USR-C322 Hardware Manual

File version: 1.2.01

Content

1. Product Overview

1.1. Dimension

Module size:18.22*26.65*2.80mm, error ±0.2mm, pin size as follows:
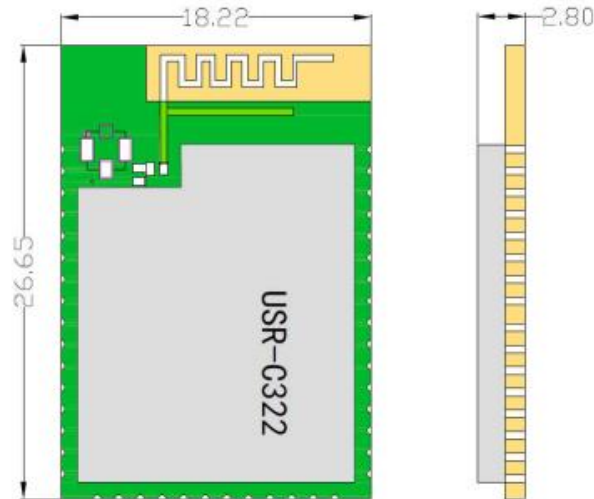
Figure 1 Dimension

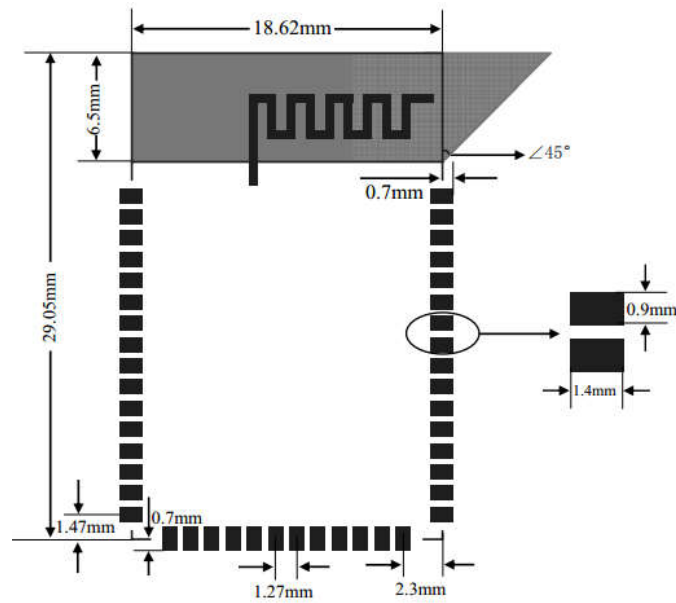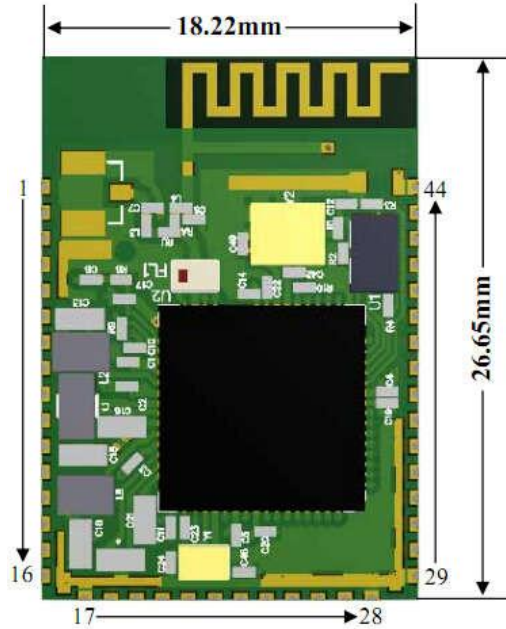## 1.2. Encapsulation Size

Figure 2 Encapsulation size

You can download PCB library from **http://www.usriot.com/pcb-library-usr-c322-wifi-module/**.

1.3. Pin Definition

PIN	Name	Definition
1	GND	Power Ground
2	GPIO	GPIO
3	GPIO	GPIO
4	nReset	Reset module, take effect in low level
5	SOP2	Pull up when upgrading the firmware version by serial port
6	SOP1	Pin floating
7	SOP0	Pin floating
8	ANA DC-DC	RF power output pin, pin floating
9	NC	Not available
10	NC	Not available
11	GND	Power Ground
12	GND	Power Ground
13	VBT_CC	Power input pin, connect to 3.3V
14	VDD_ANA2	Power input pin, connect to 3.3V
15	GPIO	GPIO
16	NC	Not available
17	GND	Power Ground
18	GPIO	GPIO
19	UART0_TX	Serial port 0 TX Pin
20	UART0_RX	Serial port 0 RX Pin
21	nReload	Take effect in low level.Keep low level 1-3s to enter simplelink mode,over 3s to restore factory settings

22	nReady	Indication pin for module working normally, take effect in low level. Can connect to external LED.
23	nLink	Indication pin for module WIFI connecting successfully, take effect in low level. Can connect to external LED
24	UART0_CTS	Serial port 0 flow control CTS pin
25	UART0_RTS	Serial port 0 flow control RTS pin, can control the RS485 enable/disable
26	GPIO	GPIO
27	GPIO	GPIO
28	GND	Power Ground
29	GND	Power Ground
30	UART1_TX	Serial port 1 TX Pin
31	UART1_RX	Serial port 1 RX Pin
32	GPIO	GPIO
33	GPIO	GPIO
34	GPIO	GPIO
35	GPIO	GPIO
36	GPIO	GPIO
37	GPIO	GPIO
38	GPIO	GPIO
39	NC	Not available
40	NC	Not available
41	GPIO	GPIO
42	NC	Not available
43	NC	Not available
44	GND	Power Ground

Figure 3 Pin definition

2. Hardware Design
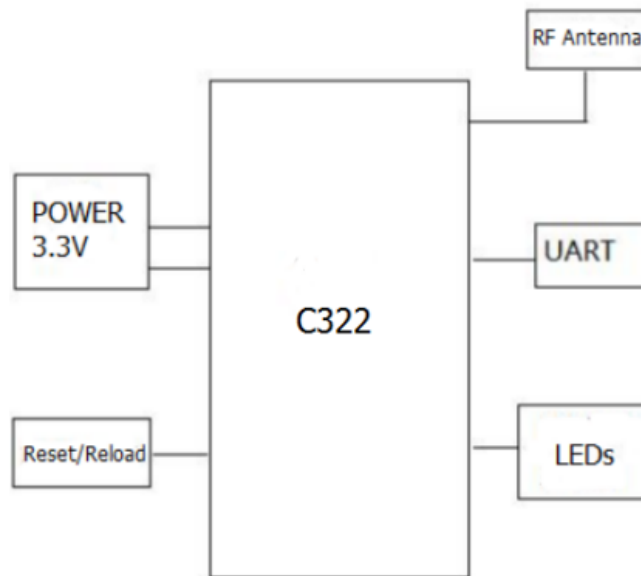
2.1. Typical Connection

Figure 4 Typical connection

2.2. Power Interface

Switching power supply is recommended. Working voltage VCC range from 3.0V~3.6V, 3.3V is recommended. Power the module by main power pin, pin interface is in parallel with appropriate energy-storage capacitance and high frequency capacitance. Circuit diagram as follows:
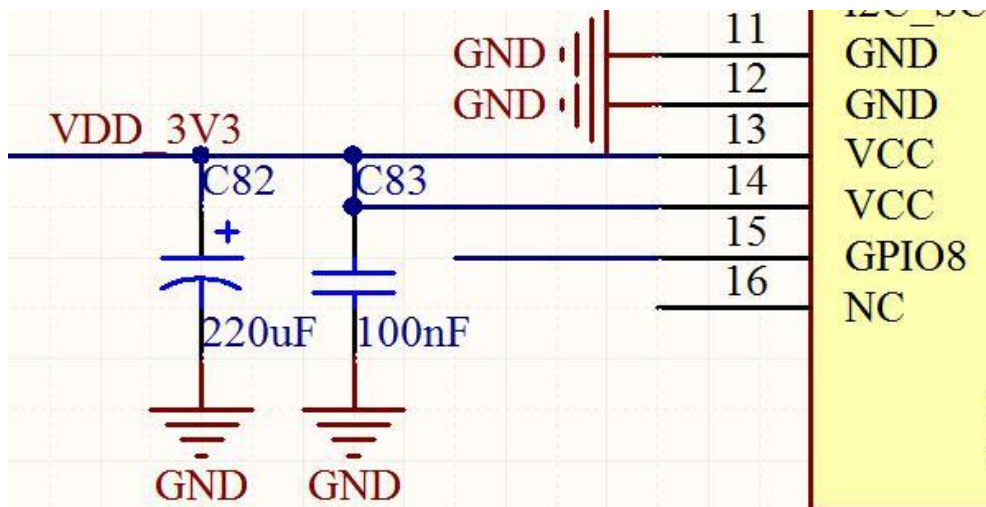

Figure 5 Power interface

2.3. UART Interface

When communicate to MCU with 3.3V, just connecting TXD of module to RXD of MCU and RXD of module to TXD of MCU.

When communicate to MCU with 5V, switching circuit is necessary.
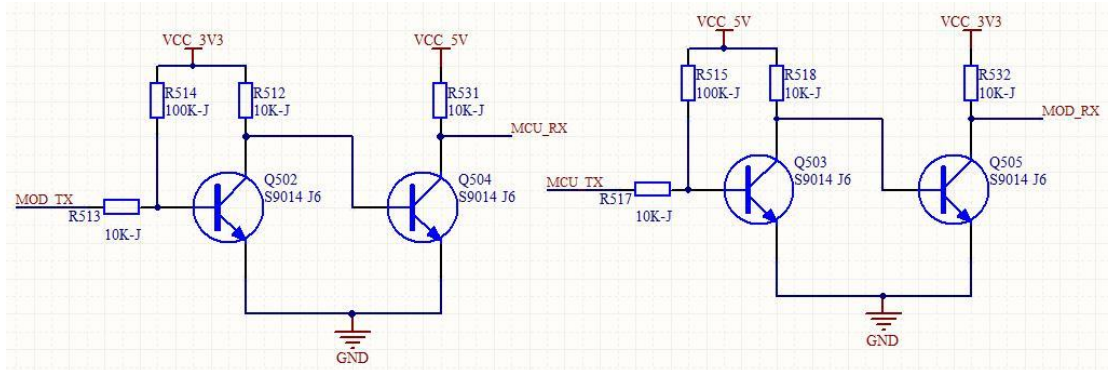
Switching circuit diagram as follows:

Figure 6 UART interface

2.4. Reset and Reload

nReload: nReload pin can connect to external button or configuration pin. Press button 1s to 3s to enter simplelink mode, press over 3s to restore factory settings. nReload pin should connect to external 4.7k-10k Ohm pull-up resistor.

nReset: Resetting the module and taking effect in low level. nReset pin connect to internal 100K Ohm pull-up resistor to 3.3V. Press over 0.5s and release to reset the device.
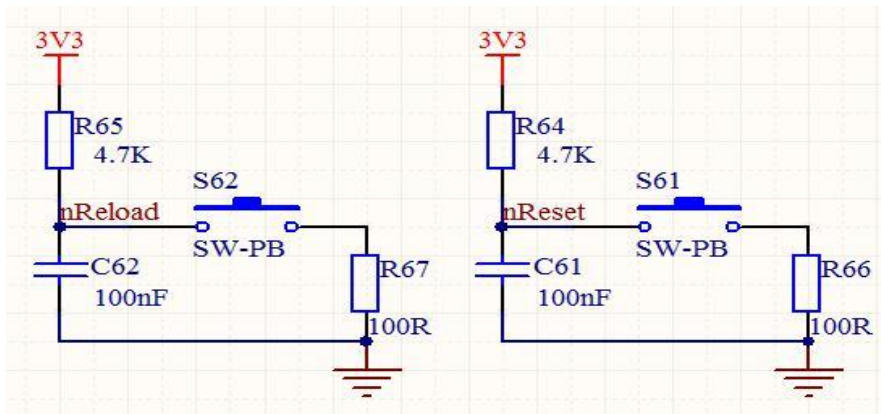
Circuit diagram as follows:

Figure 7 Reset and Reload

2.5. Antenna

USR-C322 have internally installed antenna.

Note:

1. On PCB board, user can't place component on antenna part.
2. Keep antenna away from metal, inductance or some other interference source.
3. Ensure antenna locate on margin of PCB board.

3. Contact

Company: Jinan USR IOT Technology Limited
Address: Floor 11, Building No.1, No.1166, Xinluo Street, Gaoxin District, Jinan city, Shandong province, 250101 China
Tel: 86-531-88826739
Web: **www.usriot.com**
Support: **h.usriot.com**
Email: **sales@usr.cn**

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5. Update History

2017-09-20   V1.2.01 created.