

Smart Traffic Compact

Radar sensor for non-invasive traffic monitoring

DESCRIPTION

uRAD Smart Traffic Compact is a Smart Cities specific radar solution for non-invasive traffic monitoring in urban and interurban environments. This sensor is the most compact and low consumption version of uRAD Smart Traffic Solutions, integrating MODBUS RS-485 wired, WiFi and LTE-4G wireless communication together with the last and most advanced radar uRAD hardware. Two version are available, with and without LTE-4G.

This system is affordable, easy to install and configure, very versatile since can be installed in any road, and outstandingly accurate, with an effectiveness higher than 95%.

USE CASES



Velocity measurement up to 180 Km/h.



Urban and interurban roads.



Dense or light traffic scenarios.



Up to 4 lanes monitoring with a single radar.
* Up to 3 lanes in each direction.



Counting vehicles with positive (go away) and negative (approach) velocity simultaneously.



Vehicle discrimination between regular, medium and long vehicles, bicycles and pedestrians.



TECHNICAL FEATURES

RF Parameters

Frequency	60 - 64 GHz
Modulation	FMCW
Emitting power	15 dBm
Field of view	160 °

Power supply

Voltage	8 - 42V DC (5V DC also available)
Connector	M12 female five-pin circular connector
Consumption	2.5 W

Mechanical parameters

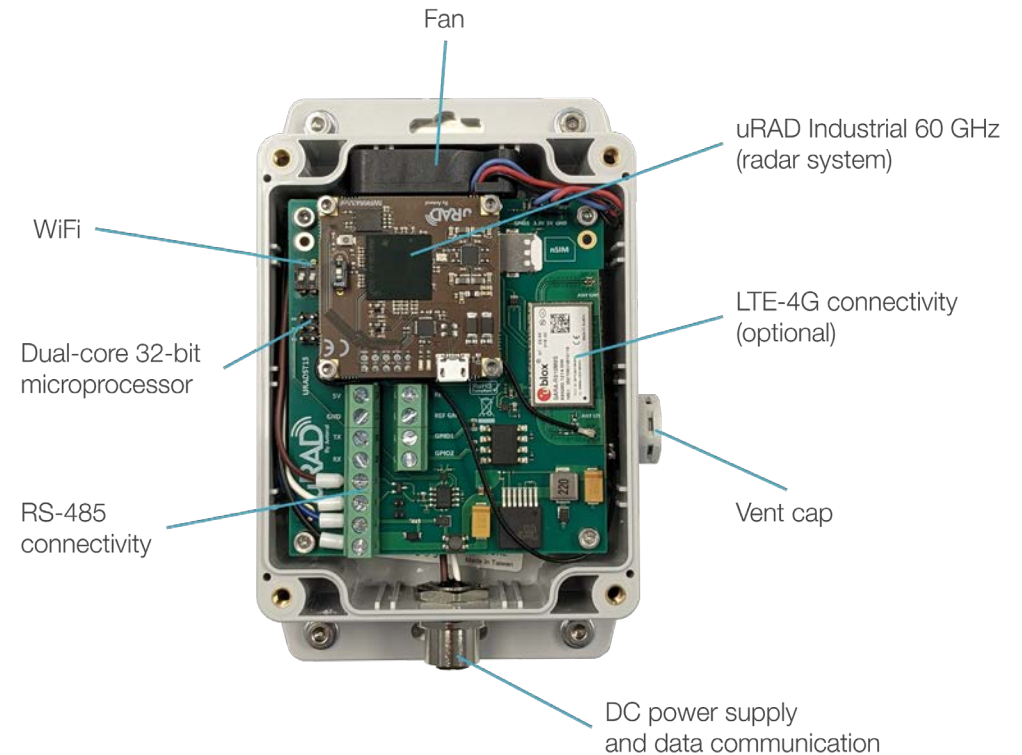
Dimensions	115 x 90 x 65 mm
Weight	560 g
Material	Polycarbonate
Protection	IP66, NEMA 4X,12,13, UL-508, UL94 HB
Installation	Anchorage and clamps included. System for vertical adjustment.

Other parameters

Wired Interface	RS-485 via MODBUS RTU protocol
Wireless Interface	WiFi (installation and configuration) LTE-4G via API (FIWARE compatible)
Core processor	Xtensa dual-core 32-bit, 240 MHz, 8MB Flash
Operating temperature	-20°C to +80°C

Performance

Maximum velocity	180 Km/h
Maximum distance	30 m (limited for accurate vehicle classification)
Side distance	±15 m



CLAMPING STRUCTURE

The equipment includes a support structure for placing the radar outdoors on cylindrical columns. The central joint allows the necessary tilt angle to be set during installation. Clamps are also included.



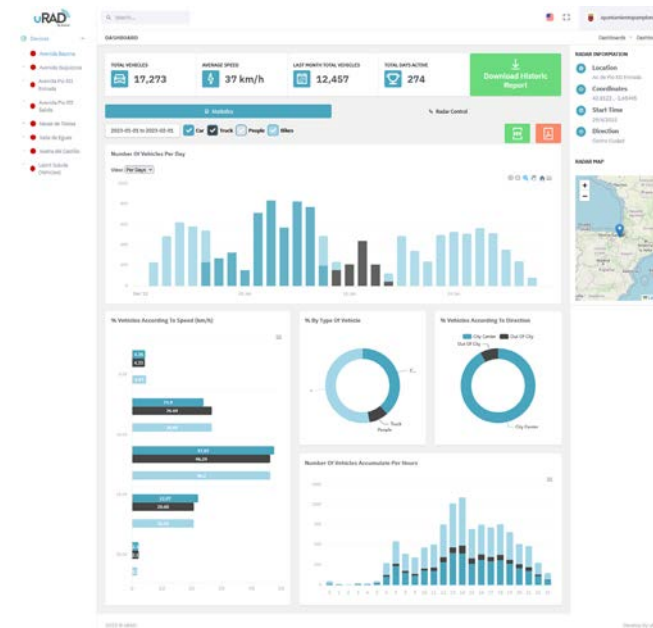
VEHICLE TYPE DISCRIMINATION

Discrimination between regular, medium and long vehicles, bicycles/motorbikes and pedestrians.

- Regular, medium and long vehicles are identified by their length.
- Bicycles and motorbikes are considered same type but can be filtered by lane and speed.
- Bicycles are distinguished from pedestrians based on their speed or the driving lane.

REAL TIME WEB APPLICATION

Optionally, a web platform is offered that provides real-time traffic statistics. The platform is customized for each client based on their specific requirements. Users can quickly and easily access traffic statistics and download reports via the web platform or mobile application.



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