WAVESYS

Technical Specifications

Thermal Mini Bullet IP Camera

- Compact size and light weight
- 12 μm uncooled vanadium oxide microbolometer
- Array size : 200 x 150
- -40°C to 330°C(-40°F to 626°F) Detection
- Flexible input power options: DC or PoE
- WaveStream : Smart Compression Technology based on bit rate Control, ROI
- WaveVCA * : Intelligence Built in Analytics at Camera Level
- 802.3af (PoE) simplified installation over a single standard cable
- Burnt-in text, video motion detection
- Two-way audio
- Indoor/Outdoor (IP66)

CAMERA MODULE (Pixel Array)

Array Size (Resolution)	200 x 150
Detection Type	Uncooled Vanadium Oxide Microbolometer
Sensor Pixel Size	12 µm
Spectral Response	7.8~14 µm
Lens	4.0mm, F1.0
FoV	35° x 26°
Sensitivity (NETD)	65mK(Typical), Less than 100mK(max) @ 25°C
Detectable Temperature Range	-40℃ to 330℃(-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.

VIDEO

Video Compression	H.265, H.264, MJPEG
Profile	H.264 : MP/HP H.265 : MP
Multiple Profile Streaming Performance	640x480/9fps + 640x480/9fps with H.264, H.265 + MJPEG
Resolution	640x480, 320x240
Frame Rate	Max. 9fps in all resolutions
Video Bit Rate	100Kbps ~ 10Mbps Multi-rate for Preview and Recording
Bitrate Control	Multi Streaming CBR/VBR (Controllable frame rate and Bandwidth)
Digital Noise Reduction	3D-DNR
Privacy Mask	16 programmable zones
Special Features	WaveStream SMART Bitrate Control, Region of Interest
Analogue Output	1 (Installation only) CVBS 1.0V p-p (75Ω), 4:3 aspect ratio

AUDIO

Input	1 channel
Output	1 channel
Compression Format	G.711, AAC

EVENT

Event Trigger	Motion Alarm, DI Temperature Alarm(Above, Below, Slope Rate)
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), ONVIF
Security	HTTPS(SSL), IP filtering, 802.1x, Digest Authentication
Plug In	ONVIF Profile S, CGI API

GENERAL

Material	Aluminum Die-casting, White & Silver
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 8.7W, PoE Max 11.9W
Operating Conditions	Humidity 10 ~ 90% RH (non-condensing) [DC12V / PoE] -40°C ~ 50°C (-40°F ~ 122°F)
Approvals	FCC, CE, IP66
Weight	0.65 kg
Dimension (H x W x D)	76mm x 61mm x 208mm

EDGE STORAGE

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

WAVEVCA: Intelligence Built-in Cameras Analytics

Basic features

Analytics Engine WVCA 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

Advanced features

Detection Behavior Enter, Exit, Appear, Disappear, Stop, Direction, Dwell filter, Abandoned/Removed object filter, Tailgating

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

3D Behavior Perspective Corrected Size and Speed Filters

Object Classification - Configured Max./Min. object sizes and Max./Min. speeds

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

Meta Data JSON format, Plain XML format

Basic features

Intrusion Detection	Zones & lines	Tamper Detection

Optional features*

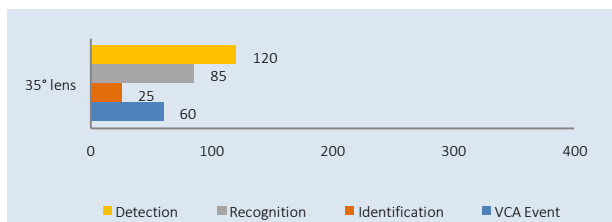| Appear Filter	Disappear Filter	Dwell Filter	Enter Filter
Exit Filter	Stopped Filter	Counting	Counting Lines
Tailgating Filter	3D Calibration	Abandoned Object Filter	Removed Object Filter
Direction Filter	Logical Rules		

Technical Specification

Detection Range

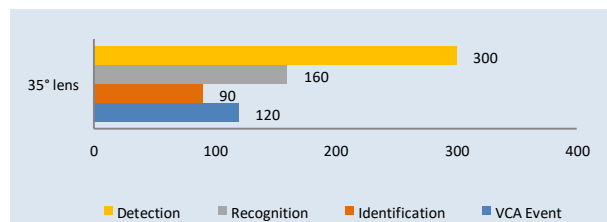*The detection range is of maximum values.

(Unit: meter)

IP-2T001BO-T35				
Object	**Detection**	**Recognition**	**Identification**	**WVCA Event**
Person	120	85	25	Max. 60
Vehicle	300	160	90	Max. 120

Person

35° lens

Detection	120
Recognition	85
Identification	25
VCA Event	60

0 100 200 300 400

■Detection　■Recognition　■Identification　■VCA Event

Vehicle

35° lens

Detection	300
Recognition	160
Identification	90
VCA Event	120

0 100 200 300 400

■Detection　■Recognition　■Identification　■VCA Event
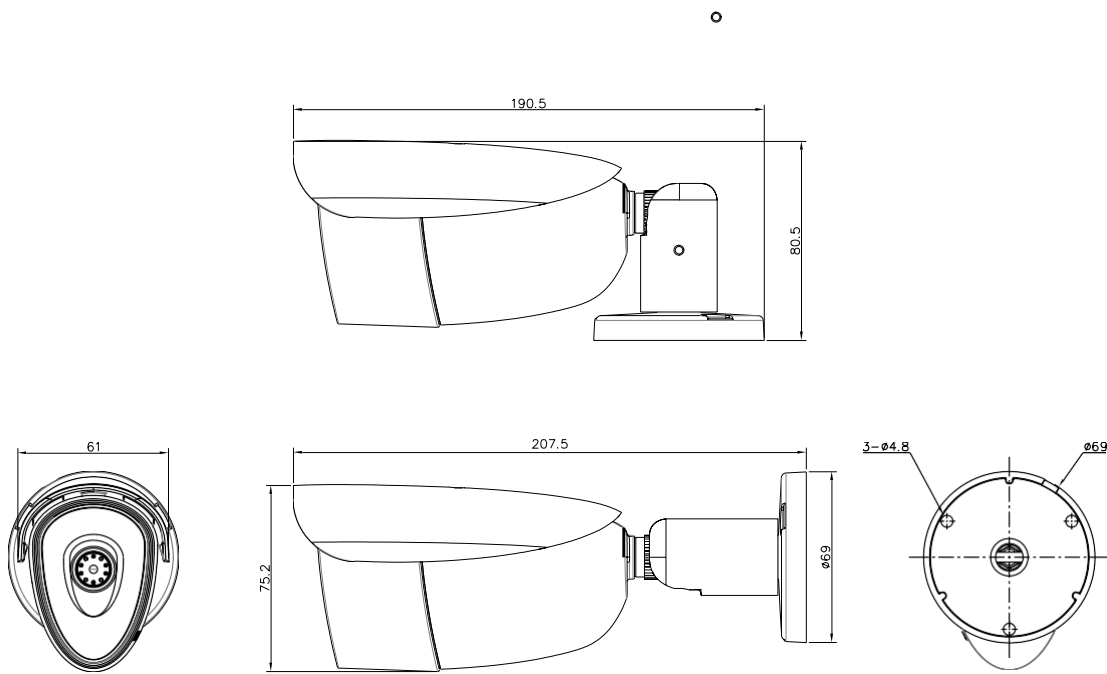
Dimensions

(Unit: mm)

Accessories

BJC07