



PRODUCT DATASHEET

AI-Enabled Video Analytics

Turning existing cameras into sensors that detect, classify and alert — in real time, on infrastructure you own.



Intrusion

ANPR

Crowd & Queue

PPE Compliance

Fire & Smoke

Face Recognition

Traffic Violations

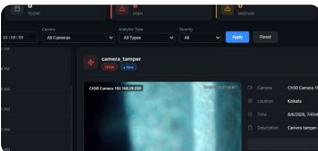
Abandoned Object

OVERVIEW

What the platform does

Cognix Vision AI-Enabled Video Analytics reads live camera streams and reports what matters — an intrusion, a plate, a queue, a missing helmet — as an event with the clip attached. It runs on the cameras you already have, at the edge or centrally, and feeds the same event pipeline, user roles and audit log as the Cognix Vision VMS.

- Intrusion Detection
- Loitering Detection
- Camera Tampering
- Fallen Person Detection
- Human / Vehicle Search
- Colour Search
- Attribute Search
- Face Recognition
- Crowd Detection
- Fight / Violence Detection
- Fire Detection
- Smoke Detection
- Worker without Safety Jacket
- Worker without Safety Helmet
- Litter Detection
- Garbage & Debris Detection
- Abandoned Object Detection
- Electrical Spark Detection
- Licence Plate Recognition (ANPR)
- Vehicle Count & Classification
- Watchlisted Vehicle Identification
- Red Light Violation Detection
- Rider without Helmet
- Triple Riding on Two Wheelers
- Wrong-way / Inverse Direction
- Vehicle Parking Violation
- Vehicle Queuing / Congestion
- Stopped Vehicle Detection



SECURITY, SAFETY & SEARCH



Intrusion Detection

Raises an alert the moment a person or vehicle crosses a virtual line or enters a marked zone in the camera's view. Direction, schedule and object type are all configurable, so a movement that is normal at noon can be an alarm at midnight.

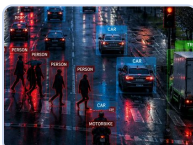
Typical use: Perimeter fences, substation yards, restricted plant areas, rear entrances after closing hours.



Loitering Detection

Flags a person or vehicle that stays inside a defined area longer than the dwell time you set. It separates ordinary passing traffic from someone who has stopped and waited.

Typical use: ATM lobbies at night, hostel corridors, warehouse loading bays, areas around critical assets.



Camera Tampering

Detects defocus, obstruction, sudden scene change, spray-over and cable cuts, and reports the camera as compromised rather than simply going dark.

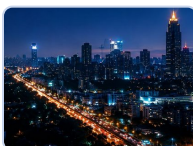
Typical use: Vandalism that starts by blinding a camera is caught in seconds instead of during an investigation weeks later.



Fallen Person Detection

Recognises a person who has gone from upright to lying down and stayed there, distinguishing a fall from someone sitting or bending.

Typical use: Lone workers in plants, hospital corridors, elderly-care facilities, stairwells and platforms.



Human / Vehicle Search

Searches recorded footage for people or vehicles instead of scrubbing timelines. Filter by object type, camera, zone and time window to reach the clip you need.

Typical use: Finding when a specific vehicle entered a site across a week of recordings from forty cameras.



Colour Search

Finds objects by dominant colour — a white truck, a person in a red jacket — narrowing thousands of detections down to a handful worth watching.

Typical use: Locating a described vehicle after an incident, without knowing its registration number.

IDENTIFICATION, CROWD & FIRE



Attribute Search

Searches by descriptive attributes: vehicle type, upper and lower clothing colour, presence of a bag or helmet. Attributes combine, so the filter tightens with each one added.

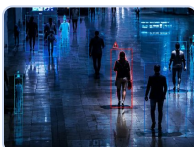
Typical use: "Two-wheeler, rider without helmet, between 6pm and 8pm, at the east gate."



Face Recognition

Matches faces against enrolled watchlists for access control, visitor management and alerting. Consent, retention period and audit logging are part of the workflow, not an afterthought.

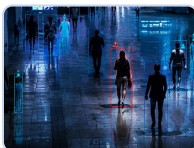
Typical use: Staff and contractor verification at gates, visitor badges that expire automatically at the end of a visit.



Crowd Detection

Measures how many people occupy an area and how densely, raising a warning as the count crosses the threshold you set — before the space becomes unsafe.

Typical use: Station concourses, event entrances, temple queues, assembly points and mall atriums.



Fight / Violence Detection

Identifies sudden aggressive motion patterns between people and escalates them as a high-priority event for immediate operator review.

Typical use: Platforms, hostels, bar and club entrances, hospital emergency departments.



Fire Detection

Detects visible flame in the camera's field of view and alerts within seconds — useful in large open spaces where point smoke detectors are ineffective.

Typical use: Warehouses with high ceilings, scrap and material yards, outdoor storage, cable trenches.



Smoke Detection

Recognises smoke plumes early, often before a conventional detector reacts, giving the ventilation and evacuation response the minutes it needs.

Typical use: Tunnels, plant rooms, godowns, underground car parks.

COMPLIANCE & PUBLIC SPACES



Worker without Safety Jacket

Checks continuously for high-visibility vest compliance in areas where it is mandatory, replacing the occasional supervisor walk-past.

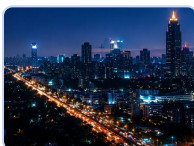
Typical use: Loading bays, construction zones, roadside works, plant vehicle routes.



Worker without Safety Helmet

Flags people in a designated zone who are not wearing a hard hat, with the clip attached so the record is verifiable.

Typical use: Shop floors, construction sites, maintenance areas, contractor work zones.



Litter Detection

Detects littering behaviour and the litter left behind in monitored public areas, with a timestamped clip for enforcement.

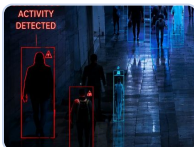
Typical use: Public parks, station forecourts, market areas, smart-city corridors.



Garbage & Debris Detection

Monitors known collection points and roadside spots and reports accumulation past a set level, so clearance is scheduled by condition rather than by routine.

Typical use: Municipal bin points, roadside dumping hotspots, drainage and canal edges.



Abandoned Object Detection

Notifies an object that has been placed and left unattended in a monitored area beyond a set duration, and equally an object that has been removed.

Typical use: Airport concourses, station platforms, lobbies, exhibition halls, secure display areas.



Electrical Spark Detection

Identifies arcing and sparking in switchgear and electrical rooms — an early sign of a fault, and often the first visible warning before a fire.

Typical use: Substations, panel rooms, plant electrical bays, data-centre power infrastructure.

TRAFFIC — RECOGNITION & ENFORCEMENT



Licence Plate Recognition (ANPR)

Reads number plates on live streams and stores each read as a searchable event with the vehicle image attached. Tuned per camera angle and lighting during commissioning.

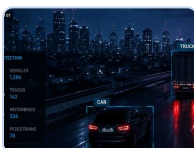
Typical use: Gate entry and exit logs, toll and parking access, corridor enforcement, watchlist alerts.



Vehicle Count & Classification

Counts vehicles by class — car, truck, bus, two-wheeler, auto — per lane and per direction, and trends the counts by hour and day.

Typical use: Junction volume studies, corridor planning, toll reconciliation, industrial gate throughput.



Watchlisted Vehicle Identification

Matches every plate read against your watchlists and raises an immediate alert on a hit, with the camera, time and image attached.

Typical use: Stolen-vehicle lists, blacklisted contractors, VIP movement, denied-entry lists at gates.



Red Light Violation Detection

Captures vehicles crossing the stop line while the signal is red, storing before-and-after evidence clips along with the plate read.

Typical use: Signalised junctions where enforcement currently depends on a person being posted there.



Rider without Helmet

Detects two-wheeler riders and pillion passengers without a helmet, and records the plate alongside the violation image.

Typical use: Corridor enforcement drives, campus and industrial-estate gate compliance.



Triple Riding on Two Wheelers

Identifies three or more people on a two-wheeler and records it as an enforceable event with plate and image.

Typical use: City corridors and junctions during peak enforcement hours.



Wrong-way / Inverse Direction

Detects any vehicle travelling against the permitted direction of a lane and escalates it immediately — on a highway or in a tunnel this is a life-safety event.

Typical use: One-way streets, highway ramps, tunnel bores, industrial internal roads.



Vehicle Parking Violation

Flags vehicles parked in no-parking zones, on footpaths, or beyond a permitted duration in a marked bay.

Typical use: No-parking corridors, fire lanes, loading bays, hospital and campus entrances.



Vehicle Queuing / Congestion

Measures queue length and occupancy per approach and reports congestion levels as they build, rather than after the corridor has locked up.

Typical use: Junction management, toll plazas, tunnel approaches, factory gates at shift change.



Stopped Vehicle Detection

Detects a vehicle that has come to a halt where stopping is not permitted, and raises it within seconds. In a tunnel or on a fast corridor, that gap decides the outcome.

Typical use: Tunnel bores, highway shoulders, bridge decks, no-stopping zones.



DEPLOYMENT

How a deployment runs

Four stages. We will tell you at the end of any of them if going further is not worth your money.

- 1 Survey**
We check camera angles, lighting, resolution and network paths. This decides accuracy far more than the choice of model does — and we will say so if a camera cannot support what you need.
- 2 Trial**
Rules run against your recorded footage first, so you see the real alert rate before anything reaches an operator.
- 3 Tune**
Zones, schedules and thresholds are adjusted until the false-alert rate is acceptable to the people who have to act on them.
- 4 Roll out**
Deployed camera by camera, with the alert rate reviewed again after the first two weeks of live running.

On accuracy: we do not quote a single accuracy figure for every site. Detection quality depends on camera angle, mounting height, lens and lighting, so we survey the site, state a figure for that site, and validate it before go-live. Any number promised before a survey is a brochure number, not an engineering one.

WHAT IT NEEDS, AND WHAT IT SENDS

- **Cameras**
Any ONVIF or RTSP IP camera. Resolution and angle matter more than brand — we list during the survey the cameras that cannot support a given detection, and say why.
- **Compute**
Edge GPU appliance per site, or a central GPU server. Sizing depends on channel count and which detections run per channel. [[Add your tested channels-per-box figure]]
- **Outputs**
Events with clip and still, live dashboard, CSV and PDF exports, and push to email or your command platform. Video never has to leave the site.



KEY HIGHLIGHTS

Why this platform

■ Camera and hardware agnostic

Works with any ONVIF or RTSP camera, on Linux or Windows, on the hardware you already own. No proprietary camera lock-in.

■ Runs at the edge or centrally

Deploy a GPU box per site where bandwidth is tight and send events instead of video, or process centrally where the links allow it.

■ One event pipeline

Analytics events, ANPR reads and face matches all arrive in the same feed as the VMS, with the same clip handling, roles and audit log.

■ Tuned on your footage

Rules are trialled against your own recordings before go-live and adjusted until the false-alert rate is one your operators will accept.

■ Alerts that reach a person

In-app event feed, email and integration with your messaging or command platform, with the triggering clip attached to every alert.

■ Privacy by design

Anonymous counting by default. Identity features are enabled only where there is a lawful basis, with retention and audit configured up front.

■ Scales by camera, not by licence tier

Add cameras and detections as the deployment grows. Channel capacity is sized to your hardware, not restricted by an arbitrary plan.

See it on your own cameras

Send us a camera list and what you are trying to catch. We will tell you what is realistic on that site before anyone talks about price.

info@cognixvision.com · cognixvision.com · [\[+91 00000 00000\]](tel:+910000000000)