USER MANUAL

6-in-1 Serial Converter

Tutorial link

Google Drive

If you have technical problems or cannot find the information that you need in the provided documents, please contact our support team. Our engineering team is committed to providing the required support necessary to ensure that you are successful with the operation of our AHRS sensors or its accessory.

Contact

Technical Support Contact Info

Contents

1 Description

Six-in-one Multifunctional Serial adater supports usb-ttl, usb-rs232, usb-rs485, ttl-232, ttl-485, 232-485 converting function, freely convert to each other

● USB specification 2.0 is compatible with Windows XP/7/8/10 32bits/ 64bits, Linux, Wince, Mac, Vista, etc.

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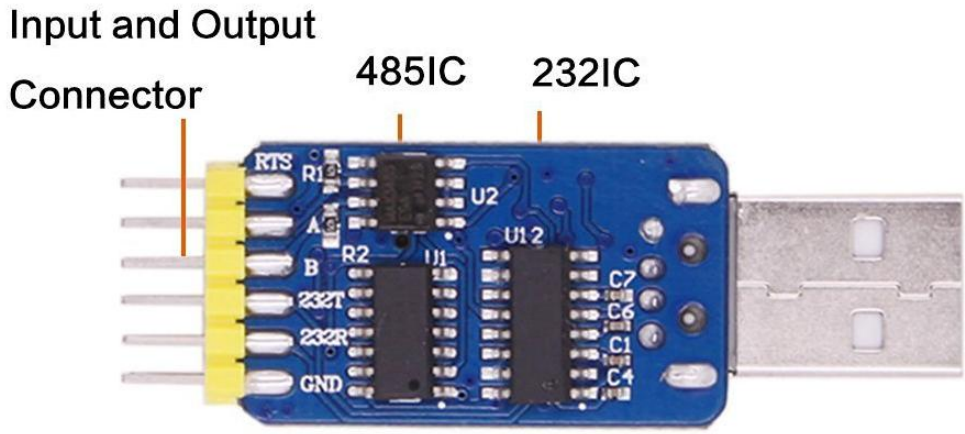
● The indicator lamp uses red, yellow and green three colors to indicate the working state of the equipment. Com port selects the USB (yellow light) to be on normally, the data receives the RX (red light) flicker, the data sends the TX (green light) flicker.

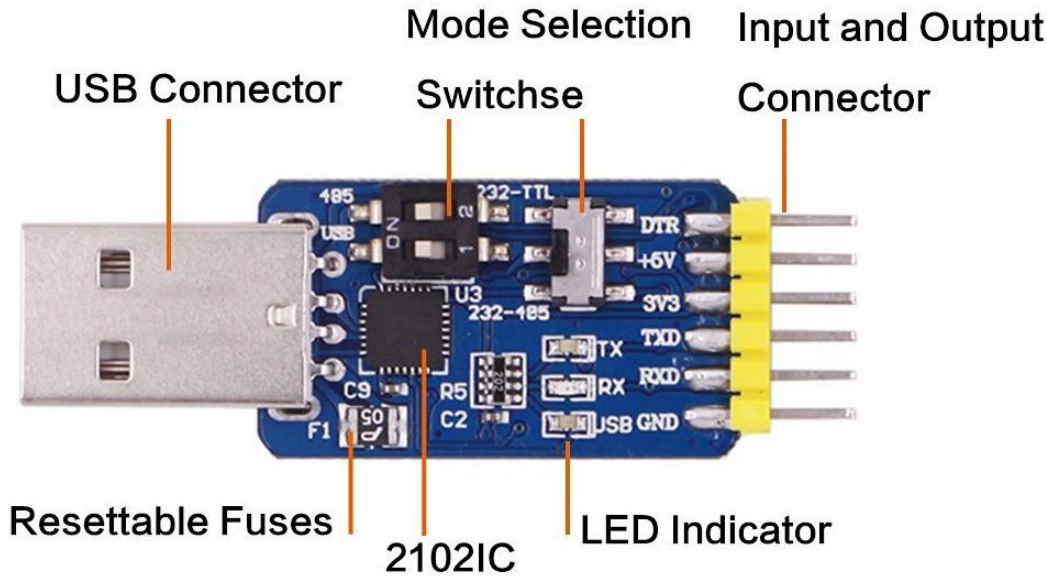
● Small size, high stability, easy to carry.

● Compatible with 3.3V/5V voltage input and output, can supply power to the SCM.

● Adopt reliable edge switch, 10 times toggle life, ensure stable switching of working mode.

2 Pin Description





Name	Function
+5V	Module power, 5V input, output
3V3	Module power, 3.3V output
RX	Serial data input, TTL level
TX	Serial data output, TTL level
232R	Serial data input, 232 level
232T	Serial data output, 232level
A	RS485 Signal line A
B	RS485 Signal line B
GND	GND
DTR	Data terminal preparation/control flow output
RTS	Request to send

3 Sizes

4 Using Method

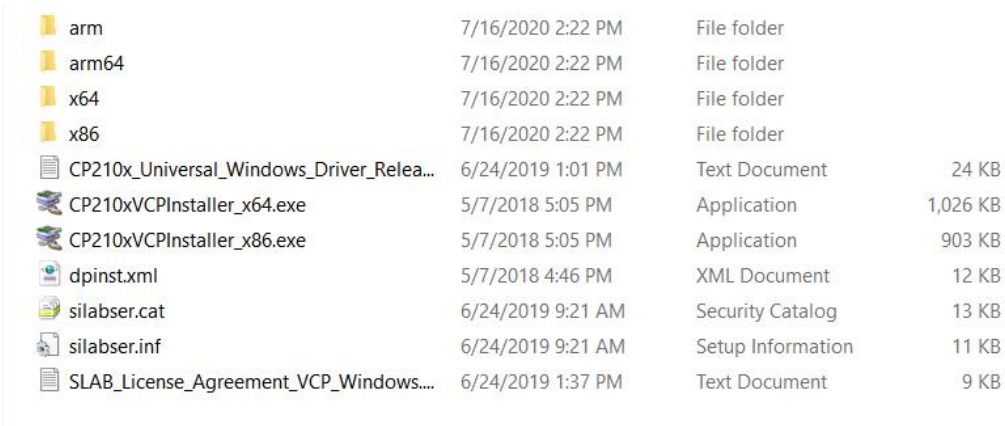
4.1 Driver Installation

For 32 bit system, please install CP210xVCPInstaller_x86.exe
For 64 bit system, please install CP210xVCPInstaller_x64.exe

Link to CP2102 Driver

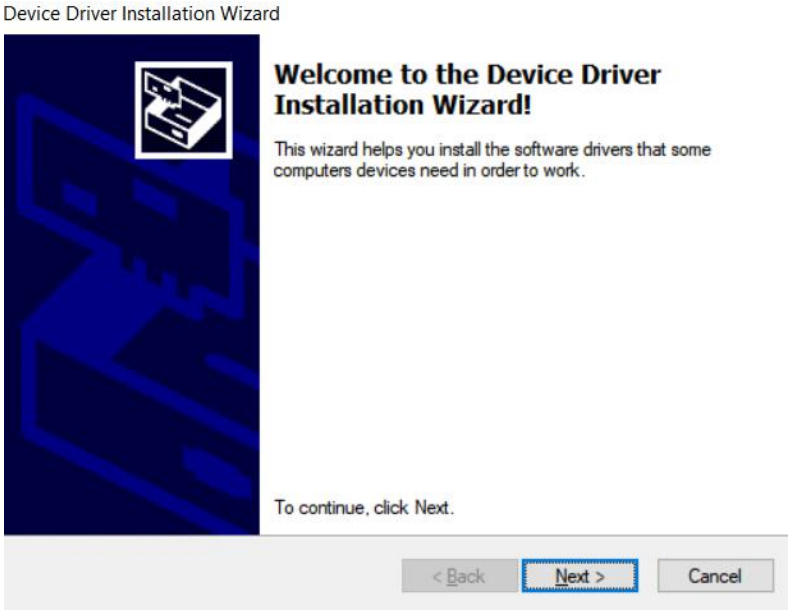
Step 1.
Download the driver from below link
Silicon Usb-to-uart-bridge-vcp-drivers

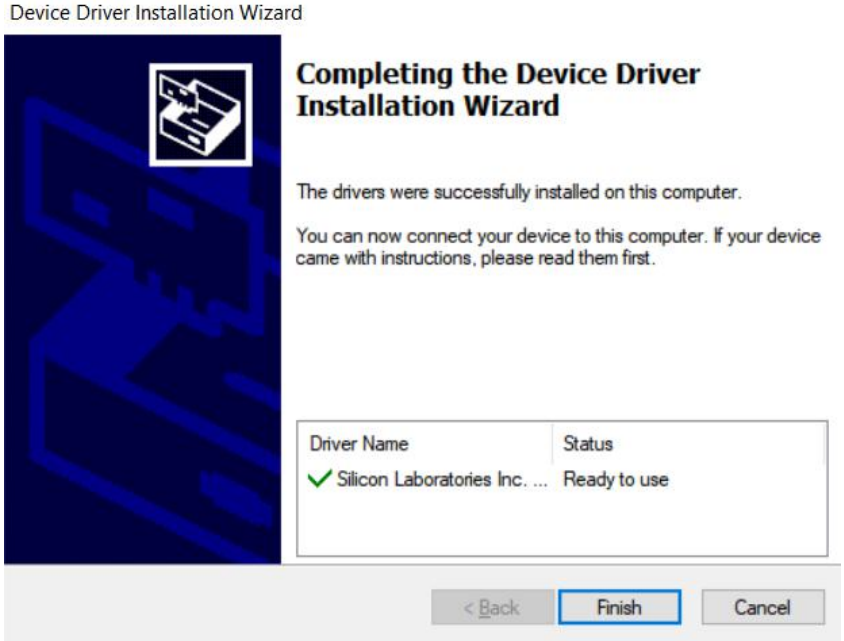
Step 2.
Unzip the file and run the installer depending to your computer type



Step 3.

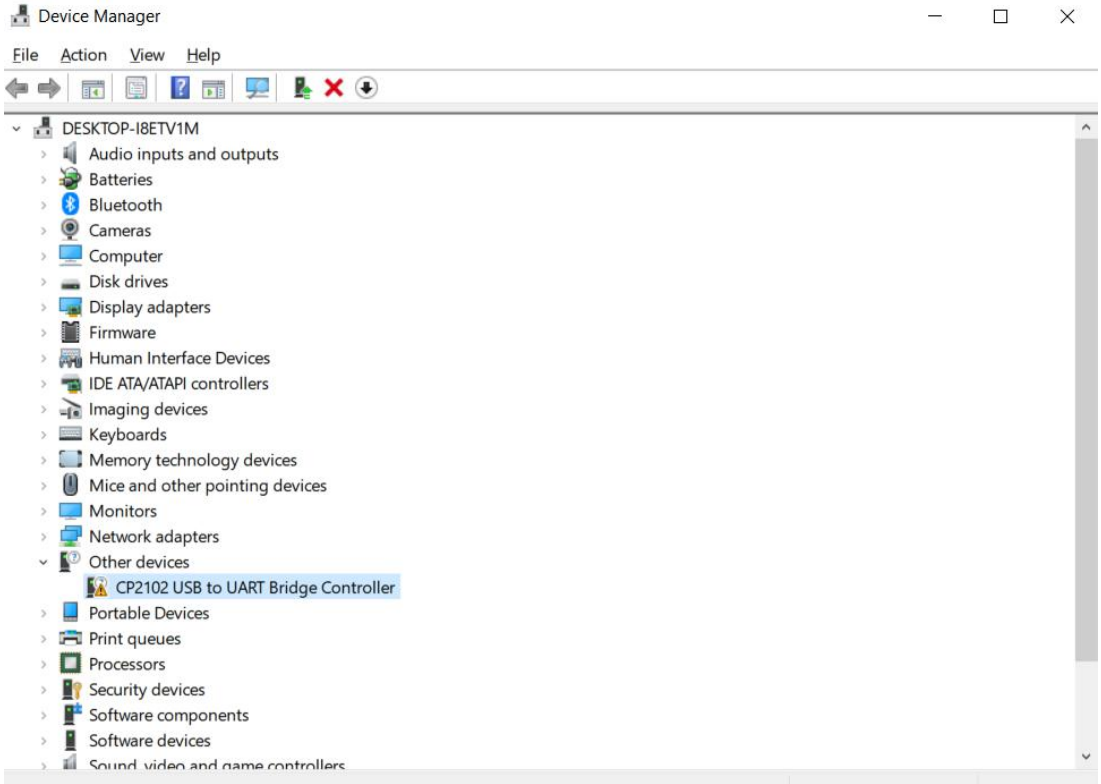
Install the driver by following the steps.





4.2 Check Port Number

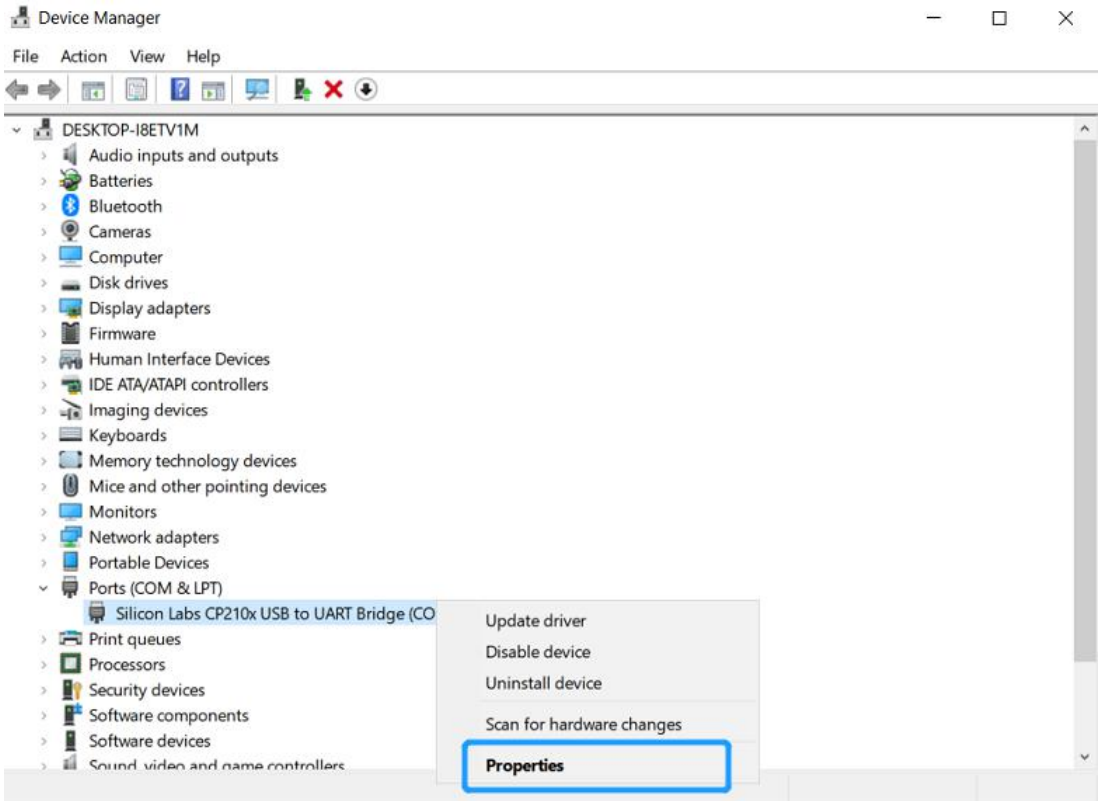
Right click my computer\management\Device manager\Port（COM&LPT）. You can see the generated port number, the port number is COM3.



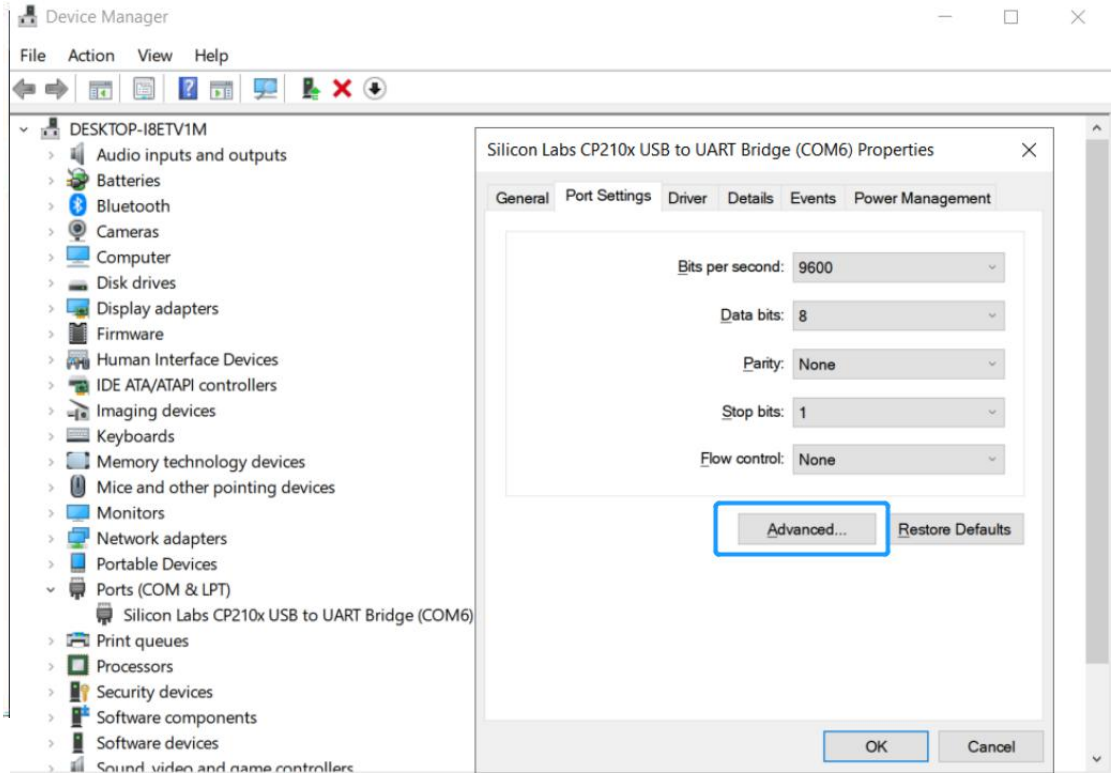
Change port number

Sometimes we insert multiple USB serial module into our computer,and sometimes we want serial numbers to be allocated according to our expectations, so we need to manually adjust the serial number, if the above serial port 3 is changed to serial port 4, the operation steps are as follows:

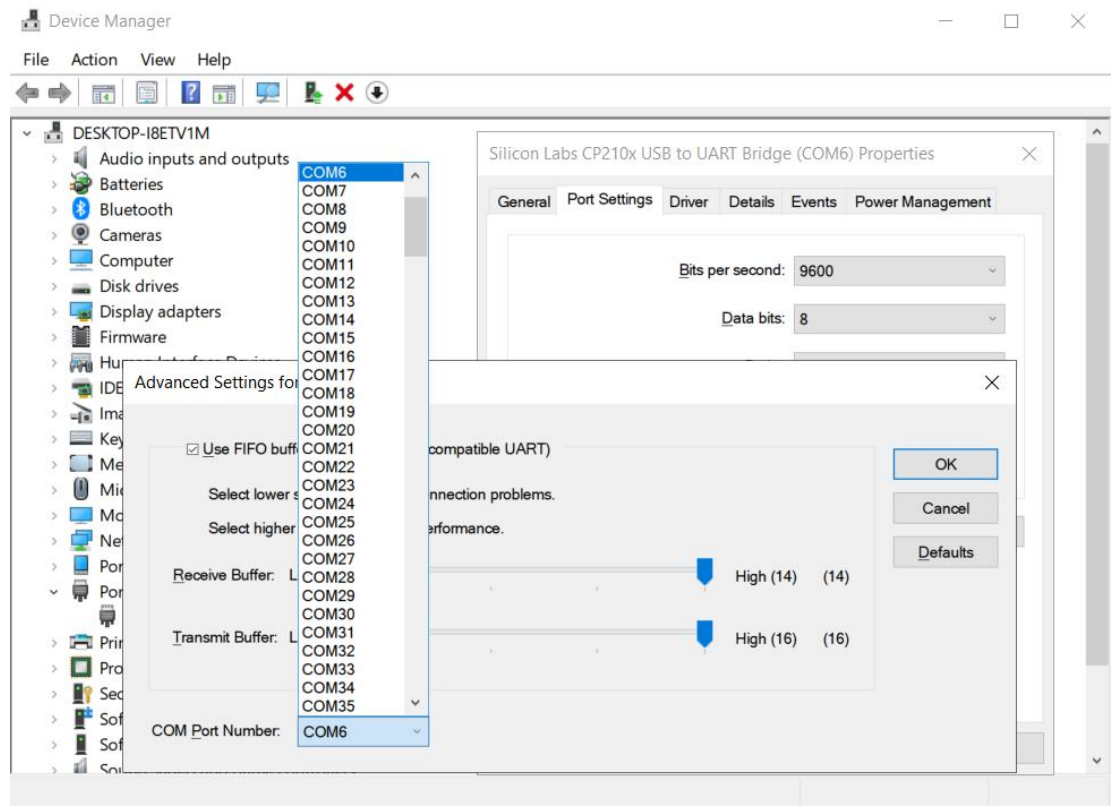
Step 1: Open device manager, right-click on CP102 USB to UART Bridge Controller and select “Properties”.



Step 2: Click on Port Settings, then click on "Advanced Settings".

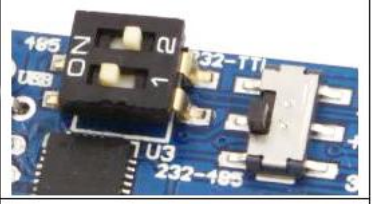
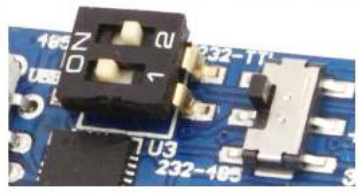
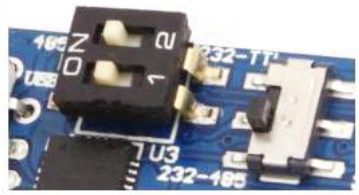
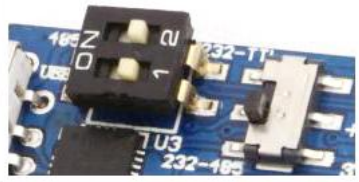
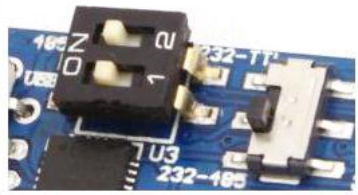
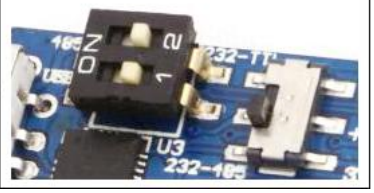


Step 3: Change the COM port and click OK.

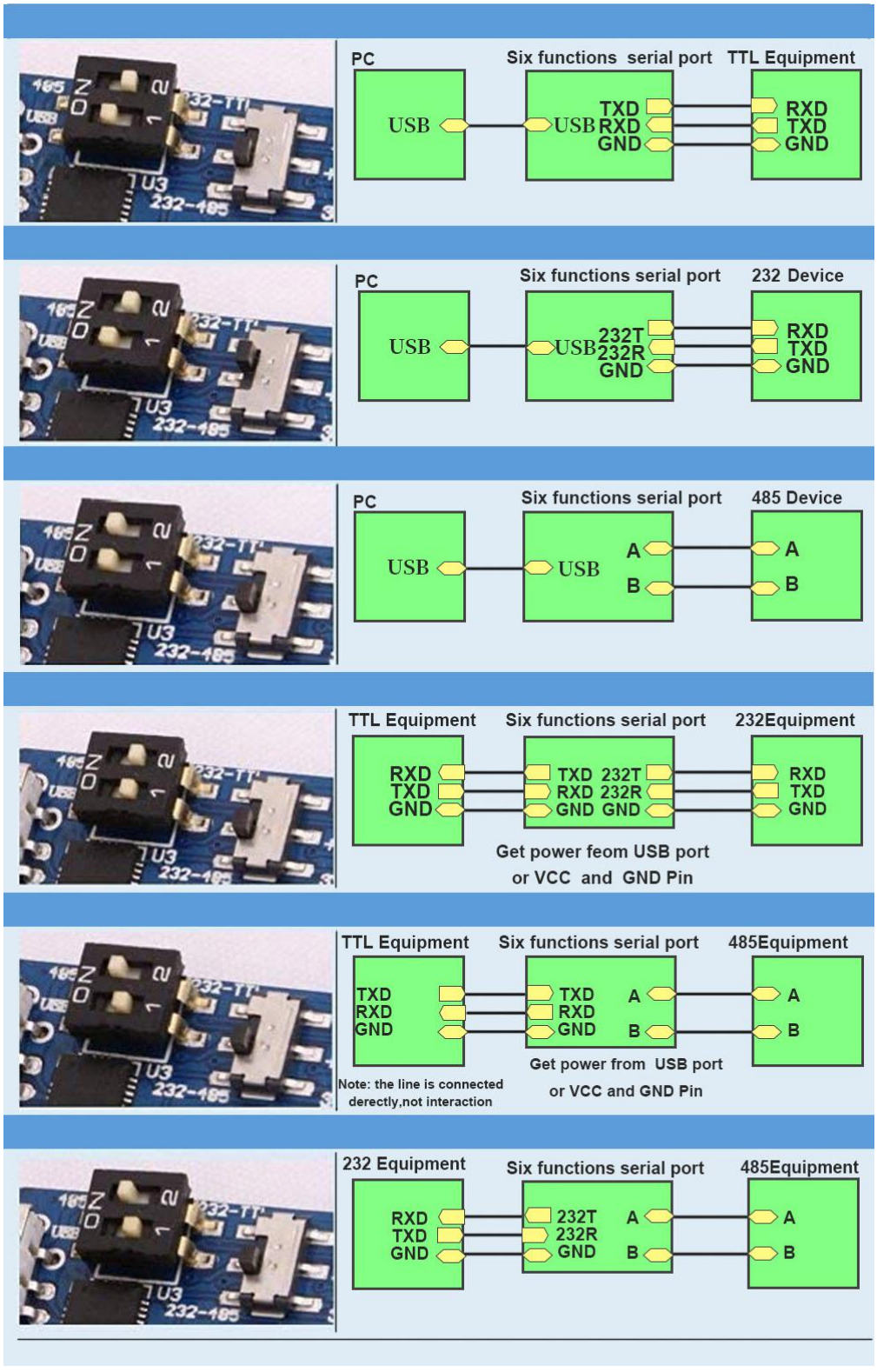


5 Dialing Mode Specification

This serial port conversion module selects conversion function through a two-bit dialing switch and chip switch. The function configuration is as follows:

Mode	Dial Switch 1(USB)	Dial Switch 2(485)	Switch S1	Diagram
USB-TTL	ON	OFF	Down (232-485)	
USB-232	ON	OFF	UP (232-TTL)	
USB-485	ON	OFF	Down (232-485)	
USB-232	OFF	OFF	Down (232-485)	
USB-485	ON	OFF	Down (232-485)	
USB-232	OFF	OFF	Down (232-485)	

6 Instruction



7 Function Test

Product functionality can be verified by USB to TTL self-loop test and USB to 232 self-loop test. Methods as below:

7.1 USB to TTL Self-closed Loop

Step 1
Connect the TXD and RXD of the module with a DuPont cable

Step 2
Follow the instructions in the function selection to dial the corresponding DIP switch

Step 3
Then insert the module into the computer

Step 4
Use the serial debugging assistant to send data to see if there is corresponding data returned.
If the data can be received, it proves that the module is functioning normally.

7.2 USB-232 Self-closed Loop

Step 1
Connect the 232T and 232R of the module with a DuPont cable

Step 2
Follow the instructions in the function selection to dial the corresponding DIP switch

Step 3
Then insert the module into the computer

Step 4
Use the serial debugging assistant to send data to see if there is corresponding data returned.
If the data can be received, it proves that the module is functioning normally.

7.3 USB-485 Testing

This mode test needs to cooperate with other 485 devices, such as using two 6-in-1 modules

Step 1
Take two 6-in-1 serial port modules, and set the DIP switch to USB to 485 mode

Step 2
Connect A and B of the two modules with Dupont wires, A connects to A and B connects to B

Step 3
Insert the module into the computer, open two serial debugging assistants

Step 4
Select the serial port numbers corresponding to the two 6-in-1 serial port modules respectively. Use one of them to see if the other serial port can receive the corresponding data

If the data can be received, it proves that the module is functioning normally.