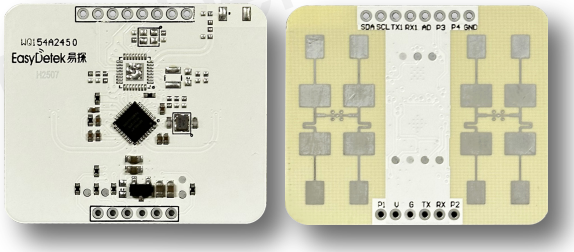
EDQ154CSpecification

24GHz Narrow Beam Series Modules



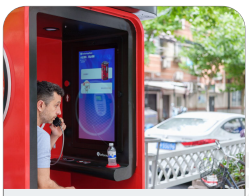
Product Features

- Narrow beam array antenna design
- Precision ranging of static point targets
- Small space occupancy detection
- Module expansion port rich, flexible definition of the function of each pin

Application Scenarios/Products


toilet


parking lots


telephone booths


gates

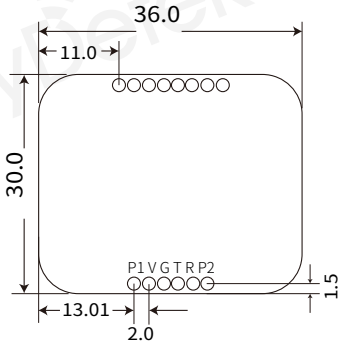

water level meter

Typical application

Parking space detection through range function, narrow beam characteristics allow it to be protected from the adjacent parking space

Product Dimension Drawing

Unit size：mm



EDQ154C Dimension tolerance: ±0.2
Welding hole of the row of pins：φ0.8

Pin Description

Pin	Description
P1	TBD
VIN	5V DC power supply
GND	GND ground
TX	UART serial TX output
RX	UART serial RX output
P2	TBD

Electrical Parameters

Input Voltage	5~12V
Operating current (conventional)	15mA±3mA
Center frequency	24.125GHz
3dB beam angle	50° (XZ plane) 24° (YZ plane)
Power consumption	75mW@5V

Functional Parameters

Ranging accuracy ①	±3cm
Measuring range	0.3~5m
Frame rate	10Hz

Output Parameter

Output method	UART
Output voltage	3.3V

Environment & Lifespan

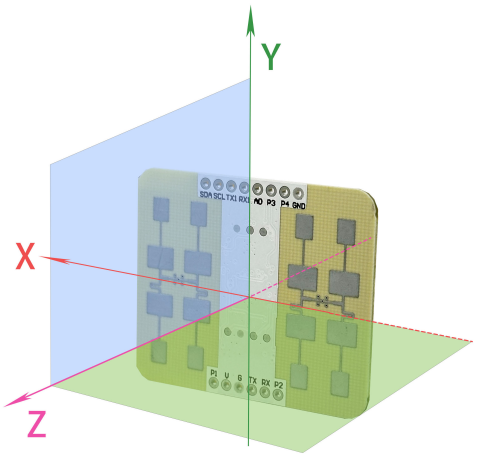
Operating temperature	-20~85°C
Storage temperature	-20~105°C

Remarks:

① Ranging accuracy test scenarios: to sensor indoor side mounted 1.2m installation, point target test, different targets have errors, subject to the actual test.

Detection Schematic

Schematic diagram of EDQ154C beam direction



3dB beam angle: 50° (XZ plane) 24° (YZ plane)

Product Naming Law

ED	Frequency Band	Product Categories	Product Subdivision	Product Number	photosensitive	Serial number
ED	Q	1	5	4C	N	01
EasyDetek	C 5.8GHz	1 Microwave sensor module	0 Ultra-low-power series	0-9, A-Z	Y Has light sensor	
	X 10.5GHz	2. Microwave radar switch	1 Flagship series		N no light sensor	
	Q 24GHz	3 Radar antenna	2 Short-distance series		P programmable	
	V 60GHz	4 MCU	3 Adjustable series			
	W 77GHz	5 Microwave power supply	4 External antenna series			
		6 IC	5 General Series			
		7 Other	6 To be defined			
		8 Networking	7 To be defined			
			8 Basic series			
			9 High altitude series			

Configuration Version Description

【material number】: EDQ154C-N-01

【PCB version number】:EDQ154_VA

【software version number】:Software:0x64A0

Historical Revision Record

Version	Time	Description	Note
V1.0	2025-02-28	First edition	-
V1.1	2025-05-07	Modify voltage parameters	
V1.2	2025-10-09	Updated typography, notes, and some parameters	

Precautions

1. When installing the radar sensor, if there is an aluminum substrate or other metal plate on the back, it should be raised to a certain height and kept at a distance of more than 5mm from the metal plane. It should not be close to or in contact with the metal plane; there should be no metal shielding or high-current cable covering in front of the radar sensor antenna, avoid facing the driving power supply, and try to stay away from the driving power supply's rectifier bridge, transformer, switch tube and other high-power devices.
2. The radar sensor has a good penetration effect on plastic and wood materials, but cannot penetrate metal or metal-coated materials. If the shell of the user's product is made of special materials such as glass, ceramic, carbon fiber, etc., please refer to the actual measured effect. If necessary, please contact Easydetek Technology's technical personnel for applicability debugging.
3. Excessive power ripple may interfere with the radar sensor and cause false alarms. It is recommended that the power supply ripple should be less than 100mV.
4. When multiple radar sensors are used in the same venue, the installation distance is too close, which may cause individual radar sensors to generate false alarms. It is recommended that the product installation distance is greater than 2m.
5.If the radar sensor is used together with a wireless communication module (NB, Bluetooth, WIFI, 2.4G module), the distance should be increased. It is recommended to keep a distance of more than 1m from high-power wireless communication devices such as routers and wireless hotspots during installation.
6. The light threshold of the radar sensor is the test value under the conditions of sunny environment, no shadow, and diffuse reflection of ambient light.
7. Easydetek Technology is committed to providing customers with high-quality and better experience radar sensors. When the product version is updated and iterated, no further notice will be given. If necessary, please contact our sales staff to obtain the latest product information.

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