

DHI-ITARD-024SA-ST

Narrow Wave Tablet Radar



- Fast response ensures high capture rate and real-time signal processing.
- Advanced radar signal processing and real-time data processing technologies.
- Adopts new algorithm for enhanced location stability and prolonged operation sustainability.
- Ideal for flexible and extensive applications.
- Low microwave radiation and power consumption, long service life, and high stability and reliability.

System Overview

This radar is a narrow beam and multiple target radar with planar antenna system. It is specifically designed to detect moving vehicles to meet modern traffic management challenges.

The product uses modern microwave radar technology and high-speed digital signal processing technology for precise positioning and accurate speed measurement.

Functions

24 GHz MMIC technology

Adopts 24 GHz MMIC technology, light-weighted and efficient.

High precision

High-precision capture at fixed position. Position error within ± 1 m (3.28 ft).

Attractive antenna design

High-gain and low-sidelobe microstrip planar array antenna design helps effectively avoid echo interference of adjacent lanes.

All-weather Working

The detection performance of the Radar is immune to glaring sunlight, dense fog or other adverse weather and lighting conditions.

Scene

The radar detector can be applied to a wide range of complex road environments such as tunnel entrance and highway interchanges, providing real-time traffic information and forensic evidence for traffic speed violations.

Technical Specification

Basic

Antenna	Microstrip planar array antenna
Modulation	Continuous wave (CW) modulation
Frequency	(24.150 ± 0.045) GHz
Transmit Power	20 dBm
Antenna 3dB Beamwidth	6° (H) × 6° (V)
AD Sampling Frequency	37 KHz
Communication	RS-232
Cable	Red: + 12 VDC Black: - 12 VDC Yellow: RS-232 RXD Green: RS-232 TXD Brown: RS-232 GND

Performance

Distance Accuracy	± 1 m (3.28 ft)
Lane Coverage	1 lane
Object Data	Vehicle speed (instantaneous)
Capture Rate	≥ 99% (when traffic is smooth)
Indoor Speed Simulation Error	± 1 km/h
Speed Error during Road Test	Error when vehicle speed < 100 km/h: ± 2 km/h Error when vehicle speed ≥ 100 km/h: ± 2%
Speed Detection Range	10 km/h–250 km/h
Capture Distance	18 m–28 m (59.06 ft–91.86 ft) when the radar is installed at around 6 m (19.69 ft) high

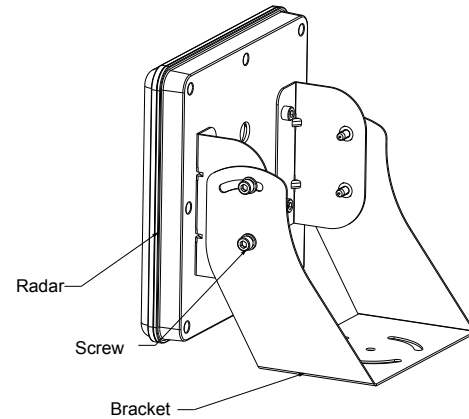
General

Power Input	12 VDC, with over-voltage, over-current, and reverse connection protection for safe and stable power input
Protection	Output interfaces are designed with over-current and over-voltage protection, IP66
Operating Environment	Operating temperature: -40°C to +80°C (-40°F to +176°F) Operating humidity: 10%–90% (RH)
Dimensions	Radar: 209.9 mm × 210.0 mm × 35.0 mm (8.27" × 8.27" × 1.38") Bracket: 163.4 mm × 100.0 mm × 155.0 mm (6.43" × 3.94" × 6.10")
Weight	1 kg (2.2 lb) (bracket excluded)
Accessory	Bracket
Installation	Center mount/ Side Mount

Ordering Information

Type	Model	Description
Radar	DHI-ITARD-024SA-ST	Narrow wave tablet radar
Accessory		Bracket

Installation



Dimensions (mm[inch])

