SELEA
ISO 9001 Certified

TARGA
860

Camera equipped with dual optics for automatic number plate recognition (OCR-ANPR) and full-colour context detection. This product is suitable for license plate reading portals inside or outside the urban area.

URBAN SECURITY
cameras for road and city safety

CONTEXT	OCR-ANPR								
5 Mpx Night Vision	**5 Mpx** Global Shutter	GPU **NVIDIA** Platform	SD **16 GB** Memory	**Privacy** of subjects	**MAKE** and model	**COLOUR** of the vehicle	**Class** of the vehicle	**Speed** snapshot

DUAL LANE

CERTIFIED
ISDP10003
Privacy by design

COMPLIANCE
NDAA
Cyber Security

WARRANTY
5 YEARS

Dual lens camera (OCR and context) for automatic reading of number plates and dangerous goods (Kemler), **dual lane**, equipped with a 5 Mpx Global Shutter OCR sensor, with 12-40mm varifocal lens (3x zoom) and a 5 Mpx Sony Night Vision high-sensitivity colour context sensor with 12 mm fixed lens.

The camera is equipped with **high-precision, high-accuracy** video analysis algorithms *(deep learning)*, integrated into the AI - NVIDIA platform for the recognition of:

- **Make and Model of** vehicles,
- **Colour of** the vehicle,
- Vehicle **type**,
- **Nationality,**
- **Direction** of travel,
- Estimation of instantaneous vehicle **speed**,
- **Privacy** function of blurring all subjects external to the recognised vehicle,
- Detection of **stationary vehicles**, queue formation, smoke and fire *(optional)*,
- **Helmet** presence/absence detection on moped and motorbikes *(optional)*.

The camera can also be powered in **POE+** via its available option.

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DATASHEET

HARDWARE FEATURES OF THE CAMERA

Sensor	
OCR sensor	5 Megapixel, Global Shutter 2/3", CMOS B/N, frame rate of 60 Fps
Context sensor	5 Megapixel color Sony Night Vision CMOS with high sensitivity for color images even at night.
Lens	
OCR lens	12 ~ 40 mm varifocal lens with F1.4 and C/CS mount.
Context lens	12 mm fixed focus lens with IR filter. Wider field of view than OCR images to have a panoramic view of the traffic when reading the license plate.
Exposure mode	
OCR sensor	Dual Shutter, Triple Shutter, Auto Shutter, Fixed Shutter
Context sensor	Auto Shutter
IR Illuminator	
Pulsed light IR Illuminator	n.12 high power 820 nm/47° IR LEDs (940 nm on request) that are compliant with the EN62471:2008 standard on photobiological safety.
Internal memory	
Typology and expandability	• *built-in* -> 16 GB High Endurance (transfer rate: 80 MB/s) (-40° ~ + 85°C) industrial microSD SLC memory card (expandable on request up to 256 GB of MLC type). • The memory can be expanded using the USB interface provided to connect storage disks of high capacity currently available on the market (≤ 1TB - optional)
Input/Output	
Input	• n.2 digital inputs • interface for PM2,5/10 Air Quality sensors (model AVPM10/25 or similar) *Image acquisition and processing can also be activated by a digital command or through a network connection.*
Output	• n.1 RS232 - RS485 interface • n.1 10mA 5-12 Vdc opto-isolated output • n.1 0.3A - 125 Vac, 1A 30 Vdc volt-free contact relays
Ports	
USB	n.2 USB 3.1 ports
Ethernet	10/100/1000 Mbps LAN
Power supply	
Power supplies	• 230 Vac power supply • 10 ~ 32 Vdc (optional) • POE+ power supply including high power injector (optional)
Absorbed power	18 Watt max
Inbuilt protection	
The camera is protected against:	• reverse polarity. • voltage fluctuations greater than 30 Vdc. • overloads with thermal protection. • overvoltages (TVS) on USB and Ethernet ports.

TARGA 860

HARDWARE FEATURES OF THE CAMERA
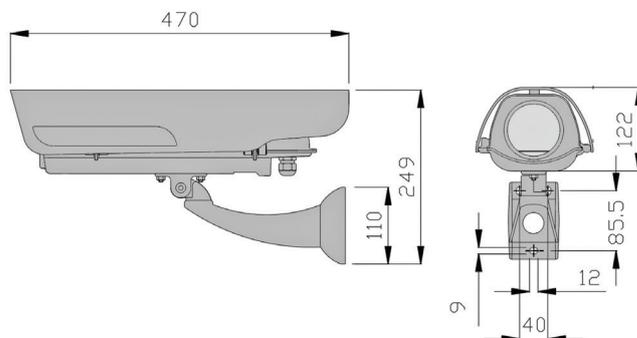
Certifications	
OCR	• **100% accuracy** according to UNI 10772:2016 class A parameters for rear, two-line, motorcycle and moped number plates.
Data security	• ISDP10003:2018 - *Privacy by Default & Privacy by Design*
Standards	
Respected standards	• EN62471 • EN55032 • EN55035 • EN61000 • EN62368-1 • EN60529 • EN60068 • EN60721 • European standard RoHS2 - 2011/65/UE
General	
Operating temperature	From -40°C to +65 °C without the need of fans or heaters.
Protection rating	Standard IP67 and IK10
Dimension (mm)	L=165 : H=122; D=470
Weight	3 Kg

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SOFTWARE FEATURES OF THE CAMERA

Embedded algorithms

Standard built-in functions	• License plate reading (OCR) - reading characters of over 50 countries • ADR dangerous goods tables reading (Kemler/ONU) • Fog-Fighter (reading license plates in the fog) • Speed estimation • Direction of travel • Nationality (**+ 50 Countries**) • Blurring of subjects on both sensors (total respect for Privacy) • Make (**400**) - *accuracy > 95%* • Model (**+9000**) - *accuracy > 95%* • Colour (**16 classes**) - *accuracy > 95%* • Class (**35 classes**) - *accuracy > 95%*

Optional algorithms

Functionalities that can be integrated into the camera, even at a later time	• Wrong way transit detection - *accuracy > 95%* • Smoke/fire detection - *accuracy > 90%* • Stationary vehicle detection - *accuracy > 95%* • Helmet presence detection on moped/motorcycle drivers - *accuracy > 95%*
Accuracy	The recognition accuracy of the integrated algorithms depends on local lighting conditions and installation methods which, if properly followed, can reach the indicated values.
Notes	The above-mentioned processing is applied to the images obtained from both sensors (OCR and Context).

Data communications

Integrated webserver	• Onvif Profile S communication protocol. • Save data directly to local server or remote NAS. • Integration with third party VMS software solutions. • Synchronized recording of metadata, number plate/Kemler table and context image. • Context images synchronised with number plate/Kemler table. • Dynamic creation and updating of multiple lists (black/white). • Integration and HTTP storage of JPEG snapshot images of external TCP/IP context cameras of any make or model. • Multiple action alarm management. • Differentiated alarms for each type of infringement. • Alarm-triggered transmission of the image associated with the captured number plate to remote devices (such as MOTOROLA and HYTERA mobile radio communication equipment, Tablet etc.) with vocal reception of the number plate. • Double FTP and/or TCP/IP server.
Protocols	TCP/IP, UDP, HTTP, HTTPS, FTP, FTPS, RTP/RTSP, DHCP, SNMP.
Other integrated protocols	MODBUS

Data security

Data protection	• HTTPS encryption. • FTPS (FTP over TLS/SSL) encryption. • Micro SD memory encryption. • Automatic deletion of data and images after specified period of time (privacy management). • AES256 Advanced Encryption Standard. • SHA2 Secure Hash Algorithm 2.

SOFTWARE FEATURES OF THE CAMERA

Functionality

Operating system	• Linux Embedded
Standard built-in functions	• Embedded FPGA video signal processing. • Mode of operation: free-run, weighted, redundant, external trigger. • Double FTP server and double IP notification server. • Dynamic FTP notification forwarding customization. • IP notification customization. • Multiple user management using HTTPS protocol protected access credentials for accessing the camera. • List management (white/black, no list) with independent actions for each list. • Synchronized recording of metadata and captured code/number plate image. • Integration and saving of context camera images. • Privacy management with automatic deletion of image data after a specified period of time. • Integration with third party VMS video surveillance software solutions. • Save data on a local server or remote NAS. • HTTPS security management. • FTPS (FTP over TLS/SSL) security management. • E-mail forwarding security using TLS/SSL protocol. • Multiple action alarm management. • Live and check control function for checking the operation of the entire system. • Synchronization of date and time via NTP, IEEE1588 protocol. • Possibility of updating firmware from a web page.

Video output

OCR sensor	5 Megapixel Jpeg images and HD RTP/RTSP video stream with MPEG4,H264 and H265 encoding.
Context sensor	Images and RTP/RTSP or HTTP video stream with MPEG4, H264 and H265 encoding.
Context frame rate	20 fps with 5 Mpx Sony Night Vision context sensor

Accuracy

OCR accuracy	• Up to 99,8% of transits. • Up to 98% of oncoming ADR plate (Kemler-UN) reading transits, **100% accuracy** according to UNI 10772:2016 class A parameters for rear, two-line, motorcycle and moped number plates. • 250 Km/h maximum capture speed

Installation

Geometry	• Dual lane detection • Gate width: up to 8 m • Reading distance: up to 30 m • Mounting height: up to 6 m

ACCESSORIES

J-INC	Algorithm for STATIONARY VEHICLE, WRONG WAY, FIRE/SMOKE detection
J-HELMET	Algorithm for detection of helmet presence on moped/motorcycle drivers
B	10 ~ 32 Vdc power supply
T	POE+ power supply including high power injector

CPS 6.5

Suit software with **no fees**, **No.1 in Italy,** for managing license plate reading portals.

CERTIFIED
Privacy by Design
& Privacy by Default
ISDP 10003

The most complete software suite for the management, archiving and searching of license plates and vehicles, **compatible with the most common license plate reading cameras** available on the market. A comprehensive solution that enhances the daily work of **Local Police** officers operating on the streets and in the operations room for road safety and citizen protection.

The suite offers the invaluable advantage of being **free from the usual renewal fees** resulting in continuous **economic savings**.

The CPS integrates advanced algorithms for **investigative use**, vehicle detection and interception, with localization and route visualization on graphical maps, traffic analysis, and transmission of information to mobile devices (*cell phones, tablets, laptops, LTE radio devices*).

Ideal suit for both **Local** and **Judicial Police,** for use in *vehicle searches, investigations, crime prevention, and repression*: a field in which the CPS excels over any other solution. Advanced algorithms and analysis methods for information extraction enable it to perform **ultra-fast tree searches** on hundreds of millions of data, and through filters, extract vehicles with specific characteristics such as *color, make, model, type, speed, direction, nationality,* as well as *complices in crimes, stolen cars, frontmen, uninsured/untested vehicles.*

About us

SELEA is specialized in the manufacture of number plate reading solutions, both for vehicle access control and for territorial security and traffic control. All of our products are developed and manufactured entirely in Italy. This means that our customers benefit from continuous and comprehensive technical support.

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