

RS485 CAN HAT

- [Schematic](#)
- [Demo code](#)

Datasheet

- [MCP2515](#)
- [SN65HVD230](#)
- [SP3481 SP3485](#)

3D Drawing

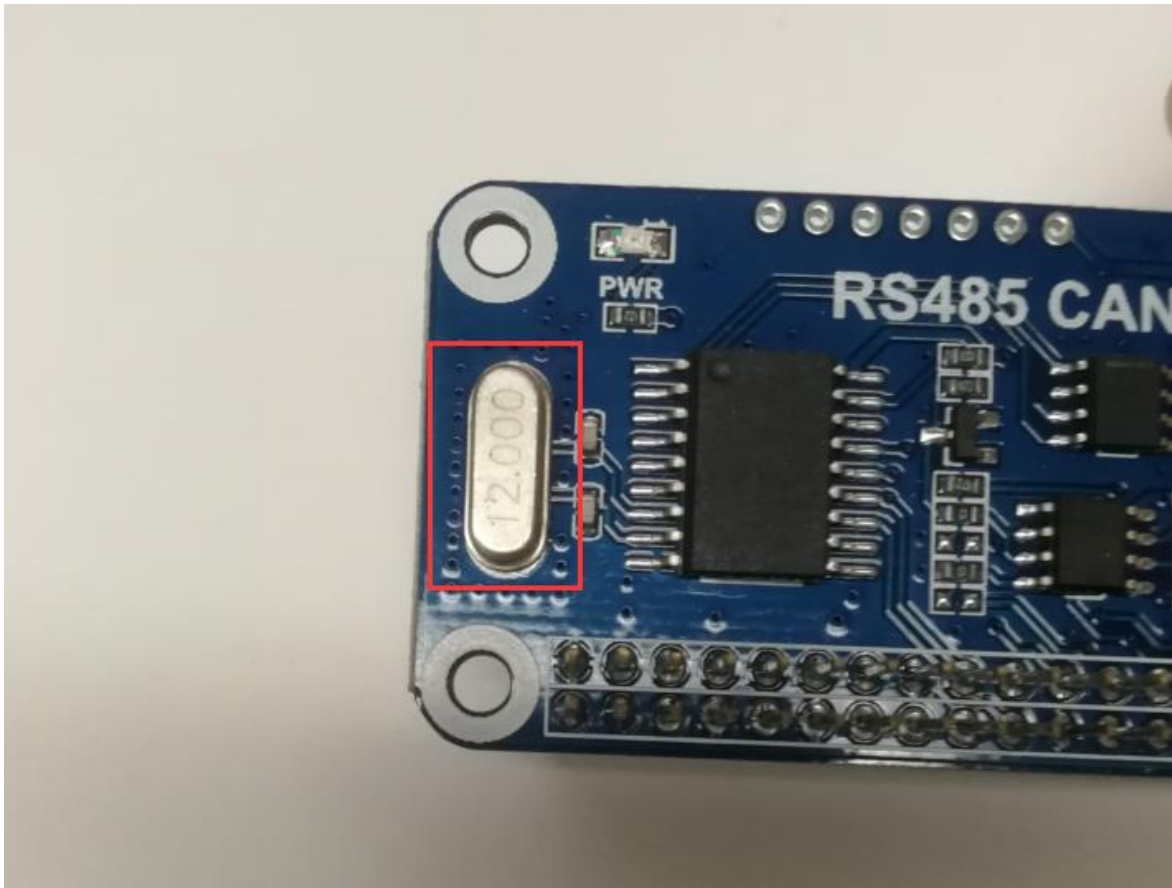
- [3D Drawing](#)

FAQ

[Question: Imprint?](#)

Answer:

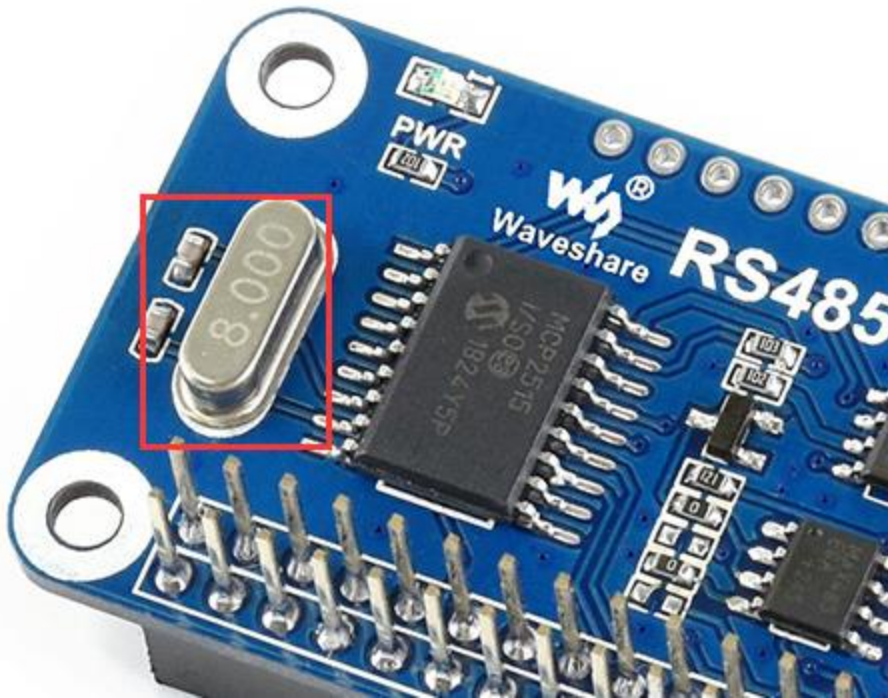
- The current version is 12M, you can view the front of the module:



Then the corresponding command in config.txt is:

```
dtoverlay=mcp2515-can0,oscillator=12000000,interrupt=25,spimaxfrequency=2000000
```

- If you have an old version, here should be an 8M crystal oscillator, as shown below:



Then the corresponding command in config.txt is:

```
dtoverlay=mcp2515-can0,oscillator=8000000,interrupt=25,spimaxfrequency=1000000
```

[Question:Can't send and receive data?](#)

Answer:

1. Make sure the baud rates on both sides are the same;
2. The fixed frame ID is set in the routine: 0X123, please set the sending and receiving CAN ID of the other end of your CAN to be x0123;

[Question:With or without quarantine](#)

Answer:

This is an entry-level 485 and CAN, both without isolation.

[Question:485 Communication is abnormal, what should I do?](#)

Answer:

1. Determine the hardware version of the Raspberry Pi, if it is the Raspberry Pi ZERO/3B, the serial port in the program needs to be modified to /dev/ttyAMA0;
2. Check whether the serial communication of the Raspberry Pi has enabled flow control;
3. Determine whether A and B of 485 correspond to the controlled 485 devices A and B one by one;
4. You can use the USB to 485 device to communicate with the RS485 CAN HAT first to ensure that there is no problem with the settings of the Raspberry Pi;
5. Check the setting of odd and even bit parity of serial communication parameters.

[Question:How to configure the config.txt file when the Ubuntu system is installed on the Raspberry Pi?](#)

Answer:

1. Mainstream Ubuntu system config.txt files are usually in the /boot/firmware folder
2. Or use the SD card of the Raspberry Pi to read and change the config.txt file under the computer (or other host that can recognize the SD card) through the card reader.

[Question:After connecting the sensor to RS485, the corresponding program does not receive data?](#)

Answer:

The sensor may send hex data (sometimes it is necessary to send hex data to the sensor to request data), follow the steps below to send and receive hex data:

```
wget https://www.waveshare.com/w/upload/0/00/RS485-CAN-HAT-For-Hex.zip
unzip RS485-CAN-HAT-For-Hex.zip
sudo chmod 777 RS485-CAN-HAT-For-Hex.zip
cd RS485-CAN-HAT-For-Hex
#Receive Hex
sudo python3 RS485-CAN-HAT-send-hex.py
#Send Hex
sudo python3 RS485-CAN-HAT-receive-hex\ .py
```