



Technology that Works!

### TRAFFIC ANALYTICS AND ACCESS CONTROL SOLUTION APPLIED TO:

#### POLICE FORCE

- Uninsured vehicle detection
- Stolen vehicles
- Terrorist search

#### PRIVATE SURVEILLANCE

- Presence in restricted areas

#### PERIMETRAL MONITORING

- Industrial estates
- Factories or large companies
- Town accesses
- Condominiums, housing developments.

#### SPECIFIC TRACKING

- Monitoring transit areas of vehicles, determining their routes and behavior.

#### ENFORCEMENT

- Red light enforcement
- Foto Stop
- Section Radar
- Lists (Insurance, Stolen, Technical Inspection, etc.)

# VPAR SERVER

## TRAFFIC ANALYTICS SOLUTION



- **VPAR SERVER<sup>®</sup>** uses **Neuronal technology** and **Deep Learning** to perform **Traffic Analytics** or **Access Control** 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 **speed**, **traffic direction** and **lane**, and **classifies vehicles**.
- It allows to use cameras from different brands and protocols on the same system.

VPAR SERVER<sup>®</sup> can process many cameras covering up to 2 lanes each.



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## System requirements

### CPU

- Intel Atom

### MEMORY

- 2 GB RAM

### HD

- 500 GB

### OPERATING SYSTEM

- Windows Server, Windows 8, Windows 7, Windows 10

## Compatibility

### SUPPORTED PROTOCOLS

RTSP

H264

Motion JPEG

JPEG

Gige Vision

IDS-IMAGING

AVI

IDS-IMAGING

### SUPPORTED VMS

MILESTONE

AVIGILON CONTROL CENTER

INDIGOVISION

BOSCH BVMS

AXXONSOFT

MIRASYS

SCATI LABS

TYCO (Exacq)

PELCO (VideoExpert)

3xLOGIC

HUAWEI

OnSSI

### SOME SUPPORTED CAMERAS

AVT, Axis, Avigilon, Basler, Bosch, Huawei, IDS, IndigoVision, JAI, JVC, Mobotix, Pelco, Sony, Vivotek, HikVision, Messoa, and more.

# VPAR SERVER

## TRAFFIC ANALYTICS SOLUTION

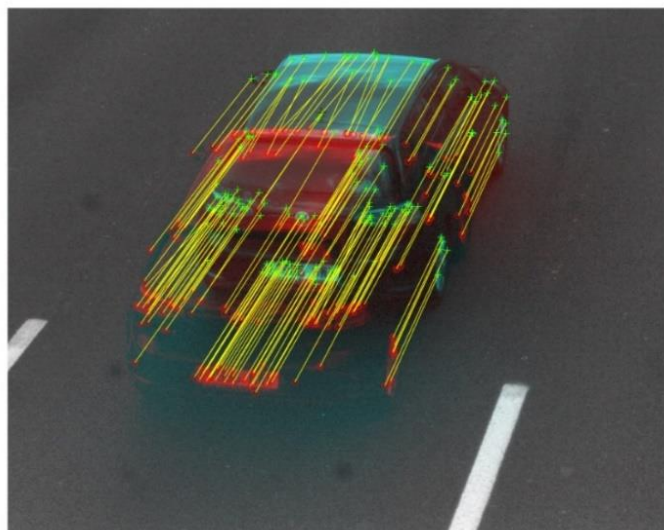
## TECHNICAL FEATURES

- Over 65 countries supported.
- 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 plates.**
  - Reliability per reading.
  - **Direction** detection.
  - Type of vehicle (**classification**)
  - **Speed** of vehicle (NL SPEED)
  - **Lane** of vehicle
  - Images of vehicles.
  - Date and time, GPS position, camera ID, etc.
  - Country of the plate
  - License plate position in the image.
- For each recognition, it sends XML messages via TCP/IP.
  - It is integrated with digital I/O
  - It admits Centralized or Distributed architectures.



### SYSTEMS THAT WORK, USE NEURAL LABS TECHNOLOGY

We advise you on  
your specific project.

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

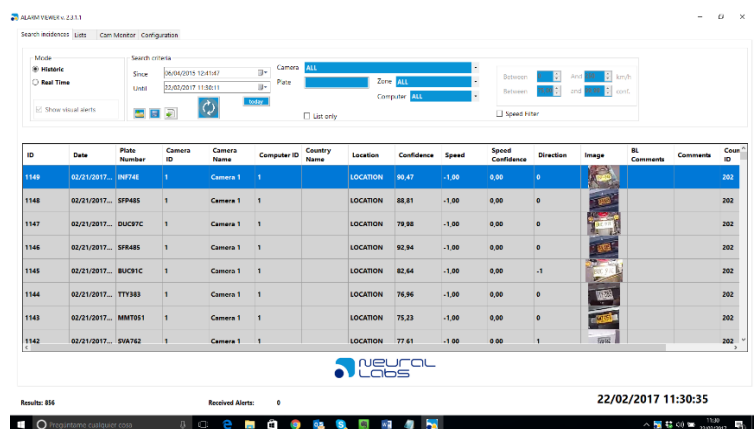
Contact us for  
personalized  
attention.









SEE MORE:



## Includes Neural Viewer

- Detected plates history searcher.
- Easy-to-use interface
- Multiple user management.
- Real time display of the last plate read by each camera from the installation.
- **Lists management** and associated actions.
- It shows in real time the plates on configured lists, with pre and post event video sequence.
- Excel Export / Import



ID	Date	Plate Number	Camera ID	Camera Name	Computer ID	Country Name	Location	Confidence	Speed	Speed Confidence	Direction	Image	RL Comments	Comments	Class ID
1149	02/21/2017...	INF74E	1	Camera 1	1		LOCATION	90.47	-1.00	0.00	0				202
1148	02/21/2017...	SFR465	1	Camera 1	1		LOCATION	88.81	-1.00	0.00	0				202
1147	02/21/2017...	DUK97C	1	Camera 1	1		LOCATION	79.98	-1.00	0.00	0				202
1146	02/21/2017...	SFR465	1	Camera 1	1		LOCATION	92.94	-1.00	0.00	0				202
1145	02/21/2017...	BUCK1C	1	Camera 1	1		LOCATION	82.64	-1.00	0.00	-1				202
1144	02/21/2017...	TY9383	1	Camera 1	1		LOCATION	76.96	-1.00	0.00	0				202
1143	02/21/2017...	MMT051	1	Camera 1	1		LOCATION	75.23	-1.00	0.00	0				202
1142	02/21/2017...	BVA782	1	Camera 1	1		LOCATION	77.61	-1.00	0.00	1				202

## OTHER ANALYTICS

- License plate **masking** (privacy)
- **Average speed detection** between 2 spots.
- **Car stopped in prohibited area** detection.
- **Access to forbidden area** detection.
- **Direction traffic** detection.
- **Prohibited turn** detection.
- **Traffic jam** detection.
- **Vehicle counting.**
- **Forbidden lane change** detection.
- **Vehicle brand and color** detection\* (contact us for details)

# TECHNICAL SPECIFICATIONS OF VPAR SERVER

Processing time	20 to 150 ms	
Recognition rate	98%* (depdning on the acquisition quality and country of the plate).	<i>This is a minimum value. It can be higher when using the adequate hardwre and configuration.</i>
Images per second/camera	Stop & Go version	5 (depending on the PC or server)
	Free Flow version	10 a 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
Supported cameras	AVT, Axis, Vivotek, IndigoVision, Bosch, Avigilon, HikVision, Huawei, Dahua, Messoa, IDS-IMAGING, PointGrey, Basler, JAI, JVC,	Mobotix, Pelco, Sony, etc. ( <b>specific models of each brand</b> ).
Other video sources	Avi Files	
	Ficheros Jpeg, Bmp	
Integrated Video Recording Systems	Milestone (minimum Express version)	Pelco
	Axxon Soft, Indigo Vision	Avigilon Control Center
	Bosch BVMS, Nuuo	3xLOGIC, Huawei
	Exacq (Tyco), Mirasys	OnSSI
	Scati Labs	
2 line license plates	Yes	
Motorbike license plates	Yes	
Diplomatic license plates	Yes	
Operative System	Windows 7, Windows Server, Windows 8, Windows 10	
Database	MS SQL Server Express (More recent versions supported, but not included)	
Optional Analytics	<b>Direction Detection</b> <b>Lane Detection</b>	<b>Speed Calculation</b> <b>Vehicle classification</b>
Working modes (per camera)	Free Flow By Trigger By Motion Detection	
Third Party Integration	XML messages via Socket	
	SQL Server database access	
Supported countries	ALBANIA, ANGOLA, AUSTRIA BOSNIA AND HERZEGOVINA, BOLIVIA, BELGIUM, BULGARY, BRAZIL, CANADA, CHILE, COLOMBIA, COSTA RICA, CYPRUS, DENMARK, DOMINICAN REPUBLIC, SPAIN, SLOVENIA, ESTONIA, FINLAND, PHILIPPINES, FRANCE, GREECE, GRIBALTAR, NETHERLANDS HONDURAS, ITALY, IRELAND, HONG KONG, LEBANON, MALYSIA, SINGAPORE, VIETNAM, ISRAEL, SOUTH AFRICA, MOROCCO	NICARAGUA, NORWAY, POLAND, PORTUGAL, , RUSSIA, ARGENTINA, ECUADOR, EL SALVADOR, GERMANY, GUATEMALA, MEXICO, PANAMA, PARAGUAY, PERU, UNITED KINGDOM, URUGUAY, ROMANIA, SWEDEN, TUNISIA, TURQUIA, PUERTO RICO, USA (supports the 50 states), VENEZUELA