# Thermal & Optical Bi-spectrum Network Bullet Camera

TIC2A32SA-F10-4F8AC-I1



| Lighthunter | WDR | Ultra H.265 | Fire detection | Smart intrusion prevention | Built-in Mic | IP67 | PoE |

## 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, satisfies the need of 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

● 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

● 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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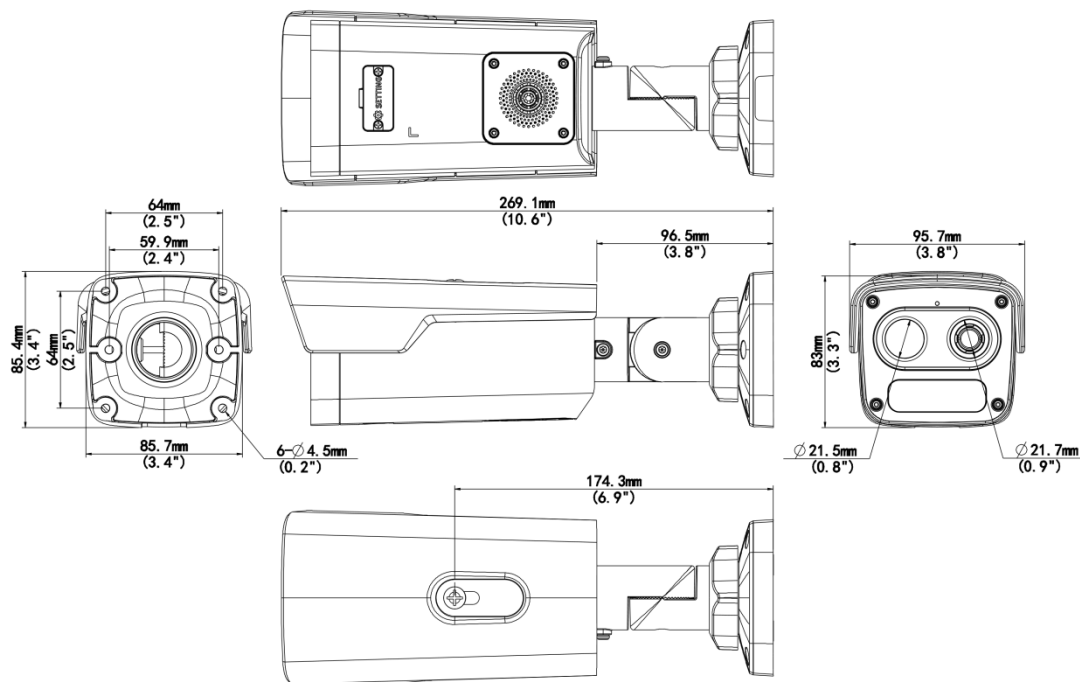| Camera | | |
|---|---|---|
| Original Resolution | N/A | 256 × 192 |
| Sensor | 1/2.8" CMOS | Vanadium oxide uncooled focal plane arrays |
| Min. Illumination | Colour: 0.003 lux (F1.6, AGC ON) B/W: 0.002 lux(F1.6,AGC ON) 0 lux with IR | N/A |
| Day/Night | IR-cut filter with auto switch (ICR) | N/A |
| Pixel Size | N/A | 12 um |
| NETD | < 50 mk@F1.0@25 ℃ | |
| Shutter | Auto/Manual, 1 to 1/100000 s | |
| WDR | 120 dB | |
| S/N | >56 dB | |
| Lens | | |
| Focal Length | 8.0 mm | 10.0 mm |
| Iris | F1.6 | F1.0 |
| Field of View (H) | 41.2° | 17.5° |
| Field of View (V) | 23.6° | 13.2° |
| Field of View (D) | 50.7° | 21.5° |
| DORI | | |
| DORI Distance (Detect) | 180.0m(590.6ft) | N/A |
| DORI Distance (Observe) | 72.0m(236.2ft) | N/A |
| DORI Distance (Recognize) | 36.0m(118.1ft) | N/A |
| DORI Distance (Identify) | 18.0m(59.1ft) | N/A |
| Illuminator | | |
| Wavelength | 750 nm | N/A |
| Illumination Distance (IR) | 50m | 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 | |
| Defog | Digital defog | N/A |
| Palette | N/A | 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, lava, medical, arctic, mazarine, fusion, rain, puce |
| **Intelligent** | | |
| 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 ℃ (±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> FCC (FCC CFR 47 part15 B, ANSI C63.4-2014) |
| Safety | CE LVD (EN IEC 62368-1:2020+A11:2020) <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 | 269.1 x 95.7 x 83 mm (10.6" x 3.75" x 3.25")(L x W x H) |
| Weight | 0.95kg(2.1lb) |
| 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 | 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 |

| Live View | |
|---|---|
| Maximum Bitstream | 35 |
| Maximum Bandwidth | 50 Mbps |
| OSD Font | Vector |
| OSD Color | Support |

| OSD Character Number | 40 |
|---|---|
| Other | 5 |
| Corridor Mode | Support |
| Software Version | Q6202 |

# Dimensions



# Accessories

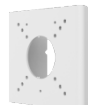| TR-JB06-A-IN | TR-UP06-B-IN | TR-UP06-C-IN |
|---|---|---|
| Middle Bullet Junction Box(Elegant White) | Bullet Pole Mounting Bracket | Pole Mounting Bracket for Bullet Junction Box Only |

TR-A01-IN

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 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) |
|---|---|---|---|---|---|---|
| 3.2mm | 316m | 126m | 79m | 32m | 53m | 21m |
| 7mm | 690m | 277m | 173m | 69m | 99m | 40m |
| 10mm | 986m | 395m | 247m | 99m | 141m | 56m |

# 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) | mperature detection (target: 0.1m x 0.1m) |
|---|---|---|---|---|
| 3.2mm | 60m | 30m | 13m | 8m |
| 7mm | 140m | 70m | 29m | 20m |
| 10mm | 200m | 100m | 48m | 30m |

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