



VIGILATE

[www.vigilatevision.com](http://www.vigilatevision.com)

# HighWay ANPR

High speed license  
plate reading cameras



# Highway ANPR



**License plate  
reading cameras  
for motorways,  
ring roads and  
major arteries.**



**We are aimed at administrators of companies that deal with road infrastructure and manage the network of state roads and motorways. Managers, concessionaires, public companies for infrastructures of national and international interest. It is also aimed at consultant designers, lobbyists and large contractors and all intermediary figures.**



**We offer a complete portfolio of high-performance cameras for modern private and public smart roads.**

The HP line devices are aimed in particular at the smart mobility and modern ITS systems market, their high performance and high computing power offer characteristics suitable for a highly professional market also for toll routes. Calculation speed and reliability allow highly reliable reading of transits capable of allowing management platforms, "Tutor" functionality with calculation of average speeds and AID algorithms for monitoring travel flows.

# Technology behind a license plate reader.



### **Professional Anpr cameras high performance**

- More than 20,000 professional ANPR installations distributed worldwide  
Best price/performance ratio in professional applications
- 20 different professional products to cover all application needs of customer from the parking lot, to the monitoring of the territory up to specific solutions
- designed for tolling and enforcement from 70 to 250 km/h, from 2 to 12 Mpixels
- Up to 75 analyzed images (OCR) for transits up to 250 km/h
- UNI 10772:2016 Class A certified cameras - up to 7 meters wide road, 2 lanes, front and rear license plates, motorcycles, up to 30° offset lateral

## Highway ANPR

### Main features



### High performance professional OCR

OCR library mixed between traditional approach and neural network to be more precise in character recognition OCR to improve nationality recognition

### Multiple images capture in sync

Strobed pulsed infrared illuminator

### High-Speed CMOS

Global Shutter, Rolling Shutter, Black/White, Color, from 2 to 12 Megapixel

### Day & Night

High performance day and night

### PoE

UPoE 60W class 6 power supply

### Certifications

EN ISO 9001 :2015 , ISO/IEC 27017:2015  
ISDP©10003:2020

### Double camera

Double head for OCR and Context

### Deep Learning

Algorithm training on a neural network directly produced by the Vigilante R&D team.

### HD SSD

from 128GB to 4TB HD in solid state technology

### NVIDIA Inside

Powered by NVIDIA deep learning hardware



### API

REST API libraries (with authentication) that guarantee the possibility of integration with third-party systems.





## Local Nvr function

Continuous recording function on board high resolution video streaming camera; transit video clip production.

## AID

AID (Automatic Incident Detection) gate algorithms for traffic control (stationary vehicle, wrong-way vehicle, slow traffic, queue).

## ANPR

OCR library on board with 41 European, 13 Asian, 6 African, 5 South American nations and special license plates such as Trailers, Kemler ADR, Kemler ADR Empty, Tram.

## Vehicles classes

Classificazione diurna dei veicoli per tipologia in 11+ 1 (Macchine, Camion, Camion con rimorchio, Motoveicoli, Motocicli, Ciclomotori, Bus, Mini van, Big van, Cassonati, Caravan, sconosciuto).

## Colors

Daytime classification of vehicles by color in 11 classes + 1 (black, white, grey, red, blue, yellow, green, orange, pink, purple, cyan, unknown).

## Models

Model classification of vehicles in transit rear view (about 400 models supported).

## Streaming Video

Continuous streaming function RTSP H264, HLS, MJPEG and complete Onvif S profile protocol.



## Speed estimate

Transit speed estimation function

## Checklist

Black & White List

Night-time classification of vehicles by type in 4 classes +1 (trucks, buses, cars, motor vehicles and unknown).

## Brand

Vehicle brand classification (around 100 brands supported).

## Cloud Ready

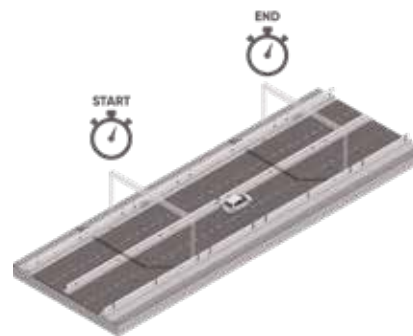
Compatible with Vigilate's v-SUITE general supervision platform.

# Application

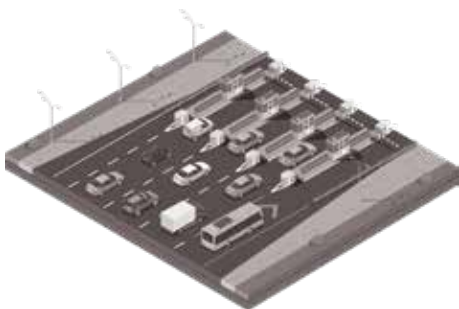
highways



Tutor systems



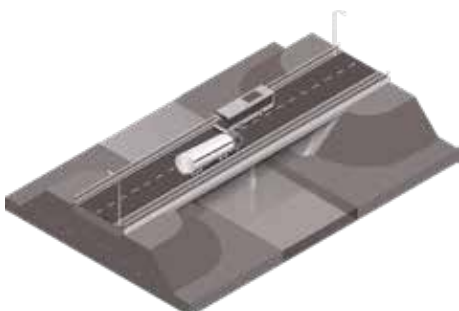
Tolling



AID systems



Bridges



Tunnels





## Certifications



Dasa-Rägister



EN ISO 9001 :2015

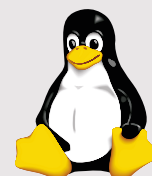
ISO/IEC 27017:2015

ISDP©10003:2020

ISO/IEC 27001:2022

ISO/IEC 27018:2019

## Platforms & Standards



## AXDX HP products lines

ANPR double optics

---

### **v-LANE A5D2HP**

**5/2MP@75/60fps Multifunctional**

**250Km/h (2 Lanes)**

ANPR Double optics

### **v-LANE A5D5HP**

**5/5MP@75/60fps Multifunctional**

**250Km/h (2 Lanes)**

ANPR Double optics



### **v-LANE A5D8HP**

**5/8MP@75/60fps Multifunctional**

**250Km/h (2 Lanes)**

ANPR Double optics





**v-LANE A12D5HP**  
**12/5MP@42/60fps Multifunctional**  
**320Km/h (3 Lanes)**  
ANPR Double optics



**v-LANE A12D8HP**  
**12/8MP@42/60fps Multifunctional**  
**320Km/h (3 Lanes)**  
ANPR Double optics



# Main features

## Main parameters

### Software Features

Operating mode:

- continuously acquisition (free-run)
- on request (by SW trigger or HW trigger)

Both modes can draw on the two local lists that can be configured locally or by remote synchronization with the FTP server"

Real-time diagnostics:

- CPU temperature
- Mainboard temperature
- IR illumination module operation
- Lighting module current peaks
- Capture status of physically connected sensors
- Input current level (power port)
- Input voltage level (power port)
- Camera tilt angle
- Internal humidity level
- CPU consumption
- RAM consumption
- Storage disks status
- Utilization of the 4 physical cores (CPU monitoring)
- Check status of operational threads
- Monitoring of analysis times and operating status of active algorithms

Generation of any alarms (local and possibly remote) in the face of anomalies detected

Supported sending protocols:

- TCP (nei formati binario, XML, string)
- TCP Milestone
- FTP (imgs + dati testuali in \*.txt/\*.csv)
- RPC-XML over HTTP / HTTPS (messaggio BASE oppure ESTESO)
- Custom Protocol
- Seriale (su porta RS 485)
- Wiegand (è necessario installare SC20 converter)
- Xentinel message (over HTTP)
- v-SUITE message (over HTTP / HTTPS)

Supported communication protocols:

- TCP/IP
- UDP
- HTTP
- HTTPS
- FTP
- FTPS
- RTP/RTSP
- openVPN
- ONVIF (S- profile)
- NTP
- SNMP

Data protection:

- Possibility to activate the management of the web configurator by HTTPS connection
- FTPS encryption on TLS/SSL protocol
- AES-256-ECB encryption for data and images saved locally and/or sent via the supported protocols
- image hash using SHA-512 algorithm and possible encryption of the signature itself using AES-256-ECB
- Totally GDPR compliant storage management with periodic deletion of the history
- Cockpit masking function (in case of front detection of vehicles) in order to ensure respect for privacy
- Possibility to connect the camera inside an openVPN with certificate installed directly on board
- Advanced management of the firewall on the machine with the possibility of disabling access to the local servers present on the machine
- (FTP server, ONVIF server, SNMP server, service ports)"



### Gruppo ottico

Sensore OCR:

Sensore COLOR:

Frame rate OCR:

Frame rate COLOR:

Ottiche:

### Illuminator

Integrated IR illuminator:

### Power Supply

Supported power supply:

Consumption:

### HW features:

Processor:

Memory:

RAM:

S.O.:

Storage Disk:

I/O

Ports:

### General characteristics

Dimensions:

Weight:

Operating temperature:

Humidity:

Protection:

### Certifications

OCR libraries:

Vehicle type daytime classification:

Vehicle type night classification:

Vehicle color daytime classification:

Vehicle brand daytime classification:

Vehicle model day classification (optional):

AID:

Sicurity data:

### Regulations

Regulations respected:

v-LANE A5D2HP	v-LANE A5D5HP	v-LANE A5D8HP	v-LANE A12D5HP	v-LANE A12 D8HP
5 MP	5 MP	5 MP	12 MP	12 MP
2 MP	5 MP	8 MP	5 MP	8 MP
75 fps	75 fps	75 fps	42 fps	42 fps
60 fps	60 fps	60 fps	60 fps	60 fps
Standard attacco C				
10 LED IR (CLASS 1M CEI EN 69825-1 ED. 4, 850 nm IR LED)		n. 2 x 10 LED IR (CLASS 1M CEI EN 69825-1 ED. 4, 850 nm IR LED)		
24VDC (5 A)				
12W Typically				
Quad-core + HW video encoder unit + Neural coprocessor				
16 GB e-MMC Flash				
4 GB			8 GB	
Linux				
HD SSD 128 GB (up to 2 TB)			HD SSD 256 GB (up to 4 TB)	
N. 2 input opto-isolated N. 1 output relè N. 1 fast output strobo 12-24 VDC N. 1 output open-collector 12-24 VDC				
N.1 USB port N.1 RS-485 port N.1 10/100/1000 Mbps Ethernet port				
350 x 270 x 165 mm				
6 Kg				
-30°; +55°				
fino al 90%				
IP66				
Libreria OCR on board con 41 nazioni Europa, 13 Asia, 6 Africa, 5 Sud America e targhe speciali quali Rimorchi, Kemler ADR, Kemler ADR Empty, Tram				
Classificazione diurna dei veicoli per tipologia in 11 + 1 (Macchine, Camion, Camion con rimorchio, Motoveicoli, Motocicli, Ciclomotori, Bus, Mini van, Big van, Cassonati, Caravan, sconosciuto)				
Classificazione notturna dei veicoli per tipologia in 4 classi +1 (camion, bus, macchine, motoveicoli e sconosciuto)				
Classificazione diurna dei veicoli per colore in 11 classi + 1 (nero, bianco, grigio, rosso, blu, giallo, verde, arancio, rosa, viola, ciano, sconosciuto)				
Classificazione brand del veicolo (circa 100 brand supportati)				
Classificazione modello dei veicoli in transito ripresa posteriore (circa 400 modelli supportati)				
Algoritmi di AID di varco per il controllo del traffico (veicolo fermo, veicolo contromano, traffico lento, coda)				
ISDP10003:2018 - Privacy by Default e Privacy by Design				
EN 55032:2015, EN 55035:2017, EN 50561-1:2013, EN 62368-1 (EN 62368-1:2014+A11:2017) EN 60068-2-14:Nb 2011-11, EN 60068-2-78:2013-11, EN 62471:2010, EN60529:1991+A1:2000+A2:2013 UE Regulation 2016/679 (GDPR)				



# Configuration interface





**Each Vigilate product in the ANPR line is equipped with practical, fast, modern configuration software, which makes using the product extremely easy.**

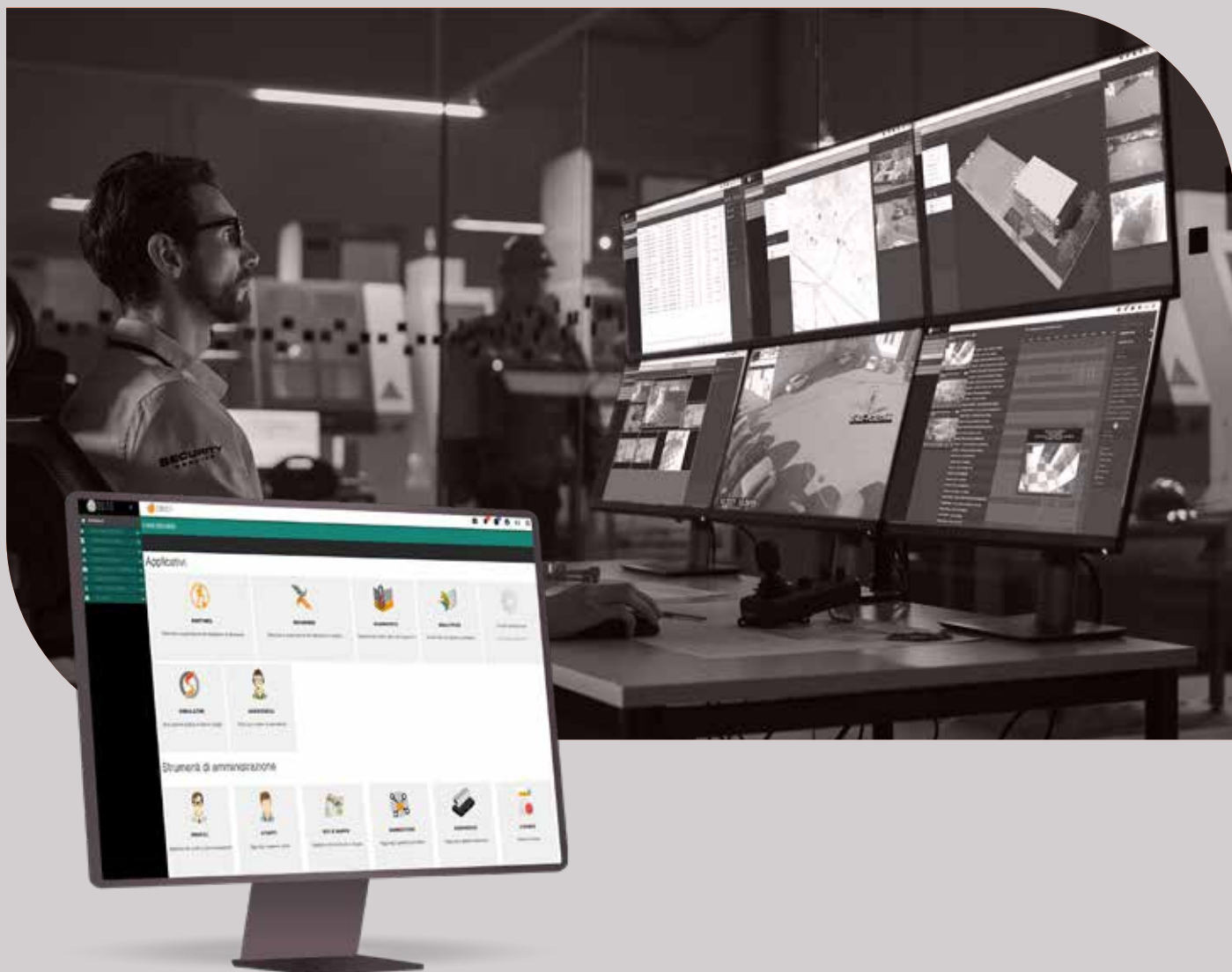
- A single, easy-to-use professional graphic interface for all products
- On-demand automatic export function of video clips associated with the transit of a specific vehicle
- Complete search to select a specific vehicle from the internal transit archive of the database
- Graphical configuration and tuning tools
- Security, privacy by design and privacy by default.
- Default HTTPS and token.
- Multiple integration tools with external systems



# v-SUITE Platform

**The universal platform for the world of scalable, accessible, intelligent, cloud or private security and traffic management.**





## Integrated software management

The supervision and control software platform PSIM, acronym for Physical security information management, is scalable, accessible, intelligent, Cloud or Private to supervise all systems in a single point.

A complete range of vertical applications dedicated to Security and Traffic Management professionals, business and consumer software to allow industry partners to better manage and control their products and provide new services to their customers.

v-SUITE (or management system): created with the aim of managing, in a single graphic SW interface environment, all the safety and traffic control equipment installed in the area.

With v-SUITE you can supervise your systems, your remote offices spread across the territory, you can manage large infrastructures such as smart cities, smart roads, major communication routes, etc. v-SUITE, thanks to its modularity in terms of application packages and distributed intelligence devices installed in the field or emulated at a central level, is able to manage heterogeneous systems ranging from security to traffic, from energy to Scada systems, from home automation to automatic safety communications between vehicles and C-V2x infrastructure.

**Vigilate is a “tech company” specialized in the production of devices and software platforms for security and traffic control.**



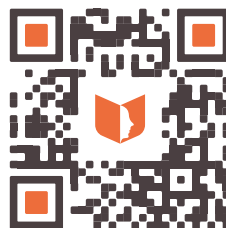
## Traffic

- **Parking**
- **Homeland Security**
- **Highway & Tolling**
- **Enforcement**
- **Smart Road**



## Security

- **Company, shops, hotel, parking**
- **Critical infrastructures**
- **Banks**
- **Retail, Fashion, GDO**
- **Control Room**
- **Logistics**



**Vigilate S.r.l.**

**Legal and operative site  
Via Napolenica, 6,  
25086 Rezzato BS Italy**

**VAT: IT01598660056  
Tel: +39.0308081000  
Pec: vigilatesrl@pec.it  
SDI Code: W7YVJK9**