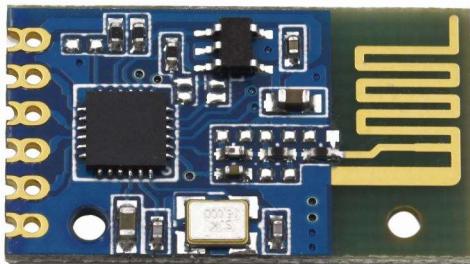


Wireless serial port module LC12S user's manual

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1. Introduction

LC12S adopt the latest 2.4G SOC Technology, characterized by development-free, line-of-sight 120 m. There is no need to switch the transceiver, the serial port is transparently transmitted. It provides a communication protocol and can quickly debug successfully. Users only need to understand the serial port communication, without complicated wireless communication knowledge, can complete the Development of line communication products. No data packet size limit, short delay

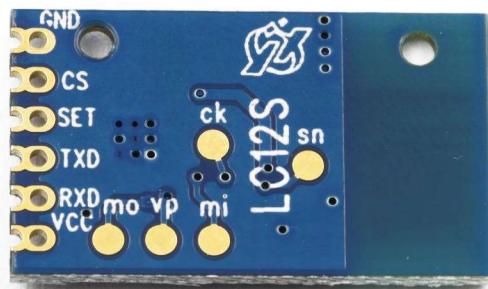
2. Features

- Half-duplex communication, strong anti-interference ability
- 2.4GHz ISM frequency band, no need to apply for use
- Maximum output power 12dBm
- Receiving sensitivity -95dBm
- Transmitting working current 40mA@12dBm
- Receive working current 24mA
- Sleep current 3.5uA
- Standard TTL level UART serial port
- The working frequency can be set, and multiple modules are frequency division multiplexed without interfering with each other
- Communication protocol conversion and RF transceiver switching are automatically completed, and the user does not need to interfere, and it is easy to use
- Communication rate 0.6kbps -38.4kbps, user can configure through AT command
- Long transmission distance, up to 120 meters in open area without interference
- Small size SMD package, easy to install

3. Application field

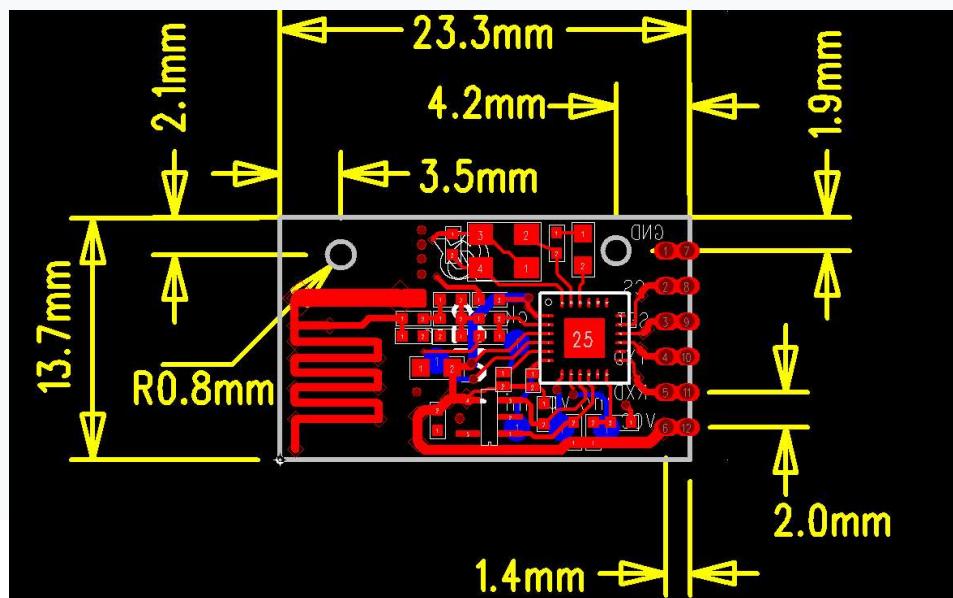
Remote telemetry data collection Smart home industrial control AGV robot

4 . Pin definition

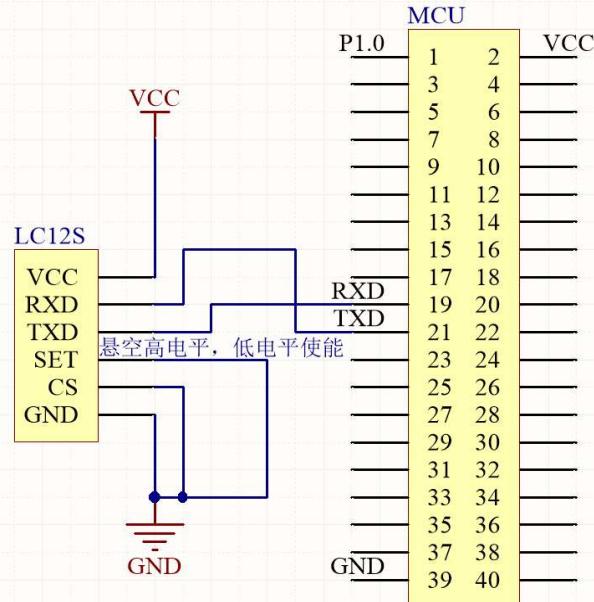


Pin	Pin name	Pin function	description
1	VCC	power supply	Power supply (connect 2.2~3.6V) typical 3.3V
2	RXT	Module data output TTL level	Serial communication data reception
3	TXD	Module data input TTL level	Serial communication data transmission
4	SET	Set bit	Configuration parameter enable (low level enable parameter configuration Set, floating is high)
5	CS	Dormant	When the pin is connected to low level, it works, while floating is high voltage level
6	GND	power supply	Grounded

5 . Product Size



6. Typical application diagram



7. Parameter setting

Parameter	Set up
1	0xaa (Command byte)
2	0x5a (Command byte)
3, 4	Self ID 2 byte (Module ID)
5, 6	Net ID 2 byte (Networking ID)
7	NC (Must be 0x00)
8	RF Power 1 byte
9	NC (Must be 0x00)
10	Baud rate 1 byte
11	NC (Must be 0x00)
12	RF Channel 1Byte(0~127)
13, 14	NC (must be 0x0000)
15	NC (must be 0x00)
16	Length 1Byte (0x12)
17	NC (must be 0x00)
18	CheckSum 1Byte(Add all the above bytes to reserve the lower 8 bits)

Data Format :

Host sends:0xaa+0x5a+Module ID+Network ID (Must be the same)+0x00+RF Transmit power+0x00+Serial port rate +0x00+RF Channel selection+0x0000+0x00+0x12 (Byte length)+0x00+Sum check byte

note: Sum check byte = accumulated bytes of all parameters

Module responded successfully

E.g

Host send :AA5A22331122000000040064000000120006

Refer to the following data table, the above configuration parameter setting wireless module is:

RF Power: 12dbm

Baud rate: 9600bps

RF Channel: 100

ID: 0x2233

Checksum: 06

Return data: AA5B22331122000000040064000000120007

Operating instructions:

After power on, when CS (Power-down) Work when the pin is connected to low level, SET The pin is to set the parameter flag. Pull it low or short to ground to switch the module to the parameter configuration mode. The pin can be set when the pin is low. TXD with RXD Pin works at high level .

Serial port settings

Once in the setting state,SET The pin configuration must be low, CS The pin must be connected to a low level, and the serial port setting must be a data bit
8, baud 9600, checkbit N, Stopbit 1, Air Speed 1mbps

RF power setting:

Set transmit power [parameter] occupies 1 byte

Setting: 0-14 level

Parameter	RF Power
0	12 dbm
1	10 dbm
2	9dbm
3	8dbm
4	6dbm
5	3dbm
6	0dbm
7	-2dbm
8	-5dbm
9	-10dbm
10	-15dbm
11	-20dbm
12	-25dbm
13	-30dbm

14	-35dbm
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Serial port baud rate:

Set the transmission rate of the serial interface, [Parameter] occupies 1 byte
setting range 600 1200 2400 4800 9600 19200 38400

Parameter	Baud Rate
0	600bps
1	1200bps
2	2400bps
3	4800bps
4	9600bps
5	19200bps
6	38400bps