



EVOKING TRUST



**Multi Layered Deep Learning
Ai Analytics at Edge
IP- 50 Camera Series**



12MP Compact IR Fisheye IP Camera

IP-50501LFO

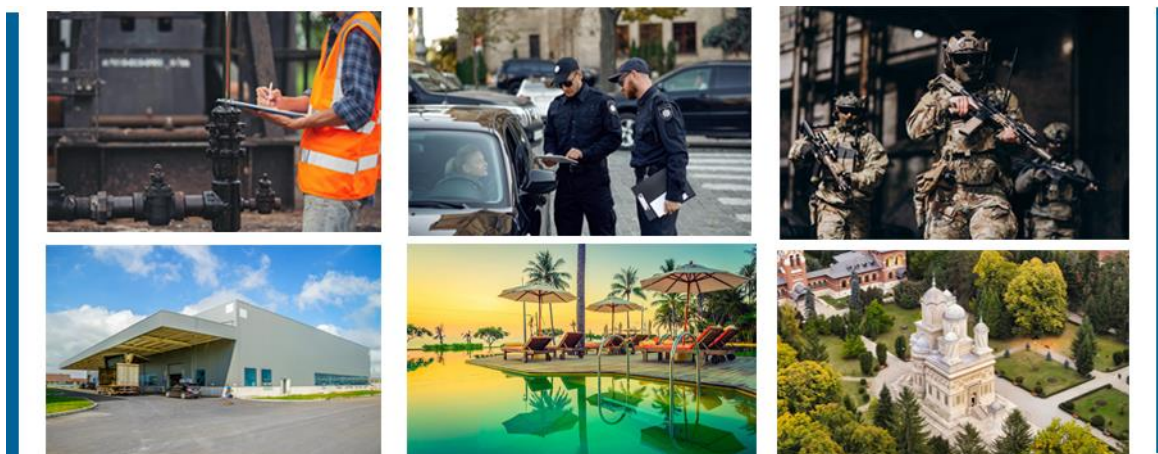


About the Camera : IP 50 Series cameras are Artificial Intelligence powered latest camera series by Wavesys. It is built on advanced system-on-chip technology from California based company Ambarella and Sony Starvis Sensors. The IP 50 series cameras are integrated with Wavesys Open Platform Enterprise 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.

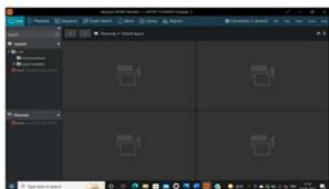
Key Features

- 30fps at 12MP
- WaveStream: Smart Compression Technology based on bit rate Control, ROI
- Power over Ethernet (IEEE 802.3af)
- UL, CE, FCC, BIS & RoHS Certification
- H.265, H.264 and MJPEG compression
- WaveVCA*: Intelligence built-in Camera Analytics
- IP67 and IK09 Environmental Housing
- Lens:2.1 mm
- Deep Learning Object Tracker/People Tracker

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	
Model	IP-50501LFO
Image Sensor	SONY STARVIS EXMOR 1/1.7" 12.4M CMOS
Effective Pixels	4000(H) x 3000(V)
Scanning System	Progressive scanning
AGC Control	Auto
IRIS Type	Auto
Minimum Illumination	Color: 0.1 Lux / B/W : 0 Lux (IR LED On)
Lens	Basic : 2.1 mm, F2.2
Angle of View	360°
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 (Max. 15fps when WDR is on)
Smart Capture Technology	WaveCapture: Smart Advanced Wide Dynamic Capture for high details in challenging conditions
S/N Ratio	50 dB
IR ILLUMINATOR	
Smart IR	WaveIR :- Advanced Smart IR
IR LED	3 x High Power LED
IR Working Distance	Up to 25m, depend upon object size
VIDEO	
Video Compression	H.265, H.264, MJPEG
Profile	H.264 : MP / HP H.265 : MP
Multiple Profile Streaming Performance	4000 x 3000/30+2592x1944/30 + 480p30 with H.264,H265 + MJPEG
Max Resolution	4000 x 3000
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 bit rate Control- Region of Interest
Other Image Processing	Configurable Exposure, White Balance, Sharpness
Image Orientation	Flip / Mirror / Corridor Mode
Analogue Output	1 (Installation only) CVBS 1.0V p-p (75Ω), 4:3 aspect ratio

AUDIO	
Audio Streaming	Two way
Audio Compression	G.711
Audio input / output	1(Built-in Mic) / 1
EVENT	
Event Trigger	Motion Alarm, Temperature critical, DI
Smart Edge Analytics*	WaveVCA: Intelligence built-in Cameras Analytics*(one channel selectable)
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 / 1000Base-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
External I/O Terminals	-
Language on webpage	English
Power Source	DC12V, PoE(IEEE 802.3af)
Power Consumption	DC12V Max 7.5W, PoE Max 8.7W
Operating Conditions	Humidity 10 ~ 90% RH (non-condensing) [DC12V / PoE] -30°C ~ 50°C (-22°F ~ 122°F)
Approvals	FCC, CE, IP67, IK09,UL
NDAA	Compliant
Weight	0.5 kg
Dimensions (D x H)	Ø125x 58 mm
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 an object

Tamper Detection Supported as standard

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



Forensic Search



DL Object tracker



DL People Tracker



Pose Detection

Optional features

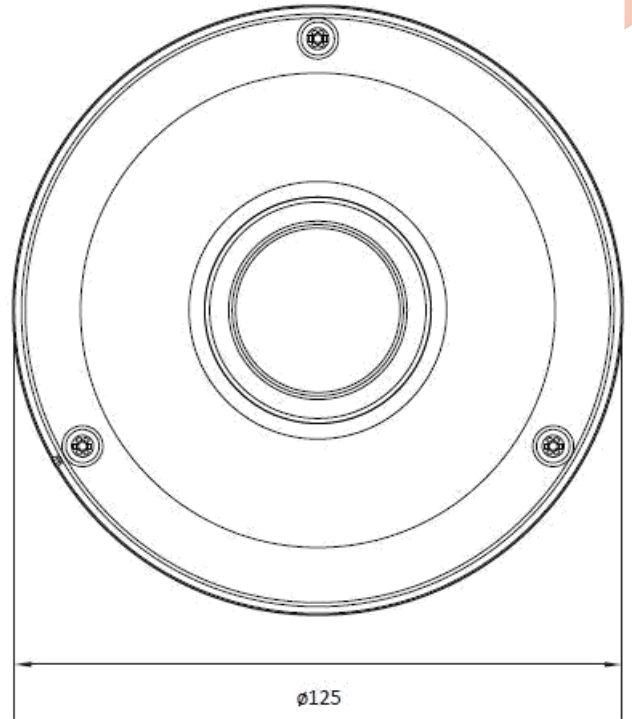
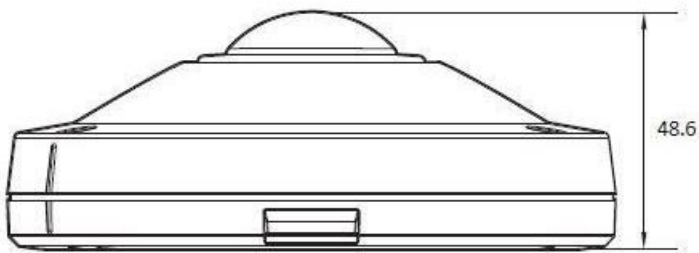
Forensic search Works with age, sentiment, gender, and ethnicity estimation



Forensic Search



Dimensions



ACCESSORIES



BW10



BC10



BP01



BCO01