# v-LANE A1B 2MPX@60 fps ANPR 160 Km/h

## Infrared IP Camera for License Plate Reading

**v-LANE A1B** is the intelligent 2-megapixel camera capable of monitoring and managing all issues related to a roadway, both for security and traffic control purposes.

- Covers 1 lane
- Single-head IR + colour camera (bispectral)
- License plate reading up to 160 km/h in free-run
- Integrated IR illuminator with strobe LEDs
- 2-megapixel resolution (context + OCR)
- On-board OCR library for 41 European nations, 13 Asia, 6 Africa, 5 South America, and special plates such as Trailers, Kemler ADR,

Kemler ADR Empty, Trams
- Transit speed estimation function
- Black & White Lists
- ONVIF Profile S
- Accessible via Cloud
- Compatible with the Vigilate v-SUITE general supervision platform
- OCR library validated multiple times UNI 10772:2016 Class A



## Features

### Analysis and recognition

V-LANE A1B captures 60 images per second, within which it analyzes, identifies, and validates the plates of present vehicles. This result, achieved through the use of sophisticated software, allows reading vehicle plates at speeds up to 160 km/h in free-run mode (without an external trigger device)..

### Data

Data and images can be stored locally, sent to the customer's supervision system, or sent to the v-SUITE supervision platform. The device supports FTP, XML-RPC (over HTTPS), and serial transmission protocols. The Optical Character Recognition (OCR) software library is complete for 41 European nations, 13 Asian countries, 6 African countries, 5 South American countries, and special plates such as Trailers, Kemler ADR, Kemler ADR Empty, Trams (Police, Army, Ambulances, Civil Protection...).

### Data Security

La memorizzazione e la trasmissione dei dati generati dal prodotto, avvengono mediante protocolli altamente affidabili e sicuri, garantendo il massimo livello d?inviolabilità e privacy. Vigilate rispetta le normative più restrittive sulla sicurezza del dato quali la ISO27001:2022.
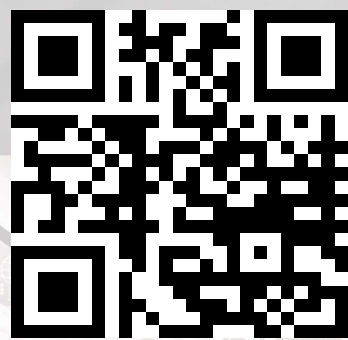
### Application Examples

- Access control for public and private parking lots
- Access control for residential and commercial areas
- Access lanes to ports, airports, stations, etc...

# DATASHEET

| | |
|---|---|
| Sensor (OCR + COLOUR): | 2 MP (1920 x 1080) CMOS COLOR + IR (bispectral) global shutter sensor |
| Frame rate: | Up to 60 fps |
| Optics: | Standard varifocal lens, 8-50 mm |
| Integrated IR illuminator: | n. 8 LED IR (CLASS 1M CEI EN 69825-1 ED. 4, 850 nm IR LED) |
| Processor: | Quad-core + HW video encoder unit |
| Memory: | 16-32 GB NAND flash |
| RAM: | 1 GB |
| O.S.: | Linux |
| Storage Disk: | Penna USB da 16 GB (fino a 128 GB) |
| I/O: | N.3 input opto-isolated<br>N.2 output relays |
| Ports: | N.1 USB port<br>N.1 RS-485 port<br>N.1 Ethernet 10/100/1000 Mbps port |
| Operating mode: | - continuously acquisition (free-run)<br>- on request (by SW trigger or HW trigger)<br>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<br>- Mainboard temperature<br>- IR illumination module operation<br>- Lighting module current peaks<br>- Capture status of physically connected sensors<br>- Input current level (power port)<br>- Input voltage level (power port)<br>- Camera tilt angle<br>- Internal humidity level<br>- CPU consumption<br>- RAM consumption<br>- Storage disks status<br>- Utilization of the 4 physical cores (CPU monitoring)<br>- Check status of operational threads<br>- Monitoring of analysis times and operating status of active algorithms<br>- Generation of any alarms (local and possibly remote) in the face of anomalies detected |
| Supported sending protocols: | - TCP (in binary, XML, string formats)<br>- TCP Milestone<br>- FTP (imgs + text data in *.txt/*.csv)<br>- RPC-XML over HTTP / HTTPS (BASIC or EXTENDED message)<br>- Custom Protocol (message configurable via template and sendable by HTTP POST / HTTPS POST /TCP protocols) - Serial (on RS 485 port) |
| 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)

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|---|---|
| Supported power supply: | 24VDC (1,25 A) or +12VDC (2,5 A) or UPoE 60W |
| Consumption: | 8W typically |
| Dimensions: | 450 x 140 x 150 mm |
| Weight: | 2,6 kg |
| Operating temperature: | -30°/ +60° |
| Humidity: | Up to 90% |
| Protection: | IP67 - class IK10 (on request) |
| OCR library: | Certificata ad alta affidabilità, la libreria è stata convalidata più volte secondo la norma UNI 10772 |
| AID algorithm: | Certified high reliability, the library has been validated several times by UNI 10772 AID algorithm: The instantaneous speed estimation by video analysis and consequently the AID algorithm with the various supported features are highly reliable as demonstrated by numerous field tests in the presence of approved systems for speed estimation for sanctioning purposes. |
| Regulations complied with: | EN 55032/2015<br>EN 55035/2017<br>EN 50561-1/2013<br>EN 62368-1 (EN 62368-1/2014+A11/2017)<br>EN 60068-2-14/Nb 2011-11<br>EN 60068-2-78/2013-11<br>EN 62471/2010<br>EN60529/1991+A1/2000+A2/2013<br>2016/679 (GDPR) |

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