ModuleSuite Manual

Version: V1.8

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1 Install

We provide the Setup. exe installation package, which is a green installation and automatically generates a desktop shortcut.

2 Uninstall

Please manually remove the uninstallation program, as it is a green installation and there is no writing to the registry.

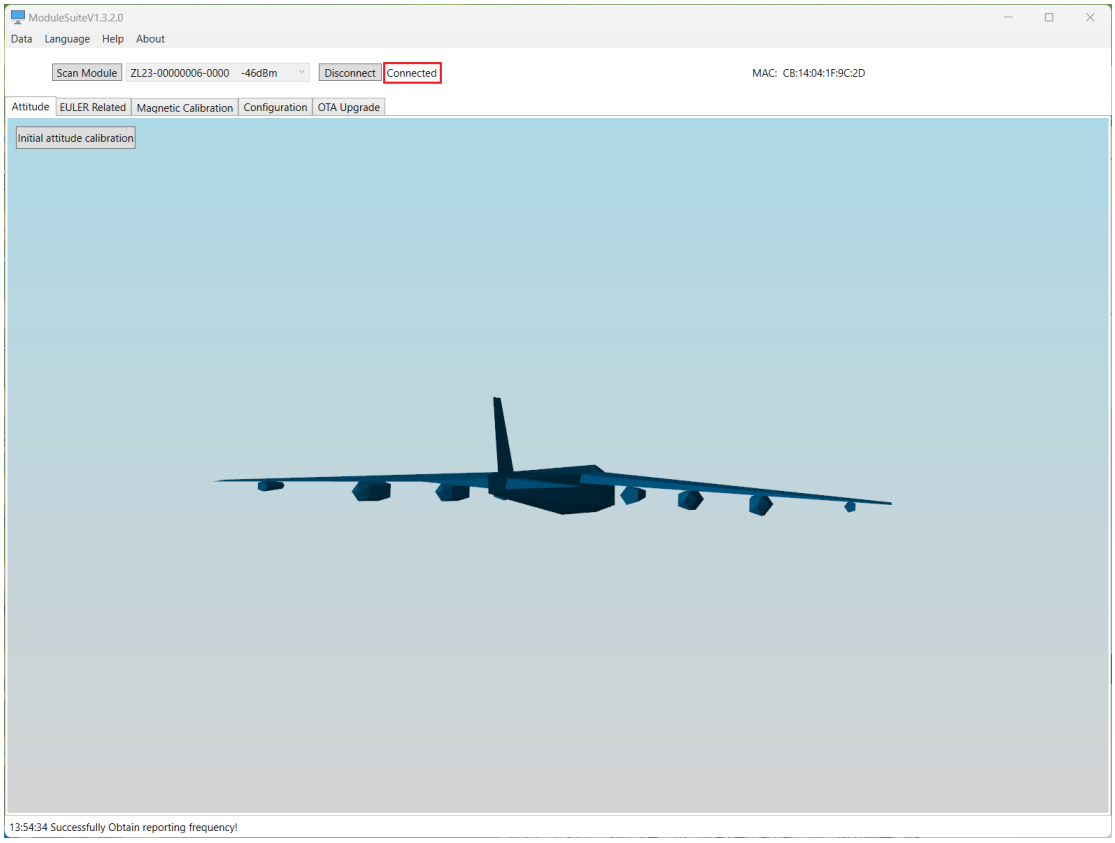
3 Usage Instructions

3.1 Run the program

Double click the ModulusSuite.exe file or shortcut to open it.

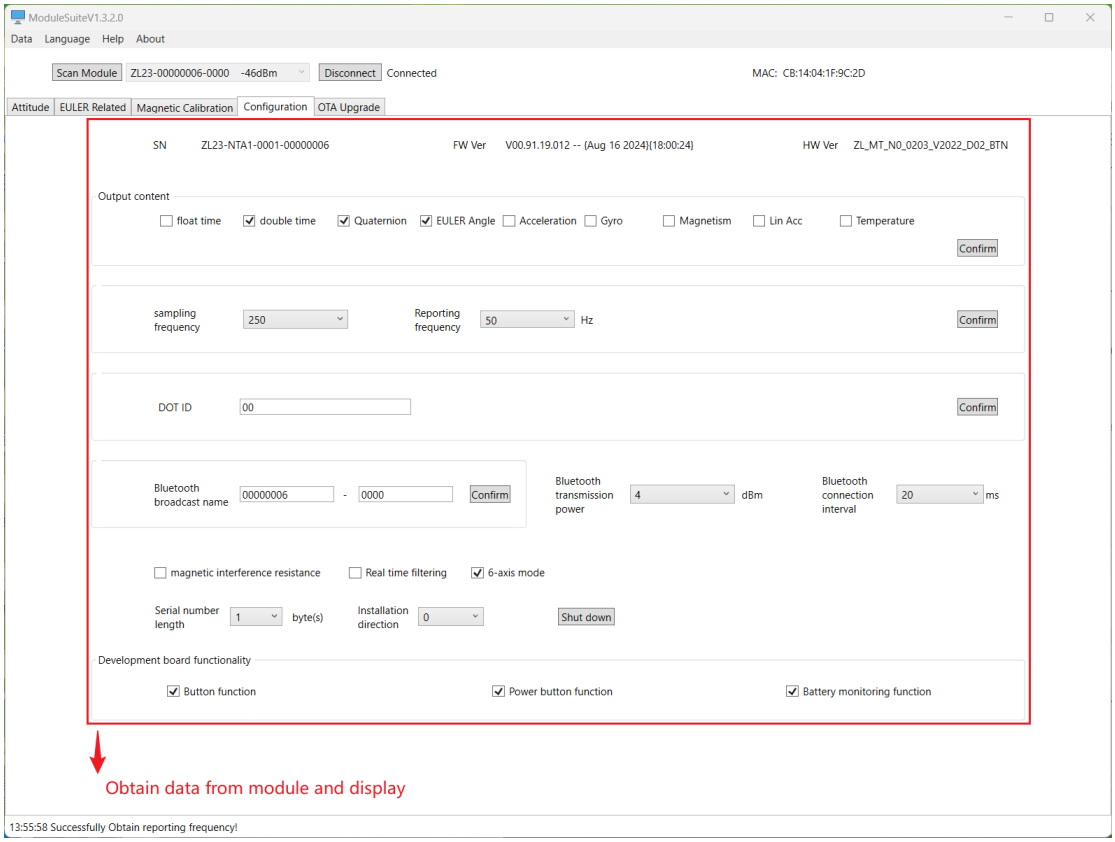
3.2 Module connect to software

Click on [Scan Module] button, and when a string appears in the dropdown menu, you can select the module to be connected, and then click on [Connect] button. When the module successfully connects to the program, it will display Connected. As shown in the following figure



3.3 Configuration

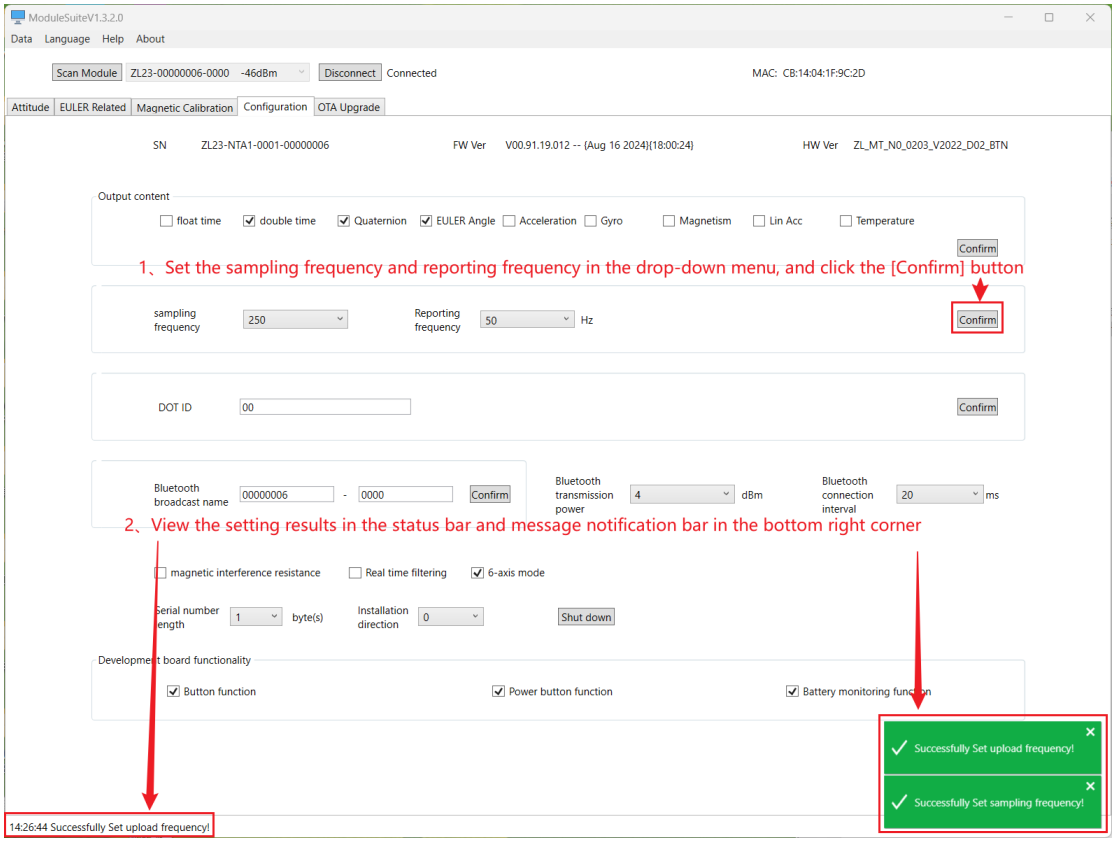
After the module is connected to the program, every time it enters the configuration interface, the program will automatically obtain data such as sampling frequency, data reporting frequency, output content, Bluetooth broadcast name, Bluetooth transmission power, Bluetooth connection interval, DOT ID, attitude optimization parameter settings (anti magnetic interference, 6-axis mode, real-time filtering), serial number length, installation direction, etc. from the module and display them on the configuration interface, as shown in the following figure.



1) Sampling Frequency、Reporting Frequency

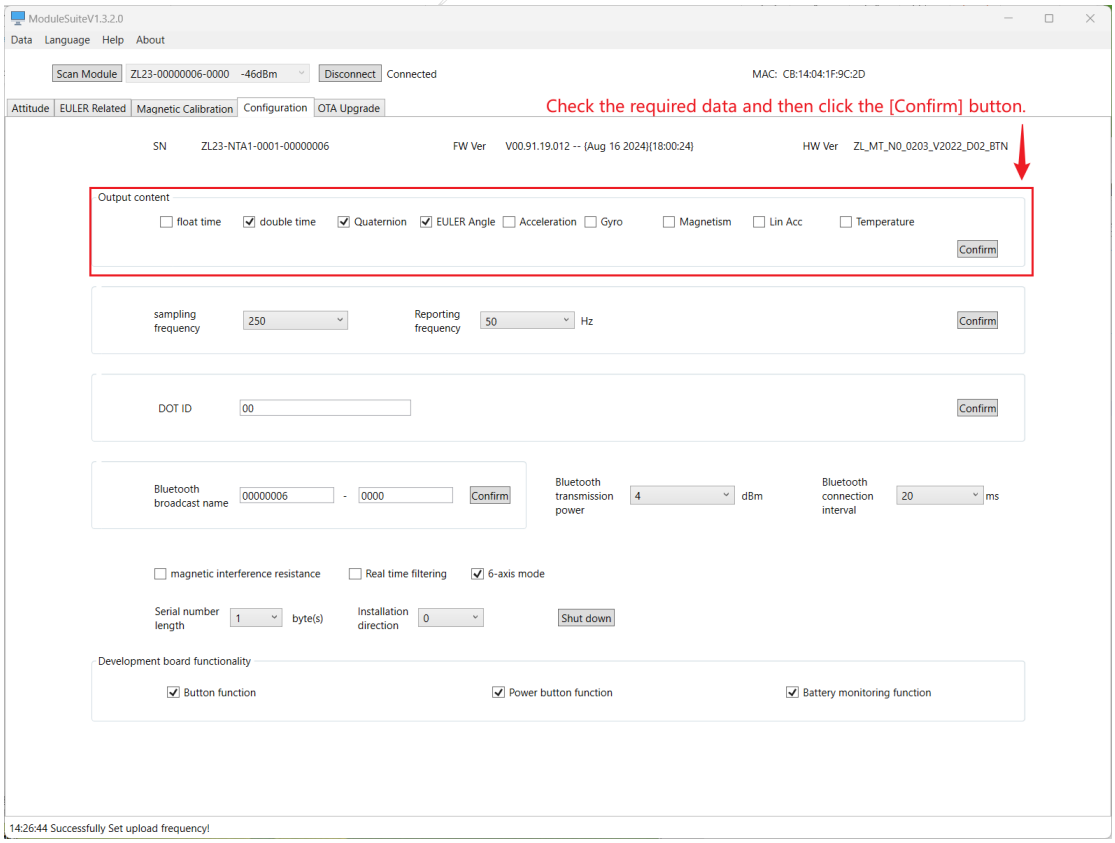
There are several options for sampling frequency, including 200Hz, 240Hz, and 250Hz. Settings can be selected from the dropdown menu. When a sampling frequency is selected, the reporting frequency will automatically change to the corresponding optional range.

After selecting the sampling frequency and reporting frequency through the drop-down menu, you need to click the [Confirm] button. As shown in the following figure.



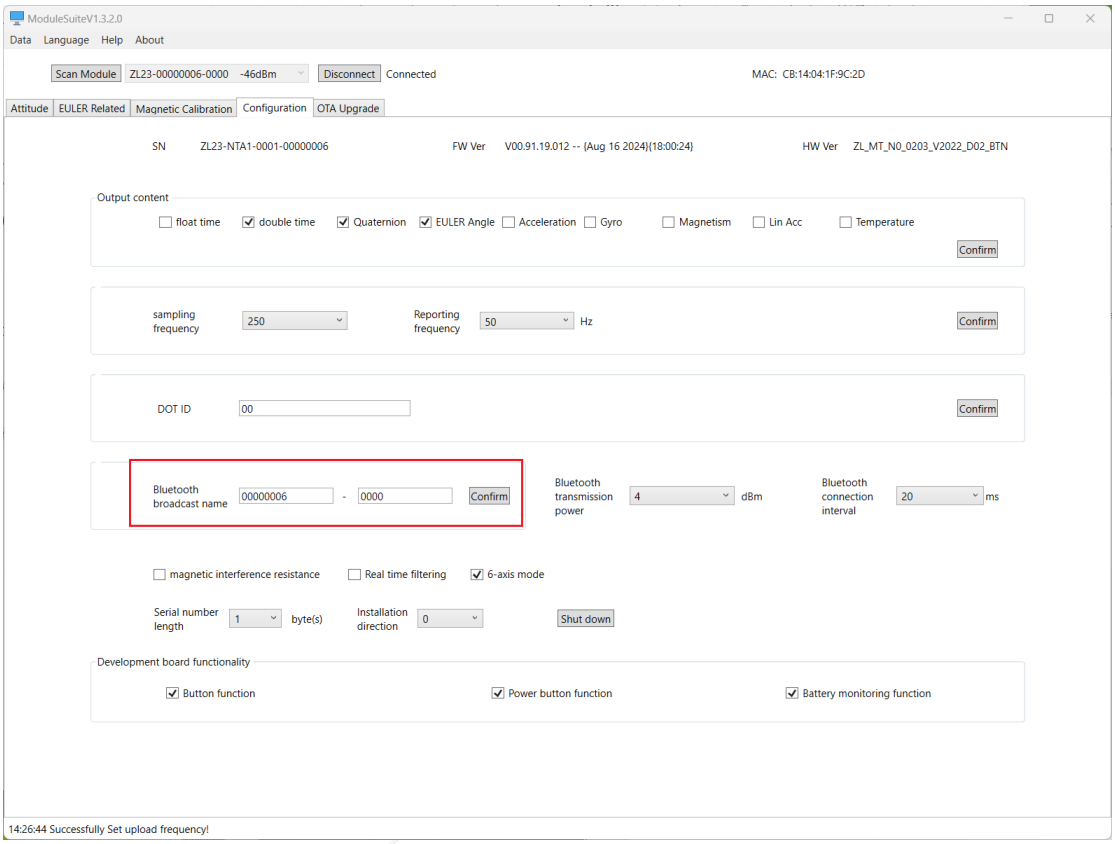
2) Output content

Check the required data and then click the [Confirm] button.



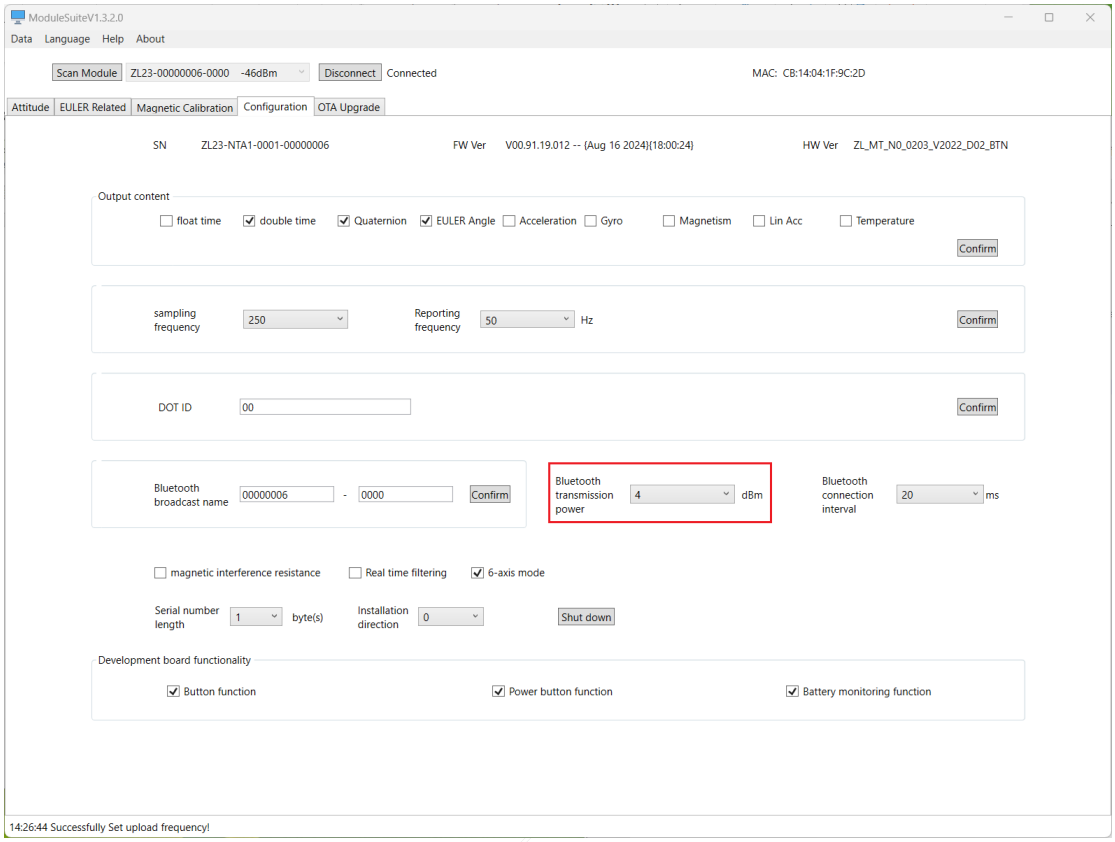
3）Bluetooth broadcast name

Change the Bluetooth broadcast name.：Enter a string length of 4-8 characters in the first text box and 4 characters in the second text box. Click the [confirm] button. Restart the module to see the new Bluetooth broadcast name.



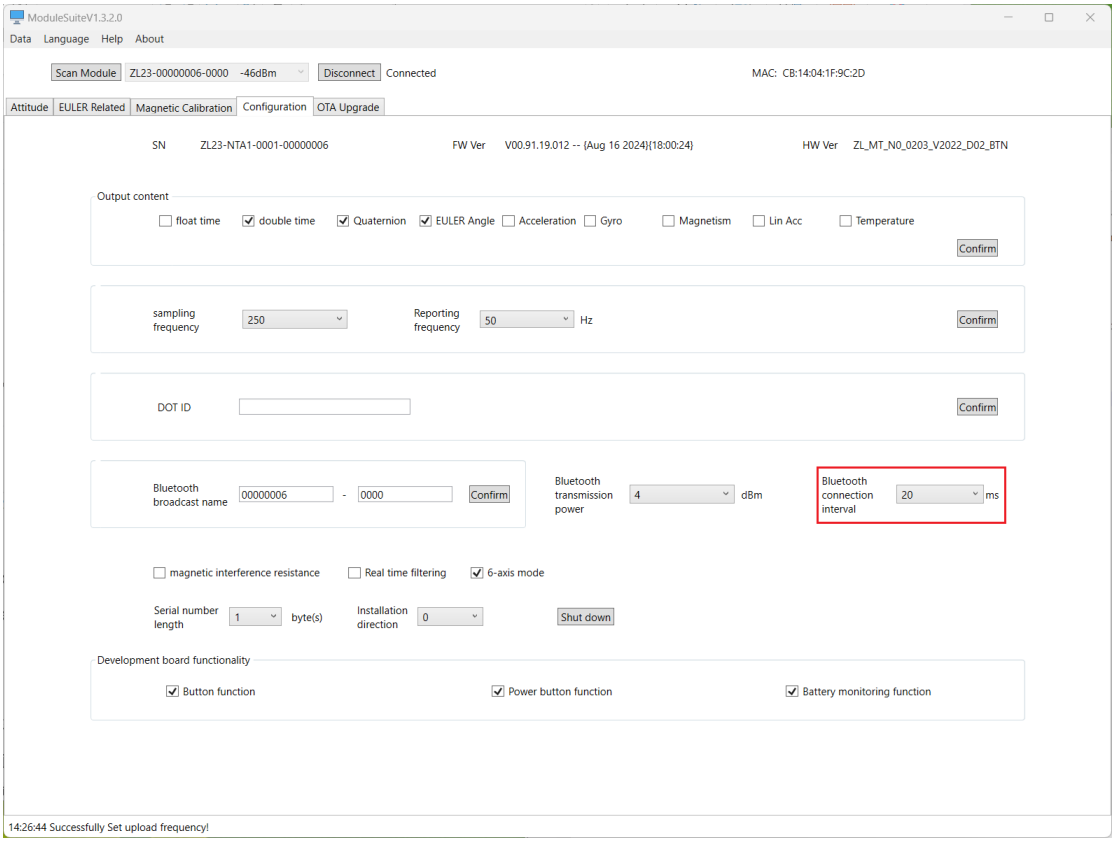
4）Bluetooth transmission power

Select the Bluetooth transmission power through the drop-down menu, the status bar will display the modification result.



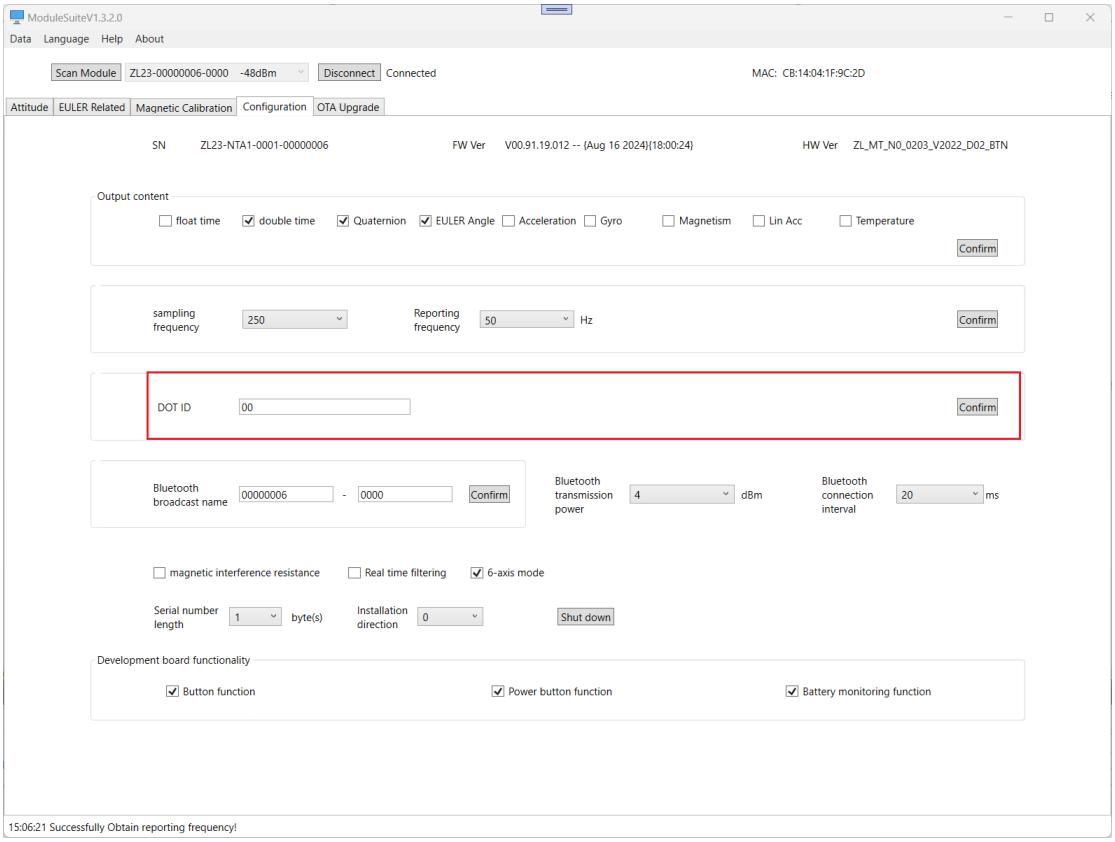
5) Bluetooth connection interval

Select the Bluetooth connection interval through the drop-down menu, the status bar will display the modification result.



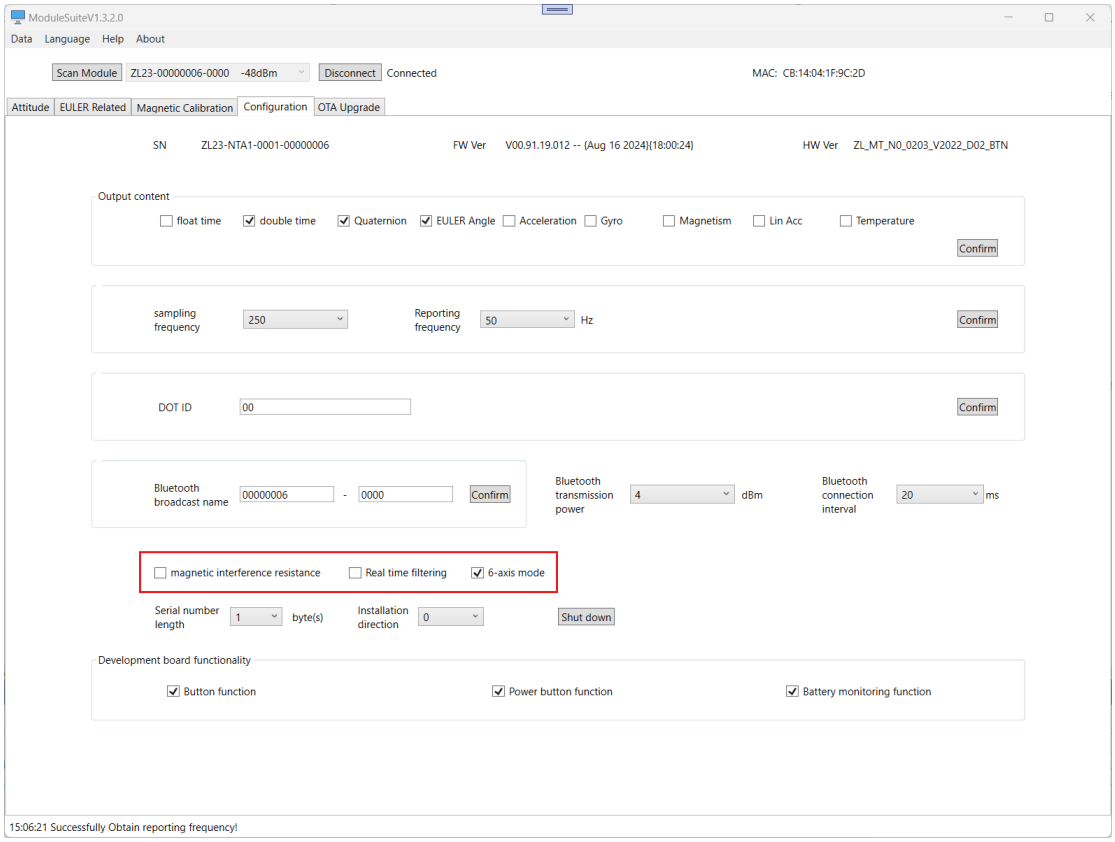
6) DOT ID

Enter the DOT ID in the text box(1 to 2 hexadecimal digits) and click the confirm button.



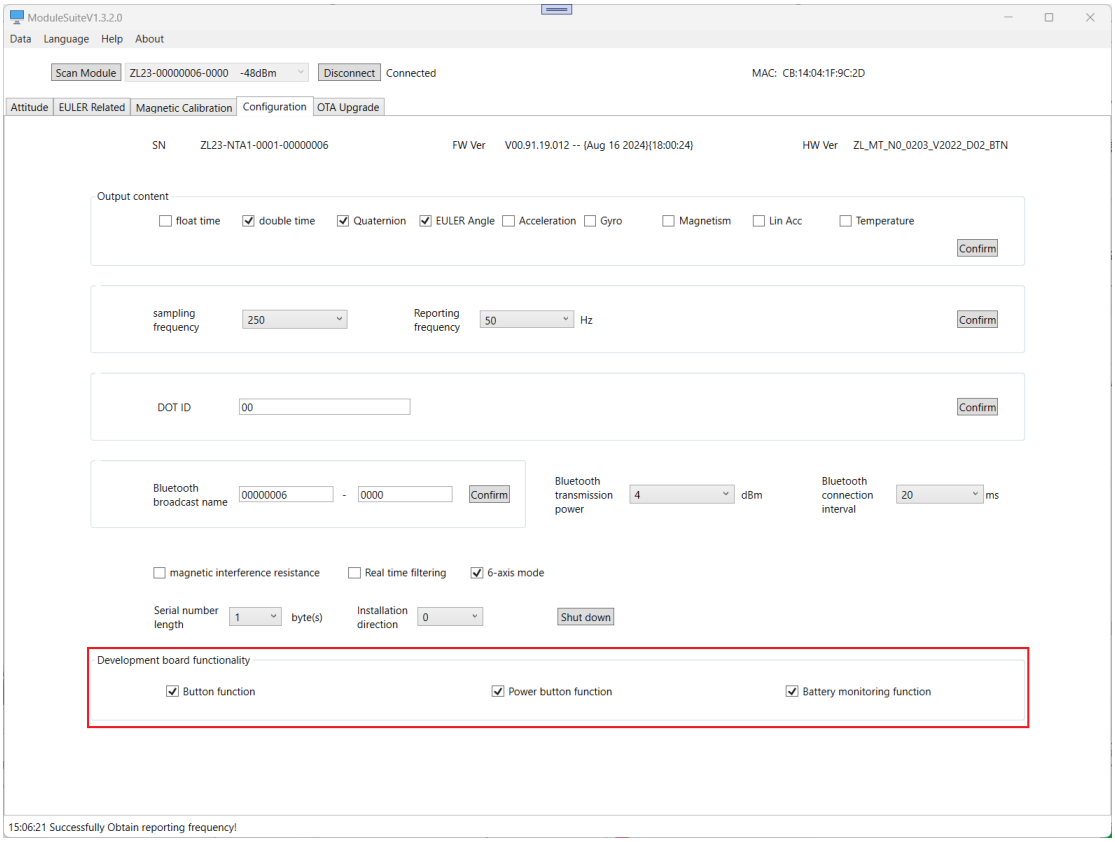
7）Attitude optimization parameters

Anti magnetic interference, 6-axis mode, and real-time filtering can be checked/unchecked through the checkBox settings.



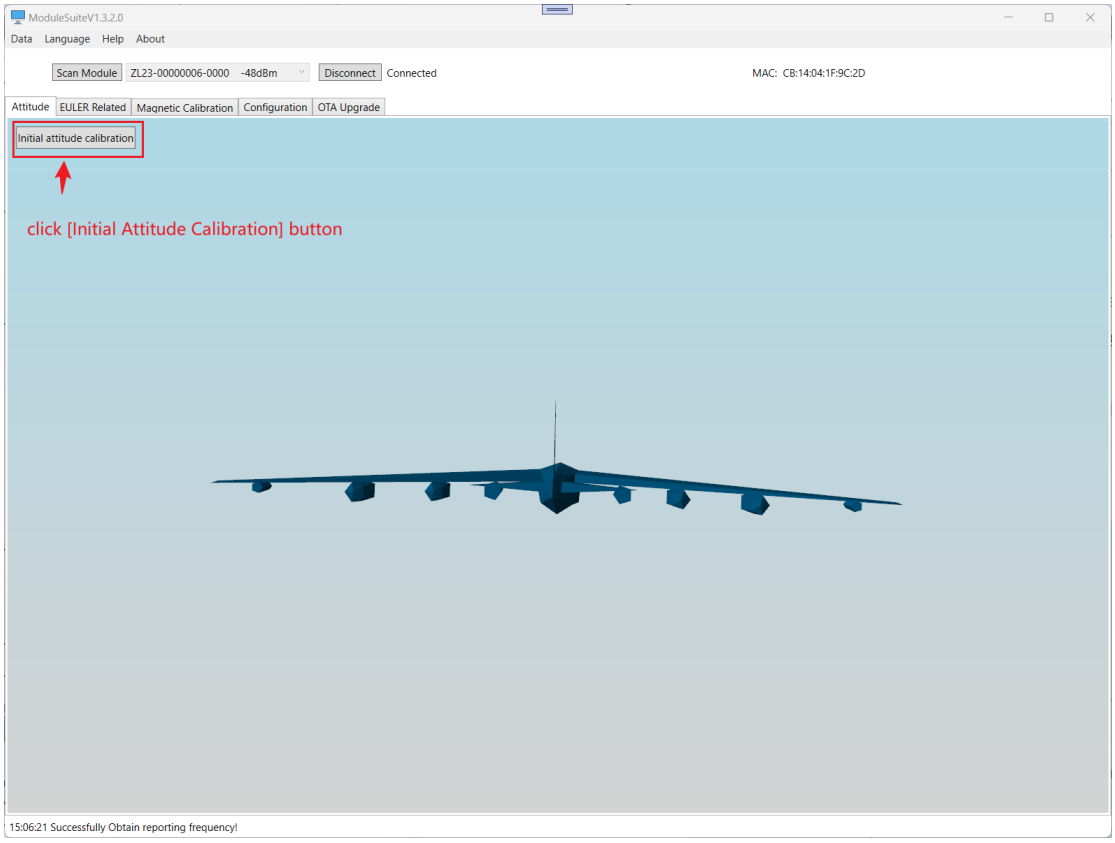
8）Development board functionality

Button function, power button function, battery monitoring function on and off.



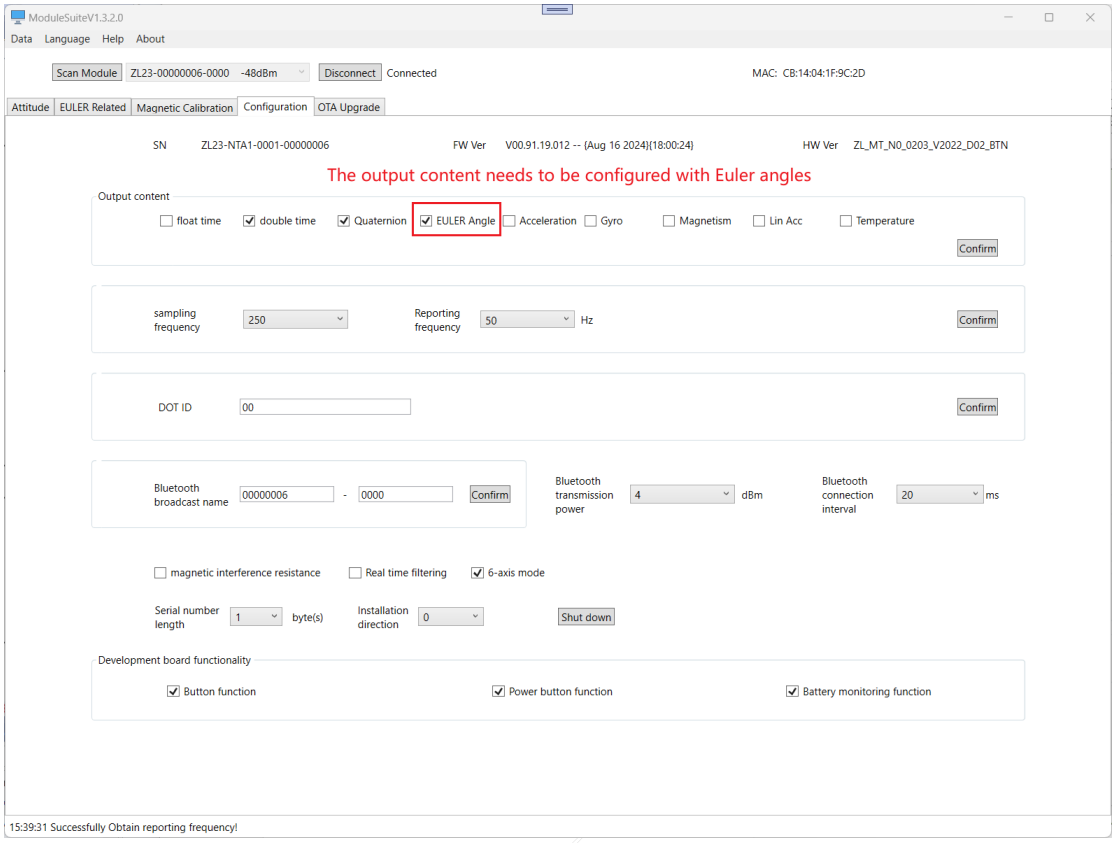
3.4 Main interface attitude display

The module is placed horizontally on the table, facing upwards, with the charging port pointing towards the screen direction. After clicking on [Initial Attitude Calibration] button, the tail of the aircraft is facing the person, and the attitude of the module corresponds perfectly to that of the aircraft. As shown in the following figure.

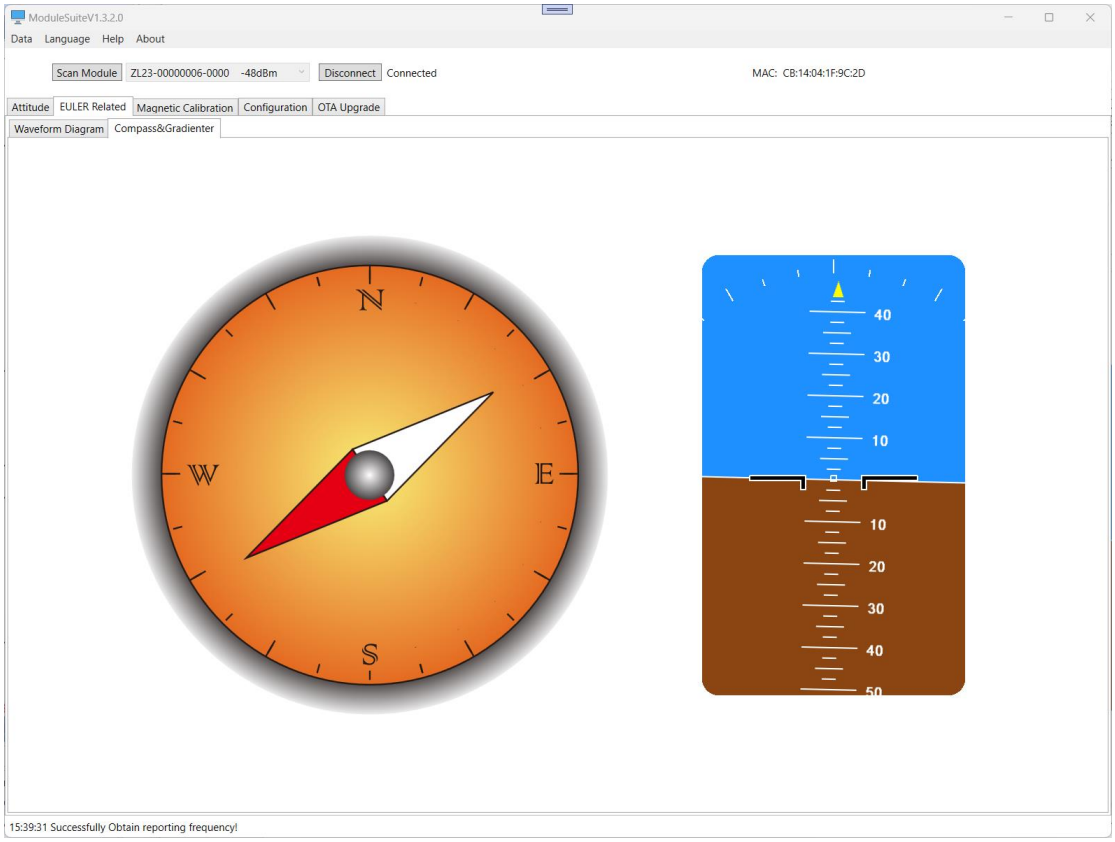


3.5 Euler angle related display

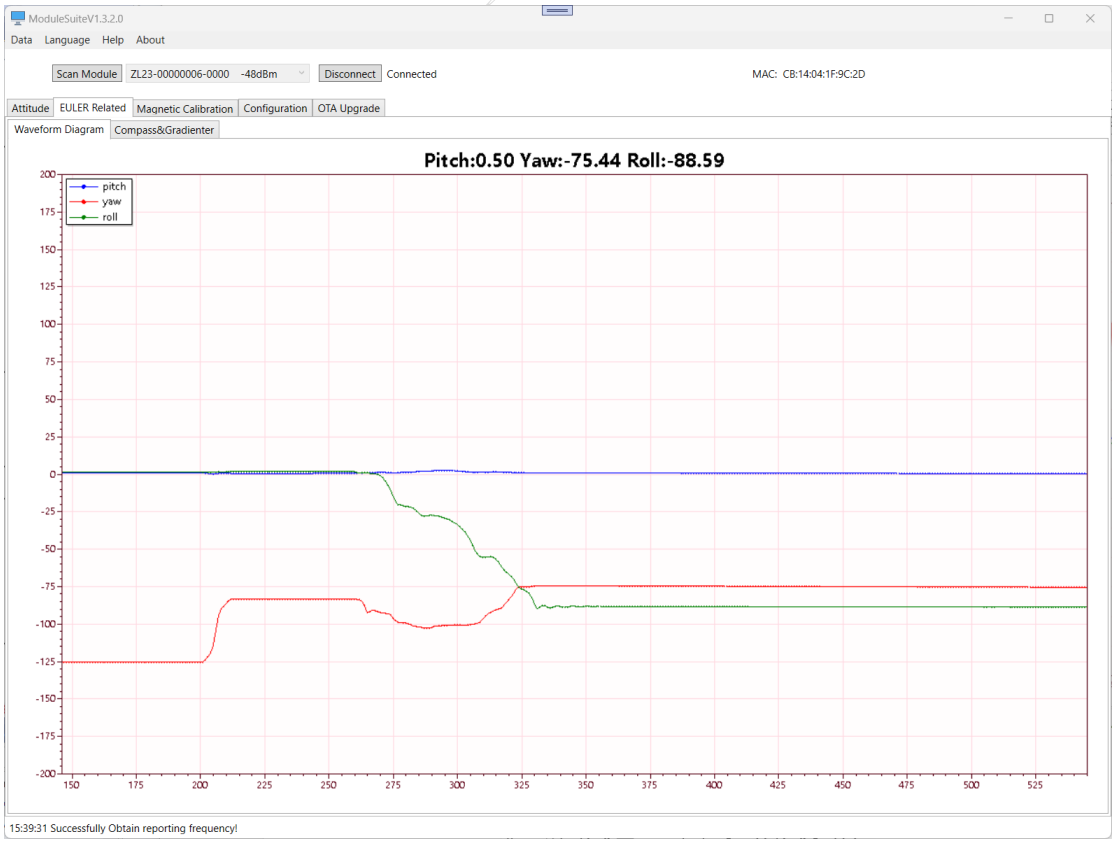
The output content needs to be configured with Euler angles



1) The compass and level display are as follows:

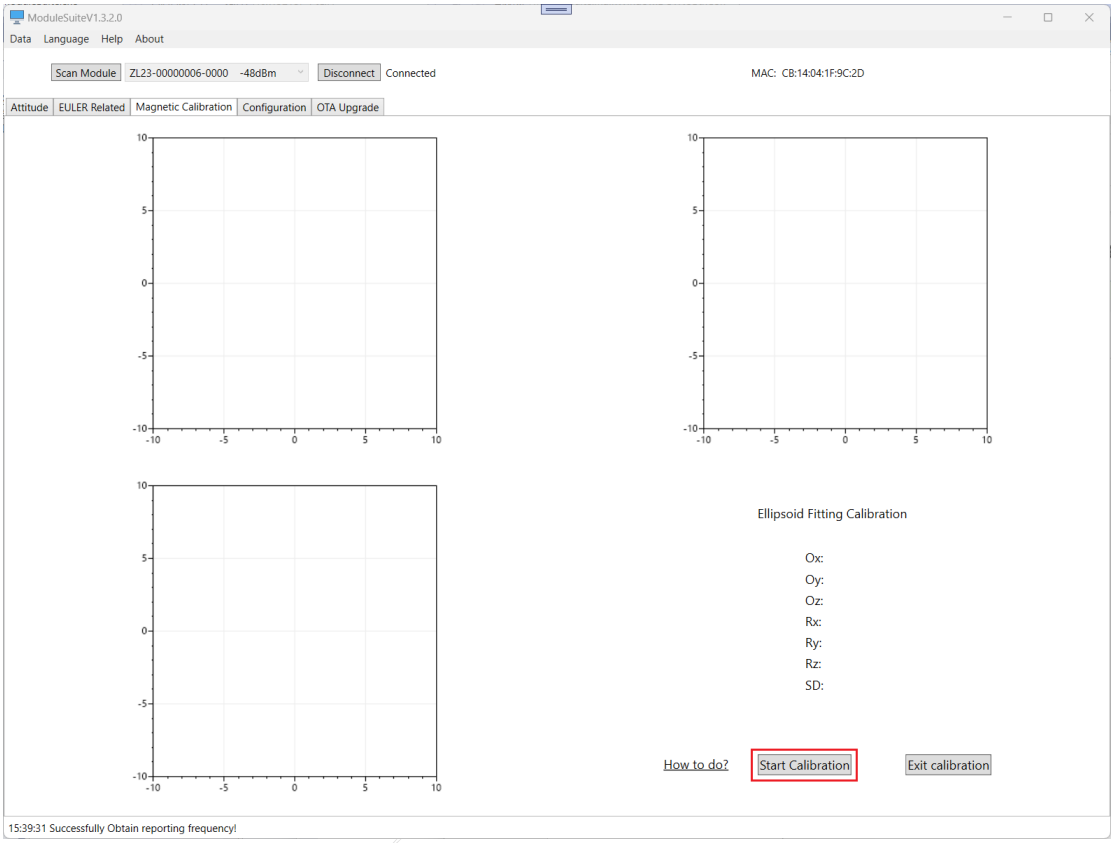


2) The Euler angle waveform diagram is shown as follows:

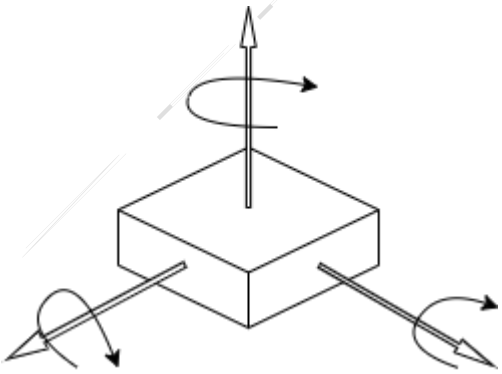


3.6 Magnetic Calibration

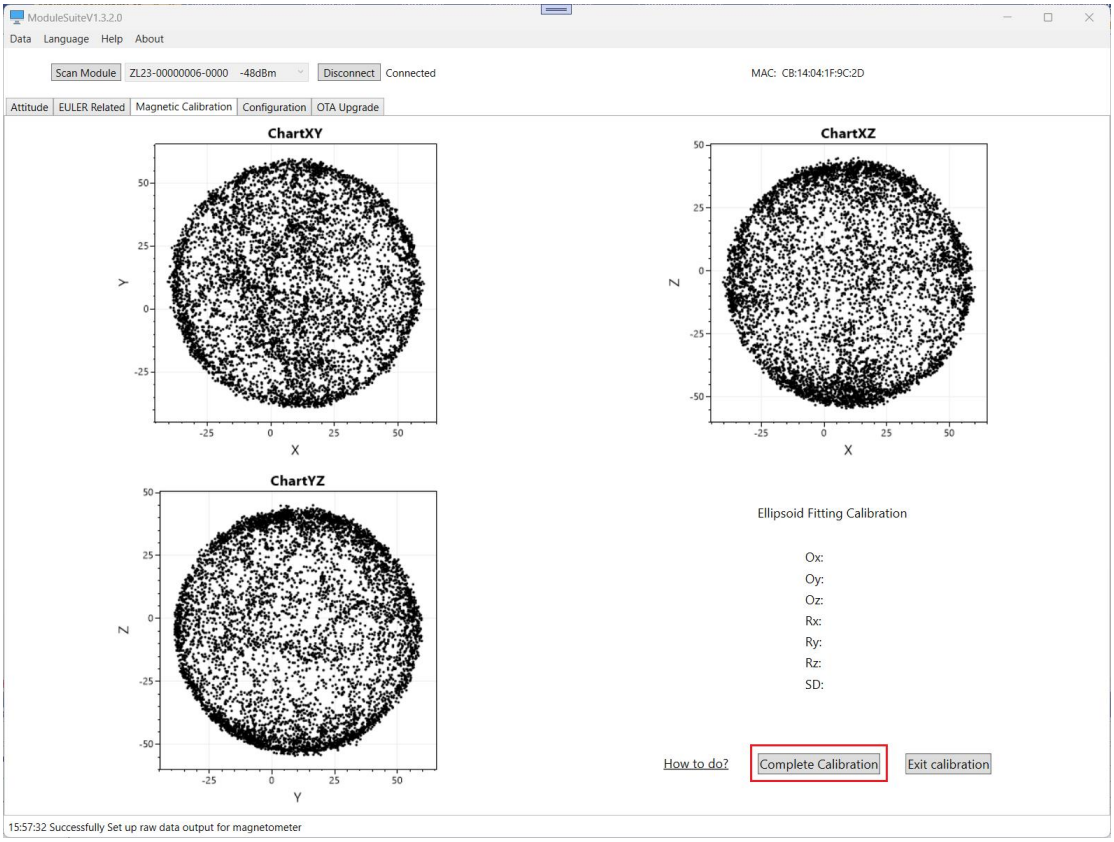
1) Enter the magnetic field calibration page and click the [Start Calibration] button.



Hand hold the module and flip it in various directions in space, or rotate it clockwise or counterclockwise around the three axes of the module.

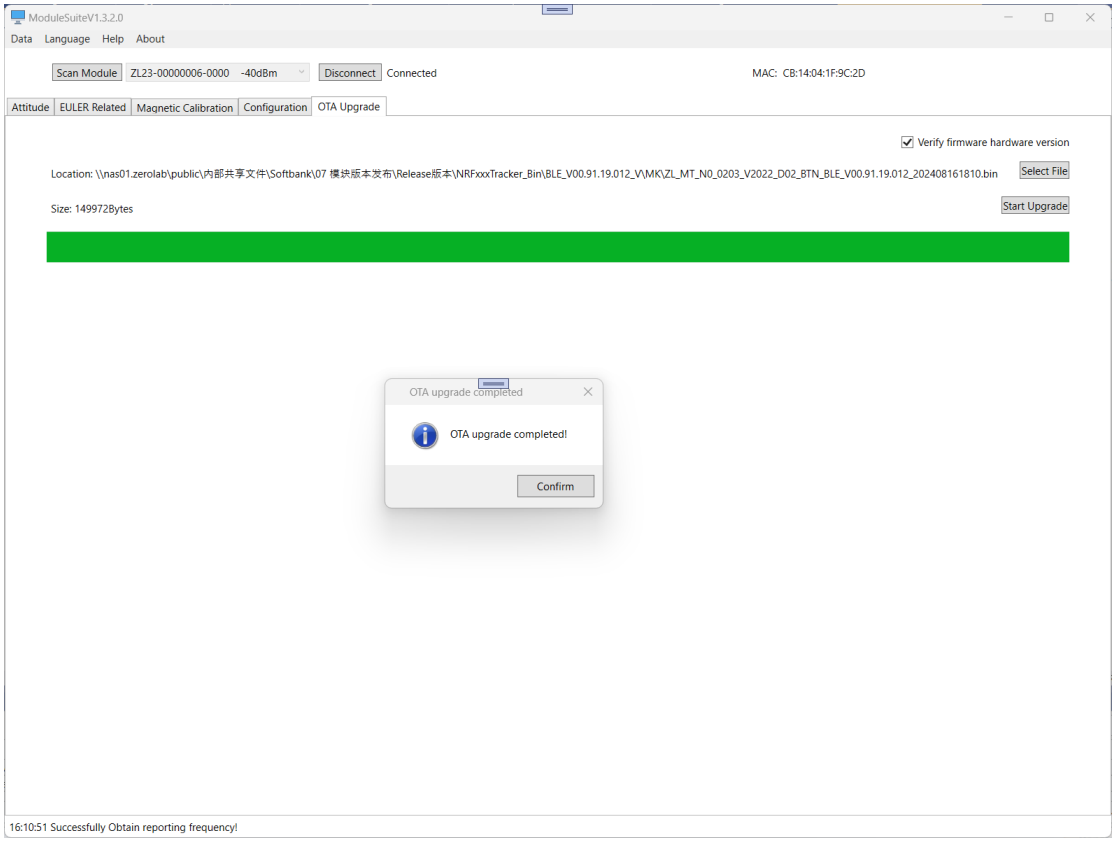


2) When the contours of the three ellipses on the program are relatively rich and obvious, as shown in the figure below, click the [End Calibration] button.



3.7 OTA Upgrade

After receiving the upgraded bin file, click the [Select File] button to select the BIN file to be upgraded, click the [Start Upgrade] button to start the upgrade, and the progress bar will display the upgrade progress. After the upgrade is completed, a pop-up box will display 'OTA upgrade completed', and the module will automatically restart.


ModuleSuiteV1.3.2.0
Data Language Help About
Scan Module
ZL23-00000006-0000 -40dBm
Disconnect
Connected
MAC: CB:14:04:1F:9C:2D
Attitude
EULER Related
Magnetic Calibration
Configuration
OTA Upgrade
Verify firmware hardware version
Location: \\nas01.zerolab\public\内部共享文件\Softbank\07 模块版本发布\Release版本\NRFxxxTracker_Bin\BLE_V00.91.19.012_V\MK\ZL_MT_N0_0203_V2022_D02_BTN_BLE_V00.91.19.012_202408161810.bin
Select File
Size: 149972Bytes
Start Upgrade
OTA upgrade completed
OTA upgrade completed!
Confirm
16:10:51 Successfully Obtain reporting frequency!