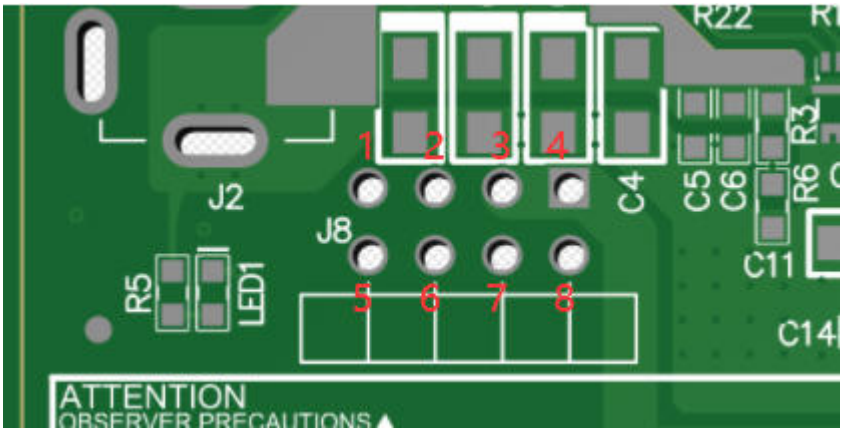
The revised date of this manual is
:20240728

Important Note: Please disconnect the power before wiring! Incorrect wiring can directly result in device short-circuit and damage! The mainboard expansion interface definition
(same for all 3 sets of expansion slots) supports both 5V and 3.3V.

As Shown On The Right→:

1:SDA 2:VDD**5V** 3:VDD**3.3V** 4:VDD**3.3V**

4:SCL 6:GND 7:GND 8:GND



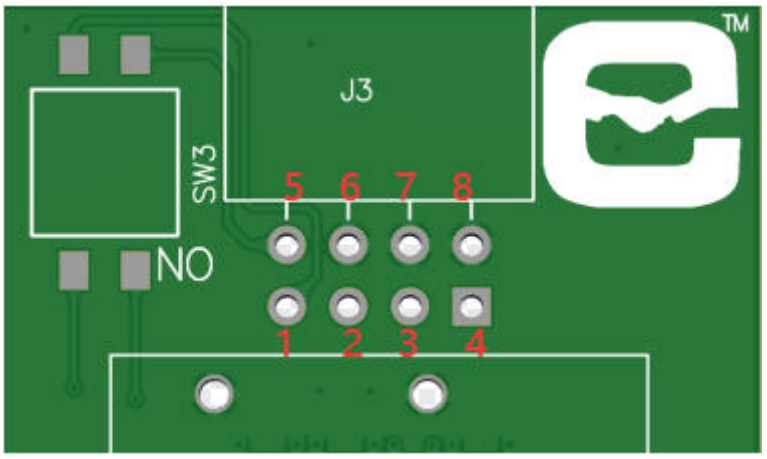
(SFP,SFP+,XFP,QSFP,QSFP-DD OSFP) The pins of the LPU are in the same sequence.

As Shown On The Right→:

5:SCL 6:GND 7:GND 8:GND

1:SDA 2:VDD5V 3:VDD3V 4:VDD**3V**

Note: The 5V positive and negative poles on these interface boards are not functional, that is, only 4 wires can work, such as wiring only 1, 4, 5, 8 pins can work



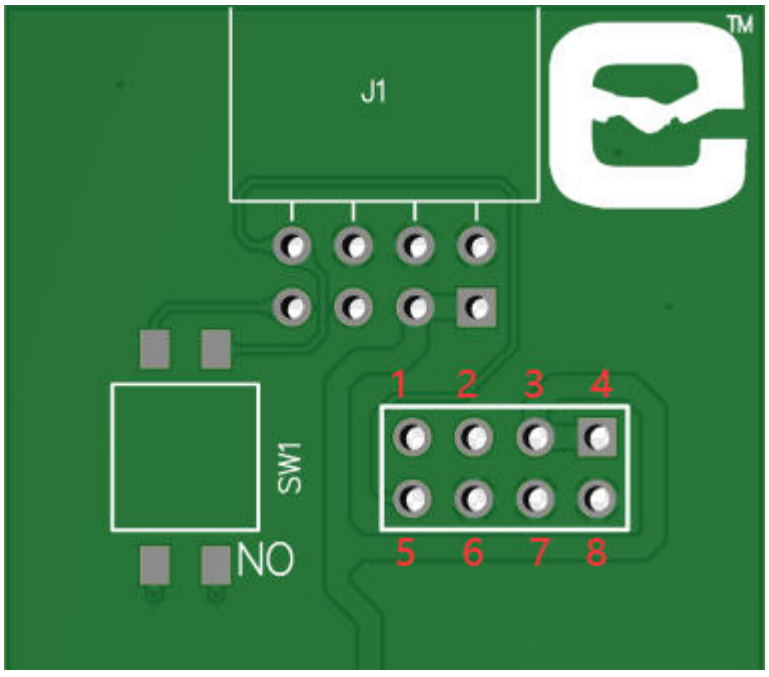
SFP and SFP+ interface boards come with an expansion port (through which you can connect to other interface boards)

The pin definition is shown on the right→:

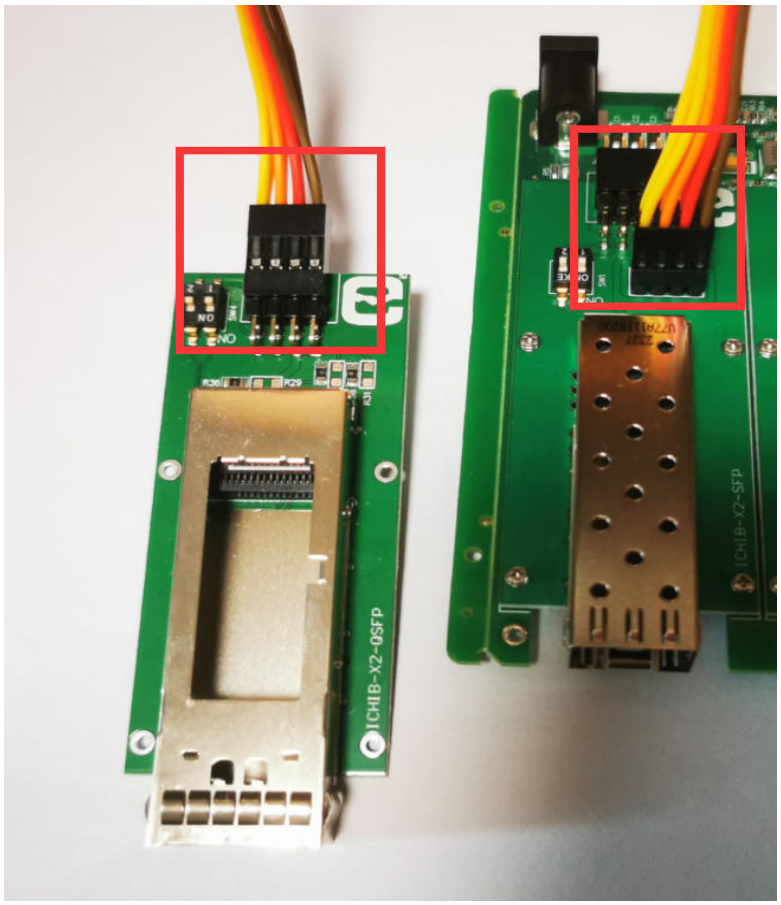
1:SDA 2:NC 3:3.3V 4:3.3V

5:SCL 6:NC 7:GND 8:GND

Note: The 5V positive and negative poles on these interface boards are not functional, that is, only 4 wires can work, such as wiring only 1, 4, 5, 8 pins can work



Example demonstration: Pay attention to problems such as the direction of the Dubon wire, reverse connection will cause damage to various devices.

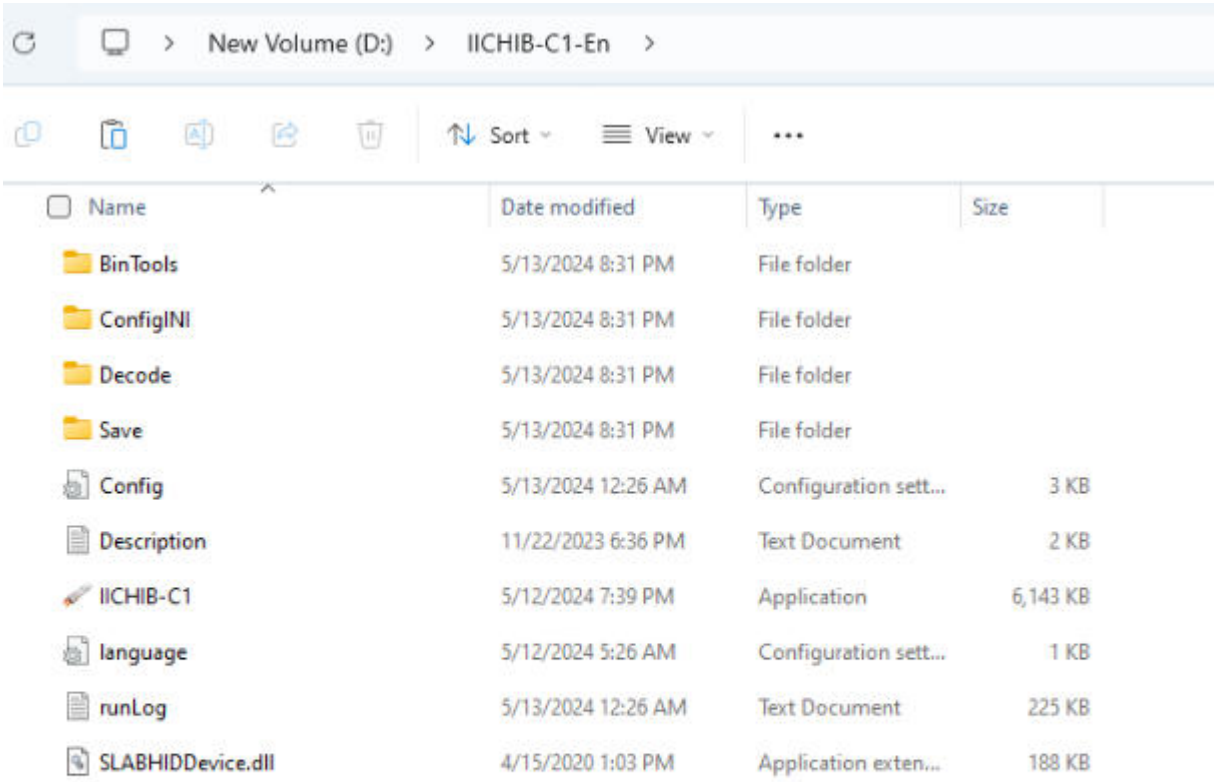


After obtaining the software compressed package, it is recommended to place it in the root directory of any drive other than the system drive. Avoid storing it in folders with Chinese characters, as it may cause some errors.

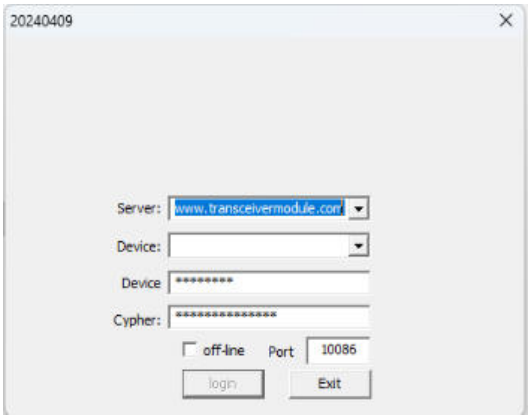
Once extracted, the directory structure will roughly resemble the following:

- The **"BinTools"** folder primarily stores firmware generated by various functions in the toolbox or some configuration files.
- The **"ConfigINI"** folder is an empty folder with no specified functionality. It can be used as a folder for managing hardware configuration INI files.
- The **"Decode"** folder is for the password recovery function.
- The **"Config.ini"** file contains recorded information for software settings. Generally, manual operations are not required.
- The **"language.ini"** file is for software language options. 1 represents Chinese, and 2 represents English. Set it according to the system language version, save it, and restart the executable file for the changes to take effect.
- The **"runlog.log"** file is the software operation log. It can be periodically deleted, and a new empty file will be generated automatically.
- You can also refer to the "Directory and File Description" within the software directory for further information.

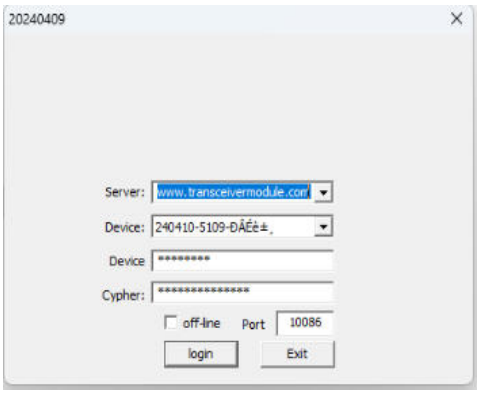
If you have any further questions or need assistance with anything else, please let me know.



You cannot log in by executing the exe without connecting to the programmer hardware
Device selection: No device ID appears and the login button is not clickable



Close the software, connect the programmer hardware properly, and execute the exe again



Note that when there is a problem with the USB, it may also cause you to be unable to log in, please carefully observe your device.

If the login fails or an exception occurs, troubleshoot each problem

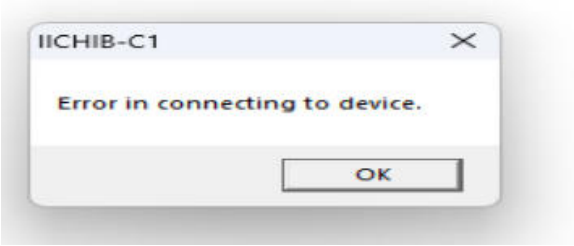
First of all, ensure that the hardware is connected to the computer, you can re-insert and remove the USB through the device manager in the system properties. Generally, you can observe the access of the new device (if the computer has a speaker, there will be a sound when the new device is inserted), if not, it may be the USB failure of the pc, or the programmer failure (the login button is available after the software is opened, that is, the programmer hardware has been identified. This is unable to login according to the error message to determine the problem.)

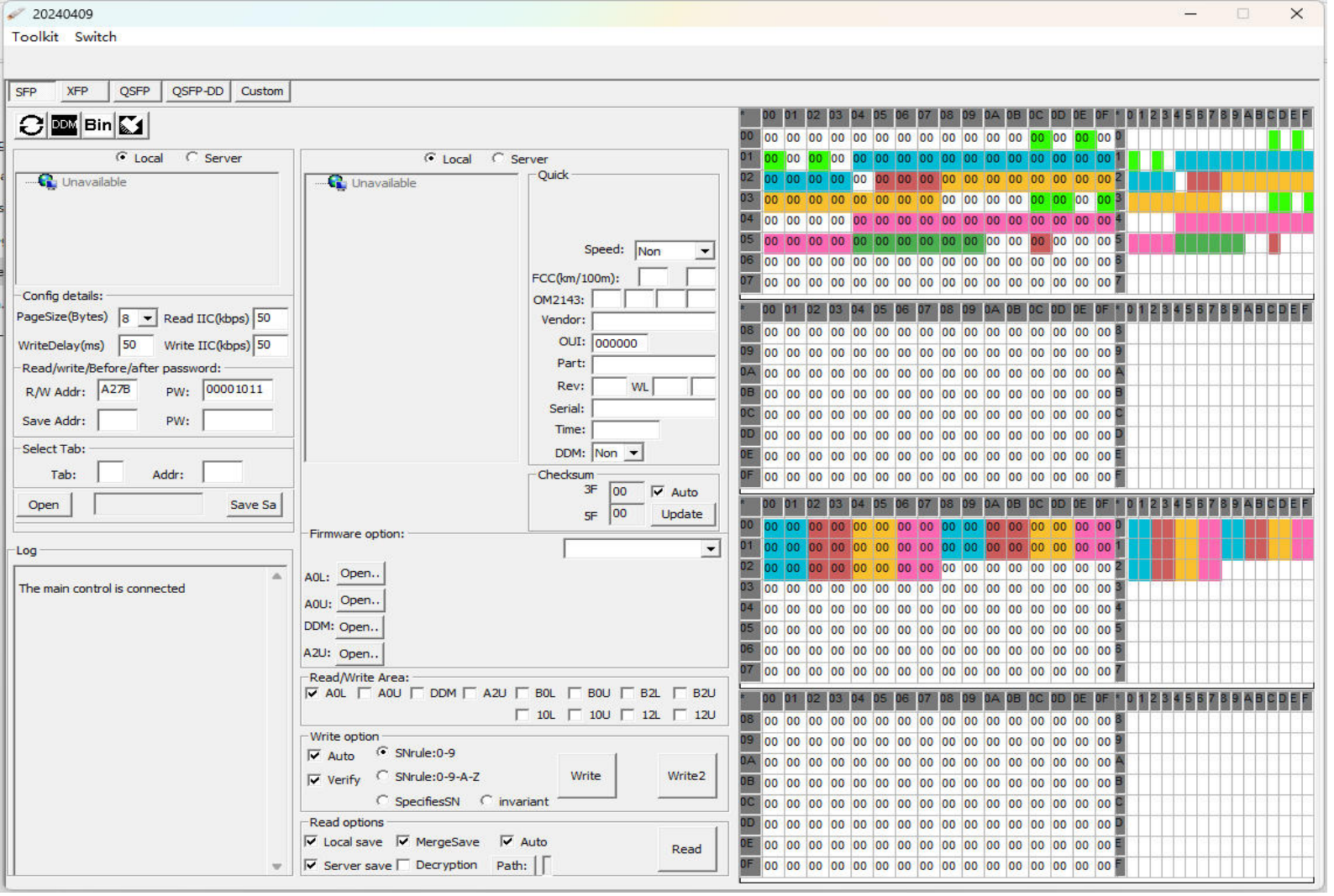
There are currently two login methods: one is to check "offline", and the other is to network mode (do not check "offline").

Offline mode: Make sure the password is correct and click to log in

Networking mode: server address, device password, Cypher, and port. All required fields Please contact the programmer supplier for information.

The following figure shows the HID and USB Devices page on WINDOWS 11. The display may be different for various versions of windows




20240409
Toolkit Switch
SFP XFP QSFP QSFP-DD Custom
DDM Bin
Local Server
Unavailable
Config details:
PageSize(Bytes) 8 Read IIC(kbps) 50
WriteDelay(ms) 50 Write IIC(kbps) 50
Read/write/Before/after password:
R/W Addr: A27B PW: 00001011
Save Addr: PW:
Select Tab:
Tab: Addr:
Open Save Sa
Log
The main control is connected
Local Server
Unavailable
Quick
Speed: Non
FCC(km/100m):
OM2143:
Vendor:
OUI: 000000
Part:
Rev: WL
Serial:
Time:
DDM: Non
Checksum
3F 00 Auto
5F 00 Update
Firmware option:
A0L: Open..
A0U: Open..
DDM: Open..
A2U: Open..
Read/Write Area:
A0L A0U DDM A2U B0L B0U B2L B2U
10L 10U 12L 12U
Write option
Auto SNrule:0-9
Verify SNrule:0-9-A-Z
SpecifiesSN invariant
Write Write2
Read options
Local save MergeSave Auto
Server save Decryption Path:
Read

The hardware configuration includes the following aspects:

IIC configuration: page size, read I2C, write delay, write I2C

Operations before and after SFF protocol read and write: Read and write/save the password to the firmware body

Hardware configuration -> Read and Write passwords -> Selection table -> Principal -> Save passwords (For more details about the selection table and passwords, see the optical module protocol)

1) Hardware configuration: it refers to the IIC protocol configuration, and only when paired can the next step be carried out (the perfect configuration can maximize the efficiency and success rate).

2) Read and write password: If the manufacturer does write protection for the module, you need to fill in: read and write password. You can skip this step if you don't have a password

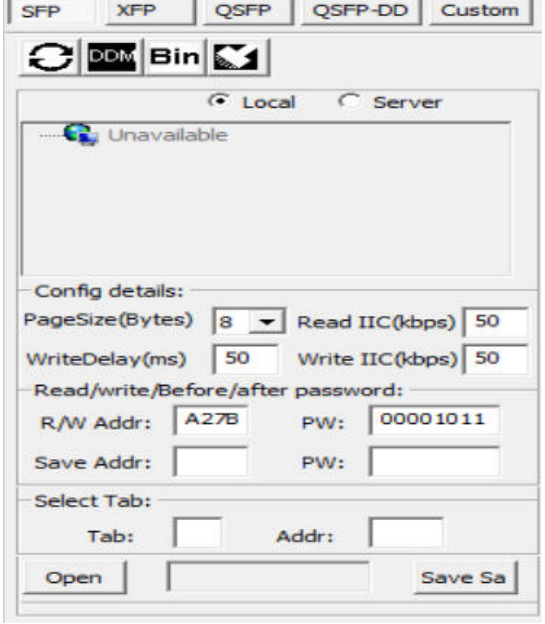
3) Table selection: This is selected according to different modules and different situations, and most scenarios of SFP do not use this step

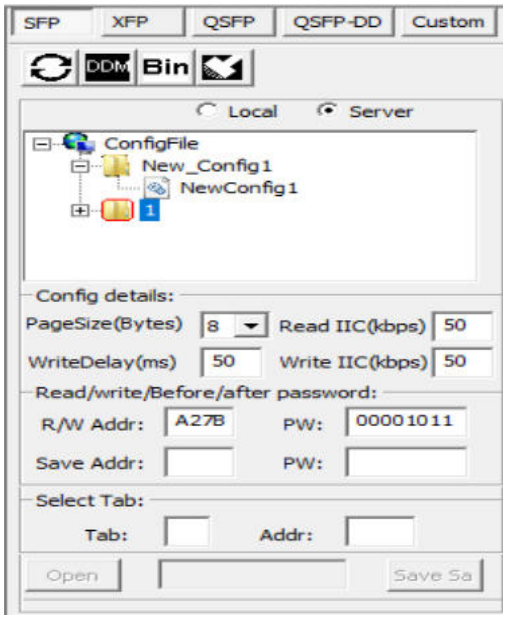
4) Write body: is the main content of optical module compatibility and configuration (if there is no write protection, steps 2 and 3 can be skipped)

5) Save the password: This is also a strengthened version of write protection (in some cases, even if the password is correct, the firmware is written in, once the power failure module firmware will restore to the content before writing the code)

We provide the process for writing firmware in almost all ways. In the absence of write protection. You only need to configure the IIC. Then you can directly start writing module firmware body content!

Write protection also has many operating processes, depending on the manufacturer's Settings for the optical module.





IIC Settings are the foundation and key to the read/write firmware. (They have no requirement on the execution efficiency, and can be configured by default in most scenarios.) If the read/write operations are frequent and the efficiency is required, you can constantly adjust the values to observe the read/write accuracy.

Page size :(usually set to 8, in some cases set to 64 Other values based on your needs and understanding)
Read I2C:(Read usually does not need to fill in too large values generally range 5 to 50)
Write delay: (usually set to 50 range 5 to 50)
Write I2C: (usually set to 50, range 5 to 50)
The program will record the value in the configuration details, and you do not need to fill in the value again after closing the program.

If there are many module varieties, multiple configurations can be saved by saving as, and selected by opening the button.

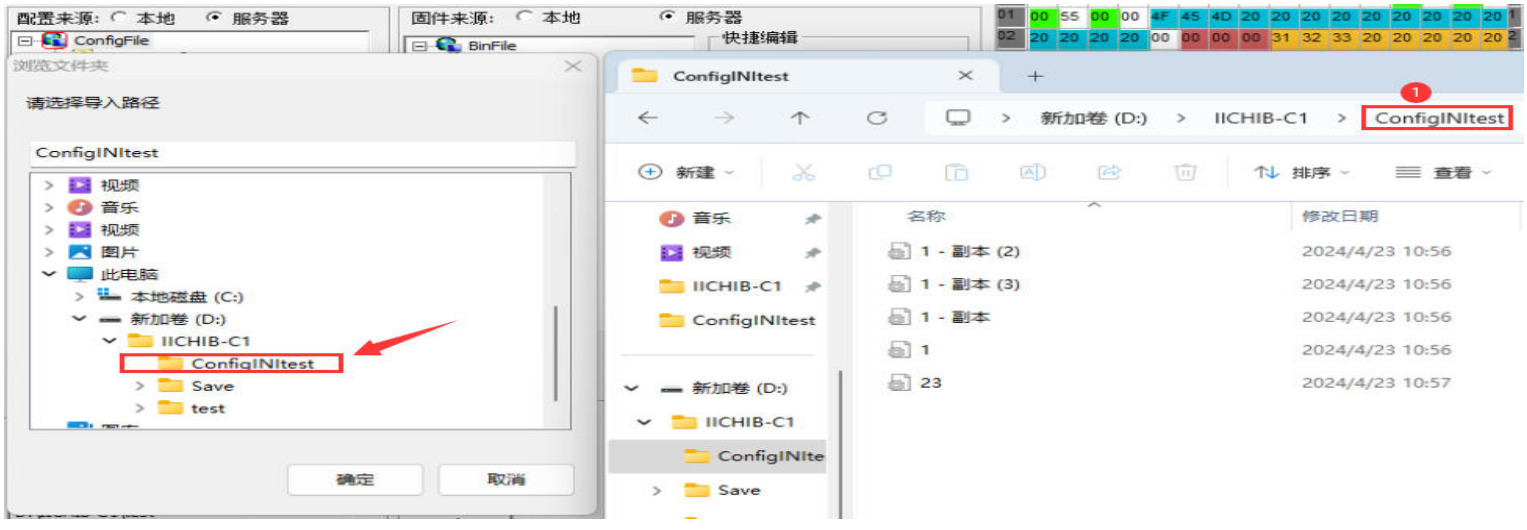
When "Offline" login is not checked, select "Server" in the configuration source, save the configuration to the server Connect the programmer to any other computer, you can use the saved configuration on the server (there are 2 uploading methods: single and batch import)

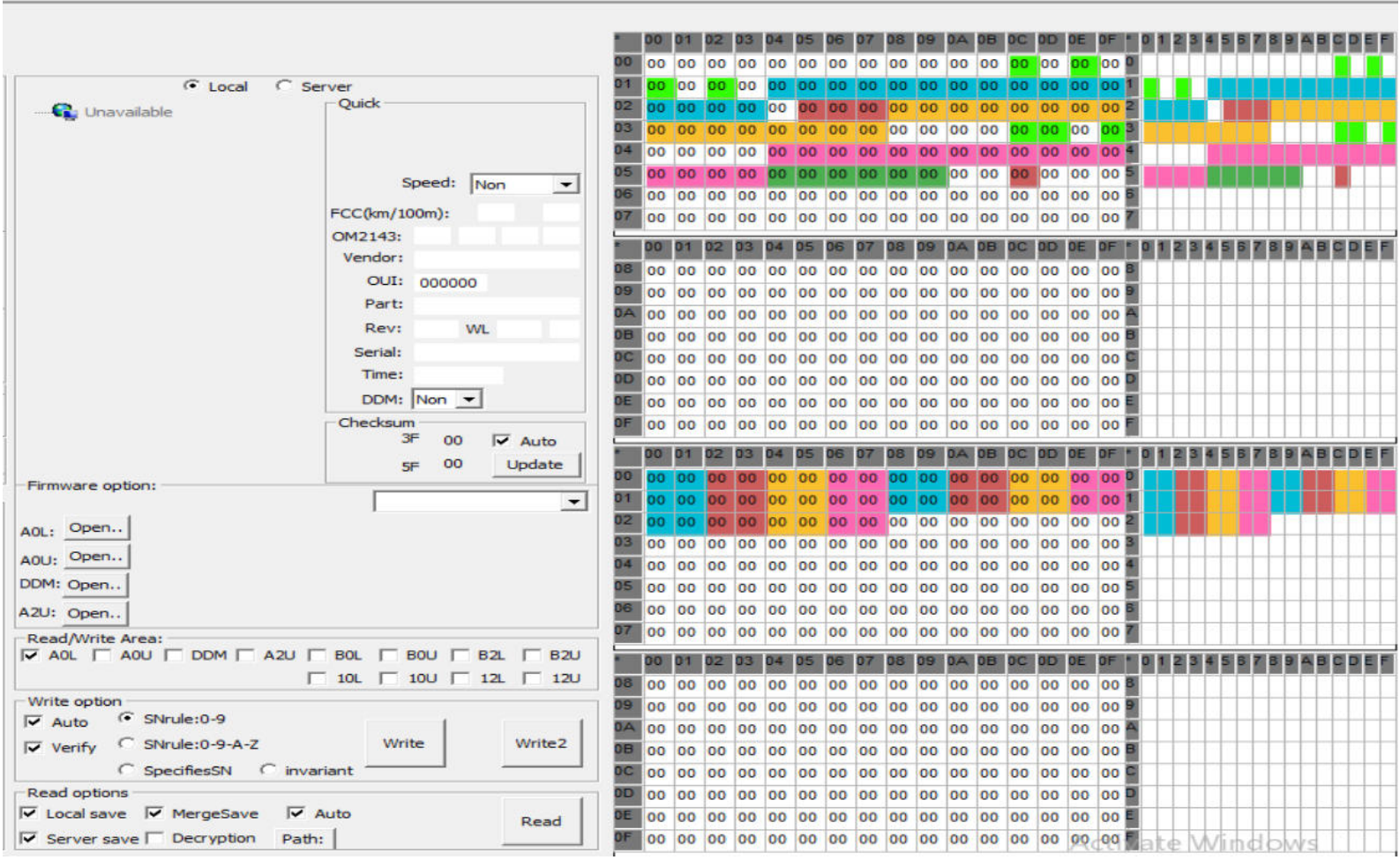
First, a single file: Configuration source select server right-click on the response control to create a new folder , and then create a new config, fill in the data after the right-click select save changes

Second, multiple files: Configuration source: Select the server to right-click on the control in response to import, and then select the folder pointed by the arrow in the following figure note that only one folder can be uploaded at a time. If you have multiple directories to upload multiple times.

Note: Files and folders support 0-9 a-z A-Z and _ -(there is no limit on the number of new files)Note Back up

the uploaded files, the server cannot fully ensure that the files are not lost.





The program provides four zones that can be used simultaneously or independently each zone is 128 bytes for a total of 512 bytes. Combine them according to usage requirements

Here are the four areas: "local bin file selection", "Read/write options" and the relationship between the hexadecimal editor area here take the SFP page A0L as an example, whether it is XFP,QSFP,QSFP-DD page they are sorted from top to bottom

Open the A0L corresponding to Local bin File Select... The button can import four sizes of firmware files: 128, 256,384,512 bytes. And the first one to open... A maximum of 1000 bin files can be imported at a time. (The following 3 "Open.." Only 1 bin file can be opened)

At 128 bytes it is imported into the block 1 editor (read/write options correspond to the block 1 hex editor)

When 256 bytes, it is imported into block 1 and 2 editors (read/write options correspond to block 1 and 2 hex editors).

At 384 bytes it is imported into block 1, 2, and 3 editors (read/write options correspond to block 1, 2, and 3 hexadecimal editors)

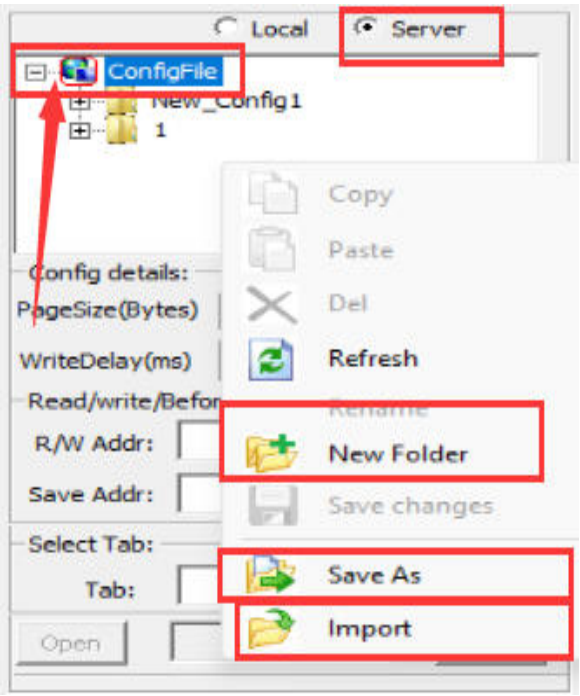
After import, it does not mean that the firmware will be used. Only if the corresponding option in the Read/Write option is selected, the corresponding firmware will be written to the optical module. For example, if 512 bytes are imported, but only the first and fourth blocks are written,select "Read/Write Option "A0L and A2U.

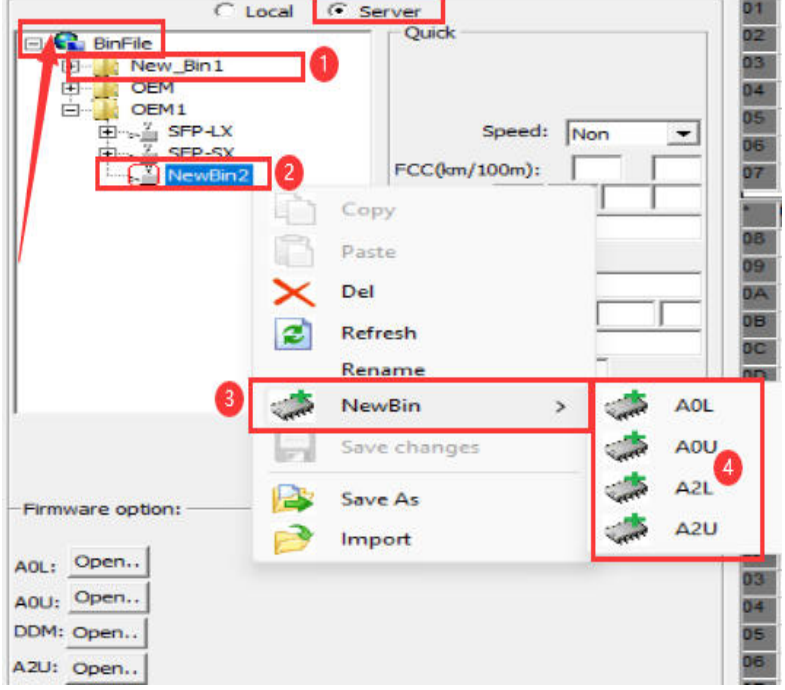
A0U"open.."The button can import firmware files of three sizes: 128,256,384 bytes.

DDM"open.."The button can import firmware files of three sizes: 128,256 bytes.

A2U"open.."The button can import firmware files of three sizes: 128 bytes.

Note: **When importing multiple firmware and using these files at the same time**, you can only write through the
"**Write**" button (the imported firmware will be displayed in the drop-down list to use one by one, you can choose to use the files in the list repeatedly)





When "**Offline**" login is not checked, select "**Server**" in the configuration source, save the configuration to the server Connect the programmer to any other computer, you can use the saved configuration on the server

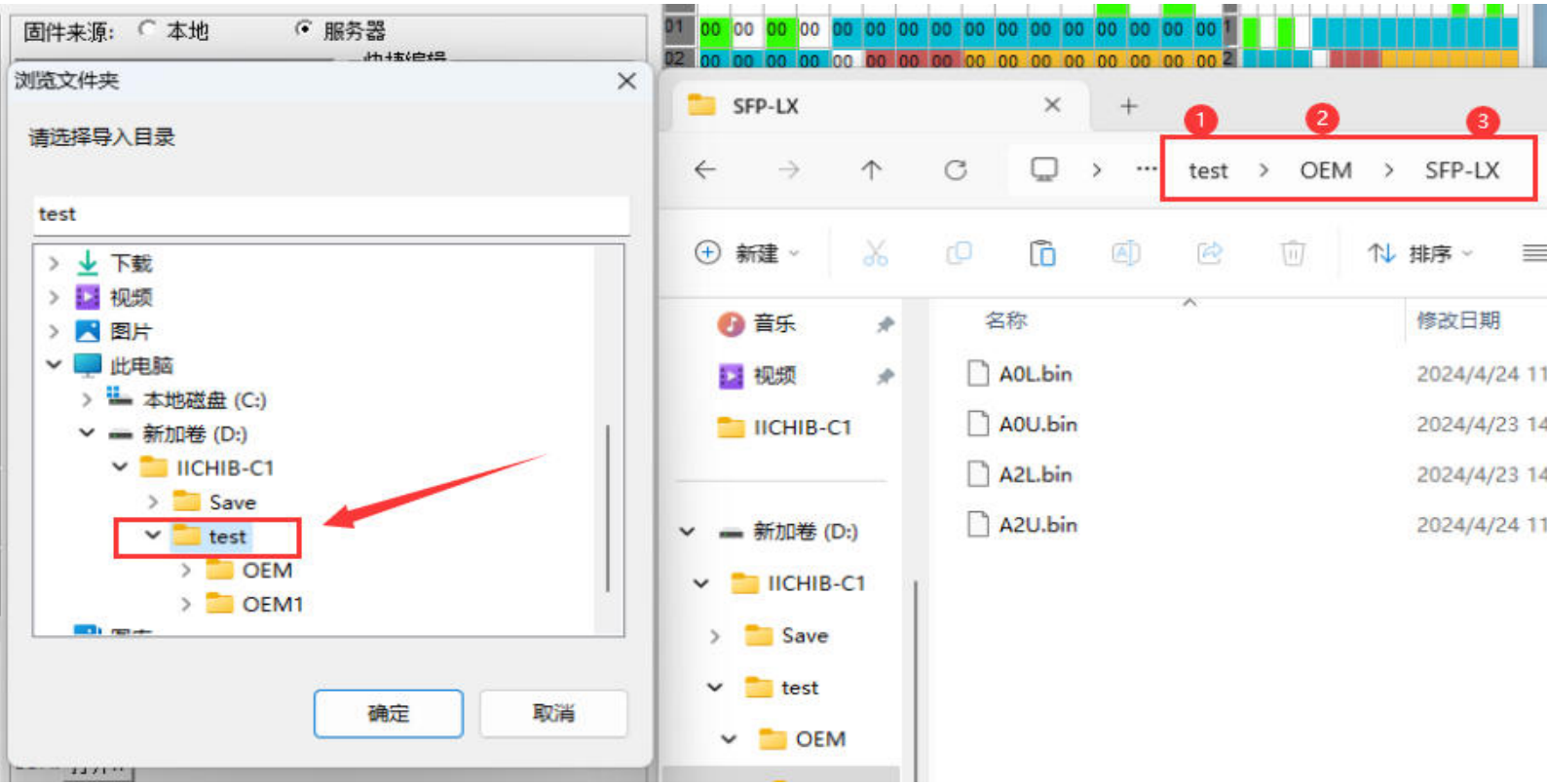
Firmware Source: The server selects the firmware created by itself and uploads it in two ways: single file or batch import

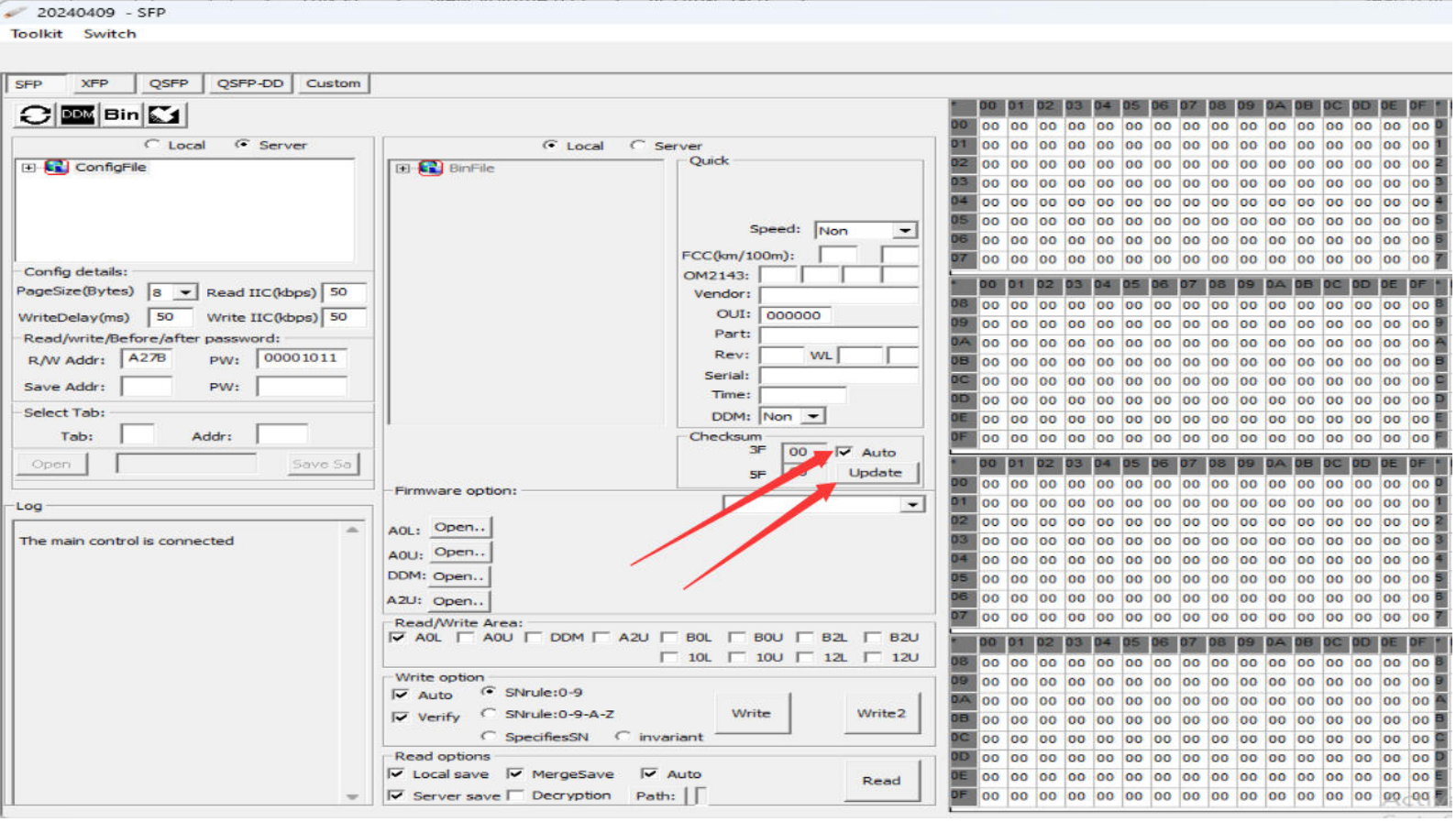
The first: look at the right picture with the left mouse button to select the open control, click the right mouse button on it to select: New folder - New bin file Right click on the new bin file.
Select which editing area you want to import into (upload of 4 areas is available). There is no limit on the number of new areas.

Second: Look at the following figure with the left mouse button to select the open control, click the right mouse button on it to select: Import, select the layer 1 folder click to confirm (see the figure below to understand the folder level a total of 3 layers, in the third layer to put the firmware and each file size can only be 128 bytes) Upload files can only be uploaded through the SFP function page, other packaging function pages can be used!

Note: Support 0-9 a-z A-Z and _- (other characters are not recommended, otherwise your data will be lost or the creation will fail)

Note Back up the uploaded files, the server cannot fully ensure that the files are not lost.





This software comes with a hexadecimal editor: data can be manually filled in the editor before writing, and different packaging optical module pages, have the function of automatic calculation of CRC check (according to the provisions of the relevant packaging protocol).

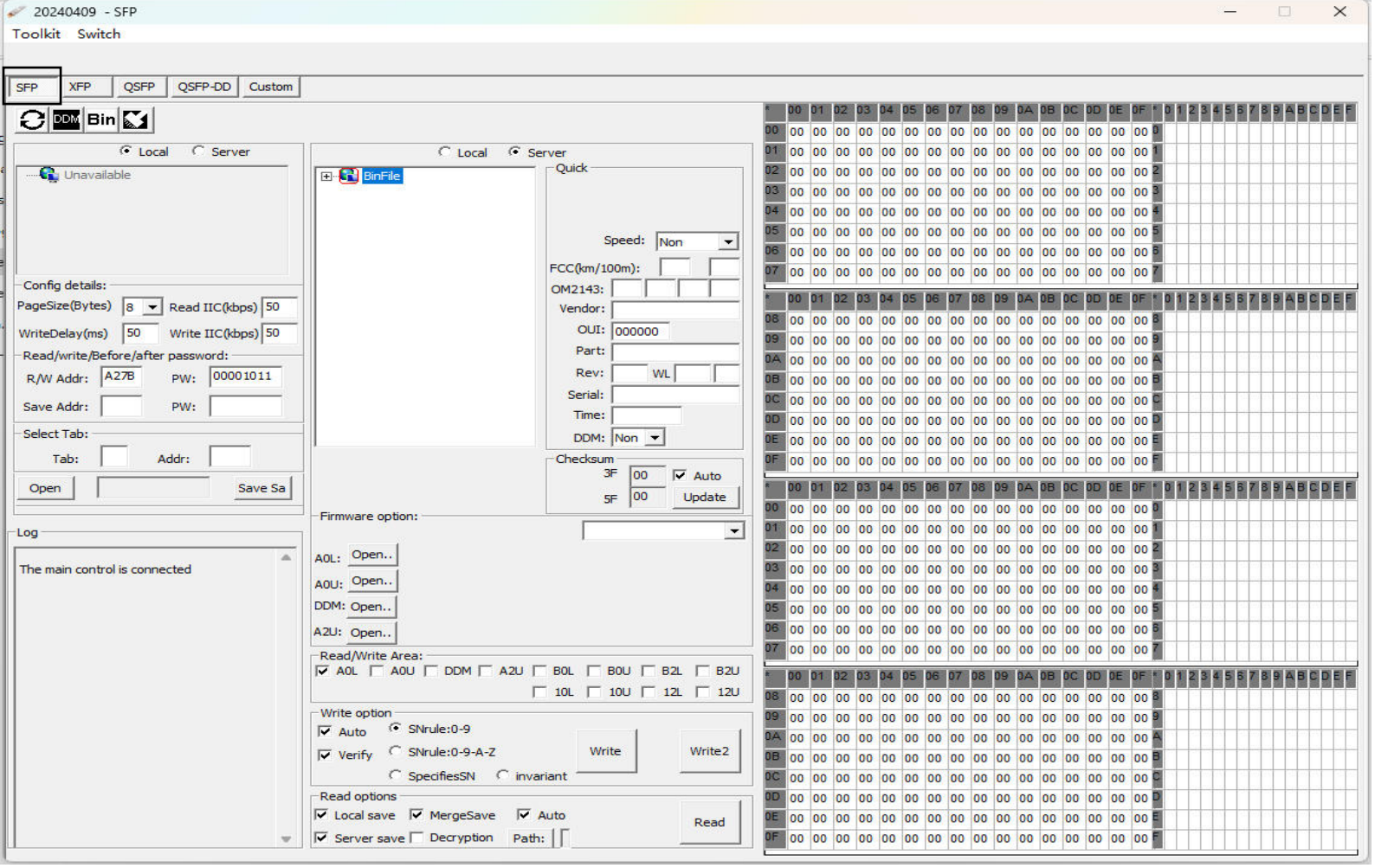
SFP calculation A0L
XFP calculation Tab1
QSFP calculation tab0
QSFP-DD and OSFP compute Tab0 and Tab1

Before and after filling in data through the shortcut edit and editor areas. Check Auto (the value of the checkbit is automatically updated in the shortcut edit) and click Update (when entering a value in the hexadecimal editor or when Auto is not checked) to recalculate the CRC checksum

Note that when you fill in the last data in the hexadecimal editor, you need to press the Enter key, or click the left mouse button at the edge of the editing area to determine the filling of the value (otherwise the filled value is not written to the corresponding area of memory).

Other address segment areas do not have CRC check function, what is written is what

SFP function page introduction
XFP function page introduction
QSFP function page introduction
QSFP-DD Function Page Introduction (CMIS 5.1)
OSFP Function Page Introduction (CMIS 5.1) Refer to the QSFP-DD Custom function page introduction



SFP page fixed read and write range, refer to the SFF-8472 protocol. Select the option in Read/Write Options to read and write data to the address segment.

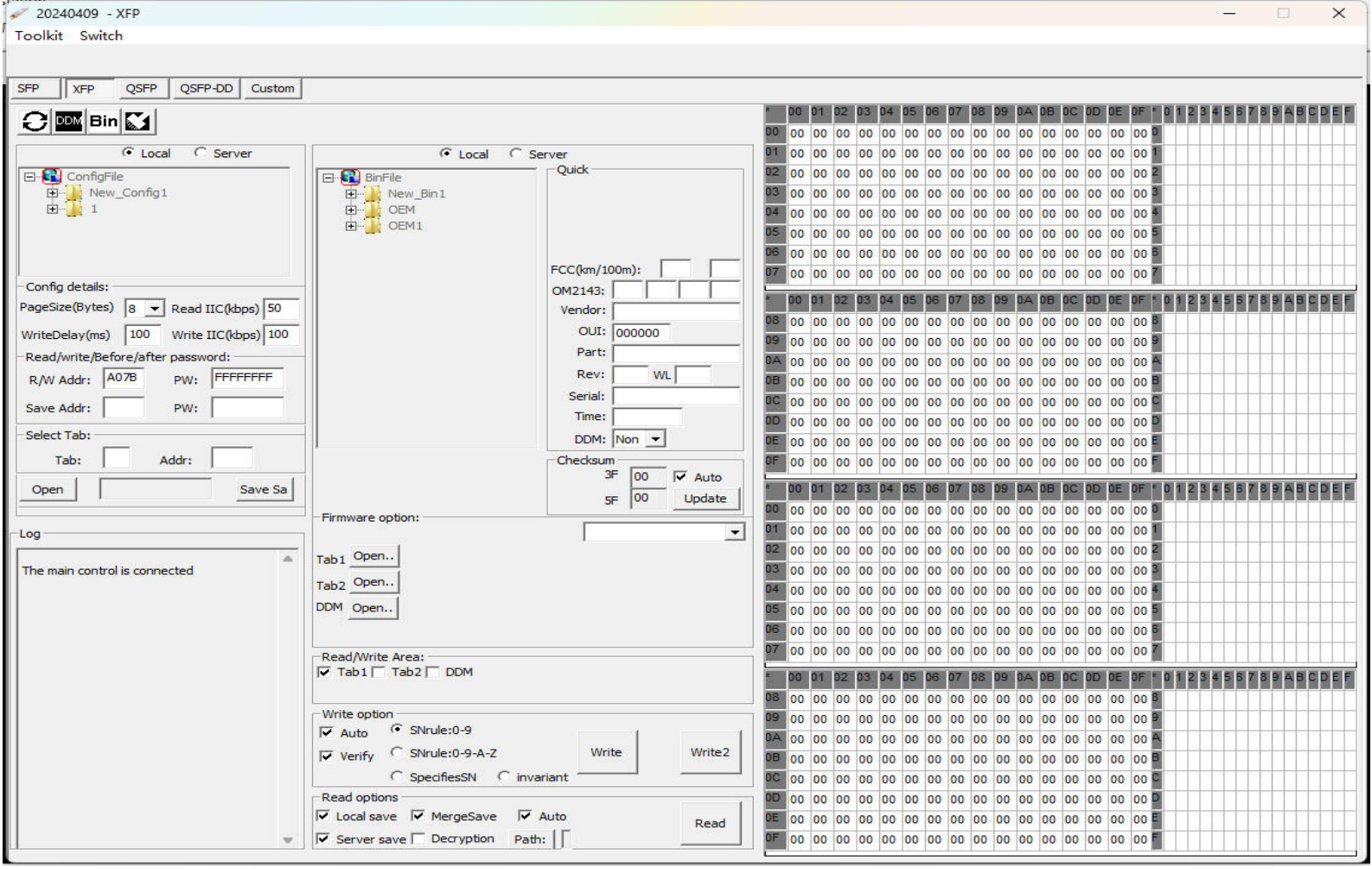
A0L Read/write range: 0 to 127 bytes of A0.
A0U Read/write range: 128 to 255 bytes of A0.
A2L Read range: 0 to 127 bytes of A2 Write range: 0 to 95 bytes of A2
A2U Read range: 128-255 bytes of A2 Write range: 128 to 247 bytes of A2

The address segments in the SFP page read/write options are not selected, so they are all operating Table 0 by default (in addition, the CSFP dual-channel optical module can read and write in the corresponding area).

If you need to perform operations on a table that is not selected, only one option can be selected from the read/write options. (The current page does not support simultaneous selection of different tables and operations on different paragraphs, such as the operation on table 1 of A0L and Table 2 of A0U at a time.)

The current read function has an option for "A2U Table 1" which can be used in certain scenarios. A2Utab1 There are two ways to perform read and write operations:
1: Fill in "Optional Form/Multi-function" Optional form: 1 or 01 Address :A27F
2: No form/multi-function. Directly check A2U in the Read/Write option, then check A2U Table 1 and click Read. That is, A2 Table 128-255 is read

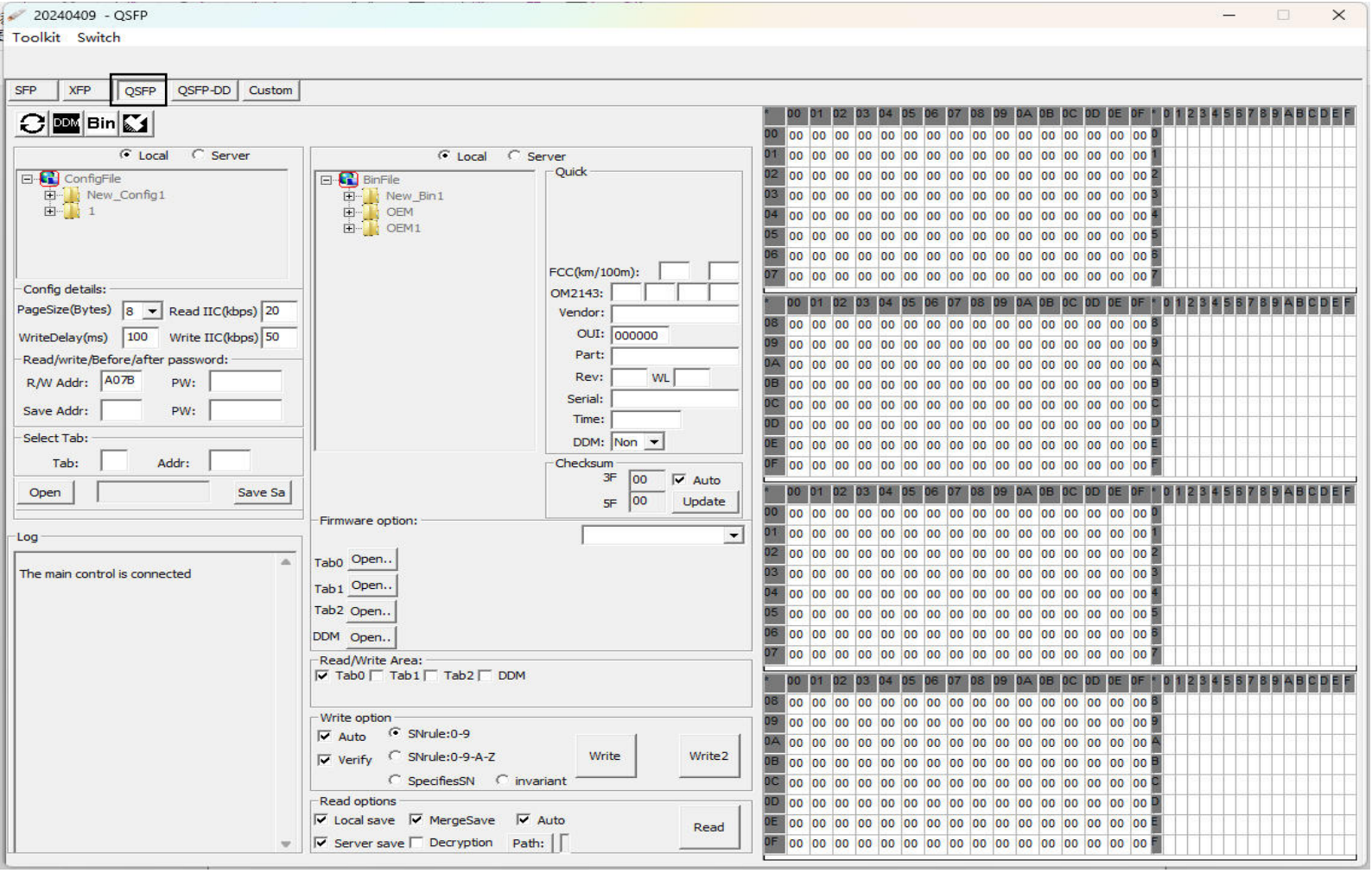
Quick edit: (This area is for the plaintext content of the A0L area.) The following contents are supported: This is not explained here, please see the SFF-8472 protocol for more information. Then fill in some characters for each option, and the corresponding address in the first edit area will display the hexadecimal data
We have optimized the commonly used values in shortcut editing: 1: In the editing box of Vender, double click the left mouse button to automatically fill in the name of the manufacturer: OEM2: Double click the left mouse button in the editing box of Time to automatically fill in the current date (6 bytes)



The read and write range is fixed on the XFP page. Refer to the INF-8077i protocol
Select the option in Read/Write Options to perform read and write operations on the address segment. Tab1 Read and write range: A0 128 to 255 bytes in Table 1
Tab2 Read/write range: A0 128 to 255 bytes in Table 2
DDM read range: 0 to 127 bytes in table 0 Write range: 0 to 95 bytes in table 0

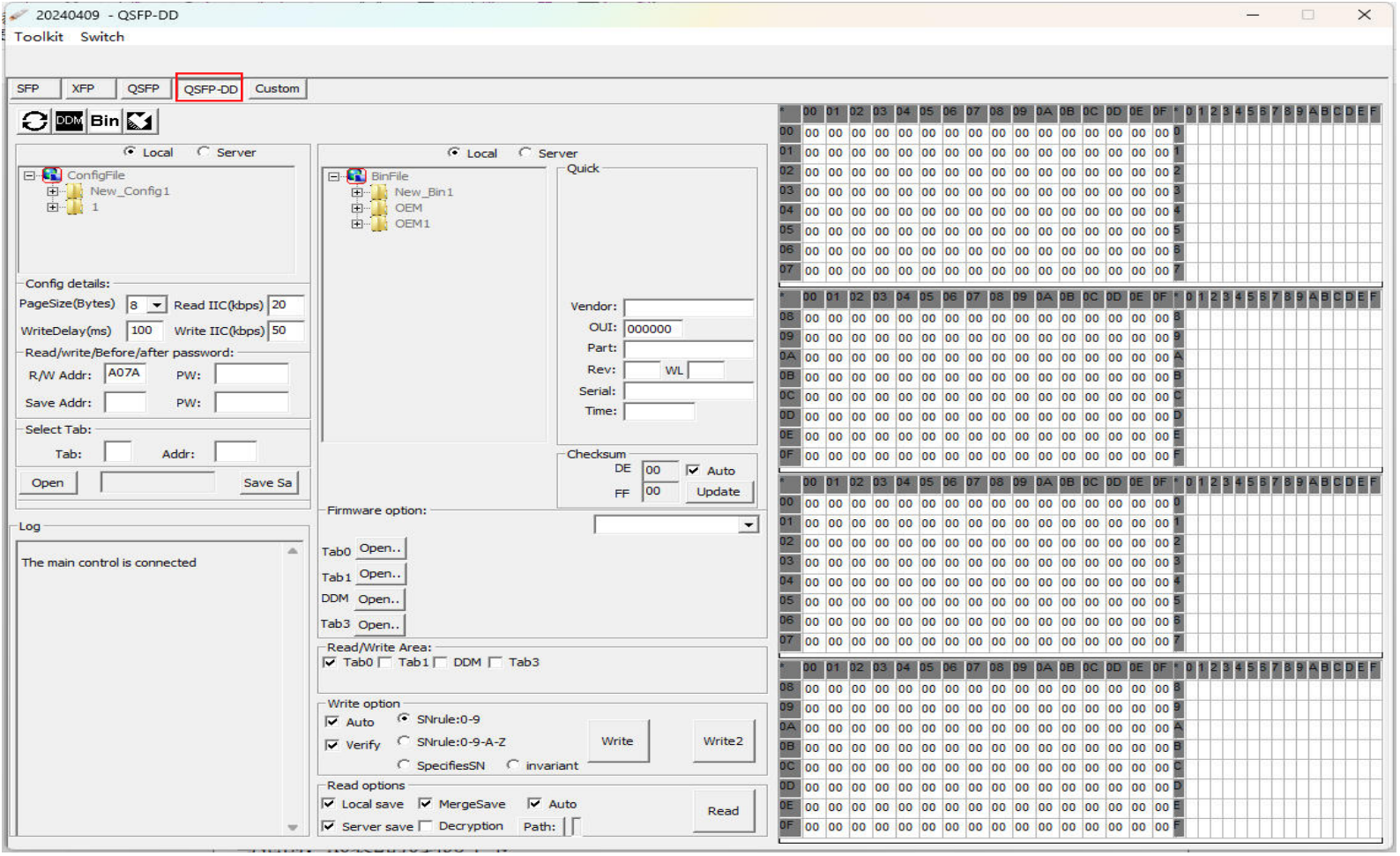
Quick edit: (This area is for Tab1 text content to fill in and select) The following content is currently supported: This is not explained here, for more information, please see INF-8077i protocol. Then fill in some characters for each option, and the corresponding address in the first edit area will display the hexadecimal data

We have optimized the value content commonly used in shortcut editing:
1: Double-click the left mouse button in the edit box of **Vender**, and automatically fill in the manufacturer name: OEM
2: Double-click the left mouse button in the editing box of **Time** to automatically fill in the current date (**6 bytes**)



QSFP page fixed read and write range, refer to the SFF-8436 protocol
Select the corresponding option in Read/Write Options to read and write to the address segment.
Tab0 Read and write range: A0 Table 0 128 to 255 bytes.
Tab1 Read/write range: A0 bytes from 128 to 255 in Table 1.
Tab2 Read/write range: A0 128 to 255 bytes in Table 2.
DDM Read range: 0 to 127 bytes in Table 3 Write range: 0 to 95 bytes in Table 3.

Quick edit: (This area is for Tab1 text content to fill in and select) Currently supports the following:
This is not explained here, please see the SFF-8436 protocol for more information. Then fill in some characters for each option, and the corresponding address in the first edit area will display the hexadecimal data.
We have optimized the value content commonly used in shortcut editing:
1: In the edit box of **Vender**, double-click the left mouse button to automatically fill in the manufacturer name: **OEM**
2: Double-click the left mouse button in the editing box of **Time** to automatically fill in the current date (**6 bytes**)

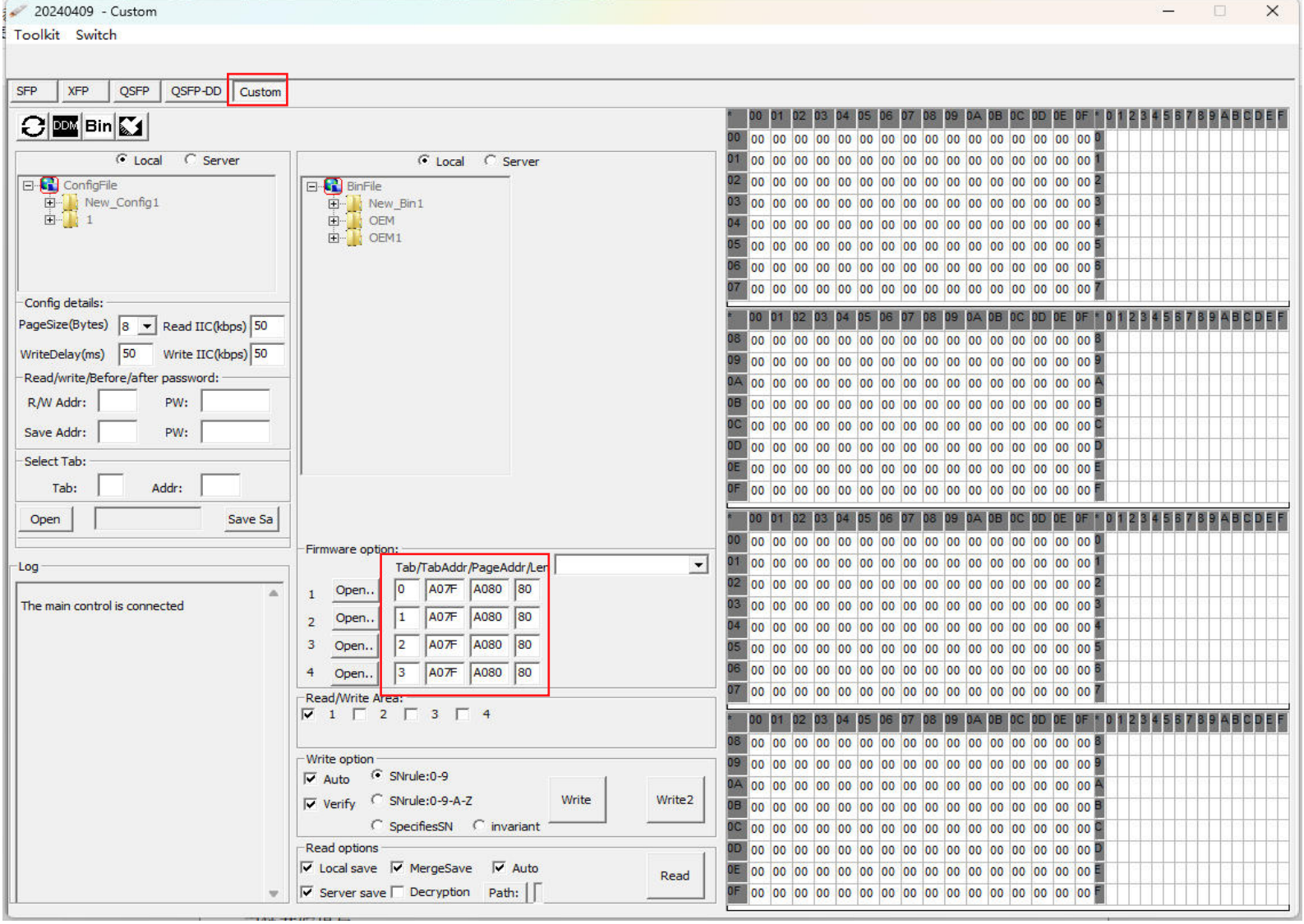


The read/write range is fixed on the QSFP-DD page. Refer to the protocol CMIS5.1.
Select the option in Read/Write Options to read and write data to the address segment.
Tab0 Read/write range: A0 Indicates 128 to 255 bytes in table 0.
Tab1 Read/write range: A0 bytes from 128 to 255 in Table 1.
DDM read range: : A0 Table 2 from 0 to 127 bytes (includes part of the 128 bytes of A0 table 0, and is not displayed in the edit area). Write range: A0 bytes from 0 to 95 in Table 2
Tab3 Read/write range: A0 128 to 255 bytes in Table 3

Quick edit: (This area is for Tab0 and Tab1 text content to fill in and select) Currently supports the following: This is not explained here, please check the protocol CMIS 5.1 for more information. Then fill in some characters for each option, and the corresponding address in the first edit area will display the hexadecimal data

We have optimized the commonly used values in shortcut editing:
1: In the editing box of Vender, double click the left mouse button to automatically fill in the name of the manufacturer: OEM
2: Double click the left mouse button in the editing box of Time to automatically fill in the current date (6 bytes)

OSFP Function Page Introduction (20240509)
The same page that is currently used for QSFP-DD will not be repeated.



This page was born out of a need to compensate or be more free.

You can select a region in the local bin file. Set the range of operations required to perform various read and write operations without read and write passwords, save the password selection table/multi-function of these three write operations.

It can complete completely user-defined arbitrary operation starting address, byte length can be customized each area minimum is 1 byte maximum range is 128 bytes.

Take the first one as an illustration and there are four edit boxes in one line.

The table and table address can be seen as a write operation, and the page address and length can be seen as a write operation (they can be used in combination or separately).

When you start filling out,
The length of the table read and write has been fixed to 1 byte (for example, A07F is essentially writing a 00 value to the address A07F).

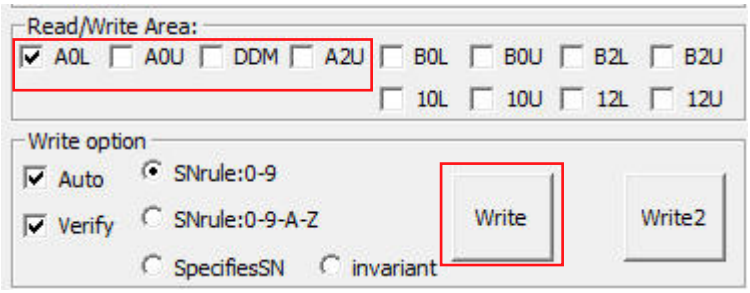
The following page address is a continuous parameter value indicating that you want to start from the address A080 (80 represents the 128th data bit) the data length is 80 (the current filling is a hexadecimal value, converted into a decimal 128 bytes means).

For example, you now only want to modify a certain byte of an address you can use the table/function to operate (this function writes data, but it has no purpose to read), but it can not confirm whether you really wrote. At this point you can use this function to write and can read the display in the editing area.

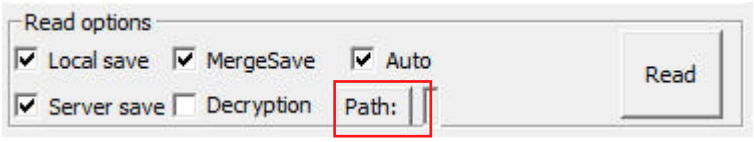
The data written can be opened by the corresponding... Button import, you can also fill directly in the editor area (note that no matter what the starting address is, you must start from the first byte in the editor).

Note: The table, table address, page address are hexadecimal, the length is Decimal (for example, to write A000, write 128 bytes) the length is filled in 128

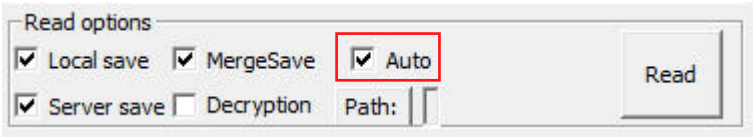
Procedure for reading an SFP optical module firmware:
1): Select the area to be read in the read/write option and click to read such as A0L A0U A2U 2): Click "Read" module firmware display to now edit the area



How to save a firmware:
Before clicking "Read", check the read options: local save, server (this option is only available when networking), Merge Save, "**Path..**"(Optional, saved to the software directory by default)

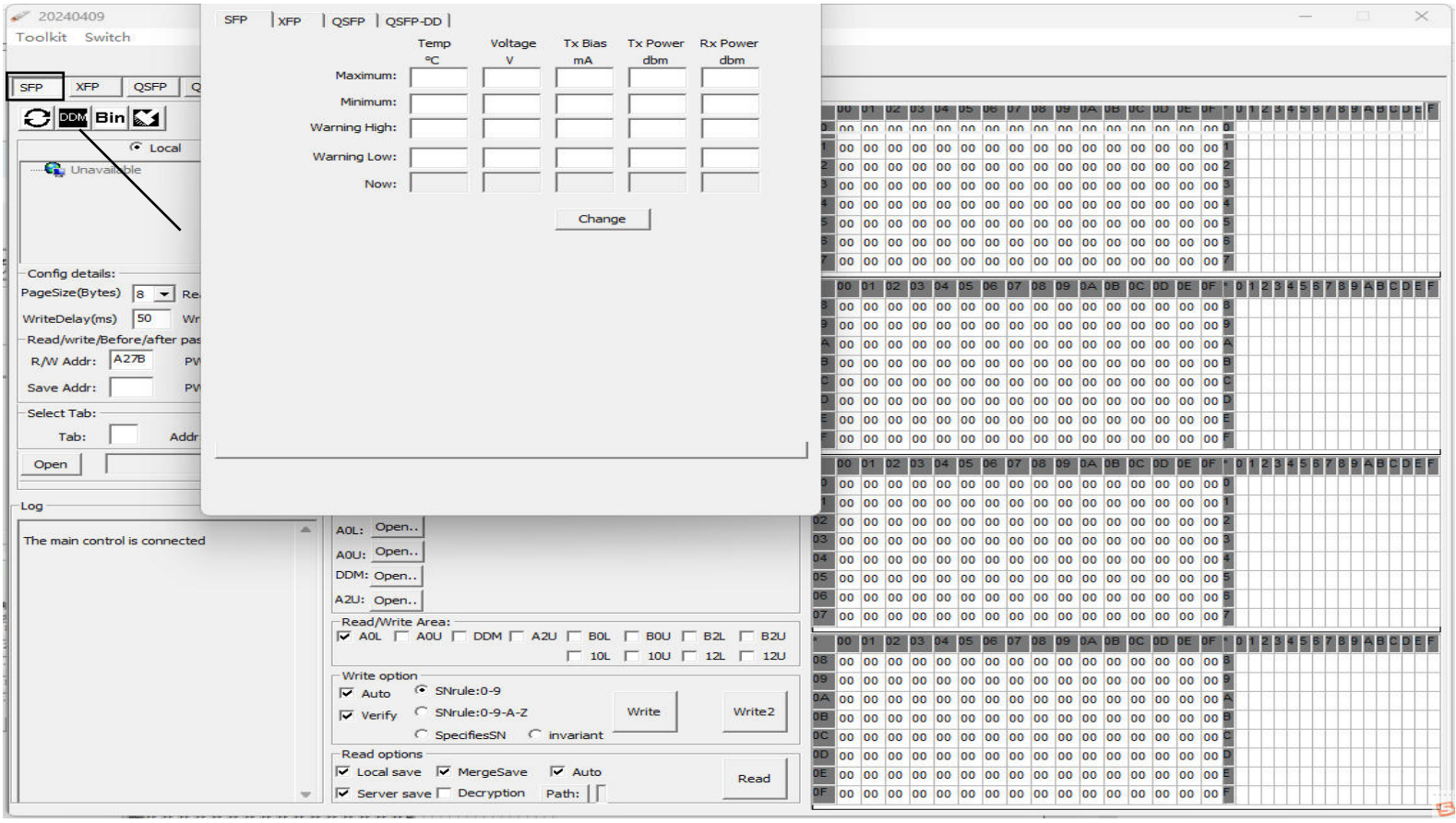


Read multiple optical modules continuously
Check "**Auto**" before clicking "**Read**"



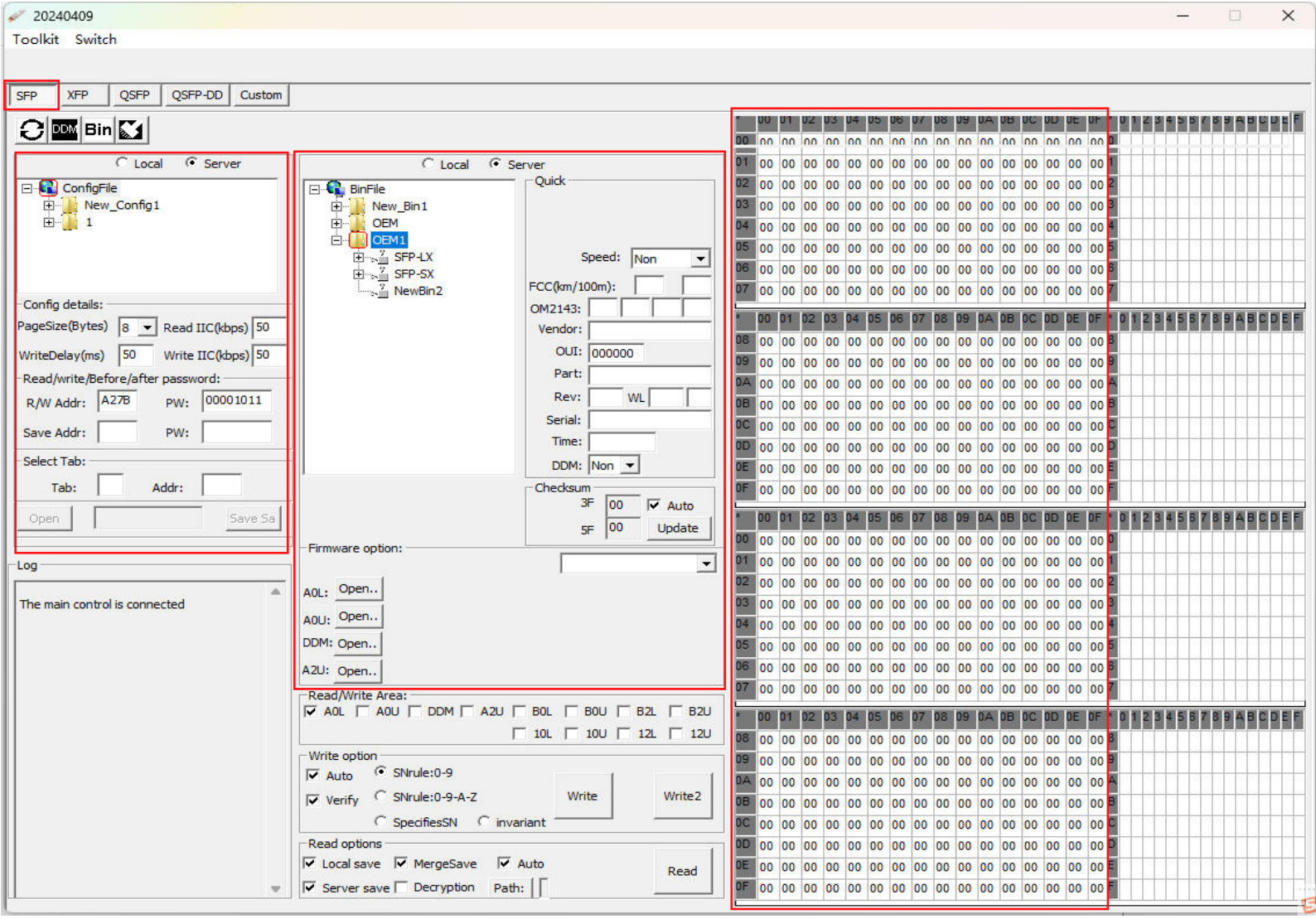
This section applies to optical modules packaged in different packages

The current presentation is **SFP**. After entering the main window, select the SFP operation page, check DDM in "**Read/Write options**", then click the "**DDM**"button pointed by the arrow, and drag the pop-up window to the appropriate position. Then click the "**Read**" button in the main window. You can see the editable threshold and current value of the optical module (read only)



If you read multiple optical modules, please check the main window "**Auto**"

You can enter the value directly on the control of the corresponding value through the "DDM" function window, and then click "**Change**" (This method if the input value with a decimal point, there will be a certain error value (the range of filled values -128 to 128)).



1: Fill in the four parameters of "Config Details" (**PageSize, Read IIC**, **WriteDelay**, **Write IIC**)(use the default values, or consult the embedded engineer of the module manufacturer)

2: Enter the address and password of Read-Write Password. After writing the code, the action "Save password" (generally not, if it does, it should be filled in). For example, after a successful write, reinserting after writing the code restores the firmware to what it was before it was written. (Do not know to ask the optical module manufacturer)

3: Import firmware (For details, see Software Function Description -> Firmware Import)

4: In Read-Write Options, select an option that needs to be written(A0L A0U DDM A2U)

5: Select automatic write, check write, SN change rules in "Write Options" as required (currently there are 4 modes)
Verify: it is equivalent to automatically re-reading the program after writing, (when you use the same design of the optical module for a long time (such as 100,000), if you can reach 1000 consecutive cases without a failure to write, you can consider canceling the use of this option. This will increase the speed of operation)

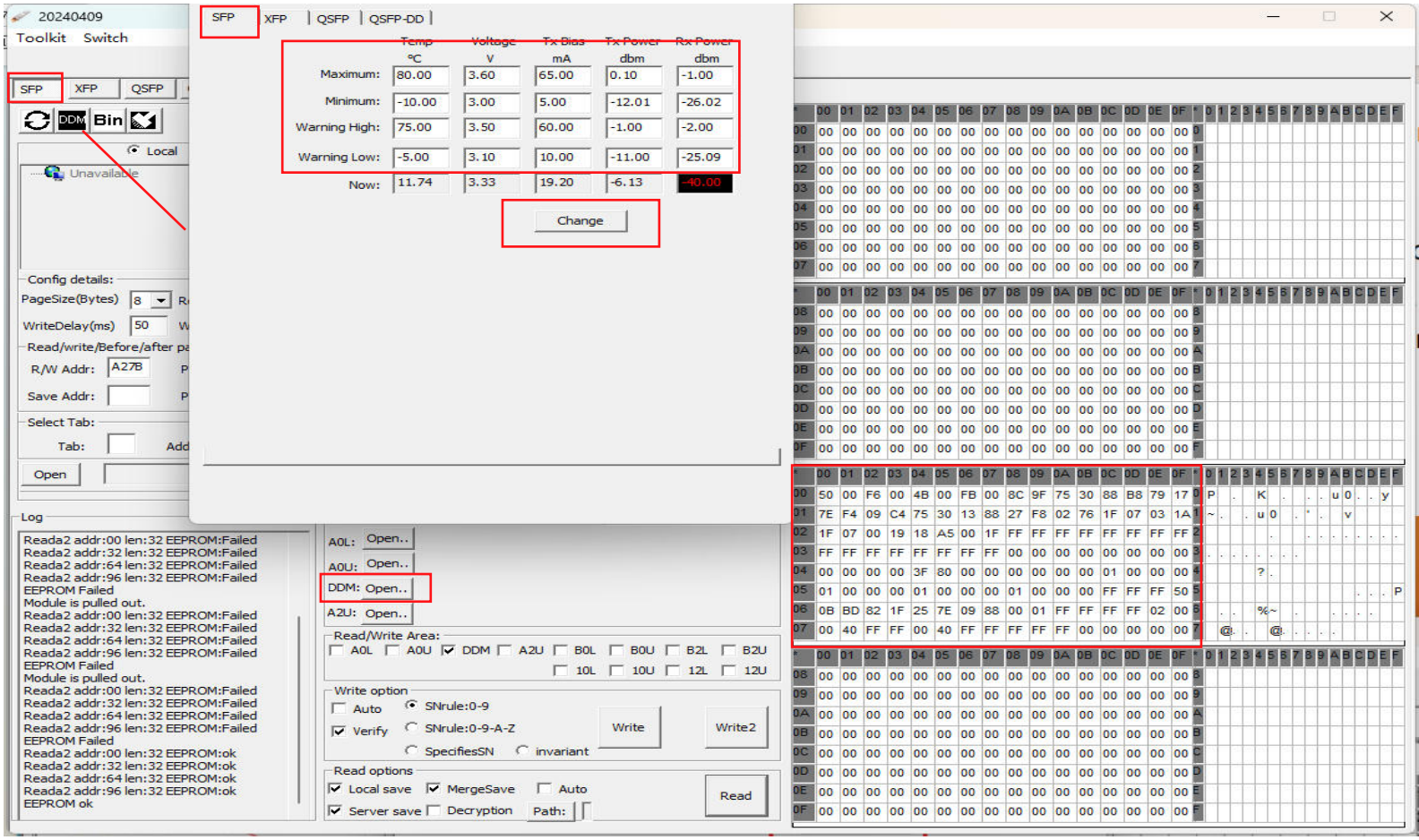
Auto(Automatic write): If you need to continuously write data to multiple optical modules, you can select automatic write. After the write succeeds, replace the next optical module and reinsert the optical module after the write fails.

6: Click "Write" (currently the "write 2" button is only used when specifying the firmware file order)

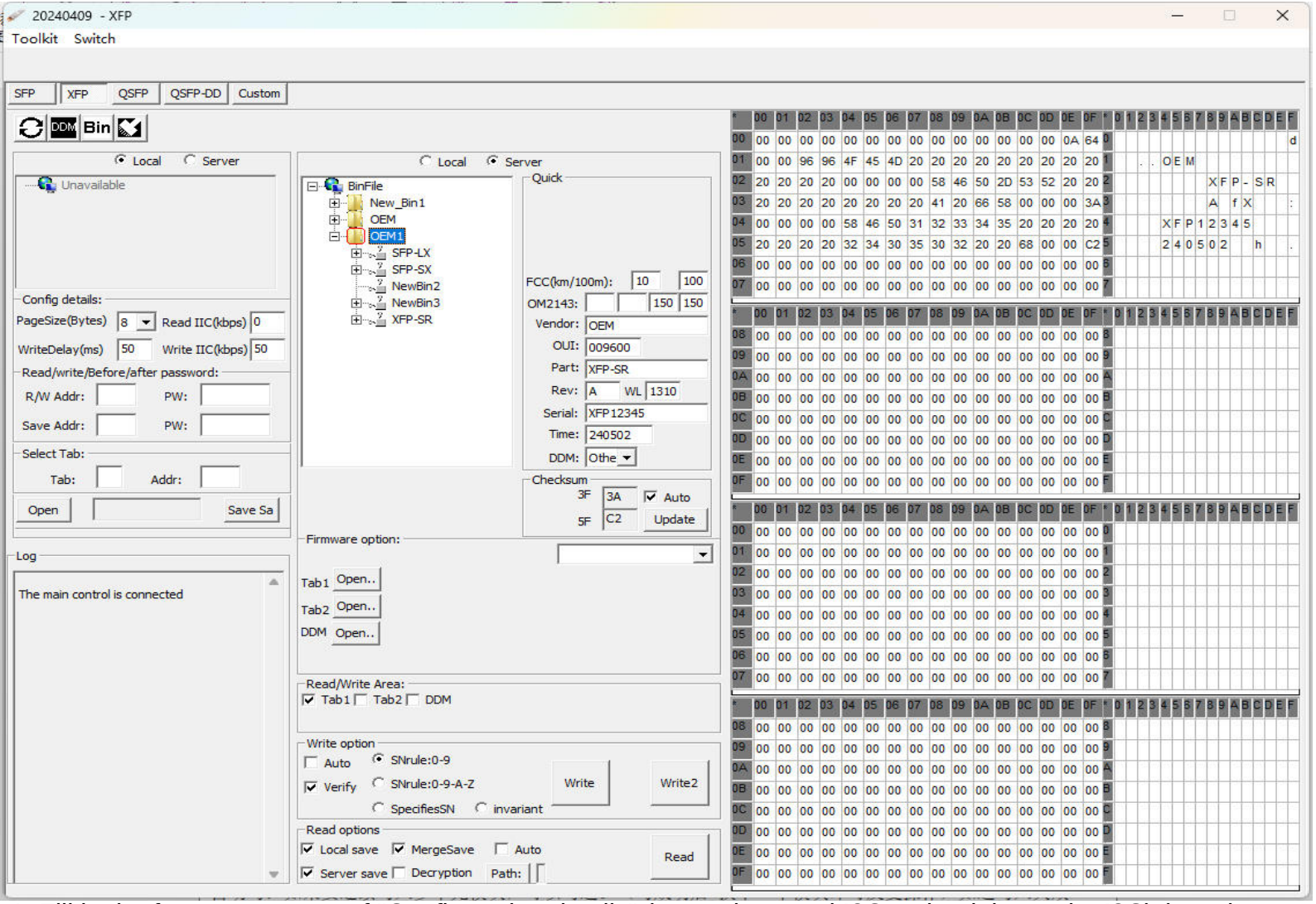
Note: Before modifying the configuration, ensure that the hardware configuration is correct
After login, select the SFP function page in the main window, fill in the hardware configuration (password can be filled in advance), and then click the DDM button to modify the threshold in two ways:

The first:
Enter the threshold directly in the DDM window (This mode does not support continuous automatic change of multiple optical modules).
In addition to the current value, you can directly enter the value in the DDM window for other values, and then click "**Change**" to operate. The value is filled in within 128 to -128, as far as possible do not enter the value of the decimal point, because the data conversion problem, there is a certain range of error

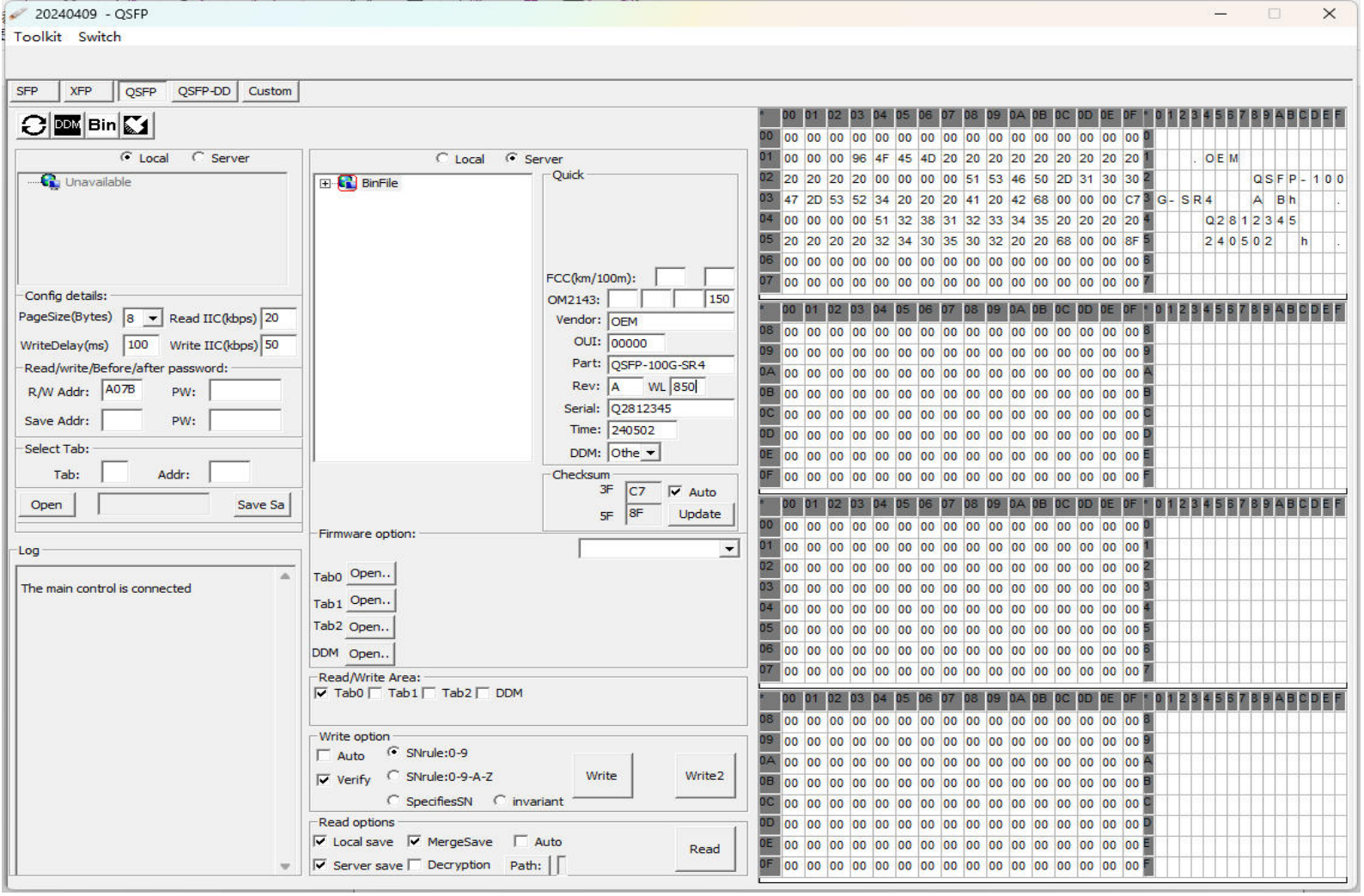
The second type:
Enter hexadecimal data through the 3rd edit block or load the data by importing bin file, then click "Write" in the main window



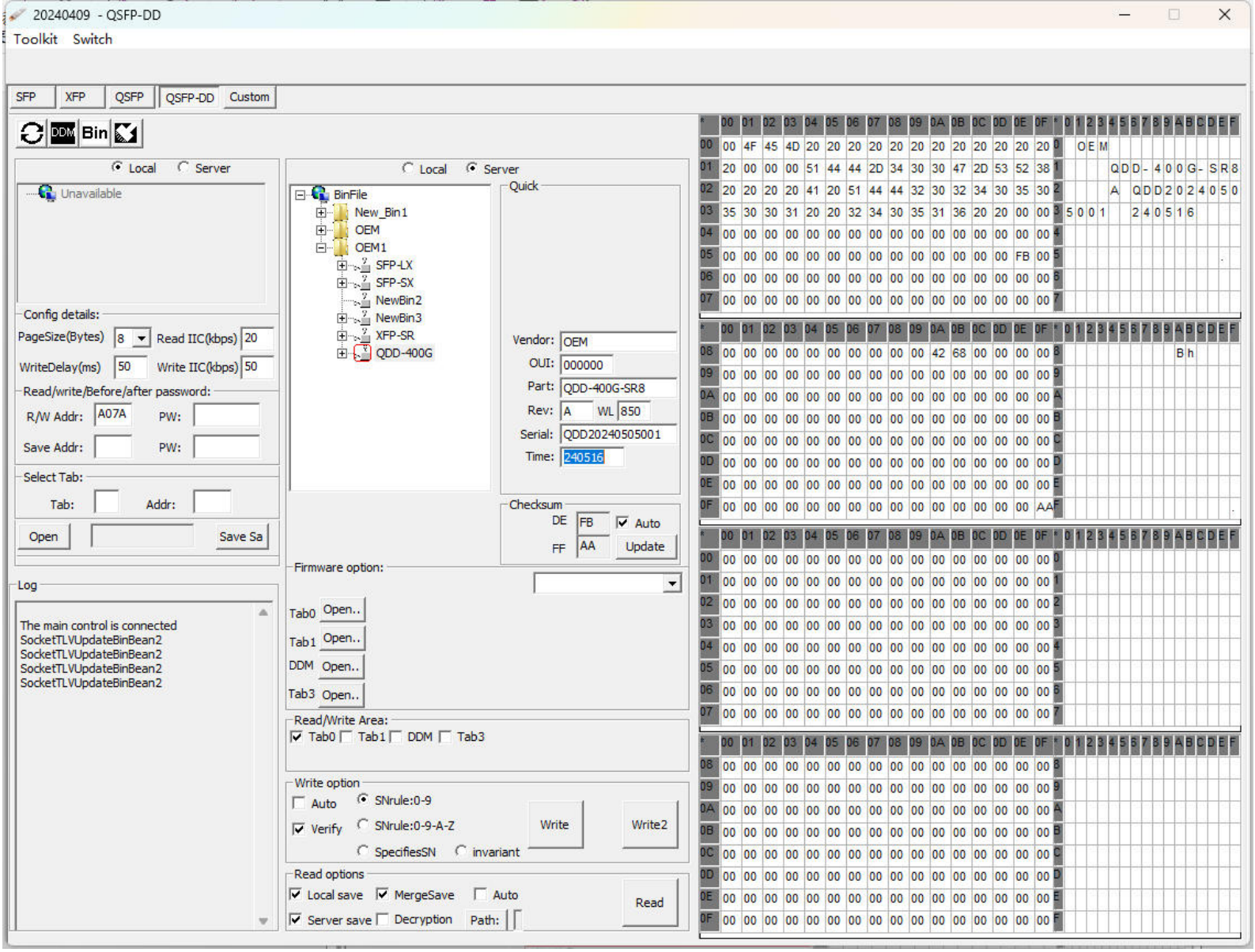
20240502 The current read/write CSFP also use the SFP function page, except for the different areas selected by the read/Write option



1: Fill in the four parameters of "Configuration details" (page size, read I2C, write delay, write I2C) (use the default value, or consult the embedded engineer of the module manufacturer)
2: Enter the address and password of Read-Write Password. After writing the code, the operation "Save password" (generally no, if there is one, it should be filled in. For example, after writing successfully, reinsert and restore to the firmware before writing code. This could be the reason. No, do not fill, do not know to ask the optical module manufacturers)
3: Import firmware (For details of importing firmware, please refer to Software Function Introduction -> Firmware Import)
4: In Read/Write Options, select the option that you want to write(Tab1 Tab2 DDM)
5: Select automatic write, check write, SN change rules in "Write Options" as required (currently 4 modes are available)
Check write: it is equivalent to the program automatically read again after writing, and the option can be removed according to demand after the stability of the product is very determined to improve the efficiency of use
Automatic write: If you want to continuously write multiple optical modules, you can select it (replace the next module after the write is successful, and reinsert it in case of write failure).
6: Click "Write" (Currently the "Write 2" button is only used if the firmware file order is specified)

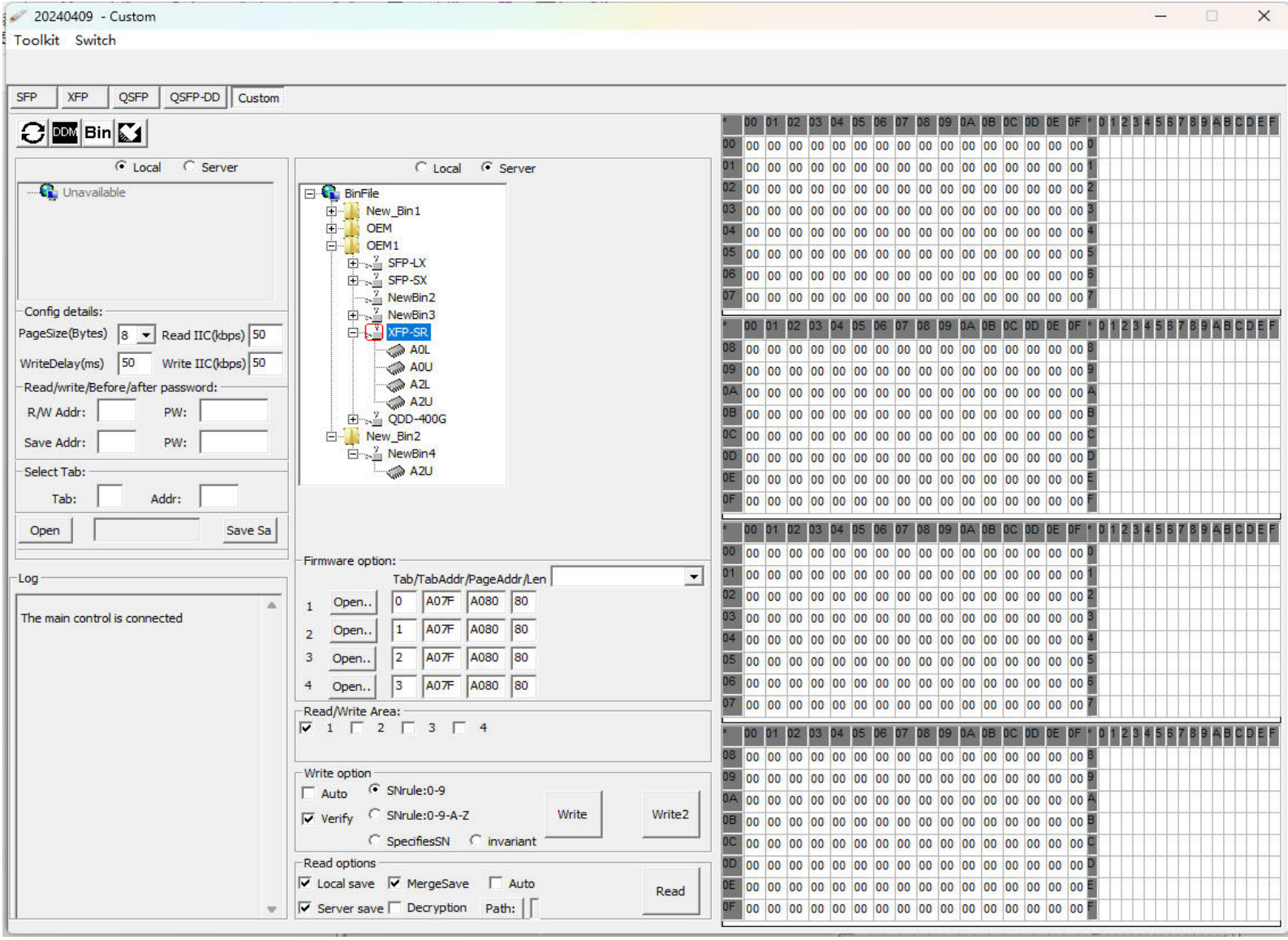


1: Fill in the four parameters of "Configuration details" (page size, read I2C, write delay, write I2C) (use the default value, or consult the embedded engineer of the module manufacturer)
2: Enter the address and password of Read-Write Password. After writing the code, the operation "Save password" (generally no, if there is one, it should be filled in. For example, after writing successfully, reinsert and restore to the firmware before writing code. This could be the reason. No, do not fill, do not know to ask the optical module manufacturers)
3: Import firmware (For details of importing firmware, please refer to Software Function Introduction -> Firmware Import)
4: In Read/Write Options, select the option that you want to write
5: Select automatic write, check write, SN change rules in "Write Options" as required (currently 4 modes are available)
Check write: it is equivalent to the program automatically read again after writing, and the option can be removed according to demand after the stability of the product is very determined to improve the efficiency of use
Automatic write: If you want to continuously write multiple optical modules, you can select it (replace the next module after the write is successful, and reinsert it in case of write failure).
6: Click "Write" (Currently the "Write 2" button is only used if the firmware file order is specified)



1: Fill in the four parameters of "Configuration details" (page size, read I2C, write delay, write I2C) (use the default value, or consult the embedded engineer of the module manufacturer)
2: Enter the address and password of Read-Write Password. After writing the code, the operation "Save password" (generally no, if there is one, it should be filled in. For example, after writing successfully, reinsert and restore to the firmware before writing code. This could be the reason. No, do not fill, do not know to ask the optical module manufacturers)
3: Import firmware (For details of importing firmware, please refer to Software Function Introduction -> Firmware Import)
4: In Read/Write Options, select the option that you want to write
5: Select automatic write, check write, SN change rules in "Write Options" as required (currently 4 modes are available)
Check write: it is equivalent to the program automatically read again after writing, and the option can be removed according to demand after the stability of the product is very determined to improve the efficiency of use
Automatic write: If you want to continuously write multiple optical modules, you can select it (replace the next module after the write is successful, and reinsert it in case of write failure).
6: Click "Write" (Currently the "Write 2" button is only used if the firmware file order is specified)

The OSFP function page is the same as the QSFP-DD function page. For details, see QSFP-DD



For details about the user - defined code writing operation, see Optical Module Read/Write Function Page -> User - Defined Function Page

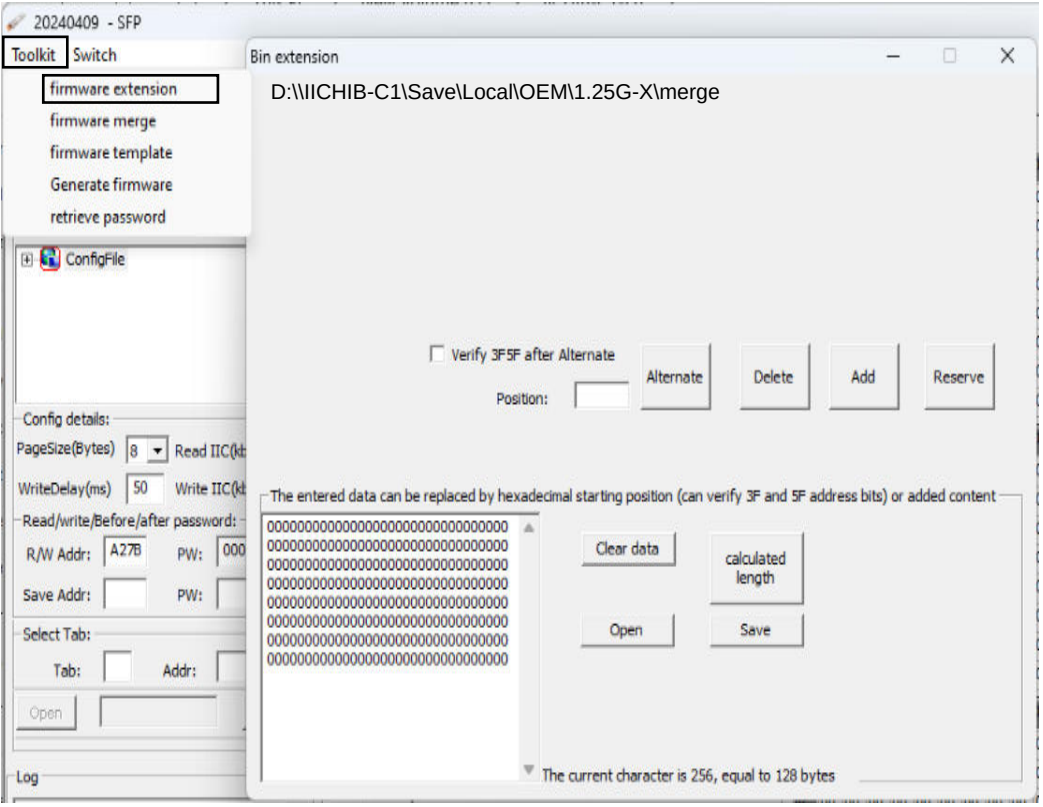
The "Custom function page" does not do any calculation formula for the four editing areas, and what data will be written into what data will be edited or imported. The functions of "**SNrule:0-9**"," **SNrule 0-9-A-Z**" and " **SpecifiesSN**" in "Write Options" on this page are invalid.
All write operations on the current page all use the same (pay attention to the order of operations between them, you can use it to complete any kind of operation is possible) :
1: read/write password
2: Table selection/Multi-function 3:4 sets of write in the local bin file selection (can also be seen as 8 sets, " table selection" is also a write operation (first "table selection", and then write the data specified in the table address))
4: Save the password
If the above operations are broken down, when you click the "write" button, a total of 11 write operations are performed in a complete process

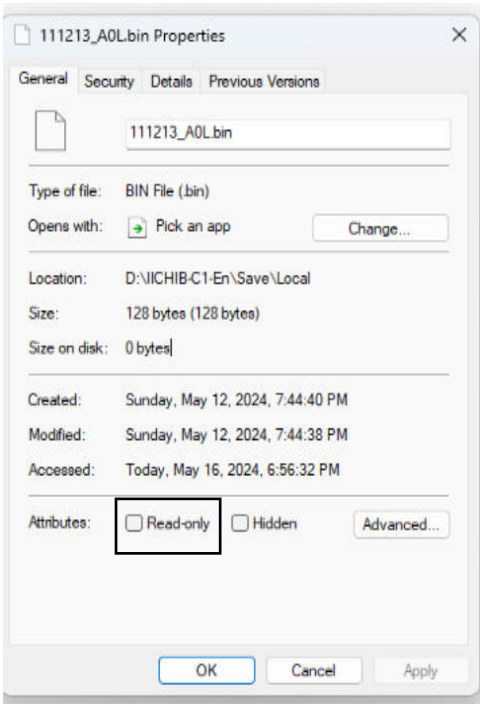
Currently available: Firmware extension, firmware merge,

Firmware template,

Firmware generation

,Retrieve Password





Bin extension function description: (First ensure that the file property to be operated, "**read-only**" is not checked,otherwise all operations will not be performed!) Open this function in the menu bar "Toolskit" (This function page needs to put the Bin file in the folder and drag it to the window for firmware modification)

Positon: This value is mandatory

Verify 3F5F after Alternate : This option takes effect only when the Replace function is used

Replace: Replace the data in the edit box into the bin file

Delete: After entering the start position, the data after this position is deleted

Add: After filling in the start position, write the data in the edit box after the start position (for example, the initial file is 128 bytes, add 128 bytes after it)

Reserve: Fill in the starting position 128 (such as 256-byte firmware, to retain the last 128 bytes, the first 128 bytes will be deleted after execution, retain the last 128 bytes)

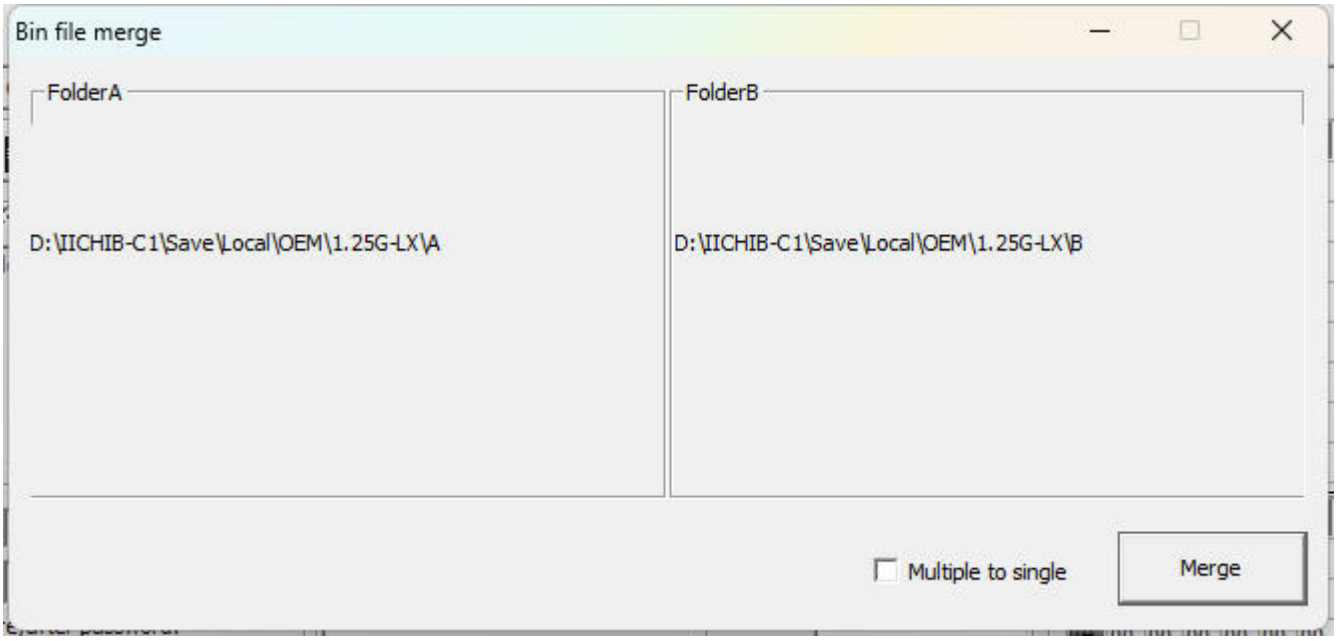
Edit box: (Fill in the edit box in hexadecimal string form)

Clear data: (Clear the contents of the edit box)

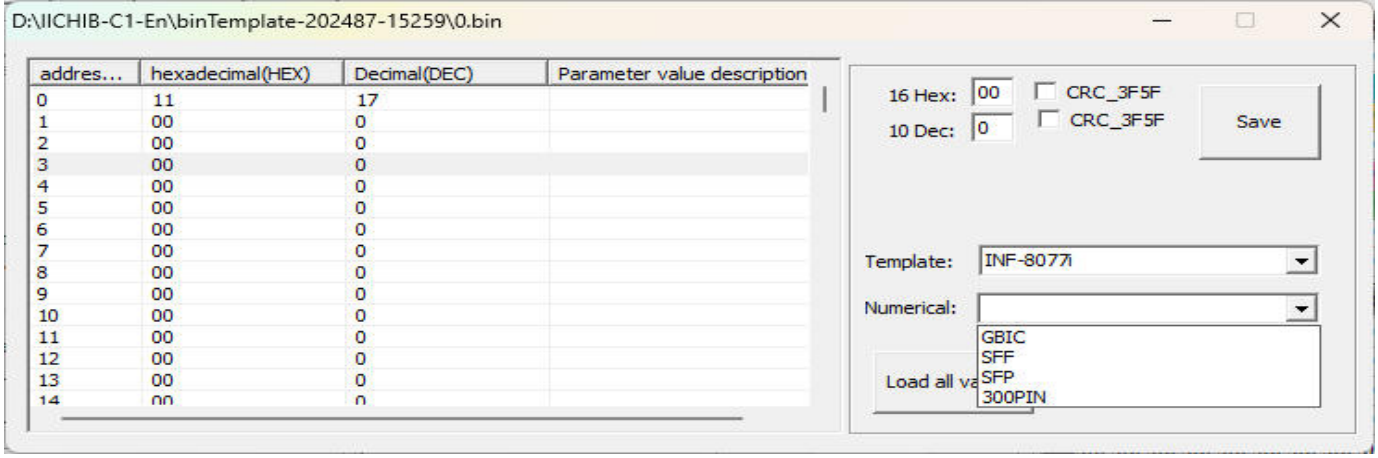
calculated length: (Compute characters to prevent odd numbers, modify the data if there are odd numbers will be an error (the program will convert the string to hexadecimal))

Open: (txt text only, and displayed as a string in the edit box)

Save: (String data in the edit box is saved to txt text)



bin merge provides two functions (file properties cannot be read-only, otherwise the merge file cannot succeed)
1 Merge multiple files and multiple files into one file
First prepare two folders with the same BIN file name in both folders, and then drag the folder to the appropriate area of the window. then
Click Merge (file generated into the appropriate file)
2 A folder (multiple files) and B file (only one file) (in this case, the latter half of the firmware is usually the same)
First, prepare 2 folders, folderA for multiple files, folderB for single files, then drag the folder to the corresponding area of the window and check "More than 1". Then click Merge (file generated into the corresponding file)



The bin template usage process is displayed on the menu bar. Then prepare the bin file into the folder, drag and drop to the bin template window to provide two ways to edit (manually enter the value, or select the preset value through the template file (the preset value supports one-click modification))

First say one-click import configuration, select the template file in the file selection, then click "One-click Import Configuration" (If you need to recalculate the crc checksum of each file, please check)

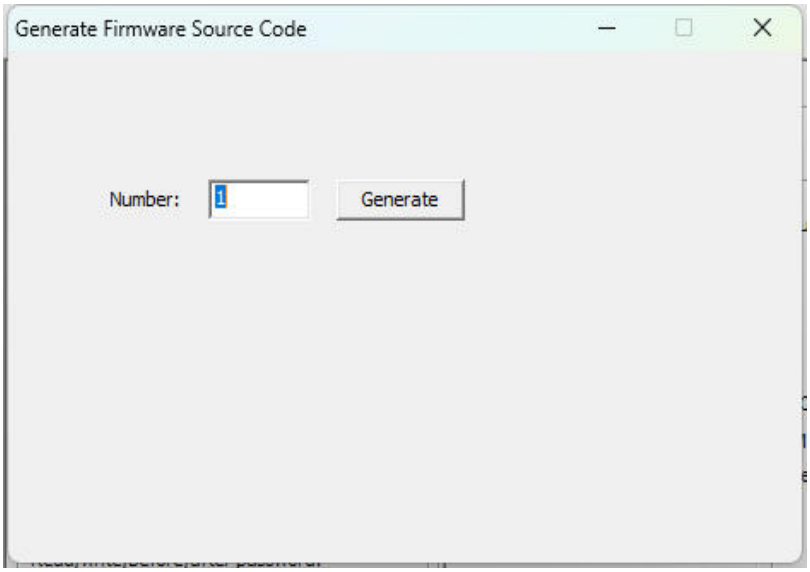
Currently, there are two kinds of checksum calculation rules:
SFP,CSFP,SFP28,XFP,QSFP optical modules are generally **CRC_3F5F**
QSFP-DD and OSFP encapsulated optical modules generally choose CRC_5EFF (this is because their protocol specifications use CMIS)

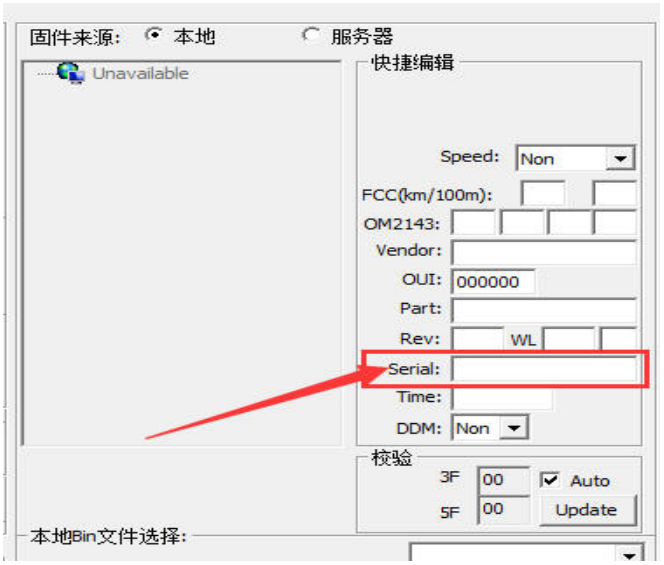
Manually enter value modification: Click on the address bar on the left and then edit by entering hexadecimal (check if you need to recalculate the crc checksum for each file) and click Save

Modify by template: Select the prefabricated template file in the file selection, then click the address bar on the left side of the window to modify, and then select the value

Note: When a byte is modified, only that byte is changed and no other byte is changed

Generally, crc check is required, otherwise switches, routers and other devices may display crc errors. Please decide according to your use scenario!





To generate a BIN file, the current version must be entered in (serialSN), and if you need to generate say 1000 firmware, the SN rules must be numbered and determined according to your number, such as SX100000 so that it can be successfully generated. If the sn is set to SX100, 1000 devices cannot be generated and may fail or end when SX999 is reached.

We are here to make the search as efficient as possible and to minimize the probability of module damage due to password recovery. But you should be prepared to use this feature! Maybe the module is broken before the password is found! For details, see EEPROM read/write lifetime

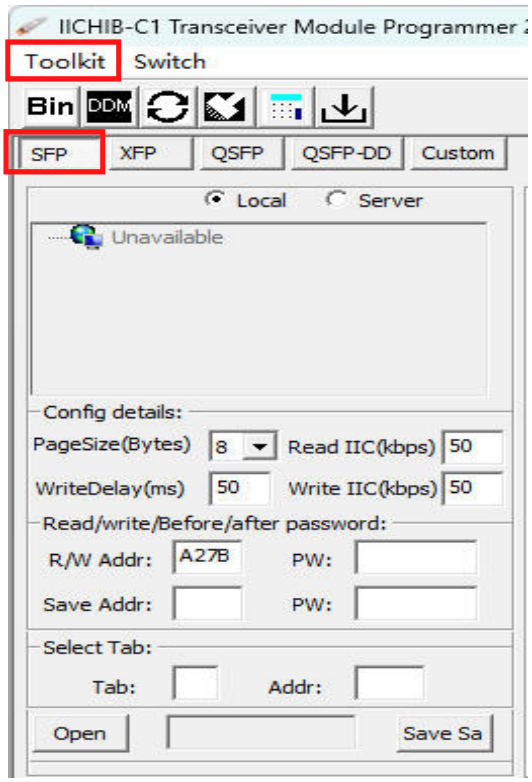
You can query 30W passwords within 24 hours

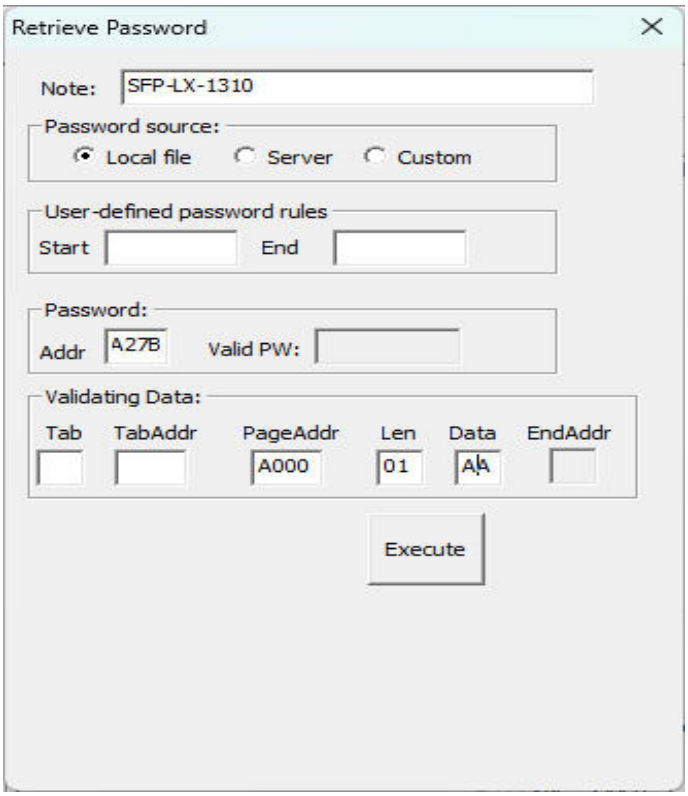
There are currently three ways to find the password:
1 local file: fill in the password in the specified file and then use it (see software - directory structure description)

2 Server: This password segment is not annotated. (Depends on the resources on which server the programmer user is logging in to)

3 Customize: Set the password range by setting the password start and end segments in the Custom - Password section on the window

Notice The password must contain 8 characters in the 0123456789ABCDEF field. For example, the start password must be 00000000. End AAAAAAAA The password segment is reasonable





After logging in to the main page, select according to the module type, such as this time to retrieve the SFP password, then select the SFP function page, and then select "Retrieve Password" from the "Tools" in the toolbar.

Note: This field can be filled in or not. It is used to record password description to prevent long-term forgetting.

Password address: SFP:A27B,A2FC. XFP,QSFP:A07B. qSFP-DD OSFP:A07A. For reference only

Finally fill in the "data ": table, table address, page address, these do not explain, fill in according to demand. The main explanation here is the "address end bit", its range can only be filled in 7F (decimal 127). Before filling in a data value, it is recommended to read it to avoid filling in a value that is exactly the same as the validated value. Then the password you find will be wrong.

(If you do not understand or are not familiar with the concept of the end of address bit, you can fill in 01), use is fine. But you forgo a measure that might have reduced the damage

Refresh window - Interface bugs due to uncertainties in the software or system, such as when controls disappear after standby or when there is an exception such as transparency. Rebuild the initial state of the interface with one click

The DDM function page can be used simultaneously or independently to display the digital diagnostic threshold and real-time laser equivalent value in plain text. For details about the DDM threshold of the read/write optical module, see the DDM threshold

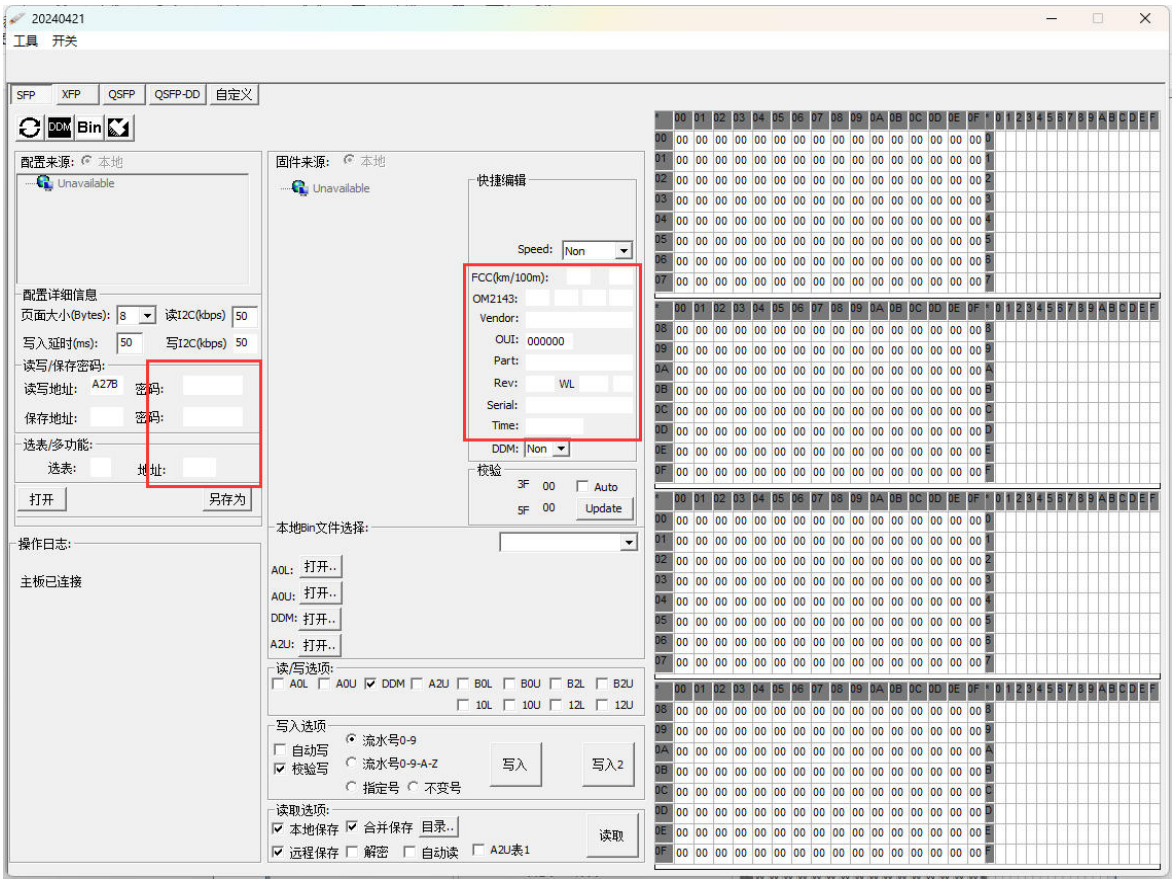
This button is used to import firmware in Read/Write Options. It is used to import firmware in the specified sequence number

The memory data of the hexadecimal editor is emptied and used in specific cases, such as reading a module after the module data values are in the editing area, but at this time, a module needs to be emptied. If you do not use this function, you need to close the software or import a firmware with empty data to achieve this function. This function can be used.

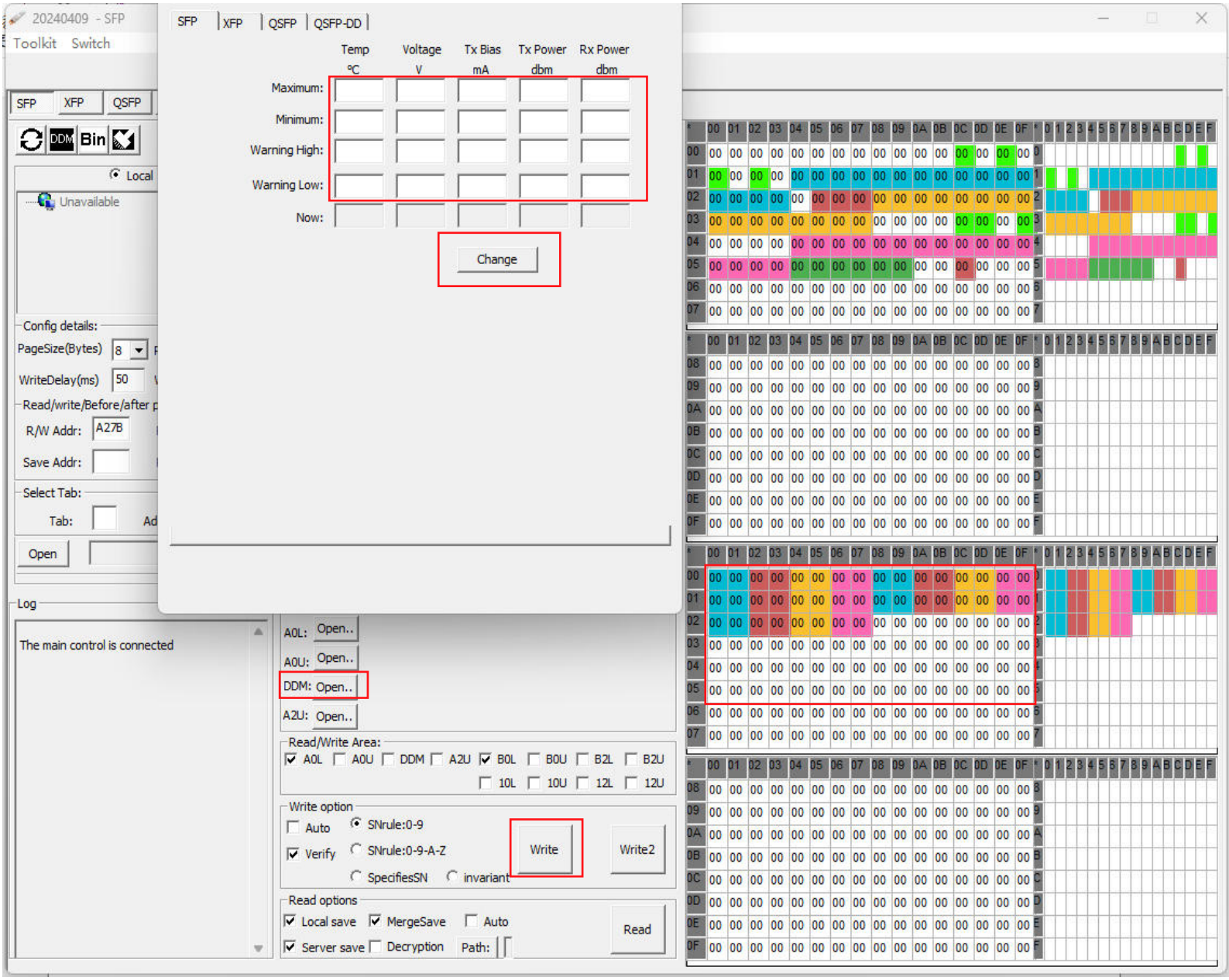
Save the current page selection

This button is the upgrade prompt button, which is an active prompt and independent choice whether to download. The program is automatically detected after opening, if it turns red, it means that there is a new version, you can click to download. (In some scenarios, you can also click to check if there is a new version)

Refresh window - Interface bugs due to uncertainties in the software or system, such as when controls disappear after standby or when there is an exception such as transparency.
Rebuild the initial state of the interface with one click

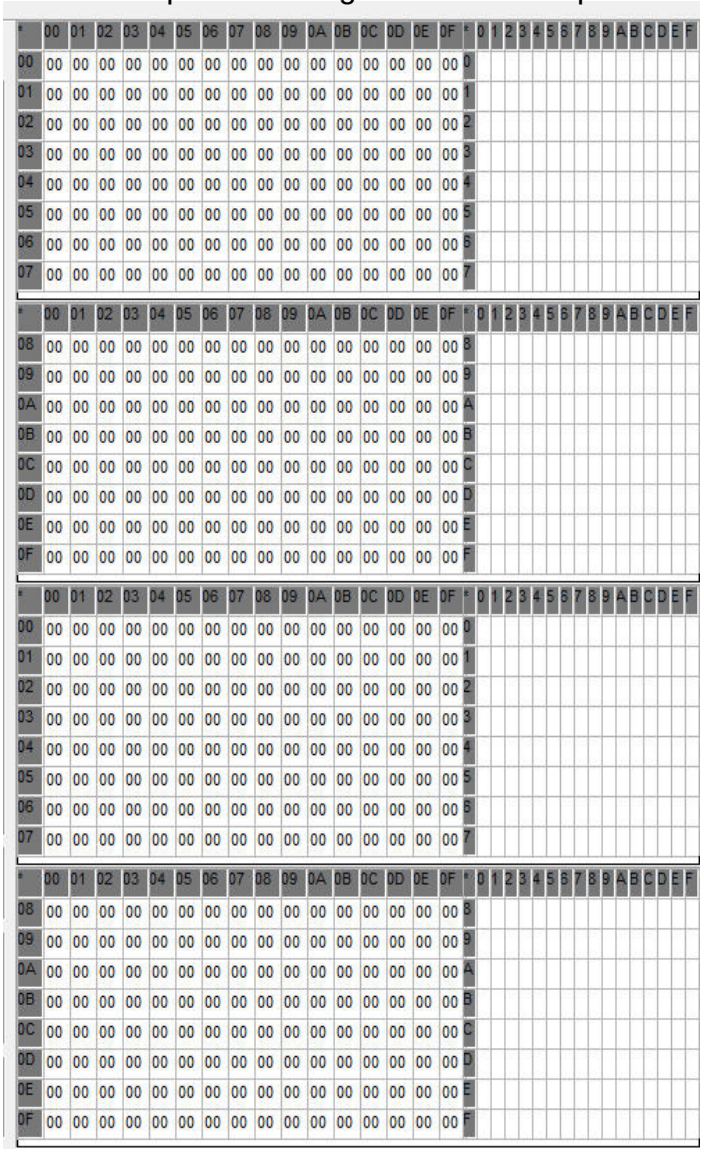


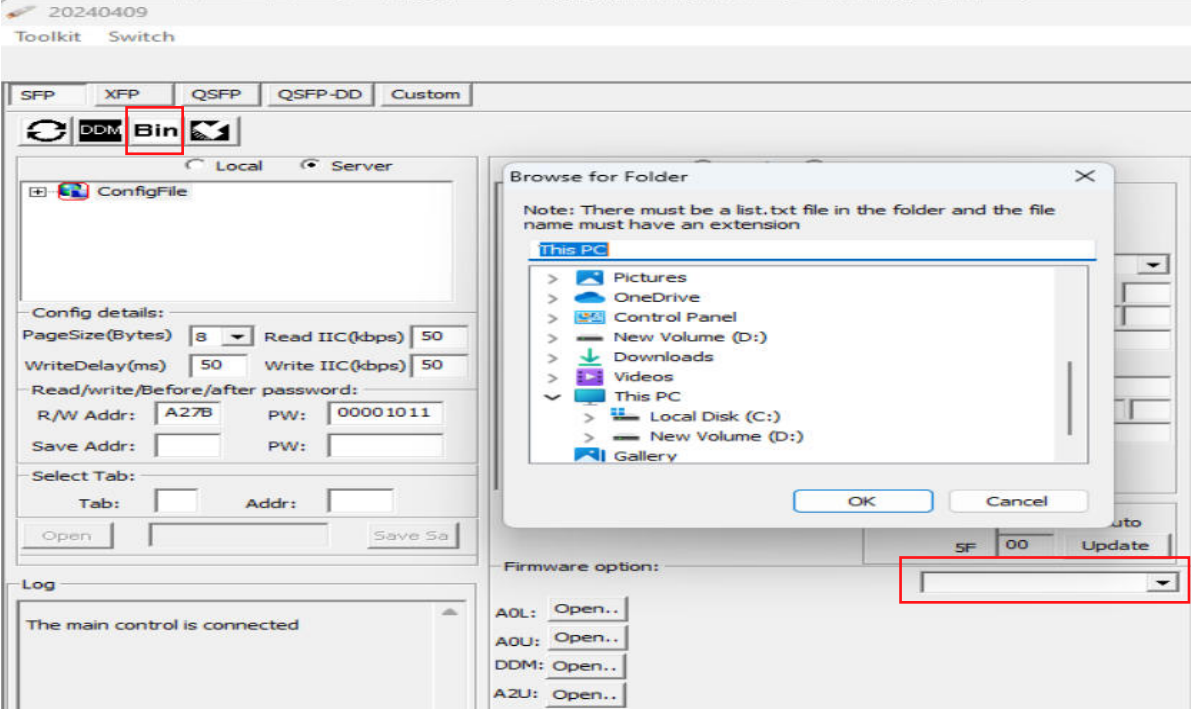
The DDM function page can be used simultaneously or independently to display digital diagnostic thresholds and real-time laser equivalents in plain text. For details about the DDM threshold of the read/write optical module, see DDM Threshold



The memory data in the editing area is emptied and used in specific cases, such as reading a module after the module data values are in the editing area, but at this time, a module needs to be emptied. If you do not use this function, you need to close the software or import a firmware with empty data to achieve this function. This function can be used.

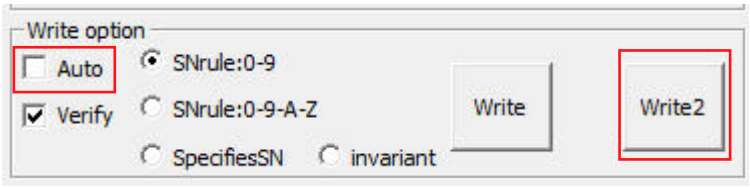
Even firmware imported through files will be wiped clean. Please select from the drop-down list again.

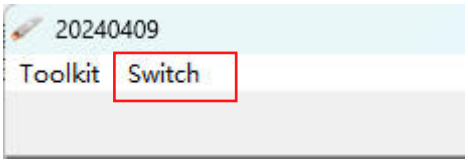




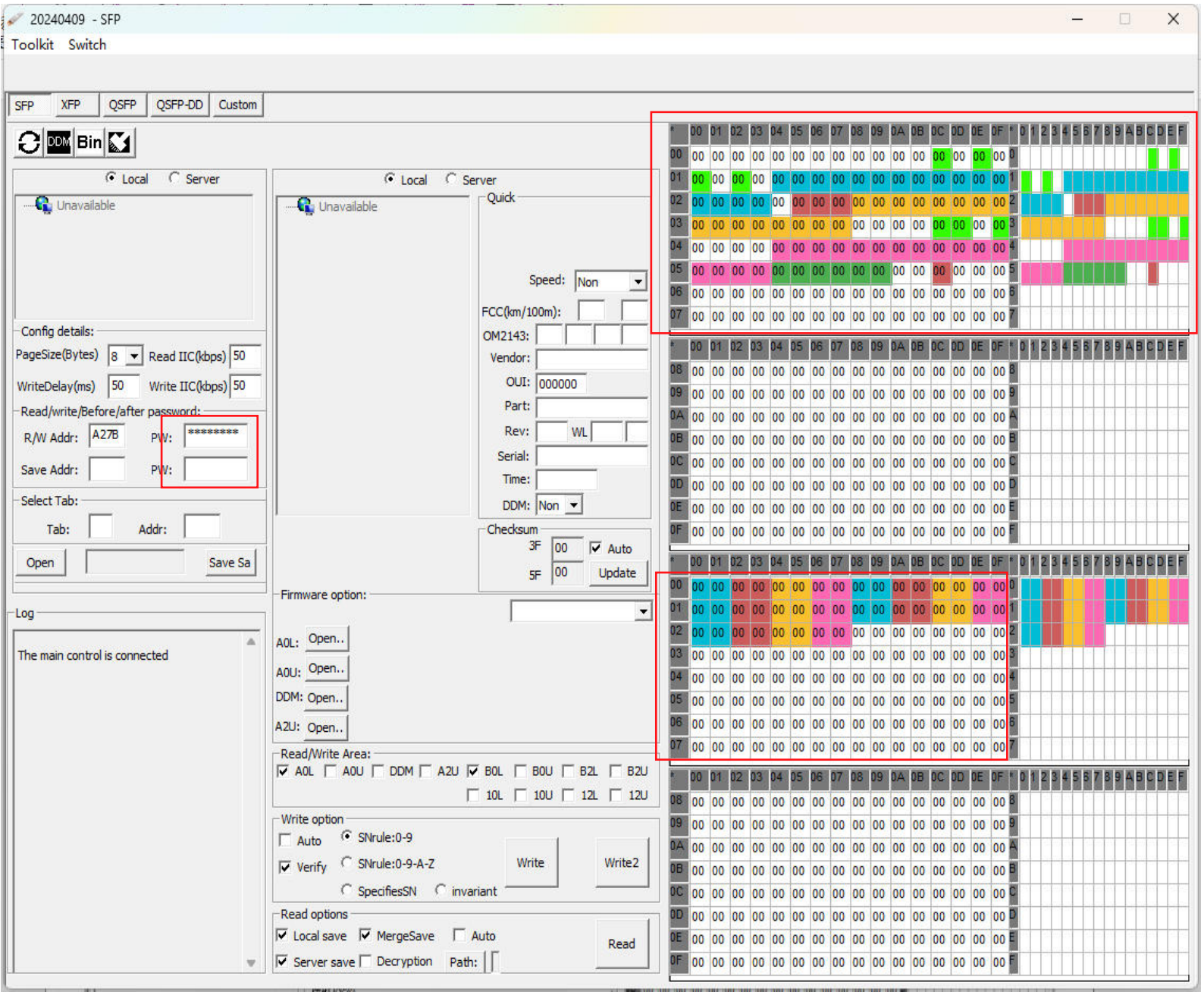
Bin This button is the import firmware button in Read/WriteOptions.It is used to import firmware in the specifiedsequence number

The maximum size of the file imported through this button is 512 bytes and the minimum is 128 bytes. The starting area of the import is from the first block.
And to execute normally in order, you must use the write 2 button (no need to check "**Auto**") in the write process if you need to return to one of the files, directly select in the file display drop-down list, it will continue to execute in the list order from the selected position

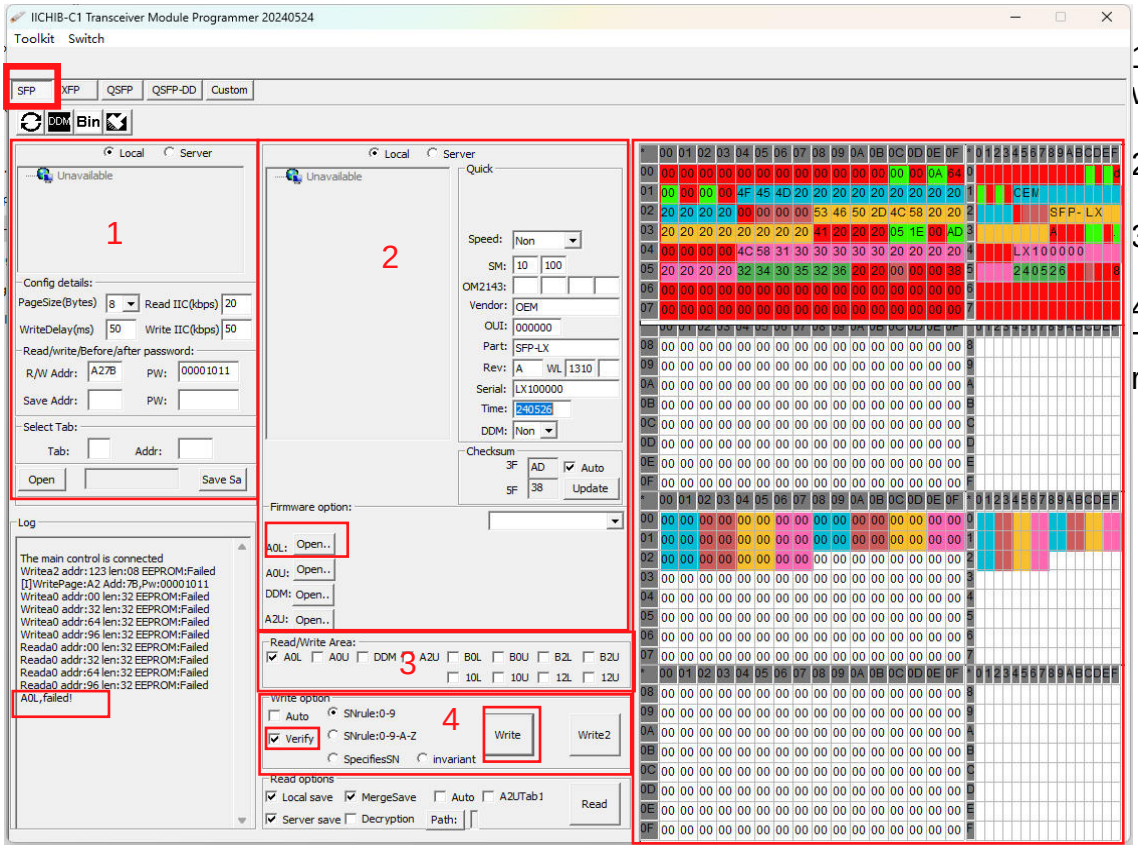




Password implicit: Used to display or hide passwords in hardware configurations ******* Bold color: color-separate the editor area and byte segments with different meanings



Select different pages for different optical modules. The operation process is described in this chapter:

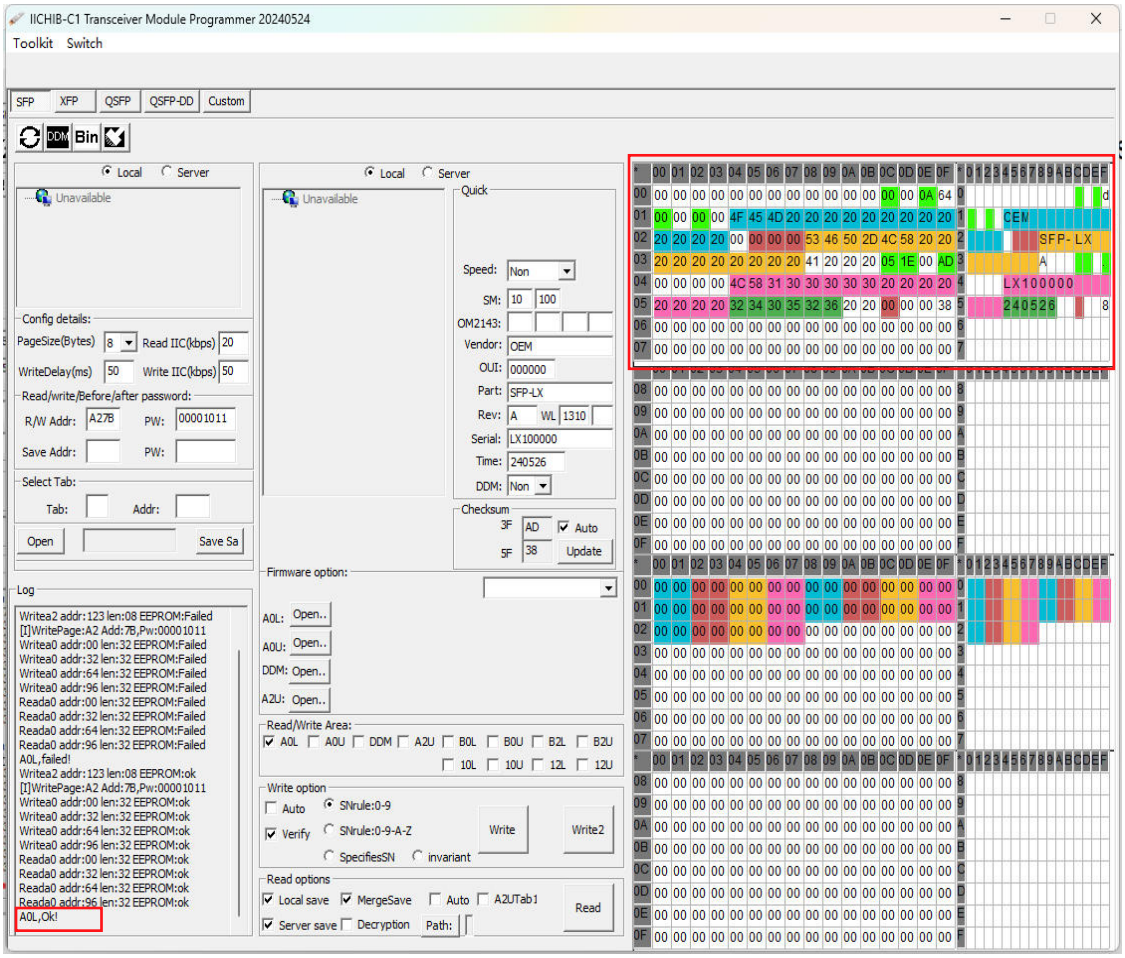


1) Configure before code writing.

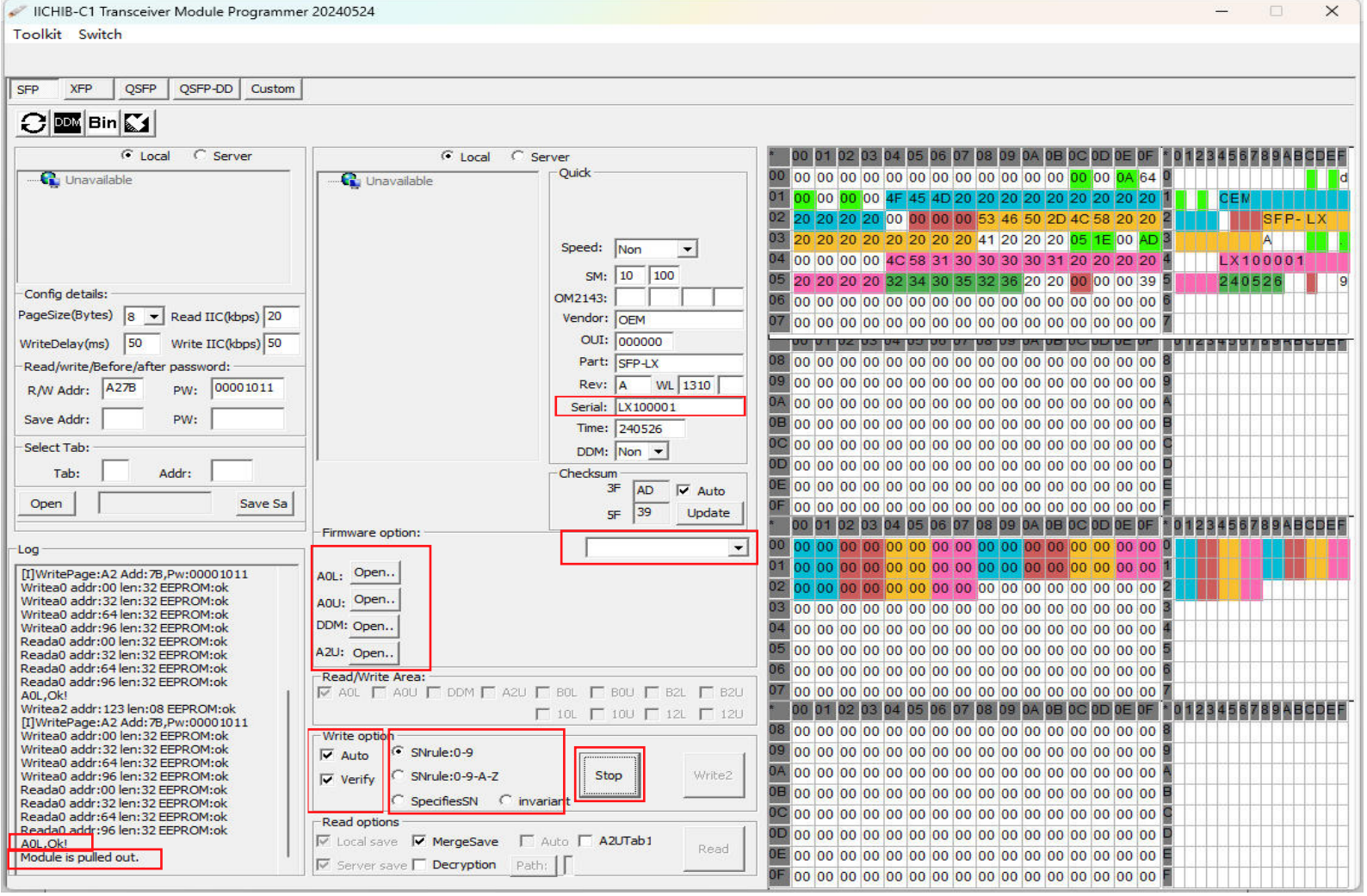
2) Import firmware

3) Select the location to write to

4) Write (check "Check write")
The hexadecimal editor will be red if the write fails



If write succeeds
The log will indicate success and the hexadecimal editor will change to the initial color (**white**)



After the data is successfully written, replace the next module and continue.If the write fails, you can stop or reinsert the data.

During the read and write process (parameters need to be adjusted, firmware modification), unlocked control parameters can be operated without clicking "**Stop**".

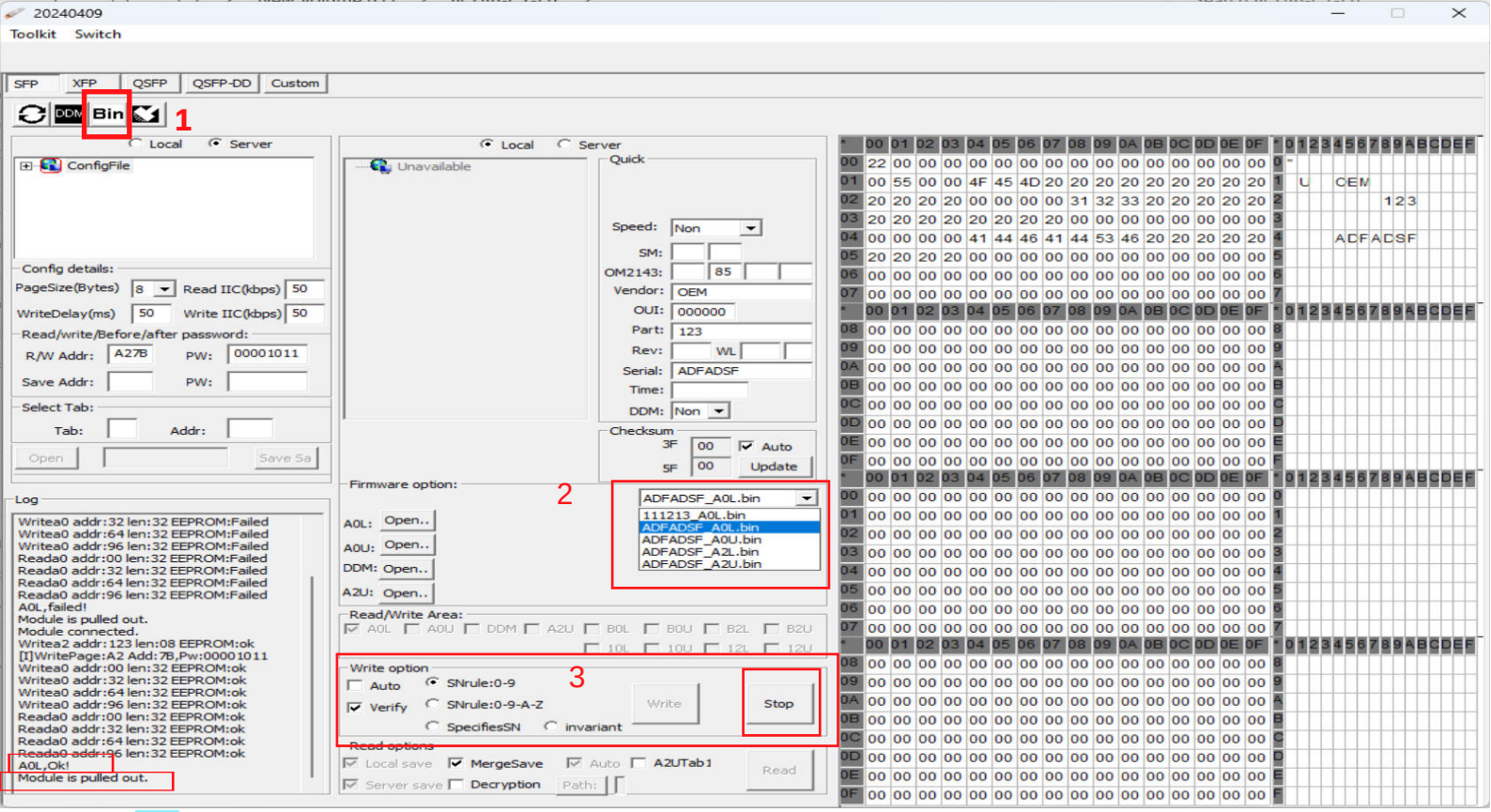
Autowrite provides four serial number change rules:
SNrule 0-9: For example, "**SX000000**" will change to "**SX999999**" and "**SX00Z100**" will change to " **SX00Z999**".

SNrule 0-9-A-Z: For example, SX00000 will change its serial number to "ZZZZZZZ".

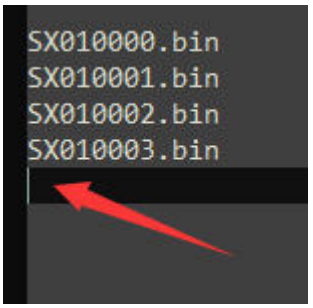
SpecifiedSN: Import through txt text in the order of one SN per line from top to bottom.

invariant: Write the same content repeatedly without any changes.

If a write fails, the sequence number does not change until the write succeeds.



Click the "Bin" button in the shortcut toolbar



Select the firmware folder (the firmware folder must contain list.txt, and save the firmware file name in advance according to the usage requirements. Note that the serial number written must be followed by a file suffix such as SX010,000. bin for each firmware.
Note Press Enter at the end of a line to indicate the end.

The imported files are displayed in the text order in the drop-down list

Check "Read/Write Options" and then click "Write 2" (no need to check" Automatic "in this mode)