ROBSTRIDE DYNAMICS



USB_CANHUB 使用说明手册 V1.0

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https://www.robstride.com/

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Legal Statement

Before using this product, please read this manual carefully and operate the product according to the contents of this manual. If the user violates the contents of this manual to use this product, resulting in any property damage, personal injury accident, the company does not assume any responsibility. Because this product is composed of many parts, do not allow children to touch this product to avoid accidents. In order to prolong the service life of the product, do not use this product in high temperature and high pressure environment. This manual has been printed to the extent possible to include a description of the functions and instructions for use. However, due to the continuous improvement of product functions, design changes, etc., there may still be discrepancies with the products purchased by users.

The color and appearance of this manual may differ from the actual product. Please refer to the actual product. This manual is published by Beijing Lingfoot Times Technology Co., LTD. (hereinafter referred to as Lingfoot), and Lingfoot may at any time make necessary improvements and changes to the inaccurate and up-to-date information in this manual, or make improvements to procedures and/or equipment. Such changes will be uploaded to the company's official website in electronic format. Details can be found in the download center (www.robstride.com). All images are for reference only. Please refer to actual objects.

After-sales Policy

The after-sales service of this product is implemented in strict accordance with the Law of the People's Republic of China on the Protection of Consumer Rights and Interests and the Product Quality Law of the People's Republic of China. The service content is as follows:

1. Warranty period and contents

   a. Users who place orders on the online channel to purchase this product can enjoy the return service without reason within seven days from the day after signing. When returning goods, the user must present a valid proof of purchase and return the invoice. The user must ensure that the returned goods maintain the original quality and function, the appearance is intact, the trademarks and various logos of the goods themselves and accessories are complete, and if there are gifts, they should be returned together. If the goods are artificially damaged, artificially disassembled, missing packaging boxes, missing parts and accessories, they will not be returned. The logistics cost incurred during the return shall be borne by the user (see "After-sales Service Fee Standard"). If the user does not settle the logistics cost, it will be deducted from the refund amount according to the actual amount incurred. Refund the amount paid to the user within seven days from the date of receipt of the returned item. Refund method is the same as payment method. The specific arrival date may be affected by factors such as banks and payment institutions.

   b. The warranty period of this product is 1 year.

   c. Within 7 days after the user signs for the next day, non-human damage performance failure occurs, through the Lingzhu after-sales service center test and confirmation, for the user to handle the return business, the user must present a valid purchase voucher, and return the invoice. Any freebies should be returned.

   d. From 7 days to 15 days after the user signs for the next day, non-human damage performance failure occurs, through the Lingfoot after-sales service center test and confirmation, for the user to replace the whole set of goods. After the replacement, the three guarantee period of the goods themselves is recalculated.

   e. From 15 days to 365 days after the user signed the next day, after the

inspection and confirmation of the Lingfoot after-sales service center, it is a quality fault of the product itself, and can provide free maintenance services. The replacement of the faulty product is owned by Lingzu Company. The product is not faulty and will be returned as is. This product has been strictly tested after the factory, if there is a quality fault other than the product itself, we will have the right to refuse the user's return demand.

2. Non-warranty regulations The following circumstances are not covered by the warranty:

3. Exceed the warranty period specified in the warranty terms.

4. Failure to follow the instructions, resulting in product damage caused by wrong use.

5. Damage caused by improper operation, maintenance, installation, modification, testing and other improper use.

6. Non-quality failure caused by conventional mechanical loss, wear.

7. Damage caused by abnormal working conditions, including but not limited to falling, impact, liquid immersion, violent impact, etc.

8. Damage caused by natural disasters (such as floods, fires, lightning strikes, earthquakes, etc.) or incapacitated forces.

9. Damage caused by exceeding peak torque.

10. Damage caused by exceeding peak torque.

11. Failure or damage caused by other non-product design, technology, manufacturing, quality and other problems.

In the case of the above situation, the user must pay the cost.

- **If the above situation occurs, the user will need to pay the fees themselves.**

◆ Precautions

Please use the product according to the operating parameters specified in this document; otherwise, it may cause serious damage! Before use, please check that all components are complete, the wiring is correct, and the voltage platform is selected correctly.

USB_CANHUB Specifications

1.1. External shape and installation dimensions：

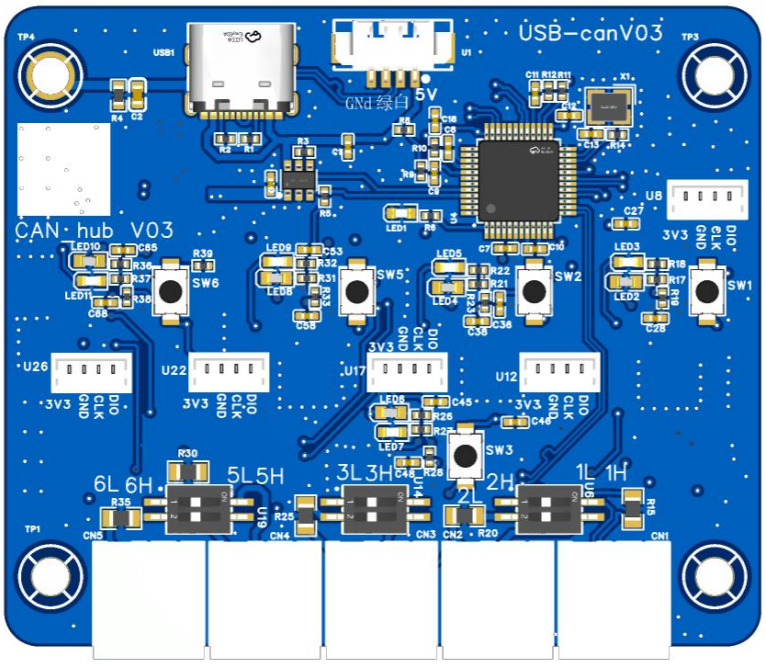


Figure 1 CANHUB Exterior drawing

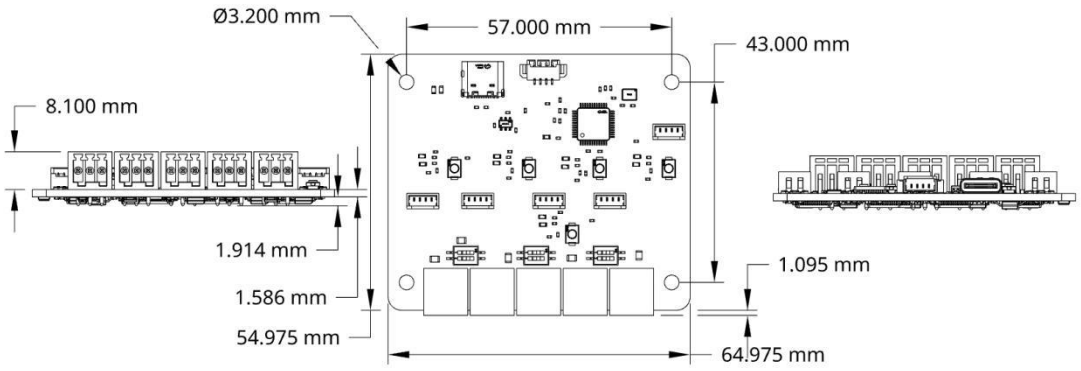


Figure 2 CANHUB Dimensions

1.2. Use standard state：

Power supply: USB Type-C or USB 2.0 and 5V power supply, connected to the control host;

Standard operating temperature: 25±5℃;

Operating temperature range: -20～50℃;

Standard operating humidity: 65%;

Operating humidity range: 5～85%, non-condensing;

Storage temperature range: -30～70℃

1.3. Interface definition：

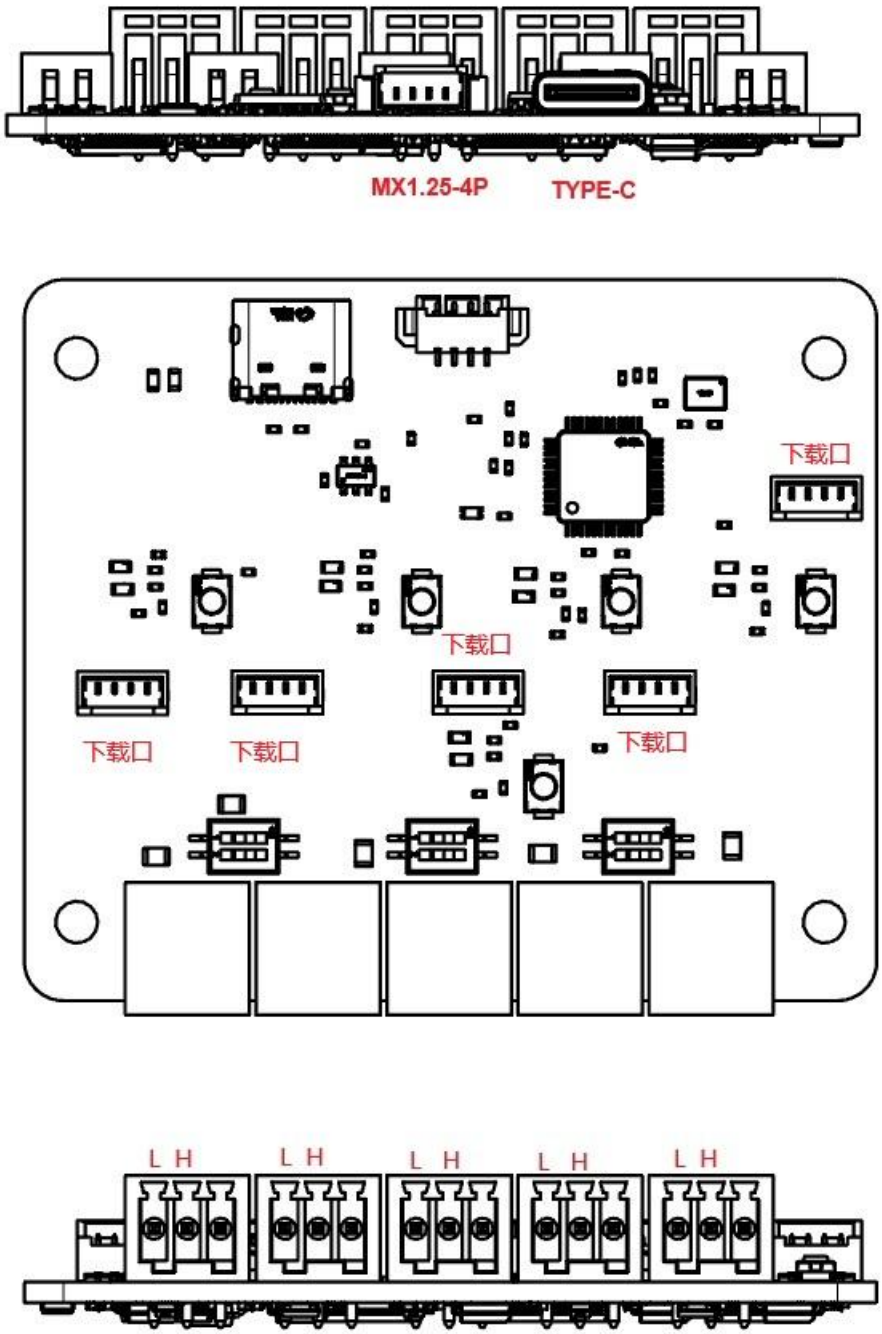


Figure 3 CANHUB interface

H: CAN signal high

L: CAN signal low

Type-C: USB 2.0 and 5V power supply, connects to the control host;

MX1.25-4P: USB 2.0 interface, white wire D+ (USB_DP), green wire D- (USB_DN);

LED: Chip status indicator, LED1 is the USB chip indicator; LED2, LED4, LED6, LED8, and LED11 (green indicators) are for receiving data; LED3, LED5, LED7, LED9, and LED10 (red indicators) are for receiving data;

DIP switch: CAN 120 ohm resistor configuration switch, ON state connects to a 120 ohm resistor;

Black reset button: The button shorts boot0, firmware can be flashed via USB;

CAN signal connector: 2.54-3P connector, connects to CANH (high), CANL (low), and GND; connects to the motor signal line;

二、 Use CAN_HUB environment

2.1. System Environment：linux

Using native CAN_HUB devices

Generate canX(0,1,2,3...) in Linux

CAN data frames can be sent and received using cansend and candump.

Basic steps related to CAN_HUB

Install can-util:

sudo apt update

sudo apt install can-utils

Configure baud rate, buffer, and other parameters:

sudo modprobe can

sudo modprobe can_raw

sudo modprobe can_dev

sudo ip link set can0 type can bitrate 1000000

sudo ip link set can0 up sudo ifconfig can0 txqueuelen 100

2.2. Based on the canable routine

- [C++](https://github.com/RobStride/robstride_ros_sample)

- [Python](https://github.com/ROBSTRIDE-DYNAMICS/Robstride-Dynamics-Python-SDK)

2.3. Unzip the host computer application folder and open the .exe file.

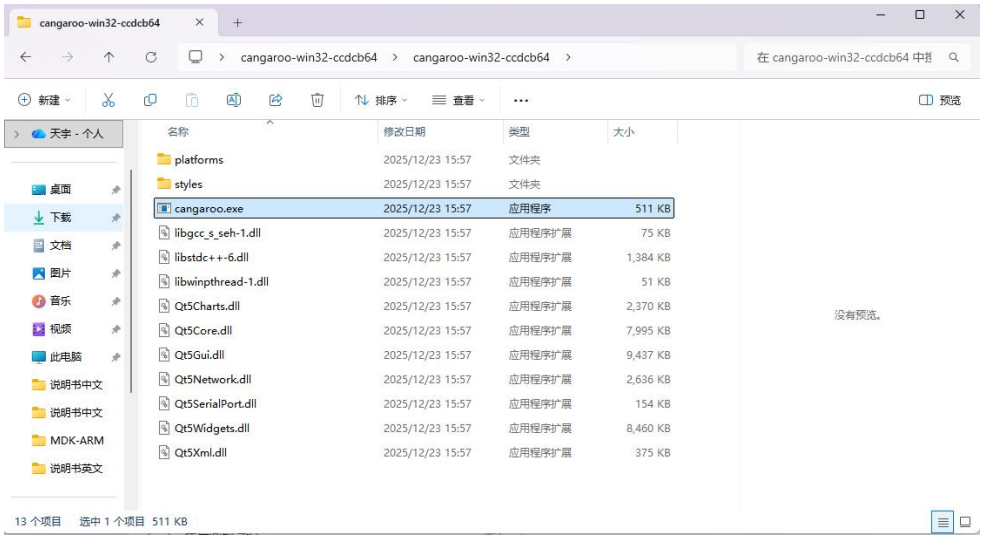


Figure 4 Unzip the file and open the .exe file.

2.4. Click Measurement

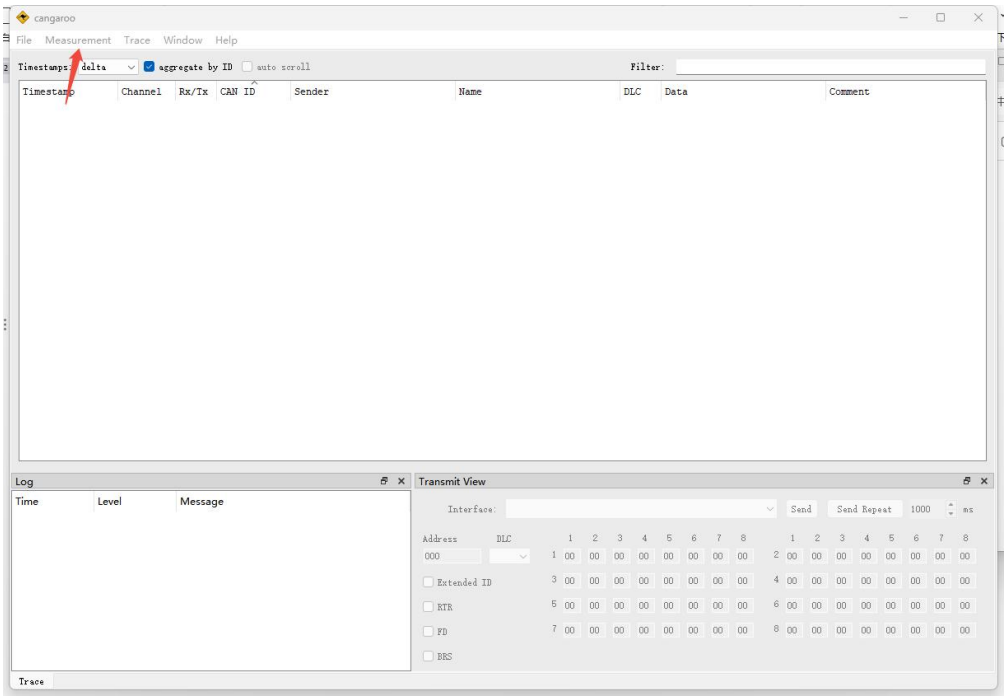


Figure 5 Click Measurement

2.5. Choose Start Measurement

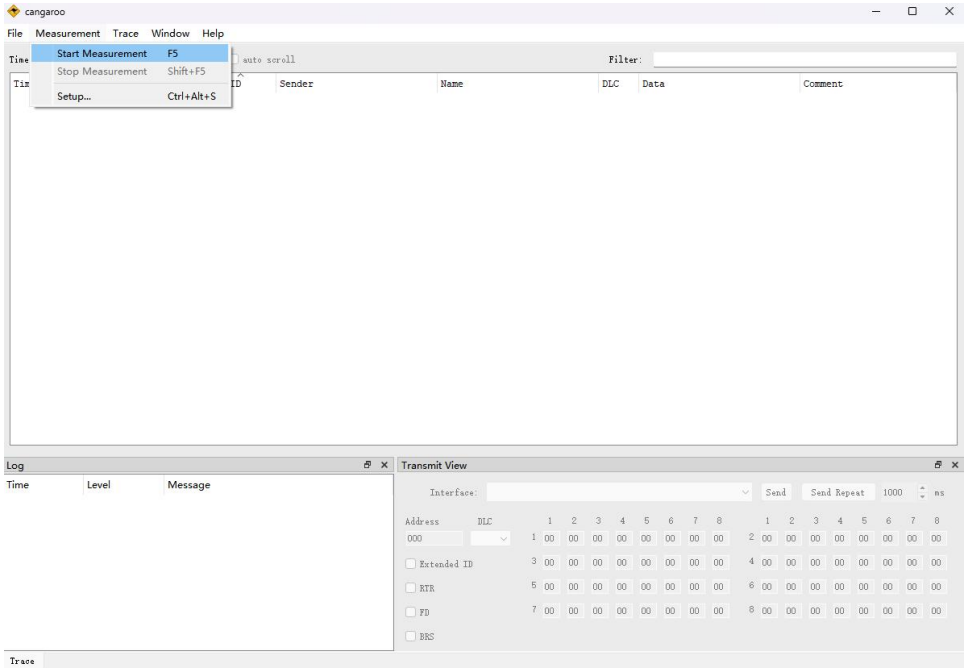


Figure 6 choose Start Measurement

2.6. Configure 5 CAN channels

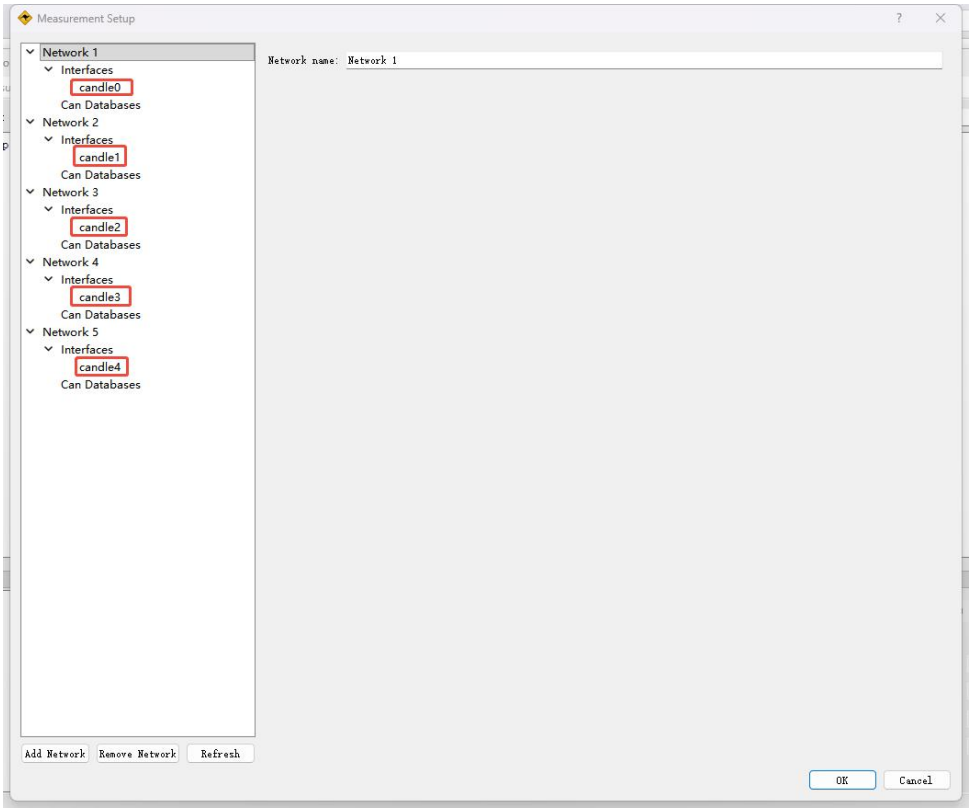


Figure 7 CAN road

2.7. Configure the baud rate to 1M and click OK.

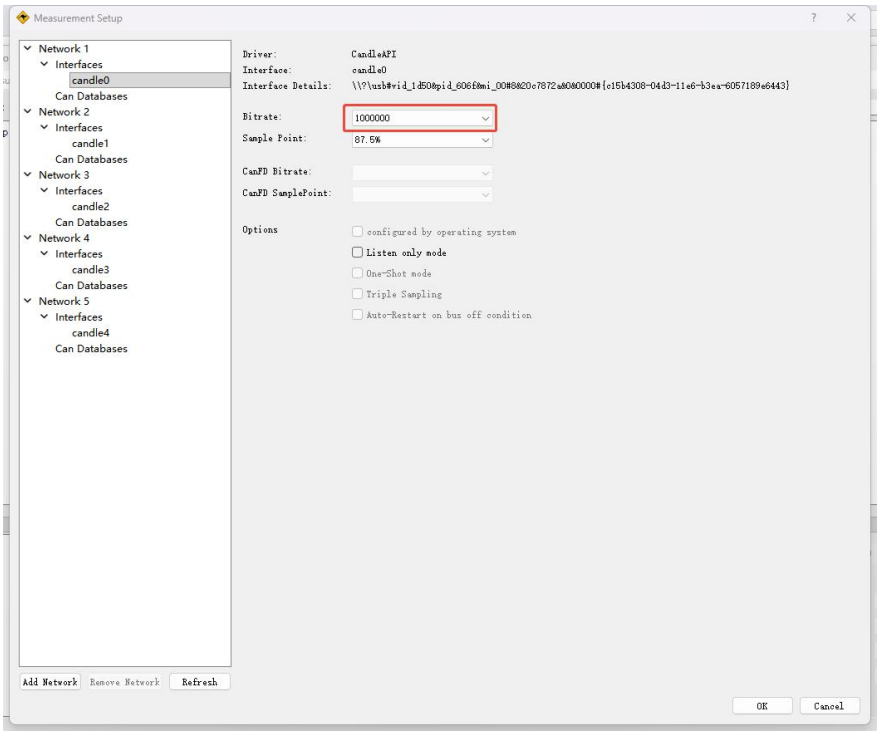


Figure 8 baud rate configuration

2. 8. Send commands to control the motor

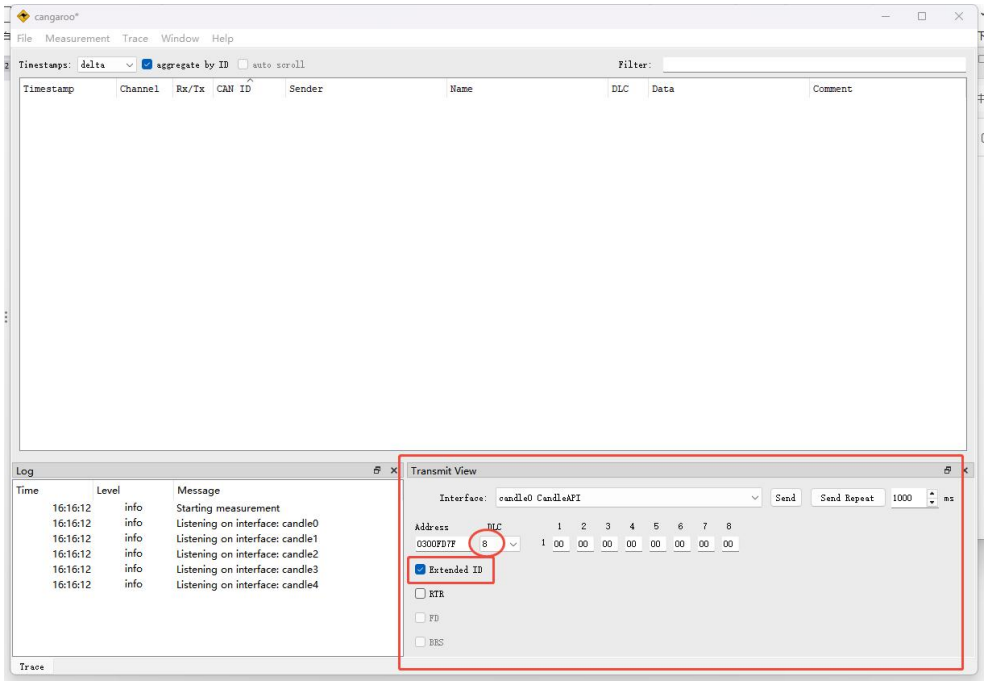


Figure 9 Send command