





### **Smart Roads Products**

A single device for video surveillance, traffic analysis, road safety and communications between intelligent vehicles and infrastructure 3

### **SMART POLE MODULES**



### **STP CCTV camera**

5 MEGAPIXEL 16:9 Configurable streaming Local I/O Can be integrated onBoard with EWC software (Environment Weather Condition)

NEURAL LIBRARY

H

LIVE

A.I.D.

ANQ.

TRAFFIC

COLOR

H

LIVE

**@**∿@

TRAFFIC

COLOR

H

LIVE

TYPES

ROAD GATE AID

### **STP A5B ANPR camera**

5 MEGAPIXEL 2 Lanes 5MP@75fps ANPR 250 Km/h (2 Lanes) ALARMS & DATA ONVIF S FTP, XML-RPC (su HTTP o HTTPS)

- OCR LIBRARY
- NEURAL LIBRARY
- ROAD GATE AID

camera

# STP MFSC Multi functions Smart Road

2 lanes coverage, single or double direction

5 Mpx OCR IR camera

Contextual Day&Night varifocal color camera 2 Mpx @60fps Free-running license plate reading up to 250 km/h Built-in stroboscopic IR LED lighting

- OCR LIBRARY
- NEURAL LIBRARY
- ROAD GATE AID

### **STP RADAR**

Advanced 4D Doppler Radar 66 - 77 GHz + Video Fully integrated 2 MPX color camera Both directions driving Speed measurement from 20 to 250 km/h Operating distance from 15 to 50 m Classification of vehicles into 4 classes 64 Maximum number of detectable objects POE power supply Integrated radar and video analysis ONVIF profile S

### **Neural Library**

- Daytime Recognition Of Types Of Vehicles (Cars, Trucks, Trucks with trailers, Motorcycles, Motorcycles, Mopeds, Buses, Mini vans, Big vans, Box bodies, Caravans, unknown)
- Night Recognition Of Types Of Vehicles (trucks, buses, cars, motorbikes, unknown)
- Color Day Recognition (black, white, grey, red, blue, yellow, green, orange, pink, purple, cyan, unknown)
- Daytime Brand Recognition Around 100 brands supported
- Daytime Model Recognition
- Approximately 400 models supported (rear classification)

#### Road gate AID

- Instant speed estimation
- Transit direction and wrong way
  detection
- Vehicle stopped in the gap alarm function
- Queue alarm function in the gate (traffic stopped) traffic status detection (regular, slow, queue, unknown)
- Slow traffic alarm function
- Lane statistics: occupancy, flow-rate, heading, speed

### **OCR Library**

- On board OCR library with 41 European countries, 13 Asians, 6 Africans, 5 South Americans
- Arabic and Persian charset
  supported
- Special license plates (diplomatic corps, police forces, trams) supported
- Local / remote calendar for OCR
- Dangerous goods (adr kemler codes) supported
- Country recognition



### **STP CV2X**





# COMMUNICATION CONNECTIVITY

### All-in-one integrated professional radio system

designed to ensure reliable V2X communication between the ground infrastructure and the OBUs (On Board Units) of the latest generation vehicles.

# It manages multiple C-V2X and DSRC connectivity standards simultaneously

ITS G5 (DSRC IEEE 802.11p), C-V2X (PC5), LTE-A Cat. 16, Supports Wi-Fi 802.11b, g, n and Wi-Fi 802.11a/ac standards. STP RSU C-V2x

### The internal software environment provides 4 levels of security

nested from the kernel to the application that ensure the protection of STP RSU C-V2x from cyber attacks

### Set of 6 antennas combined in an all-in-one mechanical solution

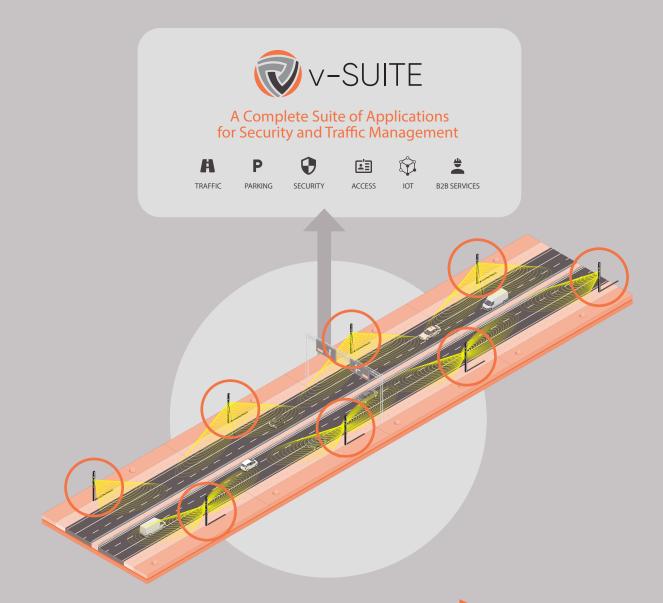
ensures optimized coverage of a road segment while minimizing radio emissions outside the road area.

### Expandable

It can host local management logic thanks to its multi-core ARM platform and compute, memory and storage resources.

### **Applications**

- Road Side Unit (RSU) device complete with all C-V2X and DSRC communication standards
- Message General warnings
- Intersection Safety message
- Shockwave damping message
- Display of the danger position
- Roadworks warning in vehicle signs
- Road works notice
- Prioritization Dynamic signage content
- Toll station
- Green light Optimal speed warning
- Green wave speed information
- Weather alert
- Park and ride



Vigilate is a tech company specialized in the production of devices and software platforms for security and traffic control.





Vigilate S.r.l.

Headquarter: Via Napoleonica, 6, 25086 Rezzato BS Italy

VAT Number: IT01598660056 Phone: +39.0308081000 Pec: vigilatesrl@pec.it SDI Code: W7YVJK9

### www.vigilatevision.com