PATROL 5B
5MP@75fps ANPR 200 Km/h

- 2 Lanes coverage
- Infrared + color (bispectral) single head camera
- Plate reading up to 200 km/h in free-run
- Integrated IR illuminator with stroboscopic LEDs
- 5 Mpixel resolution (context + OCR)
- OCR library on board with 41 countries in Europe, 13 Asia, 6 Africa, 5 South America and special plates such as Trailers, Kemler ADR, Kemler ADR Empty, Tram
- Black & White lists
- ONVIF Profile S
- Local NVR function for storage continuous recording of camera video streaming and creation of micro movies on vehicle transits
- Cloud ready
- Compatible with the Vigilate v-SUITE general supervision platform
- OCR library validated several times UNI 10772:2016 Class A

DESCRIPTIONS

Analysis and recognition v-PATROL 5B is the intelligent license plate reading camera designed for mobile installations on board vehicles capable of operating even when moving up to a maximum combined speed between vehicles of 250km/h thanks to the possibility of acquiring and analyzing up to 75 images per second. Equipped with an on-board 5Mpixel sensor, it is able to read license plates from a distance of 3 meters up to a maximum distance of 12 metres. The device includes a GPS antenna in order to correlate, in real time, the capture of license plate images with the relative GPS position and the exact time of detection.

Data Data and images can be stored directly locally, sent to the customer's supervision system or sent to the v-SUITE supervision platform. The device has FTP, XML-RPC (on HTTPS) and serial transmission protocols. Software Optical Character Recognition (OCR) library complete with 41 countries in Europe, 13 Asia, 6 Africa, 5 South America and special plates such as Trailers, Kemler ADR, Kemler ADR Empty, Trams (Police, Army, Ambulance, Civil Protection...).

Classification The camera is equipped with a video classification software capable of recognizing vehicle types with 11 + 1 classes including (Cars, Trucks, Trucks with trailers, Motor vehicles, Motorcycles, Mopeds, Buses, Mini vans, Big vans, Box bodies, Caravan, unknown); it is also able to identify the dominant color among a range of 11 colors + 1 (black, white, gray, red, blue, yellow, green, orange, pink, purple, cyan, unknown). v-Lane is equipped with gate AID algorithms for traffic control (stationary vehicle, wrong-way vehicle, slow traffic, queue).

Data security The storage and transmission of data generated by the product takes place using highly reliable and secure protocols, guaranteeing the highest level of inviolability and privacy. Vigilate complies with the most restrictive regulations on data security such as ISO27001:2022 and ISDP10003:2018 - Privacy by Default and Privacy by Design.

Application examples Checking vehicles parked on the side Territorial and traffic control

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ACCREDIA
Dasa-Rägister
EN ISO 9001:2015
ISO/IEC 27001:2022
ISO/IEC 27017:2015
ISO/IEC 27018:2019

TECHNICAL FEATURES

Optical group

Sensor (OCR + COLOR)	5 MP (2560 x 1936) CMOS COLOR + IR (bispectral) global shutter sensor
Frame rate	Up to 75 fps
Optics	Standard varifocal lens, 8-50 mm

Illuminator

Integrated IR illuminator	n. 8 LED IR (CLASS 1M CEI EN 69825-1 ED. 4, 850 nm IR LED)

HW features

Processor	Quad-core + HW video encoder unit + Neural coprocessor
Memory	16 GB e-MMC Flash
RAM	4 GB
S.O.	Linux
Storage Disk	HD SSD 128 GB (up to 2 TB)
I/O	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

SW 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 (in binary, XML, string formats) TCP Milestone FTP (imgs + text data in *.txt/*.csv) RPC-XML over HTTP / HTTPS (BASIC or EXTENDED message) Custom Protocol (message configurable via template and sendable by HTTP POST / HTTPS POST /TCP protocols) Serial (on RS 485 port) Wiegand (need to install 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

EN ISO 9001:2015
ISO/IEC 27001:2022
ISO/IEC 27017:2015
ISO/IEC 27018:2019

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)

Power Supply

Supported power supply	12VDC (5 A) or UPoE 60W class 6
Consumption	12W typically

General characteristics

Dimensions	212 x 138 x 117 mm
Weight	2,9 Kg
Operating temperature	- 30°; +60°
Humidity	Up to 90%
Protection	IP67

Certifications

OCR library:	Certified high reliability, the library has been validated several times by UNI 10772:2016 class A for all vehicle classes
Classification algorithms:	The percentages of correct classification depend on compliance with the installation geometry but are above 90% regardless of the external environmental conditions
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

Regulations complied with	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)

OPTIONALS

- Storage disk capacity extension up to 4TB
- GPS module
- Wifi module

MADE IN ITALY

ACCREDIA

Dasa-Rägister

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ISO/IEC 27001:2022
ISO/IEC 27017:2015
ISO/IEC 27018:2019