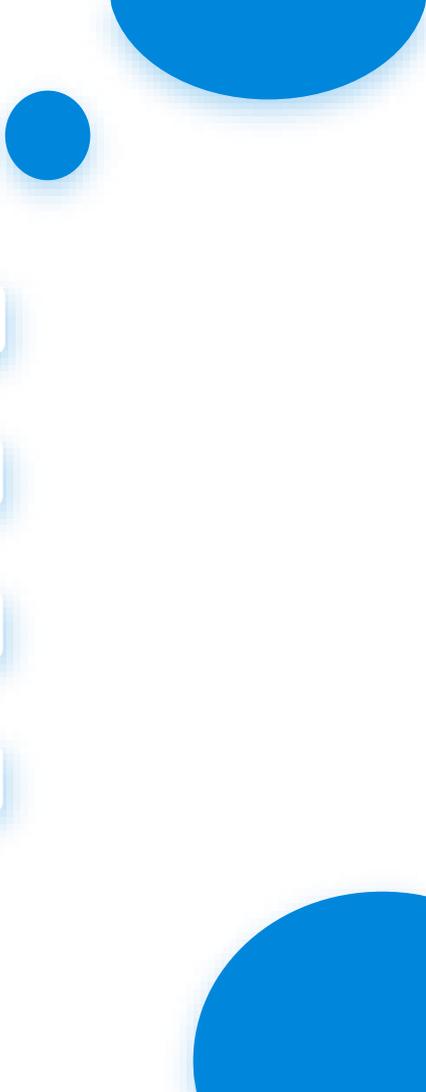


DAI Tool for EUCO Series Quick Start

David.Zhou | SPSBU
2/20/2024



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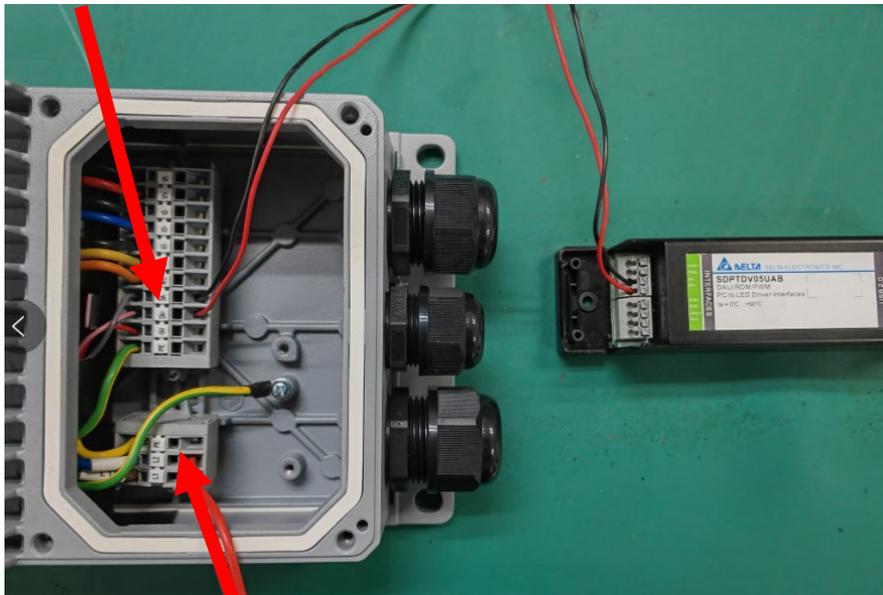
Firmware update



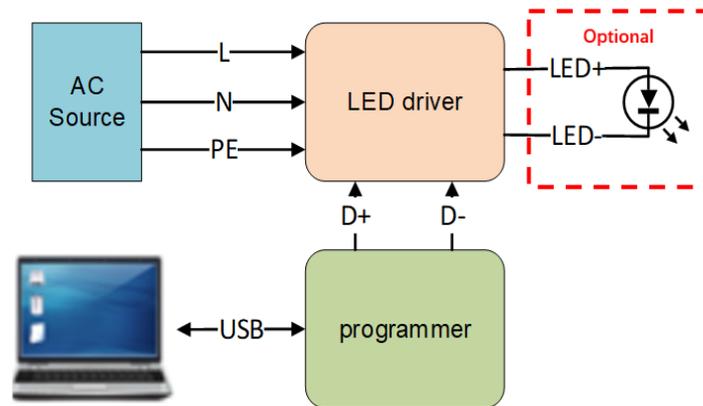
1.Connection

➤ 1.1 Physical connection

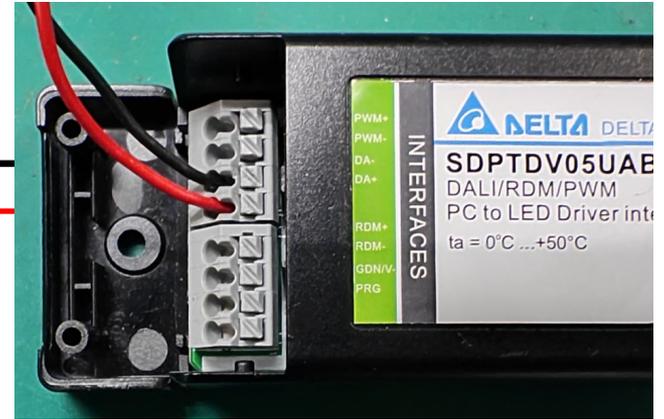
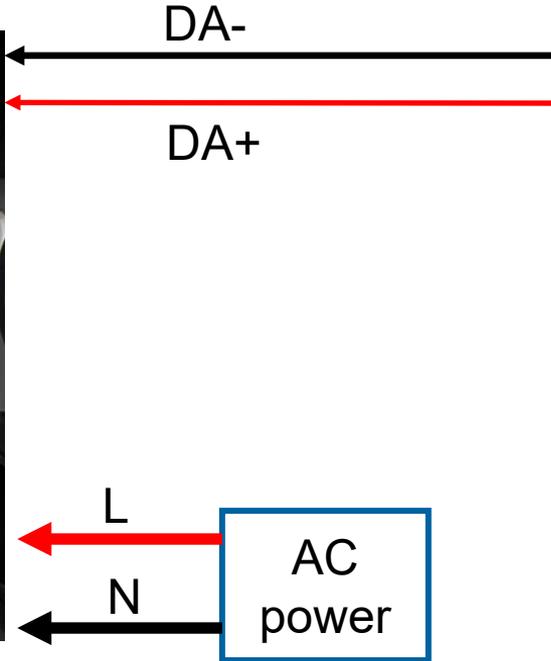
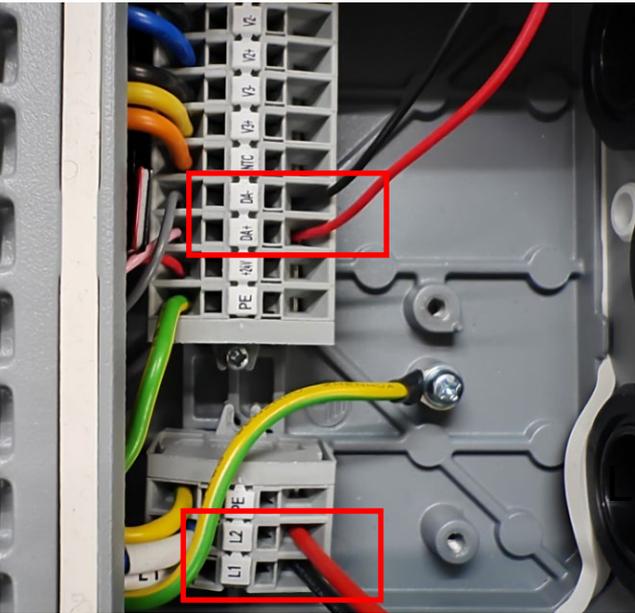
DA+,DA-



AC line: L1, L2,PE(Optional)

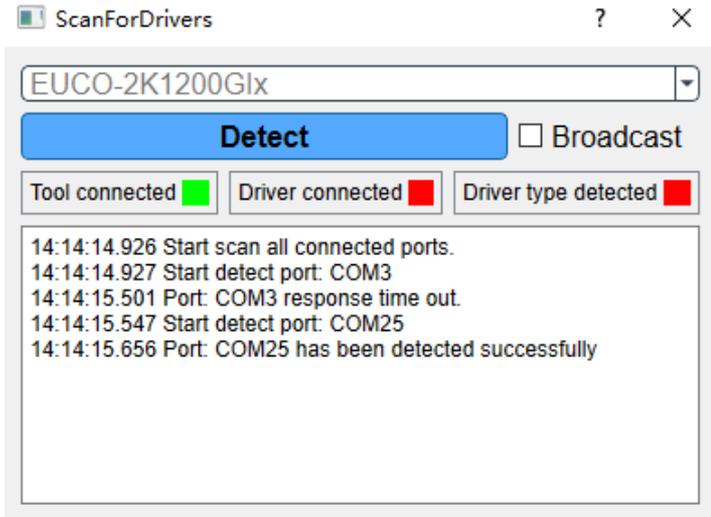


➤ 1.1 Physical connection



➤ 1.2 Open GUI

- ◆ Step 1. After connection, turn on the AC power.
- ◆ Step 2. Open the GUI.



- ◆ State->Tool connected 
- ◆ State-> Driver connected 
- ◆ State-> Driver type detected 

There are two ways to use the GUI:

One by one: Connect only one driver with the programming tool.

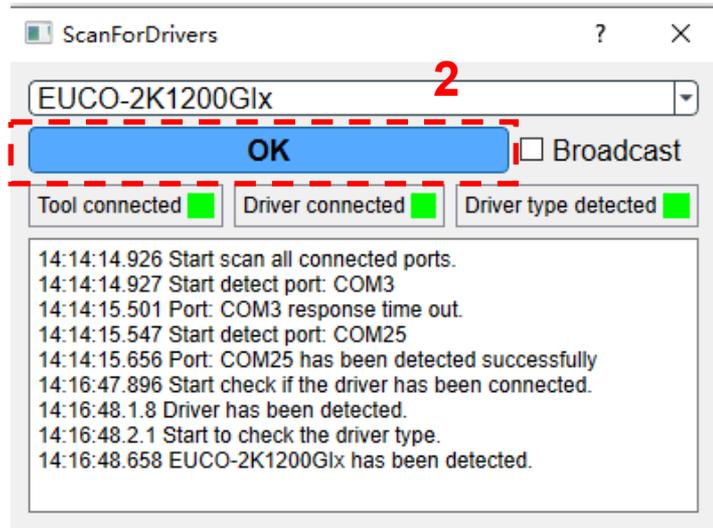
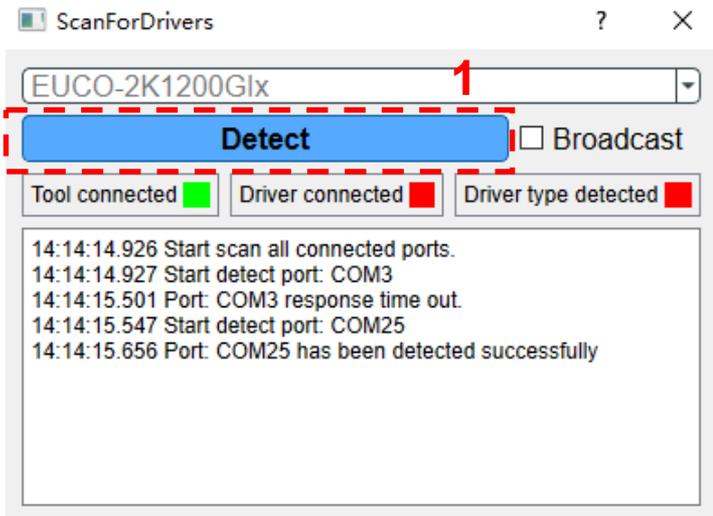
Broadcast: Connect at most 32pcs drivers with the programming tool.

➤ 1.2 Open GUI

One by one:

Step1: Click “Detect button”. The GUI will detect the driver type automatically.

Step2: Click “OK” enter main GUI.

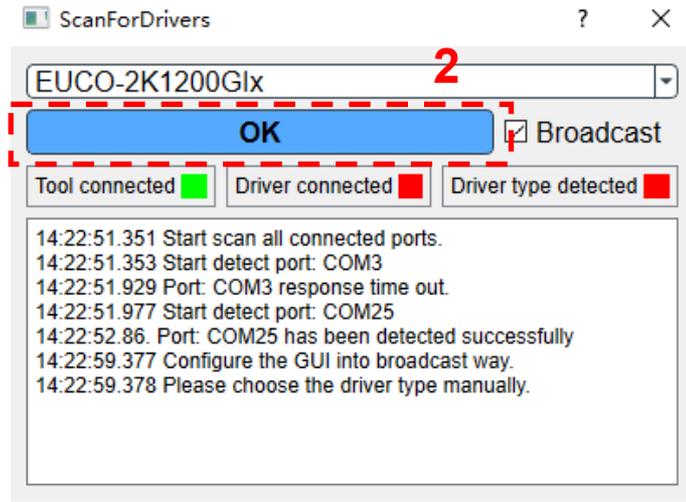
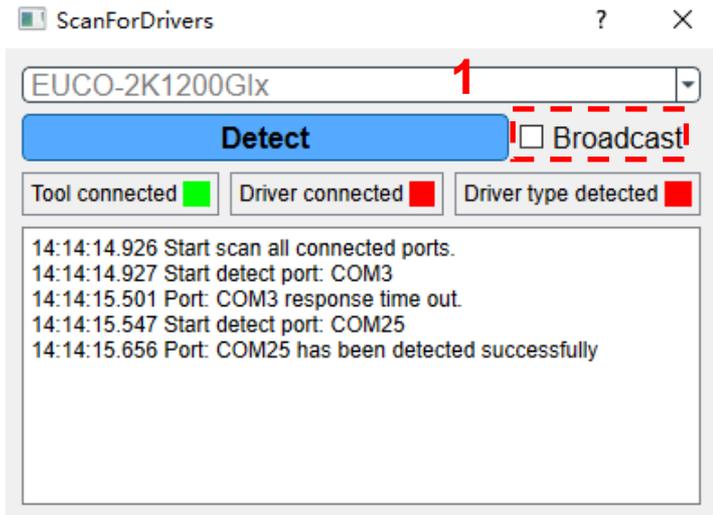


➤ 1.2 Open GUI

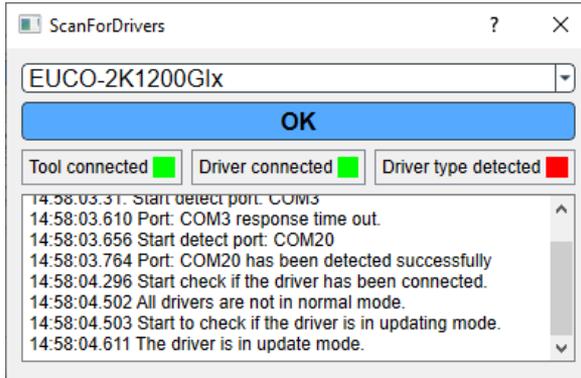
Broadcast:

Step1: Select “Broadcast” checkbox. And choose the drive type manually.

Step2: Click “ OK” enter main GUI.



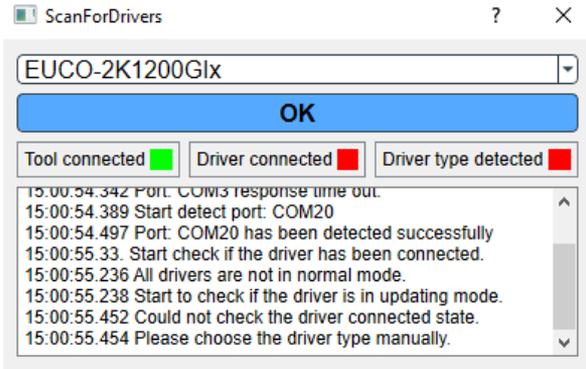
➤ 1.2 Open GUI



- ◆ State-> Tool connected
- ◆ State-> Driver connected
- ◆ State-> Driver type detected



1. Driver is in update mode
2. GUI doesn't support this type of driver



- ◆ State-> Tool connected
- ◆ State-> Driver connected
- ◆ State-> Driver type detected



1. The connection between tool and driver failed.

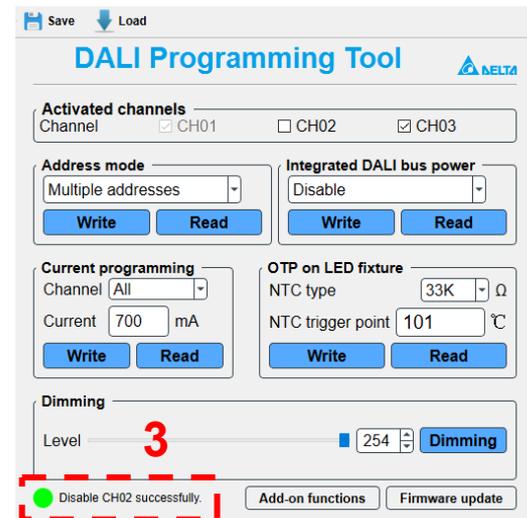
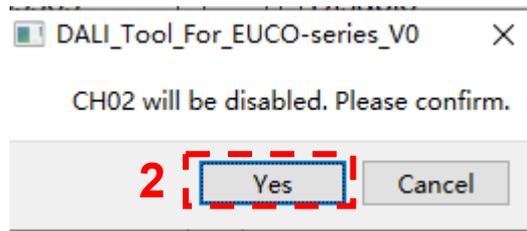
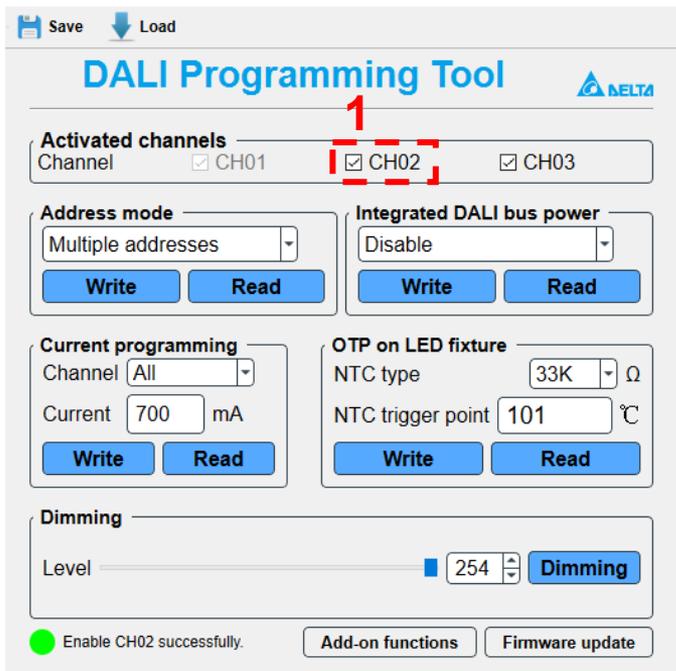
2.Regular function

➤ 2.1 Channel disable

- ◆ Step 1. Click checkbox of the specific channel.
- ◆ Step 2. Click “Yes” button on the pop-out window.
- ◆ Step 3: Check the result in the bottom line.

Disable CH0x successfully: ✓

Disable CH0x Failed: ✗



➤ 2.2 Channel enable

- ◆ Step 1. Click checkbox of the specific channel.
- ◆ Step 2. Click “Yes” button on the pop-out window.
- ◆ Step 3: Check the result in the bottom line.

Enable CH0x successfully: ✓

Enable CH0x Failed: ✗

Save Load

DALI Programming Tool

Activated channels
Channel CH01 CH02 CH03

Address mode
Multiple addresses
Write Read

Integrated DALI bus power
Disable
Write Read

Current programming
Channel All
Current 700 mA
Write Read

OTP on LED fixture
NTC type 33K Ω
NTC trigger point 101 °C
Write Read

Dimming
Level 254 Dimming

● Disable CH02 successfully. Add-on functions Firmware update

DALI_Tool_For_EUCO-series_V0 ✕

CH02 will be enabled. Please confirm.

2 Yes Cancel

Save Load

DALI Programming Tool

Activated channels
Channel CH01 CH02 CH03

Address mode
Multiple addresses
Write Read

Integrated DALI bus power
Disable
Write Read

Current programming
Channel All
Current 700 mA
Write Read

OTP on LED fixture
NTC type 33K Ω
NTC trigger point 101 °C
Write Read

Dimming
Level 254 Dimming

● Enable CH02 successfully Add-on functions Firmware update

➤ 2.3 address mode

- ◆ Step 1. Choose the operating mode.
Click “**Write**” button.
- ◆ Step 2. Check writing status from bottom line.

Write address mode successful: ✓

Write address mode failed: ✗

Save Load

DALI Programming Tool

Address mode: Single address

Integrated DALI bus power: Disable

Current programming: Channel All, Current 2000 mA

OTP on LED fixture: NTC type 33K Ω, NTC trigger point 100 °C

Dimming: Level 254

Write Read Write Read Write Read Write Read

Write address mode successfully!

Add-on functions Firmware update

Single address



Multiple addresses



➤ 2.3 address mode

- ◆ Step 1. Click “**Read**” button.
- ◆ Step 2. Check reading status from bottom line

Read address mode successful: ✓
Read address mode failed: ✗

The screenshot displays the DALI Programming Tool interface. At the top, there are 'Save' and 'Load' buttons. The main title is 'DALI Programming Tool' with the DELTA logo. The interface is divided into several sections:

- Address mode:** A dropdown menu is set to 'Multiple addresses'. Below it are 'Write' and 'Read' buttons. The 'Read' button is highlighted with a red dashed box, and a red '1' is placed next to it.
- Integrated DALI bus power:** A dropdown menu is set to 'Disable'. Below it are 'Write' and 'Read' buttons.
- Current programming:** A dropdown menu is set to 'All', and a text input field contains '2000' mA. Below are 'Write' and 'Read' buttons. A red '1' is placed next to this section.
- OTP on LED fixture:** A dropdown menu is set to '33K' Ω, and a text input field contains '100' °C. Below are 'Write' and 'Read' buttons.
- Dimming:** A slider is set to '254', and a 'Dimming' button is present. A red '2' is placed next to this section.
- Status bar:** A green circle indicates success, followed by the text 'Read address mode successfully.' and two buttons: 'Add-on functions' and 'Firmware update'. A red dashed box highlights the status bar area.

➤ 2.4 DALI bus power

DALI bus power state-> IEC 62386 Part 250, memory bank201, location 0x06

The screenshot shows the DALI Programming Tool interface. The 'Integrated DALI bus power' section is highlighted with a red dashed box. It contains a dropdown menu set to 'Disable' and 'Write' and 'Read' buttons. Other sections include 'Address mode' (Single address), 'Current programming' (Channel: All, Current: 2000 mA), 'OTP on LED fixture' (NTC type: 33K, NTC trigger point: 100 °C), and 'Dimming' (Level: 254). A green status indicator at the bottom left indicates 'Read information successfully.' and there are buttons for 'Add-on functions' and 'Firmware update'.

9.2.3 Memory bank 201, device identification (Mandatory)

Address	Description	Default value (factory)	RESET value ^a	Memory type
0x00	Address of last addressable memory location	0x06	No change	ROM
0x01	Indicator byte	Manufacturer specific	Manufacturer specific	Manufacturer specific
0x02	Lock byte Lockable bytes in the memory bank shall be read-only while the lock byte has a value different from 0x55.	0xFF	0xFF ^b	RAM-RW
0x03	Version of the memory bank	0x01	No change	ROM
0x04	Guaranteed supply current of integrated DALI bus power supply (in mA); Range: [0x32, maximum supply current]	Manufacturer specific	No change	ROM
0x05	Maximum supply current of integrated DALI bus power supply (in mA); Range [Guaranteed supply current, 0xFA]	Manufacturer specific	No change	ROM
0x06	DALI bus power supply status (on = 0x01, off = 0x00)	Manufacturer specific	No change	NVM-RW (protectable) ^c

^a Reset value after "RESET MEMORY BANK".

^b Also used as power on value.

^c This field is write protectable.

➤ 2.4 DALI bus power

- ◆ Step 1. Choose DALI bus power state
Click “**Write**” button.
- ◆ Step 2. Check writing status from bottom line.

The screenshot shows the DALI Programming Tool interface. At the top, there are 'Save' and 'Load' buttons. The main title is 'DALI Programming Tool' with the DELTA logo. The interface is divided into several sections:

- Address mode:** A dropdown menu set to 'Multiple addresses' with a red '1' next to it. Below it are 'Write' and 'Read' buttons.
- Integrated DALI bus power:** A dropdown menu set to 'Disable'. Below it are 'Write' and 'Read' buttons. The 'Write' button is highlighted with a red dashed box.
- Current programming:** A dropdown menu set to 'All', a text input for 'Current' set to '2000 mA', and 'Write' and 'Read' buttons.
- OTP on LED fixture:** A dropdown menu set to '33K Ω', a text input for 'NTC trigger point' set to '100 °C', and 'Write' and 'Read' buttons.
- Dimming:** A slider set to '254' and a 'Dimming' button. A red '2' is placed below the slider.

At the bottom, there is a status bar with a green circle icon and the text 'Write DALI power successfully.' followed by 'Add-on functions' and 'Firmware update' buttons. The status bar is highlighted with a red dashed box.

Write DALI power successful: ✓
Write DALI power failed: ✗

➤ 2.4 DALI bus power

- ◆ Step 1. Click “**Read**” button.
- ◆ Step 2. Check reading status from bottom line.

Read DALI power state successful: ✓
Read DALI power state failed: ✕

The screenshot shows the DALI Programming Tool interface. At the top, there are 'Save' and 'Load' buttons. The title is 'DALI Programming Tool' with the DELTA logo. The interface is divided into several sections:

- Address mode:** A dropdown menu set to 'Multiple addresses' with 'Write' and 'Read' buttons below it.
- Integrated DALI bus power:** A dropdown menu set to 'Disable' with 'Write' and 'Read' buttons below it. A red dashed box highlights the 'Read' button, and a red arrow labeled '1' points to it.
- Current programming:** A dropdown menu set to 'All', a text input for 'Current' set to '2000 mA', and 'Write' and 'Read' buttons below it.
- OTP on LED fixture:** A dropdown menu set to '33K' Ω , a text input for 'NTC trigger point' set to '100' $^{\circ}\text{C}$, and 'Write' and 'Read' buttons below it.
- Dimming:** A slider set to '254' and a 'Dimming' button.

At the bottom, a status bar shows a green circle and the text 'Read DALI power state successfully', which is highlighted by a red dashed box and a red arrow labeled '2'. To the right of this text are 'Add-on function:' and 'Firmware update' buttons.

➤ 2.5 Current programming

Save Load

DALI Programming Tool

Address mode: Single address [Write] [Read]

Integrated DALI bus power: Disable [Write] [Read]

Current programming (highlighted): Channel: All, Current: 2000 mA [Write] [Read]

OTP on LED fixture: NTC type: 33K Ω, NTC trigger point: 100 °C [Write] [Read]

Dimming: Level: 254 [Dimming]

Read information successfully. [Add-on functions] [Firmware update]

Current programming

Channel: All

Current: All, CH01, CH02, CH03 mA

[Write] [Read]

- ◆ **Channel: All**-> All channel are programmed to same current.
- ◆ **Channel: CH0x**-> Program the specific channel.

Current range: 700mA~2000mA

➤ 2.5 Current programming

The screenshot shows the DALI Programming Tool interface. At the top, there are 'Save' and 'Load' buttons. The main title is 'DALI Programming Tool' with the DELTA logo. Below the title, there are two sections: 'Address mode' and 'Integrated DALI bus power'. The 'Address mode' section has a dropdown menu set to 'Multiple addresses' and 'Write' and 'Read' buttons. The 'Integrated DALI bus power' section has a dropdown menu set to 'Disable' and 'Write' and 'Read' buttons. Below these are two more sections: 'Current programming' and 'OTP on LED fixture'. The 'Current programming' section has a 'Channel' dropdown set to 'All', a 'Current' input field set to '700 mA', and 'Write' and 'Read' buttons. The 'OTP on LED fixture' section has an 'NTC type' dropdown set to '33K Ω', an 'NTC trigger point' input field set to '100 °C', and 'Write' and 'Read' buttons. Below these is a 'Dimming' section with a 'Level' slider set to '254' and a 'Dimming' button. At the bottom, there is a status bar with a green circle and the text 'Program output current successfully.' followed by 'Add-on function:' and 'Firmware update' buttons. A red dashed box highlights the 'Write' button in the 'Current programming' section, with a red arrow pointing to it. Another red dashed box highlights the status bar, with a red number '2' next to it.

- ◆ Step 1. Key in output current and programmed channel. Click **“Write”** button.
- ◆ Step 2. Check writing status from bottom line.

Program output current successfully: ✓
Program output current failed: ✗



➤ 2.5 Current programming

The screenshot shows the DALI Programming Tool interface with the following sections:

- Address mode:** Multiple addresses (dropdown), Write, Read buttons.
- Integrated DALI bus power:** Disable (dropdown), Write, Read buttons.
- Current programming:** Channel: All (dropdown), Current: 700 mA, Write, Read buttons. The Read button is highlighted with a red dashed box and a red '1' below it.
- OTP on LED fixture:** NTC type: 33K (dropdown), NTC trigger point: 100 (input), Write, Read buttons.
- Dimming:** Level: 254 (slider), Dimming button.
- Status bar:** A green circle icon and the text "Read programmed current successfully" are highlighted with a red dashed box and a red '2' below it. Other buttons include "Add-on function" and "Firmware update".

- ◆ Step 1. Select output channel. Click “**Read**” button.
- ◆ Step 2. Check reading status from bottom line.

Read programmed current successful: ✓

Read programmed current failed: ✗

➤ 2.6 OTP on LED fixture

The screenshot shows the DALI Programming Tool interface. At the top, there are 'Save' and 'Load' buttons. The title 'DALI Programming Tool' is displayed in blue, with the DELTA logo to the right. Below the title, there are two main sections: 'Address mode' and 'Integrated DALI bus power'. The 'Address mode' section has a dropdown menu set to 'Single address' and 'Write' and 'Read' buttons. The 'Integrated DALI bus power' section has a dropdown menu set to 'Disable' and 'Write' and 'Read' buttons. Below these, there are two more sections: 'Current programming' and 'OTP on LED fixture'. The 'Current programming' section has a 'Channel' dropdown set to 'All', a 'Current' input field set to '2000 mA', and 'Write' and 'Read' buttons. The 'OTP on LED fixture' section is highlighted with a red dashed border and contains an 'NTC type' dropdown set to '33K Ω' and an 'NTC trigger point' input field set to '100 °C', with 'Write' and 'Read' buttons. At the bottom, there is a 'Dimming' section with a 'Level' slider set to '254' and a 'Dimming' button. A green status indicator shows 'Read information successfully.' and there are 'Add-on functions' and 'Firmware update' buttons.

NTC type: 33K Ω or 10K Ω . Before changing the NTC type, please make sure the driver supports this type of NTC.

Trigger point: 70 $^{\circ}$ C~120 $^{\circ}$ C

➤ 2.6 OTP on LED fixture

The screenshot shows the DALI Programming Tool interface. At the top, there are 'Save' and 'Load' buttons. The main title is 'DALI Programming Tool' with the DELTA logo. The interface is divided into several sections:

- Address mode:** A dropdown menu set to 'Multiple addresses' with 'Write' and 'Read' buttons below it.
- Integrated DALI bus power:** A dropdown menu set to 'Disable' with 'Write' and 'Read' buttons below it.
- Current programming:** A dropdown menu set to 'All', a text input for 'Current' set to '700 mA', and 'Write' and 'Read' buttons below it.
- OTP on LED fixture:** A dropdown menu set to '10K' with a unit symbol 'Ω', a text input for 'NTC trigger point' set to '100' with a unit symbol '°C', and 'Write' and 'Read' buttons below it. The 'Write' button is highlighted with a red dashed box and a red '1' above it.
- Dimming:** A slider set to '254' with a 'Dimming' button to its right. A red '2' is placed above the slider.
- Status bar:** A green circle icon followed by the text 'Write OTP successfully.' which is enclosed in a red dashed box.
- Bottom buttons:** 'Add-on functions' and 'Firmware update' buttons.

- ◆ Step 1. Choose NTC type and key in the OTP trigger point. Click “**Write**” button.
- ◆ Step 2. Check writing status from bottom line.

Write OTP successful: ✓

Write OTP failed: ✗

➤ 2.6 OTP on LED fixture

The screenshot shows the DALI Programming Tool interface with the following sections:

- Address mode:** Multiple addresses (dropdown), Write, Read buttons.
- Integrated DALI bus power:** Disable (dropdown), Write, Read buttons.
- Current programming:** Channel: All (dropdown), Current: 700 mA, Write, Read buttons.
- OTP on LED fixture:** NTC type: 10K Ω (dropdown), NTC trigger point: 100 °C (input field), Write, Read buttons. A red dashed box highlights the Read button, with a red '1' below it.
- Dimming:** Level: 254 (slider), Dimming button.
- Status bar:** A green circle icon and the text "Read OTP successfully." are highlighted with a red dashed box, with a red '2' below it. Other buttons include "Add-on functions" and "Firmware update".

- ◆ Step 1. Click “**Read**” button.
- ◆ Step 2. Check reading status from bottom line.

Read OTP successful: ✓

Read OTP failed: ✗

➤ 2.7 Dimming control by the tool

Click the “Dimming” button will send out “DAPC” command in broadcast way.

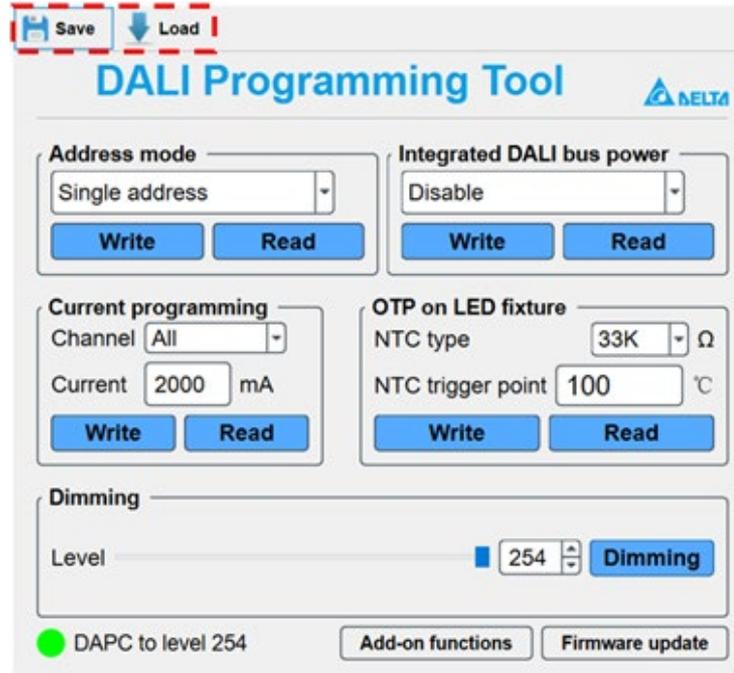
The screenshot displays the DALI Programming Tool interface. At the top, there are 'Save' and 'Load' buttons. The title 'DALI Programming Tool' is prominently displayed in blue, with the DELTA logo to its right. The interface is organized into several sections:

- Address mode:** A dropdown menu set to 'Single address', with 'Write' and 'Read' buttons below it.
- Integrated DALI bus power:** A dropdown menu set to 'Disable', with 'Write' and 'Read' buttons below it.
- Current programming:** A 'Channel' dropdown set to 'All', a 'Current' input field set to '2000 mA', and 'Write' and 'Read' buttons below it.
- OTP on LED fixture:** An 'NTC type' dropdown set to '33K Ω ', an 'NTC trigger point' input field set to '100 $^{\circ}\text{C}$ ', and 'Write' and 'Read' buttons below it.
- Dimming:** This section is enclosed in a red dashed border. It features a 'Level' slider with a blue bar and a numeric input field set to '254'. A blue 'Dimming' button is positioned to the right of the input field.

At the bottom of the interface, a green status indicator is followed by the text 'DAPC to level 254'. To the right, there are two buttons: 'Add-on functions' and 'Firmware update'.

➤ 2.8 Save & Load profile

The GUI can save all current parameters in the main GUI. The saved file could be copied or used in another PC.



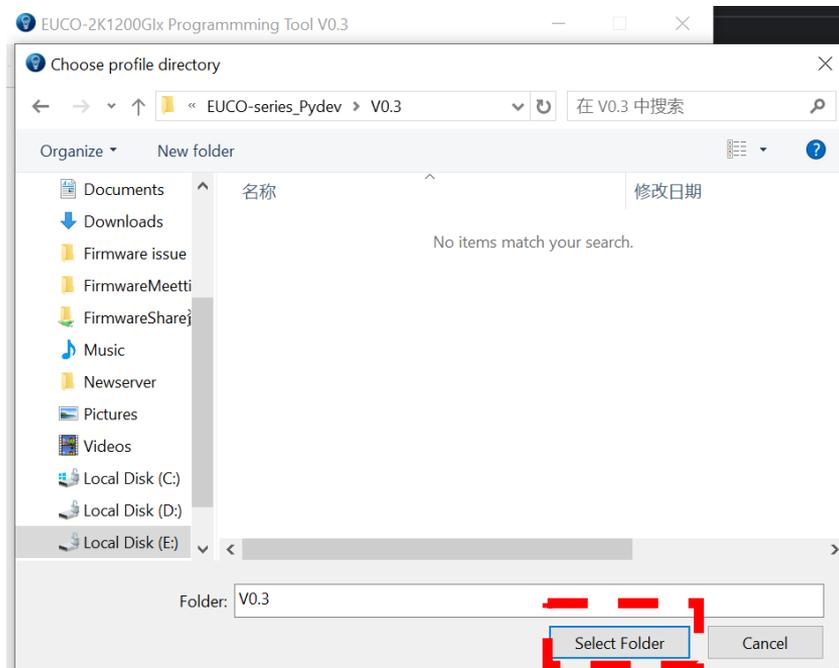
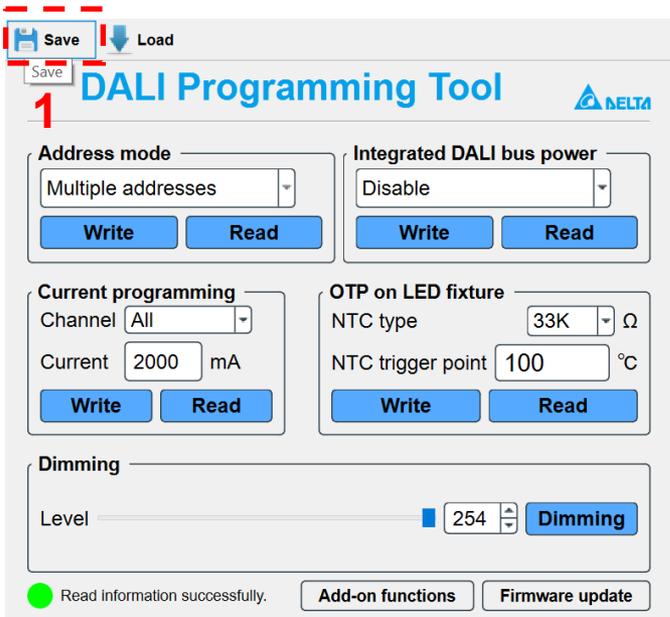
The screenshot displays the 'DALI Programming Tool' interface. At the top left, a red dashed box highlights the 'Save' and 'Load' buttons. The main interface is divided into several sections:

- Address mode:** A dropdown menu set to 'Single address' with 'Write' and 'Read' buttons below it.
- Integrated DALI bus power:** A dropdown menu set to 'Disable' with 'Write' and 'Read' buttons below it.
- Current programming:** A dropdown menu set to 'All', a text input for 'Current' set to '2000 mA', and 'Write' and 'Read' buttons below it.
- OTP on LED fixture:** A dropdown menu set to '33K' with a unit symbol 'Ω', a text input for 'NTC trigger point' set to '100' with a unit symbol '°C', and 'Write' and 'Read' buttons below it.
- Dimming:** A horizontal slider with a blue bar and a text input set to '254', followed by a 'Dimming' button.

At the bottom, there is a green status indicator labeled 'DAPC to level 254', and two buttons: 'Add-on functions' and 'Firmware update'.

➤ 2.8 Save & Load profile

Step1: Click “Save” button. Then choose the file directory. Click “Select folder”. The profile will be saved.

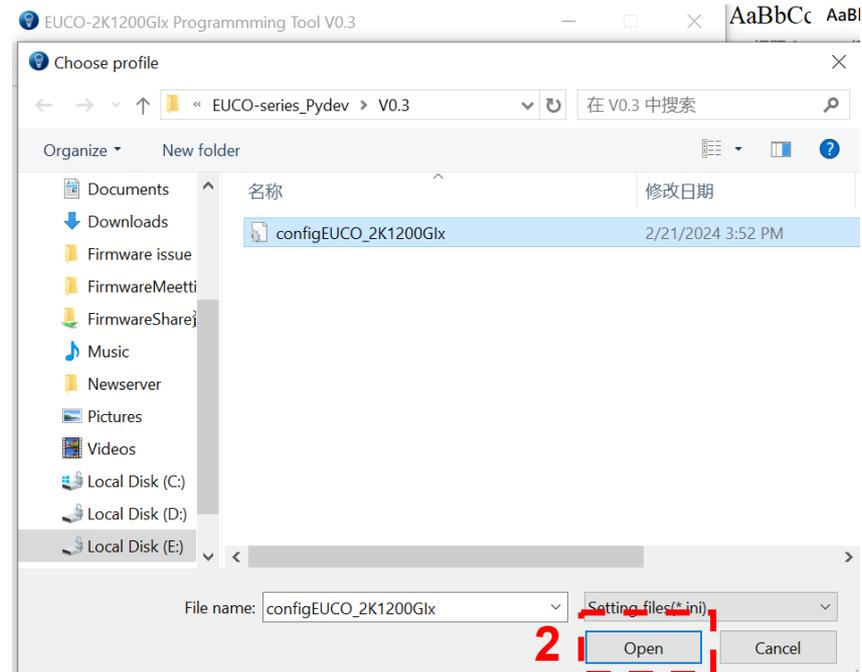
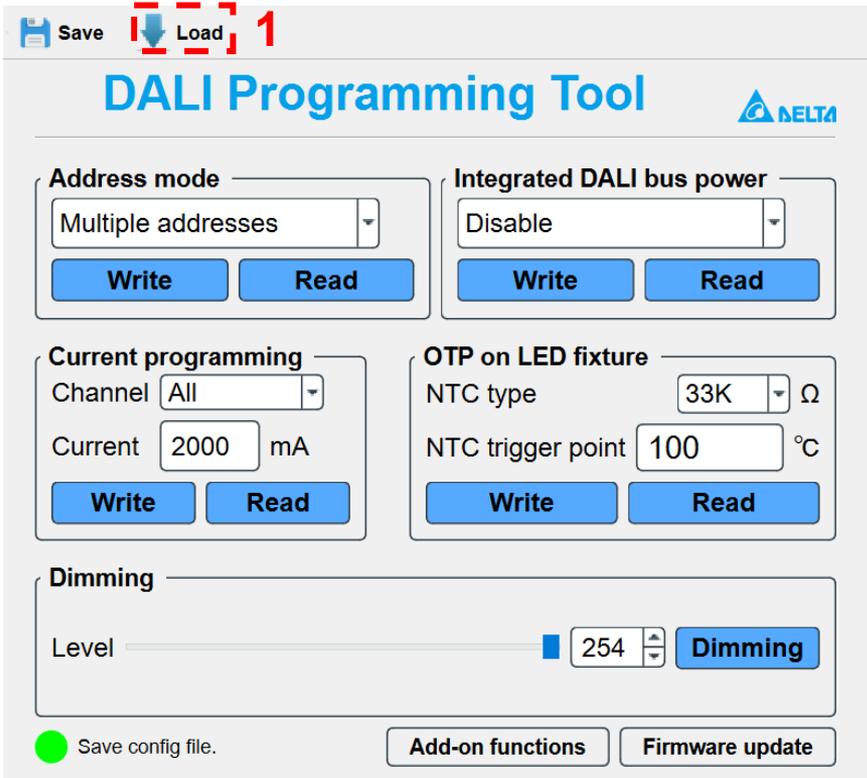


Saved file

configEUCO_2K1200Glx	2/21/2024 3:52 PM	Configuration settings	1 KB
DALI_Tool_For_EUCO-series User Manual V0.3	2/19/2024 11:41 AM	Microsoft Word 文档	3,415 KB
DALI_Tool_For_EUCO-series_V0.3	2/19/2024 11:42 AM	Application	37,909 KB

➤ 2.8 Save & Load profile

Step1: Click “Load” button. Then choose the saved profile. Click “Open”. The profile will be loaded.



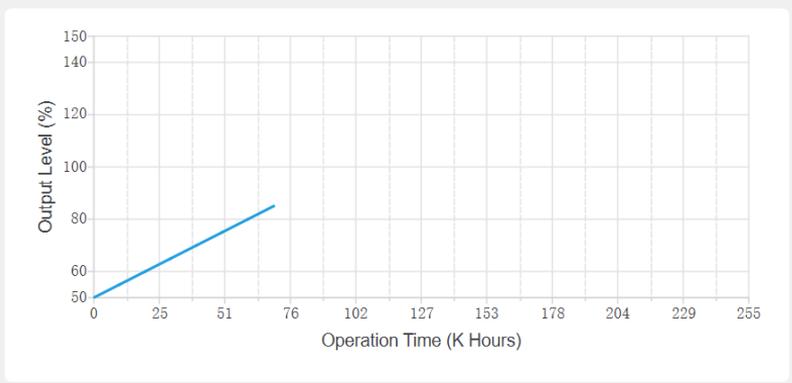
3.Add on functions

➤ 3 Add on functions

Click “Add-on functions” in the bottom line will active add on functions: DALI config, DALI part 251, DALI part 252, DALI part 253, Constant lumen, Smart timer dim

DALI Config Part 251 Part 252 Part 253 Constant lumen Smart timer dim

Constant lumen output curve



Operation Time (K Hours)	Output Level (%)
0	50
25	60
51	70
76	85

Setting

kHours	Percent/%
0	50
10	55
20	60
30	65
40	70
50	75
60	80
70	85

Read Write

Information

CH1 start time	<input type="text" value="0"/>	hours	Read	Enable
CH2 start time	<input type="text" value="0"/>	hours		
CH3 start time	<input type="text" value="0"/>	hours	Clear	Disable



Extra functions tab

➤ 3.1 DALI config

The group provide some usual functions for DALI config. It should be noted that all these DALI configuration are sent in broadcast way.

DALI Config | Part 251 | Part 252 | Part 253 | Constant lumen output | Smart timer dim

Dim Parameters

Power on level	0	Fade time	0 (0s)
System failure level	0	Ex fade time	1 X 0 (0ms)
Dimming curve	Log	Fade rate	1 (358steps/s)

Driver information

GTIN	000000000000	ID	000000000000
------	--------------	----	--------------

Status

Control gear failure	NO	Lamp failure	NO	Lamp on	NO	Reset state	NO
Power cycle seen	NO	Limit error	NO	Short address	NO	Fade running	NO

Dim

DAPC	0	Off	Recall max level	Recall min level
Down	UP			

Query

➤ 3.2 DALI Part 251

Please refer to IEC 62386 Part 251 to get more detail about this module.

DALI Config	Part 251	Part 252	Part 253	Constant lumen output	Smart timer dim
-------------	----------	----------	----------	-----------------------	-----------------

Memory bank 1 extension

Luminaire information		Light feature	
Luminaire manufacturer GTIN	<input type="text" value="000000000000"/>	<input type="button" value="Read"/>	<input type="button" value="Write"/>
Luminaire ID	<input type="text" value="0000000000000000"/>	<input type="button" value="Read"/>	<input type="button" value="Write"/>
Luminaire year of manufacture:0-99	<input type="text" value="00"/>	<input type="button" value="Read"/>	<input type="button" value="Write"/>
Luminaire week of manufacture:1-53	<input type="text" value="00"/>	<input type="button" value="Read"/>	<input type="button" value="Write"/>
Luminaire colour			
<input type="text"/>			
		<input type="button" value="Read"/>	<input type="button" value="Write"/>
Luminaire identification string			
<input type="text"/>			
		<input type="button" value="Read"/>	<input type="button" value="Write"/>

➤ 3.3 DALI Part 252

Please refer to IEC 62386 Part 252 to get more detail about this module.

DALI Config	Part 251	Part 252	Part 253	Constant lumen output	Smart timer dim
Energy reporting					
Active energy	<input type="text" value="0"/>	W·H	Active power	<input type="text" value="0"/>	W
Apparent energy	<input type="text" value="0"/>	W·H	Apparent power	<input type="text" value="0"/>	W

➤ 3.3 DALI Part 253

Please refer to IEC 62386 Part 253 to get more detail about this module.

DALI Config	Part 251	Part 252	Part 253	Constant lumen output	Smart timer dim
Diagnostic & Maintenance					
Control gear features	Light source features	Luminaire features			
AC voltage	<input type="text" value="0000"/>	V	AC frequency	<input type="text" value="00"/>	Hz
Power factor					<input type="text" value="00"/>
Control gear operating time	<input type="text" value="00000000"/>	S	Control gear start counter	<input type="text" value="000000"/>	
Overall failure condition	<input type="text" value="00"/>		Overall failure count	<input type="text" value="00"/>	
AC voltage UVP	<input type="text" value="00"/>		AC voltage UVP count	<input type="text" value="00"/>	
AC voltage OVP	<input type="text" value="00"/>		AC voltage OVP count	<input type="text" value="00"/>	
Output power limitation	<input type="text" value="00"/>		Output power limitation count	<input type="text" value="00"/>	
Thermal derating	<input type="text" value="00"/>		Thermal derating count	<input type="text" value="00"/>	
Thermal shutdown	<input type="text" value="00"/>		Thermal shutdown count	<input type="text" value="00"/>	
Control gear supply temperature	<input type="text" value="00"/>	°C			
Control gear output percent	<input type="text" value="00"/>	%			

➤ 3.4 Constant lumen output

Generally speaking, the LED module will get a little darker even with the same output current as the working time increases.

Parameter area: Based on the feature of used LED module, modify the relation of time and output current percent.

Setting area: Reset current time. Enable or disable CLO function.

➤ 3.5 Smart timer dim

The module is used for 24hours automatic dimming. There are all three different modes: Fixed timer, midnight centric timer and ratio rescale timer.

Add-on functions

Constant lumen output Smart timer dim

Smart timer dim curve

Operation Time (HH:MM)	Output Level (%)
00:00 - 01:00	10
02:00 - 05:00	20
06:00 - 13:00	30
14:00 - 17:00	40
18:00 - 23:00	50
00:00 - 01:00	10

Config

Fixed timer

Midnight Shift 0 mins

Read Write

Parameters

Steps/6min	Percent/%	FadeTime/s
2:00	10	1
5:00	20	1
6:00	30	1
4:00	40	1
5:00	50	1

Read Write

Config

Fixed timer

Disable

Fixed timer

Midnight centric timer

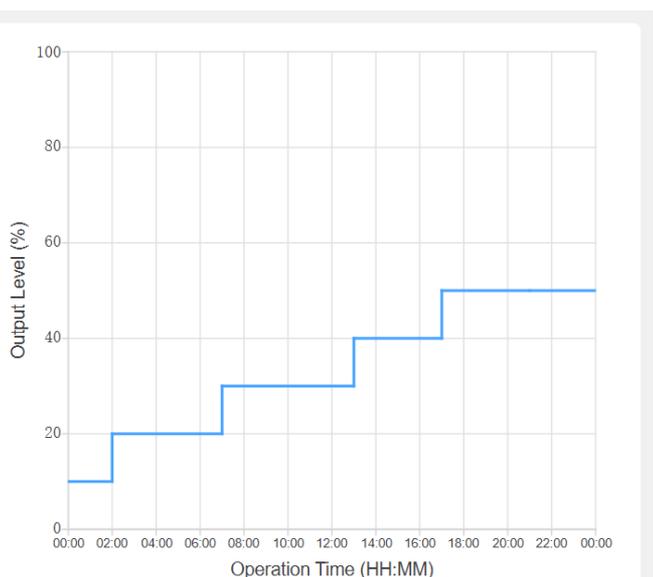
Ratio rescale timer

➤ 3.5 Smart timer dim: Fixed timer

⚙️ Add-on functions

Constant lumen output **Smart timer dim**

Smart timer dim curve



Config

Fixed timer

Midnight Shift mins

Read

Write

Parameters

Steps/6min Percent/% FadeTime/s

2:00 10 1

5:00 20 1

6:00 30 1

4:00 40 1

5:00 50 1

Read

Write



Add-on functions

Time step1 **2:00** means 2hours.00:00->02:00, dim to 10%.

Time step2:**5:00** means 5hours, 02:00->07:00 dim to 20% .

Time step3:**6:00** means 6hours, 07:00->13:00 dim to 30% .

Time step4:**4:00** means 6hours, 13:00->17:00 dim to 40% .

Time step5: the value has no meaning. 17:00->24:00 dim to 50% .

➤ 3.5 Smart timer dim: Midnight centric timer

Add-on functions

Constant lumen output Smart timer dim

Smart timer dim curve

Operation Time (HH:MM)	Output Level (%)
12:00 - 16:00	50
16:00 - 20:00	10
20:00 - 02:00	20
02:00 - 04:00	30
04:00 - 06:00	40
06:00 - 08:00	50
08:00 - 12:00	50

Config

Midnight centric timer

Midnight Shift mins

Read Write

Parameters

Steps/6min	Percent/%	FadeTime/s
<input type="text" value="16:00"/>	<input type="text" value="10"/>	<input type="text" value="1"/>
<input type="text" value="20:00"/>	<input type="text" value="20"/>	<input type="text" value="1"/>
<input type="text" value="1:00"/>	<input type="text" value="30"/>	<input type="text" value="1"/>
<input type="text" value="3:00"/>	<input type="text" value="40"/>	<input type="text" value="1"/>
<input type="text" value="5:00"/>	<input type="text" value="50"/>	<input type="text" value="1"/>

Read Write

Add-on functions

This mode supposes the driver's work time two days before are 00:00 centered, such like from 20:00->08:00 next day.

Then setting the parameter will reassign the dimming process in this time range.

➤ 3.5 Smart timer dim: Ratio rescale timer

Constant lumen output Smart timer dim

Smart timer dim curve

Operation Time (HH:MM)	Output Level (%)
00:00 - 02:00	10
02:00 - 06:00	20
06:00 - 12:00	30
12:00 - 00:00	40

Config

Ratio rescale timer

Midnight Shift mins

Read Write

Parameters

Steps/6min	Percent/%	FadeTime/s
<input type="text" value="2:00"/>	<input type="text" value="10"/>	<input type="text" value="1"/>
<input type="text" value="5:00"/>	<input type="text" value="20"/>	<input type="text" value="1"/>
<input type="text" value="6:00"/>	<input type="text" value="30"/>	<input type="text" value="1"/>
<input type="text" value="12:00"/>	<input type="text" value="40"/>	<input type="text" value="1"/>
<input type="text" value="16:00"/>	<input type="text" value="50"/>	<input type="text" value="1"/>

Read Write



Add-on functions

This mode is very similar with the fixed timer mode. In fixed timer mode, we assign 24hours dimming process. However, in this mode, it is allowed to assign the time slot of two day before. All time steps will equally scaled down from 24hours setting to the record time slot.

4. Firmware update

➤ 4. Firmware update

The screenshot shows the DALI Programming Tool interface. At the top, there are 'Save' and 'Load' buttons. The main title is 'DALI Programming Tool' with the DELTA logo. The interface is divided into several sections:

- Address mode:** A dropdown menu set to 'Multiple addresses' with 'Write' and 'Read' buttons below it.
- Integrated DALI bus power:** A dropdown menu set to 'Disable' with 'Write' and 'Read' buttons below it.
- Current programming:** A dropdown menu set to 'All', a text input for 'Current' set to '2000 mA', and 'Write' and 'Read' buttons below it.
- OTP on LED fixture:** A dropdown menu set to '33K' Ω , a text input for 'NTC trigger point' set to '100' $^{\circ}\text{C}$, and 'Write' and 'Read' buttons below it.
- Dimming:** A slider set to '254' with a 'Dimming' button.

At the bottom, there is a status bar with a green circle and the text 'Read information successfully.' To the right of the status bar are two buttons: 'Add-on functions' and 'Firmware update'. The 'Firmware update' button is highlighted with a red dashed border.

The screenshot shows the 'Firmware Update' dialog box. It has a title bar with a question mark and a close button. The dialog contains the following elements:

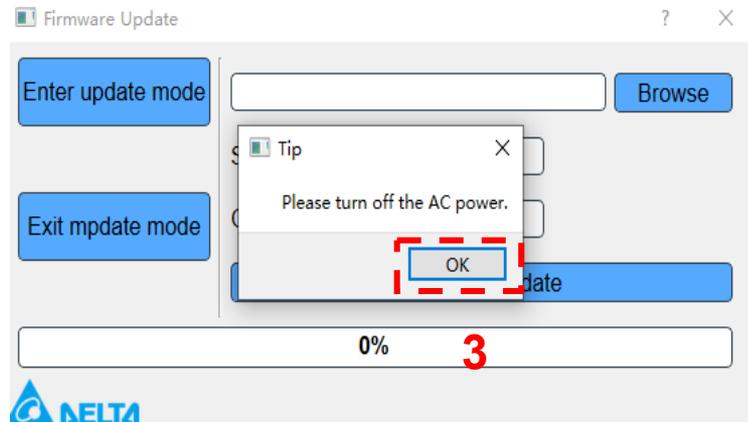
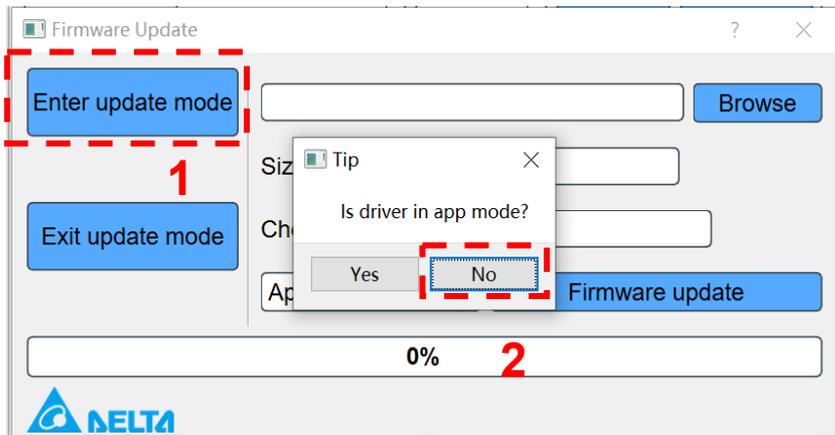
- An 'Enter update mode' button next to a text input field and a 'Browse' button.
- An 'Exit update mode' button.
- A 'Size' text input field.
- A 'Checksum' text input field.
- An 'Application' dropdown menu and a 'Firmware update' button.
- A progress bar showing '0%'.
- The DELTA logo at the bottom left.

Click the “Firmware update” button will activate the firmware update function.

➤ 4.1 Enter update mode: AC power off

Step1: click the button “Enter update mode”.

Step2: Click button “OK”

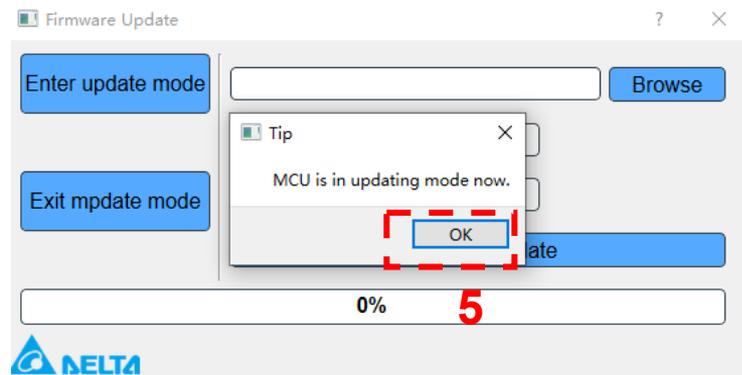
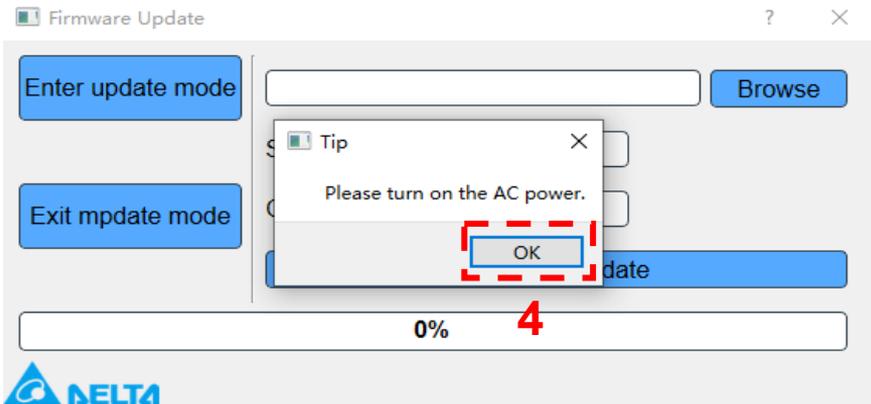


Step3: Power off the driver. Then click the button “OK”

➤ 4.1 Enter update mode: AC power off

Step4: Wait for the driver completely off. Click the button “OK”

Step5: Normally, the driver will enter update mode successfully.



➤ 4.1 Enter update mode: Normal app mode

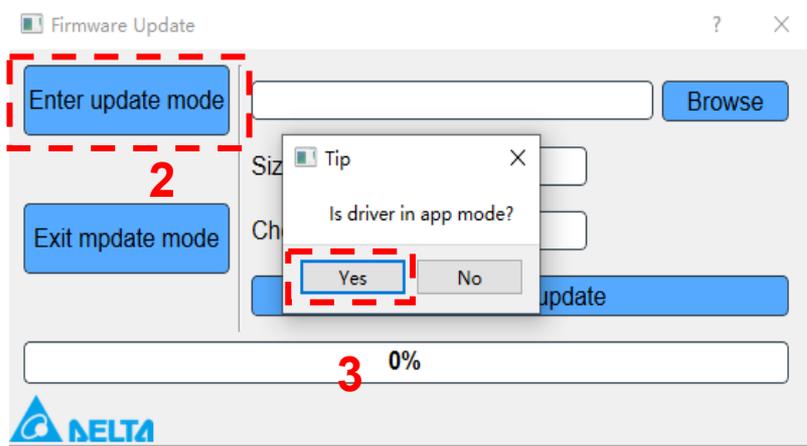
The screenshot shows the 'DMX512&RDM Program Tool' interface. At the top, there are 'Save' and 'Load' icons. The title bar reads 'DMX512&RDM Program Tool' with the DELTA logo. The main content is organized into several sections:

- Operating mode:** Includes a 'Mode' dropdown set to 'Single address', a 'CH01' dropdown, and 'Write' and 'Read' buttons.
- DMX512 default level:** Features a 'Level' input set to '255' with up/down arrows, and 'Write' and 'Read' buttons.
- Device address:** Features an 'Address' input set to '1' with up/down arrows, and 'Write' and 'Read' buttons.
- Current programming:** Includes a 'Channel' dropdown set to 'All', a 'Current' input set to '2000' mA, and 'Write' and 'Read' buttons.
- OTP on LED fixture:** Includes an 'NTC type' dropdown set to '33K' Ω , a 'Trigger point' input set to '100' $^{\circ}\text{C}$, and 'Write' and 'Read' buttons.
- Dimming:** Features a 'Level' slider and a 'Dimming' button.

At the bottom, a green indicator shows 'Tool connected.', and there are buttons for 'Add-on functions' and 'Firmware update'.

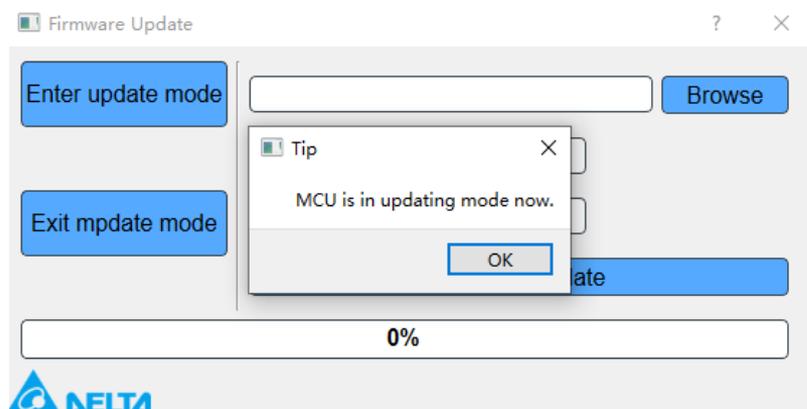
Step1 : Check communication. Click any “Read” button in the main GUI. The status in the bottom line shows “Read successfully”.

➤ 4.1 Enter update mode: Normal app mode



Step2: Click button “Enter update mode”

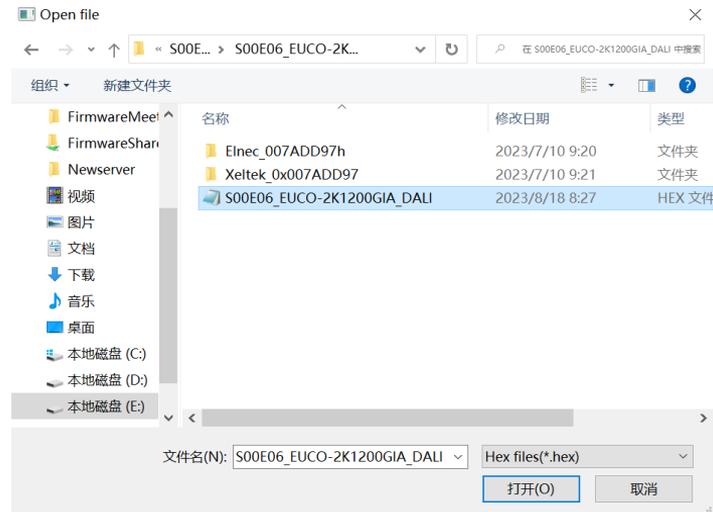
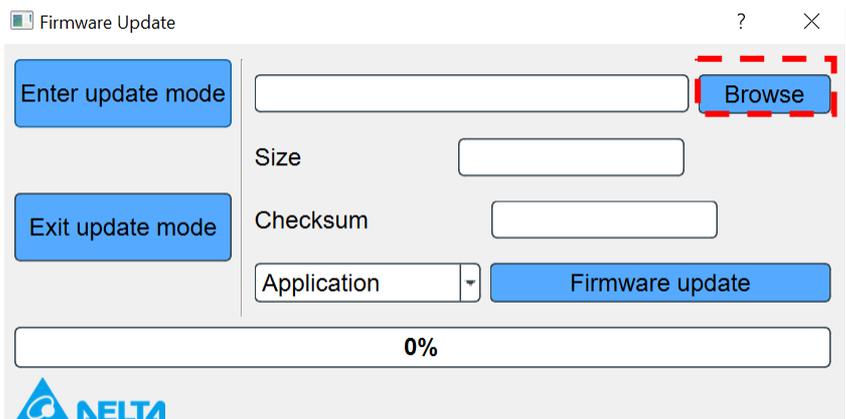
Step3: Click button “Yes”



Step4: Normally, the driver will enter update mode successfully.

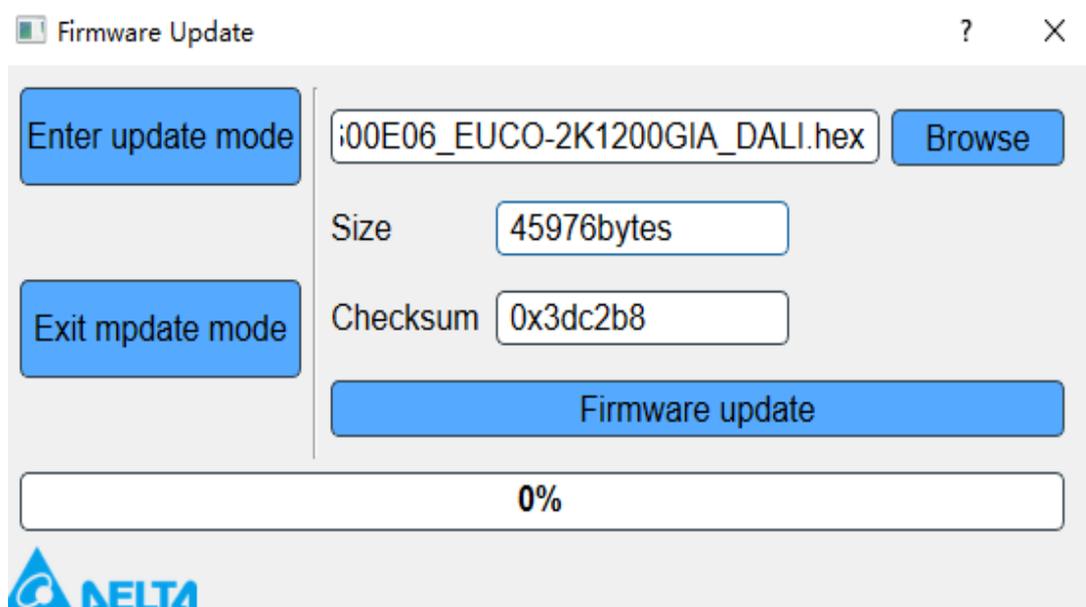
➤ 4.2 Choose firmware file

Step1: Click “Browse” button. And choose the correct firmware file



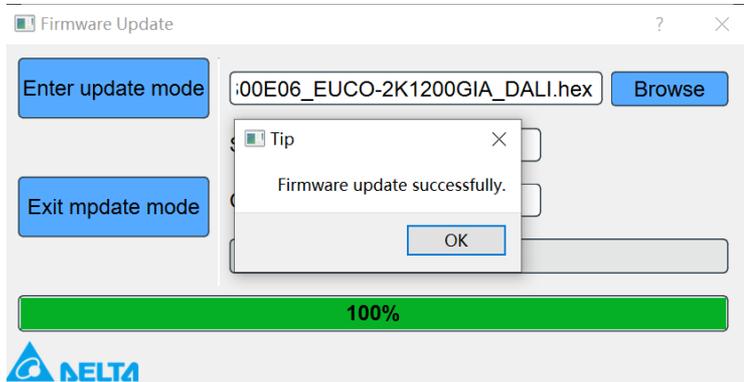
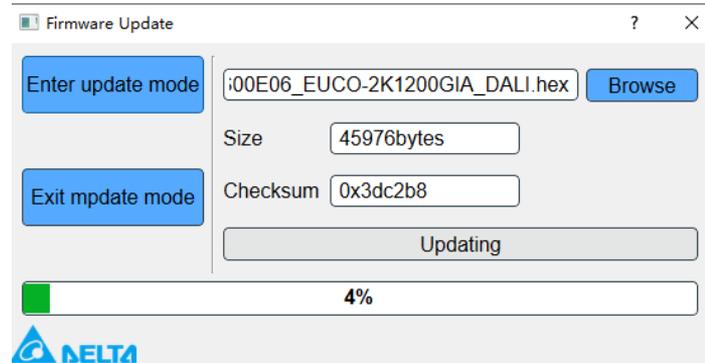
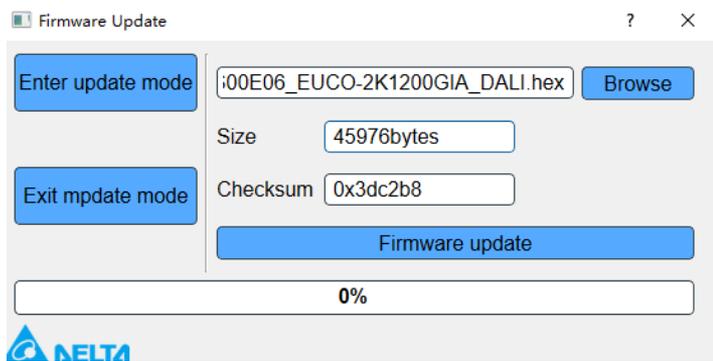
➤ 4.2 Choose firmware file

After reading, the size and checksum value of the GUI will be shown in the GUI.



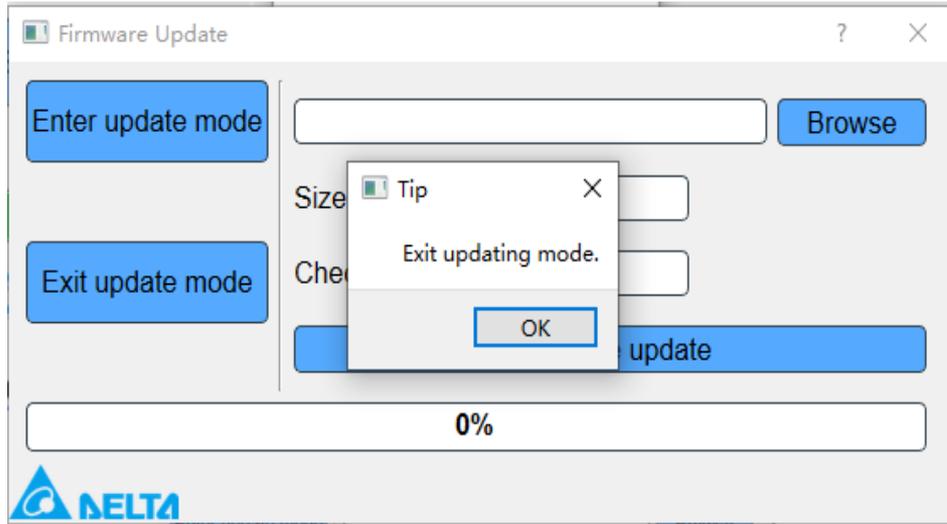
➤ 4.3 Updating the firmware

Step1: Click “Firmware update” button. Wait for 1-2minutes



➤ 4.4 Exit update mode

Step1: Click “Exit update mode” button. The driver will recover to normal app.



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