WVCA
WAVESYS VIDEO CONTENT ANALYTICS

BEST-IN-CLASS ANALYTICS

Over 500,000 channels of Wavesys 's WVCA analytics have already been deployed on PC and embedded platforms. WVCAserver can upgrade any compatible IP camera, VMS, NVR or PSIM with a best- in-class analytics solution with minimum integration e ort.

WEB-BASED CONFIGURATION INTERFACE

A HTML5 web based interface supports configuration of detection rules and notifications on desktop and mobile devices with the option for OEM customisation and interface skinning.
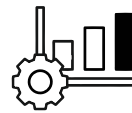
EASY INTEGRATION

Easy integration with a wide range of VMS, NVR and PSIM platforms over HTTP, TCP, digital output or email. Wavesys simple token based message format, provides relevant metadata to the your platform.Enabling real-time analytics alerts, metadata overlay and forensic search capabilities from within the native VMS environment.

Dl Based Bhaviour Detection

Use Dl to provide alerts for behaviour such as fighting,aggrsssive, ip, trip fall, hand held object.

ADVANCED AI ANALYTICS ENGINE

State-of-the-art deep learning classification and people tracking engines for reduced false alarms and accurate business intelligence metadata.

LOGICAL RULES

Simple to use logical rules engine, allowing the coupling together of rules to create advanced behaviour detection. Create bespoke alarms and events.

OPEN STANDARD API

Fully documented, open standard, REST API and metadata streams, for simple integration into a range of customized monitoring scenarios and applications. Facilitates simple event reporting to real-time metadata streaming for forensic search.

STAND-ALONE ANALYTICS SERVER MODE

WVCAserver can be deployed as a stand-alone analytics server, streaming video from ameras or VMSs directly, and is also available as a reference design for deeper integrations.

ANALYTIC & AI FEATURES
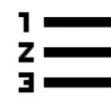
Zones	Tamper Detection	Object Tracker	Presence	Counting	Counting Lines	Colour Filter	Logical Rules
Meta Data	3D Calibration	Appear	Disappear	Direction	Dwell	DL-Filter	Face Detection
Enter	Exit	Stopping Filter	Speed Filter	Tailgating	Abandoned Object	DL People Tracker	DL Object Tracker

TURNKEY ANALYTICS SERVER

All-in-One, Stand-Alone Analytics Server and Reference Design

- Rapidly add analytics functionality to a system, VMS, PSIM or NVR software
- Open and standard interfaces for rapid integration
- Also operate as stand-alone server-based analytics solution
- Stream video directly from any IP camera or VMS via RTSP
- State-of-the-art Machine Learning and AI algorithms for tracking people, vehicle types and bags
- Full analytics metadata stream provided to facilitate forensic search or other value add applications.
- Deployable on Intel x86 and ARM hardware
- Customisable out-of-the-box HTML5 user interface for analytics configuration; Configure rules and review events using your web browser on any device (via Chrome on Windows, Linux, Mac, Android)
- Edge or server based options. WVCA is embedded in a wide range of cameras, integrated into a number of VMS or as a standalone server.

WVCAserver is an all-in-one analytics server and reference design that enables the rapid integration of Wavesys Global's AI tracking and classifications technologies to 3rd party systems such as VMSs, NVRs and PSIM systems.

In standalone mode, WVCAserver can stream video from a range of input sources and generate events in a range of formats.

WVCAserver has been designed from the ground-up to be easy to use and integrate. With video streaming, event alerting and a HTML5 configuration interface out-of-the-box, simple integrations can be completed in less than a week.

SYSTEM

Supported OSs	Ubuntu 18.04 LTS, Windows 10
Supported Browsers	Chrome (version 61 and above)
Supported Clients	PC, Android
Supported Platforms	Intel / AMD x86, ARMv8
Supported Compression Format	H.264, H.265, MPEG-4

BASIC EVENT RULES

Event Sources	Analytics Rules, Loss of Signal, Interval (heartbeat), Schedule, HTTP, Arm, Disarm
Event Actions	E-mail, TCP, HTTP, Arm/Disarm

WVCA Hardware Requirements

IP 30 series(intelligent video analysis at edge)

IP50 series (Multi Layered Deep Learning AI Analytics at Edge)

WVCA RULE SETS

Presence:	Trip wires, zones, tampers and object tracker
Presence AI:	As "presence" plus deep learning filter and instant analytics
Count:	Zones, tampers, count lines, counters
Count AI:	As "count" plus DL people tracker and metadata
Pro:	Complete WVCA rule set including logical rules, no deep learning tools or face detection
Pro AI:	Complete WVCA

SUPPORTED ANALYTICS

Tamper	Camera Tamper Alert, Loss of Video Input Connection Alert
Object Detection, Tracking and Classification	Robust object tracking engine tracks through occlusion, high probability of detection. Deep learning classification for reduced false positive rate. Multiple modes permit optimization for intrusion detection.
Event Actions	Digital Output (DO) E-mail, TCP, HTTP, Arm/Disarm
Object Counting	Accurate people and vehicle type counting, even in dense scenes
Event Rules	Intrusion detection, Tamper detection, Enter & exit filters, Appear & disappear filters, Stopping filter, Dwell filter, Direction filter, Counting, Abandoned object filter, Removed object filter, Zones & lines, Speed filter, 3D calibration, Tailgating filter, Logical rules
Deep Learning People and Object Tracking	Deep learning people and object trackers for highly accurate detection, classification and localisation of people, vehicles and objects. Optimised for business intelligence and metadata generation.

SUPPORTED INTERFACES

Video Input Method	RTSP, Files (avi, mp4, mpg)
Output Data Format	Events (TCP, HTTP, SMTP, VMS / NVR / PSIM Client) Metadata (JSON)
Web Interface	HTML5 via embedded web server, No plugins necessary
API	RESTful API for 3rd party integration and customization

Particulars	Embedded In WVMS	Embedded in IP 30 series/external Analytics server	Embedded in IP 50 Series/external Analytics server
Detection zones	✓	✓	✓
Counting lines	✓	✓	✓
Object presence	✓	✓	✓
Object enter/appear	✓	✓	✓
Object leave/disappear/Exit filter	✓	✓	✓
Line crossed	✓	✓	✓
On-screen counters	✓	✓	✓
Metadata display	✓	✓	✓
Metadata search	✓	✓	✓
Event rules	✓	✓	✓
Face recognition System	✓		
Person protective equipment	✓		
Object color attribution	✓	✓	✓
Person speed and proximity	✓		
Automated LPR	✓		
Vehicle color attribution	✓	✓	✓
Vehicle make and model	✓		
Vehicle speed and proximity	✓	✓	✓
Forensic search		✓	✓
Face Detection		✓	✓
Object Tracker	✓	✓	✓
Temper Detection	✓	✓	✓
Intrusion detection	✓	✓	✓
Stopped Filter		✓	✓
Counting	✓	✓	✓
Dwell Filter		✓	✓
Tailgating Filter		✓	✓
3D Calibration		✓	✓
Abandoned Object		✓	✓
Removed Object		✓	✓
Logical Rules	✓	✓	✓
DL-Filter		✓	✓
DL people tracker			✓
DL object Tracker			✓
Pose Tracker			✓