

Technical Specifications

Dual Thermal AI IP Camera

FOR EXTERNAL APPLICATION

- Thermal : 320 x 240, Visible : 5MP
- H.265, H.264 and MJPEG compression
- Embedded VCA Technology Video Analytics
- Deep Learning - Object Tracker/People Tracker
- SMART Bitrate Control and Region of Interest
- Power over Ethernet (IEEE 802.3af)



CAMERA		
Model	IPAi98A05-Q56	
	Visible	Thermal
Image Sensor	SONY STARVIS EXMOR 1/2.8" 5M CMOS	Uncooled Vanadium Oxide Microbolometer
Pixel Size	-	12 μm
Spectral Response	-	7.8~14 μm
NETD	-	65mK(Typical), Less than 100mK(max) @ 25°C
AGC Control	Auto	-
IRIS Type	Auto Exposure	-
Minimum Illumination	Color: 0.16 Lux, BW : 0 Lux (IR LED On)	-
Lens	4.0 mm(F2.0)	4.0 mm(F1.0)
Angle of View	Horizontal: Approx. 56°, Vertical: Approx. 42°	Horizontal: Approx. 56°, Vertical: Approx. 42°
Shutter Time	Auto / Manual: 1/30 ~ 1/32,000, Anti-Flicker, Slow Shutter (1/2, 1/3, 1/5, 1/6, 1/7.5, 1/10)	-
Day & Night	True Day & Night (Removable IR-cut filter)	-
Wide Dynamic Range	True WDR, 120 dB or above	-
Detectable Temperature Range	-	-40°C to 330°C(-40°F to 626°F)
Temperature Accuracy	-	The greater of ±5°C or 5% between 5°C to 140°C scene temperatures. Typical performance of ±10% between 140°C to 330°C scene temperatures. Specified at nominal 25°C ambient operating temperature and nominal measurement distance of 12 inches from blackbody. Temperature reported is Center Spot temperature, which is an average of the center 36 pixels.
IR ILLUMINATOR		
IR LED	High Power IR LED x 2	-
IR Working Distance	30m	-
VIDEO		
Video Compression	H.265, H.264, MJPEG	
Profile	H.264 : MP / HP H.265 : MP	
Multiple Profile Streaming Performance	2592x1944/30 + 720p30 with H.264,H265 + MJPEG	640x480/9 + 320x240/9 with H.264,H265 + MJPEG
Max Resolution	2592 x 1944/30fps	640 x 480(Upscaling)/9fps
Video Bit Rate	100Kbps ~ 25Mbps, Multi-rate for Preview and Recording	
Bitrate Control	Multi Streaming CBR/VBR(Controllable frame rate and Bandwidth)	
Noise Reduction	3D-DNR	-

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Privacy Mask	16 programmable zones		
Special Features	SMART Bitrate Control, Region of Interest		
Other Image Processing	Configurable Exposure, White Balance, Sharpness		-
Image Orientation	Flip / Mirror		
Analogue Output	1 (Installation only), CVBS 1.0V p-p (75Ω), 4:3 aspect ratio(For the visible camera)		

AUDIO

Audio Streaming	Two way
Audio Compression	G.711 u-law 8KHz, AAC-LC 48Kbps at 8KHz
Audio input	Supply voltage : 3VDC(3mA), Input impedance : 3K Ohm
Audio output	Line Out, MAX. Output Level : 1Vrms

EVENT

Event Trigger	Motion Alarm, DI, Temperature Alarm(Above, Below, Slope Rate), VCA
VCA Detection by Thermal	Person: Max. 60m, Vehicle: Max. 120m
Pre-Post Recording	Pre: 1~5 sec Post: 1~240 sec
Event Notification	FTP, E-mail, Alarm-out, SD card

NETWORK

Ethernet Standard	10/100 Base-T
IP	IPv4
Protocol	TCP/IP, UDP, AutoIP, RTP(UDP/TCP), RTSP, NTP, HTTP, HTTPS, SSL, DNS, DDNS, DHCP, FTP, SMTP, ICMP, SNMPv1/v2/v3(MIB-2), UPNP, RTCP, SSH, ONVIF
Security	HTTPS(SSL), IP filtering, 802.1x, Digest Authentication
Plug In	ONVIF Profile S/T/M, CGI API

GENERAL

Material	Aluminum Die-casting, White
External I/O Terminals	1 x Alarm In / 1 x Alarm Out
Language on webpage	English
Power Source	DC12V, PoE(IEEE 802.3af)
Power Consumption	DC12V Max 23.3W, PoE Max 11.5W
Operating Conditions	Humidity 10 ~ 90% RH (non-condensing) [PoE] -30°C ~ 50°C (-22°F ~ 122°F) [DC12V] -40°C ~ 50°C (-40°F ~ 122°F)
Approvals	FCC, CE, UKCA, IP66, IK09
NDAA	Compliant
Weight	1.08 kg
Dimensions	106mm(W) x 96.7mm(H) x 216mm(D)

EDGE STORAGE

Storage	1 x microSD / microSDHC / microSDXC (card not included)
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VIDEO ANALYTICS (Optional)

Features

Analytics Engine VCA Technology's advanced tracking algorithm with rich library of detection behaviors

Detection Zones and Rules 40 zones (Multi-segment Polygons and Lines) in total, 60 rules in total as standard

Intrusion Detection Detection of the presence of an object

Tamper Detection Supported as standard

Detection Behavior Enter, Exit, Appear, Disappear, Stop, Direction, Dwell filter, Tailgating

Logical Rules Extends standard rules to allow various combinations of the inputs

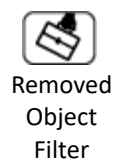
Object Tracker Motion based detection engine. Based on changes detected in the image, the algorithm separates the image into foreground and background, tracking any foreground object that is moving above a set threshold.

Deep Learning Object Tracking Deep learning based object identification (as Person, Cyclist, Car, Van, Truck, Motorcycle, Bicycle, Bag) removes false object detection

Deep Learning People Tracking Deep learning based people identification and tracking

Counting & Line High accuracy people and vehicle counting, 20 counters in total

Meta Data JSON format, Plain XML format that contains the event information and the tracked object information with the bounding box, tail history, object attributions (object type and color)

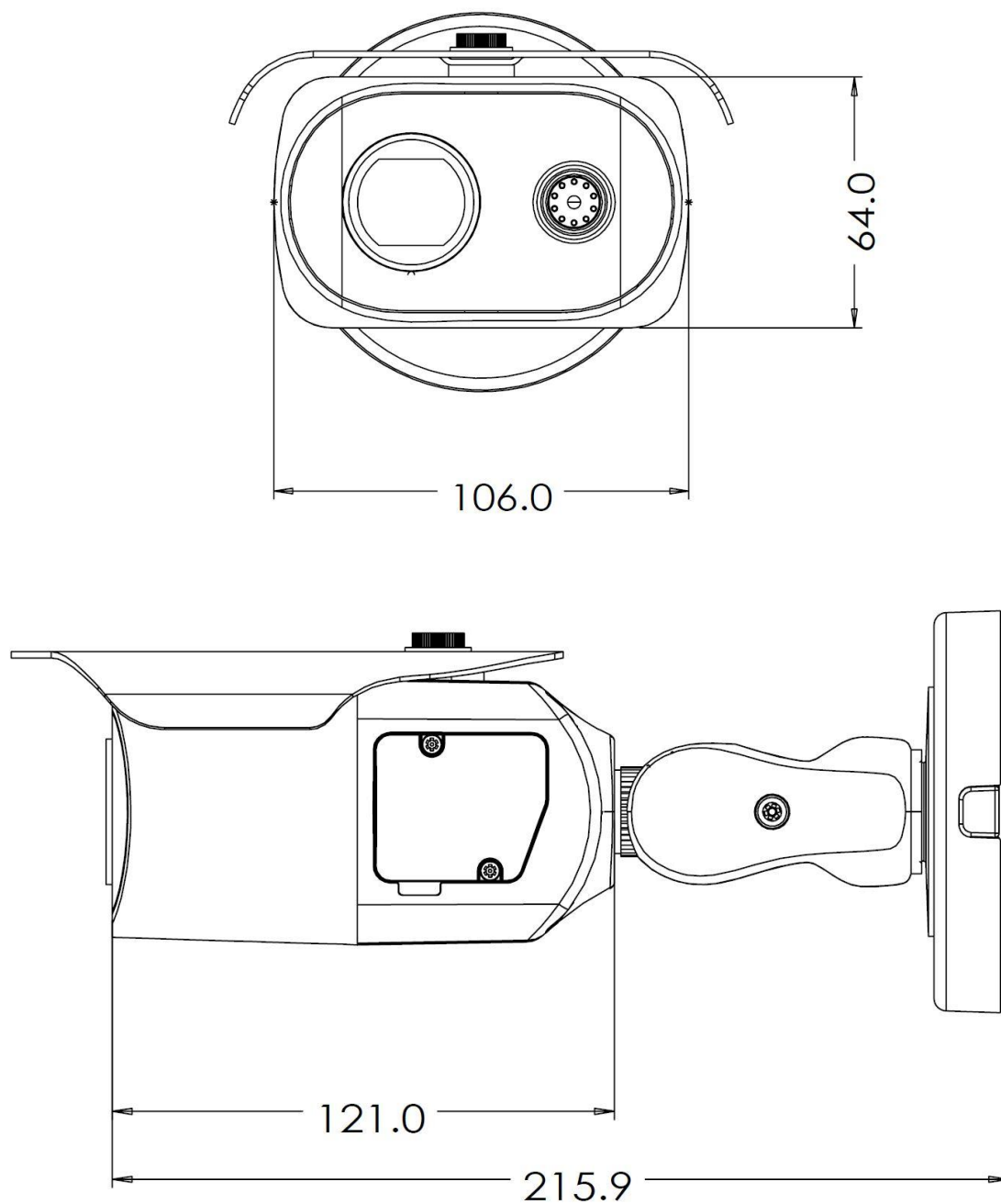


Note : The Deep Learning Tracker(DLOT/DLPT) works with the visible camera during the daytime and the Object Tracker works with the thermal camera at night. These engines are switched automatically day(visible with Deep Learning Tracker) and night(thermal with Object Tracker) by light sensors.

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Dimensions

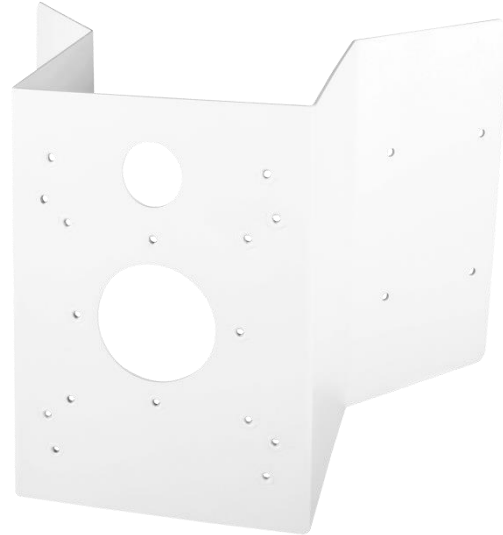
(Unit: mm)



Accessories



BP01



BCO01



BJC11