

# USB TO 4CH TTL

From Waveshare Wiki  
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## Specifications

**USB TO 4CH TTL**



(<https://www.waveshare.com/usb-to-4ch-ttl.htm>)

UART, USB  
86mm x 47.8mm x 27.6mm

Parameter Name	Parameters
Product model	Industrial Grade USB to TTL Converter
Power Supply	5V
Operating Current	32mA
Communication Rate	1200bps ~ 460800bps
UART TTL Level	3.3V/5V (Adjustable)
Operating Temperature	-40°C~85°C

Operating System

Mac OS, Linux, Windows 11 / 10 / 8.1 / 8 / 7, Android

## Onboard Interface



(/wiki/File:USB\_TO\_4CH\_TTL09.jpg)

## Function Description

The CH344 chip provides 4 sets of asynchronous serial ports UART0/1/2/3. Each set of serial ports includes pins such as TXD, RXD, CTS, and RTS, enabling both 3-wire serial communication and 5-wire serial communication. Each asynchronous serial port supports

hardware automatic flow control with CTSx and RTSx. You can configure them to enable or disable simultaneously using the CFG pin (default is disabled), or you can independently configure them using the VCP vendor driver demo.

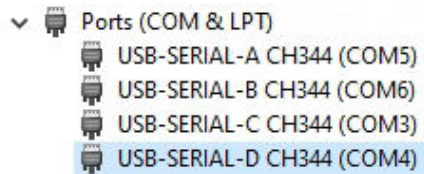
# How to use

## Windows

### CDC Driver

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The default driver of the computer is the CDC driver, which can be viewed through the device manager.



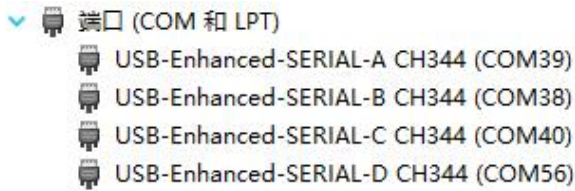
(/wiki/File:USB\_TO\_4CH\_TTL\_winEN01.png)

We default to software flow control, if you need to use CDC hardware flow you need to connect the board's CFG to EN (power on self-detection).

### VCP Driver

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The VCP driver is a vendor driver and needs to be installed by yourself. It can be viewed through Device Manager after installation.



(/wiki/File:USB\_TO\_4CH\_TTL\_win02.jpg)

The default is software flow control, if you need to use VCP hardware flow, you can open it directly through the serial debugging assistant.

## Linux/Raspberry Pi

To work with Raspberry Pi, it is driver-free, just connect and check with the following command:

```
ls /dev/tty*
```

```
pi@raspberrypi:~$ ls /dev/tty*
/dev/tty      /dev/tty18  /dev/tty28  /dev/tty38  /dev/tty48  /dev/tty58  /dev/ttyACM1
/dev/tty0     /dev/tty19  /dev/tty29  /dev/tty39  /dev/tty49  /dev/tty59  /dev/ttyACM2
/dev/tty1     /dev/tty2   /dev/tty3   /dev/tty4   /dev/tty5   /dev/tty6   /dev/ttyACM3
/dev/tty10    /dev/tty20  /dev/tty30  /dev/tty40  /dev/tty50  /dev/tty60  /dev/ttyAMA0
/dev/tty11    /dev/tty21  /dev/tty31  /dev/tty41  /dev/tty51  /dev/tty61  /dev/ttyprintk
/dev/tty12    /dev/tty22  /dev/tty32  /dev/tty42  /dev/tty52  /dev/tty62  /dev/ttyS0
/dev/tty13    /dev/tty23  /dev/tty33  /dev/tty43  /dev/tty53  /dev/tty63
/dev/tty14    /dev/tty24  /dev/tty34  /dev/tty44  /dev/tty54  /dev/tty7
/dev/tty15    /dev/tty25  /dev/tty35  /dev/tty45  /dev/tty55  /dev/tty8
/dev/tty16    /dev/tty26  /dev/tty36  /dev/tty46  /dev/tty56  /dev/tty9
/dev/tty17    /dev/tty27  /dev/tty37  /dev/tty47  /dev/tty57  /dev/ttyACM0
```

(/wiki/File:USB\_TO\_4CH\_TTL\_Linux1.jpg)

The port should be named ttyACM0, user can use the minicom tool to test.

```
minicom -D /dev/ttyACM0
```

## MacOS

First click to download the CH343 driver for MacOS ([https://files.waveshare.com/upload/0/04/CH34XSER\\_MAC.7z](https://files.waveshare.com/upload/0/04/CH34XSER_MAC.7z)).

Driver installation guide: MacOS guide ([https://files.waveshare.com/upload/1/1a/CH34X\\_DRV\\_INSTALL\\_INSTRUCTIONS.pdf](https://files.waveshare.com/upload/1/1a/CH34X_DRV_INSTALL_INSTRUCTIONS.pdf))

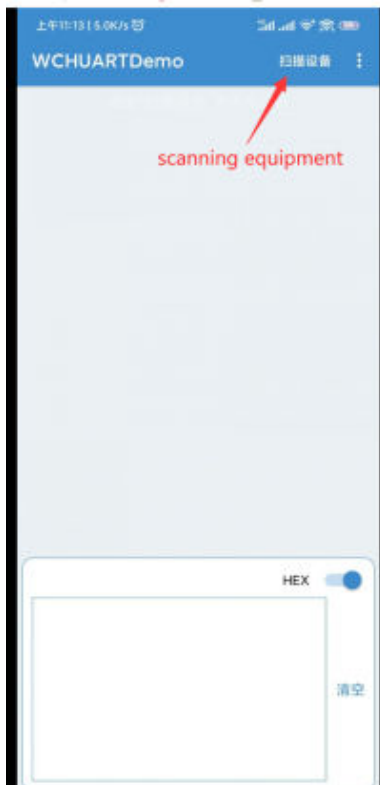
Open the serial assistant after installation (Directly download the serial assistant online through MAC).

## Android

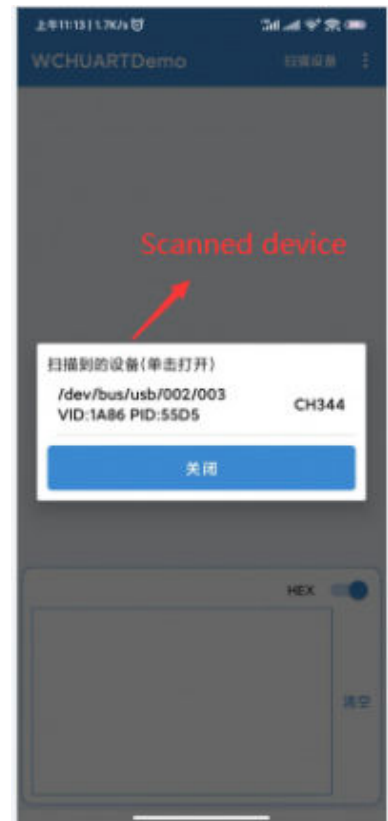
To use it with an Android device, please download the APP and test it.

- UART APP in Android ([https://files.waveshare.com/upload/2/22/WCHUARTDemo\\_V1.3.7z](https://files.waveshare.com/upload/2/22/WCHUARTDemo_V1.3.7z))

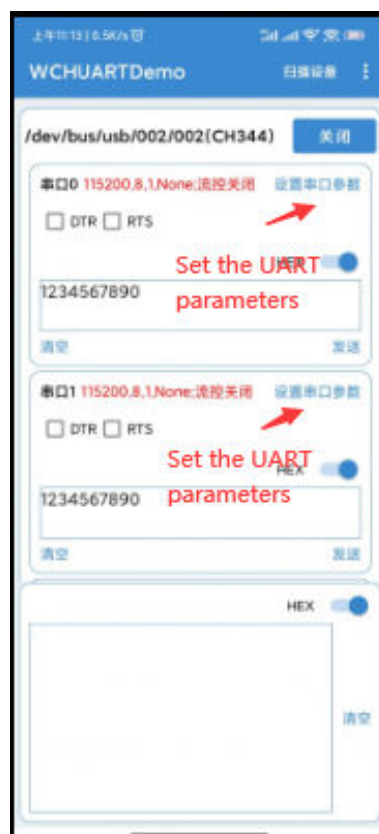
1. Open the APP and click to scan the device.
2. Click the scanned device.
3. Set the parameters to use.



(/wiki/File:USB\_TO\_4CH\_TTL\_0.png)



(/wiki/File:Scanned1.png)



(/wiki/File:USB\_TO\_4CH\_TTL\_An.png)

## Resources

- CH344 Datasheet (<https://files.waveshare.com/wiki/USB%20TO%204CH%20TTL/CH344DS1.PDF>)
- SSCOM software (<https://files.waveshare.com/upload/5/5f/Sscom.7z>)
- CH343 VCP driver for Windows (<https://files.waveshare.com/upload/f/f1/CH343SER.7z>)

- CH343 driver for MacOS ([https://files.waveshare.com/upload/0/04/CH34XSER\\_MAC.7z](https://files.waveshare.com/upload/0/04/CH34XSER_MAC.7z))
- MacOS guide ([https://files.waveshare.com/upload/1/1a/CH34X\\_DRV\\_INSTALL\\_INSTRUCTIONS.pdf](https://files.waveshare.com/upload/1/1a/CH34X_DRV_INSTALL_INSTRUCTIONS.pdf))
- UART APP in Android ([https://files.waveshare.com/upload/2/22/WCHUARTDemo\\_V1.3.7z](https://files.waveshare.com/upload/2/22/WCHUARTDemo_V1.3.7z))

## Beware of knock-offs

Please note that we've found some poor copies of this item in the market. They are usually made of inferior materials and shipped without any testing.

You might be wondering if the one you're watching or you've purchased in other non-official stores is original, feel free to contact us.

## FAQ

**Question:**After installing the driver in WIN7 environment, it shows that the digital signature of this device cannot be verified, how to solve it?

**Answer:**

This is a Microsoft bug, click to download the driver repair tool (<https://www.waveshare.com/w/upload/e/ef/Windows6.1-KB3033929-x64.zip>) and install it.

## Support

### Technical Support

If you need technical support or have any feedback/review, please click the **Submit Now** button to submit a ticket, Our support team will check and reply to you within 1 to 2 working days. Please be patient as we make every effort to help you to resolve the issue.

Working Time: 9 AM - 6 PM GMT+8  
(Monday to Friday)

Submit Now (<https://service.waveshare.com/>)

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