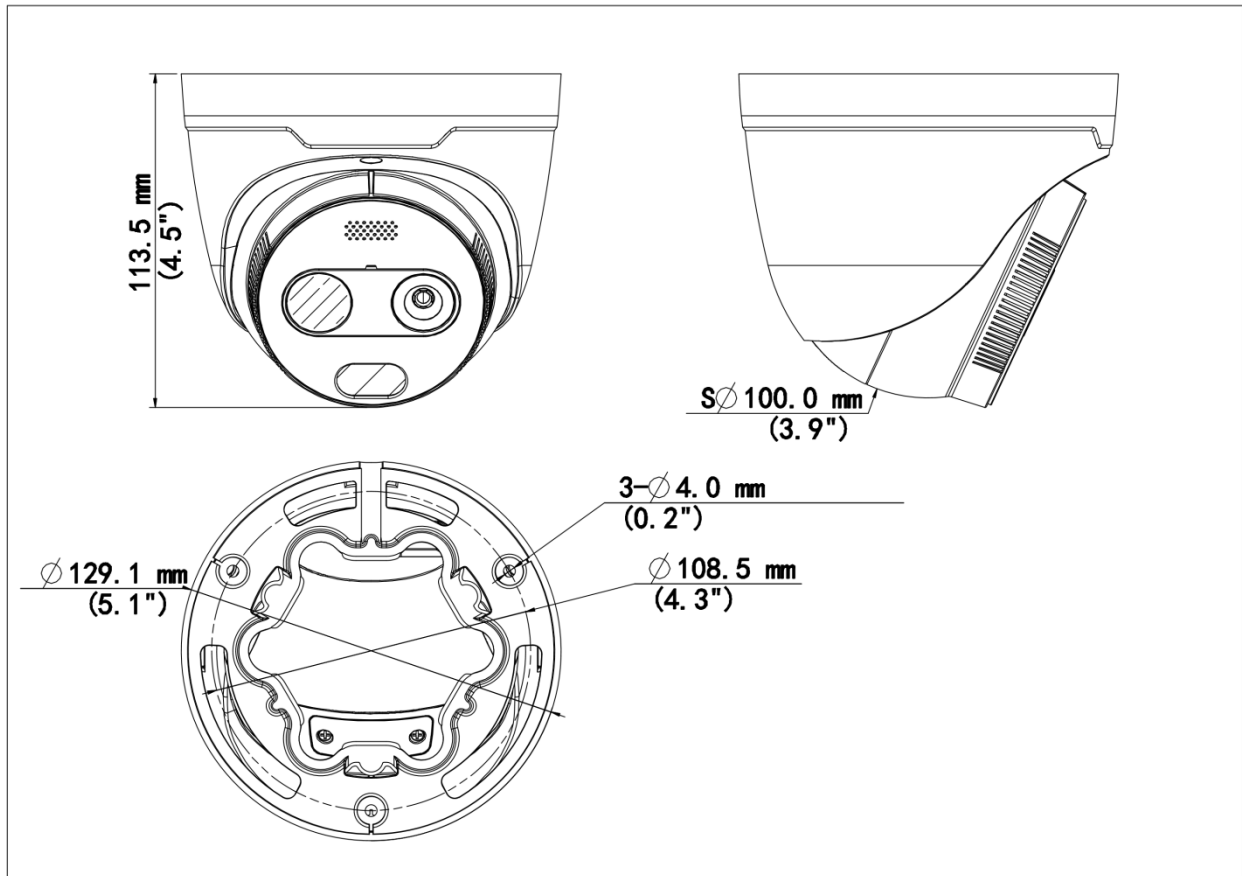
# Specifications

| Channel | Optical | Thermal |
|---|---|---|
| Camera | | |
| Original Resolution | N/A | 256 × 192 |
| Sensor | 1/2.8" CMOS | Vanadium oxide uncooled focal plane arrays |
| Min. Illumination | Colour: 0.003 lux (F1.6, AGC ON)<br><br>B/W: 0.002lux(F1.6,AGC ON)<br>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 ℃ | |
| Shutter | Auto/Manual, 1 to 1/100000 s | |
| WDR | 120 dB | |
| S/N | >56 dB | |
| Lens | | |
| Focal Length | 4mm | 3 mm |
| Iris | F1.6 | F1.0 |
| Field of View (H) | 72.9° | 58.0° |
| Field of View (V) | 44.4° | 42.5° |
| Field of View (D) | 89.8° | 72° |
| DORI | | |
| DORI Distance (Detect) | 90.0m(295.3ft) | N/A |
| DORI Distance (Observe) | 36.0m(118.1ft) | N/A |
| DORI Distance (Recognize) | 18.0m(59.1ft) | N/A |
| DORI Distance (Identify) | 9.0m(29.5ft) | 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 |
| **Image** | | |
| 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 | |
| HLC | Support | N/A |
| BLC | Support | N/A |
| Defog | Digital Defog | N/A |
| Palette | N/A | puce, rain, fusion, mazarine, medical, arctic, lava, color 2, color 1, green hot, red hot, black hot, ice hot, depict hot, rainbow 3, rainbow 2, rainbow 1, hot iron, iron oxide red, white hot |
| **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 | | ±8 ℃ (±14.4 ℉) or ±8% (whichever is greater) |
| Temperature Range | | Selectable between -20 ℃ to 150 ℃ (-4 ℉ to 302 ℉) and 100 ℃ to 550 ℃ (212 ℉ to 1022 ℉) |
| **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 | |
|---|---|
| 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: 2013+A1: 2019,EN IEC 61000-3-2: 2019+A1: 2021,EN 50130-4:2011+A1:2014)<br><br>FCC (FCC CFR 47 part15 B, ANSI C63.4-2014) |
| Safety | CE LVD (EN IEC 62368-1:2020+A11:2020)<br><br>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 ℃ to 70 ℃ (-40 ℉ to 158 ℉), Humidity: ≤ 95% RH (non-condensing) |
| Storage Environment | -40 ℃ to 70 ℃ (-40 ℉ to 158 ℉), Humidity: ≤ 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 | TR-A01-IN | TR-JB07/WM03-F-IN |
|---|---|---|
| Junction Box for Metal Turret Camera (Support wiring from behind) | NPT 3/4" Waterproof Cable Gland | Wall Mounting Assembling Bracket with Back Hole for 3 Inch Hemisphere |

TR-WM03-B-IN

Wall Mounting Assembling Bracket f
or 3 Inch Hemisphere

TR-UP06-IN

Universal Pole Mounting Bracket

TR-UC08-C

Bullet&Dome Corner Mounting Brac
ket

# 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) | Smoking detection (target: cigarette butt) | Temperature detection (target: 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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