VIGILATE

Parking ANPR

License plate reading cameras for car parks and access control

Parking ANPR

License plate reading cameras for car parks and access control of private areas.

We speak to large installers, system integrators or companies specializing in parking and vehicle access control.
As well as distributors who deal with products dedicated to parking and who want to integrate further solutions, expand the range and support customers in a greater range of opportunities.

We offer a complete portfolio of innovative products and solutions for your parking management systems

Devices suitable for reading stationary vehicles or vehicles passing at low speeds, which can be installed both in the column version and with a pole bracket.
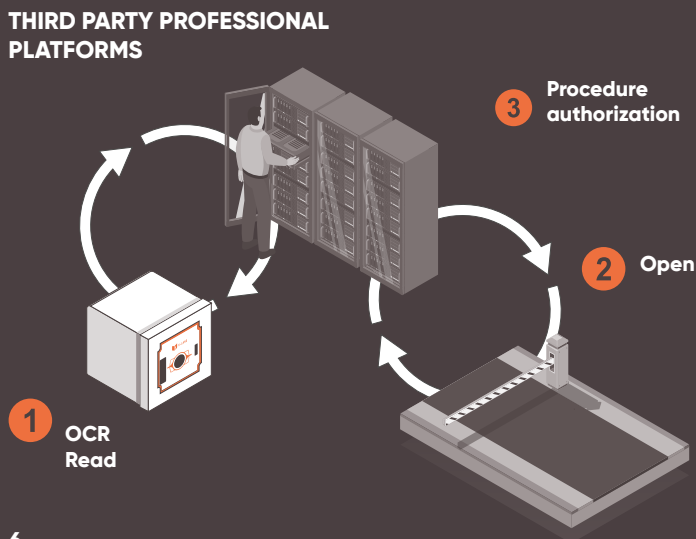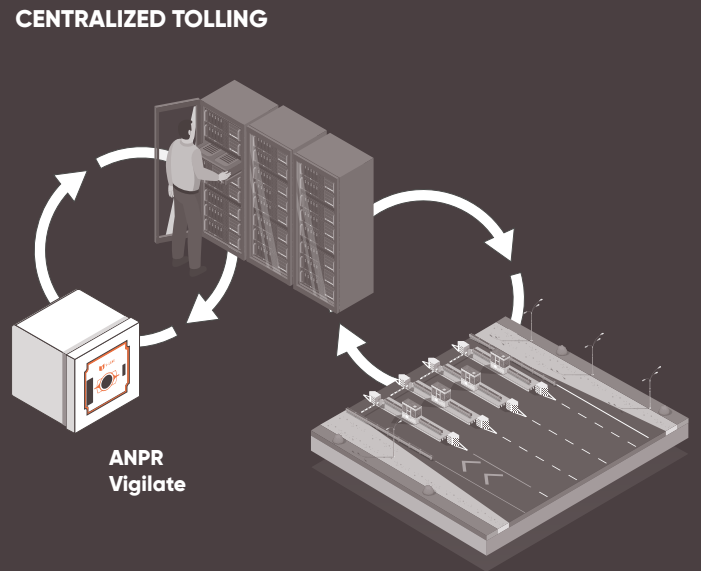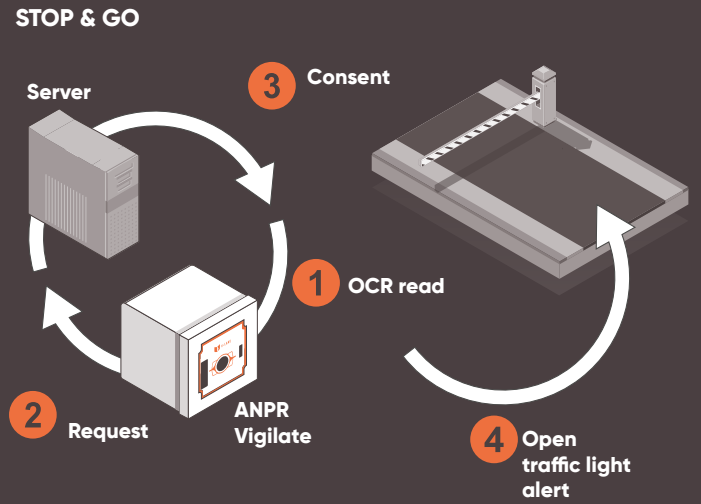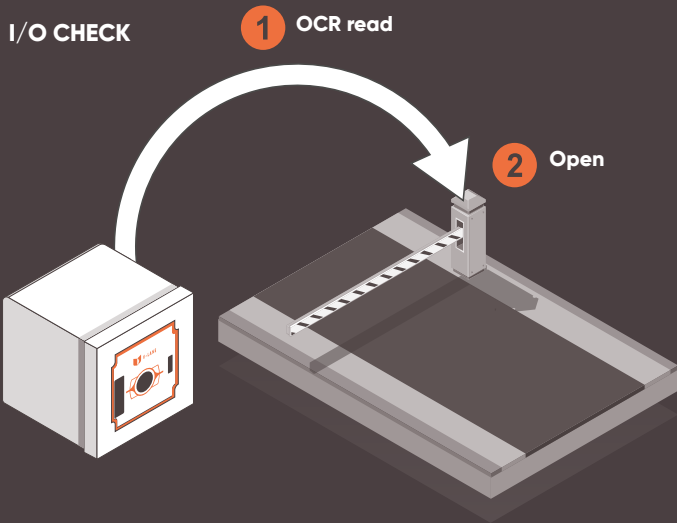
When necessary (for small non-paid parking solutions) we provide, via the v-SUITE platform, Logipark, the application dedicated to these types of systems.

Our products interface in multiple ways with existing market systems.

They are particularly suitable for integration and offer scalability from small systems up to large and complex parking environments.

Thanks to our decades of integration experience, we are the ideal partners for OEM solutions, designed for the most demanding customers who operate with large professional systems.

Architecture examples

I/O CHECK

1 OCR read

2 Open

STOP & GO

Server

3 Consent

1 OCR read

2 Request

ANPR
Vigilate

4 Open
traffic light
alert

TRIGGER STOP & GO

Third parts
Parking
Application

4 Validate or
deny

Opening or
traffic light alert

Parking
meter

2 Request
OCR reading

5

3

Request
authorization

ANPR
Vigilate

TRIGGER
Spira

1 Trigger

CENTRALIZED TOLLING

ANPR
Vigilate

**THIRD PARTY PROFESSIONAL
PLATFORMS**

3 Procedure
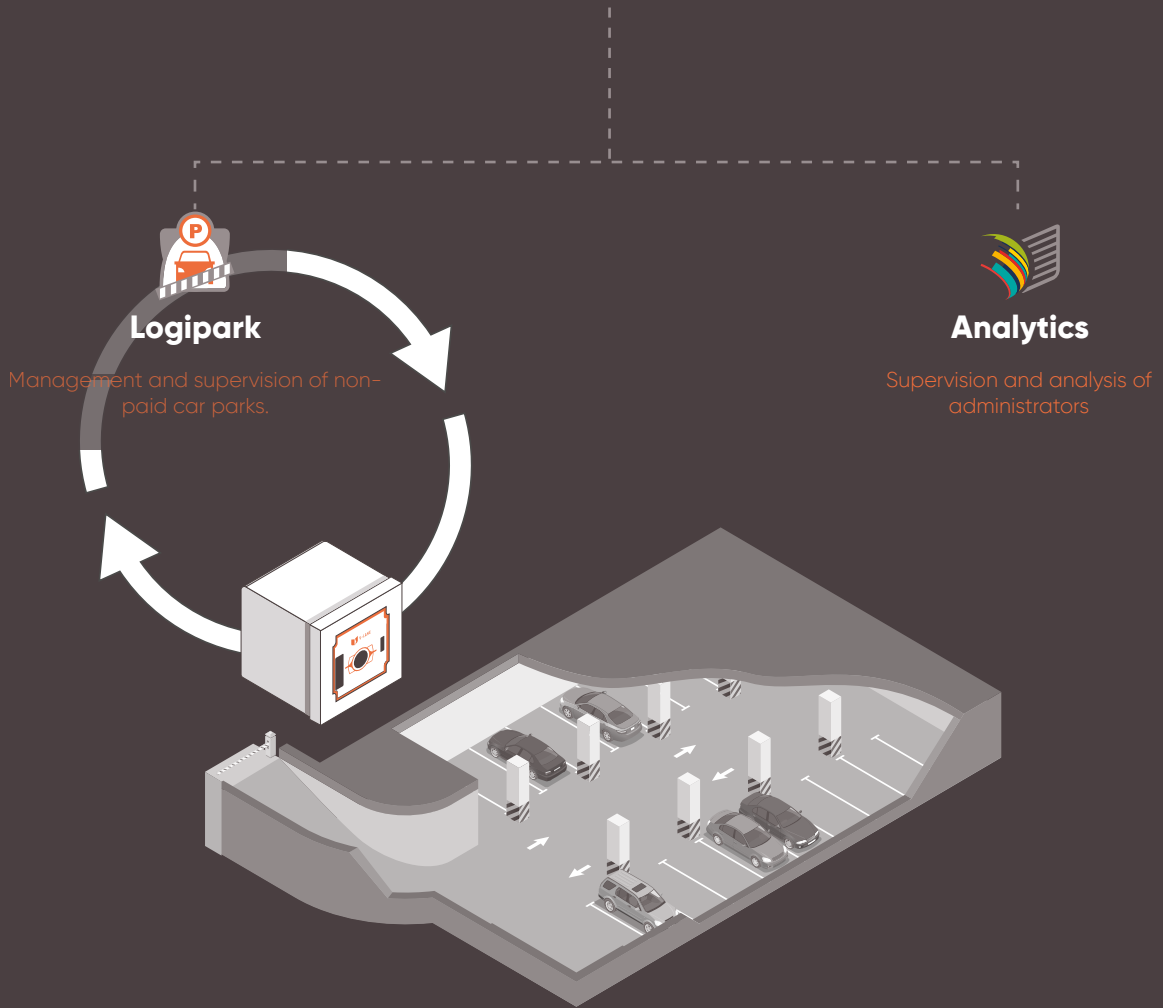authorization

2 Open

1 OCR
Read

v-SUITE

The universal platform, scalable, accessible, intelligent, cloud or private for security and traffic management

Logipark is the v-SUITE application that allows you to manage the license plate reading cameras and control the gate barriers through the camera outputs.

Logipark

Management and supervision of non-paid car parks.

Analytics

Supervision and analysis of administrators

Controlled traffic and in a clean environment

Hostile environment with heavy vehicles

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

Parking 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

Deep Learning

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

High-Speed CMOS

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

HD SSD

from 128GB to 4TB HD in solid state technology

Day & Night

High performance day and night

NVIDIA.

Powered by NVIDIA deep learning hardware, v-LANE A2B

PoE

UPoE 60W class 6 power supply

RaspberryPi

v-LANE A0B ,v-LANE A1B

Certifications

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

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.

Streaming Video

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

Speed estimate

Transit speed estimation function

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.

Checklist

Black & White List

Vehicles classes

Daytime classification of vehicles by type in 11+ 1 (Cars, Trucks, Trucks with trailer, Motorcycles, Motorcycles, Mopeds, Buses, Mini vans, Big vans, Boxes, Caravans, unknown).

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

Colors

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

Brand

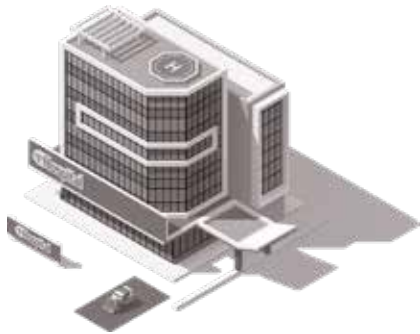Vehicle brand classification (around 100 brands supported).

Models

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

Cloud Ready

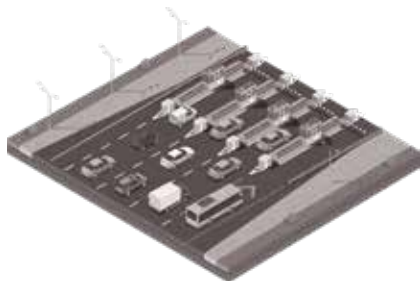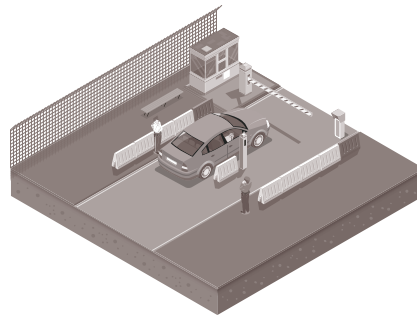Compatible with Vigilate's v-SUITE general supervision platform.
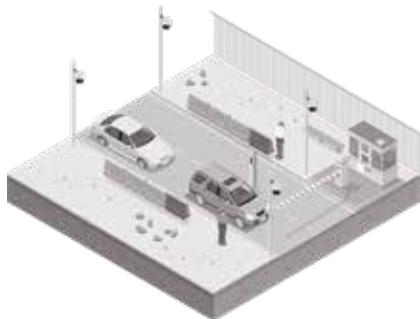
Applications

Business

Industry

Tolling

Checkpoint

Military

Logistic

- Small access gates equipped with a barrier
- Company entrances to manage employee access and parking
- Company entrances where constant monitoring of heavy vehicles is required, and possibly, for example in the case of large companies, understanding where the vehicles circulate in the internal spaces.
- Free parking entrances and exits.
- The use cases of parking and access control systems are varied: they can range from simple company entrances, for example a camera connected to a single barrier, to small or large

unpaid car parks; up to large centralized parking systems connected to software from large international platforms (for example that of Scheidt & Bachmann GmbH, leader in airport parking solutions).
- Our products, particularly suitable for integration, lend themselves to a user-friendly interface with existing systems.
- Or our decades of experience make us the ideal partners for OEM solutions, designed for customers.
- We are a reliable technological partner that opens new business opportunities and expands the portfolio of existing ones.

Certifications

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

Dasa-Rägister

inveo CERTIFICATION

ISO

IEC

UNI

EN ISO 9001 :2015

ISO/IEC 27017:2015

ISDP©10003:2020

ISO/IEC 27001:2022

ISO/IEC 27018:2019

Platforms & Standards

Onvif® | **S**

docker

Linux

NVIDIA.

Raspberry Pi
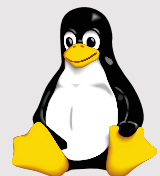
AXB Products line
ANPR Bispectral

The v-LANE AXB bispectral line cameras are made up of a single lens. The on-board software analyzes the images coming from a single sensor by reading both spectra (IR + visible light). This technology reduces costs and risks of failure but does not allow the shots to be diversified between OCR image and context image except through postprocessing operations.

v-LANE A0B 2MP@60fps – 70Km/h (1 Lane)
ANPR Bispectral

v-LANE A1B 2MP@60fps – 160Km/h (1 Lane)
ANPR Bispectral - Not equipped with on-board classifiers

v-LANE A2B 2MP@60fps 250 Km/h (1 Lane)
ANPR Bispectral

Main features

General 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** • **RTP/RTSP** • **UDP** • **openVPN** • **HTTP** • **ONVIF (S- profile)** • **HTTPS** • **NTP** • **FTP** • **SNMP** • **FTPS**
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)**

	v-LANE A0B	v-LANE A1B - A2B
Optical group		
Sensor (OCR + COLOR):	2 MP	
Frame rate:	60 fps	
Optics:	Standard S mount fixed lens, 8 mm	Standard varifocal lens, 8-50 mm
Illuminator		
Integrated IR illuminator:	n. 4 LED IR (CLASS 1M CEI EN 69825-1 ED. 4, 850 nm IR LED)	n. 8 LED IR (CLASS 1M CEI EN 69825-1 ED. 4, 850 nm IR LED)
Power Supply		
Supported power supply:	24VDC (1,25 A) or +12VDC (2,5 A) or UPoE 60W	24VDC (2,5 A) or +12VDC (5 A) or UPoE 60W class 6
Consumption:	8W typically	12W typically
HW features:		
Processor:	Quad-core + HW video encoder unit	Quad-core + HW video encoder unit + Neural coprocessor
Memoriy:	16-32 GB NAND flash	16 GB e-MMC Flash
RAM:	1 GB	4 GB
S.O.:	Linux	
Storage Disk:	16 GB USB flash drive (up to 128 GB)	HD SSD 128 GB (Fino a 4 TB)
I/O	N.3 input opto-isolated N.2 output relays	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
Ports:	N.1 USB port N.1 RS-485 port N.1 10/100/1000 Mbps Ethernet port	N.1 USB port N.1 RS-485 port N.1 10/100/1000 Mbps Ethernet port
General characteristics		
Dimensions:	120 x 120 x 120 mm	450 x 140 x 150 mm
Weight:	750 g	2,6 Kg
Operating temperature:	- 30°; +60°	
Humidity:	fino al 90%	
Protection:	IP66 - classe IK10	IP67 - classe IK10 (su richiesta)
Certifications		
OCR library:	Alta affidabilità certificata dal fatto che la libreria è stata più volte validata UNI 10772:2016 classe A per tutte le classi veicolo (Solo A0B e A2B)	
Classification algorithms:	Le percentuali di corretta classificazione dipendono dal rispetto della geometria istallativa ma sono al di sopra del 90% indipendentemente dalle condizioni ambientali esterne (Solo A0B e A2B)	
Data security:	ISO/IEC 27001 / 27017 - 27018	
Regulations		
Regulations respected:	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.
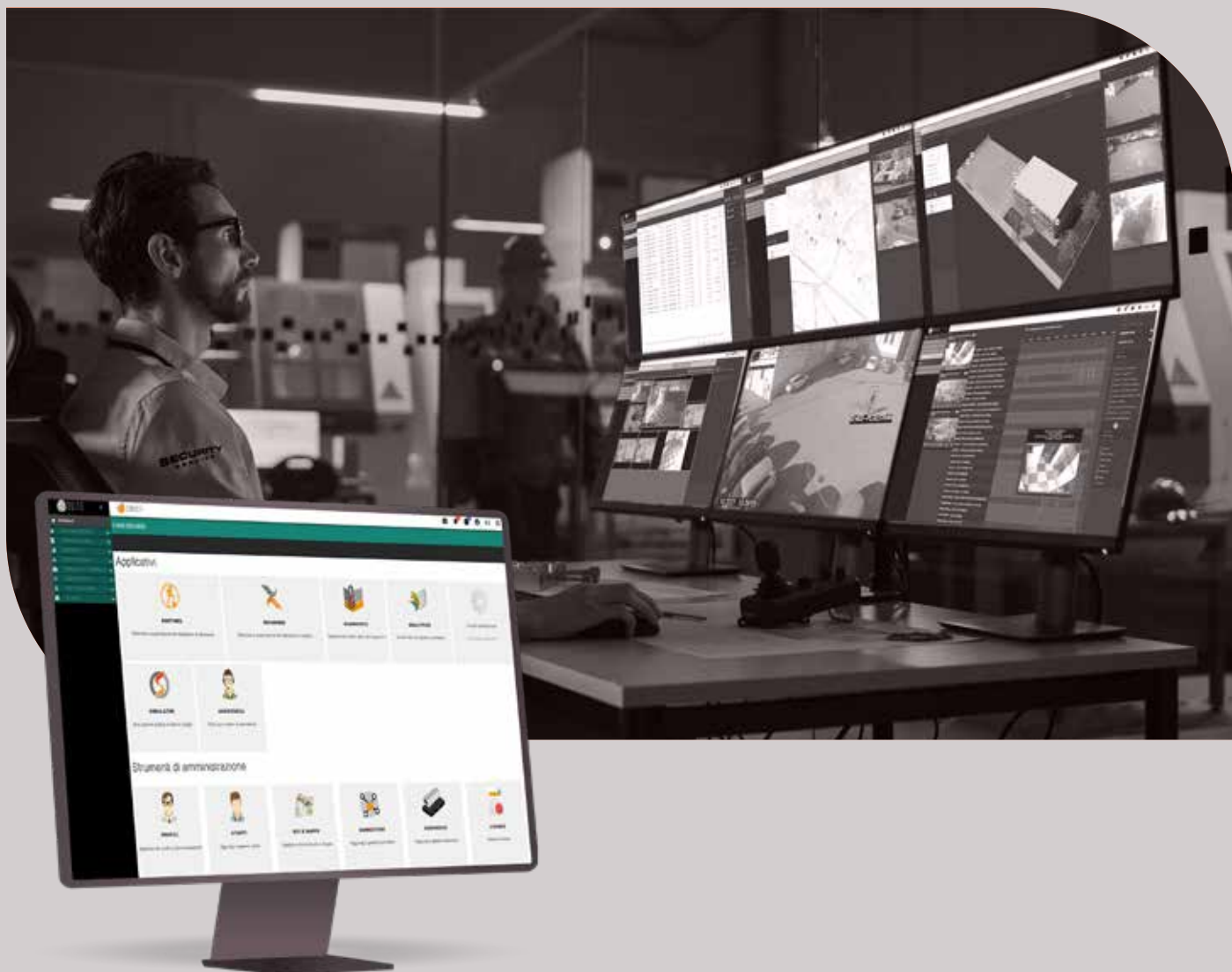
Integrated software management

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.

v-SUITE module Logipark

The software dedicated to the management and supervision of non-paid car parks. Among its features we find: vehicle access control, access rights, calendars, supervision of residence times and much more.

Logipark is designed for the integrated management of non-paid car parks with barrier entrance.
Useful for companies, hospitals, hotels, port car parks, logistics companies that must manage their internal parking areas without direct payment but according to clear and controlled criteria of
access. Logipark can be integrated into existing parking systems to provide additional information useful for statistical and security purposes, allows

you to manage access rights from subscriptions, temporary permit titles, employee rights, associations of multiple vehicles per individual and many others criteria necessary to automate and effectively control authorized access to assigned parking areas.
The simple but extremely scalable architecture with which it was designed allows the implementation of new features at any time and the interfacing with new devices to create new access rules and actions.

Permit management Parking management Statistics Gate configuration Counting Attention thresholds

- Georeferenced cartographic map (Google Maps, Open Street Map or image), which allows rapid management of car parks scattered throughout the area. With indication of the position of the car parks and the number of free/occupied spaces.
- Real-time access display page configurable per user.
- Real-time display of the filling status of each car park.
- System protected by authentication with different levels of authorization.
- Advanced transit search and export functionality in different formats.
- Calculation of time spent by vehicles in the car park with the possibility of exporting to payment/invoicing systems.

Vigilate is a "tech company" specialized in the production of devices and software platforms for security and traffic control.
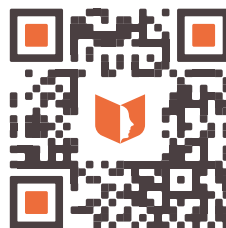
Traffic

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

Security

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