



EVOKING TRUST



**Intelligent Video
Analysis at Edge
IP-30 Camera Series**



THERMAL MINI BULLET IP CAMERA IP-2T101BO-T56



About the Camera : IP 30 Series cameras are Artificial Intelligence powered latest camera series by Wavesys. It is built on advanced system-on-chip technology from California based company Ambarella and Sony Starvis Sensors. The IP30 series cameras are integrated with Wavesys Open Platform Enterprise Level Video Management Software WVMS. Wavesys is a video-based business intelligence leader with deep knowledge of different applications of intelligent video across distinct verticals.

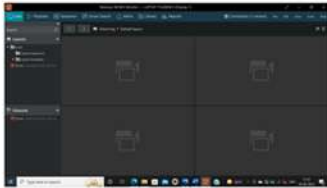
Key Features

- Compact size and light weight
- Array size : 320X240
- Indoor/Outdoor (IP66)
- Flexible input power options: DC or PoE
- Embedded VCA Technology video analytics
- 12 μm uncooled vanadium oxide microbolometer
- Burnt-in text, video motion detection
- -40°C to 330°C (-40°F to 626°F) Detection

Application



Key features of WVMS



WVMS Professional – Monitoring Console



WVMS Enterprise – Wall & Redundancy



WVMS Facial Recognition Module



WVMS Video Content Analytics



WVMS License Plate Recognition



WVMS Mobile Application

Specification

CAMERA MODULE (Pixel Array)

| | |
|------------------------------|---|
| Model | IP-2T101BO-T56 |
| Array Size (Resolution) | 320 x 240 |
| Detection Type | Uncooled Vanadium Oxide Microbolometer |
| Sensor Pixel Size | 12 μ m |
| Spectral Response | 7.8-14 μ m |
| Lens | 4.0mm, F1.0 |
| FoV | 56° x 42° |
| Smart Capture Technology | WaveCapture: Smart Advanced Wide Dynamic Capture for high details in challenging conditions |
| 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 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 compression Technology based on Bitrate Control, Region of Interest |
| Analogue Output | 1 (Installation only) CVBS 1.0V p-p (75 Ω), 4:3 aspect ratio |
| EDGE STORAGE | |
| Storage | 1x microSD / microSDHC / microSDXC (card not included) |

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 |
| Smart edge Analytics | WaveVCA: Intelligence built in camera Analytics |
| 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 | 1x Alarm In / 1x 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 |

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



Intrusion Detection



Tamper Detection



Zones & lines

Optional 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



Enter Filter



3D Calibration



Tailgating Filter



Appear Filter



Counting



Exit Filter



Dwell Filter



Disappear Filter



Removed Object Filter



Stopped Filter



Direction Filter



Logical Rules



Abandoned Object Filter



Counting Lines

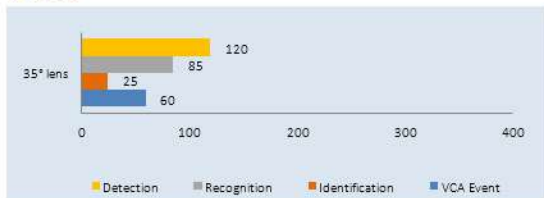
DETECTION RANGE

*The detection range is of maximum values.

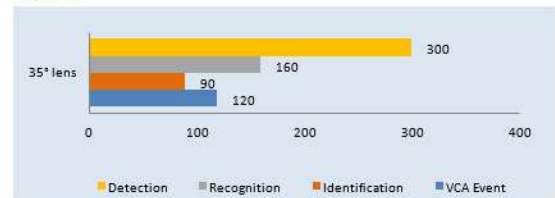
IP-2T00IBO-T35

| OBJECT | DETECTION | RECOGNITION | IDENTIFICATION | WVCA EVENT |
|---------|-----------|-------------|----------------|------------|
| PERSON | 120 | 85 | 25 MAX. | 60 |
| VEHICLE | 300 | 160 | 90 MAX. | 120 |

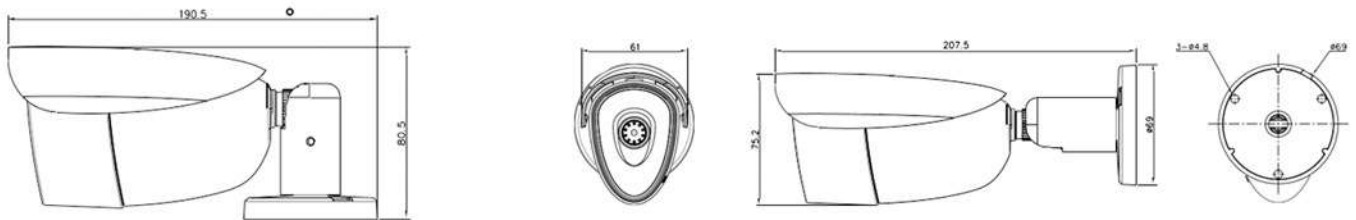
Person



Vehicle



DIMENSIONS



ACCESSORIES



BJC07