Thermal & Optical Bi-spectrum Network Bullet Camera

TIC2A32SA-F7-4F6AC-I1

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

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, 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
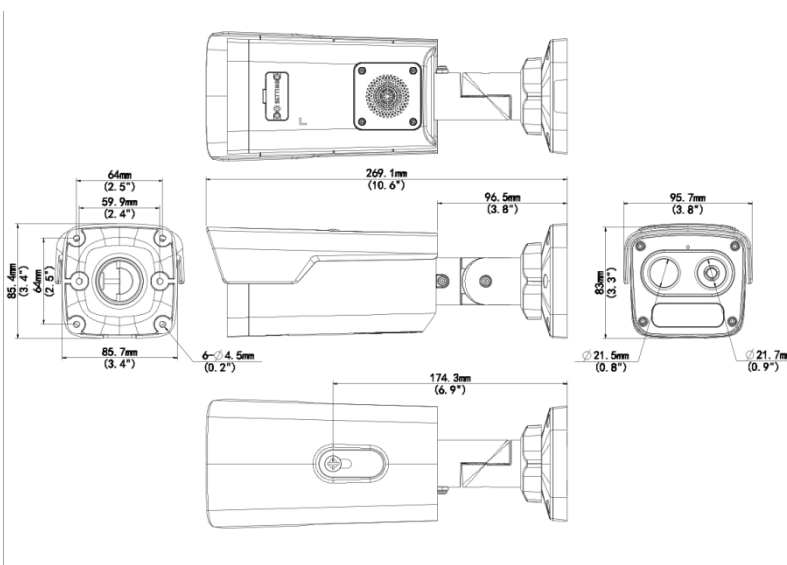
Specifications

Camera	Description
Sensor—Optical	1/2.8" CMOS
Min. Illumination—Optical	Colour: 0.003 lux (F1.6, AGC ON) B/W: 0.002 lux(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 ℃
Shutter	Auto/Manual, 1 ~ 1/100000s
WDR	120dB
S/N	>56dB
Lens	Description
Lens Type-Optical	TIC2A32SA-F7-4F6AC-I1:6.0 mm TIC2A32SA-F10-4F8AC-I1:8.0 mm TIC2A32SA-F3-4F4AC-I1:4mm
Iris—Optical	F1.6
Lens Type-Thermal	TIC2A32SA-F7-4F6AC-I1:7.0 mm TIC2A32SA-F10-4F8AC-I1:10.0 mm TIC2A32SA-F3-4F4AC-I1:3.2 mm
DORI	Description
DORI Distance（Detect）—Optical	TIC2A32SA-F7-4F6AC-I1:135.0m(442.9ft) TIC2A32SA-F10-4F8AC-I1:180.0m(590.6ft) TIC2A32SA-F3-4F4AC-I1:90.0m(295.3ft)
DORI Distance（Observe）—Optical	TIC2A32SA-F7-4F6AC-I1:54.0m(177.2ft) TIC2A32SA-F10-4F8AC-I1:72.0m(236.2ft) TIC2A32SA-F3-4F4AC-I1:36.0m(118.1ft)

DORI Distance（Recognize）—Optical	TIC2A32SA-F7-4F6AC-I1:27.0m(88.6ft)
	TIC2A32SA-F10-4F8AC-I1:36.0m(118.1ft)
	TIC2A32SA-F3-4F4AC-I1:18.0m(59.1ft)
DORI Distance（Identify）—Optical	TIC2A32SA-F7-4F6AC-I1:13.5m(44.3ft)
	TIC2A32SA-F10-4F8AC-I1:18.0m(59.1ft)
	TIC2A32SA-F3-4F4AC-I1:9.0m(29.5ft)
Illuminator	**Description**
IR Range-Optical	TIC2A32SA-F7-4F6AC-I1/TIC2A32SA-F10-4F8AC-I1:50m
	TIC2A32SA-F3-4F4AC-I1:40m
Light On/Off Control	Auto/Manual
Video	**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)
Image	**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
Intelligent	**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 Accur	$\pm$8°C ($\pm$14.4°F) or $\pm$8% (whichever is greater)

acy	
Temperature Range	Selectable between -20°C ~ 150°C (-4°F ~ 302°F) and 100°C ~ 550°C (212°F ~ 1022°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
Events	**Description**
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
Audio	**Description**
Audio Compression	G.711U; G.711A
Audio Bitrate	128 Kbps
Two-way Audio	Support
Suppression	Support
Sampling Rate	16KHZ
Storage	**Description**
Edge Storage	Micro SD, up to 512 GB
Network Storage	ANR
Network	**Description**
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
Interface	**Description**
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)
General	**Description**
Power	DC12V(±25%), PoE(IEEE802.3af)
Power Consumption	Max 12W
Power Interface	Ø 5.5 mm coaxial power plug
Dimensions	269.1 x 95.7 x 83mm(10.6" x 3.75" x 3.25")
Weight	0.95kg(2.1lb)
Working Environment	-40 °C ~ 70 °C (-40 °F ~ 158 °F), Humidity: ≤95% RH (non-condensing)
Surge Protection	6KV
Certification	**Description**
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
3.2mm	316m	126m	79m
7mm	690m	277m	173m
10mm	986m	395m	247m

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.
3.2mm	60m	30m	13m
7mm	140m	70m	29m
10mm	200m	100m	48m