

All-in-one solution for license plate recognition, make, color and vehicle classification in urban scenarios

HIGH PERFORMANCE LPR

KIT URBAN EDGE includes:

- **NEURAL EDGE URBAN** license for
- license plate recognition (**LPR**), **color**, **speed** and **vehicle classification** (car, motorcycle, bus, truck and van) in free flow scenarios and lists and rules management. Identifies vehicles circulating at up to **120km/h even in 2 lane**.
- **Camera with motorized zoom, illuminator and bracket** VIVOTEK IP9165-LPC-v2 Kit (Highway, 9-50mm, i-CS) with the solution embedded.

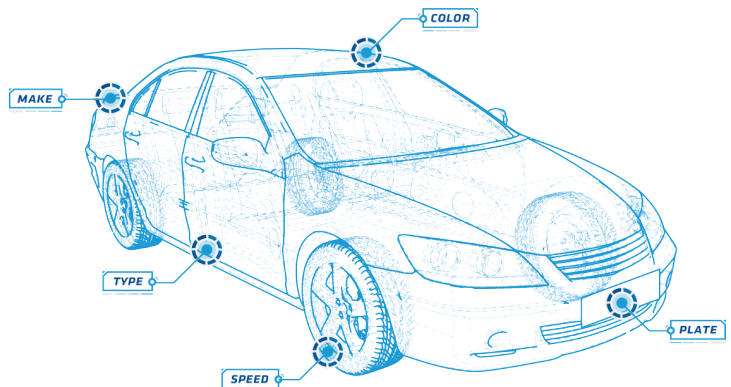


The analytics are **processed inside the camera**, using its resources to minimize servers costs and offer a solution in scenarios with limited connectivity.

MAKE, COLOR, CLASSIFICATION AND VEHICLE SPEED

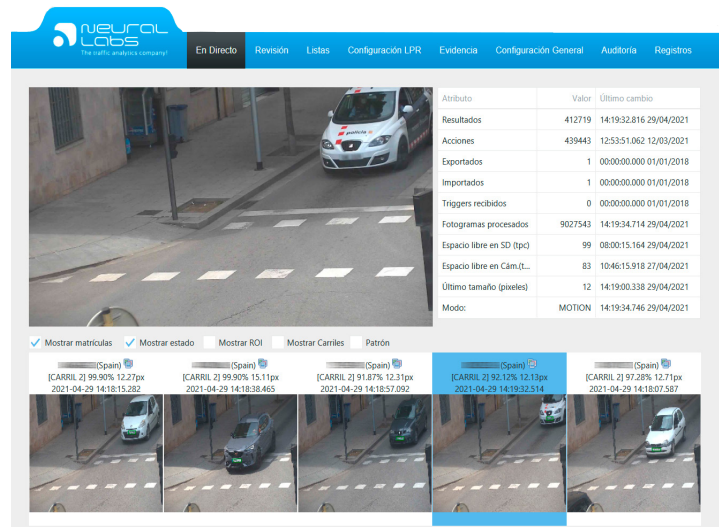
In addition to **license plate recognition**, **KIT URBAN EDGE** offers:

- Make (Toyota, Renault, BMW, etc.).
- Color.
- Vehicle classification: car, motorcycle, van, bus or truck.
- Speed: an additional licence has to be acquired in order to detect this data.



NEURAL EDGE FUNCTIONALITIES

- Recognition rate between 95% and 99% (depending on country and installation conditions).
- It recognizes license plates from 70 countries. Ask your sales agent to check your country availability.
- Multicountry. Recognizes several countries simultaneously.
- Recognition of all the legal and current license plates of each country, including, diplomatic ones, motorcycles, etc.
- Direction detection.
- Up to 2 lanes definition capability.
- Area of interest definition capability.
- Complete lists and rules management based on license plate, schedule and day that allow actions like:
 - Activate the digital output of the camera to open or close a barrier gate or activate an alarm siren.
 - Send an email.
 - Send notifications by WhatsApp.
 - Send metadata to third party systems through protocols TCP/IP (sockets), HTTP and TELNET.
 - Insert metadata in several VMS (ask your agent about VMS integrations).
 - Transfer the images by FTP.
 - And much more.
- Response time between 100 and 1000 ms. (depending on scenario, camera model and country).
- License plate recognition by movement detection or by external trigger (inductive loop).
- Filters by angles, reliabilities, characters amount, license plate size. And non-repeating result control.
- Supported explorers: IE, Edge, Chrome, Firefox.
- Multilanguage.
- Capability to integrate evidence cameras to get a snapshot of each license plate detected. Useful to relate the context of the recognized vehicle.
- Real time viewer for operation checkout.
- Historical results and actions queries with many filters and exportation possibility.



NEURAL EDGE: MORE THAN AN LPR

NEURAL EDGE is designed to meet the needs of the most demanding clients. It's easy to configure and includes all the tools needed to diagnose a proper function and to keep a healthy system.

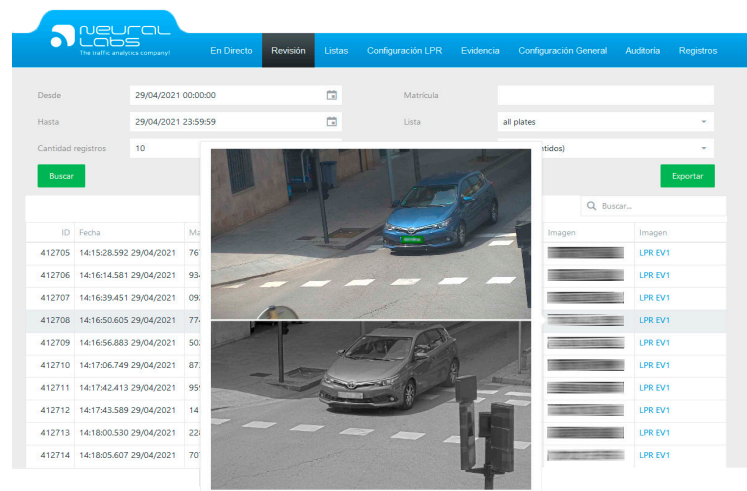
Amongst its most demanding functions, it includes a results viewer with many selection filters and exportation possibilities. It also offers a logs and actions audit registry that the software creates according to the lists and rules configured. Furthermore, it includes an automatic purge logic relying on the memory availability.

EASY TO INTEGRATE

NEURAL EDGE offers several integration options designed to be user friendly and supplement any access control, security, mobility, traffic, or logistics system.

It includes metadata (data and images) send out through:

- XML/JSON messaging by sockets.
- HTTP calls.
- TELNET.
- Email.
- ONVIF events.
- And more.



SCALABILITY

NEURAL EDGE is integrated with Neural Server Suite for more complex scenarios where additional video analytics are required (color, make or classification), or applications like capacity control or sanctions (red light crossing, wrong turn, wrong way etc.) are needed.

NEURAL EDGE WARRANTY

NEURAL EDGE includes a **12 months warranty** starting from the license activation moment. The final user has the right to request the new available versions or software flaws correction during the warranty.

The warranty is extendible. If the license is still active, the extension can be prepaid with 10% of the current license cost for a year. In case the warranty has already expired, the cost is 18% of the value of the last years license.

CAMERA- GENERAL TECHNICAL SPECIFICATIONS

Image sensor	1/2" Progressive CMOS
Maximum Resolution	1920x1080 (2MP)
Lens Type	9-50mm: Vari-focal, Remote Focus(i-CS)
Focal Length	f = 9 ~ 50 mm
Aperture	F1.5 ~ F1.6
Field of View	42.8° ~ 8.3° (Horizontal) 24.3° ~ 4.7° ~ (Vertical) 48.9° ~ 9.46° (Diagonal)
WDR Technology	WDR Pro II
Day/Night	Removable IR-cut filter for day & night function (Headlight filter design for Anti-Glare)
IR Threshold	IR on: 300 lux IR off: 600 lux RS485 configurable
Shutter Time Highway	1/1,600 to 1/10,000 sec.
Max. Shutter Time	1/5 to 1/32,000 sec.
IR Illuminators	CA8018-2040 *1, 80W, 20° ~ 40° remote control beam angle
Capture Range	Up to 35 meters *Suggested Distance: 10 ~ 20 m
Captured Lanes	Road-side: 2 Lanes Gantry: 2 Lanes
Power Input	AC 24V, DC 24V
Power Consumption	Max. 110W (AC 24V / DC 24V)
Housing	Weather-proof IP68-rated housing Vandal-proof IK10-rated housing
Operating Temperature Starting Temperature	0°C ~ 60°C (32°F ~ 140°F)
Working Temperature	-20°C ~ 60°C (-4°F ~ 140°F) -40°C ~ 60°C (-40°F ~ 140°F), con calefactor de arranque en frío opcional
Humidity	90% (non-condensing)

CAMERA- VIDEO TECHNICAL SPECIFICATIONS

Maximum Frame Rate	60 fps @ 1920x1080
S/N Ratio	66.2 dB
Dynamic Range	140 dB
Compression	H.265, H.264, MJPEG
Maximum Streams	3 simultaneous streams
Image Settings General settings	Video title and time stamp overlay, video orientation (flip, mirror, rotation), day/night settings; Illuminators: illuminators, anti-overexposure; Image settings: white balance, image adjustment (brightness, contrast, saturation, sharpness, gamma curve), defog, 3DNR, EIS, scene mode (auto, deblur); Exposure: BLC, HLC, exposure control (exposure level, iris adjustment, exposure time, gain control, iris mode), AE speed adjustment, WDR; Focus: zoom, Remote focus(i-CS), Remove back focus; Privacy mask; Scheduled profile settings

CAMERA- NETWORK TECHNICAL SPECIFICATIONS

Users Live viewing	Up to 10 clients
Protocols	802.1X, ARP, Bonjour, CIFS/SMB, DDNS, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMPv3, IPv4, IPv6, NTP, PPPoE, QoS (CoS/DSCP), RTSP/RTP/RTCP, SMTP, SNMP, SSL, SFTP, TCP/IP, TLS 1.2, UDP, UPnP
Interface	10 Base-T/100 Base-TX/1000 Base-T Ethernet (RJ-45) *It is highly recommended to use standard CAT5e & CAT6 cables which are compliant with the 3P/ETL standard.
ONVIF	Profile G, S, T supported

IR LED- TECHNICAL SPECIFICATIONS

Max. Distance	170 ~ 280 meters
Beam Angle	20° ~ 40° remote adjustable
Input Power	24VDC ±10%, 24VCA(50/60Hz) ±10%
Power Consumption	80W
Weight	2.1 kg
Housing	Weather-proof IP68-rated housing Vandal-proof IK10-rated housing
Operating Temperature	-40 °C ~ 60 °C (-40 °F ~ 140 °F)
Wavelength	850nm
Dimensions	220 x 160 x 73 mm
Certifications	CA8018-2040: IEC 62471, EN 50130-4, CE: EN61000-6-3, EN60598-1, EN60598-2-5, FCC Class A, EN60529 AI-109: CE, FCC Clase B, EN62471

KIT LOGISTIC MEASURES

Logistic measures (Kit)	500x550x440mm.
Logistic gross weight (Kit)	10 kg.

ORDER INFORMATION

CODE	DESCRIPTION
KIT URBAN EDGE I-CS	Neural Edge Urban Kit with Vivotek camera and make, color and classification.