

Coding Box Operation Guide

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Contents

1 Introduction	3
1.1 Introduction	3
1.2 CodingBox Software	3
1.3 Remarks.....	4
2 Write Code of Optical Modules	5
2.1 Read Modules Base Information.....	5
2.2 Read Page	6
2.3 Write Page.....	7
2.4 Load File	8
2.5 Save File	9
3 DDM of Optical Modules	11
3.1 DDM Display.....	11
3.1 Threshold Modification	12

1 Introduction

1.1 Introduction

Software:

1 Software Name: Coding Box Software

2 Operating Environment: Windows XP\7\8\8.1\10 32\64bit

3 Software Description: Write EEPROM code to Module, view and export the EEPROM code file, and read DDM

Hardware:

1 Name: Coding Box

2 Size: 90mm*80mm*25mm

3 Weight: 135g

4 Interface Type: USB Type C (USB power supply)

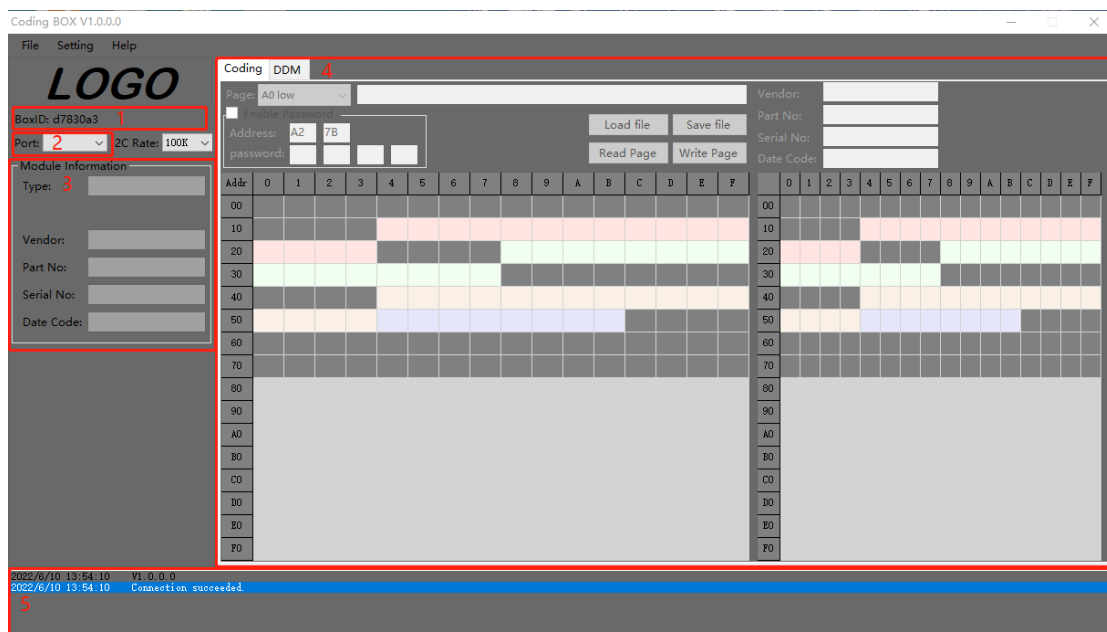
5 Work Voltage: +5V

6 Maximum Power: 3.5W

7 Support Module Type: SFP, SFP+, SFP28, SFP56, XFP, QSFP+, QSFP28, QSFP DD

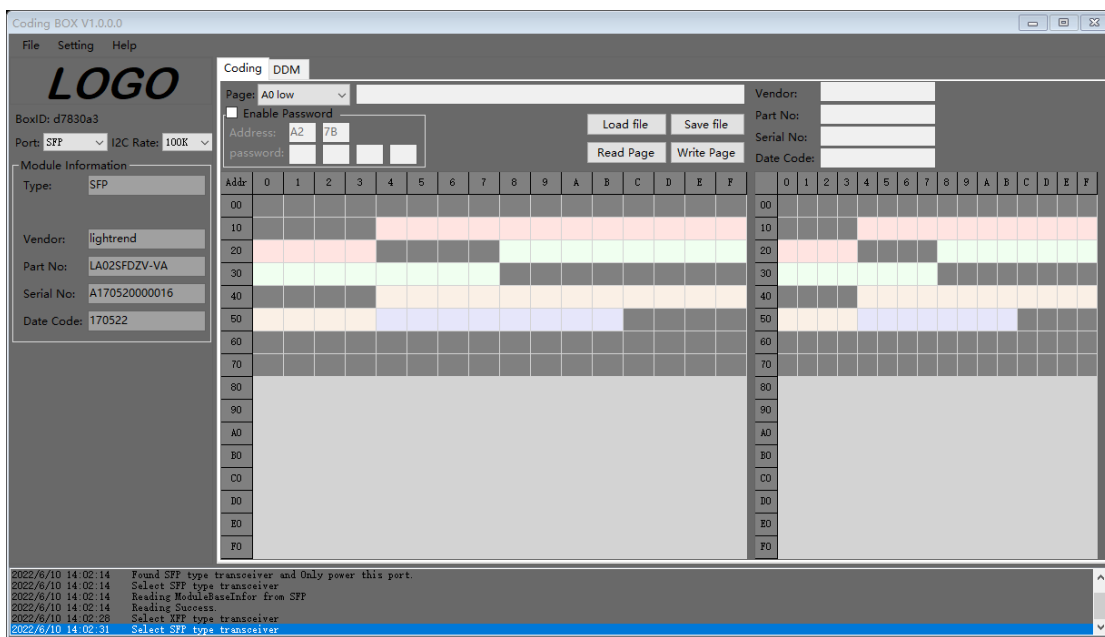
The CodingBox connects to a PC through a USB port to implement functions such as write code and DDM for SFP type, XFP type, QSFP type, and QSFP-DD type optical modules.

1.2 Coding Box Software



- (1) Coding Box detection area, showing the number of Coding Box we connected and the connection status.
- (2) Module type detection and selection area, showing the type of inserted module or manually selecting the module type.
- (3) Display basic information of plugged-in modules.
- (4) Write code and DDM functional area.
- (5) log display output area.

Take inserting an SFP type module as an example :



1.3 Remarks

The current version uses USB power supply. Due to power supply restrictions, QSFP28, and QSFP-DD modules do not support the high power consumption mode.

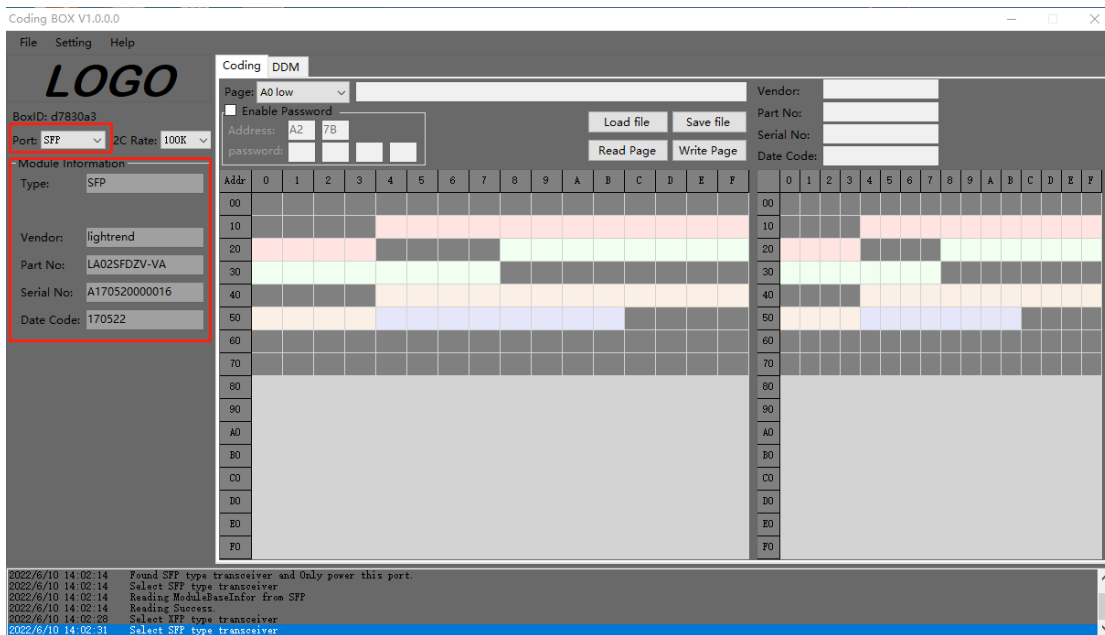
Do not remove or insert an optical module during the write coding.

No need to install drivers.

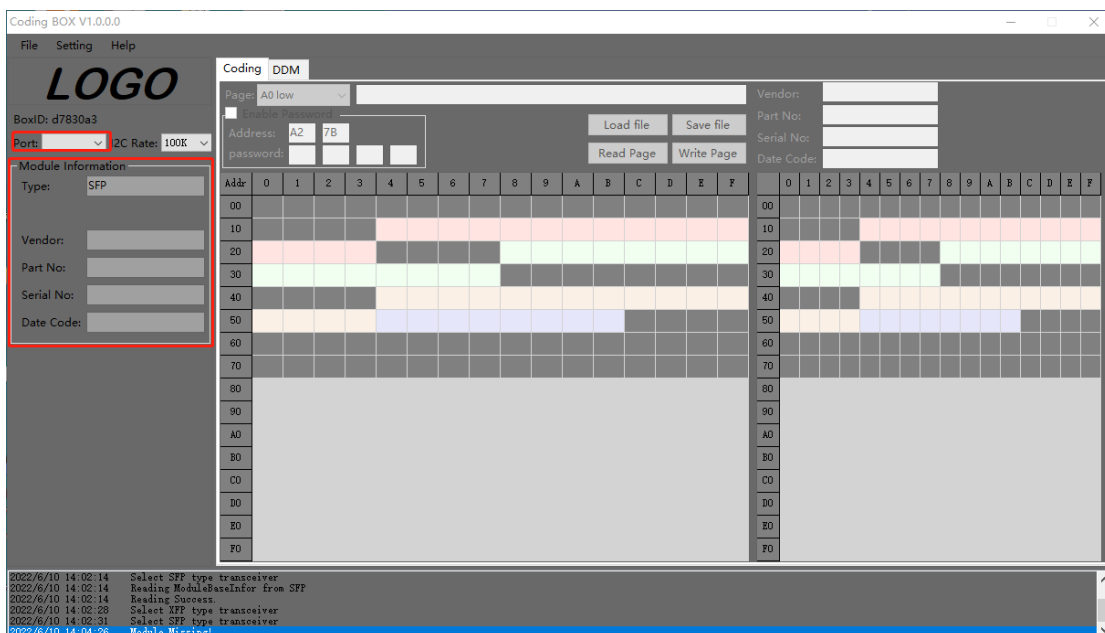
2 Write Code of Optical Modules

2.1 Read Modules Base Information

When the module is inserted into the Coding Box, the software will automatically identify the module type and read the basic information of the current module. Such as SFP Type Modules.



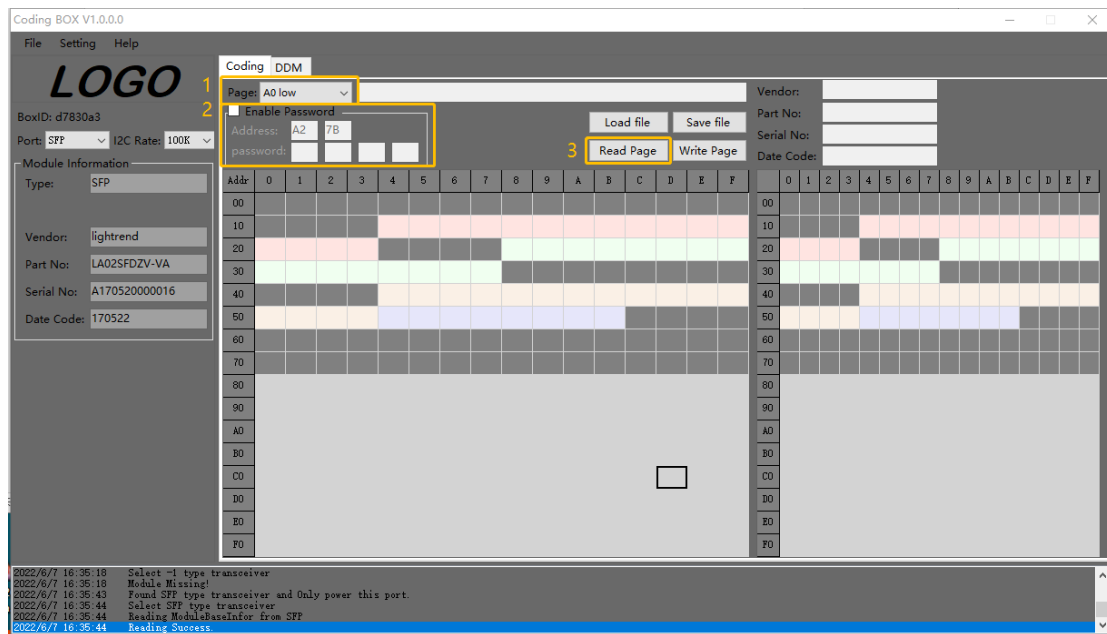
When the module is pulled out the Coding Box, the basic information of the module will be automatically cleared.



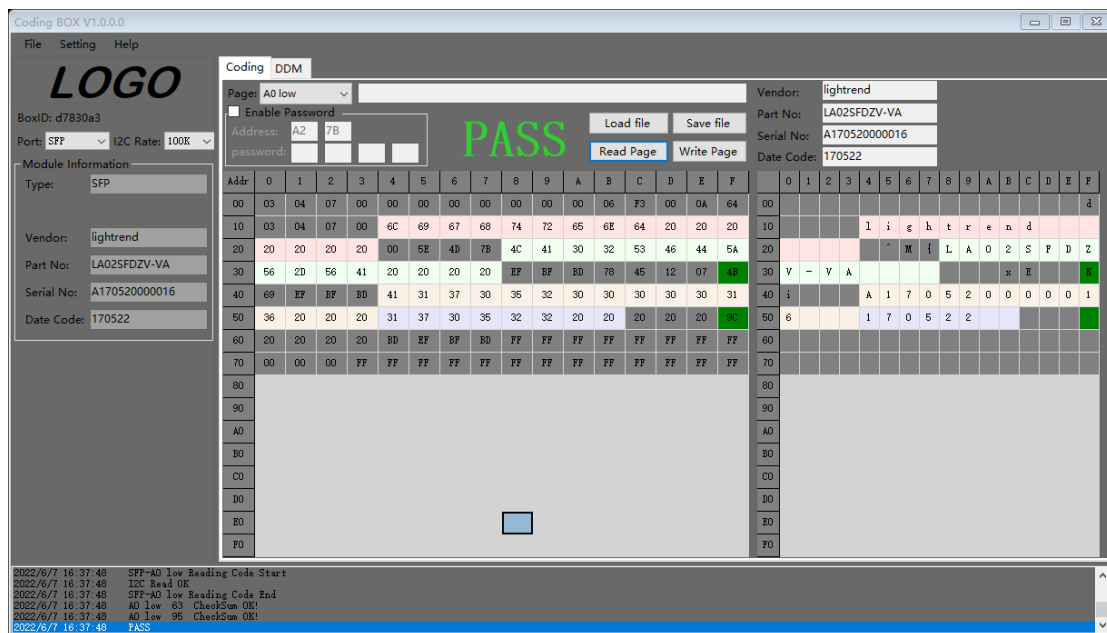
2.2 Read Page

When the module is inserted into the Coding Box, the software will automatically identify the module type and read the basic information of the current module. Select Coding in the functional area.

- (1) Select the desired page, such as A0 Low.
- (2) Check the Password Enable box and enter the password. Note: If the password enable box is not checked, it means that the read process does not use a password.
- (3) Click the read page button.



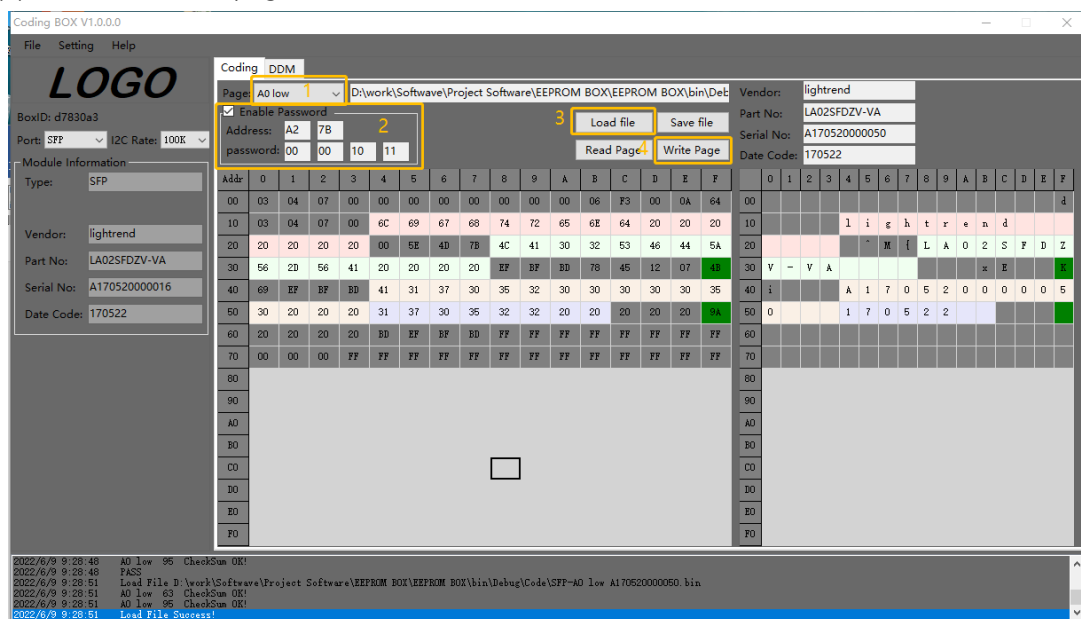
Read OK



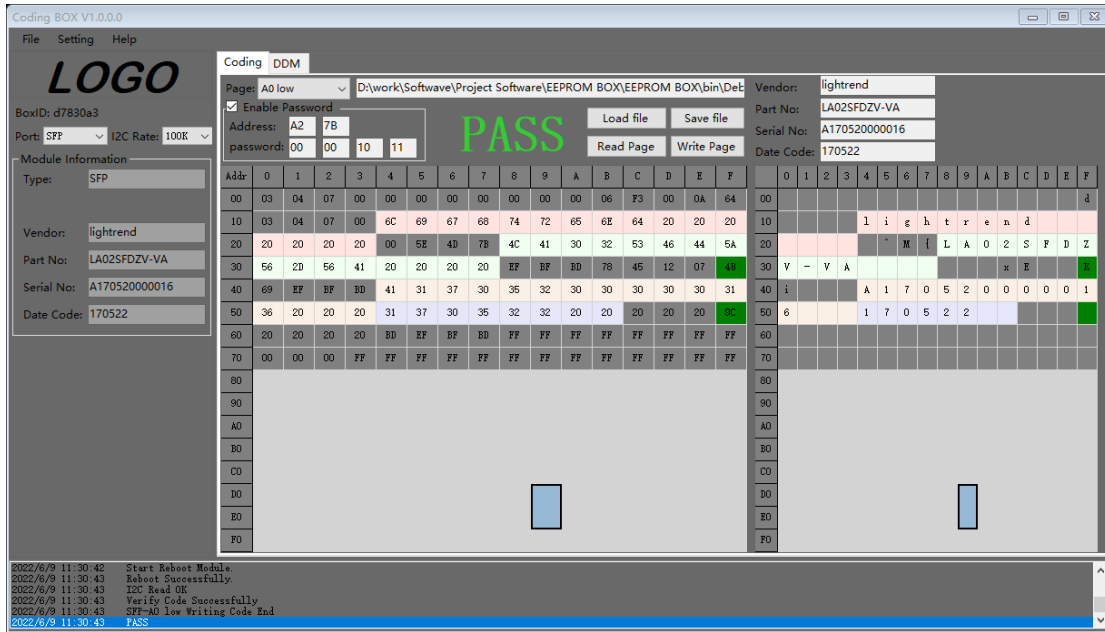
2.3 Write Page

When the module is inserted into the Coding Box, the software will automatically identify the module type and read the basic information of the current module. Select Coding in the functional area.

- (1) Select the desired page, such as A0 Low.
- (2) Check the Password Enable box and enter the password. Note: If the password enable box is not checked, it means that the read process does not use a password.
- (3) The user can click the read page button first and after reading the information to the table, modify the data to be modified in the table. Or the user clicks the Load File button to import the information that needs to be written. such as Load File.
- (4) Click the Write page button.



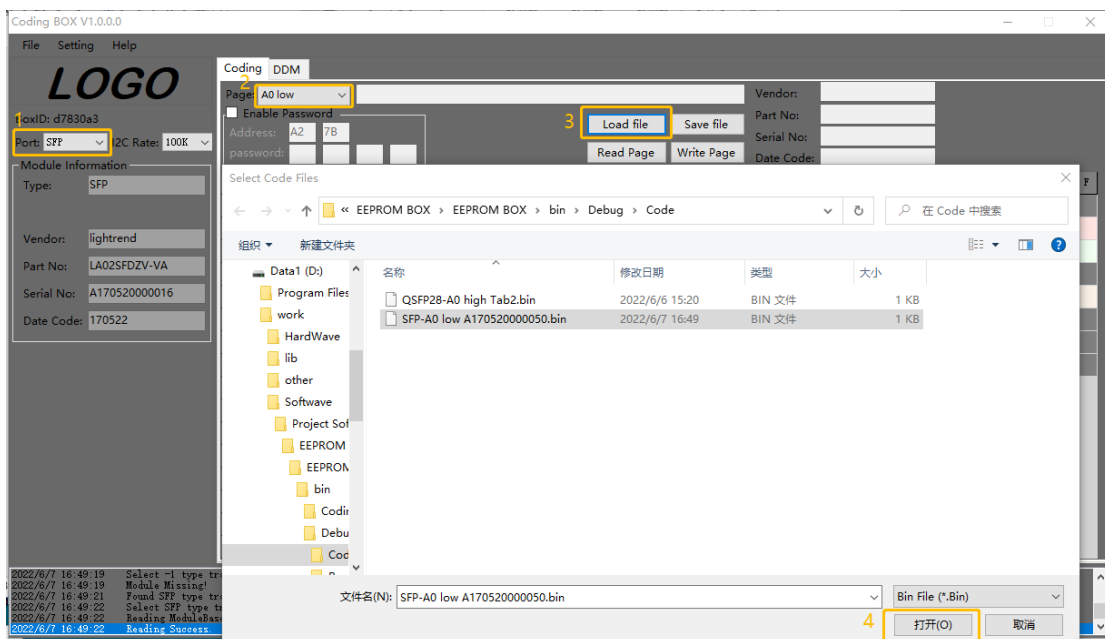
Write Pass:



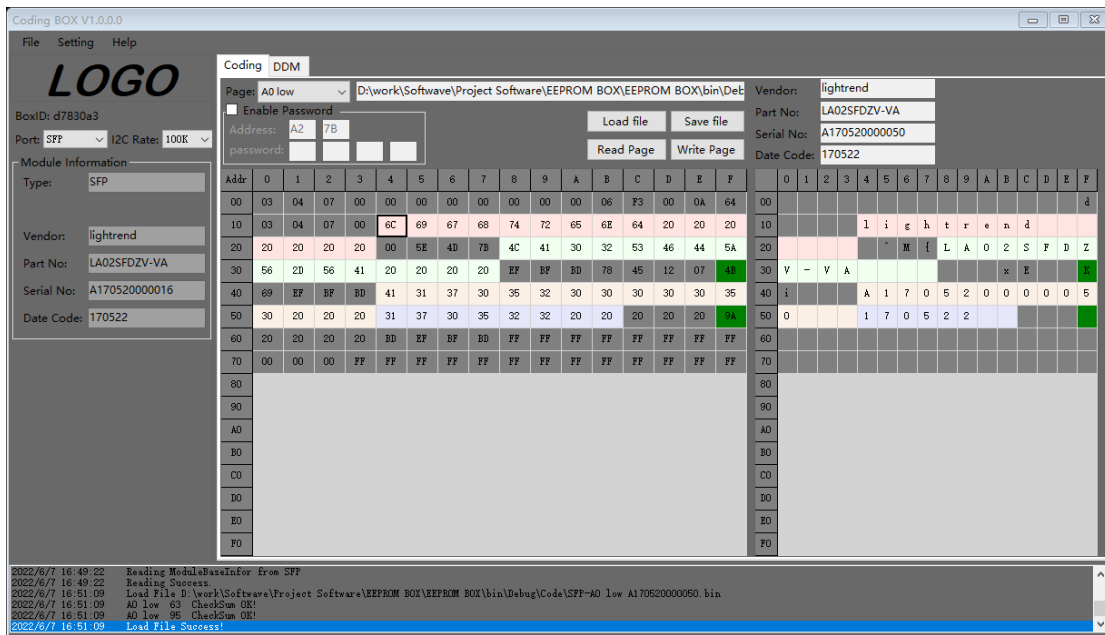
2.4 Load File

When the module is inserted into the Coding Box, the software will automatically identify the module type and read the basic information of the current module. Select Coding in the functional area.

- (1) Insert Module into Coding Box or Select the desired "Port", such as "SFP".
- (2) Select the desired page, such as A0 Low.
- (2) Click the Load File button.
- (3) Select the corresponding bin file



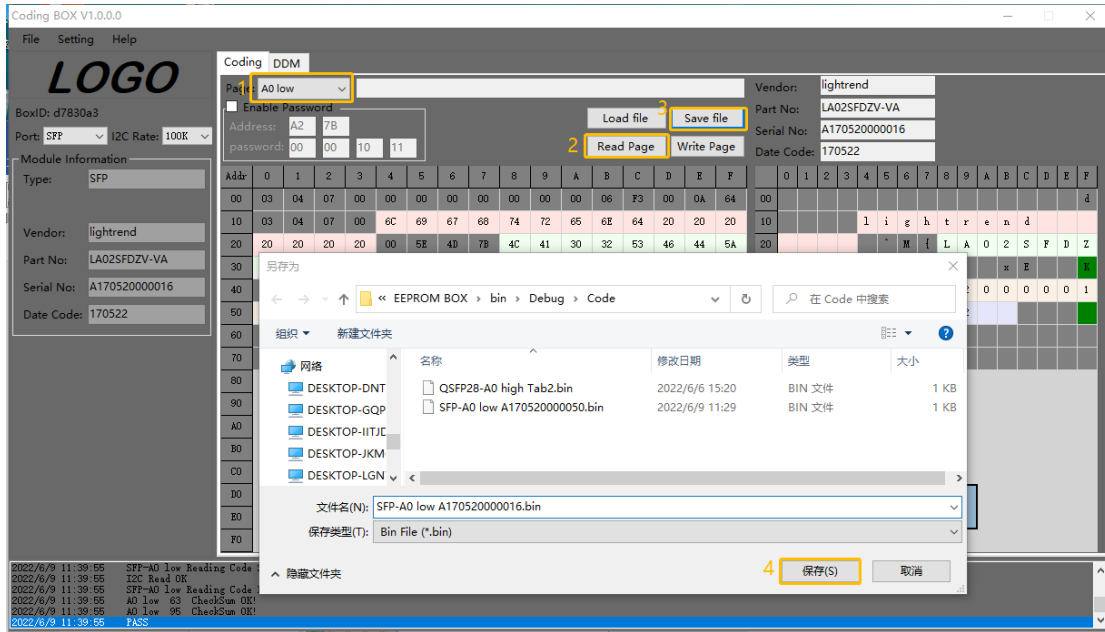
Load OK:



2.5 Save File

When the module is inserted into the Coding Box, the software will automatically identify the module type and read the basic information of the current module. Select Coding in the functional area.

- (1) Select the desired page, such as A0 Low.
- (2) Check the Password Enable box and enter the password. Note: If the password enable box is not checked, it means that the read process does not use a password.
- (3) The user can click the read page button first and after reading the information to the table, modify the data to be modified in the table. Or the user clicks the Load File button to import the information that needs to be written.
- (4) Click the Save File button. (File name can be modified)



Save OK:



3 DDM of Optical Modules

3.1 DDM Display

When the module is inserted into the Coding Box, the software will automatically identify the module type and read the basic information of the current module. Select DDM in the functional area. Such as SFP+ Modules.

- (1) DDM box module is checked by default, DDM real-time update display.
- (2) Hard Txdis box module is checked by default, Module default txdis. The Txdisable and Hard Txdis box is used to control the module Txdis function.

Note: Due to insufficient power supply, QSFP28 and QSFP-DD type modules have low power consumption by default and do not support modification.

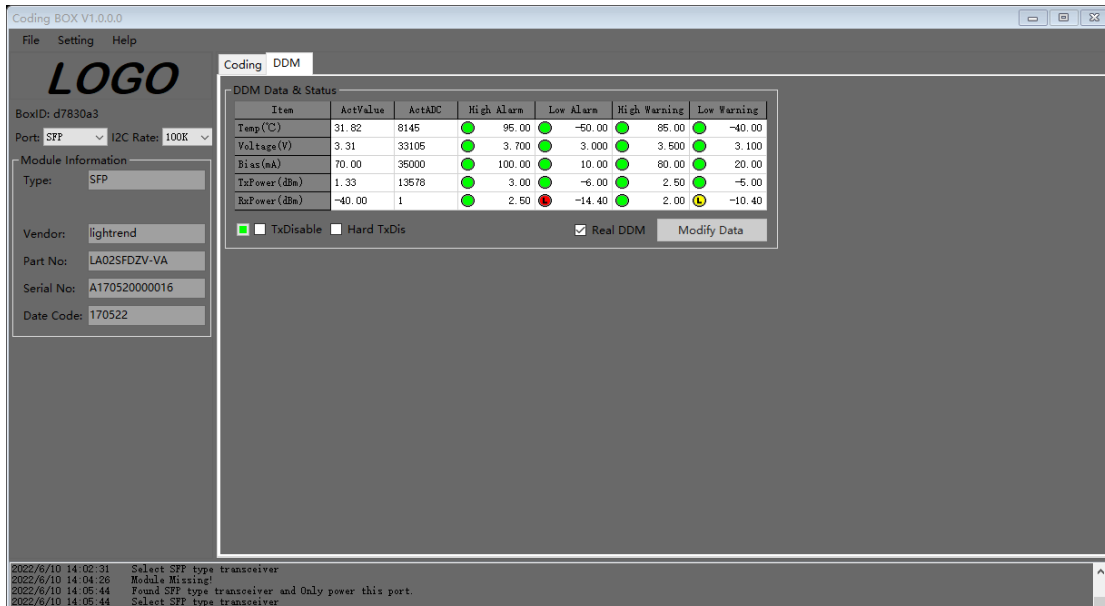
The screenshot shows a software window titled "Coding DDM" with a "LOGO" in the top left. The interface is divided into several sections:

- BoxID:** d7830a3
- Port:** SFP (dropdown), **I2C Rate:** 100K (dropdown)
- Module Information:**
 - Type: SFP
 - Vendor: lightrend
 - Part No: LA02SFDZV-VA
 - Serial No: A17052000016
 - Date Code: 170522
- DDM Data & Status:**

Item	ActValue	ActADC	High Alarm	Low Alarm	High Warning	Low Warning
Temp(°C)	29.97	7673	● 95.00	● -50.00	● 85.00	● -40.00
Voltage(V)	3.40	33996	● 3.700	● 3.000	● 3.500	● 3.100
Bias(mA)	0.00	0	● 100.00	● 10.00	● 80.00	● 20.00
TxPower(dBm)	-40.00	1	● 3.00	● -6.00	● 2.50	● -5.00
RxPower(dBm)	-40.00	1	● 2.50	● -14.40	● 2.00	● -10.40
- Control Options:**
 - TxDisable
 - Hard TxDis
 - Real DDM
 - Modify Data
- Log:**

```

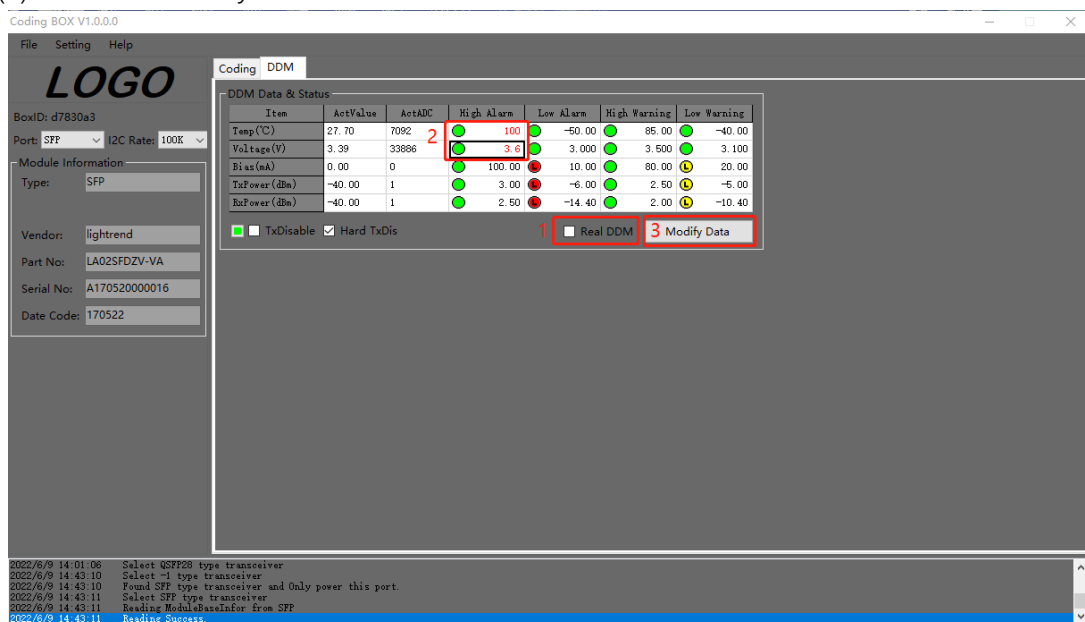
2022/6/10 14:02:31 Select SFP type transceiver
2022/6/10 14:04:26 Module Missing!
2022/6/10 14:05:44 Found SFP type transceiver and Only power this port.
2022/6/10 14:05:44 Select SFP type transceiver
2022/6/10 14:05:44 Reading ModuleBaseInfor from SFP
2022/6/10 14:15:44 Reading Success
                
```



3.1 Threshold Modification

When the module is inserted into the Coding Box, the software will automatically identify the module type and read the basic information of the current module. Select DDM in the functional area. Such as SFP+ Modules.

- (1) DDM box module is checked by default, DDM real-time update display.
- (2) Uncheck the Real DDM box.
- (3) Check the Password Enable box and enter the password. Note: If the password enable box is not checked, it means that the read process does not use a password.
- (4) You can modify the threshold corresponding to the crazy modification threshold, and the modified threshold will be marked in red.
- (5) Click the Modify Data button to write the threshold to the module.



Modify OK:

The screenshot shows the 'Coding DDM' window in the Coding BOX V1.0.0.0 software. The interface includes a menu bar (File, Setting, Help), a 'LOGO' section, and a 'Module Information' section with fields for BoxID, Port, I2C Rate, Vendor, Part No, Serial No, and Date Code. The main area displays 'DDM Data & Status' with a table of parameters and their values, along with status indicators (green for OK, red for alarm, yellow for warning). A status bar at the bottom shows a log of system events.

Item	ActValue	ActADC	High Alarm	Low Alarm	High Warning	Low Warning
Temp (C)	29.97	7673	100.00	-60.00	85.00	-40.00
Voltage(V)	3.40	33969	3.600	3.000	3.500	3.100
Bias(A)	0.00	0	100.00	10.00	80.00	20.00
TxFPower (dBm)	-40.00	1	3.00	-6.00	2.50	-5.00
RxFPower (dBm)	-40.00	1	2.50	-14.40	2.00	-10.40

TxDisable Hard TxDis Real DDM

```

2022/6/9 14:45:54 Select -1 type transceiver
2022/6/9 14:45:54 Module Missing!
2022/6/9 14:45:56 Found SFP type transceiver and Only power this port.
2022/6/9 14:45:58 Select SFP type transceiver
2022/6/9 14:45:58 Reading ModuleBaseInfor from SFP
2022/6/9 14:45:58 Reading Success
    
```

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