

# IRS-TMR935

94GHz Millimeter-Wave Radar



## General Description

The IRS-TMR935 Millimeter Wave Radar is a 94GHz traffic millimeter wave. Adopting a mature chip solution combining domestic and overseas components, it operates in dual modes to achieve a maximum detection distance of 350 meters. It can be integrated with cameras to form a radar-vision integrated device, and work with traffic signal lights to optimize signal timing, thereby alleviating traffic pressure and reducing manual intervention.

## Product Features

- 94GHz operating frequency, all-weather operation, minimally affected by weather conditions such as rain, snow, fog and haze
- Maximum detection distance of 350m @15dBsm
- Support tracking of up to 200 targets simultaneously

## Main Application Scenarios

- Traffic flow statistics
- Road safety warning
- Roadside illegal parking monitoring
- Perimeter security applications
- Traffic signal control system applications
- Intersection oncoming vehicle warning

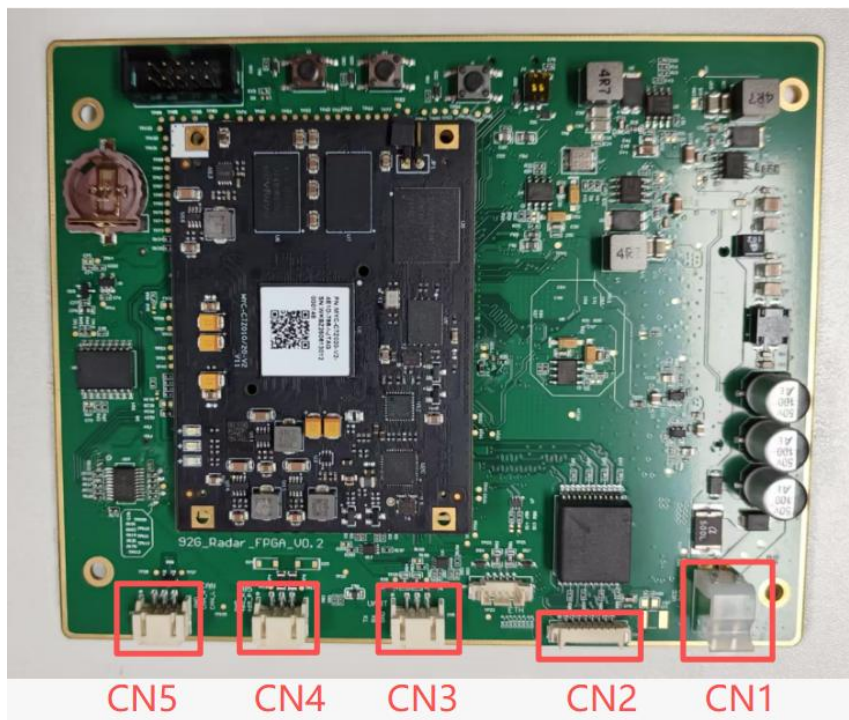
## Radar System Characteristics

Performance Parameter		Mid-Range
Range (m)	Range	0.5~350m
	Accuracy	±0.3m
	Resolution	1.5m
Velocity (km/h)	Range	±250km/h
	Accuracy	±0.05km/h
	Resolution	0.2km/h
Horizontal Field of View (°)	Range	±6° @6dB
	Accuracy	±0.4° @0°
	Resolution	2.2° @0°
Vertical Field of View (°)	Range	±10° @6dB
Detectable Target Type		Dynamic & Static

Number of Detectable Targets	400 point clouds, 200 tracking targets
Update Rate (Hz)	10
Operating Frequency Range (GHz)	92~94GHz
Operating Voltage	9-24V DC
Communication Interfaces	CAN, RS485, TTL, Ethernet
Maximum Power Consumption	25W
Operating Temperature & Humidity	-40℃ ~ +85℃, 0 ~ 95% RH (non-condensing)
Storage Temperature & Humidity	-40℃ ~ +95℃, 0 ~ 95% RH (non-condensing)
IP Rating (Whole Unit)	IP67

## Interface Description

Description of Main Interfaces on the Mainboard



Interface No.	Interface Description	Accessory Model
CN 1	Power Interface	CH3.96-2Y
CN 2	Ethernet Interface	1.25-8Y
CN 3	TTL Interface	A2001H-3P
CN 4	RS485 Interface	A2001H-3P
CN 5	CAN Interface	A2001H-3P

### CN1 Power Interface Pin Functions

Signal	Function
GND	System Ground
VIN+	Power Input Pin, Voltage Range: 9-24V

### CN2 Ethernet Interface Pin Functions

Signal	Function
CH1_P	Ethernet Differential Signal Positive, for 10BASE-T/100BASE-TX/1000BASE-T
CH1_N	Ethernet Differential Signal Negative, for 10BASE-T/100BASE-TX/1000BASE-T
CH2_P	Ethernet Differential Signal Positive, for 10BASE-T/100BASE-TX/1000BASE-T
CH3_P	Ethernet Differential Signal Positive, Radar Data Interface
CH3_N	Ethernet Differential Signal Negative, Radar Data Interface
CH2_N	Ethernet Differential Signal Negative, for 10BASE-T/100BASE-TX/1000BASE-T
CH4_P	Ethernet Differential Signal Positive, Radar Data Interface
CH4_N	Ethernet Differential Signal Negative, Radar Data Interface

### CN3 TTL Interface Pin Function

Signal	Function
UART_TX	UART_TX, Radar Data Interface
UART_RX	UART_RX, Radar Data Interface
GND	System Ground

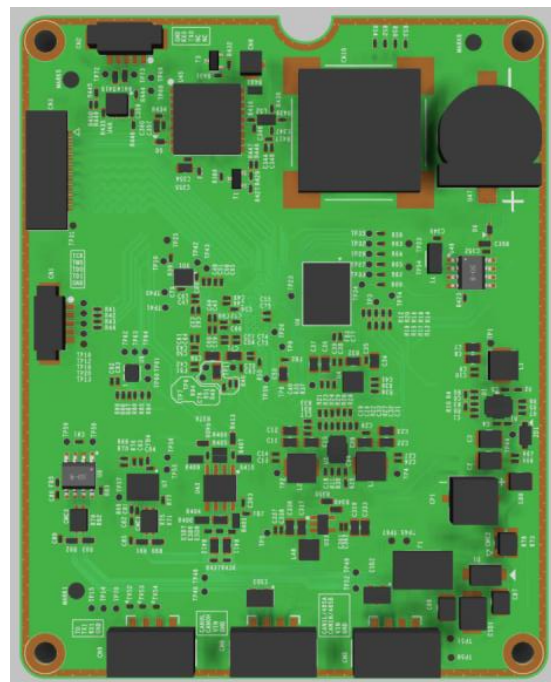
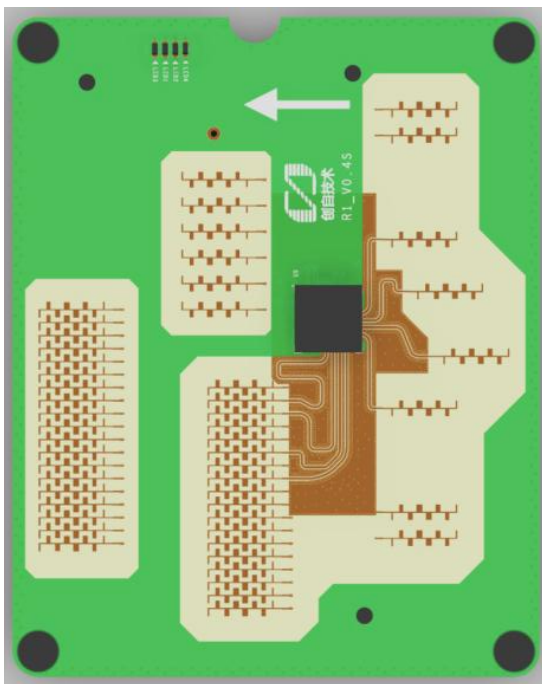
CN4 RS485 Interface Pin Functions

Signal	Function
485_P	RS485 Positive, Radar Data Interface
485_N	RS485 Negative, Radar Data Interface
GND	System Ground

CN5 CAN Interface Pin Functions

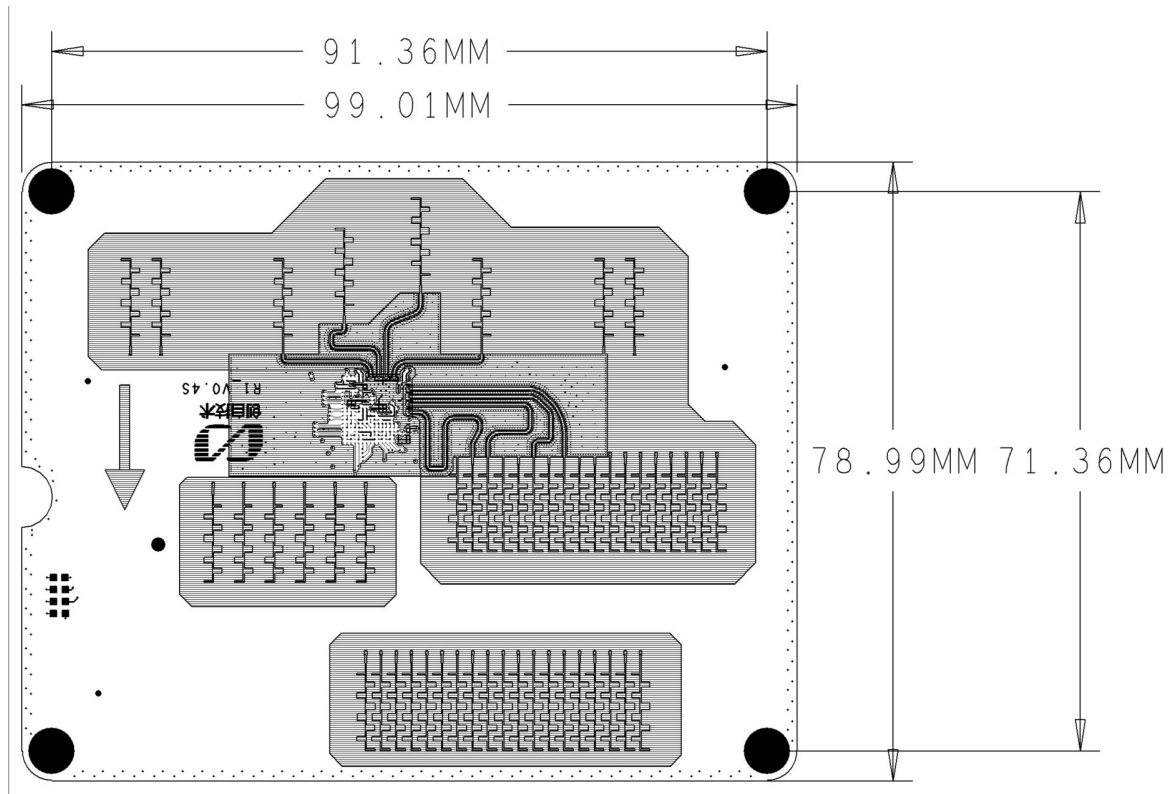
Signal	Function
CAN_FD_N	CAN Negative, Radar Data Interface
CAN_FD_P	CAN Positive, Radar Data Interface
GND	System Ground

## Overall Module Structure



## Dimension

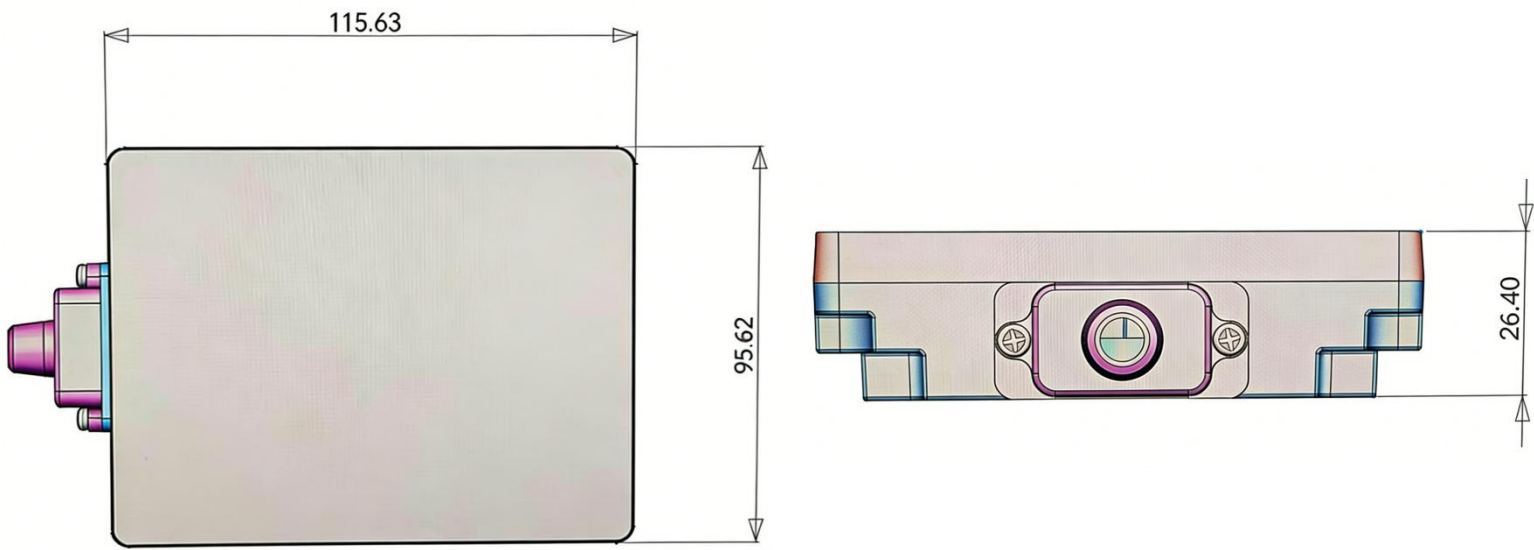
Module Outline Dimensions and Screw Hole Spacing (Screw Hole Diameter: 3.5mm)



## Overall Unit Appearance



## Overall Unit Dimensions (Unit: mm)



GRG Intelligent Technology Solution Co., Ltd.

Add: 9, 11 Kelin Road, Science City, High-tech Industrial Development Zone, Guangzhou, China

Email: [sales@inffitech.com](mailto:sales@inffitech.com)

Mobile/WhatsApp: 86-13902326917



www.inffitech.com