

# **User Manual**

**HuiZhou BoShiJie Technology CO.,Ltd**

**Product name: GSM wireless data module**

**Model: RC10**

**FCC ID : 2AQSK- RC10**

## Overview

The RC10 module is a two-in-one module (2G wireless communication and positioning) based on the MTK 2503D, Size:24 mm×15 mm×3.0 mm, Total 57PIN, Suitable for GSM networks for global roaming. The RC10 module with a Abundant interface and a powerful software support platform. With secondary development software and hardware platform, it can support a variety of peripheral devices to meet the user's business function needs.

## I . The Appearance Of The Module



## II . Technical specifications

Main Technical Specifications Of The Rc10 Module

Product Feature	Description
Power Voltage	3.3V~4.6V (Recommended value4.0V)
Working Frequency	Quad-band: GSM850/EGSM900/DCS1800/PCS1900 Module can search for frequency bandsautomatically
GPRSData characteristics	GPRSData downlink transmission: maximum85.6Kbps GPRSData uplink transmission: maximum42.8Kbps

### III. Pin definition

RC10 is an application mode with module as the main processor

#### 1. Power supply

PIN Name	PIN No.	Description	Remark
VBAT	37、 38	Power supply	Vmax=4.6V Vmin=3.3V Vnorm=4V
VBAT1	11	GPS power supply	Connect with 37 &38
VIO28	19	Output 2.8V	Max current 100mA
VRTC	47	RTC clock output	2.8V/2mA
GPS_RTC	15	GPS clock input	
GND	1、 29、 31、 36、 48、 55、 57	AGND	

#### 2. Serial Port

PIN Name	PIN No.	Description	Remark
UTXD1	23	Main Port: Print、 Download	Serial port power supply 2.8V
URXD1	22		
GNSS_UART_T X	46	GPS serial port	
GNSS_UART_R X	45		
UTXD3	6		Serial port power supply2.8V
URXD3	7		

#### 3. SIM card port

PIN Name	PIN No.	Description	Remark
SIM1_SCLK	54	SIM card clock pin	
SIM1_SRST	52	SIM card reset pin	
SIM1_SIO	51	SIM card data pin	
VSIM1	53	SIM card power-up pin	Power-up 1.8V or 3V

#### 4. Booting

PIN Name	PIN No.	Description	Remark
PWRKEY	34	Module boot pin	Lower boot

#### 5. Audio interface

PIN Name	PIN No.	Description	Remark
MIC_N0	44	Audio input	

MIC_P0	43		
SPKP1	42	Audio output	
SPKN1	41		

#### 6. AD port

PIN Name	PIN No.	Description	Remark
AD0	40	AD detect	Max voltage 2.8V
AD1	39	AD detect	Max voltage 2.8V

#### 7. Antenna

PIN Name	PIN No.	Description	Remark
ANT1	30	GSM Antenna	
ANT2	56	GPS Antenna	

#### 8. USB download

PIN Name	PIN No.	Description	Remark
VBUS	35	Voltage 5V	Download detect
USB_DM	50		
USB_DP	49		

#### 9. I2C port

PIN Name	PIN No.	Description	Remark
SCL	16	I2C clock pin	Voltage 2.8V
SDA	17	I2C data pin	Voltage 2.8V

#### 10. GPIO port

PIN Name	PIN No.	Description	Remark
GPIO_0	21	Max Voltage 2.8V	
GPIO_1	18	Max Voltage 2.8V	
GPIO_2	13	Max Voltage 2.8V	
GPIO_3	14	Max Voltage 2.8V	
GPIO_4	9	Max Voltage 2.8V	
GPIO_5	8	Max Voltage 2.8V	
GPIO_6	5	Max Voltage 2.8V	
GPIO_7	10	Max Voltage 2.8V	
GPIO_8	12	Max Voltage 2.8V	
GPIO_10	26	Max Voltage 2.8V	
GPIO_11	25	Max Voltage 2.8V	
GPIO_12	20	Max Voltage 2.8V	

#### 11. Others

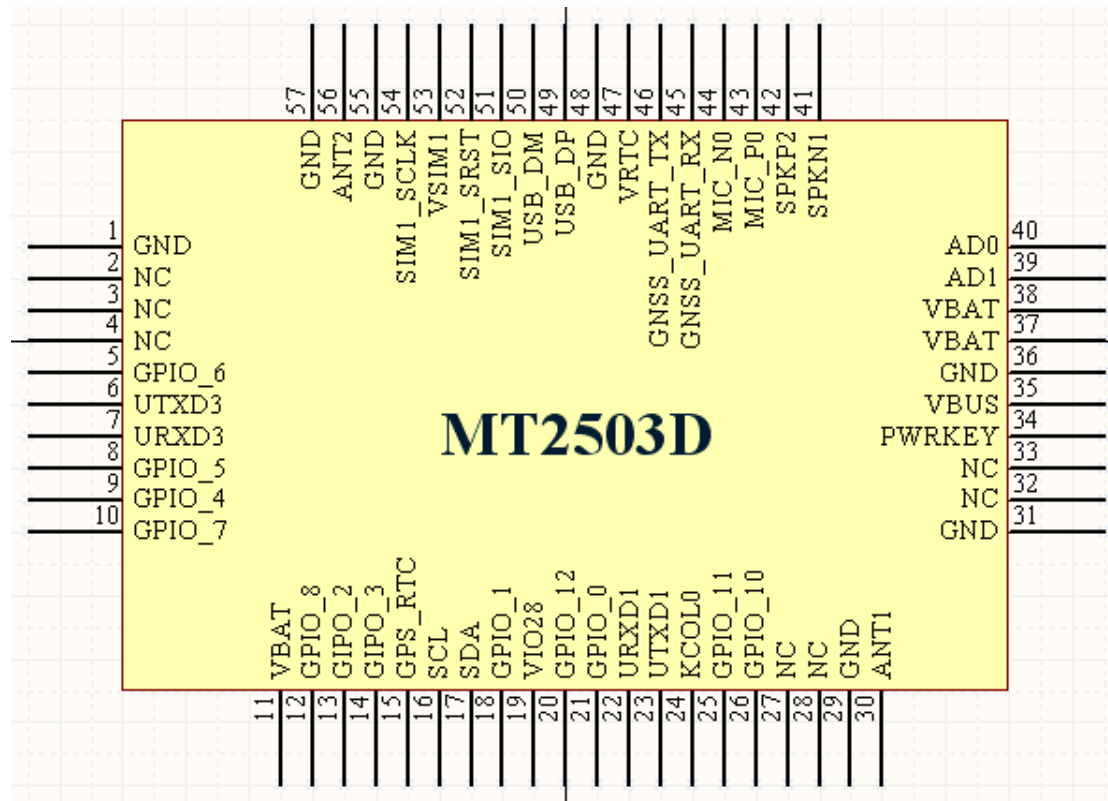
PIN Name	PIN No.	Description	Remark
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KCOL0	24	USB mode select	
NC	2、3、4、27、 28、32、33	Hanging	

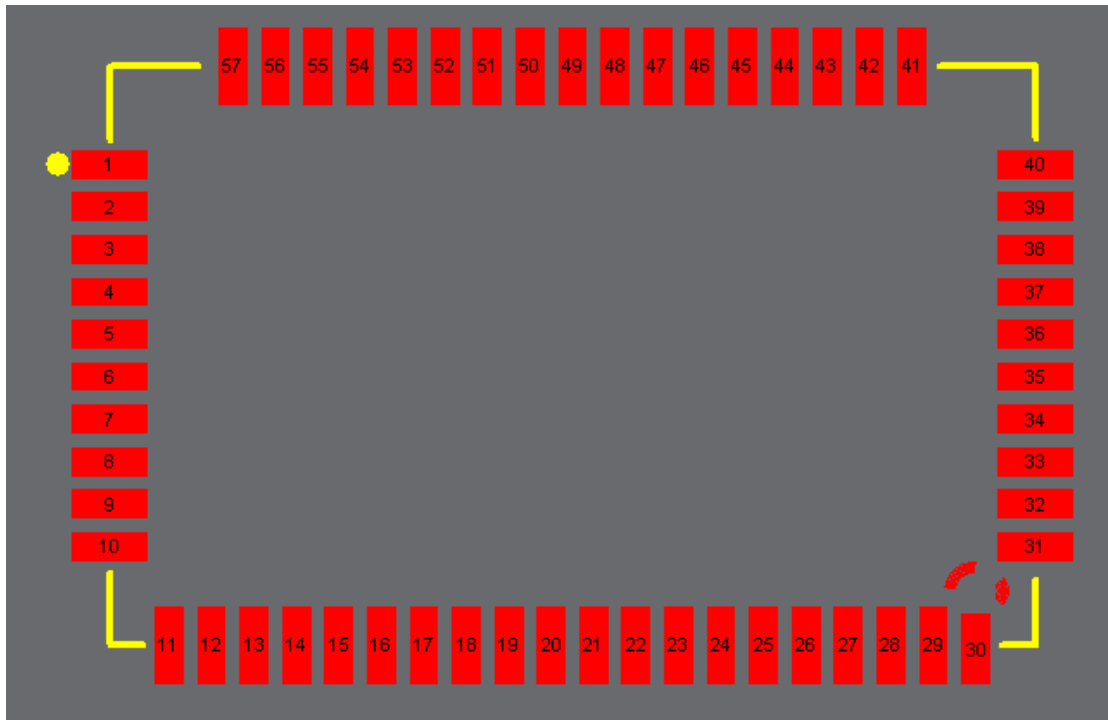
## IV. Attentions

- 1、 Working voltage: 3.3V~4.6V, typical voltage4.0V
- 2、 Working current: Max working current 3A
- 3、 Standby power consumption: 18mA
- 4、 Working temperature: -20 ~80 °
- 5、 Module size: 24\*15mm

## V. Schematic diagramencapsulate



## VI. PCB encapsulate



Installation warning statement

- (a) product should not collocate with other radio
- (b) GSM wireless data module is designed to comply with the ID statement. FCC ID is 2AQSK- RC10. The host system using GSM wireless data module, should have label indicated FCC ID 2AQSK- RC10
- (c) If you buy this module, you only use the antenna (The Gain is 1.80dBi for GSM850 and The antenna is 2.50dBi for GSM1900) of GSM wireless data module, Do not use the other antenna
- (d): The GSM wireless data module is Only applicable for the mobile device.

**FCC Statement**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception,

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**FCC RF Radiation Exposure Statement**

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body. for example Used in Such as Car locator, etc.