

# Wavestore Vision Thermal Mini Bullet IP Camera

WV-CT-4F-A

- Indoor/Outdoor Application
- Compact size and light weight
- 12  $\mu\text{m}$  uncooled vanadium oxide microbolometer
- Array size : 320 x 240
- -40°C to 330°C (-40°F to 626°F) Detection
- Flexible input power options: DC or PoE
- Advanced Analytics capabilities included



TECHNICAL SPECIFICATION	
Camera Module (Pixel Array)	
Model No.	WV-CT-4F-A
Array Size (Resolution)	320 x 240
Detection Type	Uncooled Vanadium Oxide Microbolometer
Sensor Pixel Size	12 $\mu\text{m}$
Spectral Response	7.8~14 $\mu\text{m}$
Lens	4.0mm, F1.0
FoV	56° x 42°
Sensitivity (NETD)	65mK(Typical), Less than 100mK(max) @ 25°C
Detectable Temperature Range	-40°C to 330°C (40°F to 626°F)
Temperature Accuracy	The greater of $\pm 5^\circ\text{C}$ or 5% between 5°C to 140°C scene temperatures. Typical performance of $\pm 10\%$ 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 Centre Spot temperature, which is an average of the centre 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 Bitrate	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	SMART Bitrate Control, Region of Interest
Analogue Output	1 (Installation only) CVBS 1.0V p p (75 $\Omega$ ), 4:3 aspect ratio

TECHNICAL SPECIFICATION	
Audio	
Input	1 channel
Output	1 channel
Compression format	G.711, AAC
Event	
Event Trigger	Motion Alarm, Digital Input 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, French, German, Italian & Spanish
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 (1.433 lbs)
Dimensions (H x W x D)	76mm x 61mm x 208mm (2.99" x 2.45" x 8.19")
Edge Storage	
Storage	1x microSD / microSDHC / microSDXC (card not included). Max. Capacity: 256GB

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## Video Analytics Features

Wavestore Analytics Engine with advanced tracking algorithm and rich library of detection behaviours

Detection Zones and Rules: Multi-segment Polygons and Lines

Intrusion (motion) Detection

Tamper Detection

Detection Behaviour: Enter, Exit, Appear, Disappear, Stop, Direction, Dwell Filter, Abandoned/Removed Object, Tailgating

Logical Rules extend standard rules to allow various behaviour combinations

3D Behaviour: Perspective, Size and Speed Filters

Object Classification: Configurable Max./Min. object sizes and Max./Min. speeds

High accuracy counting for people and vehicles, 20 counters in total

Meta Data, JSON format, Plain XML format

### Analytics features



Intrusion Detection



Zones & lines



Tamper Detection



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

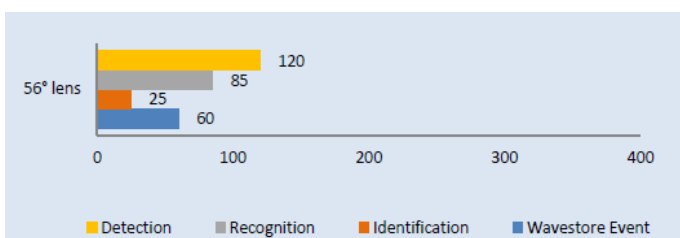
## Detection Range

\*The detection range is of maximum values.

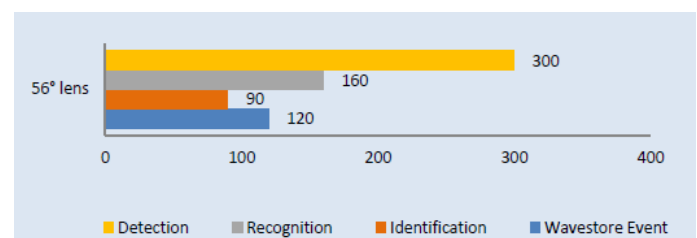
(Unit: metre)

WV-CT-4F-A				
Object	Detection	Recognition	Identification	Wavestore Event
Person	120	85	25	Max. 60
Vehicle	300	160	90	Max. 120

### Person

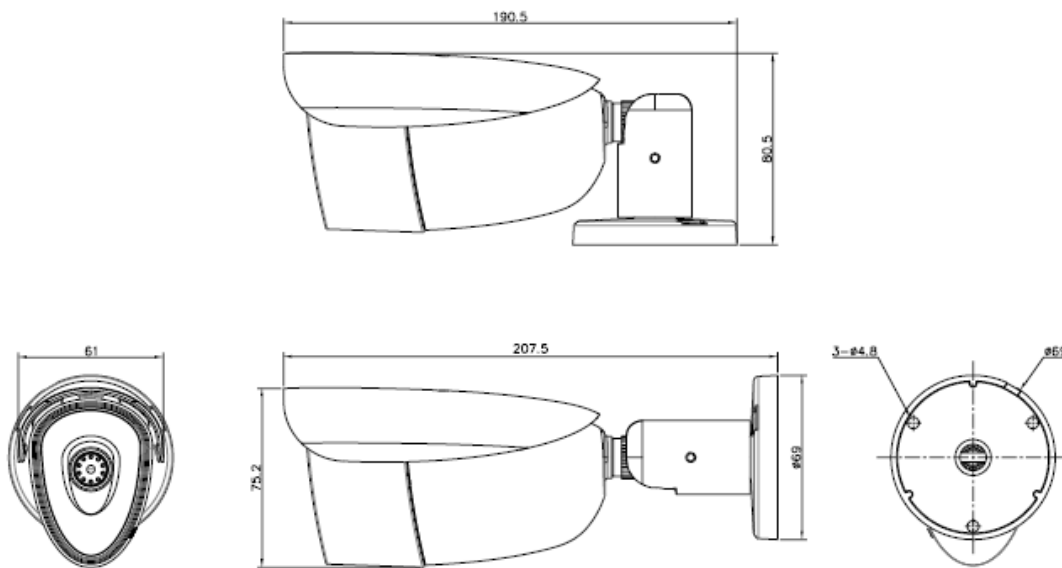


### Vehicle



## Dimensions

(Unit: mm)



## Accessories



BP01 Pole Mount Adaptor



BCO01 Corner Mount Adaptor



BJC07 Junction Box