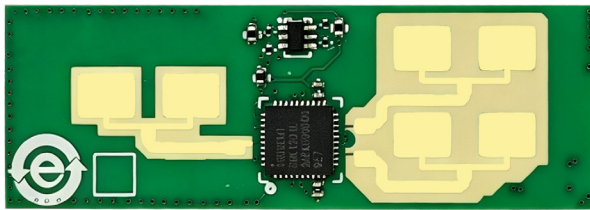


Gesture Recognition Radar Module ME73MS06



Datasheet
V 1.0.0



Version Note

Version	Details	Contributor(s)	Date	Notes
1.0.0	First edit	Vincle	2026.09.02	

Part Number

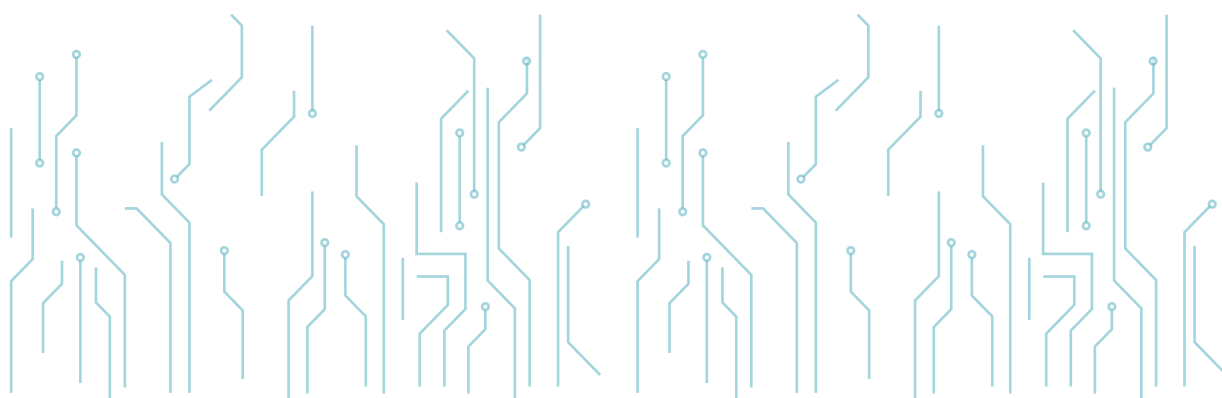
Model	Hardware Code
ME73MS06	-

Click the icon to view and download the latest product documents electronically.
https://en.minewsemi.com/file/ME73MS06_Datasheet_C_EN.pdf



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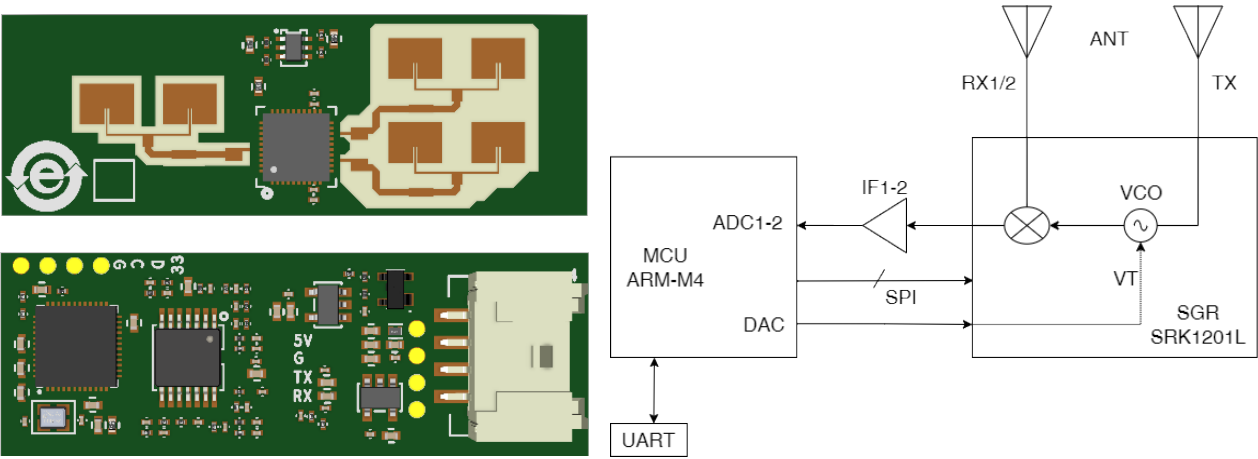
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1 OVERVIEW

The ME73MS06 is an IoT radar module based on the SGR 24G radar chip. It features one transmit channel and two receive channels and operates in Frequency-Modulated Continuous Wave (FMCW) mode to detect the distance and angle of targets. Its primary function is gesture recognition.

2 SYSTEM ARCHITECTURE



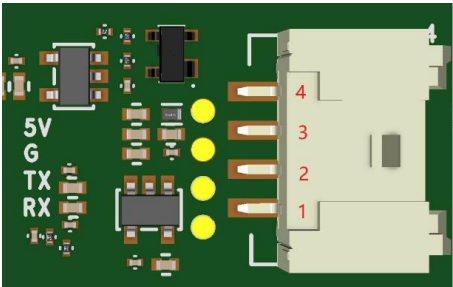
3 TECHNICAL PARAMETERS

Parameter	Minimum	Typical	Maximum	Unit	Test Conditions
Supply Voltage VDD	4.0	5	5.5	V	
Operating Current		140		mA	Average current @ 5V
		285		mA	Maximum current @ 5V
Transmit EIRP		12		dBm	
Transmit Antenna Half-Power Beamwidth		100		deg	Horizontal
		50		deg	Vertical
Receive Antenna Half-Power Beamwidth		100		deg	Horizontal
		50		deg	Vertical
Interface Level VOH/VIH	0.7*VDD		VDD	V	Internal 10k ohm open drain pull-up
Interface Level VOH/VIL	0		0.7	V	

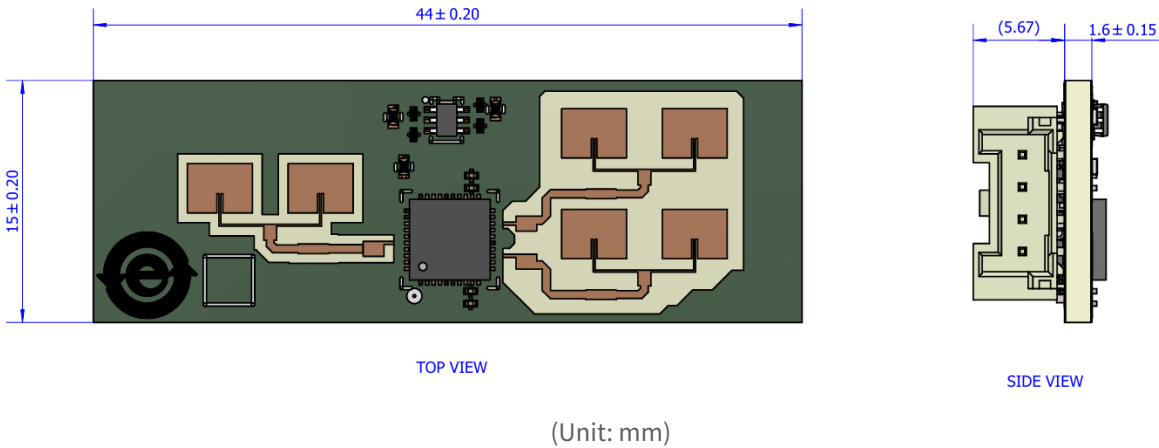
4 INTERFACE INFORMATION

The module uses a 4-pin, 2.0 mm-pitch, horizontal SMT PA-series connector (PA-4AWB). The pin definition is shown below:

Pin	Definition	Description
1	RX	Radar UART receive
2	TX	Radar UART transmit
3	GND	Ground
4	VCC	5V power supply



5 STRUCTURE AND DIMENSIONS



6 COMMUNICATION PROTOCOL

6.1 UART Protocol

The module supports a UART text protocol		
1	Baud rate	921600
2	Data bits	8bit
3	Stop bits	1
4	Parity check	None

6.2 Communication Transmission Protocol

Data is transmitted in ASCII format:
num=0 count=0\r\n
num=0 count=0\r\n
num=0 count=0\r\n
Here, \r\n represents carriage return and line feed (CRLF), num indicates the gesture type, and count indicates the number of hand waves.

Examples:
num=1,2 indicates a single left or right hand wave (left or right depends on the installation orientation).
num=31, 32 indicates multiple left and right hand waves.
num=3 indicates a double-tap gesture.

A dedicated host PC application is provided for use with the module. The application interface is shown below.



7 TECHNICAL REQUIREMENTS

7.1 Environmental Requirements

(1)Temperature and Humidity Requirements

Item	Operating Environment
Temperature Range	-40 °C to + 85°C
Relative Humidity	0 to 85%RH

(2)Operating Altitude: No specific requirement.
(3)Environmental Compliance: Complies with China RoHS Requirements.

7.2 Special Installation Requirements

Do not place metal panels or other objects that may shield electromagnetic signals in front of the radar.

8 PACKAGING AND STORAGE

- Each outer package shall be labeled with the manufacturer's product model, product name, quantity, lot number, and other relevant information.
- The inner and outer packaging shall be free from damage, and the components shall be properly contained with no spillage or loss.

9 STORAGE CONDITIONS

- Please use this product within 6 months after signing the receipt.
 - This product should be stored without opening the package at an ambient temperature of 5~35°C and a humidity of 20~70%RH.
 - This product should be left for more than 6 months after receipt and should be confirmed before use.
 - The product must be stored in a non-corrosive gas (Cl₂, NH₃, SO₂, NO_x, etc.).
 - To avoid damaging the packaging material, do not apply any excessive mechanical shocks, including but not limited to sharp objects adhering to the packaging material and product dropping.
- This product is suitable for MSL2 (based on JEDEC standard J-STD-020).
 - After opening the package, the product must be stored at ≤30°C/<60%RH. It is recommended to use the product within 3-6 months after opening the package.
 - When the color of the indicator in the package changes, the product should be baked before welding.
- Baking is not required for one year if exposure is limited to <30°C and 60%RH. Refer to MSL2 for exposure criteria for moisture sensitivity level. If exposed to (≥168h@85°C/60%RH) conditions or stored for more than one year, recommended baking conditions.
 1. 120 ±5/-5°C, 8 hours, 1 timeProducts must be baked individually on heat-resistant trays because the materials (base tape, reel tape, and cover tape) are not heat-resistant, and the packaging material may be deformed at temperatures of 120 °C;
 2. 90 °C ±8/-0 °C , 24hours, 1timesThe base tape can be baked together with the product at this temperature. Please pay attention to the uniformity of heat.

10 HANDLING CONDITIONS

- Be careful in handling or transporting products because excessive stress or mechanical shock may break products.
- Handle with care if products may have cracks or damages on their terminals. If there is any such damage, the characteristics of products may change. Do not touch products with bare hands that may result in poor solder ability and destroy by static electrical charge.

11 QUALITY

Cognizant of our commitment to quality, we operate our own factory equipped with state-of-the-art production facilities and a meticulous quality management system. We hold certifications for ISO9001, ISO14001, ISO27001, OHSAS18001, BSCI.

Every product undergoes stringent testing, including transmit power, sensitivity, power consumption, stability, and aging tests. Our fully automated module production line is now in full operation, boasting a production capacity in the millions, capable of meeting high-volume production demands.

12 COPYRIGHT STATEMENT

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The company has the right to change the content of this manual according to the technological development, and the revised version will not be notified otherwise. Without the written permission and authorization of the company, any individual, company, or organization shall not modify the contents of this manual or use part or all of the contents of this manual in other ways. Violators will be held accountable in accordance with the law.

13 RELATED DOCUMENTS

- [MinewSemi_Product_Naming_Reference_Manual](https://en.minewsemi.com/file/MinewSemi_Product_Naming_Reference_Manual_EN.pdf)
https://en.minewsemi.com/file/MinewSemi_Product_Naming_Reference_Manual_EN.pdf
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