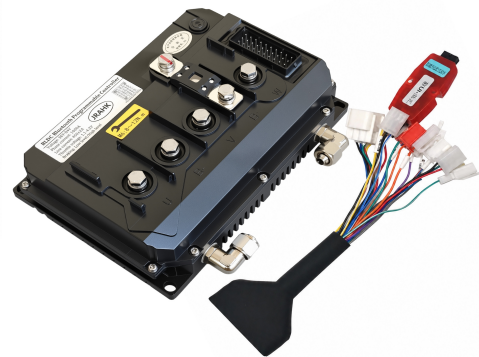
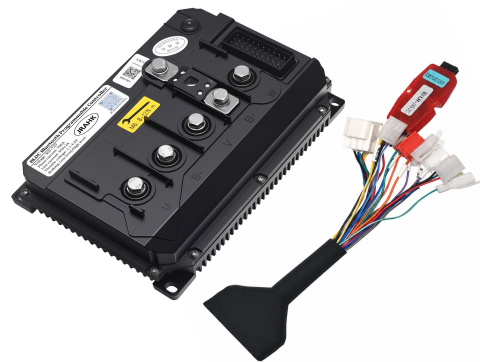
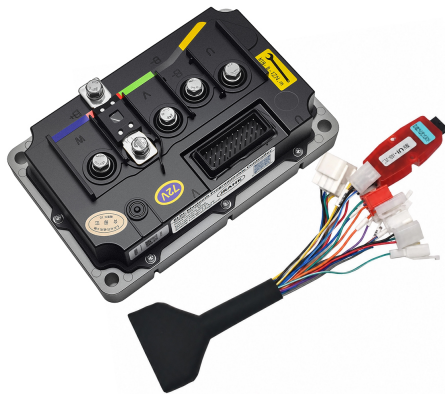


JRAHK E-Drive Tech Debug Console



Installation Instructions

Before connecting the controller to a computer for parameter configuration, firmware upgrade, or motor self-learning, please follow the steps below.

1. Power Off

Turn off the vehicle power and disconnect the main power supply of the controller. Ensure the controller is completely powered off before connecting any cables.

2. Check the Wiring

Verify that all wiring is connected correctly, including the controller, motor, Hall sensor cable, and communication cable (UART/USB or Bluetooth module). Ensure there are no loose connections, incorrect wiring, or short circuits.

3. Required Connections

For the initial setup and testing, the following connections are required:

- * Battery positive (+) and negative (-) terminals
- * Motor phase wires (U, V, W)
- * Hall sensor cable
- * Communication cable (UART/USB or Bluetooth module)
- * Ignition switch / Key switch
- * Throttle

Make sure all required connections are securely connected before powering on the controller.

4. Lift the Drive Wheel Off the Ground

****The drive wheel (motor wheel) must be completely suspended off the ground and able to rotate freely.**

> ****Important:**** During parameter reading, motor self-learning, motor direction calibration, and certain testing procedures, the controller may automatically drive the motor to rotate. If the wheel is not suspended, the vehicle may move unexpectedly, which could result in personal injury or equipment damage.

5. Connect to the Computer

After all wiring has been completed, power on the controller.

Connect the controller to the computer using the USB communication cable (USB driver installation is required).

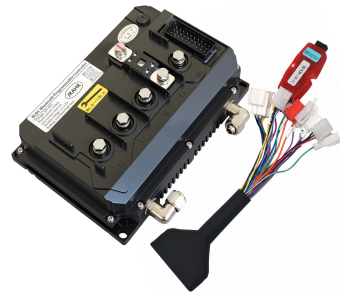
Launch ****JRAHK Controller PC Software****, select the default COM port, and click ****Open UART**** to establish communication.

6. Start Configuration

Once communication is established successfully, it is recommended to open the ****Parameter Settings**** page and click ****Read**** to retrieve the current controller parameters before making any changes.

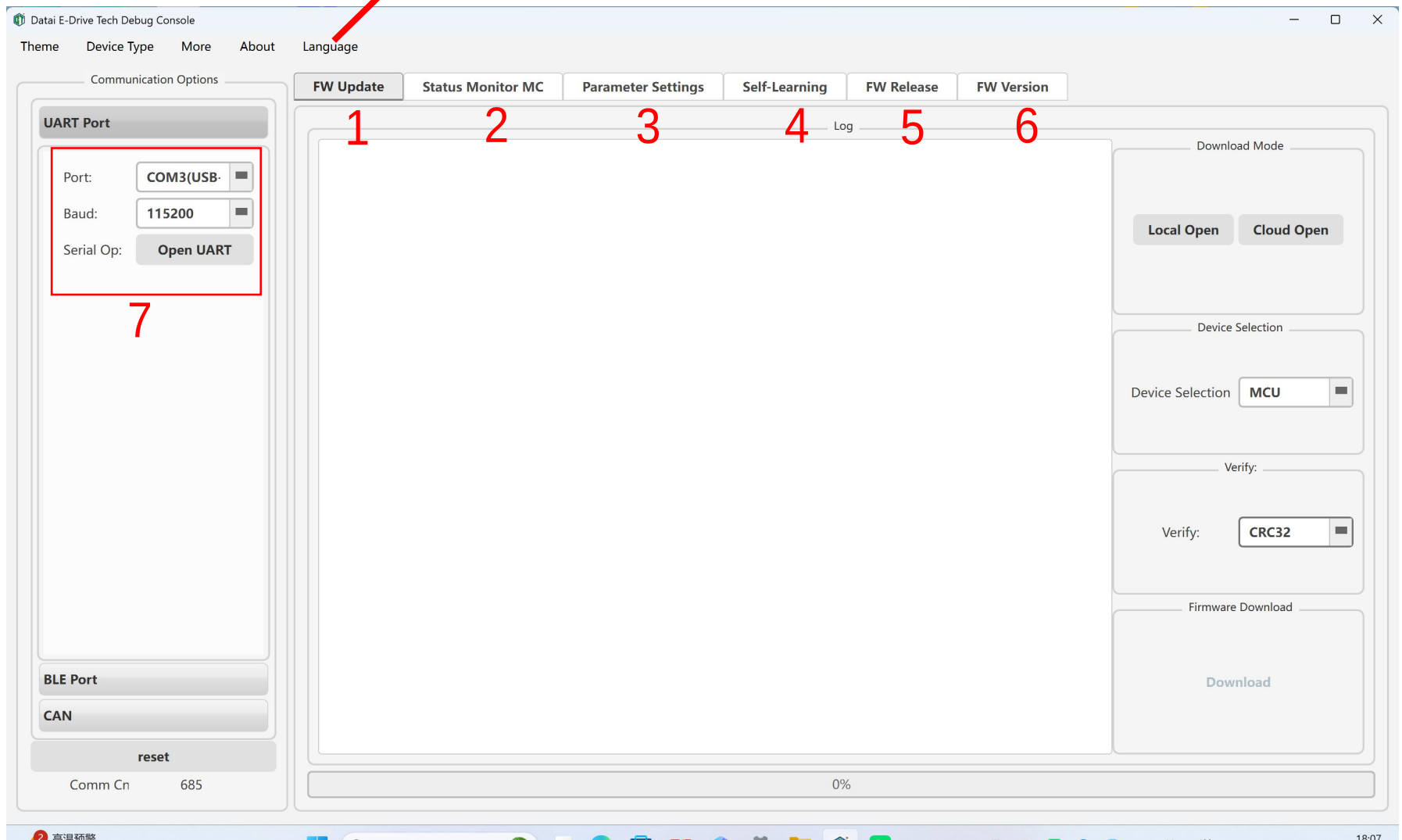
You may then proceed with:

- * Parameter Configuration
- * Motor Self-Learning



PC

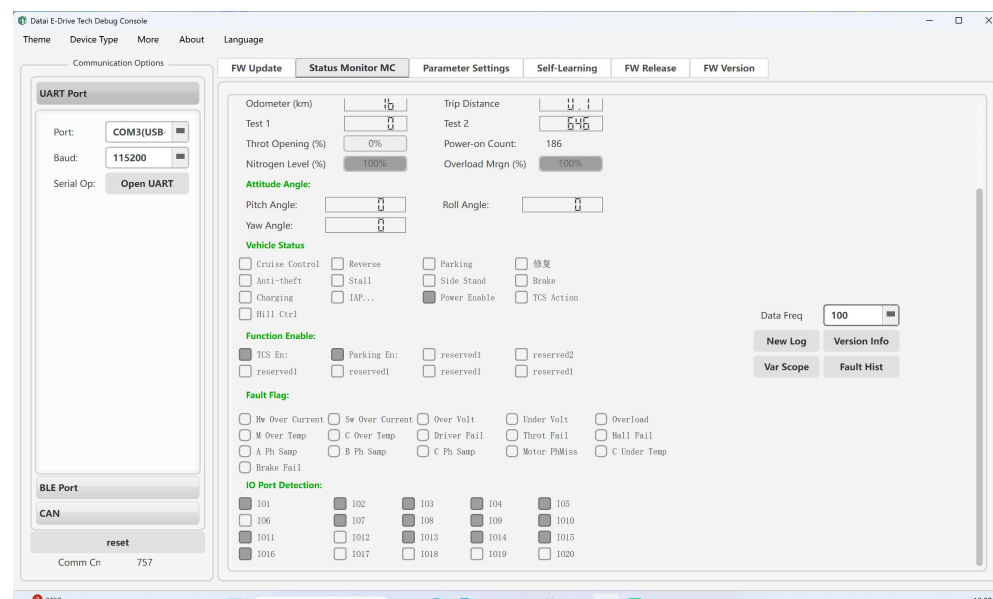
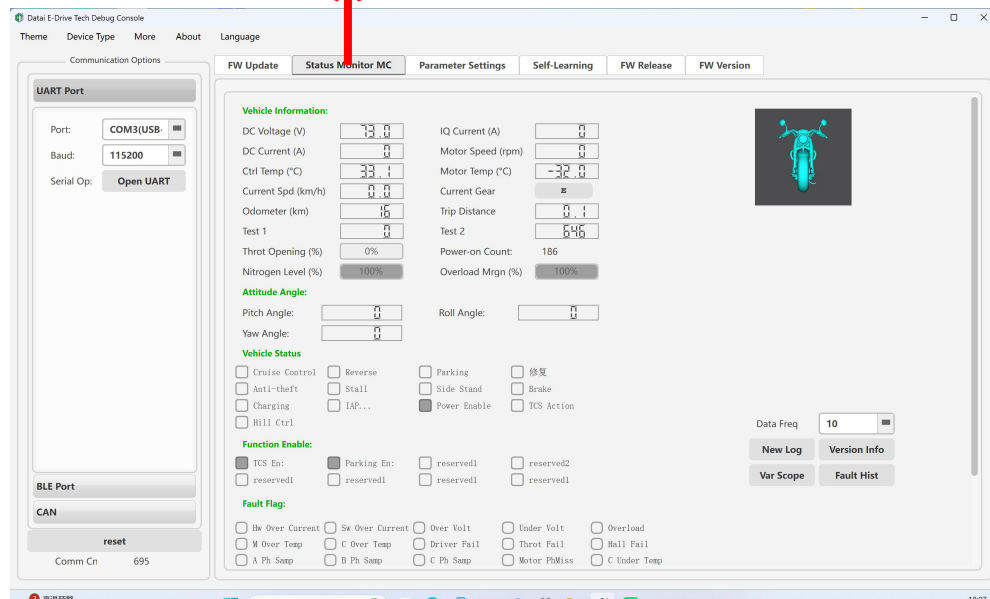
Language Switching: Supports switching between Chinese and English.

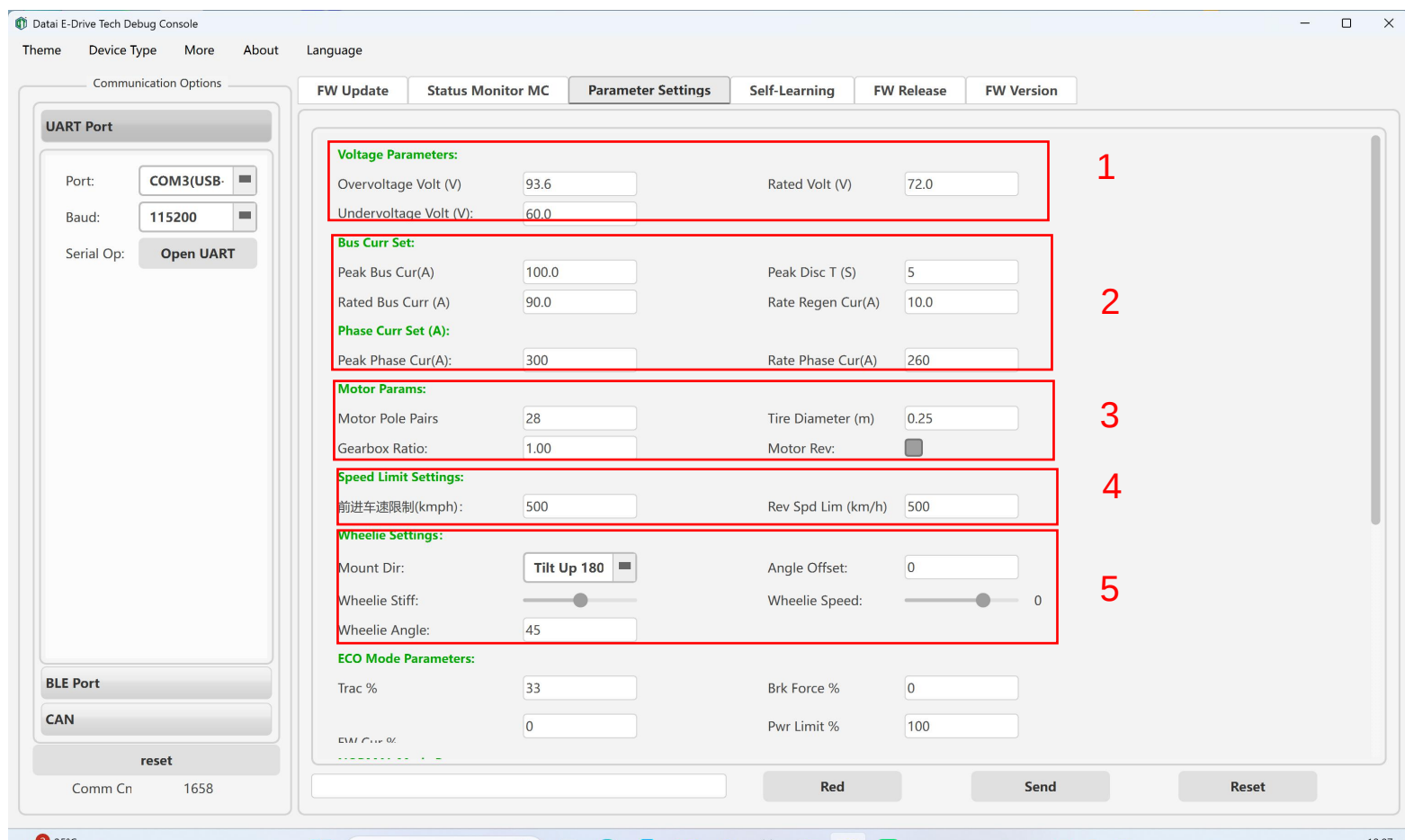


- 1: Firmware upgrade page
- 2: Parameter status check
- 3: Parameter adjustment page
- 4: Firmware export page
- 5: Self-learning page
- 6: Firmware version
- 7: Drive connection status

【Status Monitoring (MC)】

This page is primarily used to monitor voltage, current, rotational speed, mileage, gear controller temperature, functions, and fault information. This page is non-editable.





1. Voltage Parameters

- 【Over-voltage threshold】: For controller models 72200 through 721200, the over-voltage threshold must not exceed 93.6V; for model 841000, it must not exceed 110V.
- 【Rated voltage/Under-voltage threshold】: Enter values based on the battery's rated voltage.

2. Bus Current Parameters

- 【Peak bus current/Rated bus current】: Enter the rated current value specified for your controller (you may enter any value up to the rated limit).
- 【Rated regenerative current】: Refers to the current fed back to the battery during energy recovery.
- 【Peak discharge duration】: Refers to the duration of maximum current output.

2.1Phase Current Parameters

- 【Peak phase current/Rated phase current】: Enter the phase current value specified for your controller.

3. Motor Parameter Settings

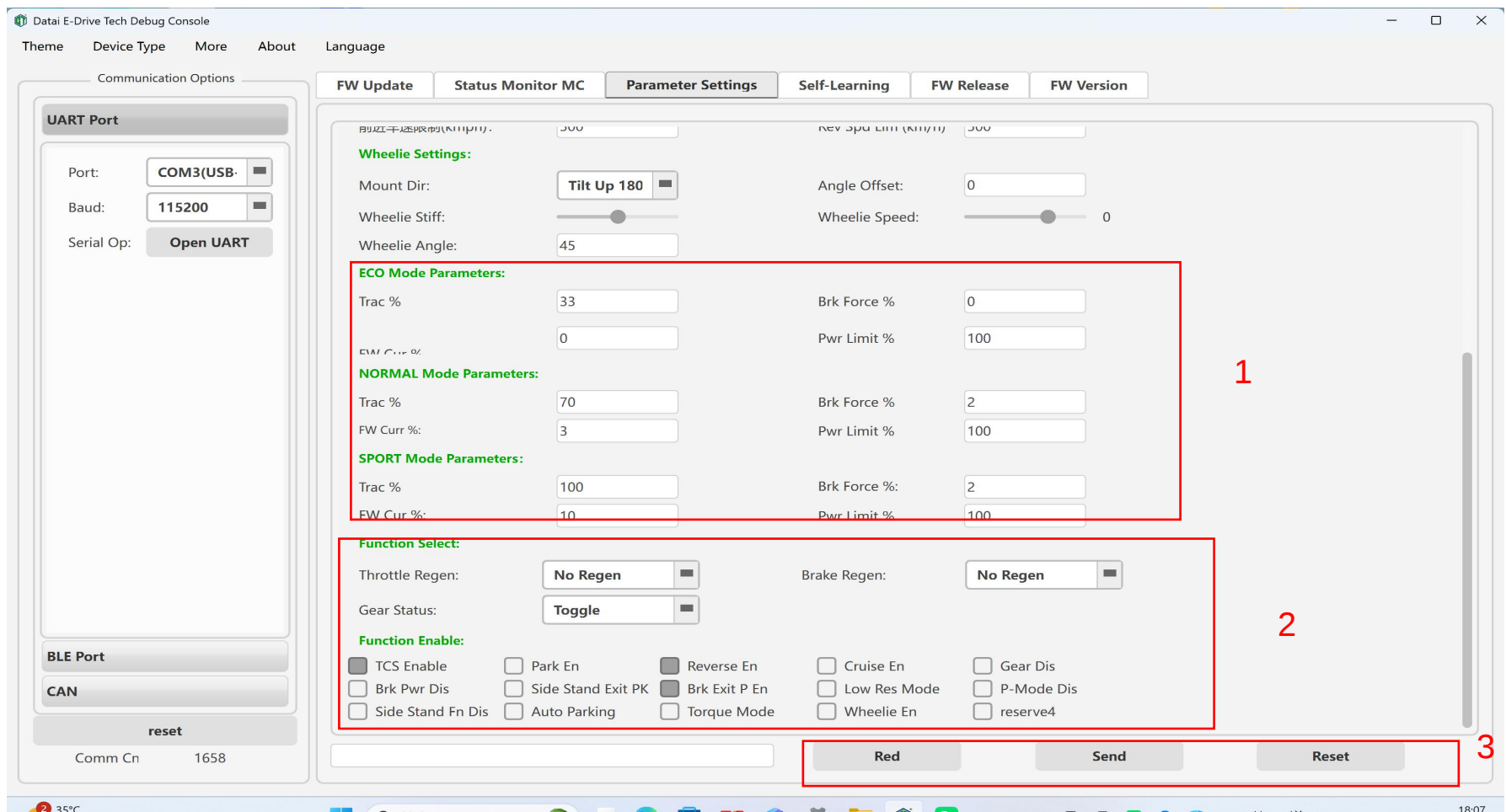
- 【Motor pole pairs】: Adjust according to motor specifications.
- Tire diameter: Enter the actual tire diameter (unit: meters).
- 【Reduction gear ratio】: Applicable only to mid-drive motors; no setting required for other motor types.
- 【Motor reverse rotation】: If the motor rotates in reverse after self-learning, click this option; data must be sent after clicking.

4. Speed Limit Settings

- 【Forward/Reverse speed】: Adjust as needed (unit: km/h); default is 500 (no speed limit).

5. Wheelie Control Settings

This function is applicable only to controller models 721200 and 841000.



1. Eco Mode Settings (Level 1) / NORMAL Mode Settings (Level 2) / SPORT Mode Settings (Level 3)

Traction Percentage: Refers to the phase current output percentage.

Braking Percentage: Corresponds to the energy regeneration ratio.

Field Weakening Percentage: Set according to personal preference (used to increase top speed).

Power Limit Percentage: Corresponds to the speed limit; default setting of 100 is recommended.

2. Function Selection

Throttle Energy Regeneration / Braking Energy Regeneration: Can be enabled or disabled according to personal preference.

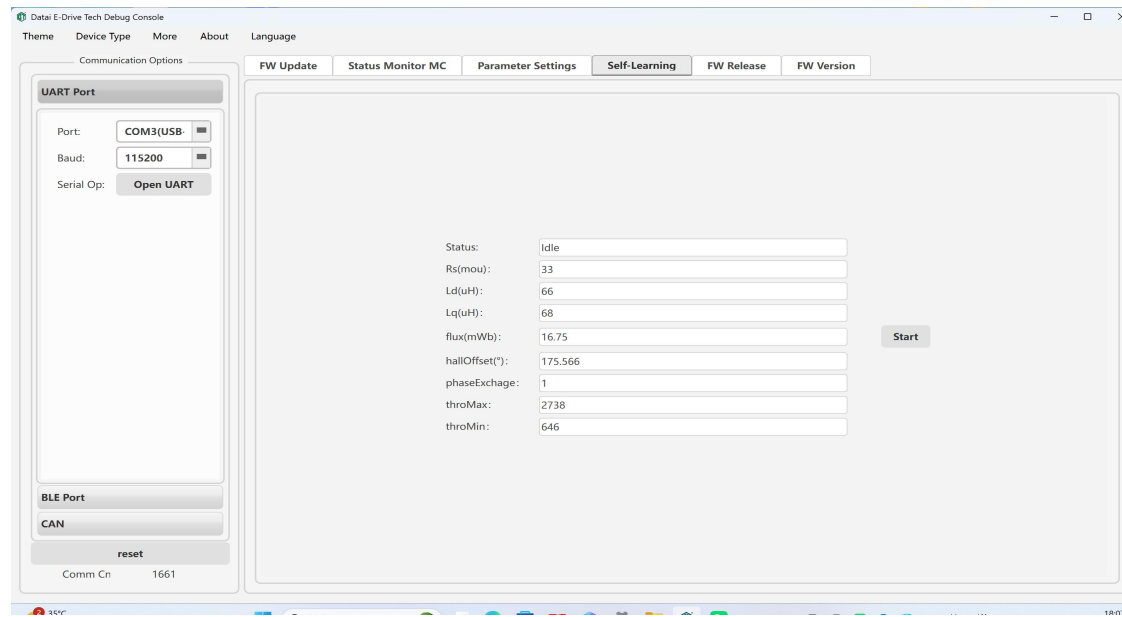
Gear Mode Status: Toggle or momentary switch.

Function Enable: Select functions based on your requirements.

3. Read: Click "Read" after opening the driver software before adjusting settings.

Send: Click "Send" to apply the edited data.

Reset: Restore factory settings.



Self-Learning (start)

Before starting the Self-Learning procedure, it is recommended to configure the appropriate voltage and current parameters on the Parameter Settings page according to your controller and motor specifications.

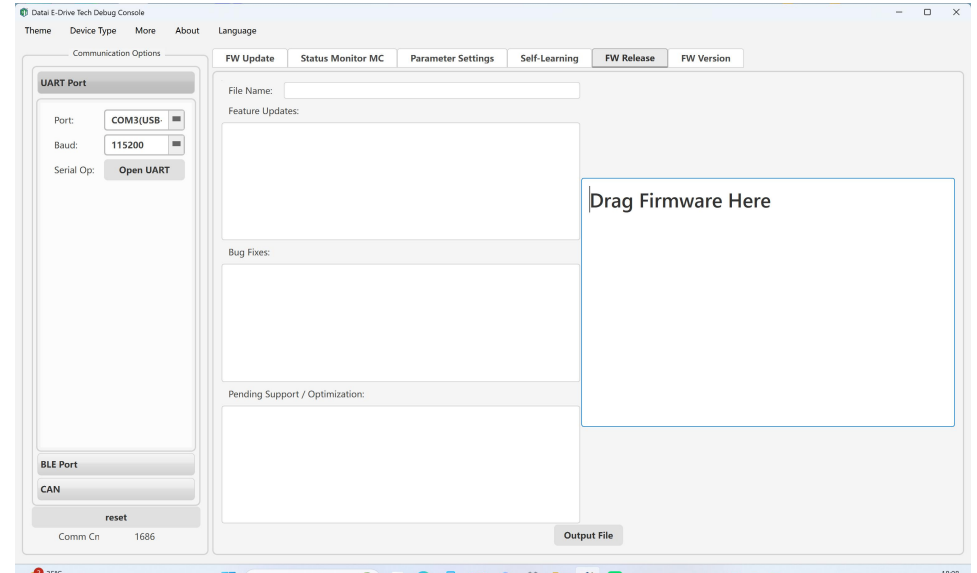
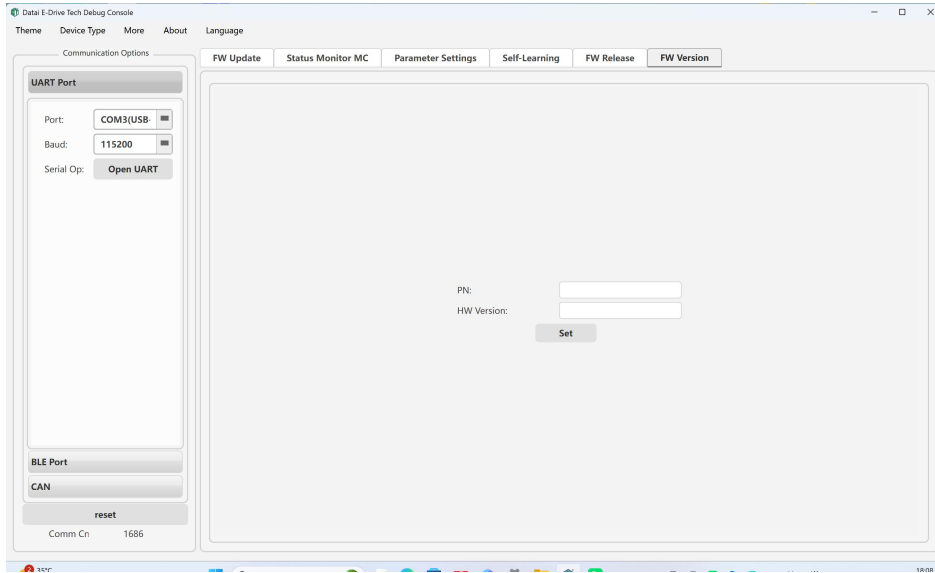
Before performing the self-learning procedure, please refer to the Safety Precautions on Page 2.

Important: After clicking Self-Learning, fully twist the throttle to the maximum position, then release it. Wait for the self-learning process to complete automatically.

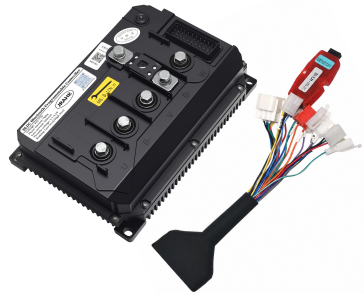
During the self-learning process, the motor may automatically rotate in both the forward and reverse directions. This is normal. Do not operate the throttle, disconnect the power supply, or interrupt the process until the self-learning procedure is complete.

If the motor rotates in the opposite direction after the self-learning process has been completed, go to Parameter Settings → Motor Parameters, enable the Motor Reverse option, and then click Send at the bottom of the page to save the setting.

Note: After changing the motor rotation direction, it is recommended to test the motor with the drive wheel suspended off the ground before normal operation. This helps ensure that the motor rotates in the correct direction and that the controller functions properly.



Firmware export and firmware version are new features; typically, no configuration is required for version upgrades.



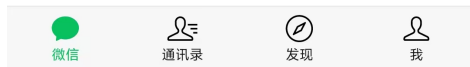


WeChat Mini Program

You can copy "
大泰电驱"
directly.

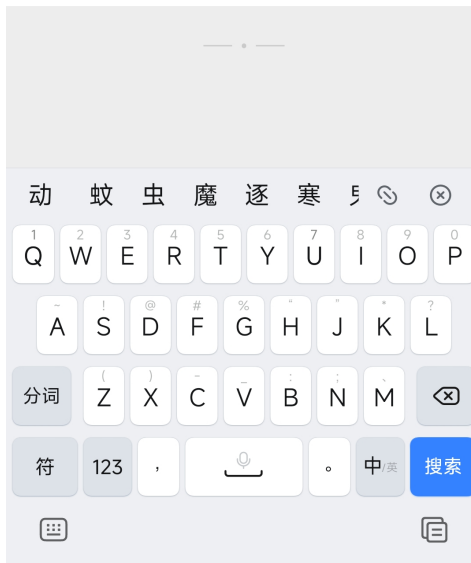


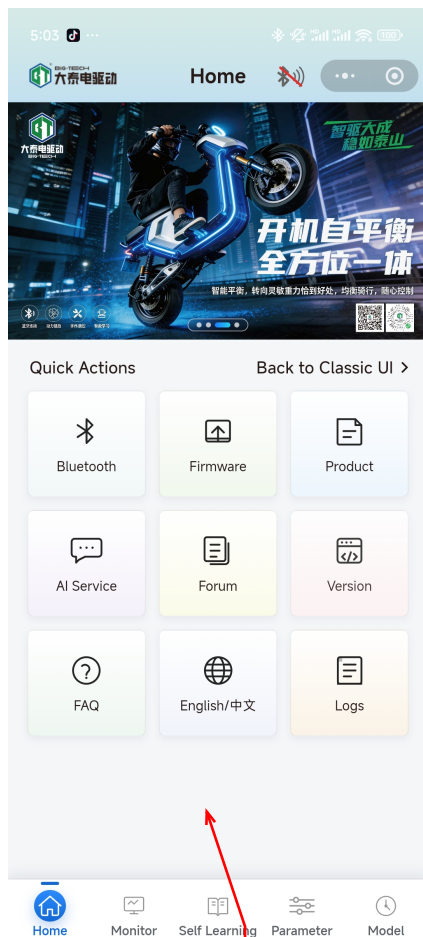
Click to search



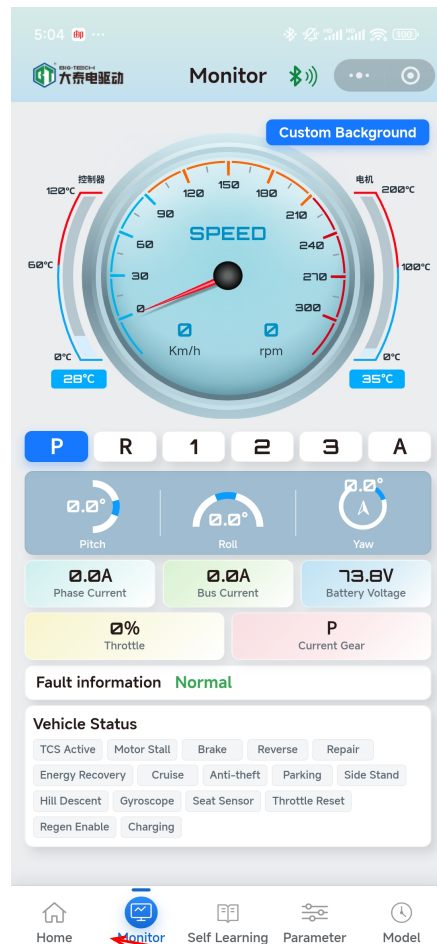
Enter "大泰电
驱"

Click to enter

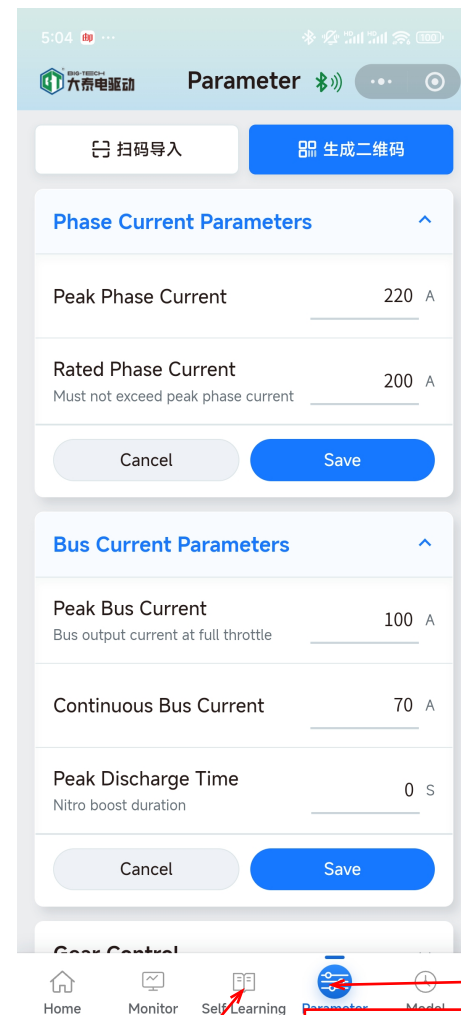




Switch between Chinese and English



Status Monitoring Page



Self-learning page

Parameter adjustment page

5:04

BIG-TECH 大奔电驱动

Parameter

扫码导入 生成二维码

Phase Current Parameters

Peak Phase Current 220 A

Rated Phase Current 200 A
Must not exceed peak phase current

Cancel Save

Bus Current Parameters

Peak Bus Current 100 A
Bus output current at full throttle

Continuous Bus Current 70 A

Peak Discharge Time 0 s
Nitro boost duration

Cancel Save

Home Monitor Self Learning Parameter Model

Phase Current Parameters

Peak Phase Current / Rated Phase Current: Enter the phase current value specified for the controller you purchased.

Busbar Current Parameters

Peak Busbar Current / Rated Busbar Current: Enter the rated current value specified for the controller you purchased (you may enter any value up to the rated current limit).

Rated Regenerative Current: Refers to the current fed back to the battery during energy recovery.

Peak Discharge Duration: Refers to the duration of maximum current output.

Set the corresponding values and click Save.

5:04

Parameter

Gear Control

Gear Control
Defaults to highest gear when disabled ☒

Gear Type Momentary ▾

Gear Mode 2-Gear ▾

Gear1 Speed Ratio	100 %
Gear1 Current Ratio	60 %
Gear2 Speed Ratio	100 %
Gear2 Current Ratio	100 %
Gear2 Weak Ratio	0 %
Gear3 Speed Ratio	100 %
Gear3 Current Ratio	100 %
Gear3 Weak Ratio	50 %

Cancel Save

Gear Control

Gear Type: Select based on the connected three-speed configuration.

Gear Mode: Default setting recommended.

Speed ratio, phase current ratio, and field weakening ratio for Gears 1, 2, and 3 can be adjusted according to personal preference.

The recommended default for the speed ratio is 100%. The phase current ratio refers to the percentage of total current, while the field weakening ratio controls the maximum speed adjustment; it is recommended to avoid setting this value too high.

Set the corresponding values and click Save.

5:05

Parameter

Basic Parameters

Gear Control

Motor Parameters

Tire Diameter
Hub motor: 12" = 42 cm / 10" = 32 cm cm

Motor Pole Pairs
High-power motor: 16, standard motor: 30

Motor Gear Ratio
Only for mid-drive motors with differential ratio

Sensor Type

Data2

Reverse Function

Home Monitor Self Learning **Parameter** Model

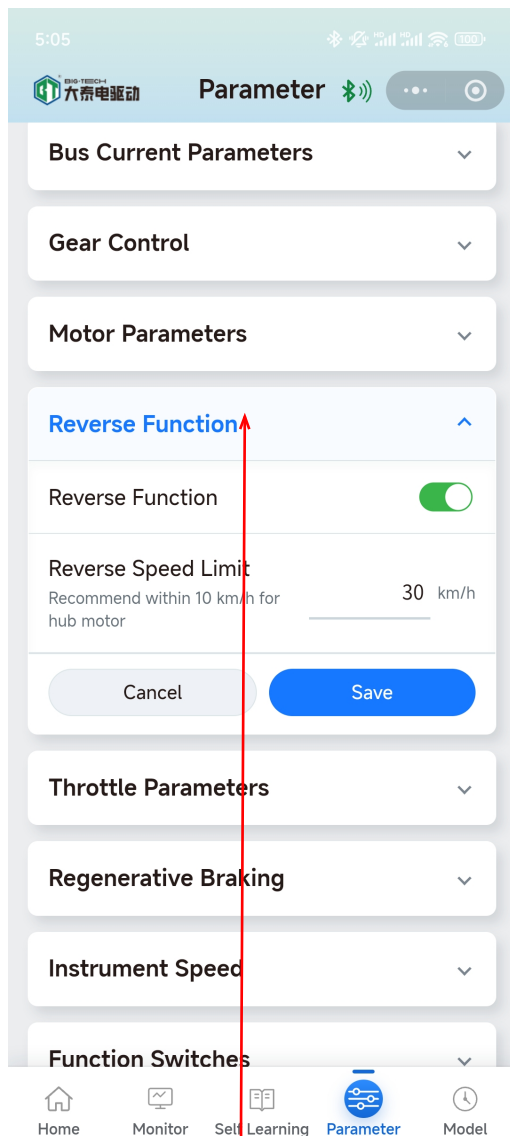
Motor Parameter Settings

Motor pole pairs: Adjust according to motor specifications

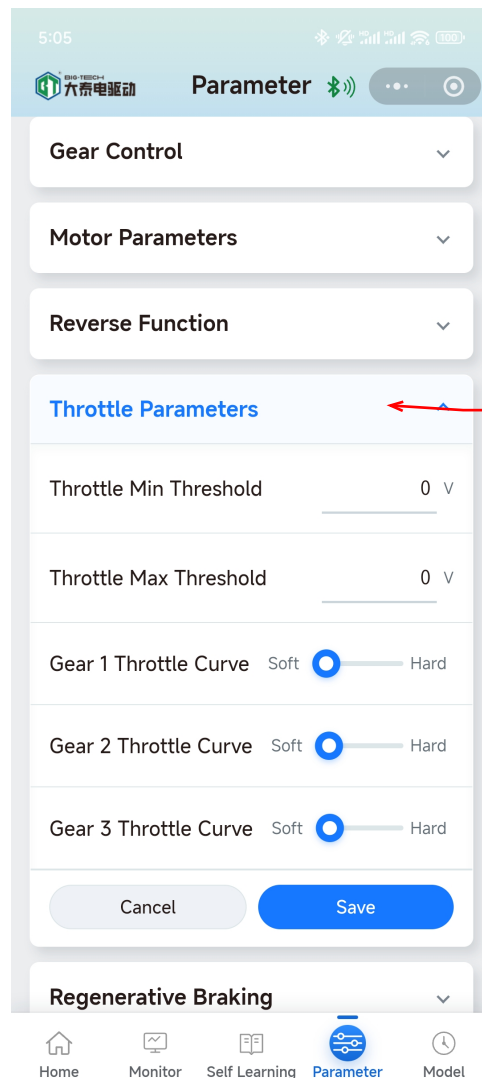
Tire diameter: Enter the actual tire diameter (in meters)

Reduction gear ratio: Applicable only to mid-drive motors; no setting required for other motor types

Set the corresponding values and click Save.



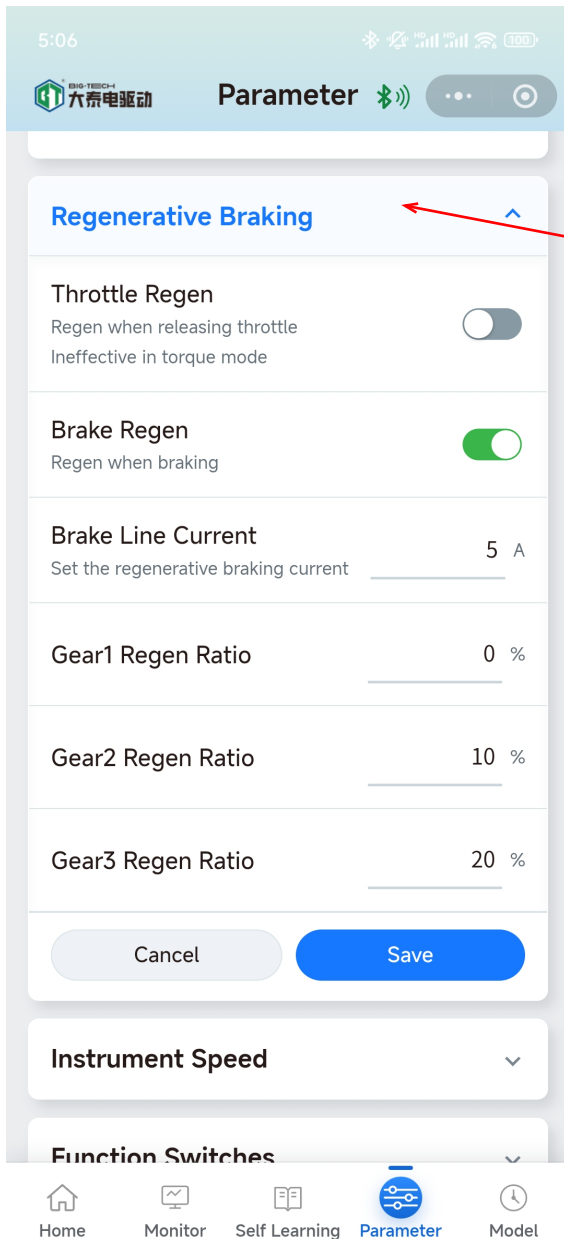
Reversing settings:
Configure as needed.



Throttle Parameters

Minimum throttle voltage, maximum throttle voltage, and soft/hard start settings can be customized according to your preference or left at their default values.

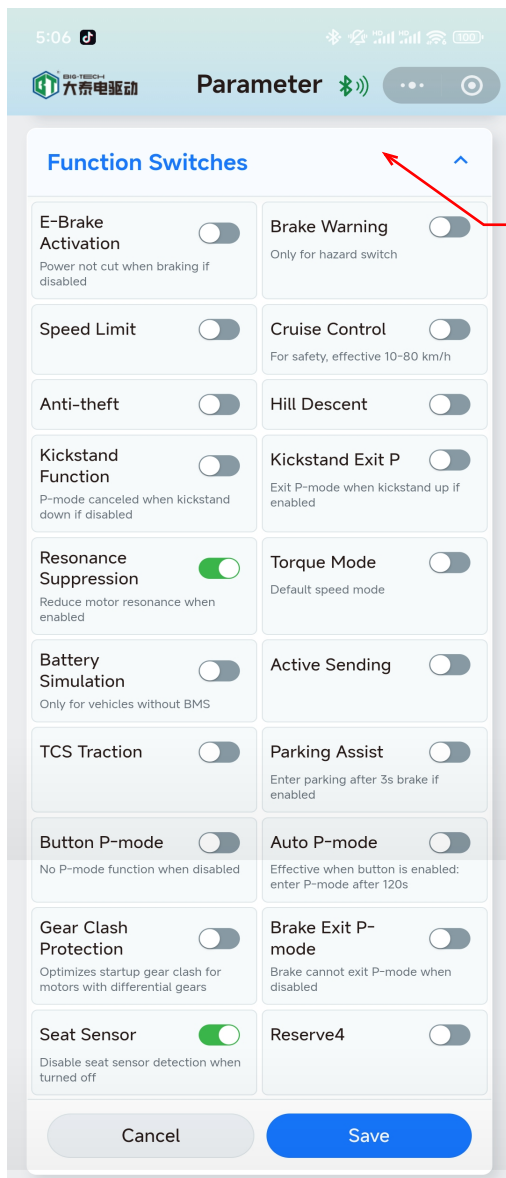
Set the corresponding values and click Save.



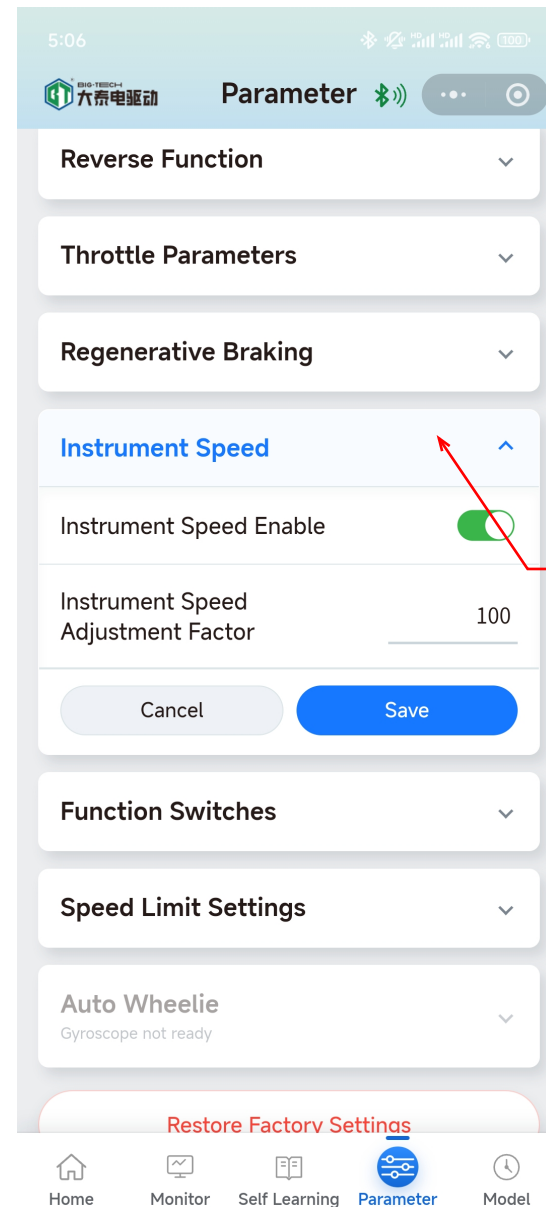
Regenerative Braking

Energy recovery via throttle release or braking can be enabled or disabled according to preference.
Energy recovery levels (Level 1, 2, or 3) can be selected based on personal preference; setting the level too high is not recommended.

Set the corresponding values and click Save.

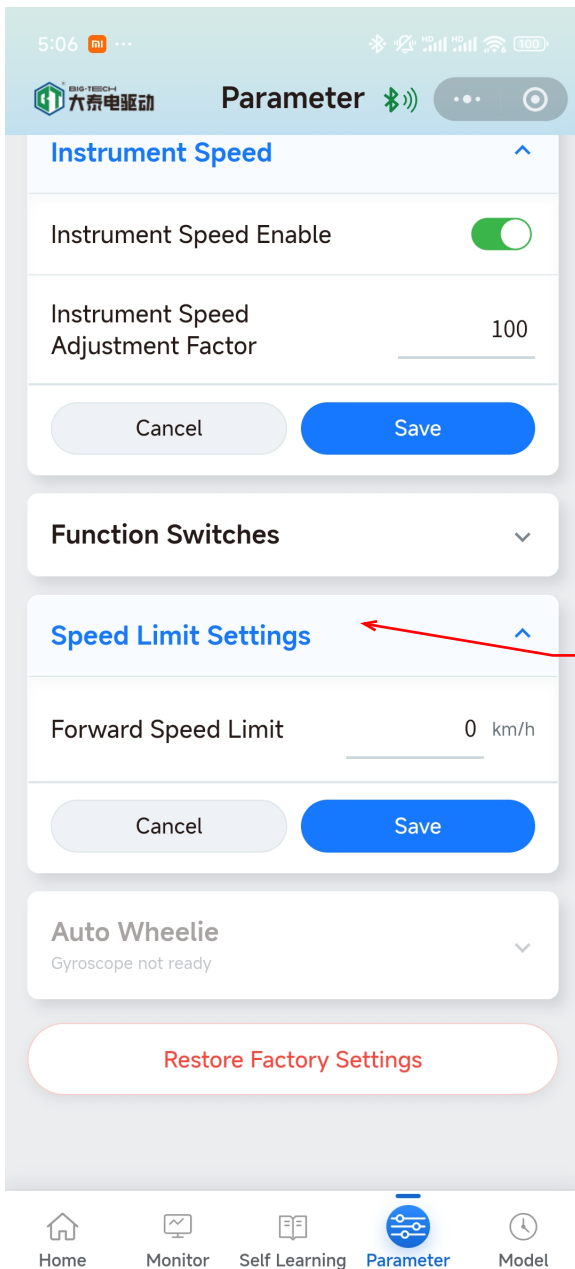


Feature Toggles
Simply enable or disable the features as needed.

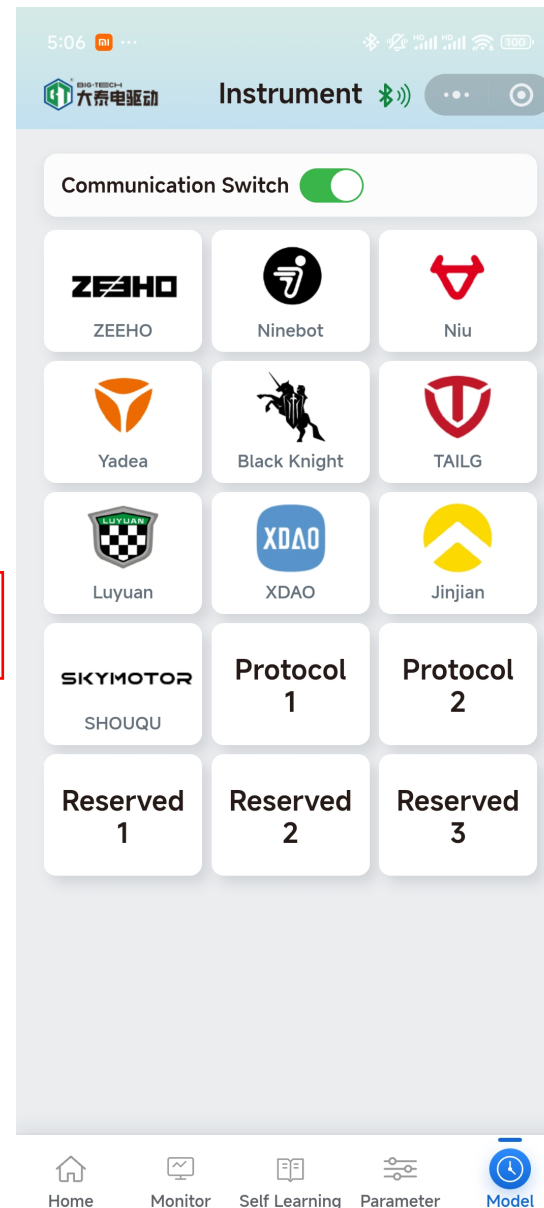


Instrument Speed
Adjust the value based on the actual speed: a higher value results in slower speed, while a lower value results in faster speed.

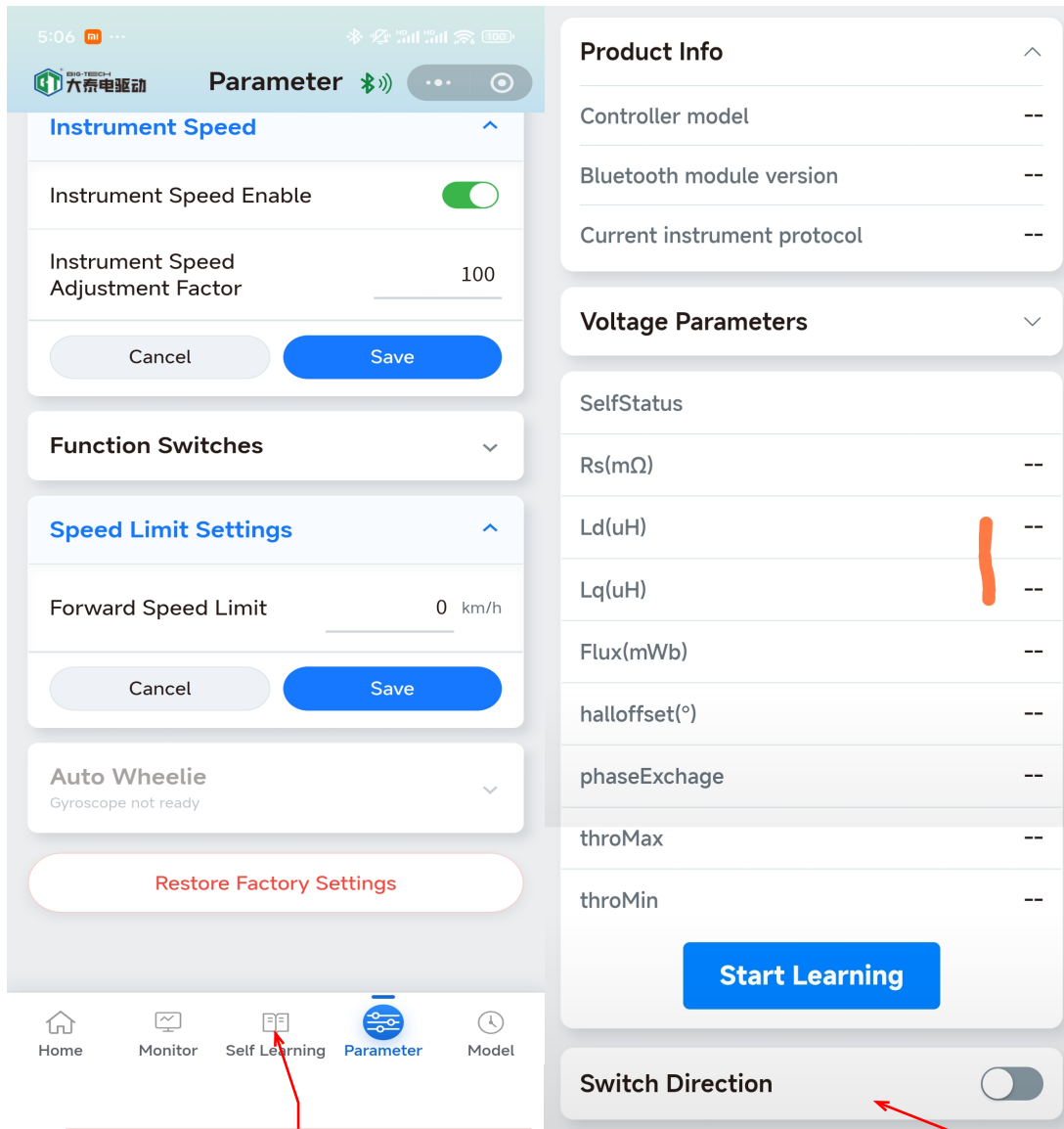
Set the corresponding values and click Save.



Speed Limit Settings
Forward/Reverse Speed:
Adjustable in km/h based
on actual requirements;
default is 500 (no speed
limit).



Instrument Options
Select the appropriate
protocol based on the
specific display unit.



Click the self-learning page.

Self-Learning (Startup)

Before initiating the self-learning procedure, it is recommended to configure the appropriate voltage and current parameters on the "Parameter Settings" page based on the specifications of the controller and motor.

Please refer to the "Safety Precautions" on page 2 before executing the self-learning procedure.

Important: After clicking "Self-Learning," fully twist the throttle to the maximum position and then release it. Wait for the self-learning process to complete automatically.

During the self-learning process, the motor may automatically rotate in both forward and reverse directions; this is normal. Do not operate the throttle, cut off the power, or interrupt the process until the self-learning procedure is complete.

Switch Direction

If the motor rotates in the opposite direction

Safety Precautions

? Please read the following safety instructions carefully before operation.

Always switch off the vehicle power before connecting or disconnecting any wiring.

The drive wheel must remain suspended off the ground. Never perform self-learning, motor direction calibration, or parameter testing while the vehicle is on the ground or carrying a rider.

Ensure that the battery voltage matches the controller's rated operating voltage to prevent protection faults or hardware damage.

After modifying any parameters, click Send to save the settings, then click Read again to verify that the parameters have been written successfully.

During a firmware upgrade, do not disconnect the USB communication cable, power off the controller, or close the software. Doing so may cause the controller to fail to boot properly.

Do not modify advanced parameters (such as current limits, field weakening, or motor parameters) unless you fully understand their functions. Incorrect settings may result in controller protection, abnormal motor operation, or permanent hardware damage.

Whenever the controller, motor, or Hall sensor wiring is replaced, perform Self-Learning before normal operation to ensure proper motor direction and parameter matching.

Keep hands, clothing, tools, and other objects away from all rotating parts during testing. Ensure the surrounding area is clear of people and obstacles.

If abnormal heating, unusual odors, smoke, or any other unexpected conditions occur, immediately disconnect the power supply and inspect the system before continuing operation.