

DHI-ITARD-024SA-ST

24 GHz Radar Detector



- 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

The 24 GHz radar detector is a narrow beam 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.

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.

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.

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: 12V+ DC Black: 12V- DC Yellow: RS-232 RXD Green: RS-232 TXD Brown: RS-232 GND

Performance

Distance Accuracy	±0.5 m (1.64 ft)
Lane Coverage	1 lane
Object Data	Vehicle speed (instantaneous)
Capture Rate	≥95%
Indoor Speed Simulation Error	-4 km/h to 0 km/h
Speed Error during Road Test	Error when vehicle speed <100 km/h: -4 km/h to 0 km/h Error when vehicle speed ≥100 km/h: -4% to 0%
Speed Detection Range	10 km/h-250 km/h
Capture Distance	18 m-38 m (59.06 ft-124.67 ft) when the radar is installed at around 6 m (19.69 ft) high

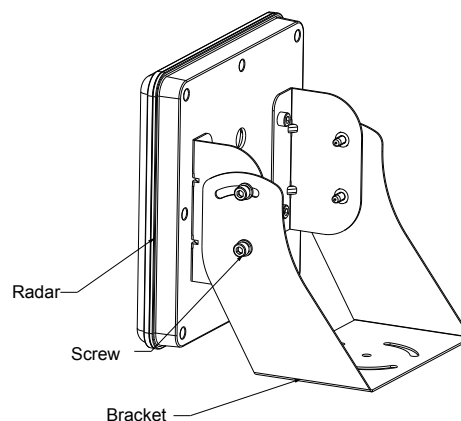
General

Power Input	12V DC, with over-voltage, over-current, and reverse connection protection for safe and stable power input
Interface Protection	Output interfaces are designed with over-current and over-voltage protection
Operating Environment	Operating temperature: -40°C to +80°C (-40°F to +176°F) Operating humidity: 10%RH-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	Pole-mounted

Ordering Information

Type	Model	Description
Radar detector	DHI-ITARD-024SA-ST	24 GHz radar detector
Accessory		Bracket

Installation



Dimensions (mm[inch])

