

APPLICATIONS:

Product code: NS-FF

SECURITY

- Uninsured vehicle detection.
- Stolen vehicles.
- Terrorist search.
- Forensic investigation.
- Car characteristics not matching government records
- Police cars.
- Vehicles without license plate.

MOBILITY

- Vehicle counting.
- Route tracking (origindestination).
- Transit distribution and density, vehicle category, speed statistics, etc.

ENFORCEMENT

- Red light enforcement.
- Stop sign enforcement.
- Illegal turn.
- Pedestrian zone
 management.
- Wrong direction.
- Traffic restriction.
- Pollution management.
- Illegal stop.

ITS

- Section control / radar
- Speeding.
- Tolling.

NEURAL SERVER CITY & ITS



- **NEURAL SERVER**[®] uses **Neuronal technology** and **Deep Learning** to perform **Traffic Analytics** in a fast and efficient way, whatever the target scenario: police cars, fixed cameras, etc.
- It can recognize license plates continuously, from vehicles in movement (Free-Flow) or stopped (Stop & Go).
- It detects make, color, speed, traffic direction and lane, and vehicle classification: car, motorcycle, bus, truck and van.
- NEURAL SERVER[®] detects traffic infractions like: red light crossing, wrong turn, section control, restricted zone, wrong way, etc.
- It's compatible with cameras from different brands and protocols in the same system.





Neural Labs S.L. Altimira 48, 2nd Floor, 08290 Cerdanyola del Vallès, Barcelona Spain +34 93 820 56 94 info@neurallabs.net www.neurallabs.net

MINUMUM REQUIREMENTS

CPU Intel Atom (1 camera)

MEMORY 2 GB RAM

HD 500 GB

OPERATING SYSTEM

Windows Server 2012 R2, Windows 8, 7 y 10

COMPATIBILITY SUPPORTED PROTOCOLS

RTSP H264 Motion JPEG JPEG **Gige Vision IDS-IMAGING** AVI **IDS-IMAGING** POINT GREY

SUPPORTED VMS

MILESTONE NX WITNESS (NETWORK OPTIX) WISENET WAVE (HANWHA) DIGIFORT **DW SPECTRUM** AVIGILON CONTROL CENTER HUAWEI **INDIGOVISION BOSCH BVMS** MIRASYS TYCO (Exacq) PELCO (VideoExpert) 3xLOGIC OnSSL AXIS CAMERA STATION

SUPPORTED CAMERAS

Vivotek, AVT, Axis, Avigilon, Bosch, Huawei, IndigoVision, Mobotix, Pelco, Sony, Vicon, HikVision, Dahua and Hanwha, among others.



NEURAL SERVER CITY & ITS

MAIN FEATURES

- More than 70 supported countries.
- Open architecture.
- Neural Labs proprietary technology.
- Camera and VMS agnostic (independent).
- It supports ADR plates (dangerous goods).
- Grammar control.
- Repeated plates filter.
- Image pre processing for shadow filter.
- Perspective correction.
- Real time recognition modes, by external trigger and motion detection.
- For each vehicle it registers:
 - **Recognized plate.**
 - Reliability per reading.
 - Vehicle color. •
 - Vehicle make (Toyota, Renault, BMW, etc.).
 - **Direction** detection.
 - Vehicle classification: car, motorcycle, bus, truck and van.
 - Vehicle Speed (NL SPEED).
 - Vehicle Lane. •
 - Vehicle image. •
 - **Country** of the plate.
 - License plate position in the image.
- Easy integration from third party software.
- Allows centralized, distributed or mixed architectures.



Altimira 48, 2nd Floor, 08290 info@neurallabs.net Cerdanyola del Vallès, Barcelona Spain

Neural Labs S.L. +34 93 820 56 94 www.neurallabs.net



NEURAL SERVER CITY & ITS

A. I. FOR SMART CITIES

We advise you on your specific project.

We recommend you the most suitable hardware for your project in order to guarantee the best results.

Contact us for personalised attention.

LEARN MORE IN:



INCLUDES OPERATOR SOFTWARE

- Historical search by: plate, make, color, classification, time, direction, lane, etc.
- Multiple user management.
- Real time display.
- Multi list management and associated actions.
- Alerts to operators.
- Configurable pre / post event video recording.
- Fine management and Enforcement
- Excel / pdf export.
- Automated reports.

•	Neural Labs	16/03/2010	00:00	:00,000	1	6/03/2020	۲	23:59:	59,999		∓ Filtro o	de Matricula				₹ Nom
	2	Actualizar 🕃	Actualizer (C) Filtree Letra 1: Rescablecer filtree (C) Tempo Rud (J) Select Column: 🚱													
	Admin v_4.12.0.20	Cámaras	¥	Colores	¥	Orde	nadores	¥	Direcc	iones	*	Localización		• Marc	is	÷
ė	Administración usuarios	Clasificación	*	En Lista	*	No lis	tado	÷	Analiti	cas	*					
	Incidencias															
	Sanciones Mapa	Cámara Fecha		Matrícula	Imagen	Fiabilidad	Altura Cará	País	Carril	Lista	Velocidad	Dirección	Тіро	Marca	.ogo	Color
=	Gestión de listas >	LPR Locatio 09/03/2020	17:43:45.700	511046	distan	99.90	20.75	Spain	Lane 1		Desconocid	i No Detectado	.	Desconocid	esconoci	d 🔿 Blanc
	Alarmas	LPR Locatio 09/03/2020	17:43:39.073	-022.08	532 72	99.90	21.00	Spain	Lane 1		Desconocid	i No Detectado	÷	Fiat	۲	Negro
	Neural BI	LPR Locatio 09/03/2020	17:43:34.760	2422423	NUMBER	99.90	20.56	Spain	Lane 1		Desconocid	i No Detectado	~	Desconocid	Nesconoci	d 🔴 Rojo
		LPR Locatio 09/03/2020	17:43:27.677	100.07	2280.JCT	99.90	20.71	Spain	Lane 1		Desconocid	i No Detectado		Desconocid	Nesconoci	d Desconoci
		LPR Locatio 09/03/2020	17:43:10.637	CH10453.	ELITER	99.90	21.00	Spain	Lane 1		Desconocid	i No Detectado	÷	Hyundai	Ð	🔴 Rojo
		LPR Locatio 09/03/2020	17:41:55.627	GENORE	C 09063K	93.97	21.13	Spain	Lane 1		Desconocid	i No Detectado	÷	Volkswager	(3)	O Blanc
		LPR Locatio 09/03/2020	17:41:54.637	тоносан	S DIOEBK	89.55	21.50	Spain	Lane 1		Desconocid	i No Detectado	÷	Volkswager	83	
		LPR Locatio 09/03/2020	17:41:47.533	GENOREN	EDMEN.	98.07	20.00	Spain	Lane 1		Desconocid	i No Detectado	÷	Volkswager	(3)	
		LPR Locatio 09/03/2020	17:41:26.903	211000	2018/08	99.90	20.00	Spain	Lane 1		Desconocid	i No Detectado	بد ر	Desconocid I	Nesconoci	d Desconoci
		LPR Locatio 09/03/2020	17:41:08.033	2111.05	NAME OF CASE	83.46	20.89	Spain	Lane 1		Desconocid	i No Detectado	÷	Desconocid I	Nesconoci	d 🔴 Negro

FINE MANAGEMENT MODULE

- Section control (average speed between 2 points).
- Restricted area management.
- Wrong direction detection.
- Red light enforcement.
- Vehicle counting.
- Wrong turn.
- llegal Stop.



Neural Labs S.L. Altimira 48, 2nd Floor, 08290 Cerdanyola del Vallès, Barcelona Spain +34 93 820 56 94 info@neurallabs.net www.neurallabs.net

NEURAL SERVER TECHNICAL SPECIFICATIONS

Processing time	20 to150 ms	
Recognition rate	98%* (depending on the acquisition quality and country of the plate).	This is a minimum value. It can be higher when using the adequate hardware and configuration.
Images per second/camera	Stop & Go version	5 (depending on the PC or server)
	Free Flow version	10 to 20 (depending on the PC or server)
Maximum number of cameras	Unlimited, depending on the PC or Server	
Vehicle maximum speed	250km/h (using the adequate camera and lighting)	
Supported protocols	MJPEG	JPEG
	H264	AVI
	RTSP	Gige Vision
	IDS Imaging	DirectShow
	Point Grey	
Supported cameras	Vivotek, AVT, Axis, Avigilon, Bosch, Huawei, IndigoVision, Mobotix, Pelco, Sony, Vicon, HikVision, Dahua and Hanwha, among others.	Specific models of each brand. Ask you sales agent
Other video sources	Avi Files	
	Jpeg, Bmp files	
Integrated video recording systems	Milestone (Express version, minimum)	Pelco
	NX Witness (Network Optix)	Wisenet WAVE (Hanwha)
	Digifort	DW Spectrum
	Axxon Soft, Indigo Vision	Avigilon Control Center
	Bosch BVMS, Nuuo	3xLOGIC, Huawei
	Exacq (Tyco), Mirasys	OnSSI
	AXIS Camera Station	
2 lines license plates	Yes	
Motorcycle license plates	Yes	
Diplomatic license plates	Yes	
Operative system	Windows 7, Windows Server 2012 R2, Windows 8, Windows 10, all 64 bits	
Database	MS SQL Server Express	Standard and Enterprise versions supported, but not included
Included analytics (no extra cost)	Number Plate Recognition Lane Detection	
Optional analytics (Extra cost)	Make Detection Color Detection Direction detection	Speed Calculation Vehicle classification
Traffic offence detected (Extra cost)	Wrong turn Red light run Pedestrian zone management	Wrong way Section speed control
Working modes (per camera)	Free Flow By an external trigger By motion detection	
Third party Integration	XML messages via Socket or JSON SQL Server database access	
Supported countries	More than 70 countries	Ask you sales agent



Neural Labs S.L. Altimira 48, 2nd Floor, 08290 Cerdanyola del Vallès, Barcelona Spain +34 93 820 56 94 info@neurallabs.net www.neurallabs.net