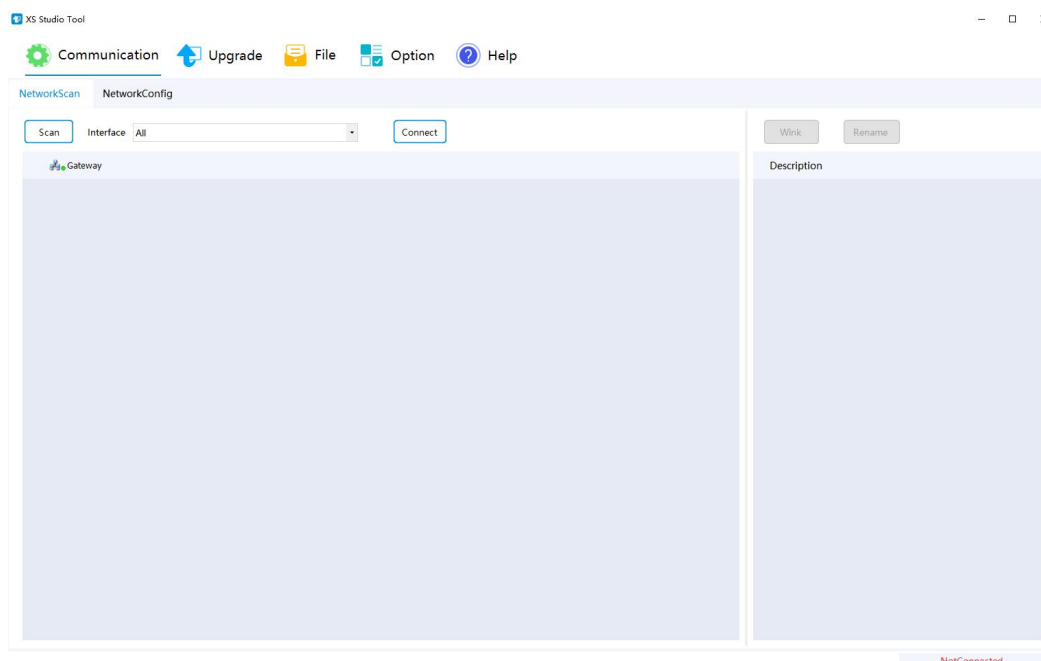
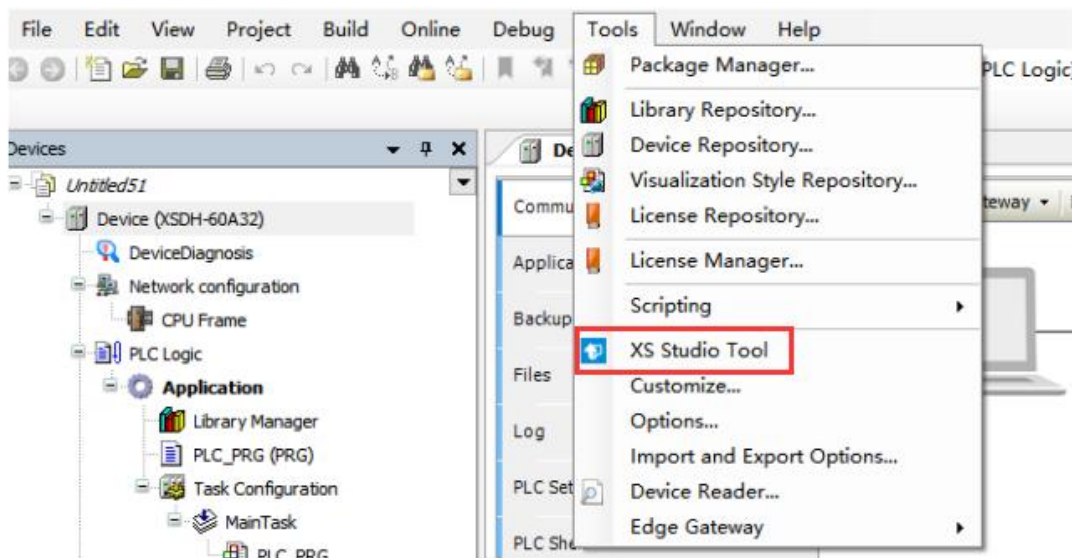


XS Studio Tool instruction

XS Studio Tool is a convenient tool in XS Studio software, which includes five menus: Communication configuration, Upgrade, File, Settings, Help.

Users can find the XS Studio Tool according to the following steps.

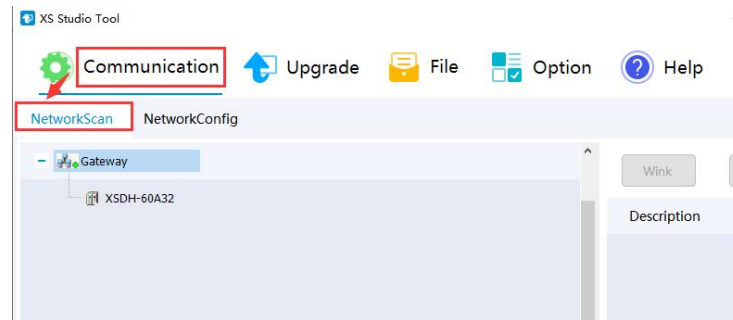


1.1 Communication configuration

The first step is to configure communication, including NetworkScan and NetworkConfig. Users can connect all PLC devices in the same network segment of the host via these two functions and set the IP address of the PLC devices.

1.1.1 Connect

Click on "Communication" -> "Network Scan" to scan and connect PLC devices in the network segment, as shown in the following figure:

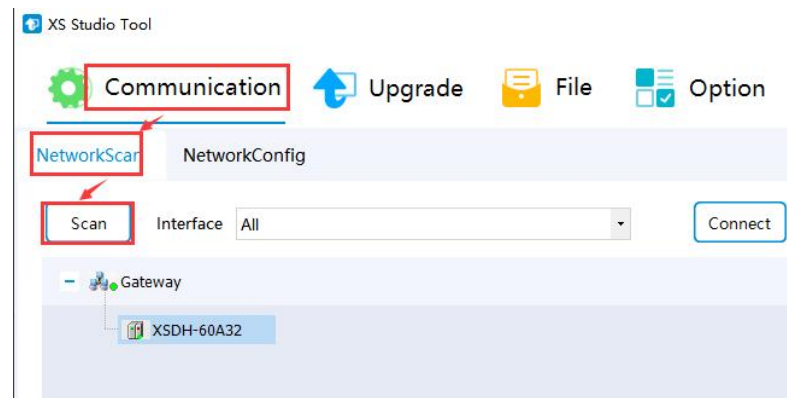


When the device is connected, the connection information will be shown in the status bar in the lower right corner, including the model name and status of the currently connected device.

Connected device status	Status display	
Not connect	Red character identification: Device not connected	NotConnected
Run	Green character identification: Device name, green character identification: Running	XSDH-60A32 Running
Stop	Green character identification: Device name, green character identification: Stop	XSDH-60A32 Stop
err	Green character identification: Device name, Red character identification: Err	XSDH-60A32 err

1.1.1.1 Scan Network

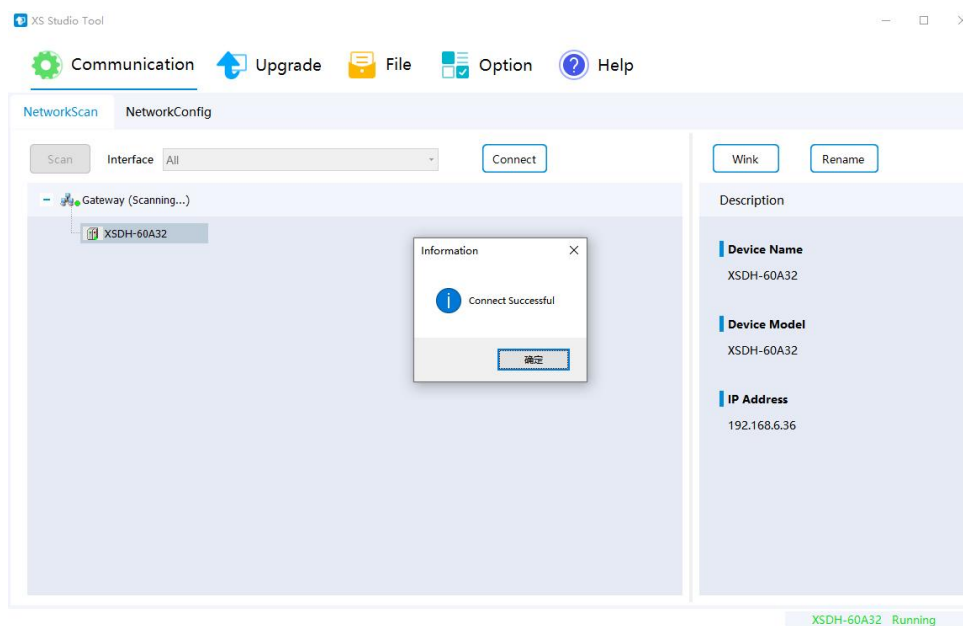
Click on "Scan" to display all PLC devices .



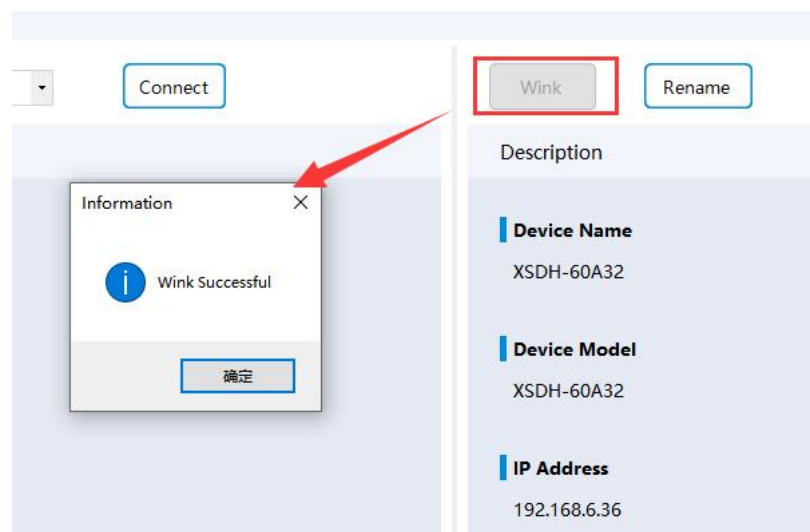
Click on the PLC device in the device tree, and the model will become selected. The device information on the right will display the basic information of the corresponding device, including Device name, Device model, and IP address.



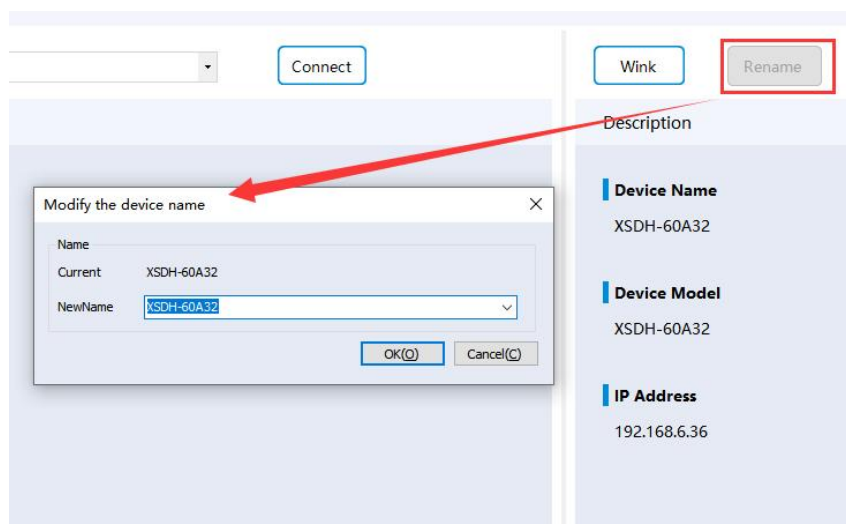
Double click on the selected device, the software and device are successfully connected.



Click on " Wink" , and the err light of the connected model will flash.

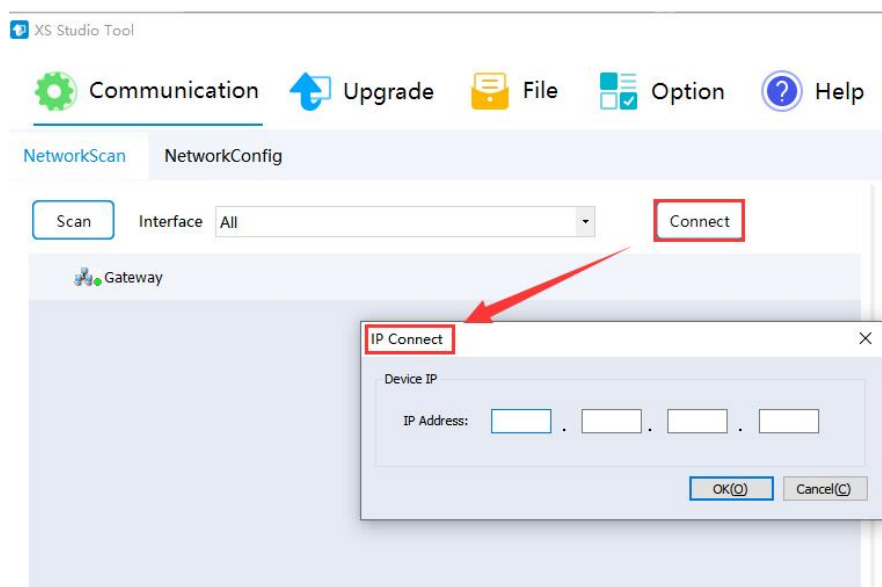


Click "Rename" to modify the corresponding device name, which is used to distinguish different PLC devices.



1.1.1.2 Connect through IP address

Click on "Connect" and enter the IP address to directly connect to the corresponding device.



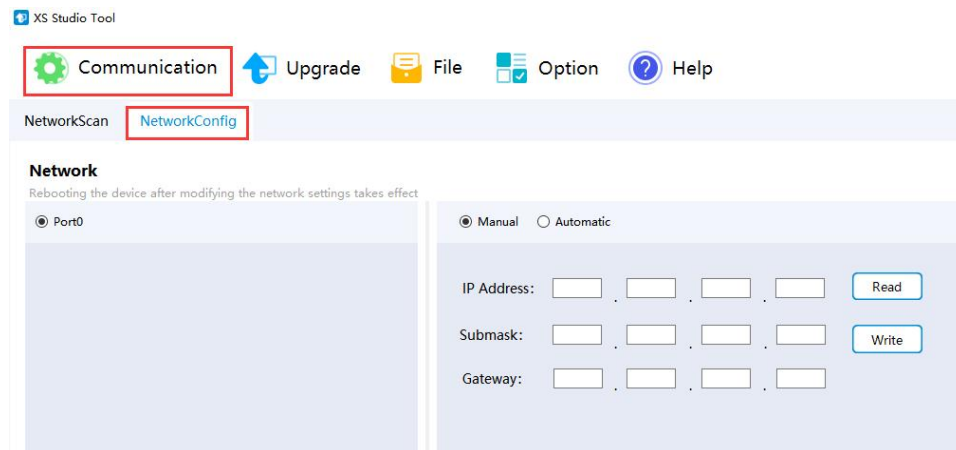
When the device is not connected, clicking other buttons except for Scan, Connect, and Select upgrade package will prompt an error message, as shown in the following figure.



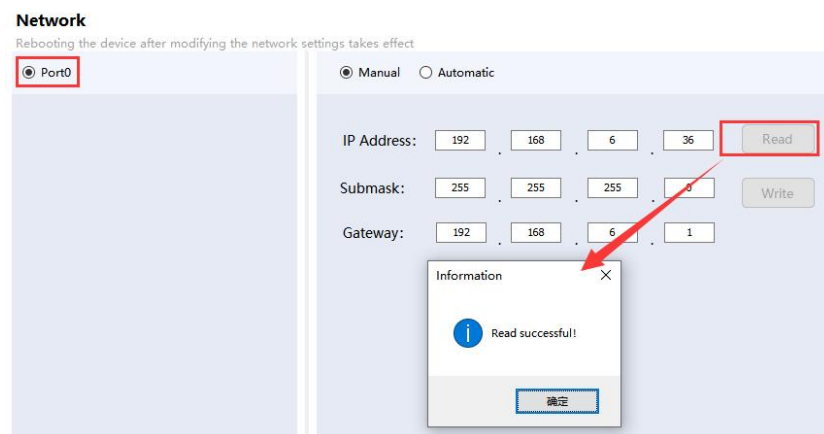
1.1.2 Network settings

Click on "Communication" → "NetworkConfig" to read and write the IP address, Gateway, and other

information of the connected PLC device. The settings interface is as follows:



Select the corresponding network port, click "Read", read the IP address, subnet mask, and gateway of the connected device, and prompt "Read successful!". Here the IP address of XSDH-60A32 is 192.168.6.36.

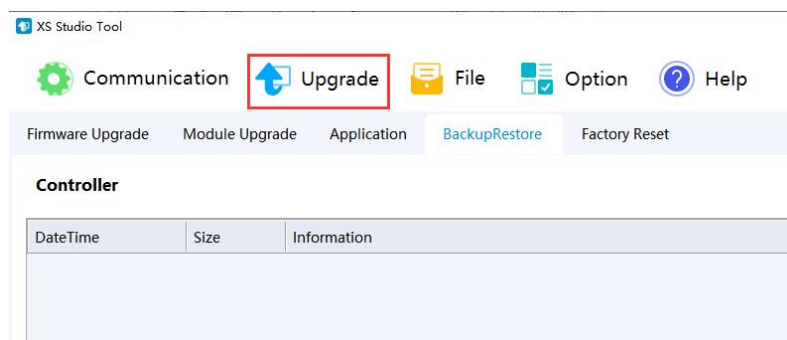


Users can also change the IP address through this screen, and it will take effect after reboot the device.



1.2 Upgrade

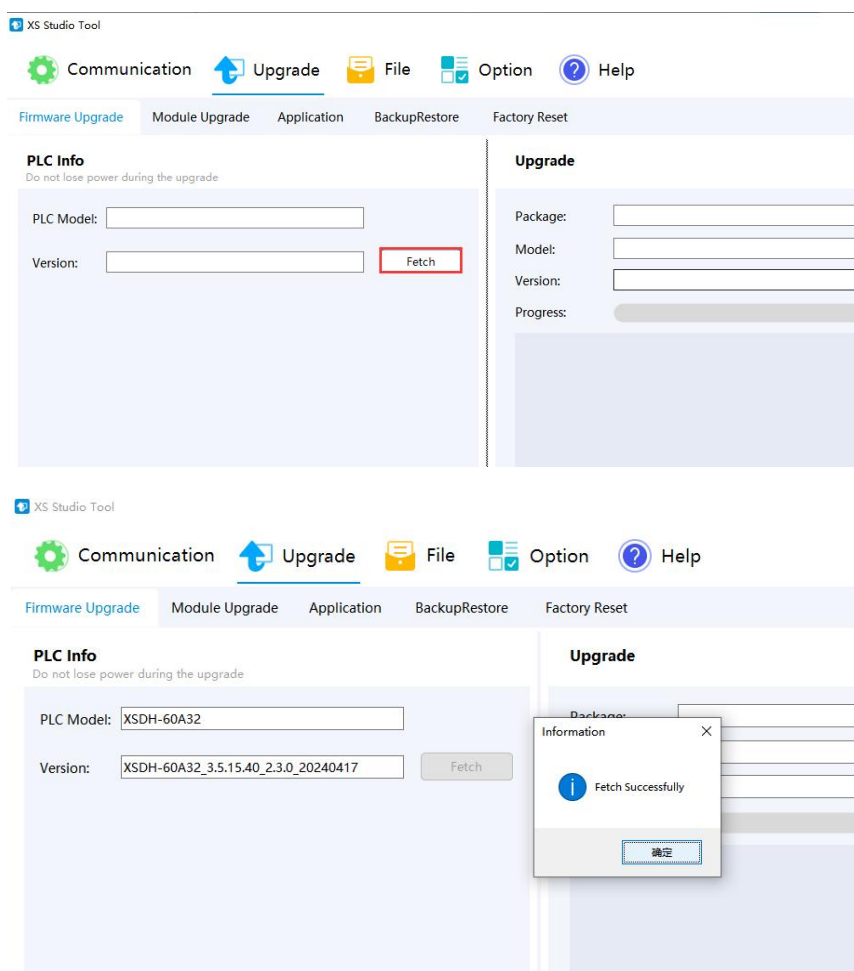
The " Upgrade" menu can support Firmware upgrade, Module firmware upgrade, Application management, Backup/Restore, and Factory Reset for XSDH, XSLH, XSF5 series PLC.



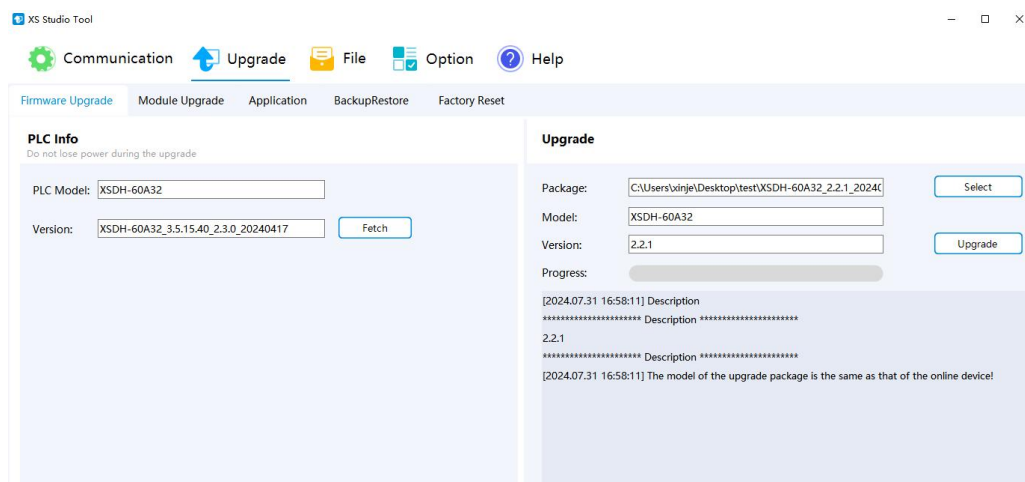
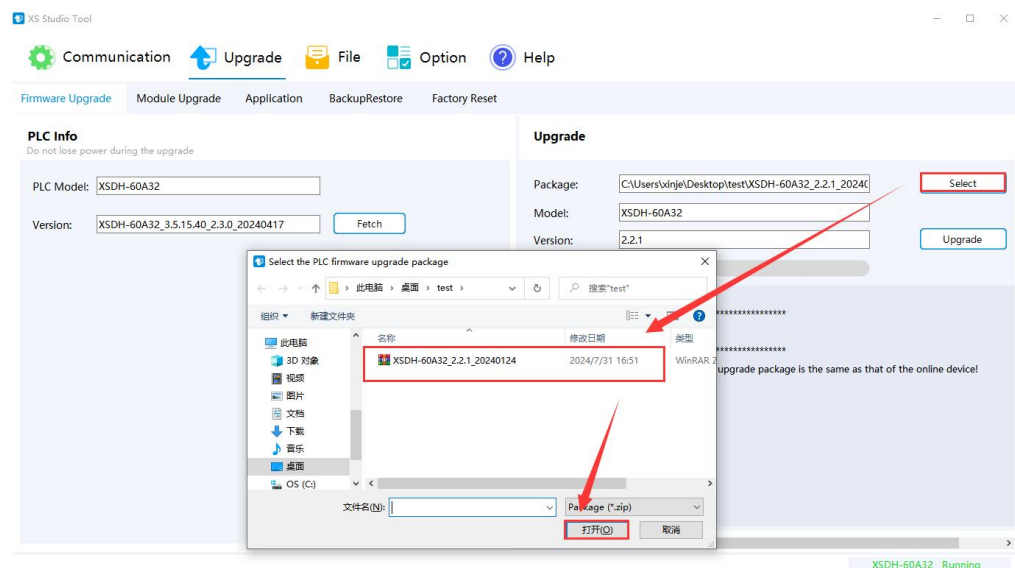
1.2.1 PLC firmware upgrade

This function can realize firmware upgrade of PLC. After successfully connecting the PLC device, click "Upgrade" -> "Firmware upgrade" to enter the PLC firmware upgrade interface.

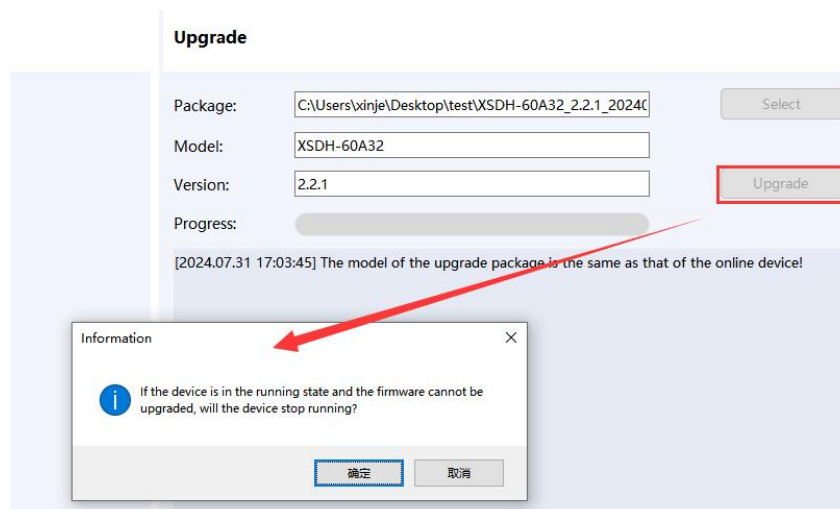
Click on "Fetch", and the left window will display the PLC model and firmware version of the connected device, as shown in the following figure:



Click on "Select firmware upgrade package", a file selection window will pop up, select the corresponding upgrade package file, click "Open", as shown in the following figure:



Click "Upgrade", firstly confirm whether the connected PLC is in a stopped state. If it is in a running state, it will prompt "will the device stop running?" If you click "Cancel", the upgrade will be stopped; If you click "OK", continue with the upgrade.



Secondly, confirm the compatibility between the upgrade package and the online device. If it is not compatible, stop the upgrade and the information box will output specific information. If compatible,

directly upgrade the firmware of the connected device.

Upgrade

Package:

C:\Users\xinje\Desktop\test\XSDH-60A32_2.2.1_20240

Select

Model:

XSDH-60A32

Version:

2.2.1

Upgrade

Progress:

[2024.07.31 17:03:45] The model of the upgrade package is the same as that of the online device!

[2024.07.31 17:04:58] Stop the application successfully

[2024.07.31 17:04:58] Downloading firmware...

[2024.07.31 17:05:09] Download successful!

[2024.07.31 17:05:10] Upgrading firmware...

[2024.07.31 17:05:30] Upgrade successful!

[2024.07.31 17:05:30] The device will automatically restart, please do not power off.

===== End =====



- During the upgrade process, the device status is the same as the firmware upgrade of the USB/SD card. The Err indicator flash indicates that the upgrade is in progress, and the Err indicator OFF indicates that the upgrade is successful. After the upgrade is successful, the device is in the run state and runs with the upgraded firmware version (see table below).
- During the device upgrade process, the software cannot be switched to other interfaces.

Indicator	Status	Description
ERR	Flash	Firmware upgrading
	OFF	Upgrade successful, device running with new firmware
	ON	Upgrade failed, device is running with previous firmware

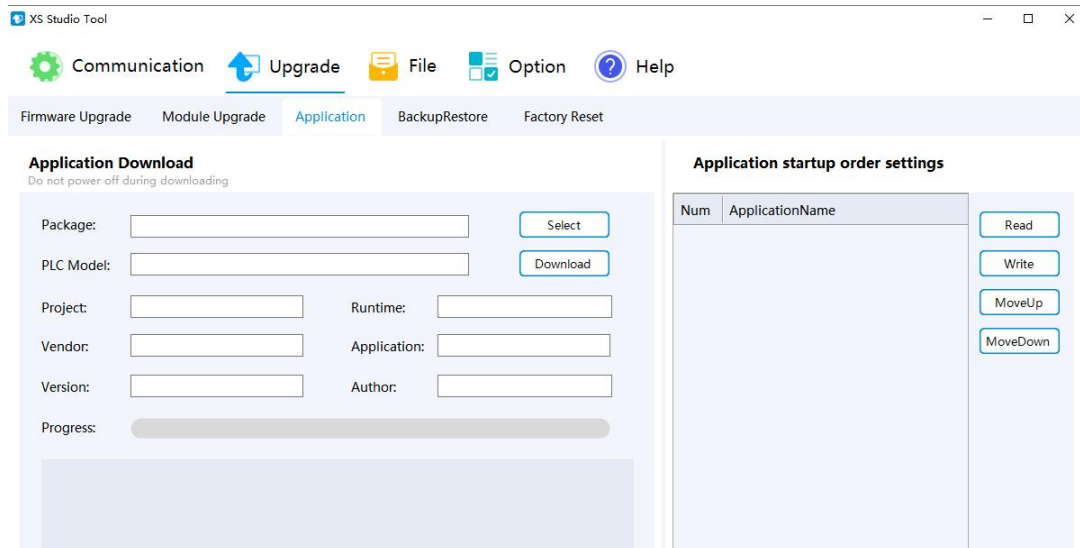
1.2.2 Module upgrade

This function is currently not supported.

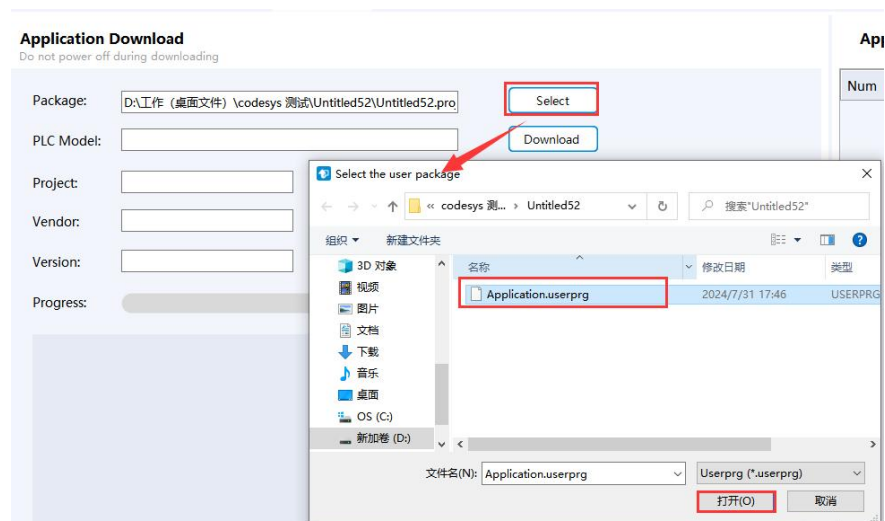
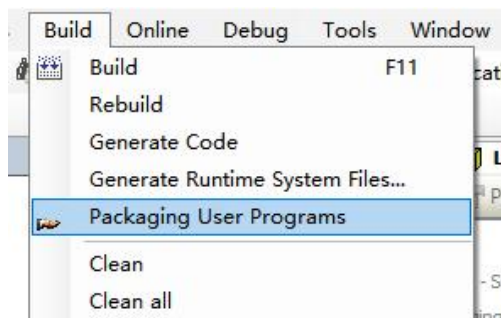
1.2.3 Application

This function can realize the download of user applications.

After successfully connecting with the PLC device, click "Upgrade"→"Application" to enter the user application management interface, as shown in the following figure:



Click "Select" to pop up a file selection window. Select the corresponding user program package (which needs to be compiled and packaged in the software to generate the corresponding file), obtain the path of the corresponding application package, PLC type, runtime version, project name, application name, and other information, and display them in the left window. The description information in the project package is displayed in the information window at the bottom left corner.



Application Download
Do not power off during downloading

Package:	D:\工作 (桌面文件) \codesys 测试\Untitled52\Application.usc	Select	
PLC Model:	XSDH-60A32	Download	
Project:	Untitled52.project	Runtime:	3.5.15.40
Vendor:		Application:	Application
Version:		Author:	
Progress:			

[2024.07.31 17:47:35] The model of the user package is the same as that of the online device!

Click "Download" to confirm if the application is compatible with the online device. If not, stop downloading and output specific information in the information window. If compatible, download the application package to the connected device.

After successfully download, the device should be reconnected.

XS Studio Tool

Communication Upgrade File Option Help

Firmware Upgrade Module Upgrade Application BackupRestore Factory Reset

Application Download
Do not power off during downloading

Package:	D:\工作 (桌面文件) \codesys 测试\Untitled52\Application.usc	Select	
PLC Model:	XSDH-60A32	Download	
Project:	Untitled52.project	Runtime:	3.5.15.40
Vendor:		Application:	Application
Version:		Author:	
Progress:			

[2024.08.08 16:46:06] The model of the user package is the same as that of the online device!
[2024.08.08 16:46:06] Downloading...
[2024.08.08 16:46:06] Download successful!
[2024.08.08 16:46:06] Upgrading user programs...
[2024.08.08 16:46:12] Upgrade successful!
[2024.08.08 16:46:12] The device will automatically restart, please do not power off.

===== End =====

By clicking the "Read" button, the application program currently in the online PLC can be read. Click the "Write" button, and the application program will be written to the PLC in order.

Application startup order settings

Num	ApplicationName	
1	Application	Read
2	Application2	Write
		MoveUp
		MoveDown

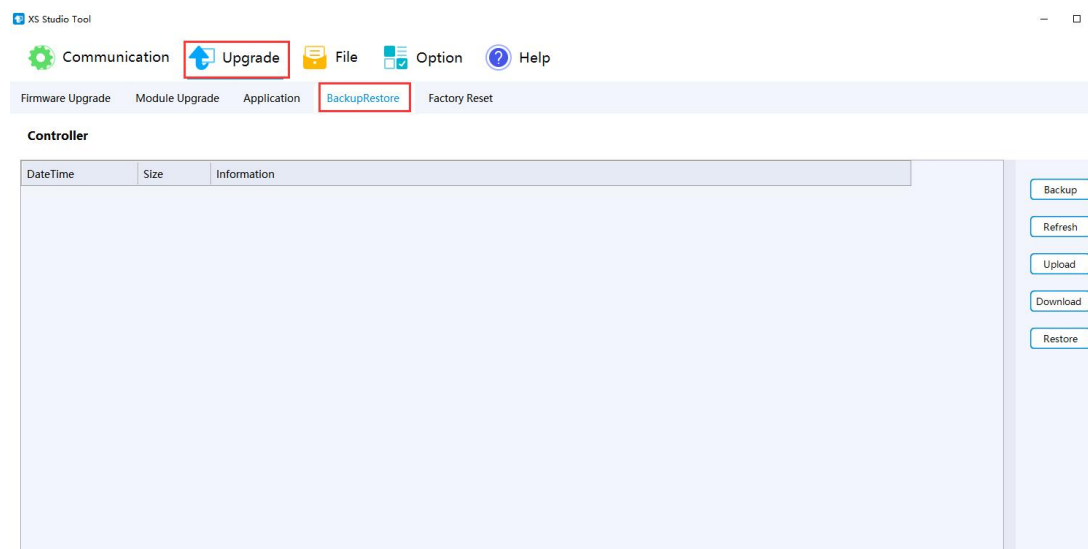
1.2.4 Backup/Restore

This function is used to backup or restore user programs and data in the current controller.

Backup: Only one backup file is allowed to exist in the device. If the file has already been backed up, clicking backup will overwrite the previous backup file.

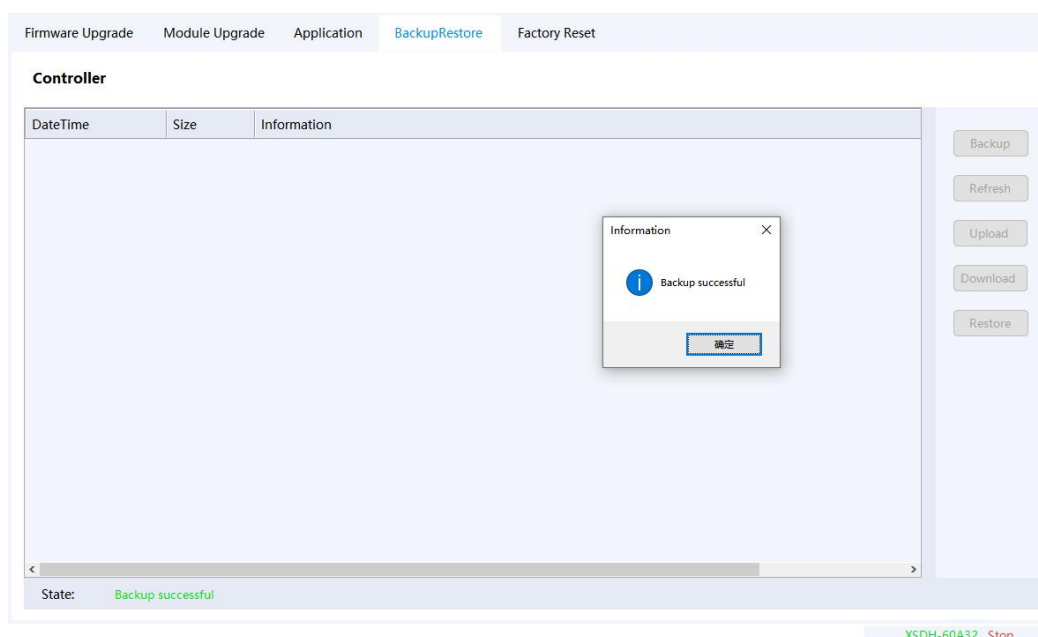
Restore: Can restore the selected user program backup file type To achieve this, it is necessary to first obtain the backup file and select the backup file.

After successfully connecting the device, click "Upgrade" ->"Backup/Restore" in the function menu bar to enter the backup/restore settings interface.



1.2.4.1 Backup

Click "Backup" to backup the user programs and data in the current PLC. The interface and status information will prompt "Backup successful".



Backup should be performed when the PLC is in the stopped state.

If users click "Backup" while the PLC is running, it will prompt "Should the device stop running?"

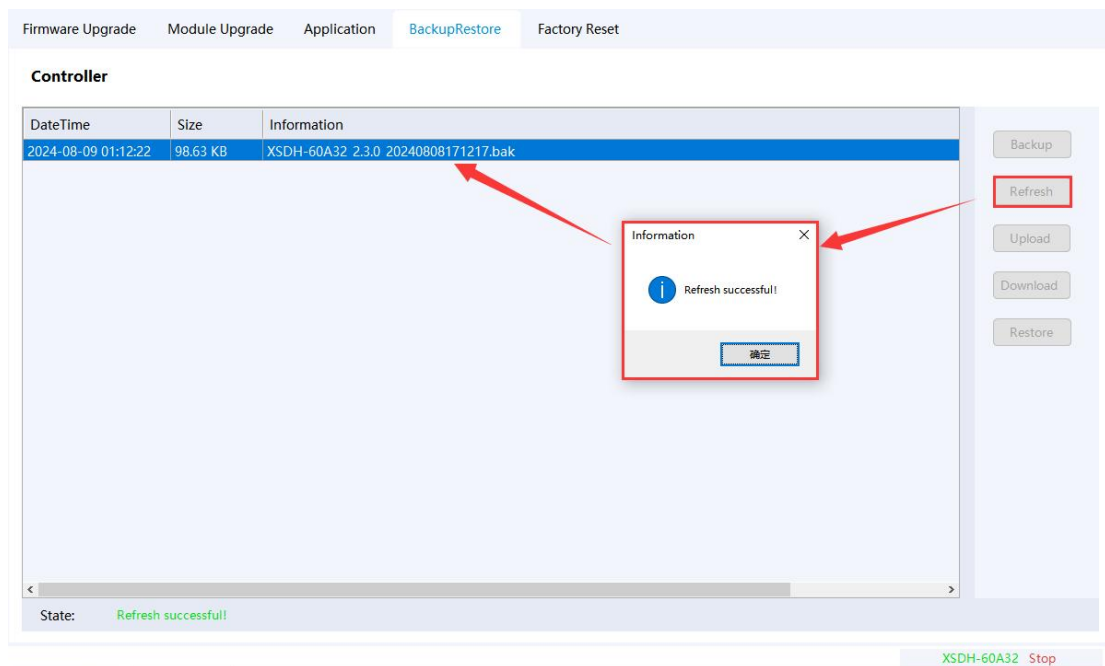
Click "OK" to stop the PLC and perform the backup.

Click "Cancel" to cancel the backup.



1.2.4.2 Refresh

After backup, click "Refresh", and the controller window will display the backup file name, size, and other information of the connected device. At the same time, the status bar will display "Refresh successful!", as shown in the following figure:

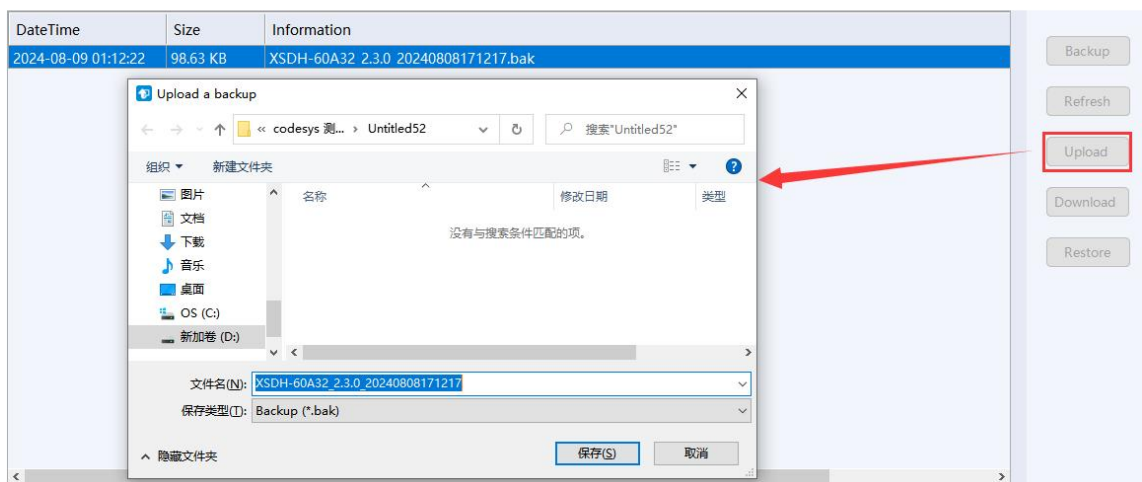


Refresh function is only used to display backup files generated by the upgrade tool and cannot display files generated by Codesys native backups.

1.2.4.3 Upload

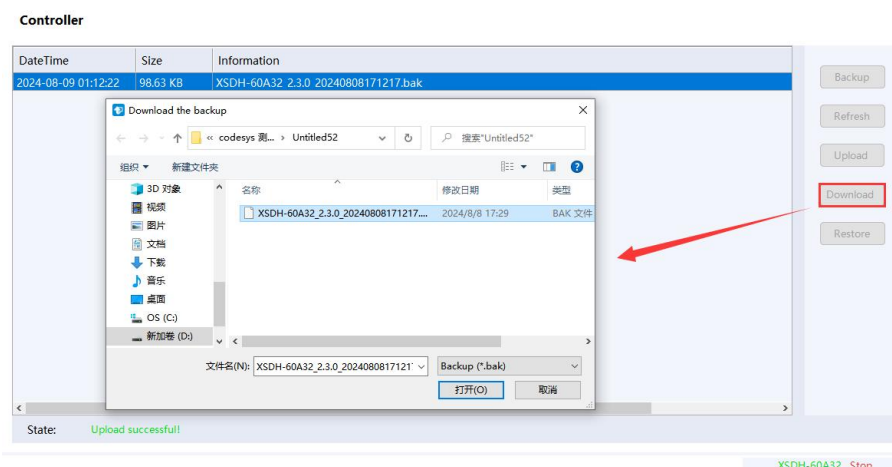
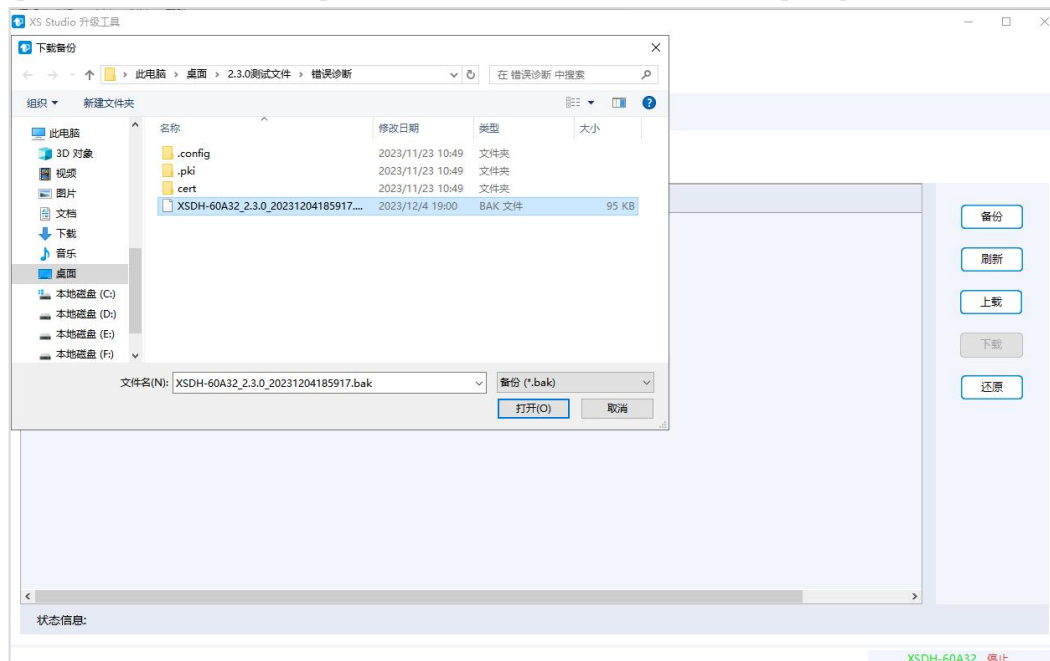
After refreshing, select the corresponding backup file, click "Upload", a file saving window will pop up, select the address where the file needs to be saved, click "Save", and "Upload successful" will be displayed.

Controller

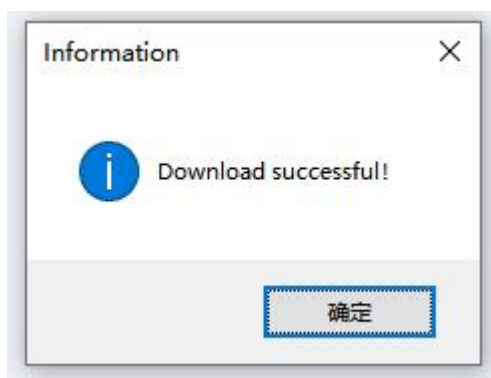


1.2.4.4 Download

The "Download" function can download backup files to the connected device. Click on "Download", a file selection window will pop up, select the required backup file, and download it. The selected backup file needs to match the type of connected device, otherwise it will prompt download failure.

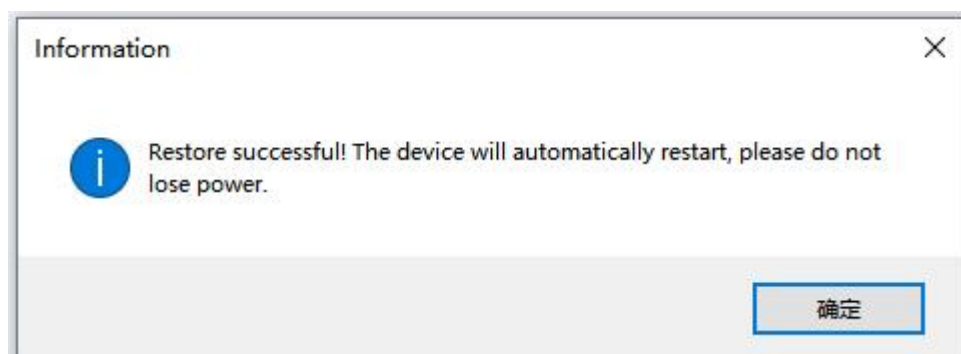
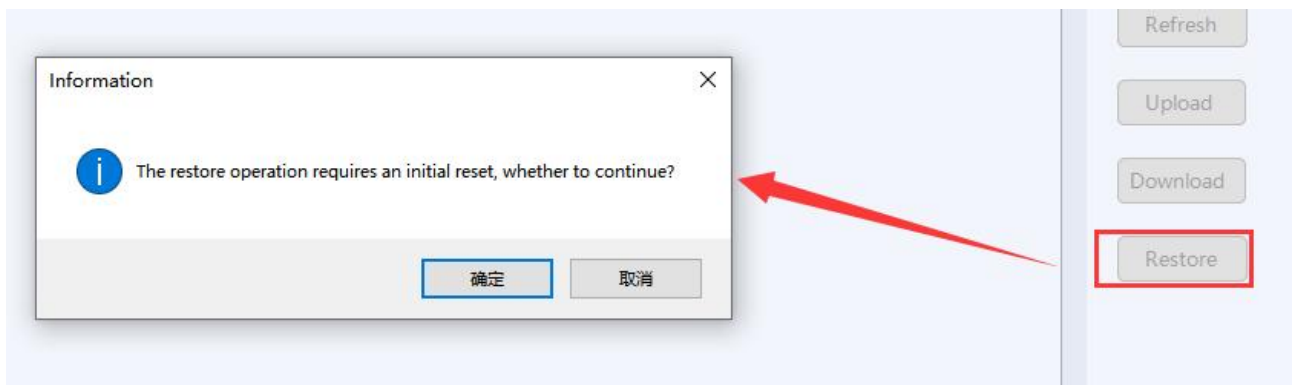


After the download is successful, it will prompt "Download successful!" and display it in the status bar. To import downloaded backup files, pls click "Refresh" to display them.



1.2.4.5 Restore

After downloading and refreshing the file, select the corresponding backup file, click "Restore", and the device will run the backup program selected for restoring. After successfully restore, a prompt will appear indicating successfully restore.



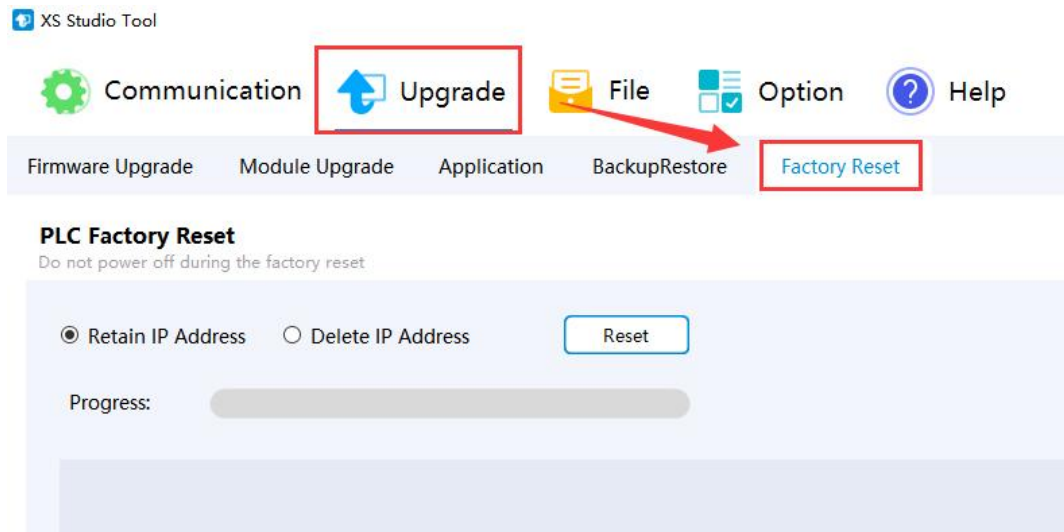
- If the information interface is empty, it will prompt "No backup file is selected", and pls click Refresh to display the backup file, as shown in the following figure.



- PLCs with firmware versions 2.3.0 and above support Backup/Restore function.

1.2.5 Factory Reset

Factory Reset function can initialize the controller, including deleting user projects, data, files, etc. After successfully connecting the device, click "Upgrade" -> "Factory Reset" to enter the factory reset interface.



Check " Retain IP address" and then click " Reset " , the device IP will not be cleared. Select " Delete IP Address" , and then click "Reset " , device IP will be deleted and restore it to the default IP (192.168.6.6). After successfully recset, pls reconnect the device.



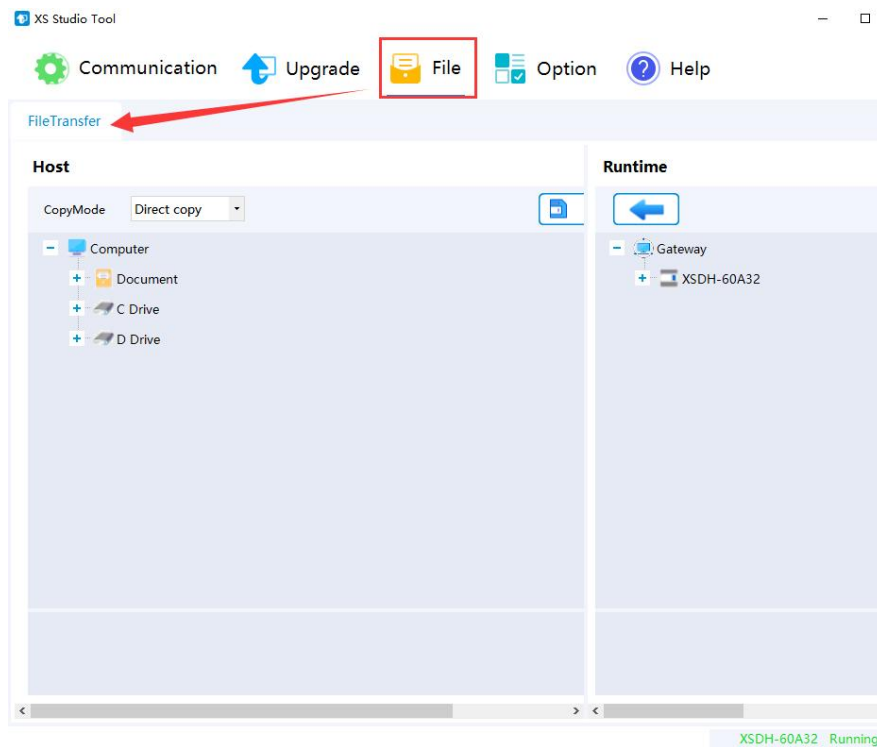
-
- During the factory reset process, pls be careful not to power off the PLC.
 - Firmware versions below 2.3.0 do not support the function of keeping IP addresses
-

1.3 File

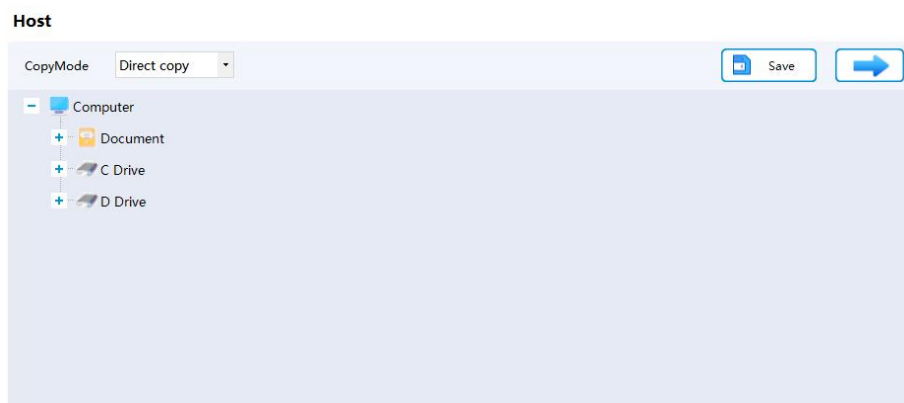
The file transfer function can achieve file copying and other operations between the computer client and PLC device.

1.3.1 FileTransfer

FileTransfer function can achieve file copying and mutual transfer between the computer and the PLC.



Under the "Host" window, users can transfer files or folders to the PLC.



In the "Runtime" window, all online device models in the gateway can be displayed.

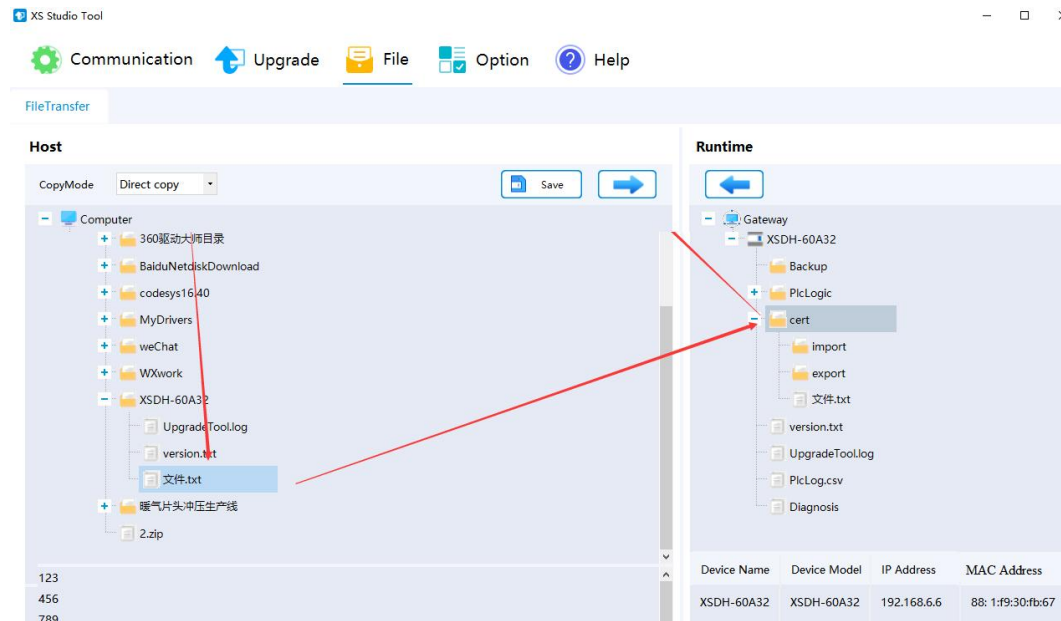


When transmitting, select the corresponding PLC, and the corresponding device name, device model, IP address, and MAC address will be displayed in the window at the bottom right corner of the interface.

Device Name	Device Model	IP Address	MAC Address
XSDH-60A32	XSDH-60A32	192.168.6.6	88: 1:f9:30:fb:67

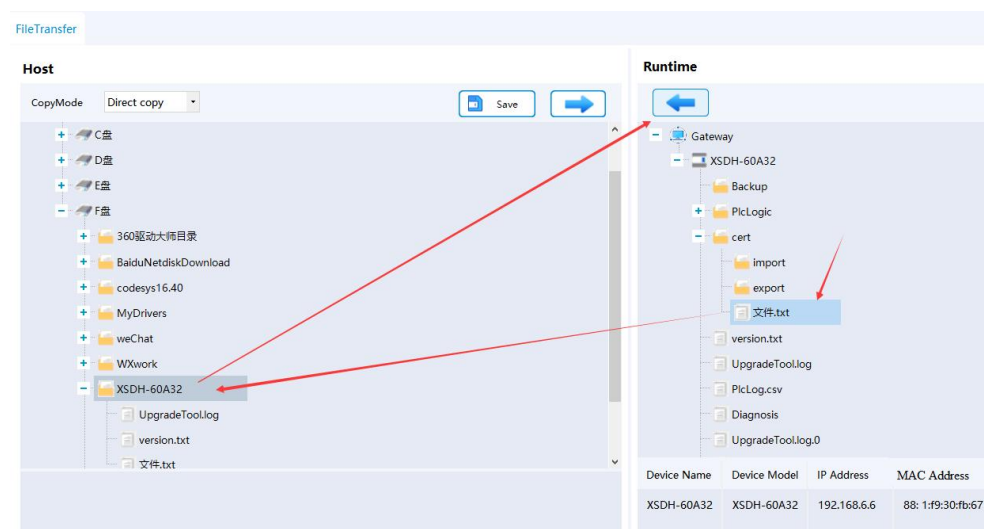
1.3.1.1 Transfer host files to PLC

Select "Direct Copy" for copy mode, choose the file from the host, select the folder name to save the copied file in the target PLC, click  or right-click to select "Copy to PLC" to transfer the file to the target PLC.



1.3.1.2 Transfer PLC files to Host

Select the file to be copied in the "Runtime" window, choose the folder name to save the copied file in the host, and click  or right-click to select "Copy to Host" to transfer the file to the host.



If no directory is selected on the host interface or runtime interface, prompt will pop up and indicate that the target directory is unclear and needs to be specified.

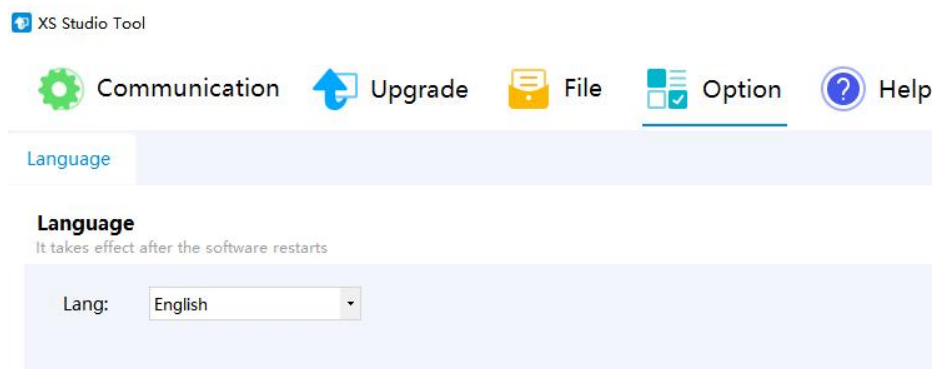


- If the device storage space is insufficient during transfer, a message prompt will pop up indicating that the device storage space is insufficient and the file 'xxx' transmission has failed!
- Currently, only supports transfer from the host to one PLC and cannot transfer to multiple PLCs simultaneously.
- The copied files can be saved to any location on the host, including USB drive.

1.4 Option

Users can switch language through Option menu, 简体中文 or English can be selected through the drop-down menu.

Note: After selecting the desired language, it takes effect after the XS Studio tool software restarts.



1.5 Help

" Help" manual helps users better use the upgrade tool.