Quick Start Guide

October 11, 2024 Version (2.1.0)

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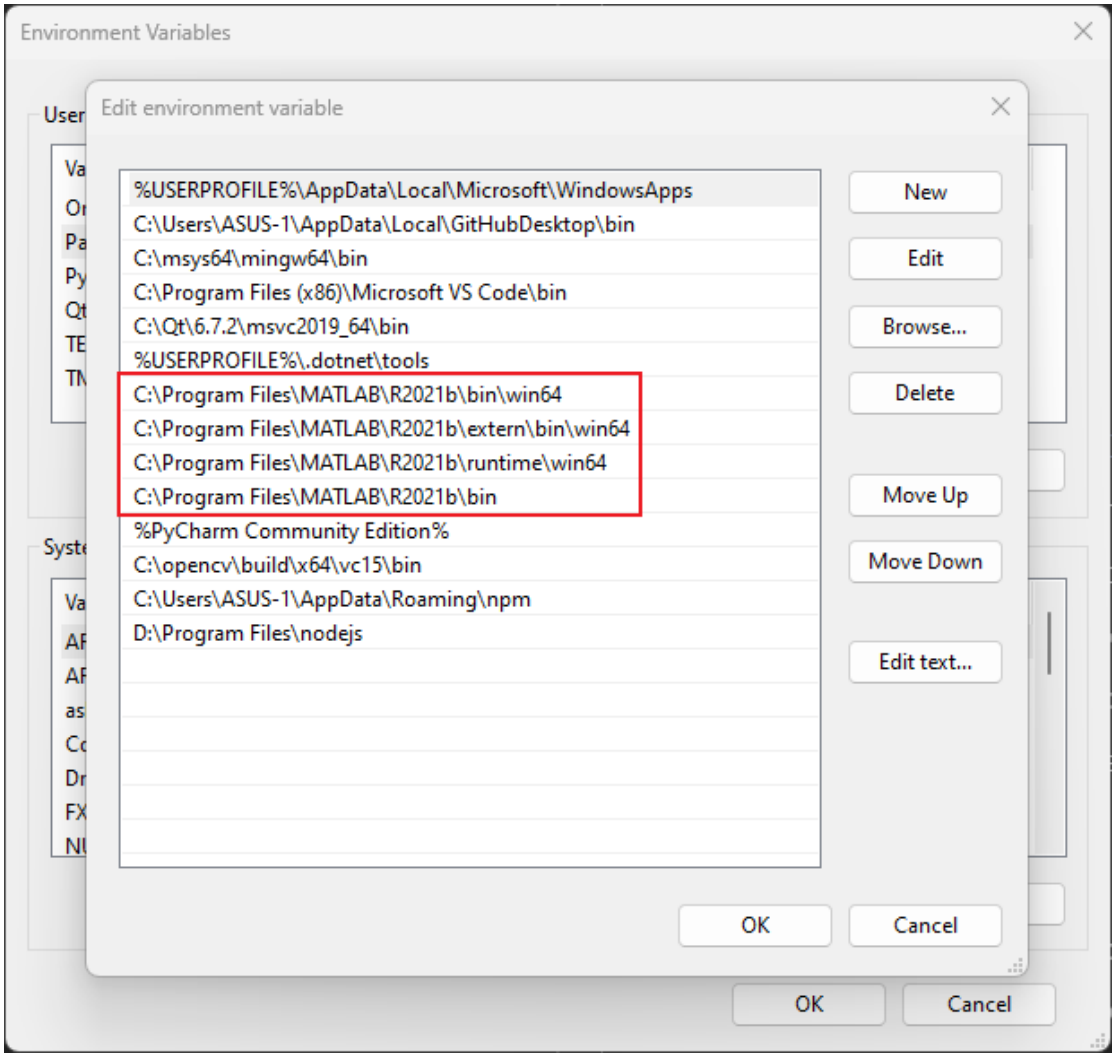
0 Driver installation and software configuration

0.1 Install MATLAB

This software requires MATLAB to be installed. Please download the MATLAB R2021b product and complete the installation.
MATLAB R2021b default installing location is C:\Program Files\MATLAB\R2021b. Please add the following path to the computer environment variables:

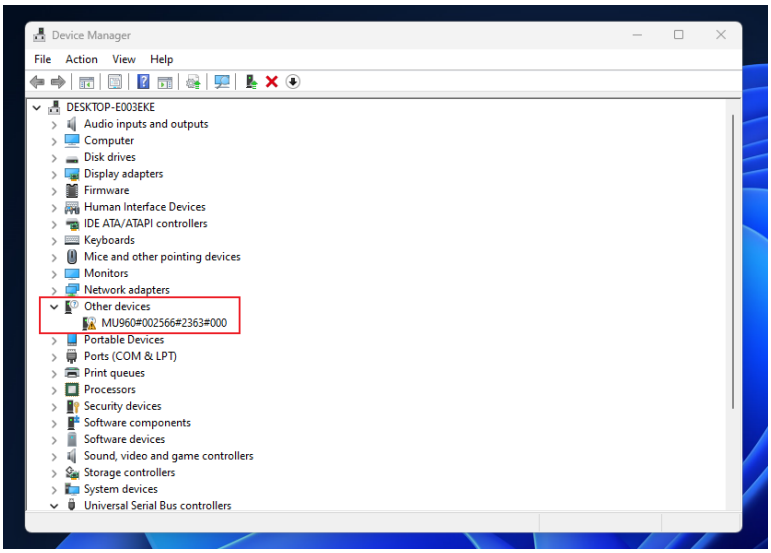


The text paths are listed below:
C:\Program Files\MATLAB\R2021b\bin\win64
C:\Program Files\MATLAB\R2021b\extern\bin\win64
C:\Program Files\MATLAB\R2021b\runtime\win64
C:\Program Files\MATLAB\R2021b\bin

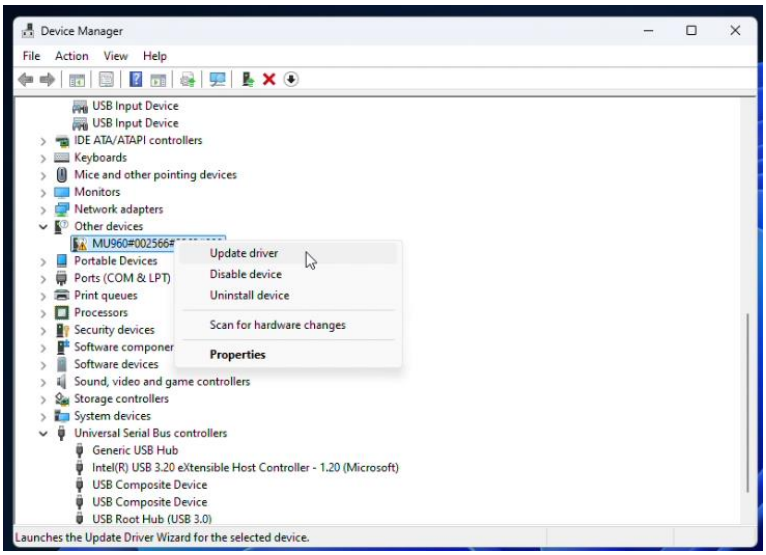
0.2 Installing the hardware driver

The operation of this software requires a connection with the hardware, so the hardware driver needs to be installed. Please follow the steps below to install the hardware driver:

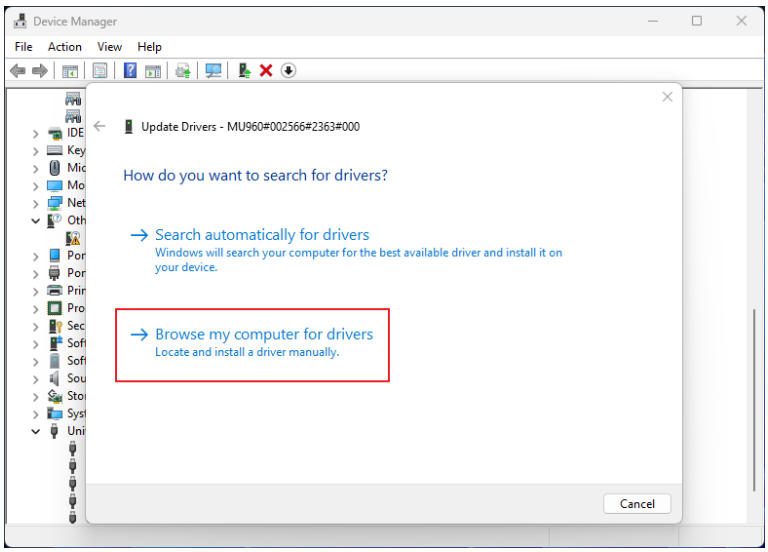
- Get the hardware driver file (dothinkey USB3driver_20180604.zip)
- Unzip the file and select the appropriate driver file according to your computer system version and architecture
- Find MU960 in Device Manager

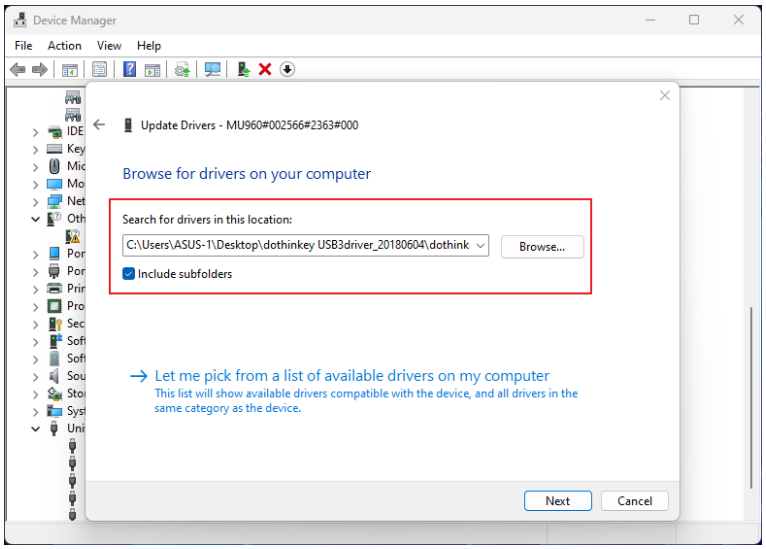


- Right-click the device and click Update Driver

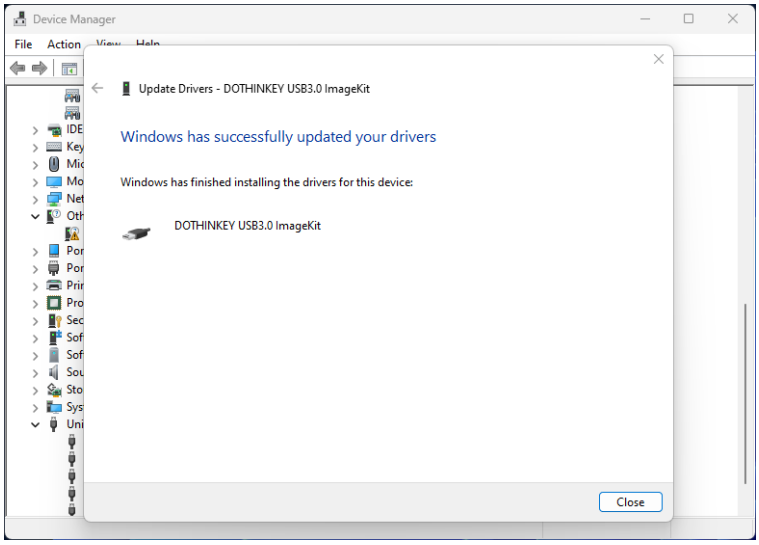


- Select Browse local files and select the driver file you just unzipped



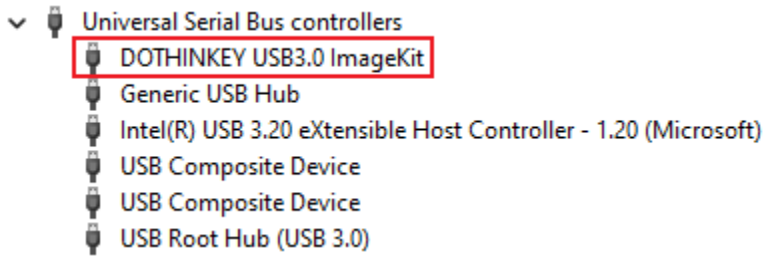


- Installation Successful

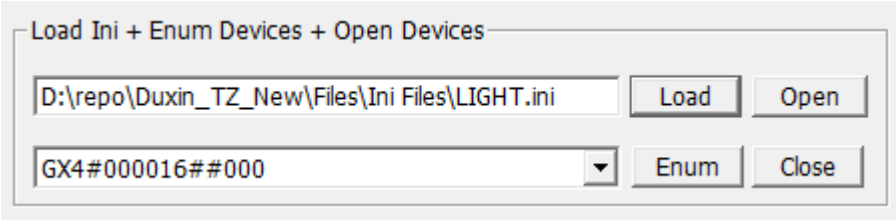


'DOTHINKEY USB3.0 ImageKit' will be displayed in the device manager, indicating that the driver installation is successful. If it is unsuccessful, you can repeat the above steps or contact

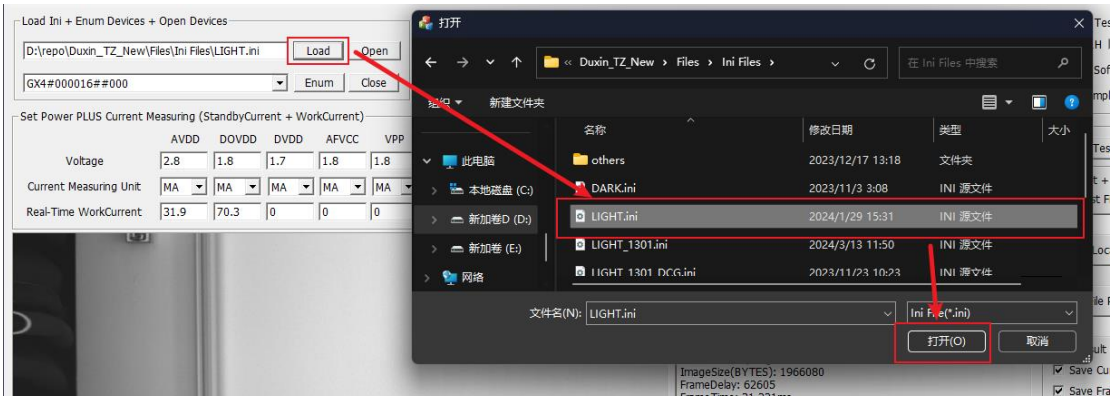
us for technical support.



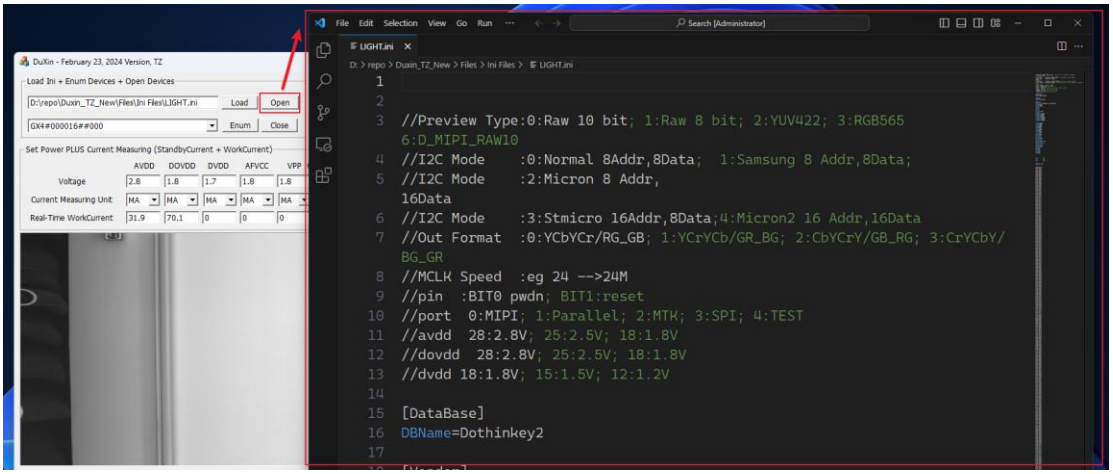
1 Load ini parameters files



After clicking the Load button, a file manager will pop up to select the ini file. You can select different ini configuration files here. The function of Load is to select the path of the ini configuration file, as shown in the following figure:

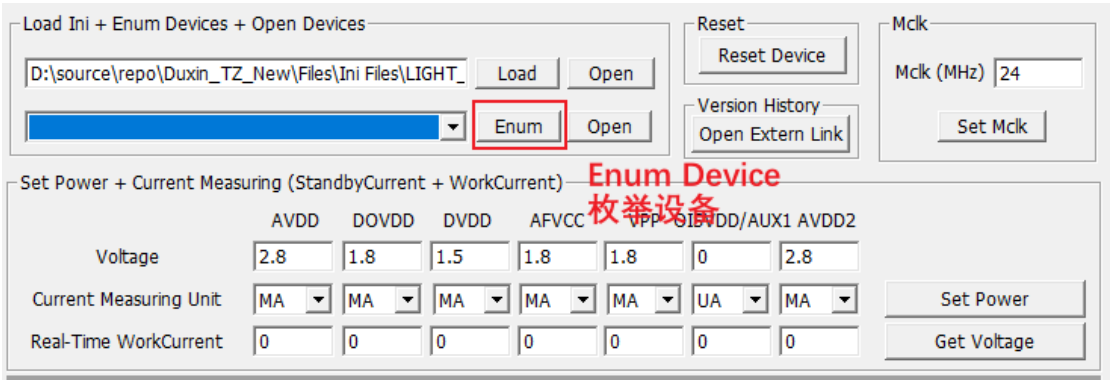


Click the Open button to quickly open the ini file in the path. The following figure shows the contents of the entire ini configuration file, which mainly contains some initial configurations of the chip. As shown in the following figure:

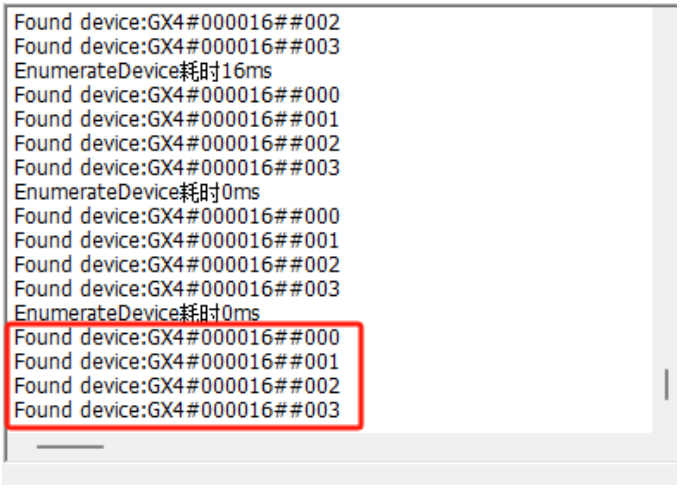


2 Enumerate devices

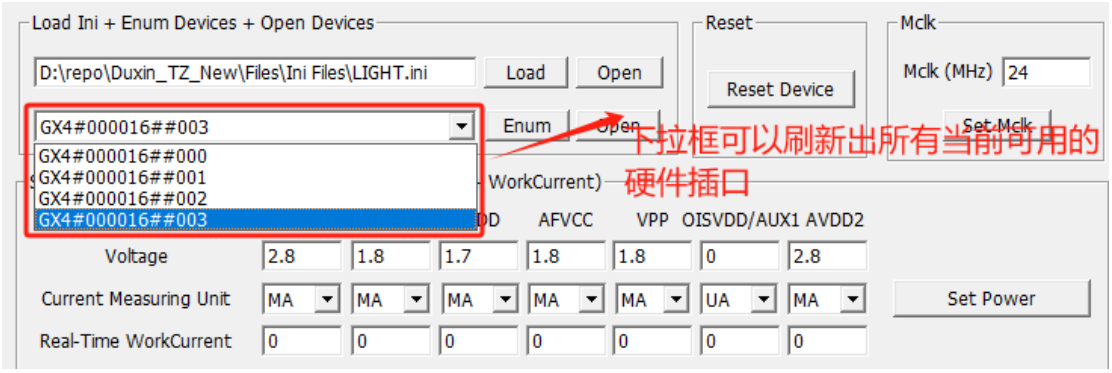
You can refresh all available devices by clicking the Enum button.



After clicking the Enum button, a list of all available devices will be displayed in the information bar, see the red box in the figure below:

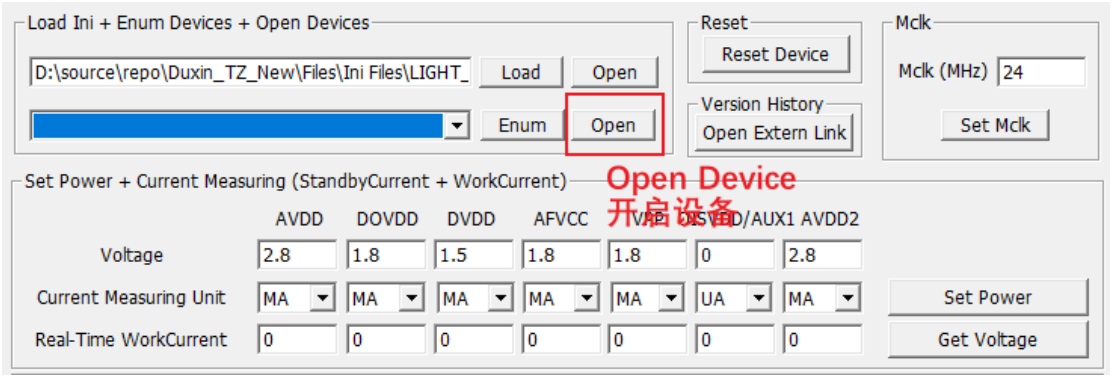


After connecting, you can view all devices in the drop-down list, as shown below:

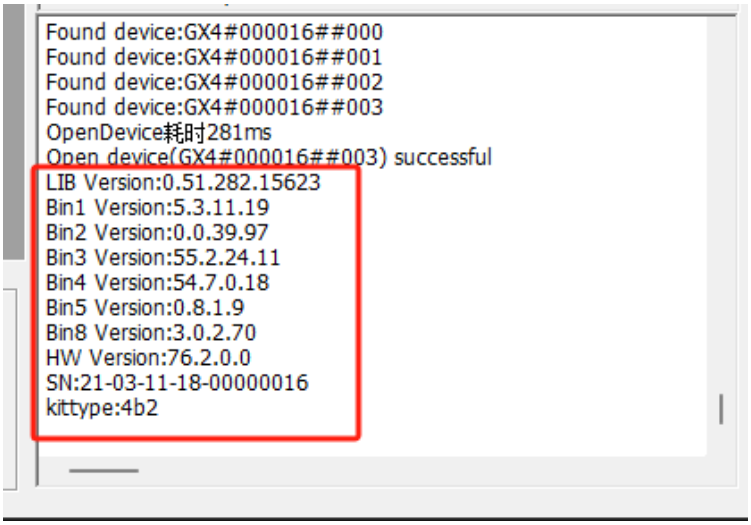


3 Turn on/off the device

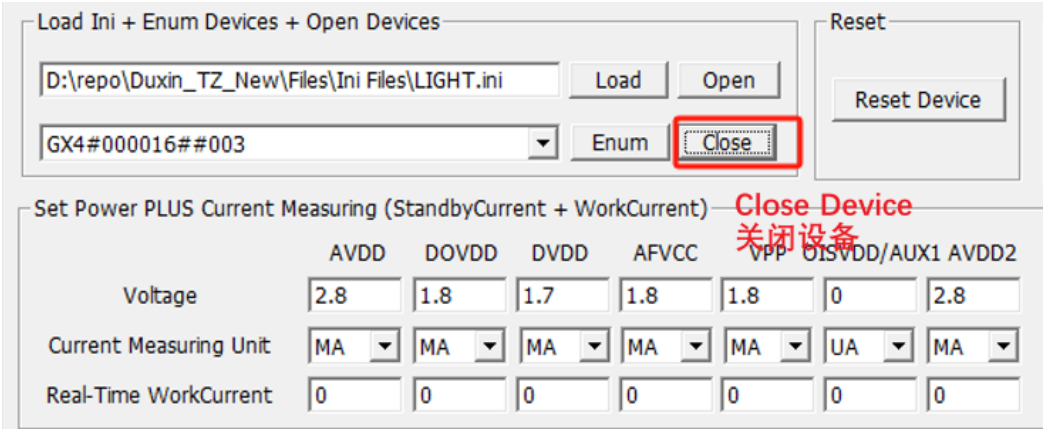
After completing the enumeration operation and selecting the correct hardware connection socket, you can click the Open button to turn on the device. As shown in the following figure:



After successful opening, the information bar will display the prompt message " O pen device successful", including the version number information of different libraries at runtime, and the original Open button will become a Close button. As shown in the following figure:



If you want to close it, you can click the Close button. As shown in the following figure:

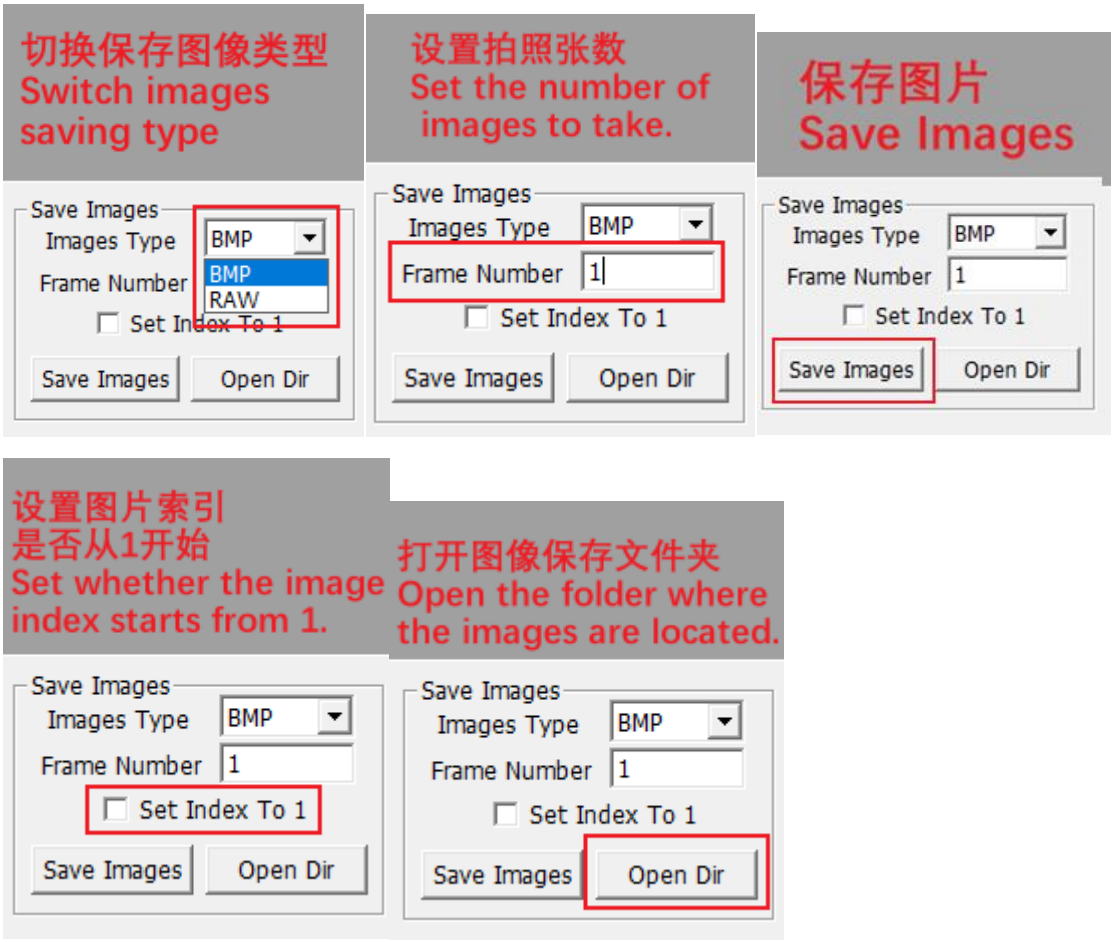


4 Start/Stop playback

By clicking the Start / Stop button, you can run and stop the state.
When the device is turned on (Opened) and is not running, clicking the Start button will start the working thread, turn on specific functions such as image display, and the original Start button will become a Stop button;
When the device is already running (the working thread has been started), clicking the Stop button will terminate the working thread and stop specific functions such as image display.
As shown in the following figure:

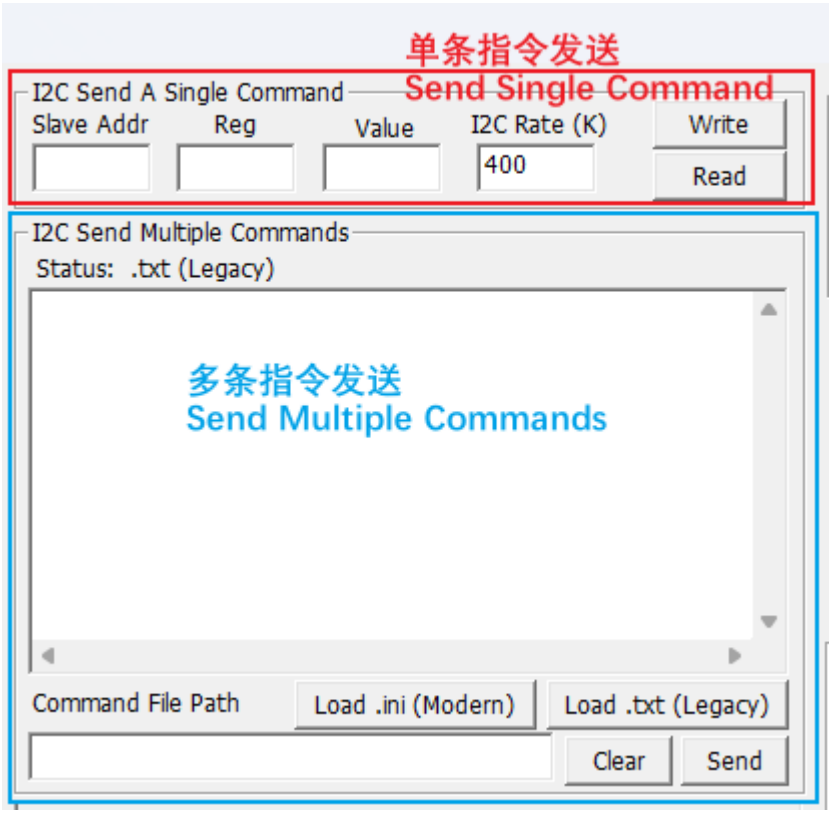
5 Save image data

host computer supports two image formats for saving image data.
Click Images Type to switch the saved image format, BMP and RAW formats are available;
Setting Frame Number can set the number of images to be saved;
Click the Set Index To 1 checkbox to set whether the continuous image file index starts from 1;
Click the Save Images button to save the image file according to the previous configuration;
Click the Open Dir button to quickly open the folder where the image file is saved.
As shown in the following figure:



6 Send command

The host computer can send instructions. As shown in the following figure:

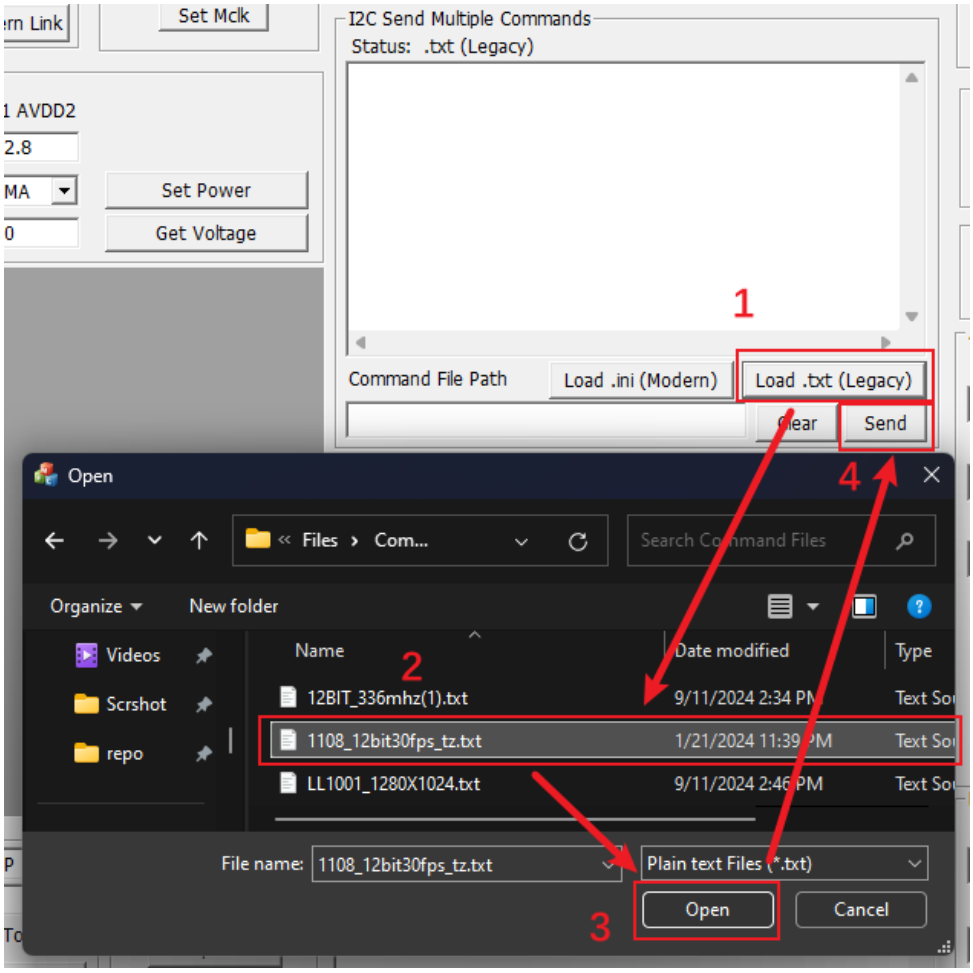


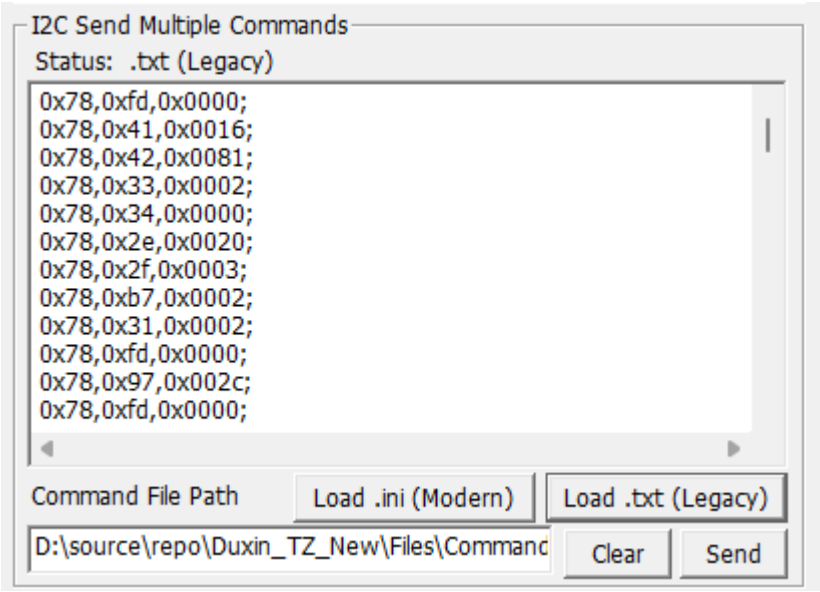
6.1 Single instruction sending/receiving

Enter the I2C address in Slave Addr, such as 0x78, fill in 78;
Enter the starting register address value to be read and written in Reg, such as 0xfd, fill in fd;
Enter the value to be written to the register in Value, such as 00;
According to the different needs of sending and receiving, click the Write and Read buttons respectively.
Click the Read button and the received register value will be displayed in Value.
I2C Rate is used to set the I2C rate.
As shown in the following figure:

6.2 Send multiple instructions (.txt file format)

Click the Load .txt (Legacy) button to browse and select the command file. In the pop-up file explorer window, select the file to be sent and click Open to select it.
Then click Send to complete the sending of multiple instructions.
Click Clear to quickly clear the instructions in the instruction window.




I2C Send Multiple Commands
Status: .txt (Legacy)
0x78,0xfd,0x0000;
0x78,0x41,0x0016;
0x78,0x42,0x0081;
0x78,0x33,0x0002;
0x78,0x34,0x0000;
0x78,0x2e,0x0020;
0x78,0x2f,0x0003;
0x78,0xb7,0x0002;
0x78,0x31,0x0002;
0x78,0xfd,0x0000;
0x78,0x97,0x002c;
0x78,0xfd,0x0000;
Command File Path
Load .ini (Modern)
Load .txt (Legacy)
D:\source\repo\Duxin_TZ_New\Files\Commanc
Clear
Send