# THE AGE OF
commendAi

SOLUTION SHEET

What Is Commend Ai?

The world is changing, populations are expanding, and habits are evolving. Cities, buildings and public spaces are having to plan & adapt faster than ever to keep up. Commend Ai provides the platform that enables those who see these challenges, to not only manage them but embrace them. Commend Ai is an Audio/Video-based service for evidence-based safety, designed to empower environments. With a smart integration of computer vision AI, audio biometrics, big data, and enterprise messaging, Commend Ai allows cities, buildings & public spaces to adapt to ever-changing threats to combat 21st-century problems such as pandemics, overcrowding, missing people and crime whilst simultaneously provide a better experience for all.

Vision Ai

- Monitor missing/wanted lists.
- Get foot traffic statistics with masks and demographic features.
- Detect crowds and queues.
- Detect dangerous behaviours.
- Get the average speed from any point A to point B.
- Measure stopping/parking time.
- Detect road accidents and congestions.
- Detect traffic violations.
- Count vehicles by type.
- Detect smoke and fire.
- Detect emergency exit blocking.
- Detect intrusions in restricted areas of critical infrastructure.
- Detect other safety violations.
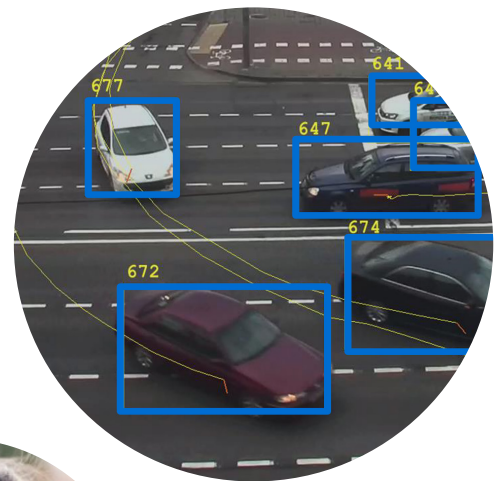
How Does Commend Ai Work?

Commend Ai connects to any existing IP CCTV camera, audio device (standard protocol such as SIP) and IoT sensor. Commend Ai runs computer vision AI and audio biometrics to detect public safety threats such as, unattended items or key word detection and sends alerts directly to first responders, security teams, venue managers, and other stakeholders.

The teams can then collaborate on the Commend Ai Messaging Platform to share media and track progress. The government and local police can use the Commend Ai Surveillance Engine to find suspects, missing people, vehicles, and incidents such as vandalism. Commend Ai event statistics can be used to improve safety, security and customer experience as well as drive efficiencies and understand trends by which it learns and adapts.
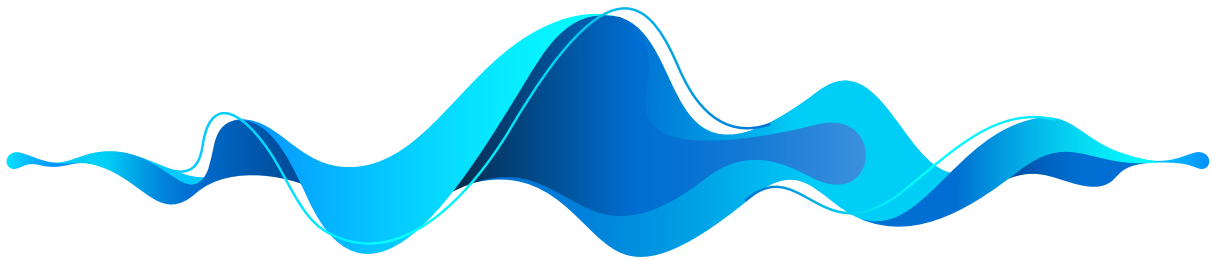
Unlike conventional video management systems (VMS), audio platforms and physical security information systems (PSIM), Commend Ai is designed to serve multiple organizations from a single secure private cloud. For example, a service provider for a smart city can connect city government, local businesses, first responders, and police. All these users can share cameras and data, yet can be completely isolated from each other.

Commend Ai Carried-Grade Features Include:

- Multi-tenant product design.
- Multi-vendor support for cameras and servers.
- Cross-platform clients (web browsers, desktops, and mobile devices).
- High availability, no single point of failure.
- Horizontal scaling by the number of cameras, the number of users, and retention period.
- Advanced monitoring and logging tools.
- Rolling updates (i.e. without stopping the service).

Commend Ai Core Features

Mapping & Camera Management:

- Assign names and tags to cameras.
- Place cameras on a scalable map (OpenStreetMap) and building floor plans.
- Scale the map with smart clustering of cameras and other devices.
- Search cameras by name, tags, video analytics, resolution and status.
- Use OpenStreetMap in a closed network (for on-prem deployments).

Realtime Alert Monitors:

- Create multiple monitors (event pre-sets or filters).
- Create multiple people and vehicle lists to receive alerts.
- Arm and disarm monitors.
- Receive monitor alerts in web browsers and mobile apps.
- Receive monitor alerts in messenger chats.
- View alert screenshots and play video.
- Review alert details (people/vehicle ID, tags, location etc).

Multi-Organisational Collaboration:

- Provide role-based media access for users in multiple organizations.
- Support users on different platforms (Windows, MacOS, Linux, Android, iOS).
- Integrate enterprise messenger to push alerts and track response.
- Share cameras.
- Share people/vehicle lists.
- Share alert monitors and events.

Smart Video Player:

- Play low-latency live and recorded video/ audio at a variable speed.
- Share media with a deep link from a given camera and timestamp.
- Rewind fast with client-side media caching.
- Review events on the scalable timeline with key snapshots.
- Use a digital video zoom.
- Export and share video to the Commend Ai cloud storage.
- Export video to MP4 file.
- Export frames to JPEG files.
- View AI overlay annotation.
- Search objects in video using visuals tools (tripwire, region of interest).
- Control PTZ cameras using mouse or touchscreen (ONVIF Profile S required).
- No browser plug-in required (HTML5).
- Switch to other cameras nearby.
- Adaptive interface to any screen size.

Integrations:

- Use open Commend Ai API to connect third-party applications.
- Import/export data.

Surveillance Engine - Global Event Search:

- Find instantly people, vehicles, event instantly across thousands of cameras.
- Filter events by type, camera tags, event tags, location, data and time etc.
- Manage lists of people and vehicle for automatic event tagging.

Commend Ai Use Cases

Unattended & Missing Items

- Detect unattended items in public spaces (bags, boxes, etc) within a variable time threshold.
- Audio Analytics - Triggered by loud sounds, gunshots (needs Local Commend Sensor for muzzle flash), breaking glass and screams.
- Video - Video stream quality stays consistent even in low light, high brightness, low frame rate or signal loss.

Traffic Control & Number Plate Recognition (NPR/LPR)

- Reads plates of 30+ countries using preloaded templates (including single-line/double-line/normal/inverted plates).
- Searches by vehicle number, owner name and other data.
- Traffic Management - Detects road congestion, accidents, hard shoulder stopping as well as measuring speed.
- Vehicle Appearance - Classifies vehicle type, colour, make, model and appearance.

Crowd Control & People Flow

- Crowd Density - Detect and count the number of people in public spaces (stations, squares, streets, etc) and set up automated PA announcements to disperse overcrowding.
- People Falling - Detect people falling or laying on the ground due to illness, accident or homeless lodging.
- Foot Traffic - Count people against a tripwire in both directions, ideal for queue management and for estimating demographics.

Missing People & Person Of Interest Detection

- Detects faces at any angle and builds a robust descriptor from multiple images as the person moves.
- Monitors public missing/wanted/staff lists.
- Searches people by photo, name, passport number, etc.
- Detects apearance features (gender, age, race, hair colour, skin, facial hair, headdress, glasses, etc).
- Detects spoofing for access control systems.

Anti-Social Behaviour & Threat Detection

- Weapon Detection - Detect guns and knives in public spaces (not a standard feature).
- Intrusion Detection - Detect people and vehicles in security areas (tripwire/secured zone alerts).
- Railway Safety - Detect unauthorised personnel on railways and tunnels whilst ignoring trains and passengers boarding.
- Driving Violations - Detect parking and driving violations.

Track & Route Objects

- Object Mapping - Set an object and track its route using object mapping.
- Person Mapping - By adding a few simple details, you can track the route and location of a missing person or person of interest.
- Vehicle Mapping - Track the route and location of stolen vehicles or identify patterns in traffic violations.