

Smart Radar Sensor

Radar sensor for non-invasive traffic applications

DESCRIPTION

uRAD Smart Radar Sensor is a specialized radar solution designed for the deployment of non-invasive traffic applications in both urban and interurban environments. This sensor incorporates the latest and most advanced uRAD radar hardware specifically tailored for Smart Cities applications.

The system is affordable, easy to install, very versatile, since it can be installed on any road, and can be easily configured for a multitude of use cases or applications.

USE CASES



Velocity measurement up to 180 Km/h.



Activation of light signals: educational radar, warnings, cyclists, traffic jams, etc.



Intelligent pedestrian detection at crosswalks.



Dense or light traffic scenarios.



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



Multiple lanes at the same time.



TECHNICAL FEATURES

RF Parameters

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

Power supply

Voltage	8 V to 42 V DC
Consumption	0.5 - 2 W (Depending on the application)

Mechanical Parameters

PCB dimensions	75 x 70 x 20 mm
PCB weight	50 g
Dimensions with box	115 x 90 x 65 mm
Weight with box	285 g
Box protection	Polycarbonate. IP68, NEMA 1,2,4X,12,13, UL-508
Connector	Customizable. M12 5-pole, cable gland, etc.
Installation	Optional clamping. Ball joint and brackets.

Other parameters

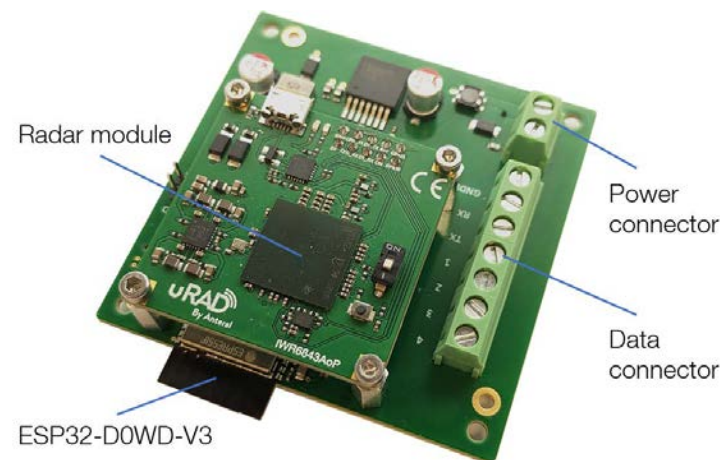
Communication interface	RS-485, UART (TTL 3.3V), 4 x optocoupler GPIOs, Wi-Fi & Bluetooth.
Protocol	Customized (depending on the application)
Core processor	ESP32-D0WD-V3
Operating temperature	-20°C to +80°C

Performance

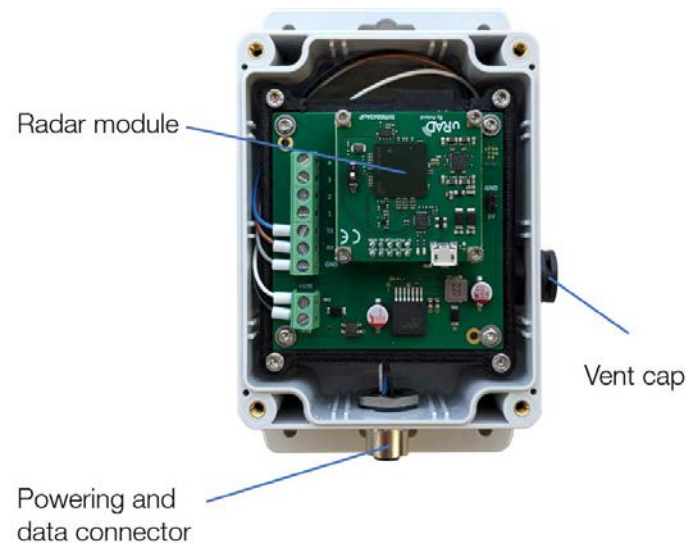
Maximum velocity	180 Km/h
Maximum distance	100 m
Side distance	±15 m

*Performance depends on the application: vehicles detection, pedestrians, sensor placement, etc.

PCB



PCB WITH BOX INCLUDED



The device can be purchased with or without box

DISCLAIMER

Anteral S.L. 2018. The information contained in this document is subject to change at any time without notice.

Anteral assumes no responsibility or liability for any loss, damage or defect of a product which is caused in whole or in part by:

1. use of any circuitry other than circuitry embodied in a Anteral S.L. product,
2. misuse or abuse including static discharge, neglect, or accident,
3. unauthorized modifications or repairs which have been soldered or altered in the assembly and are not capable of being tested by Anteral S.L. under its normal test conditions, or
4. improper installation, storage, handling, warehousing, or transportation, or
5. being subjected to unusual physical, thermal, or electrical stress.

Anteral S.L. makes no warranty of any kind, expressed or implied, with regard to this material, and specifically disclaims any and all expressed or implied warranties, either in fact or by operation of law, statutory or otherwise, including the implied warranties of merchantability and fitness for use or a particular purpose, and any implied warranty arising from course of dealing or usage of trade, as well as any common-law duties relating to accuracy or lack of negligence, with respect to this material, any Anteral S.L. product and any product documentation. All sales are made conditioned upon compliance with the critical uses policy set forth below.

CRITICAL USE EXCLUSION POLICY: BUYER AGREES NOT TO USE ANTERAL'S PRODUCTS FOR ANY APPLICATIONS OR IN ANY COMPONENTS USED IN LIFE SUPPORT DEVICES OR TO OPERATE NUCLEAR FACILITIES OR FOR USE IN OTHER MISSION-CRITICAL APPLICATIONS OR COMPONENTS WHERE HUMAN LIFE OR PROPERTY MAY BE AT STAKE.

Anteral S.L. owns all rights, titles and interests to the intellectual property related to Anteral S.L. products, including any software, firmware, copyright, patent, or trademark. The sale of Anteral S.L. products does not convey or imply any license under patent or other rights. Anteral S.L. retains the copyright and trademark rights in all documents, catalogs and plans supplied pursuant to or ancillary to the sale of products or services by Anteral S.L. Unless otherwise agreed to in writing by Anteral S.L., any reproduction, modification, translation, compilation, or representation of this material shall be strictly prohibited.

Last version: 22/02/2024

THE POWER OF RADAR. THE POWER OF YOU.

