FM-WR-V8 Programming Box User Guide

Prepare by Joslyn Date 2023-12-13

Review by Bergen

Shenzhen FiberMall Co., Ltd.

Content

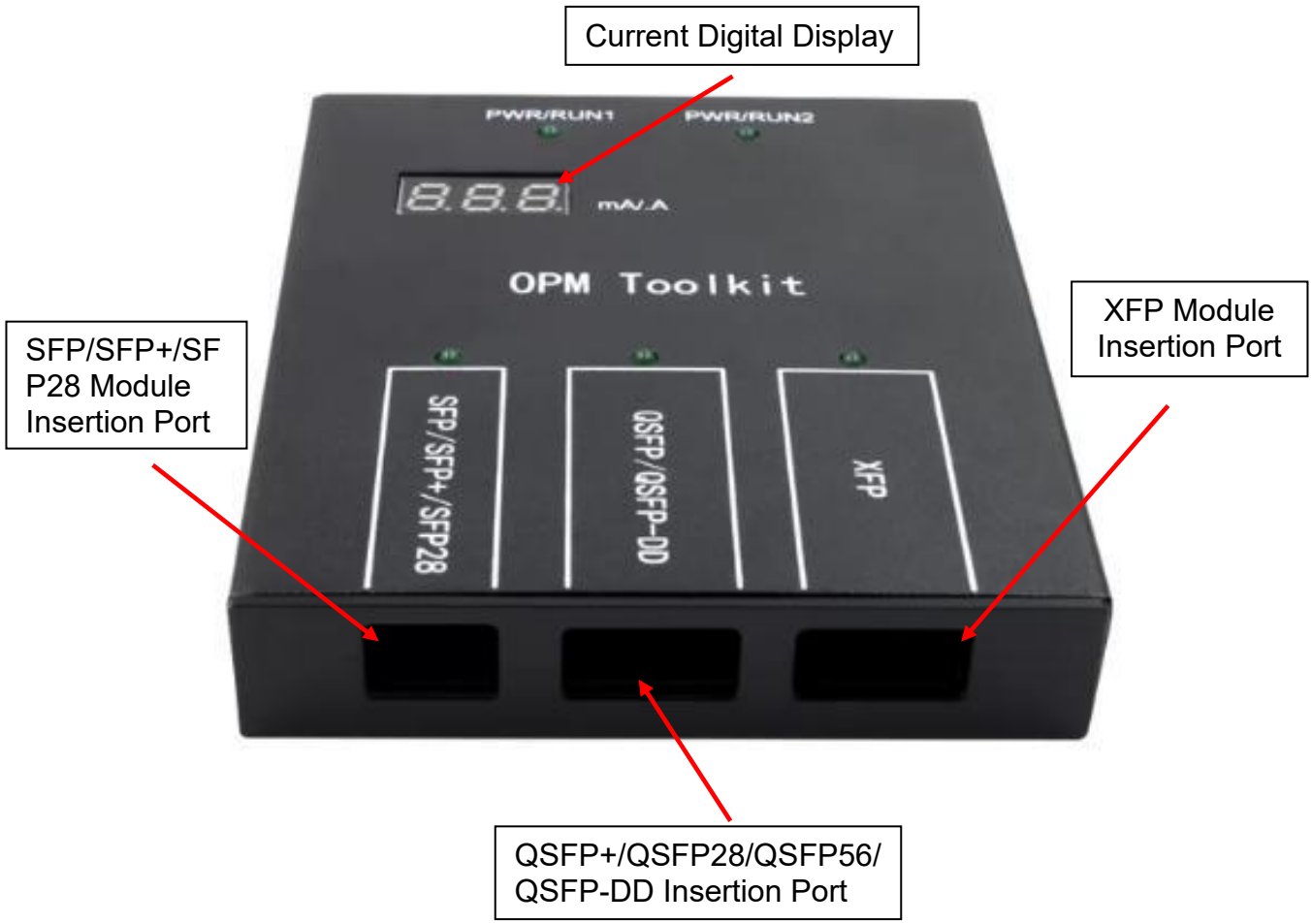
1.**EEPROM Programmer Board/Box Function Introduction**

- SFP/SFP+/SFP28 Transceivers/DAC/AOC Code Reading/ Code Saving/ Code Writing
- XFP Transceivers Code Reading/Code Saving/Code Writing
- QSFP+/QSFP28/QSFP56 Transceivers/DAC/AOC Code Reading/ Code Saving/ Code Writing
- QSFP-DD Transceivers Code Reading/Code Saving/Code Writing
- Import and Export of 128/256/384 Bin Files

Application Environment

- W7/W10/W11 operating system

Function Guid



1. Other Accessories

Figure 1

2. Connection & installation instructions

1.Connect the program board to the computer with the USB cables(Figure 1), insert the other USB plug into the AC power supply.
2.Insert the optical module to be operated into the corresponding port of the Programming Box V2.

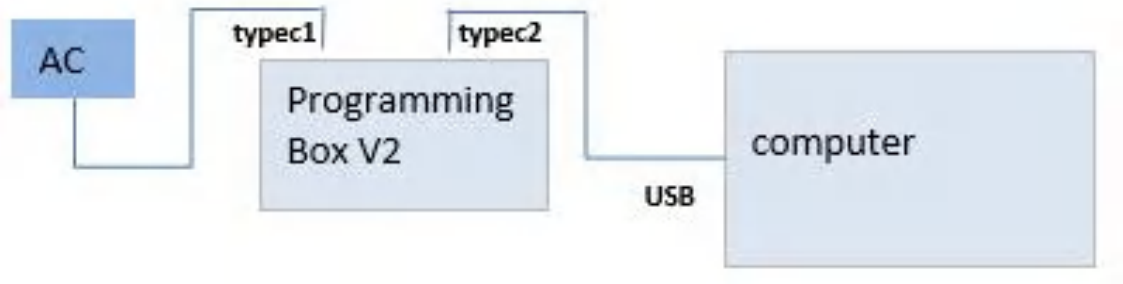


Figure 2

3.Click to open the software page (Figure 3), then click "Scan & Connecting" to display the interface after the software and hardware are connected (Figure 4). For a detailed introduction to each functional area of the software, refer to the image below (Figure 5).

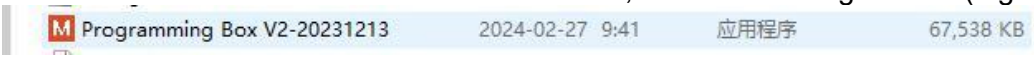


Figure 3

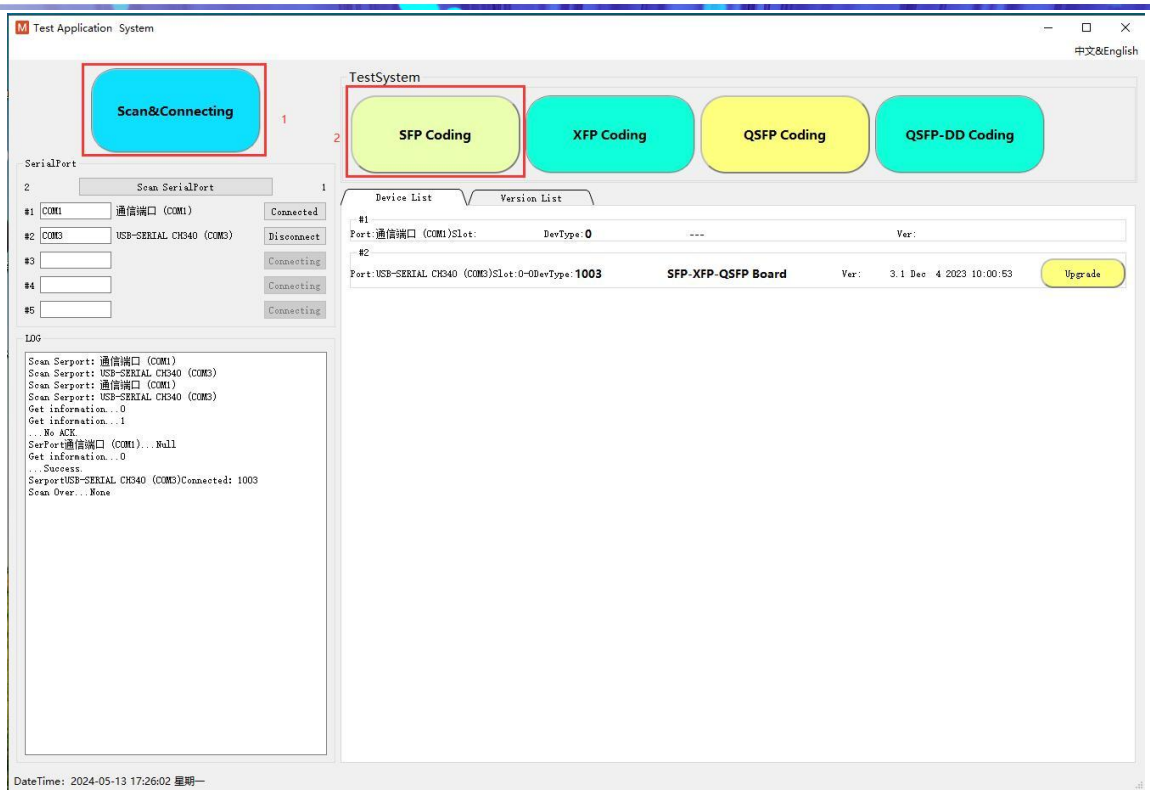


Figure 4

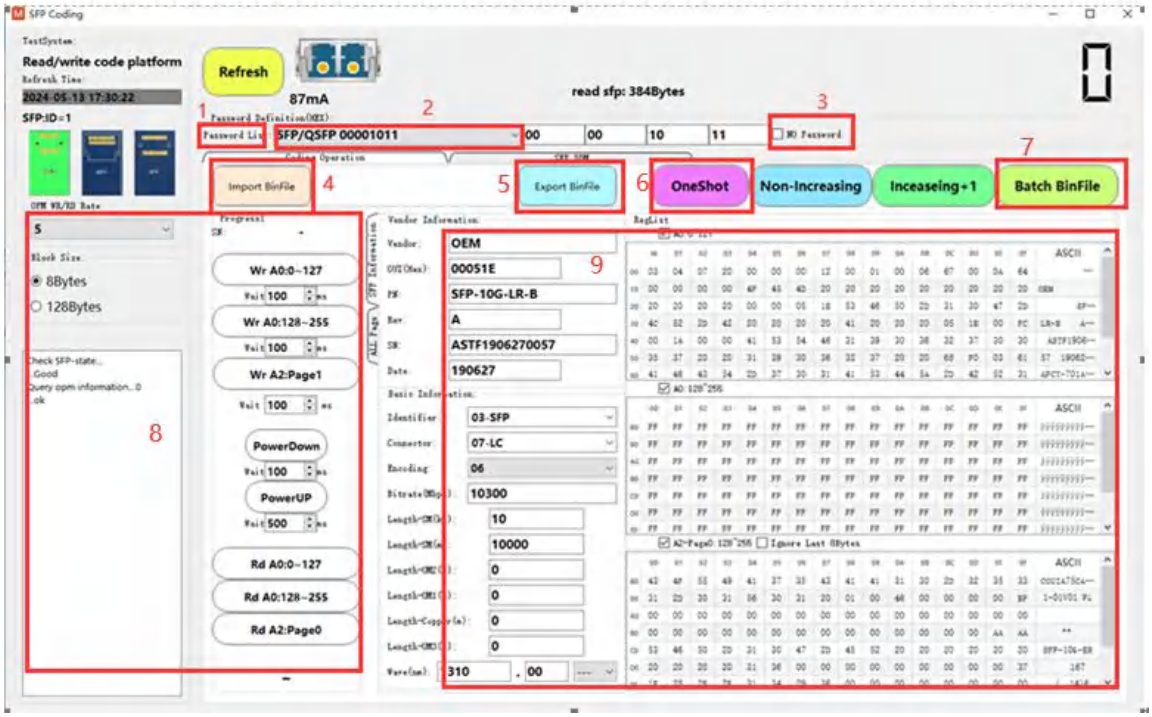


Figure 5

1. Password Add/Modify Section
2. Password Selection Section
3. Password Checkbox(Yes/No)
4. Import Software for 128/256/384 bin Bytes
5. Export to Computer for 128/256/384 bin Bytes
6. Single Code Writing
7. Batch Code Writing
8. Code Writing Rate and Other Settings Section (Default)
9. Code Information Section

3. SFP/SFP+/SFP28 Optical Transceivers/DAC/AOC Code Reading/Code Saving/Code Writing

1.Read Code A0 A2

1.1Insert the SFP optical module to be read into the SFP/SFP+/SFP28 socket，

1.2 Open the “Programming Box V2-20231213” software(Figure 6).

1.3 Click “Scan&Connecting”(Figure 7-1)

1.4 Click “SFP-Coding” (Figure7-2)

1.5 Click“Refresh”(Figure 8-1) to read A0 and A2 (Figure 8-2) shows A0, (Figure 8-3) shows A2.

Figure 6

Figure 7

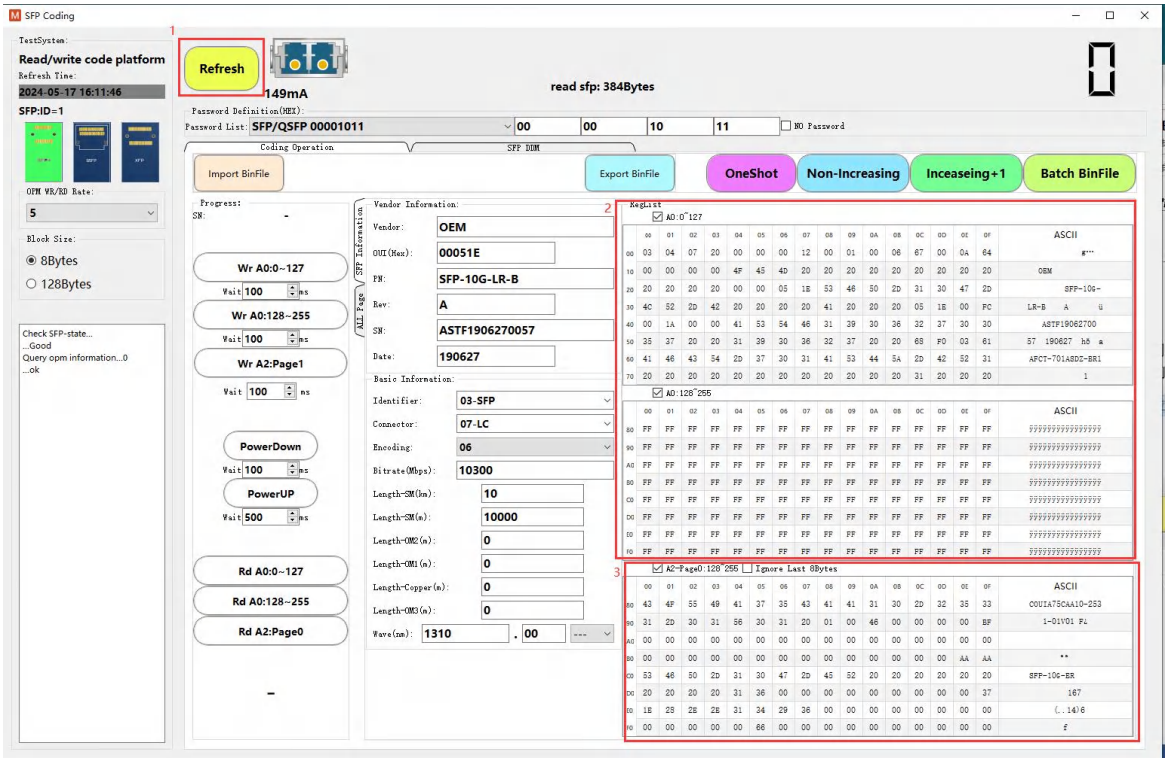


Figure 8

2.Save Code A0 A2

2.1 Save A0 and A2 separately

Save A0 Code

Insert the SFP optical module to be read into the SFP/SFP+/SFP28 socket,

2.1.1 Click “Refresh” to read A0 and A2(Figure 9-1),

2.1.2 Uncheck the box for “A2-Page0:128~255” (Figure 9-2),

2.1.3 Click “Export BinFile” to save A0 to the computer (Figure 9-3).

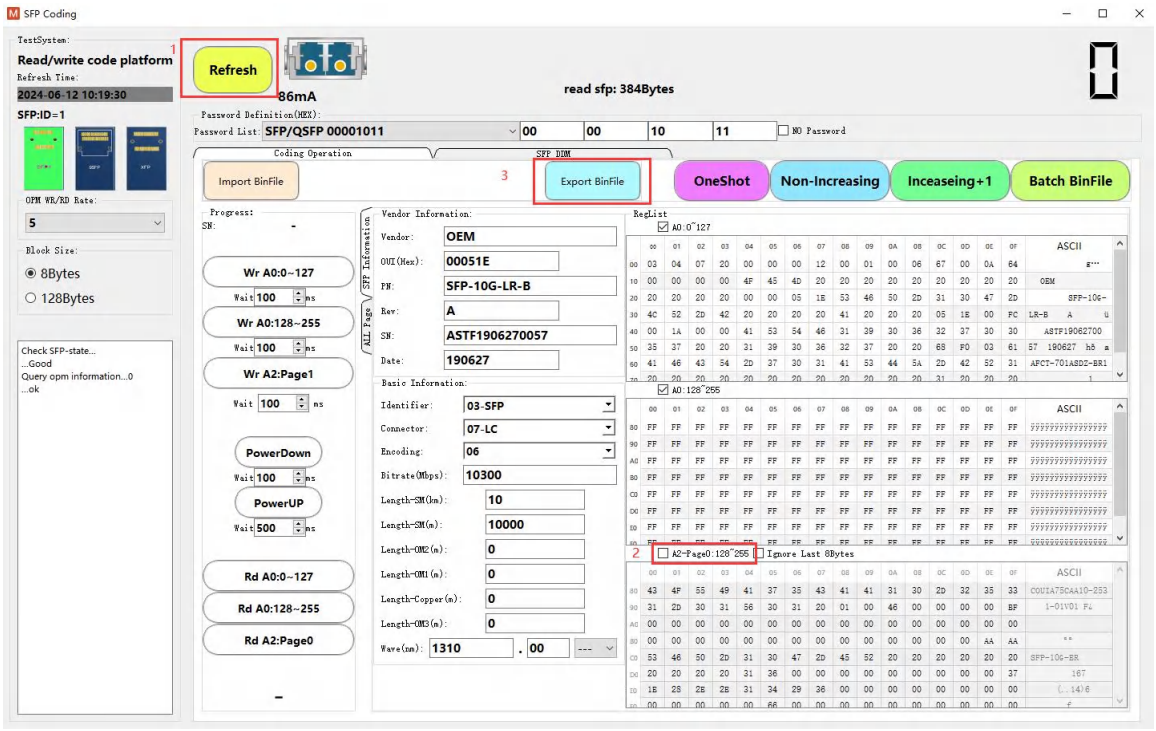


Figure 9

Save A2 Code

Insert the SFP optical module to be read into the SFP/SFP+/SFP28 socket.,

2.1.1 Click “Refresh” to read A0 and A2(Figure 9-1),

2.1.2 Uncheck the box for “A0:0~127” and ”A0:128~255”,

2.1.3 Click “Export BinFile” to save A2 to the computer (Figure 9-3).

2.2 Merge and Save A0 and A2

Saving both A0 and A2 codes simultaneously

Insert the SFP optical module to be read into the SFP/SFP+/SFP28 socket,

2.2.1 Click “Refresh” to read A0 and A2(Figure 10-1)

2.2.2 Click “Export BinFile” to save A0 and A2 to the computer (Figure 10-2)

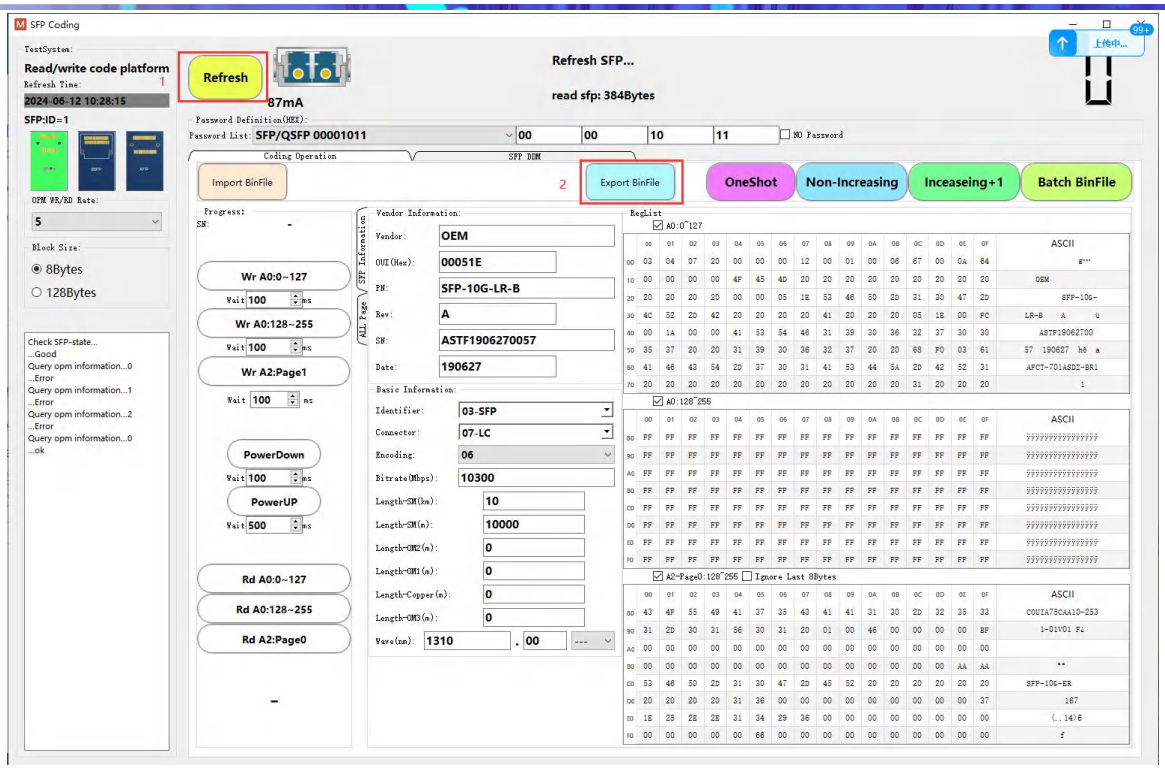


Figure 10

3. Write Code A0 A2

Taking the example of writing the CISCO SFP 10G LR 10km with code " 00 00 10 11"

Insert the 10G LR 10km optical module to the EEPROM Programmer board.

3.1 Import A0 and A2 separately for writing (A0 and A2 are not merged).

3.1.1 Select the configuration file "SFP/QSFP 00001011" corresponding to the 10G LR code "00001011" (Figure 11).

3.1.2 Click "Export BinFile" to import the A0 bin (Figure 12)

3.1.3 Uncheck the boxes for"A0:0~127" and "A0:128~255" (Figure 13)

3.1.4 Click " Export BinFile" to import the A2 bin (Figure 14)

3.1.5 Check the boxes for "A0:0~127" and "A0:128~255" (Figure 15)

3.1.6 Click "OneShot" and wait for the prompt "Success," indicating that the module programming is complete (Figure 16).

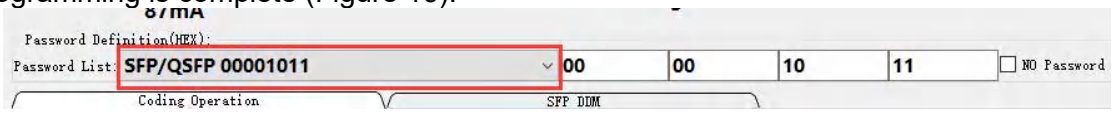


Figure 11

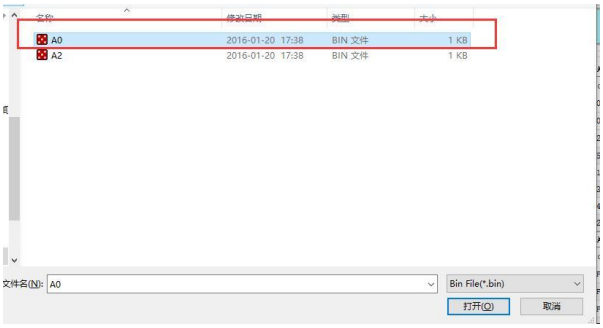


Figure 12

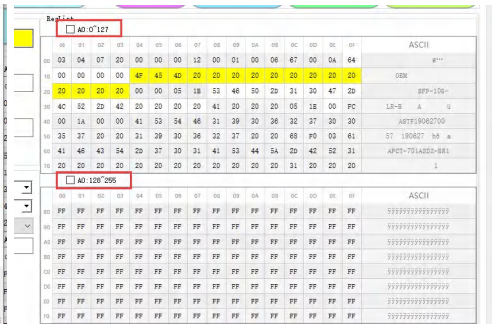


Figure 13

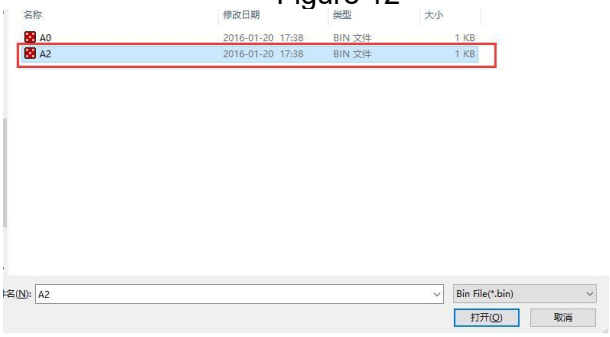


Figure 14

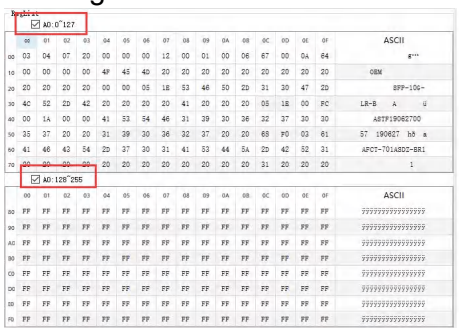


Figure 15

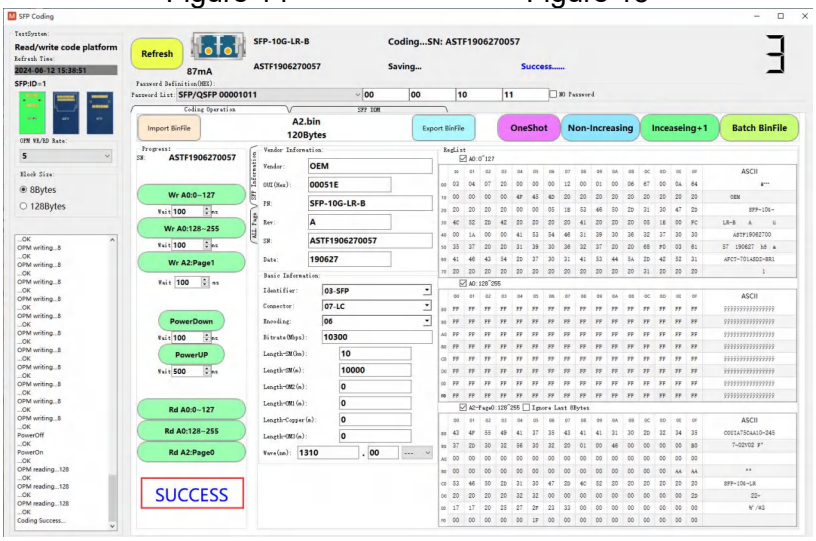


Figure 16

3.2 Import A0 and A2 Simultaneously (A0 and A2 Merged)

3.2.1 Select the configuration file “SFP/QSFP 00001011” corresponding to the 10G LR code “00001011” (Figure 11).

3.2.2 Click “ Export BinFile” to import the A0 and A2 bin (Figure 17)

3.2.3 Click “OneShot” and wait for the prompt “Success,” indicating that the module programming is complete (Figure 16).

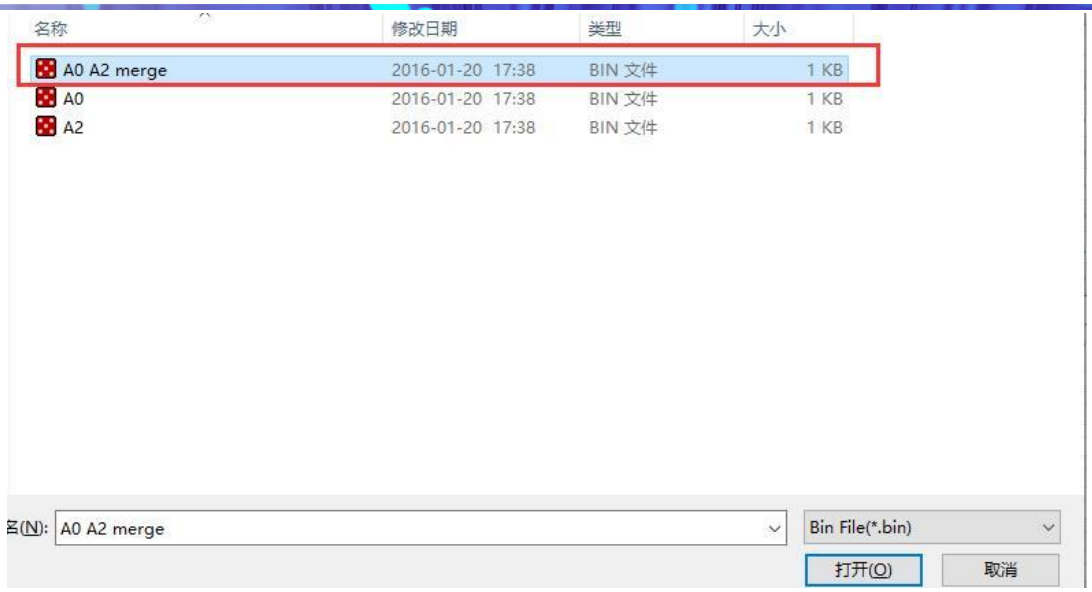


Figure 17

4. Automatic Code Writing A0 A2
Import A0 and A2 separately for writing (using the example of A0 and A2 merged).
4.1 Select the configuration file “SFP/QSFP 00001011” corresponding to the 10G LR code “00001011” (Figure 18).
4.2 Check “Ignore Last 8 Bytes” as shown (Figure 19)
4.3 Click “Batch BinFile” to import the first code to be written (Figure 20)
4.4 Insert the module corresponding to the serial number until the writing is complete (Figure 21).
4.5 Wait for the display to show “Finished,” indicating that the code writing was successful, then insert the next optical module (Figure 22).

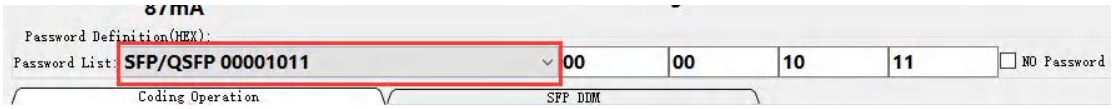


Figure 18

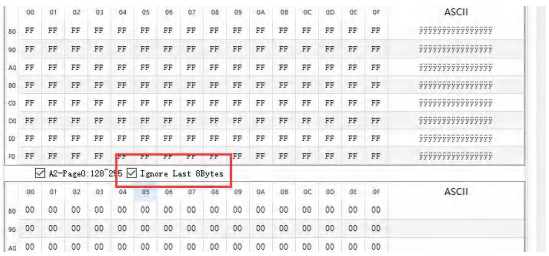


Figure 19

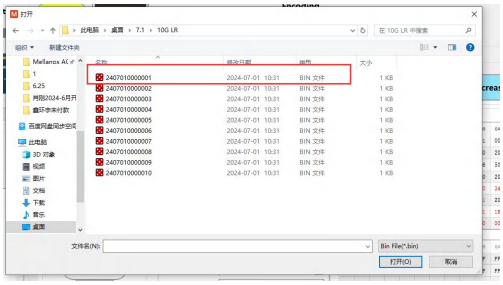


Figure 20

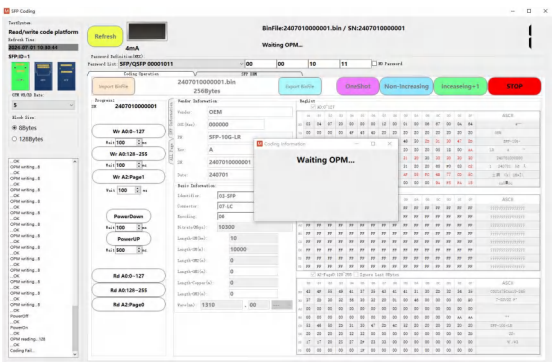


Figure 21

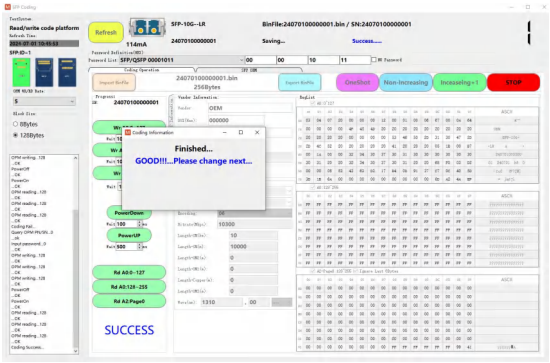


Figure 22

4. XFP Optical Transceivers Code Reading /Code Saving /Code Writing

1.Read Code A0 Table01 and Table02

1.1 Insert the XFP optical module to be read into the XFP socket,

1.2 open the “Programming Box V2-20231213” software(Figure 23)

1.3 Click “Scan&Connecting”(Figure 24-1)

1.4 Click “XFP Coding” (Figure 24-2)

1.5 Click “Refresh”(Figure 25-1)to read A0's Table01(Figure 25-2) and Table02 (Figure 25-3)

Figure 23

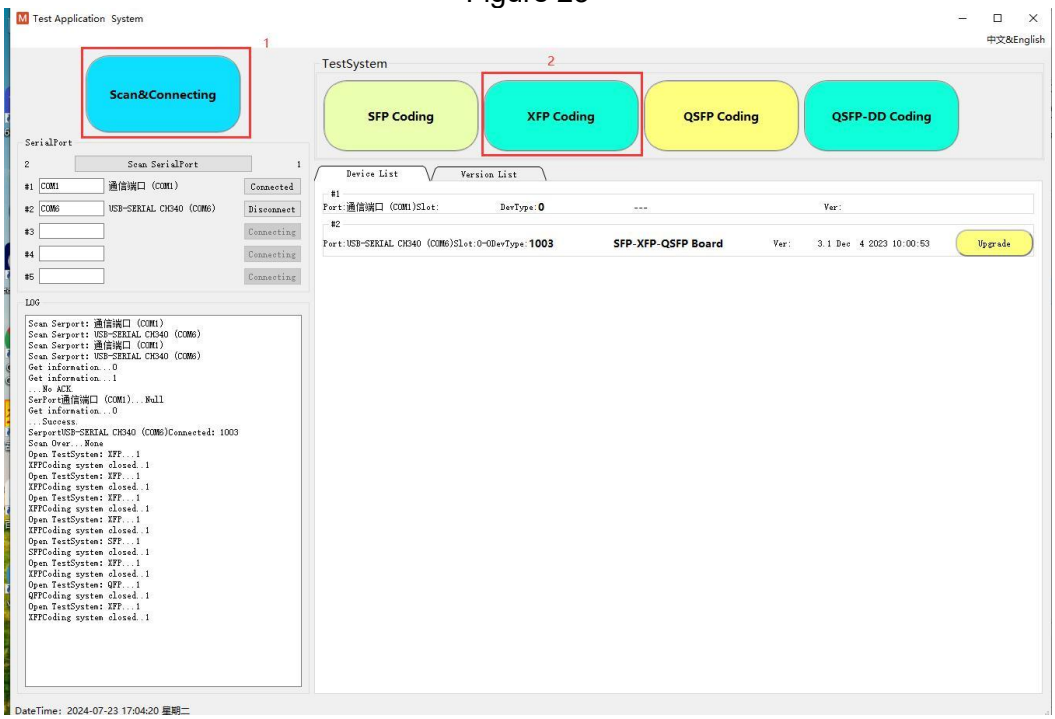


Figure 24

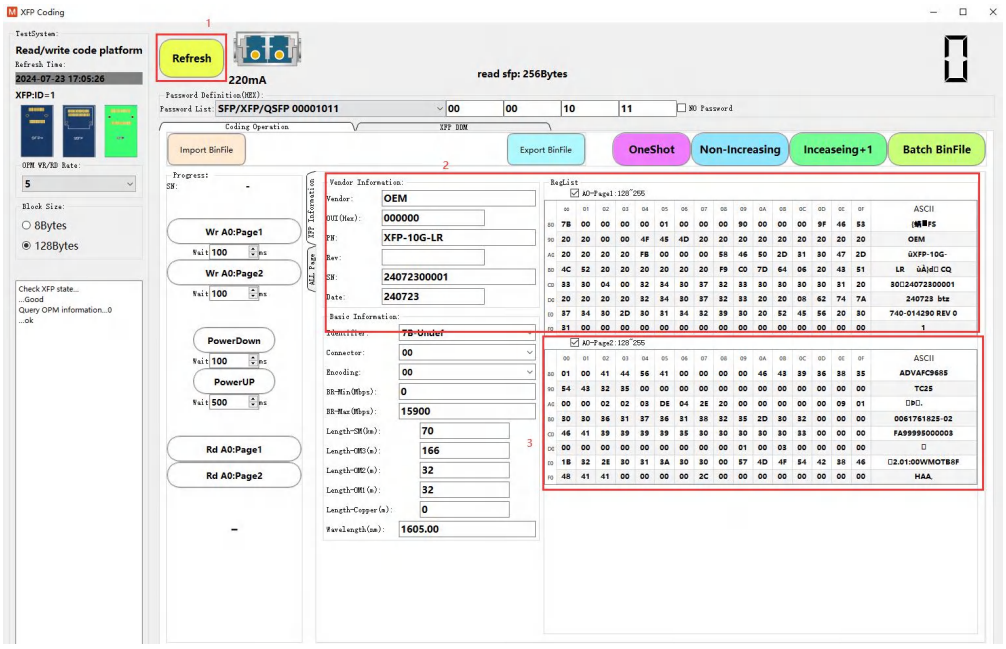


Figure 25

2. Save Code A0 Table01 and Table02

2.1 Save Table01 and Table02 separately

Save Table01 Code

Insert the XFP optical module to be read into the XFP socket，

2.1.1 Click “Refresh” to read Table01 (Figure 26-1 and Figure 26-2)

2.1.2 Uncheck the box for “A0-Page2:128~255” (Figure 26-3),

2.1.3 Click “Export BinFile” to save Table01 to the computer (Figure 26-4)

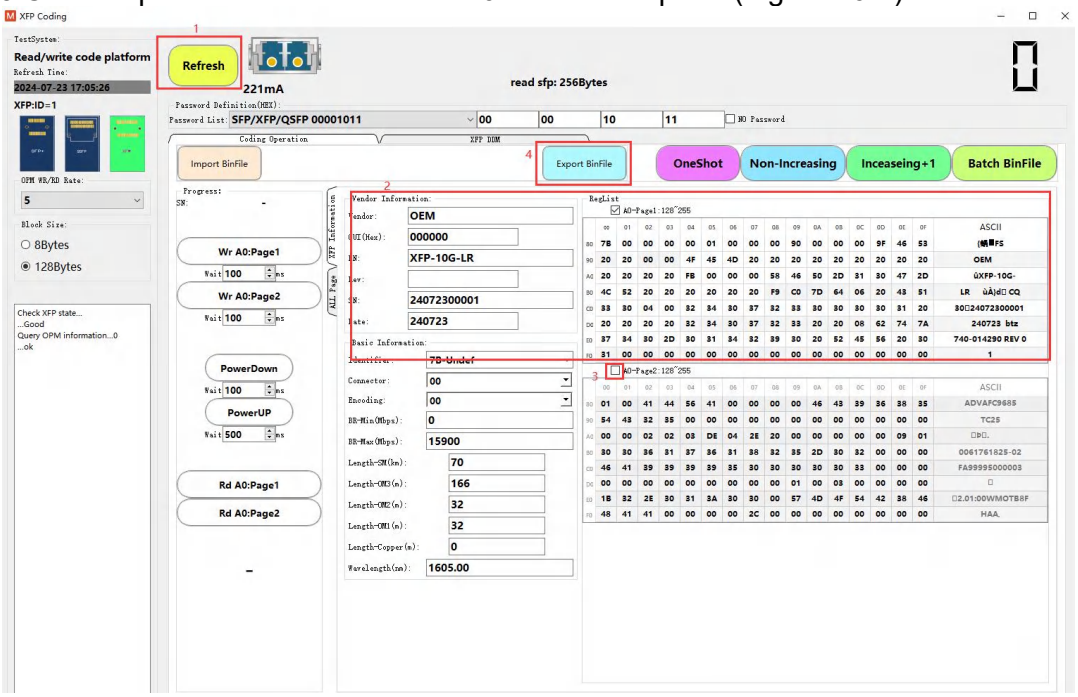


Figure 26

Save Table02 Code
Insert the XFP optical module to be read into the XFP socket，
2.1.4 Click “Refresh” to read Table02 (Figure 27-1 and Figure 27-2)
2.1.5 Uncheck the box for “A0-Page1:128~255” (Figure 27-3),
2.1.6 Click “Export BinFile” to save Table02 to the computer (Figure 27-4)

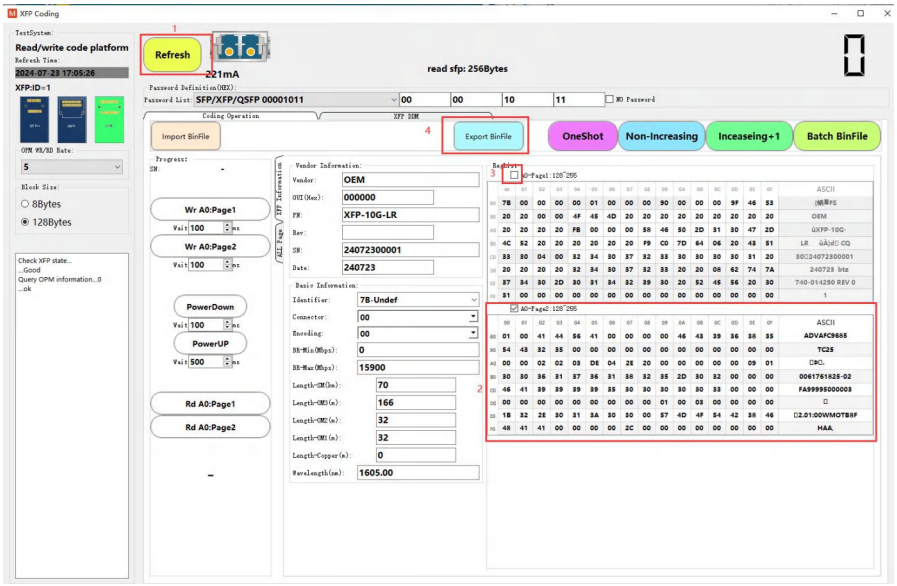


Figure 27

2.2 Merge and Save Table01 and Table02
Saving both A0 and A2 codes simultaneously.
Insert the XFP optical module to be read into the XFP socket，
2.2.1 Click “Refresh” to read Table01 and Table02 (Figure 28-1)
2.2.2 Click “Export BinFile” to save Table01 and Table02 to the computer (Figure 28-2)

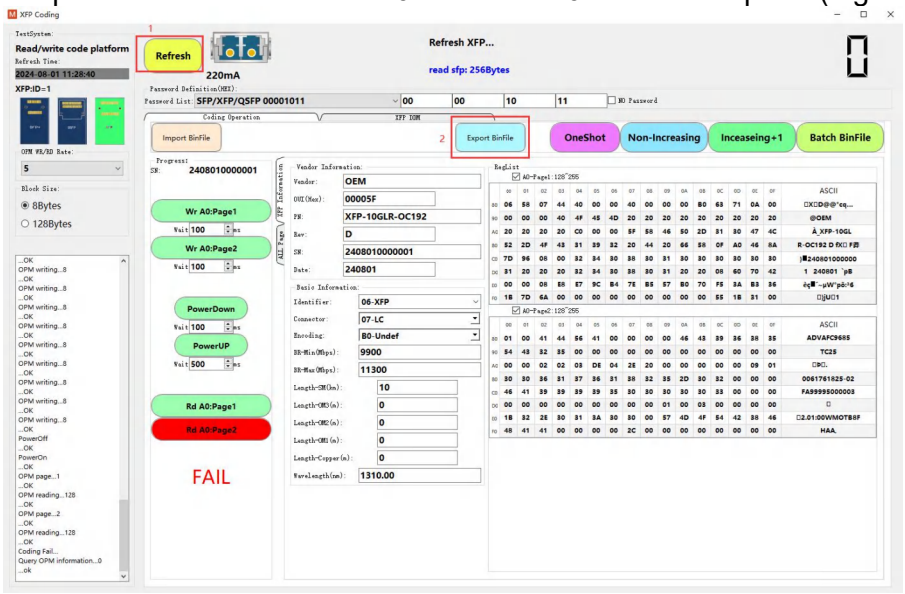


Figure 28

3. Write Code Table01 and Table02
Taking the example of writing the CISCO 10G XFP 10km with code “00 00 10 11”
Insert the 10G XFP 10km optical module to the EEPROM Programmer board.

3.1 Import Table01 and Table02 separately for programming (Table01 and Table02 are not merged).

3.1.1 Select the configuration file “SFP/XFP/QSFP 00001011” corresponding to the 10G XFP password of 00001011 (Figure 29)

3.1.2 Click “Export BinFile” to import the Table01 bin (Figure 30)

3.1.3 Click to uncheck the box for "A0:Page1:128~255" (Figure 31)

3.1.4 Click “Export BinFile” to import the Table02 bin (Figure 32)

3.1.5 Click to check the box for “A0:Page1:128~255” (Figure 33).

3.1.6 Click “OneShot” and wait for the prompt “Success,” indicating that the module programming is complete (Figure 34).

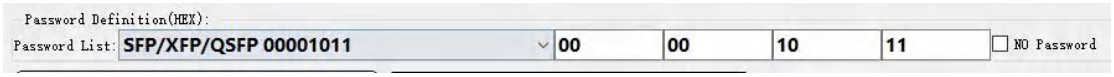


Figure 29

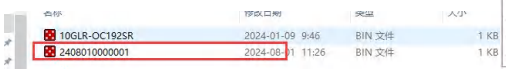


Figure 30

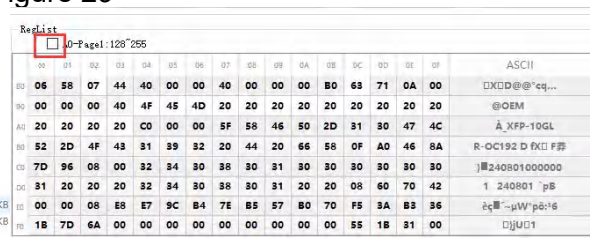


Figure 31

Figure 32

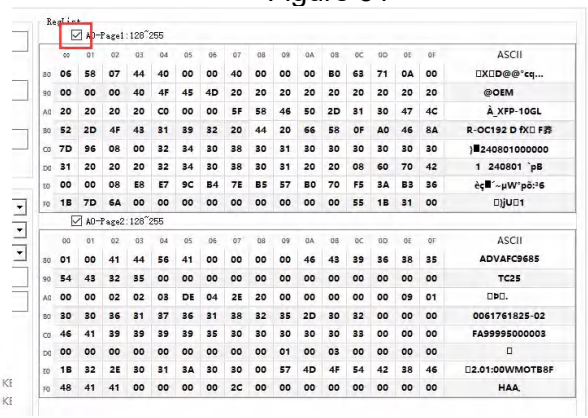


Figure 33

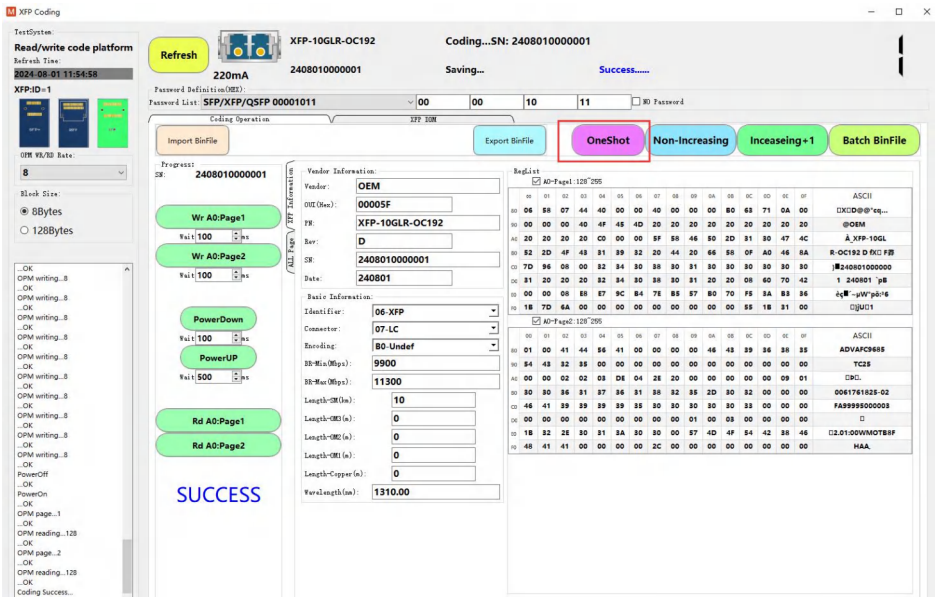


Figure 34

3.2 Import Table01 and Table02 Simultaneously (Table01 and Table02 Merged)

3.2.1 Select the configuration file “SFP/XFP/QSFP 00001011” corresponding to the 10G XFP code of “00001011” (Figure 29)

3.2.2 Click “Export BinFile” to import the Table01 and Table02 bin (Figure 35)

3.2.3 Click “OneShot” and wait for the prompt “Success,” indicating that the module programming is complete (Figure 34)

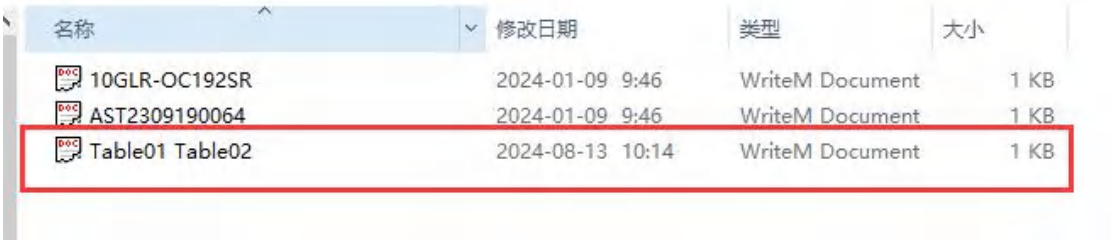


Figure 35

4. Automatic Code Writing Table01 and Table02

Import Table01 and Table02 for Writing (using the example of merged Table01 and Table02)

4.1 Select the configuration file “SFP/XFP/QSFP 00001011” corresponding to the 10G XFP code of 00001011 (Figure 36)

4.2 Click “Batch BinFile” to import the first code to be written (Figure 37)

4.3 Insert the module corresponding to the serial number until the programming is complete(Figure 38)

4.4 Wait for the display to show "Finished," indicating that the code writing is successful, then insert the next optical module (Figure 39)

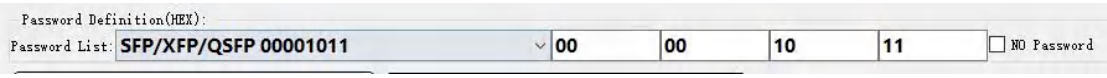


Figure 36

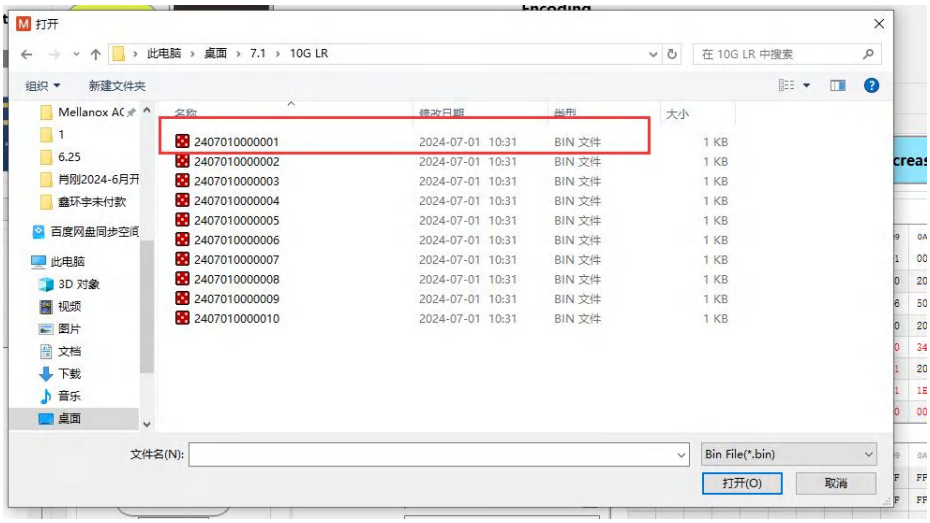


Figure 37

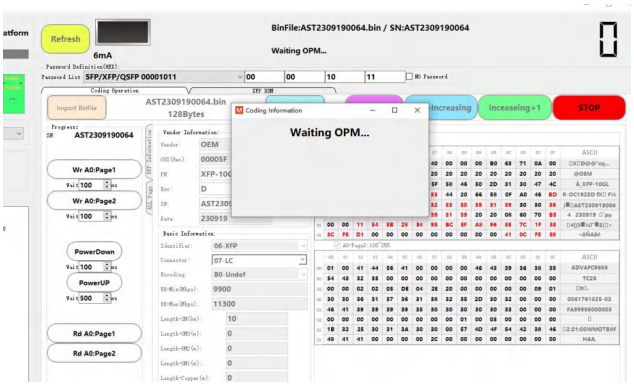


Figure 38

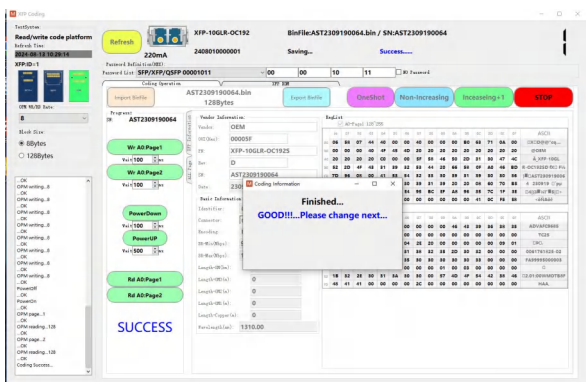


Figure 39

5. QSFP+/QSFP28/QSFP56 Optical Transceivers/DAC/AOC Code Reading/Code Saving/Code Writing

1.Read Code A0 Page00 and Page02

1.1 Insert the QSFP28 optical module to be read into the QSFP28 socket，

1.2 Open the “Programming Box V2-20231213” software(Figure 40)

1.3 Click “Scan&Connecting”(Figure 41-1)

1.4 Click “QSFP Coding” (Figure 41-2)

1.5 Click “Refresh”(Figure 42-1) to read A0’s Page00(Figure 42-2) and Page02 (Figure 42--3)

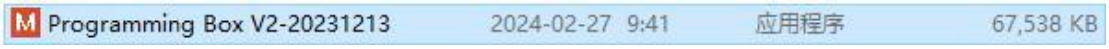


Figure 40

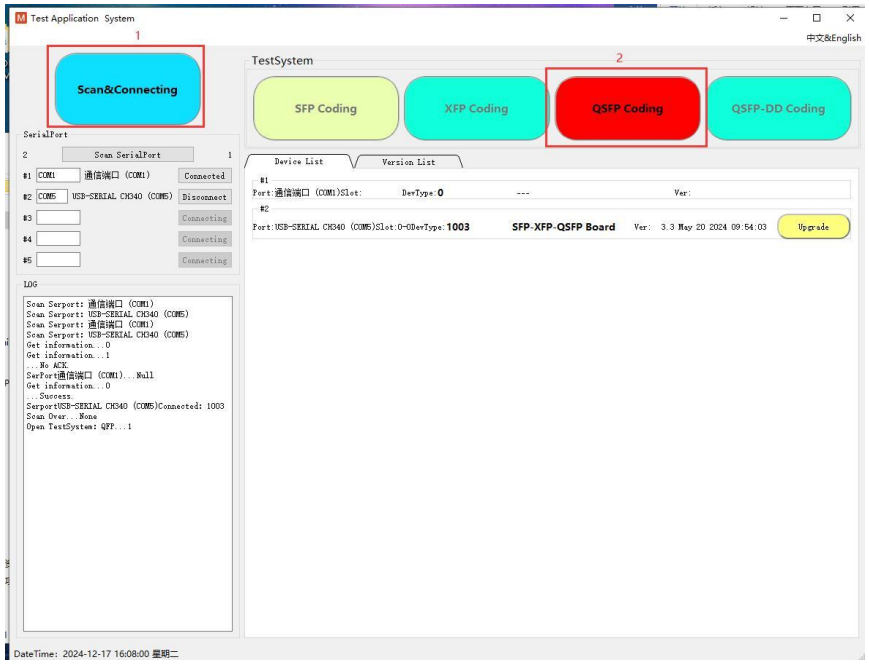


Figure 41

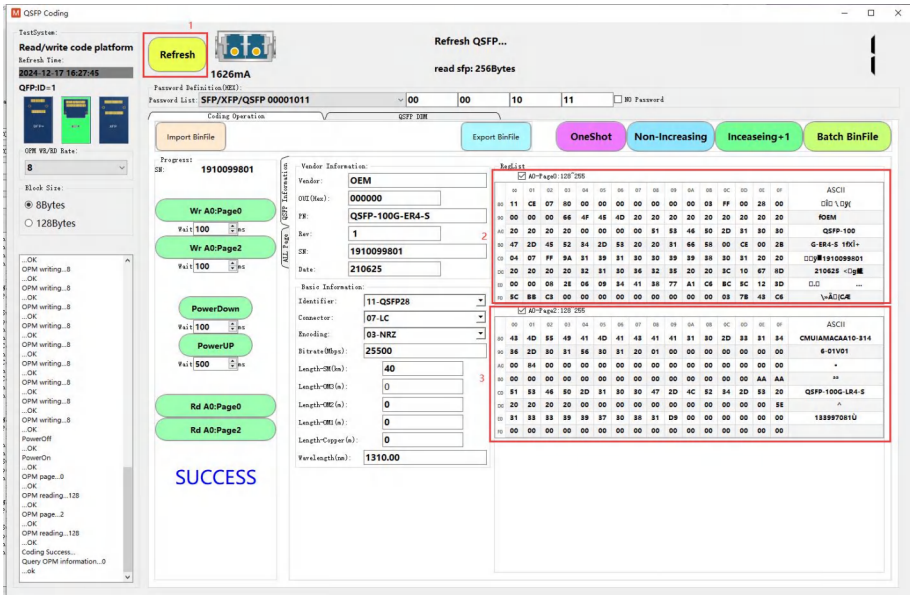


Figure 42

2. Save Code A0 Page00 and Page02
2.1 Save Page00 and Page02 separately
Save Page00 Code
Insert the QSFP28 optical module to be read into the QSFP28 socket
2.1.1 Click “Refresh” to read Page00 (Figure 43-1 and Figure 43-2)
2.1.2 Uncheck the box for “A0-Page2:128~255” (Figure 43-3),
2.1.3 Click “Export BinFile” to save Page00 to the computer (Figure 43-4)

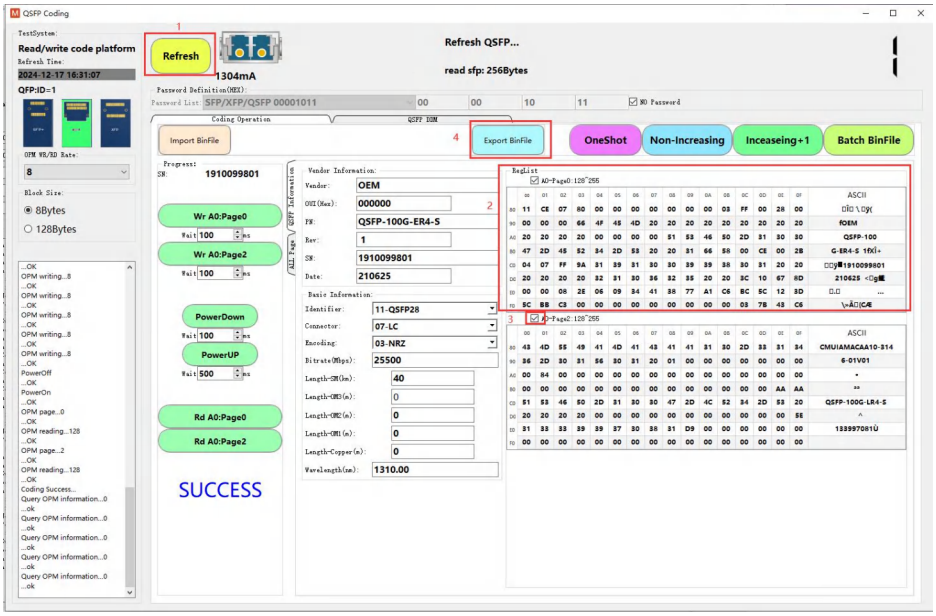


Figure 43

Save Page02 Code

Insert the QSFP28 optical module to be read into the QSFP28 socket

2.1.4 Click“Refresh” to read Page02 (Figure 44-1 and Figure 44-2)

2.1.5 Uncheck the box for “A0-Page0:128~255” (Figure 44-3),

2.1.6 Click “Export BinFile” to save Page02 to the computer (Figure 44-4)

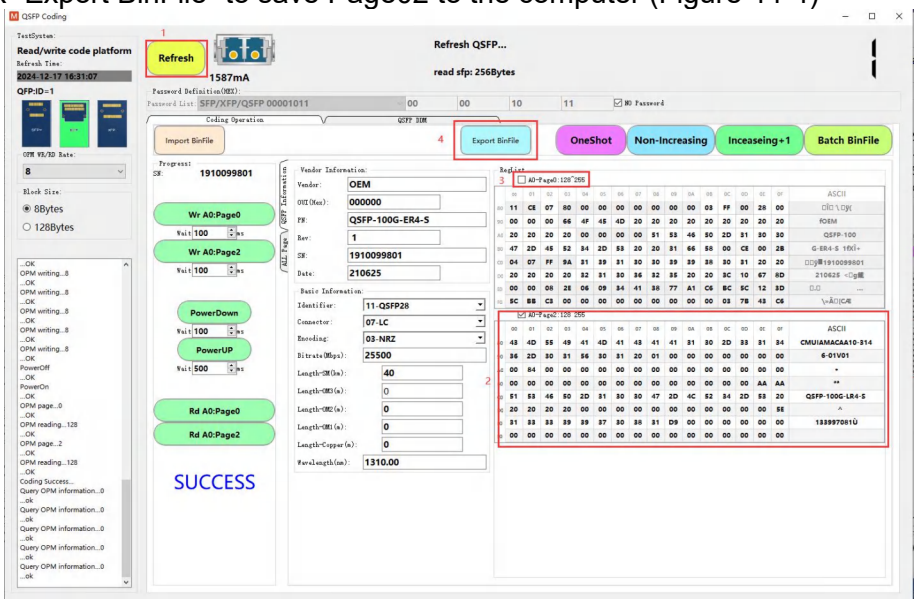


Figure 44

2.2 Merge and Save Page00 and Page02

Saving both Page00 and Page02 codes simultaneously

Insert the QSFP28 optical module to be read into the QSFP28 socket，

2.2.1 Click “Refresh” to read Page00 and Page02 (Figure 45-1)

2.2.2 Click “Export BinFile” to save Page00 and Page02 to the computer (Figure 45-2)

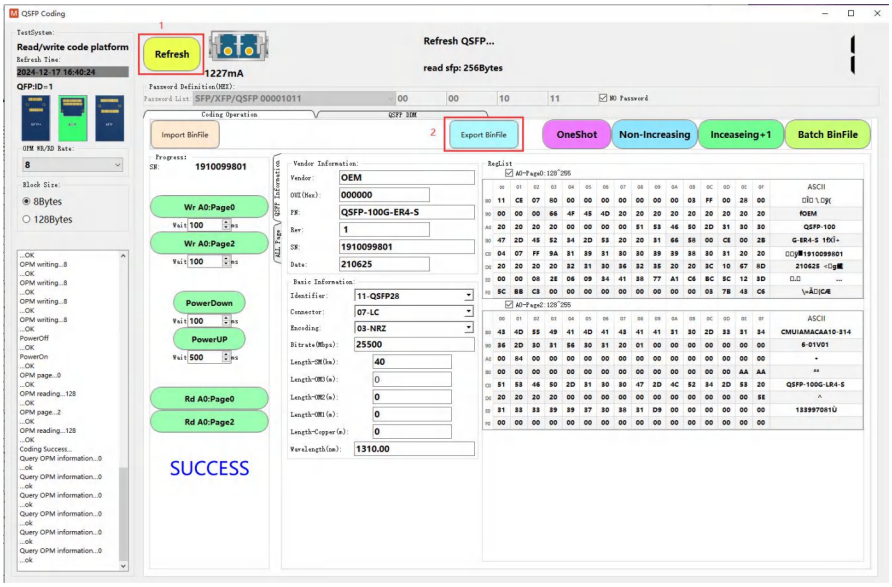


Figure 45

3. Save Code A0 Page00 and Page02
Taking the example of writing the Cisco QSFP28 100G ER4 code “00 00 10 11”
Insert the QSFP28 100G ER4 optical module to the EEPROM Programmer board.
3.1 Import Page00 and Page02 separately for programming (Page00 and Page02 are not merged).

3.1.1 Select the configuration file “SFP/XFP/QSFP 00001011” corresponding to the QSFP28 100G ER4 code “00001011” (Figure 46)

3.1.2 Click “ Export BinFile” to import the Page00 bin (Figure 47)

3.1.3 Uncheck the box for “A0:Page0:128~255” (Figure 48)

3.1.4 Click “Export BinFile” to import the Page02 bin (Figure 49)

3.1.5 Check the box for “A0:Page0:128~255” (Figure 50)

3.1.6 Click “OneShot” and wait for the prompt "Success," indicating that the module programming is complete (Figure 51)

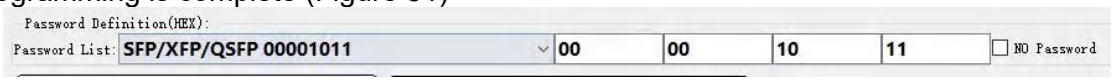


Figure 46

Figure 47

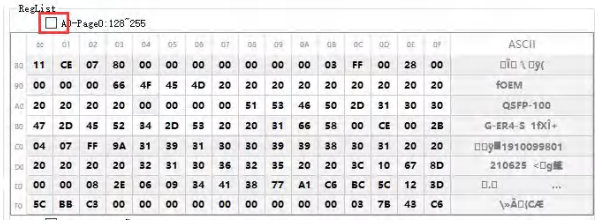


Figure 48

Figure 49

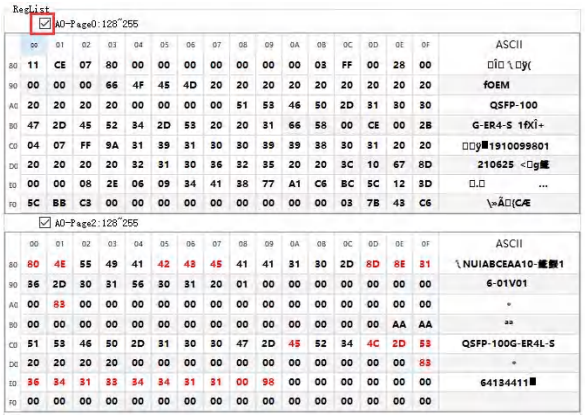


Figure 50

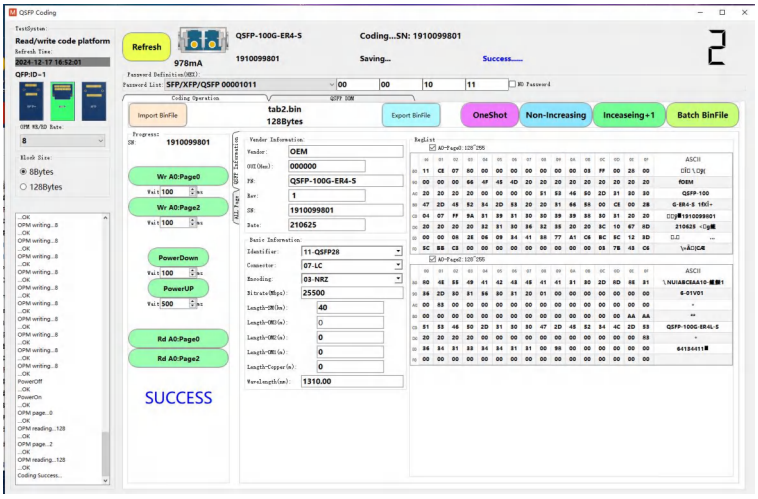


Figure 51

3.2 Import Page00 and Page02 Simultaneously (Page00 and Page02 Merged)

3.2.1 Select the configuration file “SFP/XFP/QSFP 00001011” corresponding to the QSFP28 100G ER4 code “00001011” (Figure 46)

3.2.2 Click “Export BinFile” to import the merged Page00 and Page02 bin (Figure 52)

3.2.3 Click “OneShot” and wait for the prompt “Success,” indicating that the module programming is complete (Figure 51)

Figure 52

4. Automatic Write Code Page00 and Page02
Import Page00 and Page02 for programming (using the example of merged Page00 and Page02)
4.1 Select the configuration file “SFP/XFP/QSFP 00001011” corresponding to the QSFP28 100G ER4 code “00001011” (Figure 53)
4.3 Click “Batch BinFile” to import the first code to be written (Figure 54)
4.4 Insert the module corresponding to the serial number until the programming is complete (Figure 55)
4.5 Wait for the display to show “Finished,” indicating that the programming was successful, and then insert the next optical module (Figure 56)

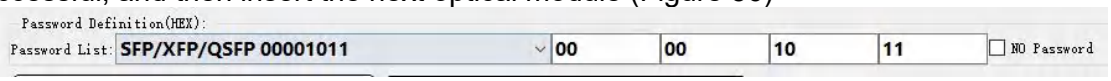


Figure 53

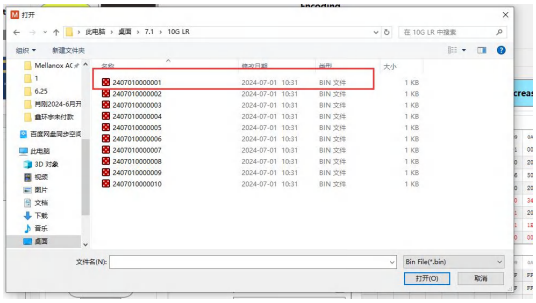


Figure 54

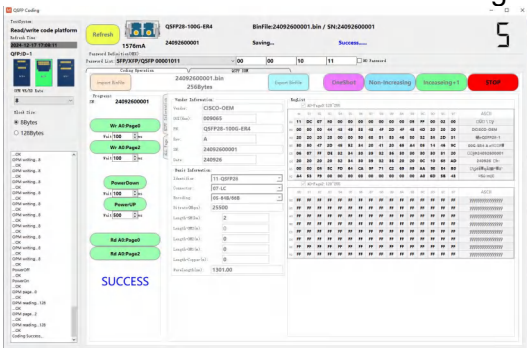


Figure 55

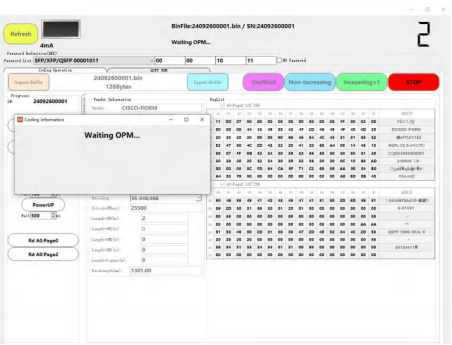


Figure 56

6. QSFP-DD Optical Transceivers Code Reading /Code Saving /Code Writing

1. Read Code A0 Page00 and Page03
1.1 Insert the QSFP-DD optical module to be read into the QSFP-DD socket，
1.2 Open the “Programming Box V2-20231213” software (Figure 57)
1.3 Click “Scan&Connecting”(Figure 58-1)
1.4 Click “QSFP-DD Coding” (Figure 58-2)
1.5 Click “Refresh”(Figure 59-1) to read A0’s Page00 (Figure 59-2) and Page03 (Figure 59--3)

Figure 57

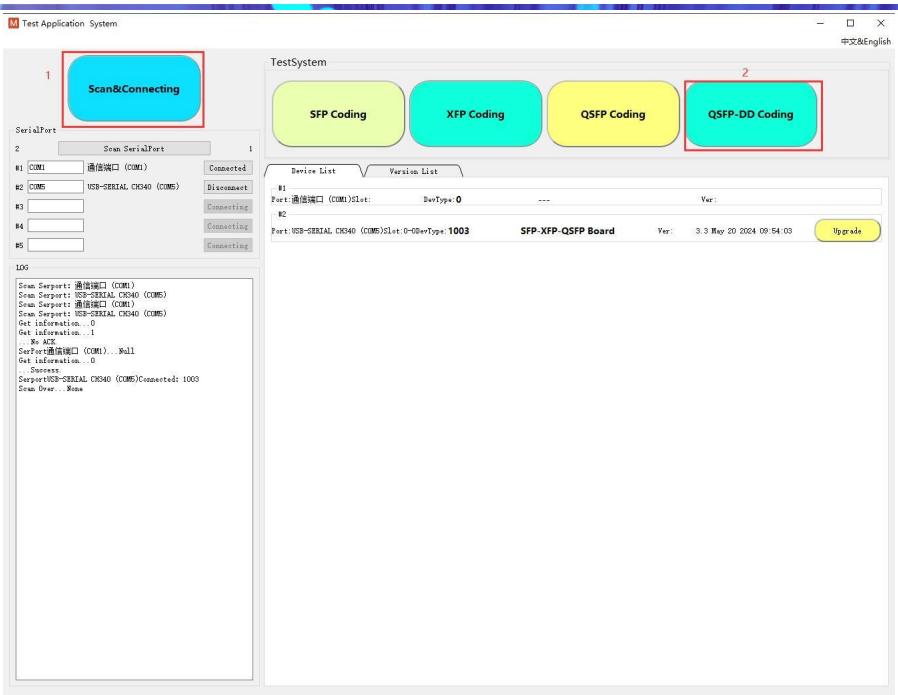


Figure 58

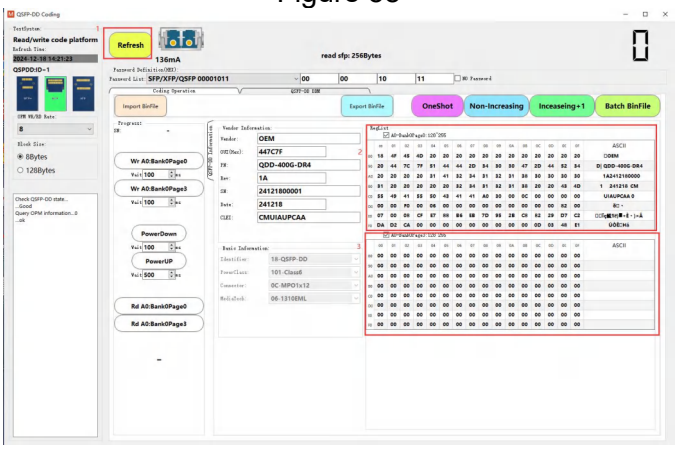


Figure 59

2. Save Code A0 Page00 and Page03
2.1 Save Page00 and Page03 separately
Save Page00 Code
Insert the QSFP-DD optical module to be read into the QSFP-DD socket
2.1.1 Click “Refresh” to read Page00 (Figure 60-1 and Figure 60-2)
2.1.2 Uncheck the box for “A0-Page3:128~255” (Figure 60-3),
2.1.3 Click “Export BinFile” to save Page00 to the computer (Figure 60-4)

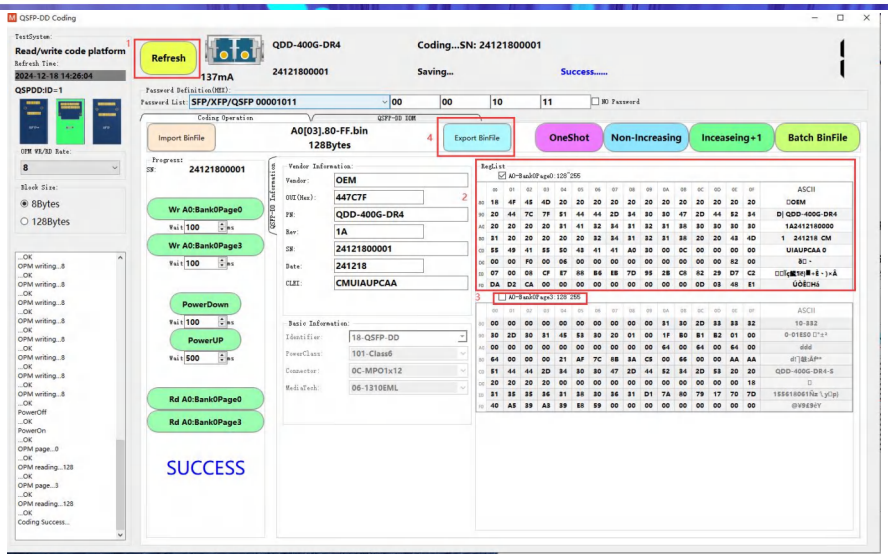


Figure 60

Save Page03 Code
Insert the QSFP-DD optical module to be read into the QSFP-DD socket
2.1.4 Click “Refresh” to read Page03 (Figure 62-1 and Figure 61-2)
2.1.5 Uncheck the box for “A0-Page0:128~255” (Figure 61-3),
2.1.6 Click “Export BinFile” to save Page03 to the computer (Figure 61-4)

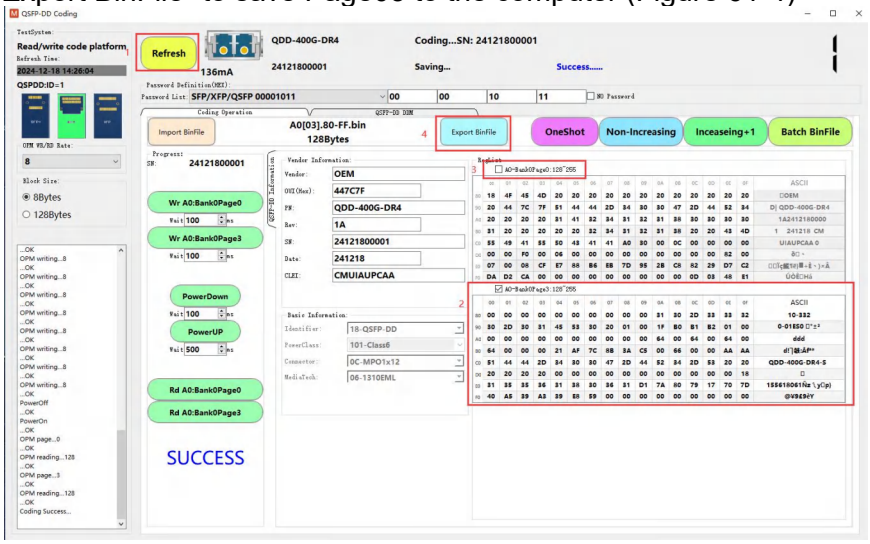


Figure 61

2.2 Merge and Save Page00 and Page03
Saving Page00 and Page03 Codes Simultaneously
Insert the QSFP-DD optical module to be read into the QSFP-DD socket，
2.2.1 Click “Refresh” to read Page00 and Page03 (Figure 62-1)
2.2.2 Click “Export BinFile” to save Page00 and Page03 to the computer (Figure 62-2)

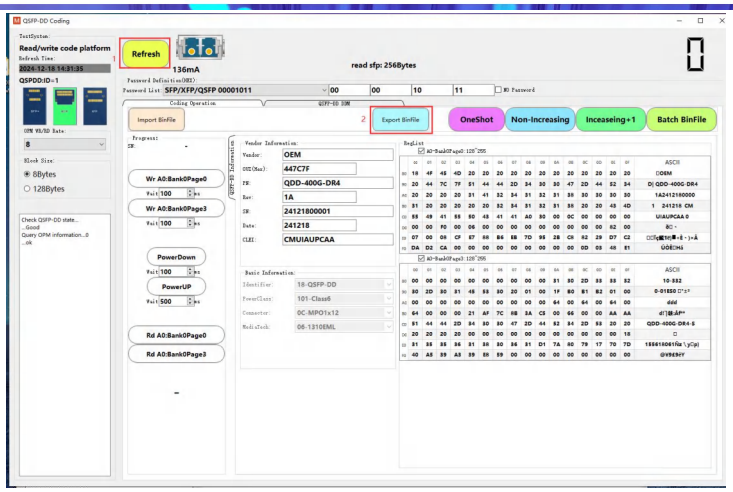


Figure 62

3. Write Code Page00 and Page03

Taking the example of writing the Cisco QSFP-DD 400G DR4 code “00 00 10 11”

Insert the QSFP-DD 400G DR4 optical module to the EEPROM Programmer board.

3.1 Import Page00 and Page03 separately for programming (Page00 and Page03 are not merged)

3.1.1 Select the configuration file “SFP/XFP/QSFP 00001011" corresponding to the QSFP-DD 400G DR4 password of 00001011 (Figure 63)

3.1.2 Click “ Export BinFile” to import the Page00 bin (Figure 64)

3.1.3 Uncheck the box for “A0:Page0:128~255” (Figure 65)

3.1.4 Click “ Export BinFile” to import the Page03 bin (Figure 66)

3.1.5 Check the box for "A0:Page0:128~255" (Figure 67)

3.1.6 Click “OneShot” and wait for the prompt "Success," indicating that the module programming is complete (Figure 68)

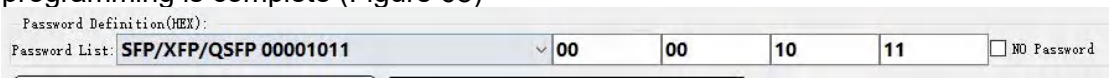


Figure 63

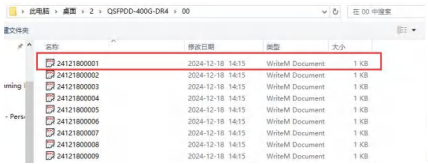


Figure 64

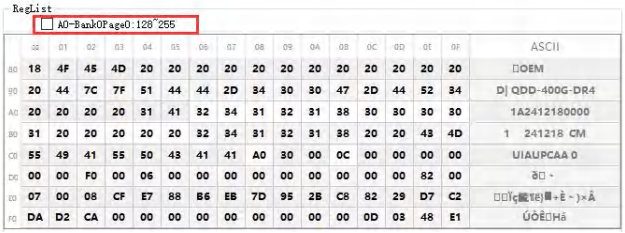


Figure 65

Figure 66

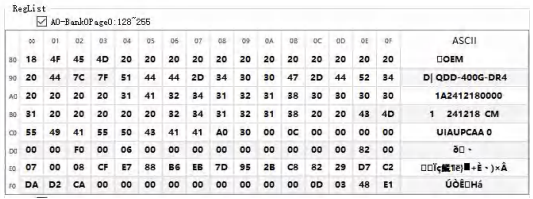


Figure 67

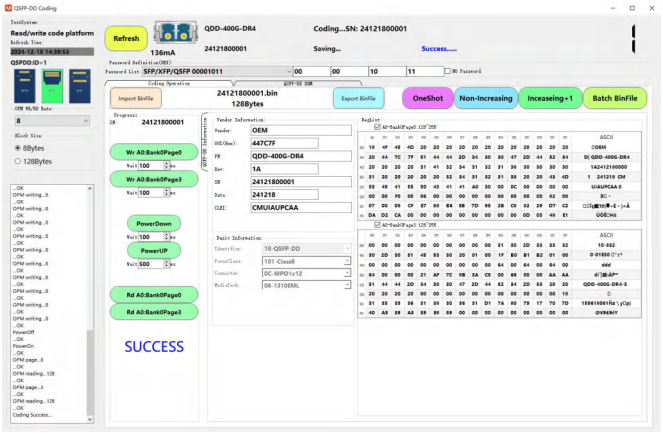


Figure 68

3.2 Import Page00 and Page03 Simultaneously (Page00 and Page03 Merged)

3.2.1 Select the configuration file “SFP/XFP/QSFP 00001011” corresponding to the QSFP-DD 400G DR4 password of “00001011” (Figure 64)

3.2.2 Click “ Export BinFile” to import the Page00 and Page03 bin (Figure 69)

3.2.3 Click “OneShot”and wait for the prompt “Success," indicating that the module programming is complete (Figure 68）

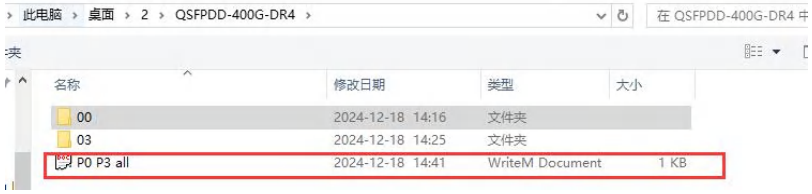


Figure 69

4. Automatic Write Code Page00 and Page03

Import Page00 and Page03 for programming (using the example of merged Page00 and Page03)

4.1 Select the configuration file “SFP/XFP/QSFP 00001011" corresponding to the QSFP-DD 400G DR4 password of “00001011” (Figure 70)

4.2 Click "Batch BinFile" to import the first code to be written (Figure 71)

4.3 Insert the module corresponding to the serial number until the programming is complete (Figure 72)

4.4 Wait for the display to show "Finished," indicating that the programming was successful, and then insert the next optical module (Figure 73)

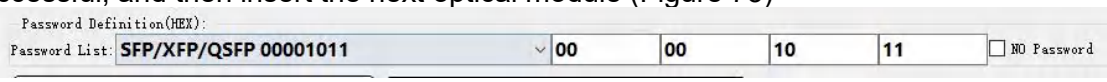


Figure 70

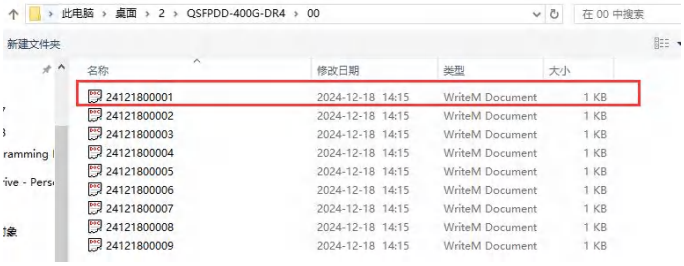


Figure 71

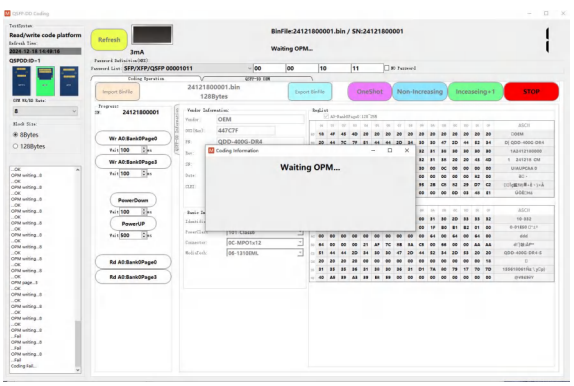


Figure 72

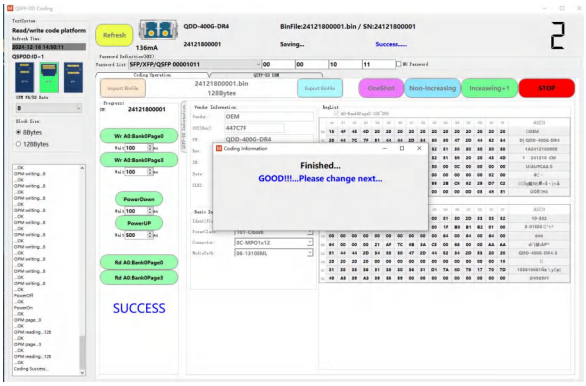


Figure 73

7. Custom Passwords with Configuration File

If you need to customize the configuration file password, for example, if the SFP module programming password is 12345678, then you need to create a configuration file with the password 12345678.

1. Click to open the “Password List” (Figure 74)

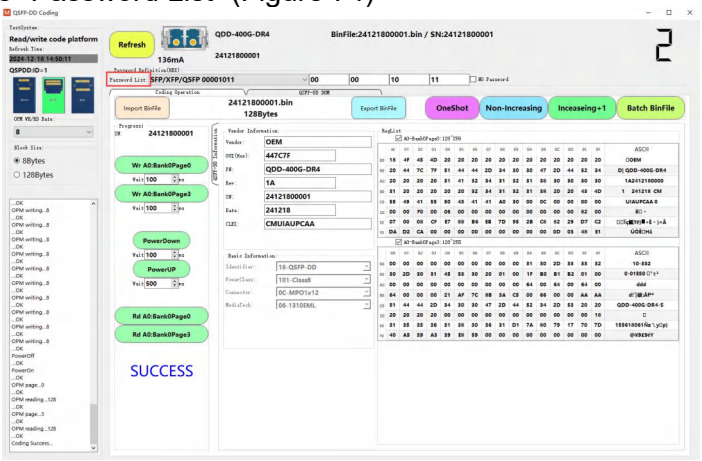


Figure 74

2. In the “Password Remark” field, enter the desired name, such as “SFP 12345678,” then input the hexadecimal password “12345678”. Afterward, click confirm to generate the configuration file for "SFP 12345678" (Figure 75)

Figure 75