

USER MANUAL

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1 General Description

The CitRadar-360 radar sensor has a maximum detection range of 500m radius. In applications requiring multiple sensors, line of sight considerations mean that sensors are typically placed every 500 to 700 metres to achieve optimum coverage. CitRadar-360 Sensor complete a full 360° scan four times a second with range resolution of just 17.5cm.

CitRadar-360 Sensor adopts compact and lightweight design, which is made by integrated manufacture to increase its roughness. Low power consumption of equipment can effectively reduce energy consumption and maintenance requirements.



Figure1 CitRadar-360 Radar product

Features:

- High performance radar works in 77GHz ISM Band;
- Special microstrip antenna design effectively avoids interference from adjacent channel target;
- Accurate speed and distance measurement for multiple targets;

- High dynamic speed measurement range with very high capture rate($\geq 99\%$);

2 Product Function

In practical application, The radar can scan 1200 meters within the scope of the test area or road (one-way multiple lanes, two-way lanes, each cross lane), the test events include: stopped vehicles, traffic congestion, vehicles queuing, reversing vehicles, and illegal invasion, and other important events in a particular area, provide important to have a basis for traffic law enforcement.

3 Specifications

| | |
|-------------------------|-----------|
| Frequency Range | 76~77GHz |
| Modulating Type | FMCW |
| Maximum detection range | 500M |
| Beam azimuth | 2° |
| Beam Elevation | 2° |
| Scanning speed | 4rps |
| Connector | 100Mb |
| Voltage | 24V |
| Protection grade | IP67 |
| Power Dissip | <15W |
| Temp. Range | -30℃~+60℃ |
| weight | 8Kg |

4 Installation Instruction

4.1 Installation

The installation of CitRadar-360 Sensor is flexible and it can be installed in the middle of the road, on the shoulder and on the roadside. Besides, it can be installed both normally and invert.

4.2 Maintenance

The Sensor does not need daily cleaning. Even in a dusty place, it can be kept every three years maintenance records.

4.3 Accessories

| Name | Number | Note |
|----------------|--------|------|
| Sensor | 1 | |
| Power cable | 1 | |
| Ethernet cable | 1 | |
| Screw | 4 | |

• 5. FCC Warning

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject

to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator& your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.