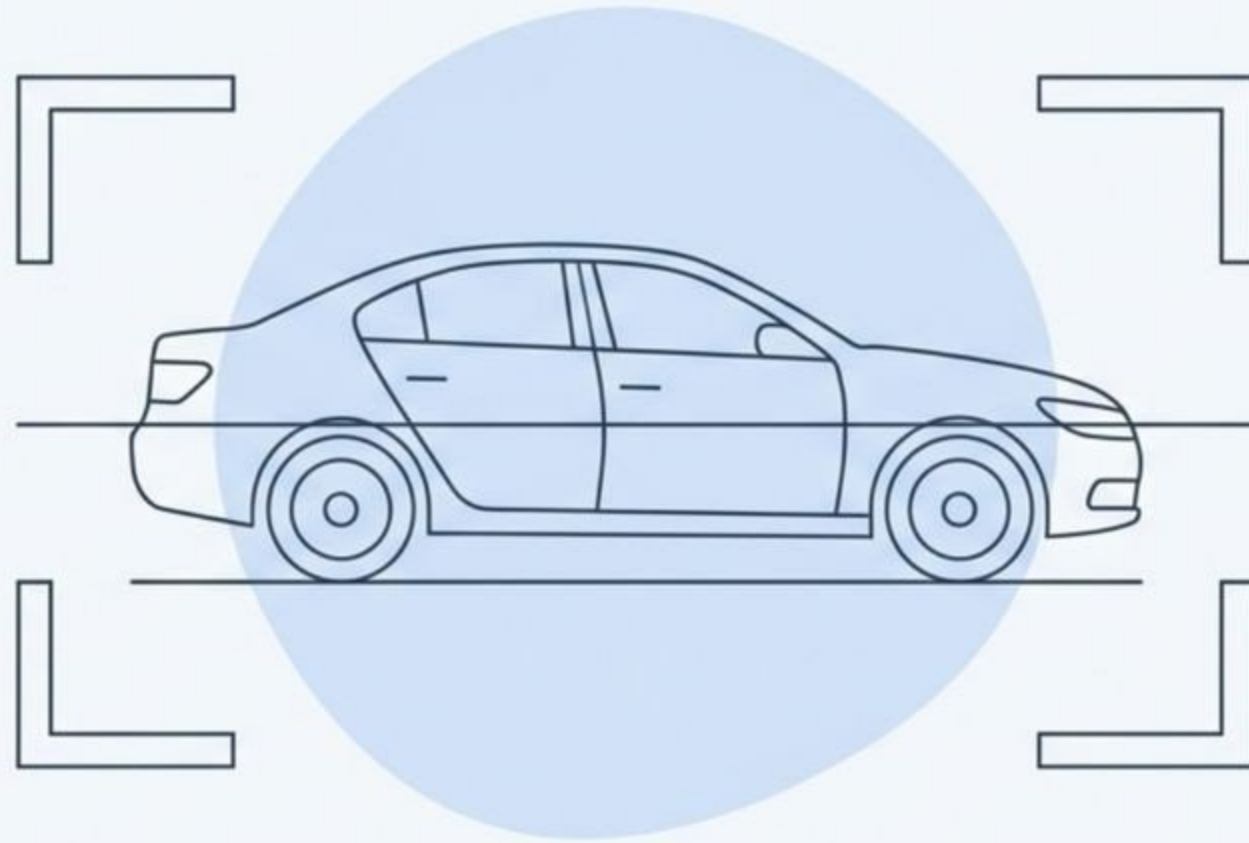


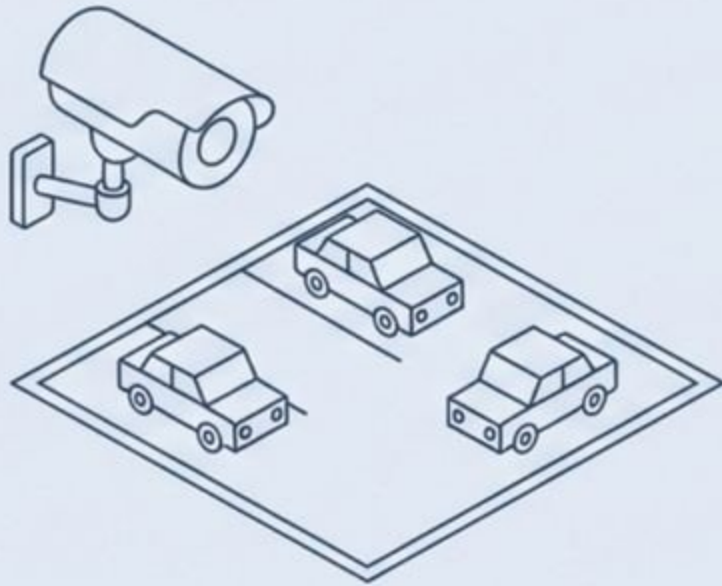
Vehicle Counting

Intelligent Video Analytics for Traffic & Parking Management



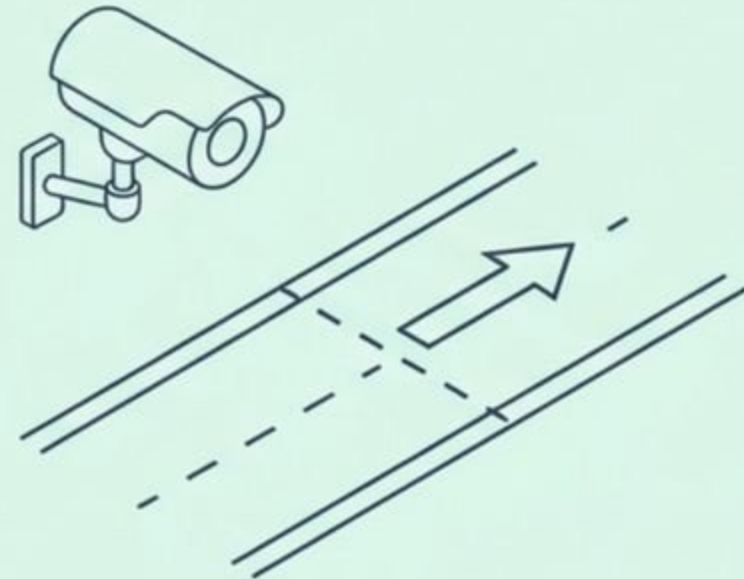
Overview

Core Tech: Automated technology utilizing deep learning AI inside the camera to count vehicles via visual indicators.



Method 1: Area Counting

Counts all vehicles in a single video frame (Total count per frame). Results are generated as metadata or events based on a target threshold (e.g., alarm sent if >10 vehicles detected).



Method 2: Accumulated Flow

Counts vehicles entering/exiting an area or crossing a virtual line over a period of time. Capable of — bi-directional counting. Results are generated as metadata.

Features



- **Area Counting of Vehicles**



- **Accumulated Flow Counting of Vehicles**



- Counting Metadata Transmission



- Video Streams with Embedded Counting Values (OSD)



- Push and Pull Metadata



- Counting Alarms by Thresholds

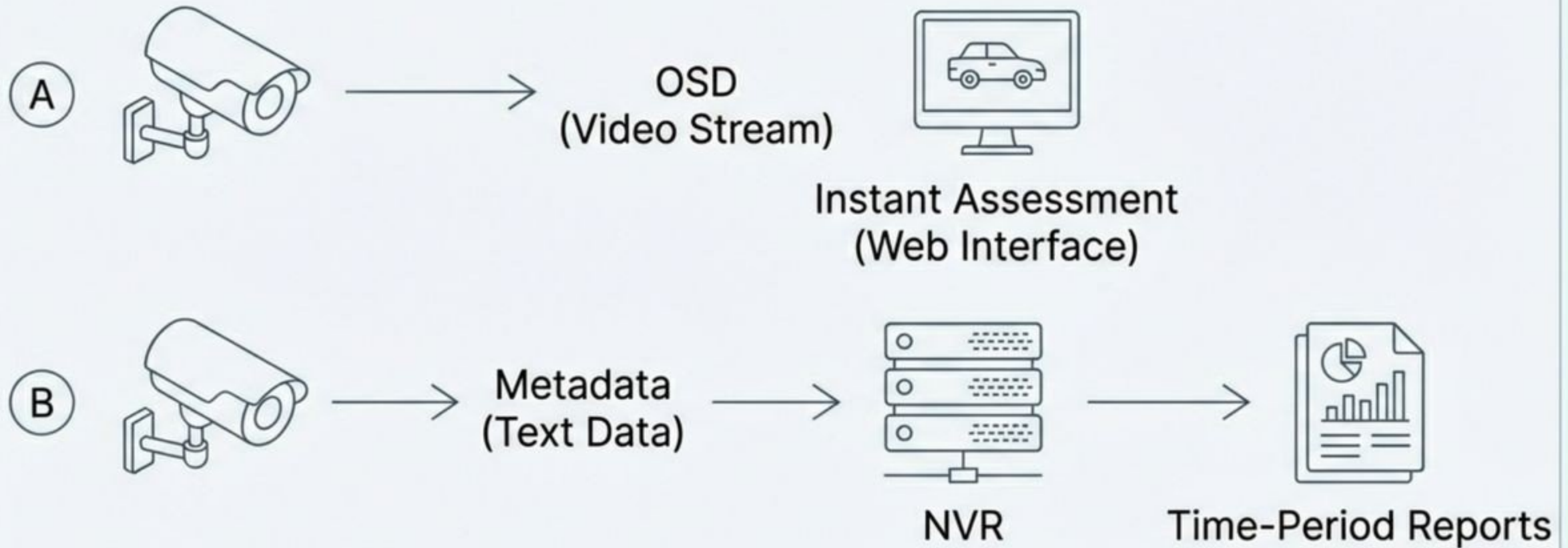


- Single Camera Counting



- Multi-Camera Counting

Architectures



Alarm Architecture: Single-camera solution calculates occupancy.
If result > threshold, an alarm is sent to the VMS.

Applications



Traffic Management

- Traffic Jam Detection: Uses Area Counting for density alerts.
- Flow Optimization: Uses Accumulated Counting for cycle adjustment.



Parking Management

- Lot Occupancy: Full lot detection via Area Counting.
- Gate Counting: Entry/exit calculation for large lots.



Security & Safety

- High Occupancy Alarms: Detect unexpected crowds.
- Threshold Alerts: Notify security when capacity is exceeded.

Solutions



ACTi People Counting Cameras



Management Server: NVR 3 Corporate /
Smart ZNR (e.g., ZNR-424)



License Efficiency

- No AI License Required: All processing is done on the camera edge.
- Only a regular video channel license is applied on the server side.

Product Introduction

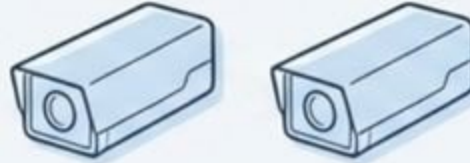
Business Analysis / OSD (A-Series)



Models: A426, A427, A428, A429,
VMGB-410

Role: Traffic Flow Counting & Basic
Business Analysis.

High Occupancy / Site Management (Z-Series)



Models: Z-Series

Role: Single-Gate Full Parking Lot
Detection & High Occupancy
Alarms.

Traffic Jam Detection



Models: Any A-series with vehicle
counting

Role: Single frame based Traffic
Jam & Full Parking Lot alerts.

Product Matrix

Application	Type	Camera QTY	Method	Purpose	Solution (Camera + VMS)
Traffic Flow Counting	Multi-frame	1	OSD only	Basic Business Analysis	Cam: A426-A429, VMGB-410 + Any NVR/Web Client
Traffic Flow Counting	Multi-frame	1	Metadata -> Report	Business Analysis (Report)	Cam: A427-A429, VMGB-410 + Any NVR
Single-Gate Parking	3-Level Thresholds	1	Event	Site Management (Alarm)	Cam: Z-Series + Any ZNR (except ZNR-126)
Single-Gate Parking	Metadata	1	Report	Business Analysis (Report)	Cam: Z-Series + Any ZNR (except ZNR-126)
Traffic Jam / Full Lot	Single frame	1	3-Level Thresholds	Traffic Jam / High Occupancy Alert	Cam: Any A-series (with counting) + Any NVR

Comparison



Business Analysis (Reporting)

Focus: Historical data and trends.

Method: Counting Metadata.

Output: Reports generated by time periods on the server.



Instant Assessment (Visual)

Focus: Real-time observation.

Method: Counting OSD.

Output: Live values on video overlay; no server integration required.



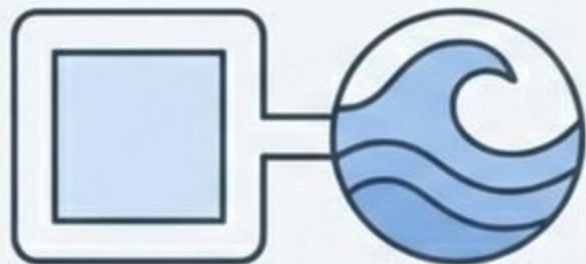
Security & Safety (Action)

Focus: Crowd control & capacity.

Method: High Occupancy Alarms.

Output: Event triggers sent to VMS when thresholds (Low/Med/Critical) are surpassed.

Summary



Versatile Methodologies

Supports both Area Counting (static jams/parking) and Accumulated Flow (moving traffic/gates).



Cost Efficiency

Edge-based AI processing eliminates server-side AI licenses; only standard video channel licenses apply.



Flexible Integration

Choose between OSD for standalone visual use or Metadata for deep reporting and VMS integration (NVR 3/Smart ZNR).

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