

# DHI-ITARD-024MA-H

## Multi Target Bayonet Radar



- One single radar covers up to 32 vehicles of 1–4 lanes.
- Precisely detects speed and position of vehicles when they are 18 m–35 m (59.1 ft–114.8 ft) away.
- Special functions such as detection of illegal lane change and wrong-way driving.
- The detection performance is not impaired by adjacent lane or vehicles in front of or behind the target vehicle.

### System Overview

The multi target bayonet radar can be installed over the lane to detect vehicles 18 m–35 m (59.1 ft–114.8 ft) away and cover vehicles of 1–4 lanes. It sends capture signals to the camera when the vehicle approaches the specific position, and also detects the vehicle speed and the lane that the vehicle is driving on.

### Functions

#### Impressive capture rate

About 95% when traffic is smooth.

#### High position accuracy

The position accuracy of triggering capture signal is as high as  $\pm 1$  m (3.3 ft).

#### All-weather working

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

### Scene

The radar is applicable to traffic security system, speeding detection, and more.

**Technical Specification**

Performance

Lane Coverage	1–4 lane (s) (3.75 m (12.30 ft) standard lane)
Speed Measurement Range	10 km/h–250 km/h
Speed Measurement Accuracy	Simulated speed measurement error range: $\pm 2$ km/h On-site speed measurement error range: Vehicle speed < 100 km/h: $\pm 2$ km/h Vehicle speed $\geq 100$ km/h: $\pm 2\%$
Detection Target	Up to 32 vehicles
Maximum Detection Distance	35 m (114.8 ft)
Minimum Detection Distance	18 m (59.1 ft)
Installation Height	5 m–8 m (16.40 ft–26.25 ft)
Position Detection Accuracy	$\pm 1$ m (3.3 ft)
Overspeed Capture Rate	$\geq 95\%$ (when traffic is smooth)
Lane Recognition Rate	$\geq 95\%$
Frequency	24 GHz–24.25 GHz
Response Time	$\leq 50$ ms
Transmit Power (EIRP)	20 dBm (100 mW)
Modulation	FMCW + Monopulse + Doppler, 3 transceiving antennas
Bandwidth	250 MHz
Protection Grade	IP66
Radar Beam Angle	Horizontal: $20^\circ$ ( $-3$ dB) Vertical: $18^\circ$ ( $-3$ dB)

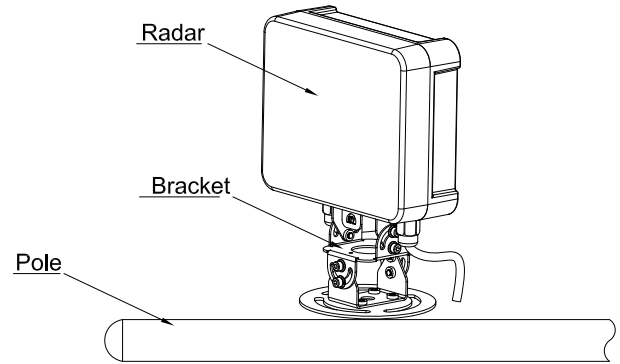
General

Operating Voltage	12 V DC
Average Power Consumption	< 3.5 W
Operating Temperature	$-40^\circ\text{C}$ to $+85^\circ\text{C}$ ( $-40^\circ\text{F}$ to $+185^\circ\text{F}$ )
Relative Humidity	10%–90%(RH, non-condensing)
Dimensions	155.0 mm $\times$ 130.0 mm $\times$ 54.9 mm (6.10" $\times$ 5.12" $\times$ 2.16") (L $\times$ W $\times$ H)
Weight	2.2 kg (4.85 lb)
Installation	Center mount

**Ordering Information**

Type	Model	Description
Radar	DHI-ITARD-024MA-H	Multi Target Bayonet Radar
Accessories	—	Bracket
	SOY-1200330	12 V DC power adapter

**Dimensions (mm[inch])**



**Dimensions (mm[inch])**

