

User manual

6E series timing area and IO function

Catalog

Instruction	1
About software	1
Device connection	2
Setup the screen parameters	2
Add group	2
Add screen	3
Communication configuration	4
Screen parameters configuration	7
Timing area function	8
Add program	8
Button counting	8
Stopwatch	9
Counter	10
IO Configuration	11
IO connection	11
Logic connection diagram	12
IO Function	12
Switch program selection	14
IO output	22
Contact us	25

Instruction

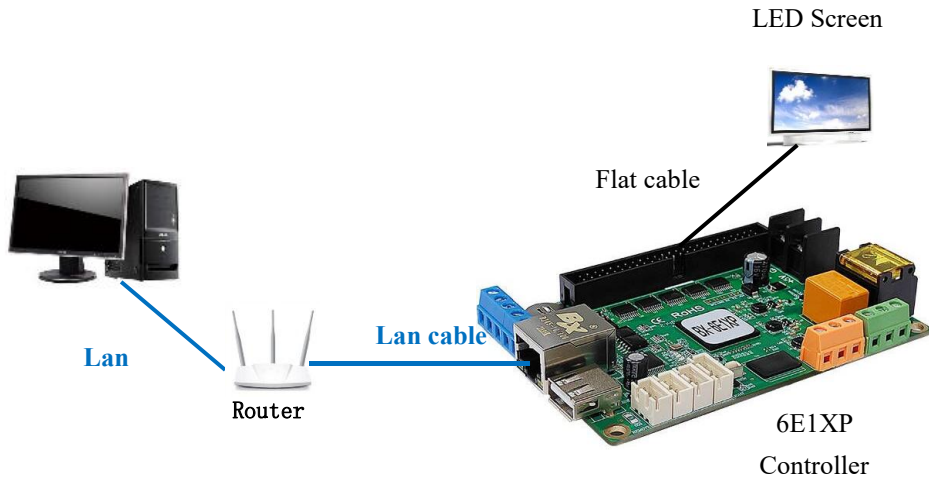
Thank you for purchasing our control card. We hope you will enjoy experiencing the superior performance of this product. The control card is designed to meet international, industry standards, but may still cause personal injury and property damage if not operated properly. In order to avoid possible dangers from the equipment and to benefit from your equipment as much as possible, please follow the relevant instructions in this manual when installing and operating the product.

About software

The software installed on this product shall not be changed, decompiled, disassembled, decrypted or reverse engineered, all of the above acts are illegal.

Device connection

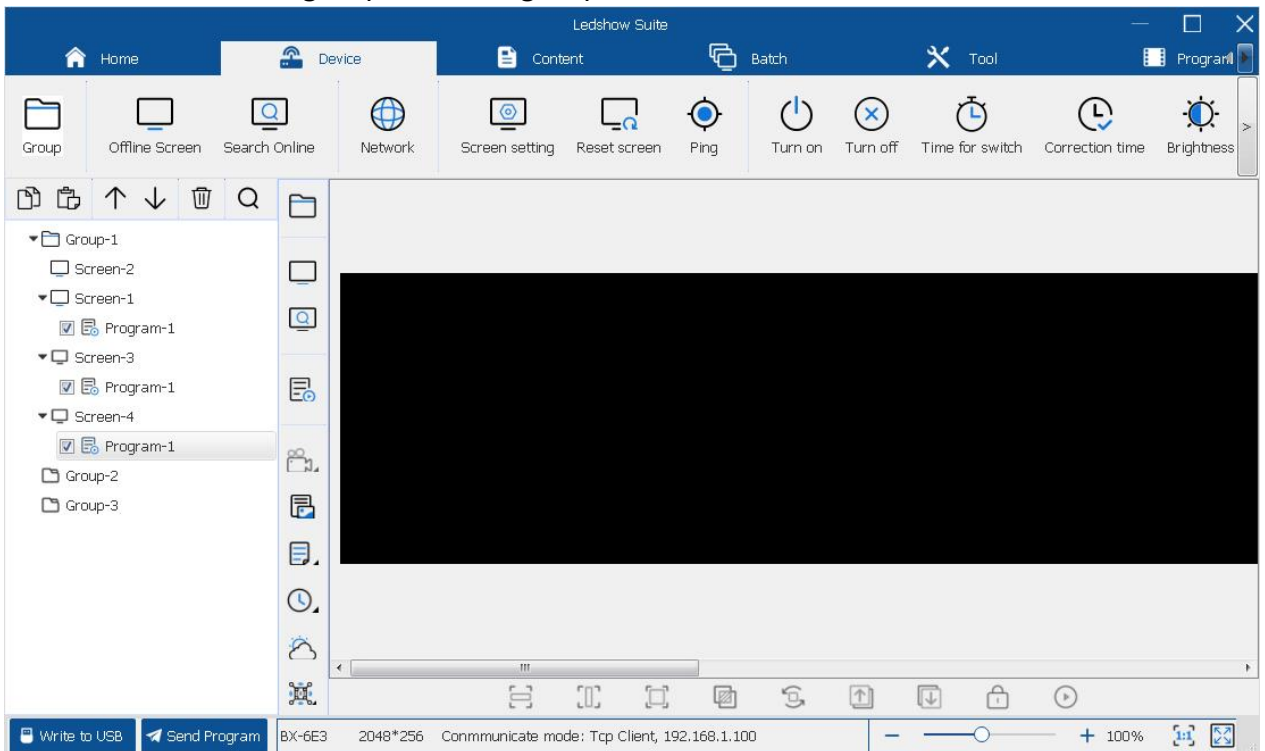
For example BX-6E1XP:



Setup the screen parameters

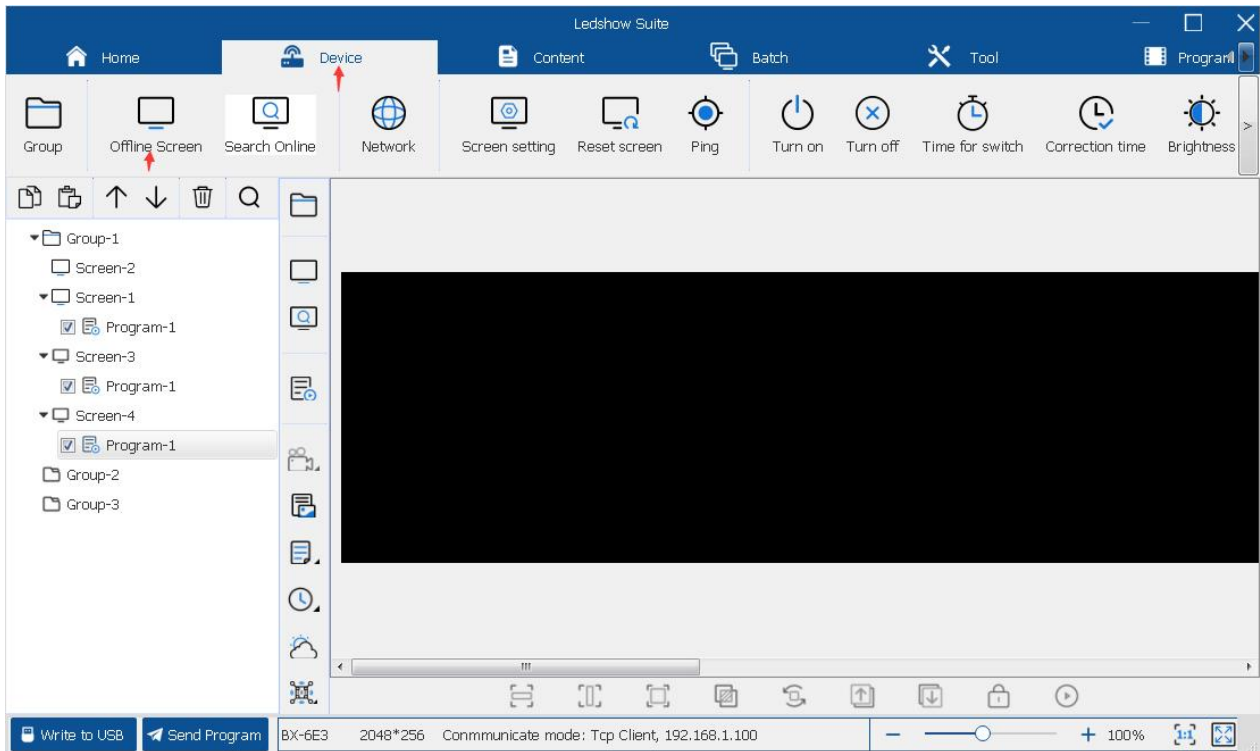
Add group

Click "device" —> "group" —> add group

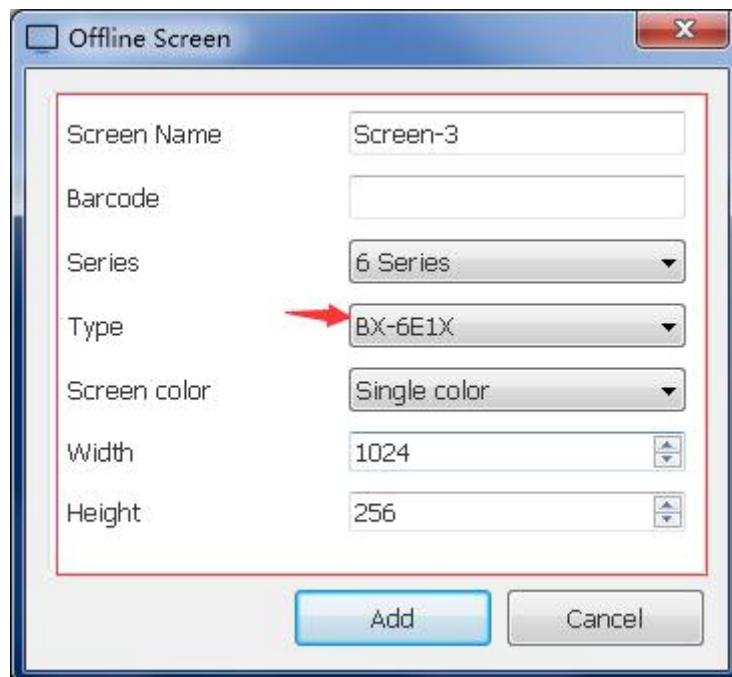


Add screen

Click “device” —> “offline screen” —> turn to the “offline screen” interface

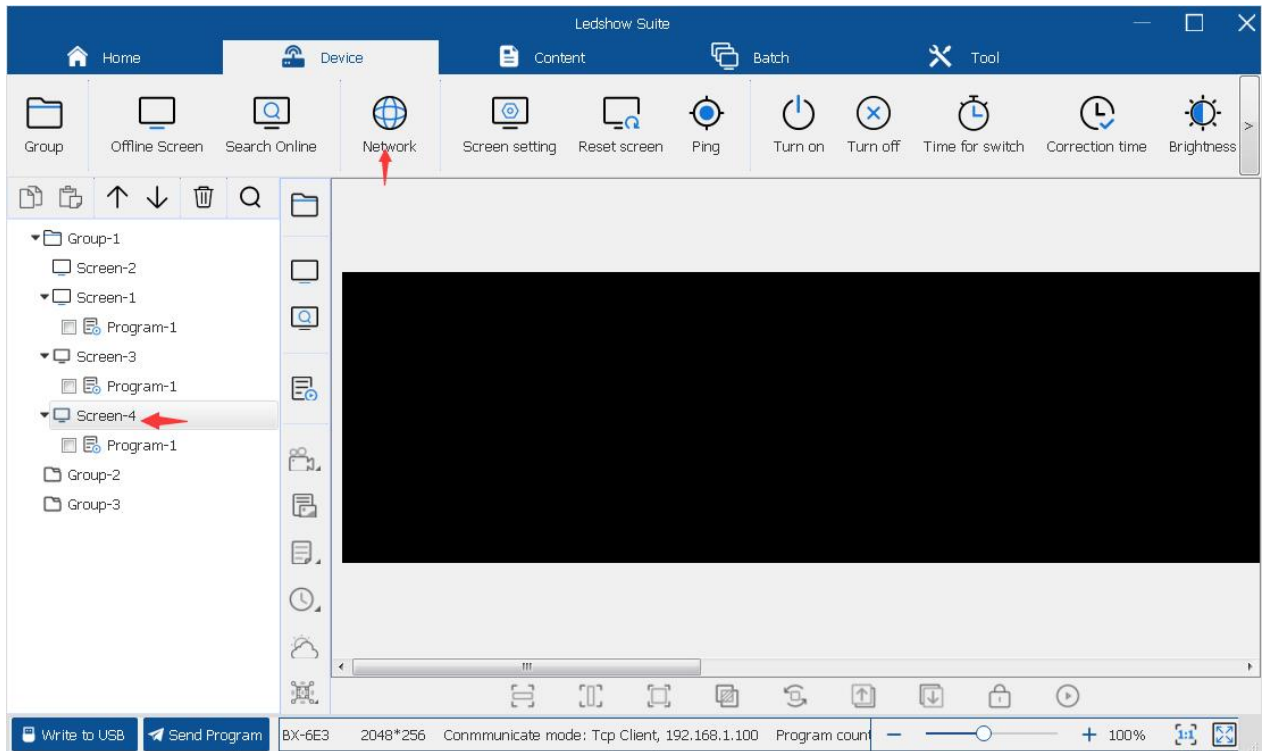


Modify the “screen name” , select the controller series and type in the list of “series” 和 “type” , select the screen in the “screen color” click “add” .



Communication configuration

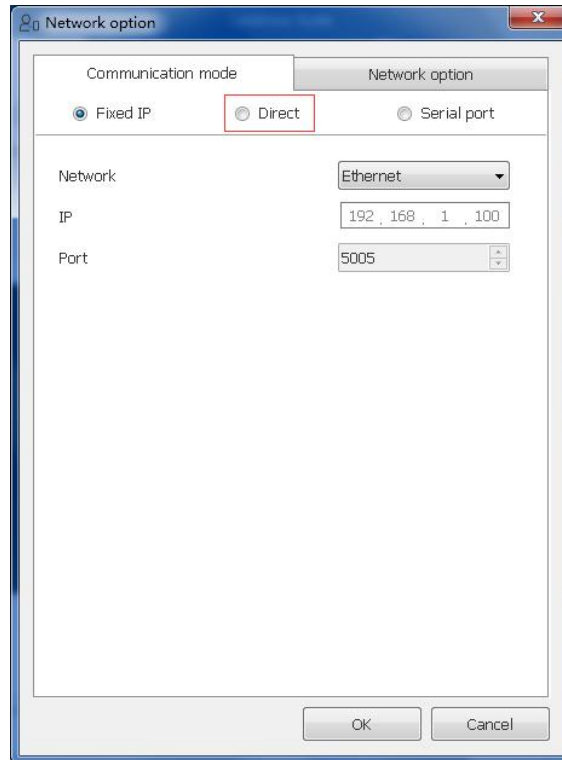
Select the setup controller ,click the" device " —> "Communication" —> "network" setup



Select the "fixed IP" " direct" or "serial port" "communicate mode"

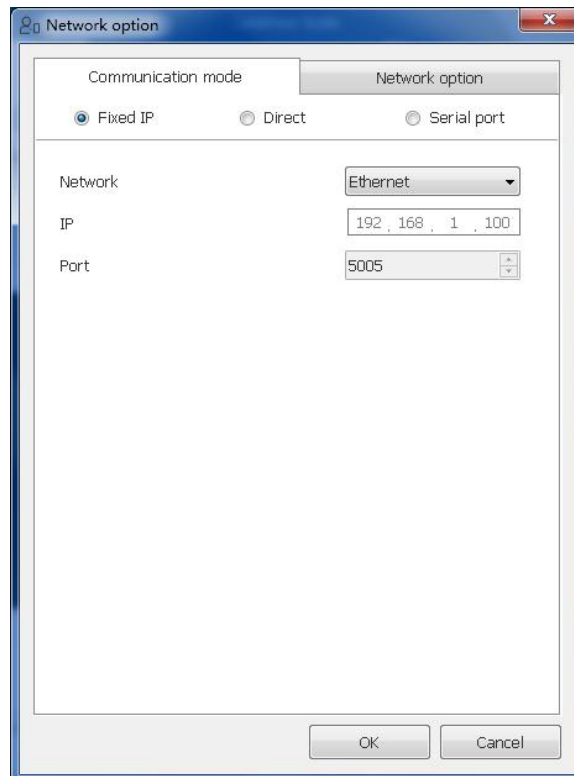
- Direct

Select "direct" mode, click "OK"



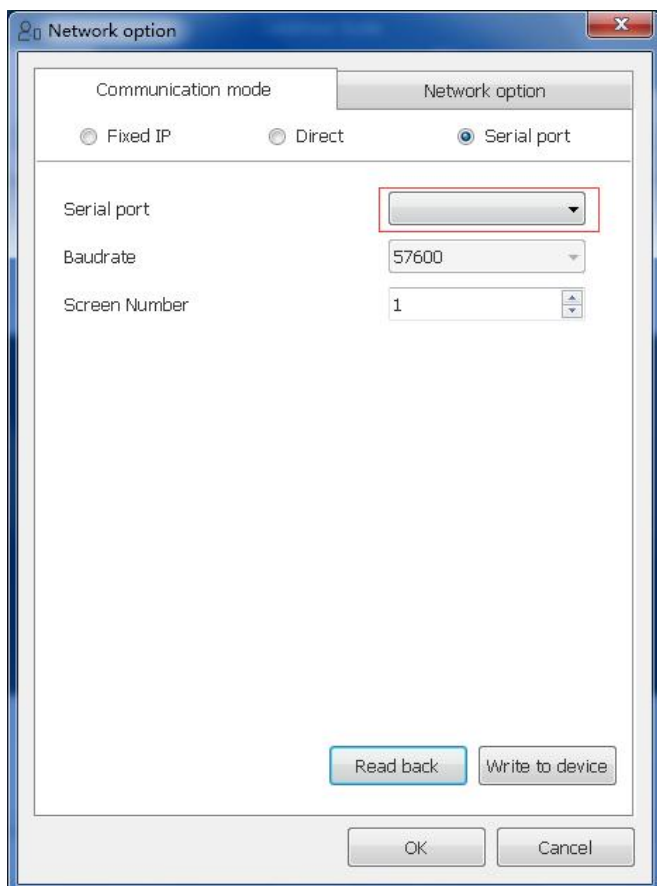
- Fixed IP mode

Select "fixed IP" , select "network" " wifi" " AP" or "custom" in the network setup, if select the" custom" then should write the IP and port parameters and click OK .



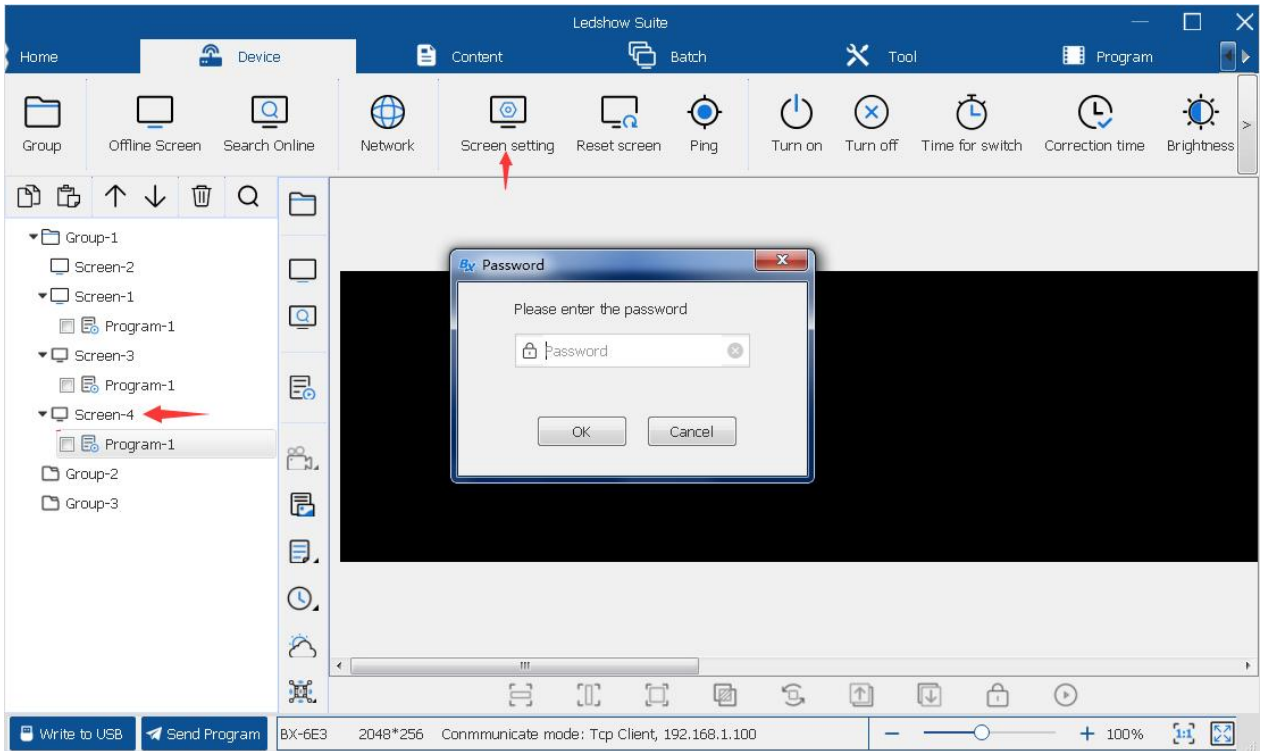
- Serial port

Serial port mode,after select the "serial port" and "screen number" then click the " " write to device "and click "OK"

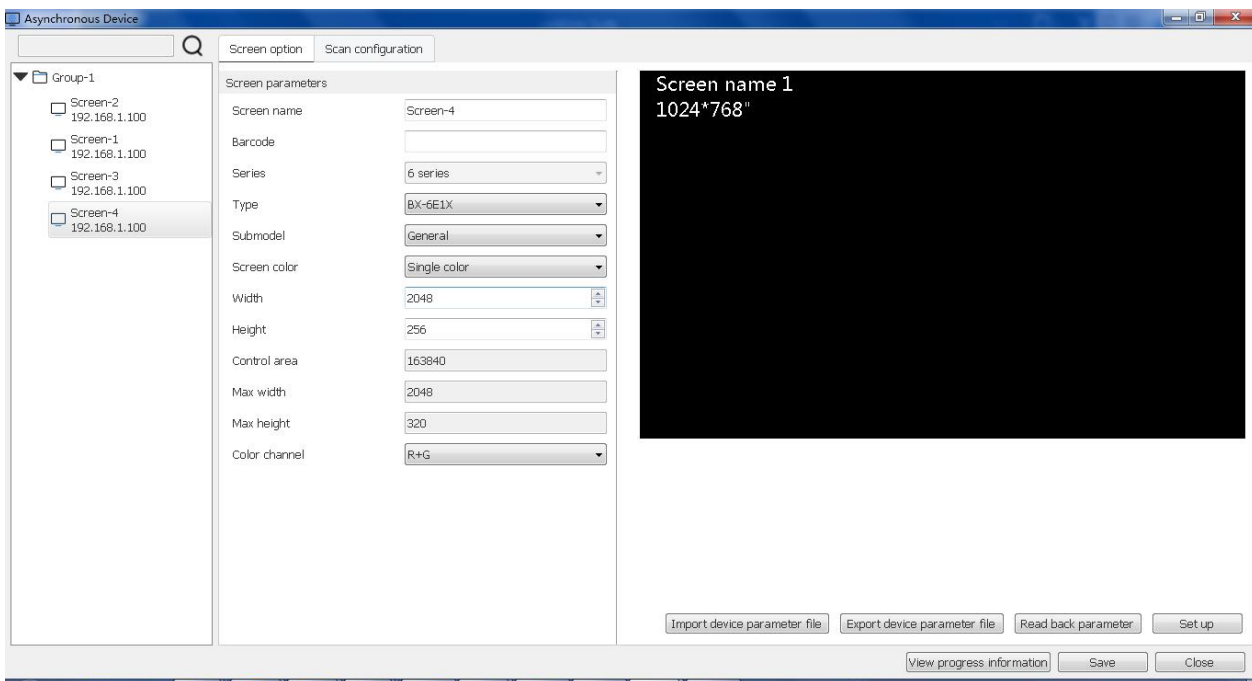


Screen parameters configuration

Select the setup controller,click the “device” —> “setup parameter” —>input password “888






In the “ screen setup” interface ,setup the width and height of the screen ,then click” setup” and “save”



Timing area function

Add program

Click the menu of software  , click the "program" in the content menu, after add  program, then click the  , then select the clock, time, lunar calendar, button time counting and counter.

Button counting

1 program only create one button counting



After add the "button counting" then set up the parameters:

- **Start point X:** the position of the top left corner vertex of the add area relative to the left border of the LED display, unit is pixels.
- **Start point Y:** the position of the top left corner of the add area relative to the upper border of the LED display, unit is pixels.
- **Width W:** the width of the added area in pixels.

- **Height H:** the height of the added area in pixels.
- **Button Countdown:** Select "Run" under "Initial Status" and "Target Time" to set the number of days, hours, minutes and seconds as needed. After setting, click "Send Program" to start the timer. And you can set the display color of the target time.

Note: If you select "Pause" under "Initial Status", the program will not be timed after you click "Send Program". Select "Run" under "Initial State" to start timing. Timer can be controlled by remote control

- **Button timing:** Select "Run" under "Initial Status", and set the "Target Time" to days, hours, minutes and seconds as needed. After setting, click "Send Program" to start timing. And you can set the display color of the target time.
- **Single line, multi-line display:** You can choose single line and multi-line display for setting the time.
- **Display text:** You can check whether to display text or not, and then you can display the input text content after checking. And you can choose the color, font, font size, bold, italic, underline, left, center, right of the text.
- **Style:** You can select the unit to be displayed in the button timing area and you can choose to accumulate and other operations.
- **Dazzling border:** When checked, you can add various styles of borders, and set the border display stunt, move step and run speed.
- **Dazzling background:** When checked, you can add various custom pictures or the system's own pictures as background.



After clicking "Send Program" to start the timer, you can click the "Remote Control" button under the "Device" menu, select "Timer", and use the "Timer Remote Control" pop-up to start/pause and reset the timer.

Stopwatch

1 program only create one stopwatch



After selecting "Add Stopwatch", you can set the following parameters.

- **Start point X:** the position of the top left corner of the added area relative to the left border of the LED display, in pixels.
- **Start point Y:** the position of the top left corner of the added area relative to the upper border of the LED display, in pixels.
- **Width W:** the width of the added area in pixels.

- **Height H:** the height of the added area in pixels.
- **Count font:** you can select the number of counts in the "Number of counts" drop-down list, the number of counts is the maximum number of counts displayed on the screen. The maximum number of counts displayed is 5. Under "Initial Status", select "Run", after setting, click "Send Program" to start timing.
- **Note:** If you select "Pause" under "Initial Status", it will not be timed after you click "Send Program", you need to select "Run" under "Initial Status". Select "Run" under "Initial Status" to start timing.
- **Stopwatch font:** you can set the stopwatch font, font size, bold, italic, underline and font color.
- **Counting font:** the top of the count in the screen is the latest count, in order backward. You can set the font, font size, bold, italic, underline and font color of the stopwatch.
- **Dazzling border:** When checked, you can add various styles of borders, and also set the display stunt, moving step and running speed of the border.
- **Dazzling Background:** After checking, you can add various custom pictures or system pictures as background.

After clicking "Send Program" to start timing, you can click "Remote Control" button under



"Device" menu and select "Stopwatch", through the pop-up "Timer Remote Control" 遥控器 to the stopwatch to start/pause, reset and remember the time operation.

Counter

1 program only create 2 counter areas:



After selecting "Add Counter", you can set the following parameters.

- **Start point X:** the position of the top left corner of the added area relative to the left border of the LED display, in pixels.
- **Start point Y:** the position of the top left corner of the added area relative to the upper border of the LED display, in pixels.
- **Width W:** the width of the added area in pixels.
- **Height H:** the height of the added area in pixels.
- **Start value:** you can input the specified start value, which can be a decimal. And you can modify the display color, font, font size, bold, italic, underline, left, center and right of the starting value.

- **Whether to loop:** Check to return to the starting value when the maximum or minimum value is reached.
- **Jump step:** the value to increase or decrease each time (e.g., if the jump value is 3, then increase or decrease by 3 each time) The default is 1.
- **Show text:** You can check whether to show text or not, and then you can show the input text content after checking. And you can choose the color, font, font size, bold, italic, underline, left, center, right of the text.
- **Maximum value:** The maximum value of the count is displayed, and the increased value cannot be higher than this value.
- **Minimum value:** The minimum value of the count is displayed, and the decreasing value cannot be lower than this value.
- **Decimal Digits:** the number of decimal digits that can be displayed on the screen.
- **Dazzle Border:** When checked, you can add various styles of borders, and also set the display stunt, move step and running speed of the border.
- **Dazzling background:** When checked, you can add various custom pictures or system pictures as background.

After clicking "Send Program" to start timing, you can click the "Remote Control" button under the "Device" menu, select "Counter", and select the counter area to be modified through



the "Timer Remote Control" pop-up, and then you can increase, decrease or reset the selected counter area.

IO Configuration

The 2-4 bit program selection interface is on board on the control card, supporting the function of external pin program selection. By using the external signal to select the program, to achieve different signals to display different program application scenarios. (Currently, the software only supports 6K and 6E series to use this function)

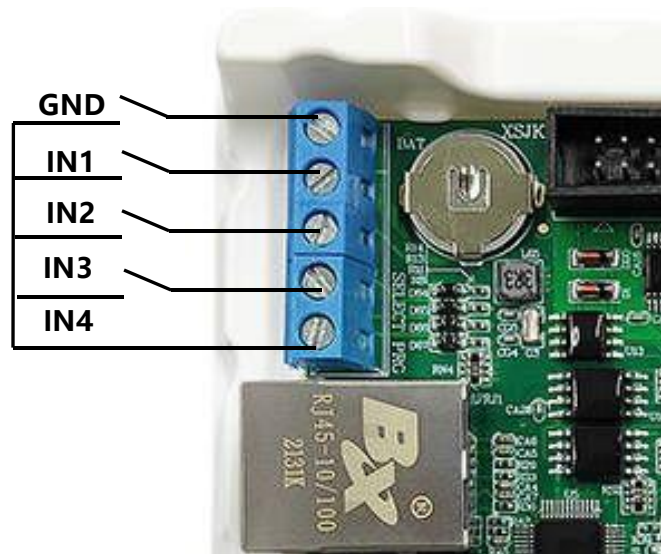
IO connection

Example :BX-6E1XP

**4-bit program
selection**

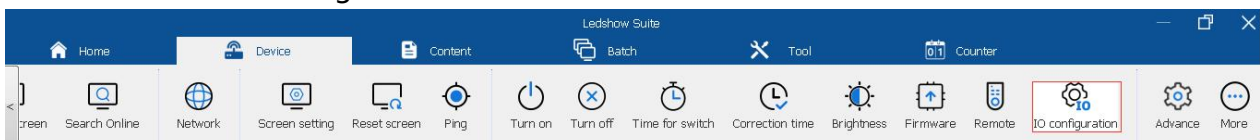


Logic connection diagram

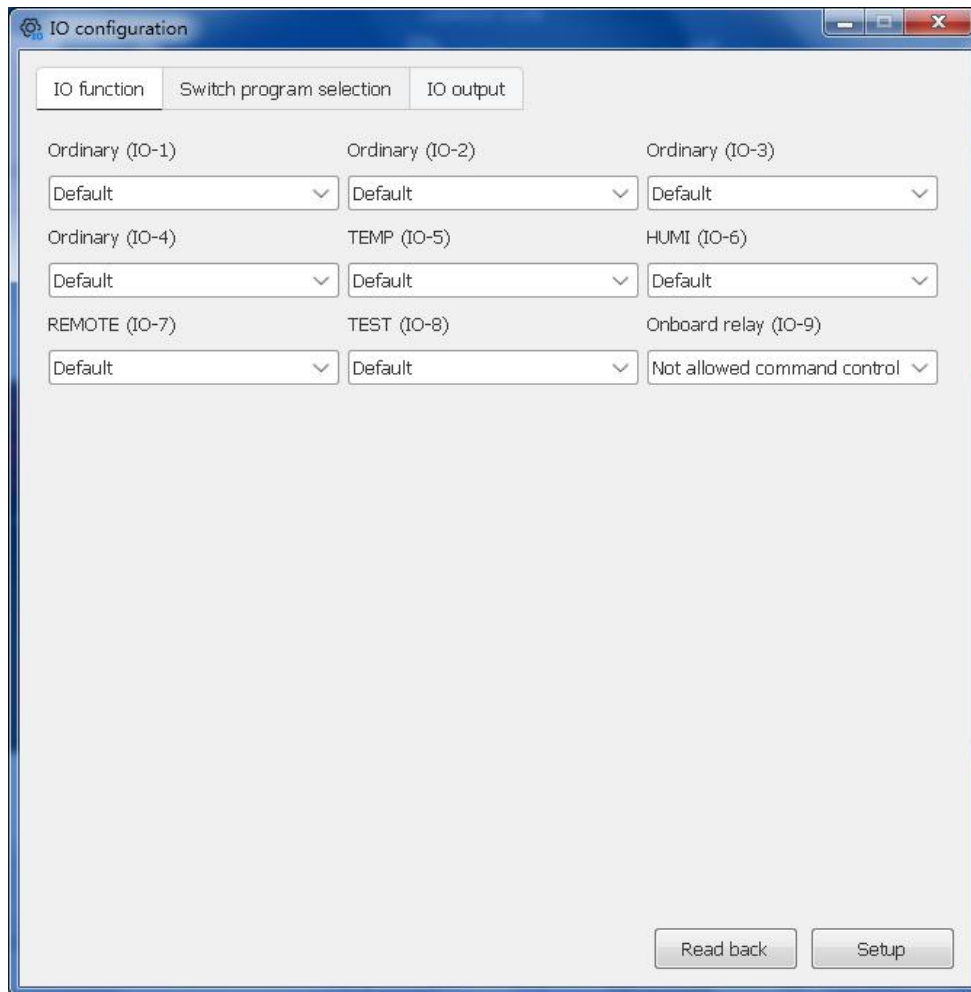


IO Function

Select the "IO configuration" in the device .



In the "IO Function" interface, you can select the corresponding control function for controlling the program in the drop-down list of each pin. After selecting the corresponding function for each pin, you need to click "Setup" to complete the configuration.



1. **Normal (IO-1) - Normal (IO-4):** Default is program selection switch, also can be used for IO output, Timer-Start/Pause, Timer-Reset, Stopwatch-Start/Pause, Stopwatch-Reset, Stopwatch-Count, Count1-Increase, Count1-Decrease, Count1-Reset, Count2-Increase, Count2-Decrease, Count2-Reset.
 - ◆ IO output: When IO output is selected, the IO pin is used to control the switch of the relay.
 - ◆ Timing-start/pause: When timing-start/pause is selected, the IO pin is used to control the switch for timing, and when a signal is received, timing starts, and when a signal is received again, timing pauses.
 - ◆ Timing-Reset: Select Timing-Reset, the switch of IO pin for timing reset.
 - ◆ Stopwatch-Start/Pause: Select Stopwatch-Start/Pause, IO pin is used to control the switch of stopwatch, after receiving the signal, stopwatch starts timing, after receiving the signal again, stopwatch timing is paused.
 - ◆ Stopwatch-Reset: Select Stopwatch-Reset, IO pin is used for the switch of stopwatch reset.
 - ◆ Stopwatch-Count: select Stopwatch-Count, the switch of IO pin for stopwatch count, send 1 signal, record 1 time, the current function records up to 5 times data.
 - ◆ Count 1-increase: Select Count 1-increase, IO pin for count-increase switch, send 1

time signal, count increase 1 time, increase 1 time jump step.

- ◆ Count 1-Decrease: Select Count 1-Decrease, the IO pin is used for count-decrease switch, send 1 signal, count decreases 1 time and decreases 1 jump step.
 - ◆ Count 1-Reset: Select Count 1-Reset, the switch used by IO pin for Count 1 Reset.
 - ◆ Count 2-Increase: Select Count 2-Increase, the switch used by IO pin for Count-Increase, send 1 signal, count increases 1 time and increase 1 jump step.
 - ◆ Count 2-Decrease: Select Count 2-Decrease, IO pin for Count-Decrease switch, send 1 signal, count decreases 1 time and decreases 1 jump step.
 - ◆ Count 2-Reset: Select Count 2-Reset, the IO pin is used for the switch of Count 2 Reset.
2. **TEMP:** Default is the temperature sensor interface, which can be expanded to function as IO-5 pin for controlling the program switch. It can also be used for IO output, timing-start/pause, timing-reset, stopwatch-start/pause, stopwatch-reset, stopwatch-count, count1-increase, count1-decrease, count1-reset, count2-increase, count2-decrease, count2-reset.
 3. **HUMI:** Default is the temperature and humidity sensor interface, which can be expanded to function as IO-6 pin for controlling the program switch. It can also be used for IO output, timing-start/pause, timing-reset, stopwatch-start/pause, stopwatch-reset, stopwatch-count, count1-increase, count1-decrease, count1-reset, count2-increase, count2-decrease, count2-reset.
 4. **REMOTE:** Default is infrared remote control interface, can expand the function as IO-7 pin used to control the program switch. It can also be used for timing-start/pause, timing-reset, stopwatch-start/pause, stopwatch-reset, stopwatch-count, count1-increase, count1-decrease, count1-reset, count2-increase, count2-decrease, count2-reset.
 5. **TEST:** Default is the test button, which can be expanded to function as an IO-8 pin used to control the program switch. It can also be used for Timer-Start/Pause, Timer-Reset, Stopwatch-Start/Pause, Stopwatch-Reset, Stopwatch-Count, Count1-Increase, Count1-Decrease, Count1-Reset, Count2-Increase, Count2-Decrease, Count2-Reset.
 6. **On-board relay:** default relay interface, IO-9 pin only "Allow command control" and "Do not allow command control" options, the default is "Do not allow command control" It is not used for switch selection.

Note: The IR remote control interface "REMOTE" IO-7 pin of BX-6E series controller cannot be used for IO output.

Switch program selection

For example, select "Normal IO-1" and "Normal IO-2" in the "IO Function" interface for the "Switching Program" function, then click the "Switch select program" interface and check "Switch Program Configuration", as shown in the figure below.

IO function Switch program selection IO output

Ordinary (IO-1) Ordinary (IO-2) Ordinary (IO-3)

Switch program selection Switch program selection Default

Ordinary (IO-4) TEMP (IO-5) HUMI (IO-6)

Default Default Default

REMOTE (IO-7) TEST (IO-8) Onboard relay (IO-9)

Default Default Not allowed command control

IO configuration

IO function Switch program selection IO output

Switch program configuration

Trigger mode Logic control

Switch trigger Single logic control

Working mode Trigger program number

No advertising 2

Program choices

Program IN1(Ordinary IO-1) Program IN2(Ordinary IO-2)

IN2	IN1	Program
0	0	blank
0	1	Program1
1	0	Program2

In the table, 1 represents the closed signal and 0 represents the open signal

Read back Setup

1. Select the trigger mode

Switching program configuration trigger mode is divided into: switch trigger and button trigger.

The default is switch trigger, more commonly used, switching programs more flexible.

The screenshot shows a configuration window with the following elements:

- Switch program configuration
- Trigger mode: A dropdown menu with "Switch trigger" selected and highlighted by a red box.
- Logic control: A dropdown menu with "Single logic control" selected.
- Working mode: A dropdown menu with "No advertising" selected.
- Trigger program number: A numeric input field with "2" entered.
- Program choices: A section with two options: "Program IN1(Ordinary IO-1)" and "Program IN2(Ordinary IO-2)".

Button mode is usually used for projects like bus stop announcements, where programs are played one by one in sequence.

When you select "Button Trigger" mode, you need to configure "Normal IO-1" and "Normal IO-2" in the "IO Function" interface. " in the "Program Selection" screen, the "Program Selection" box will display [Program Selection IN1 (Normal IO-1)] / [Program selection IN2 (Normal IO-2)]. The programs are triggered by "Normal IO-1" and "Normal IO-2". The following figure shows.

IO configuration

IO function Switch program selection IO output

Switch program configuration

Trigger mode
Button trigger

Working mode Trigger program number
No advertising 2

Program choices

Program IN1(Ordinary IO-1) Program IN2(Ordinary IO-2)

IN2	IN1
Last triggered program	Next trigger program

In the table, 1 represents the closed signal and 0 represents the open signal

Read back Setup

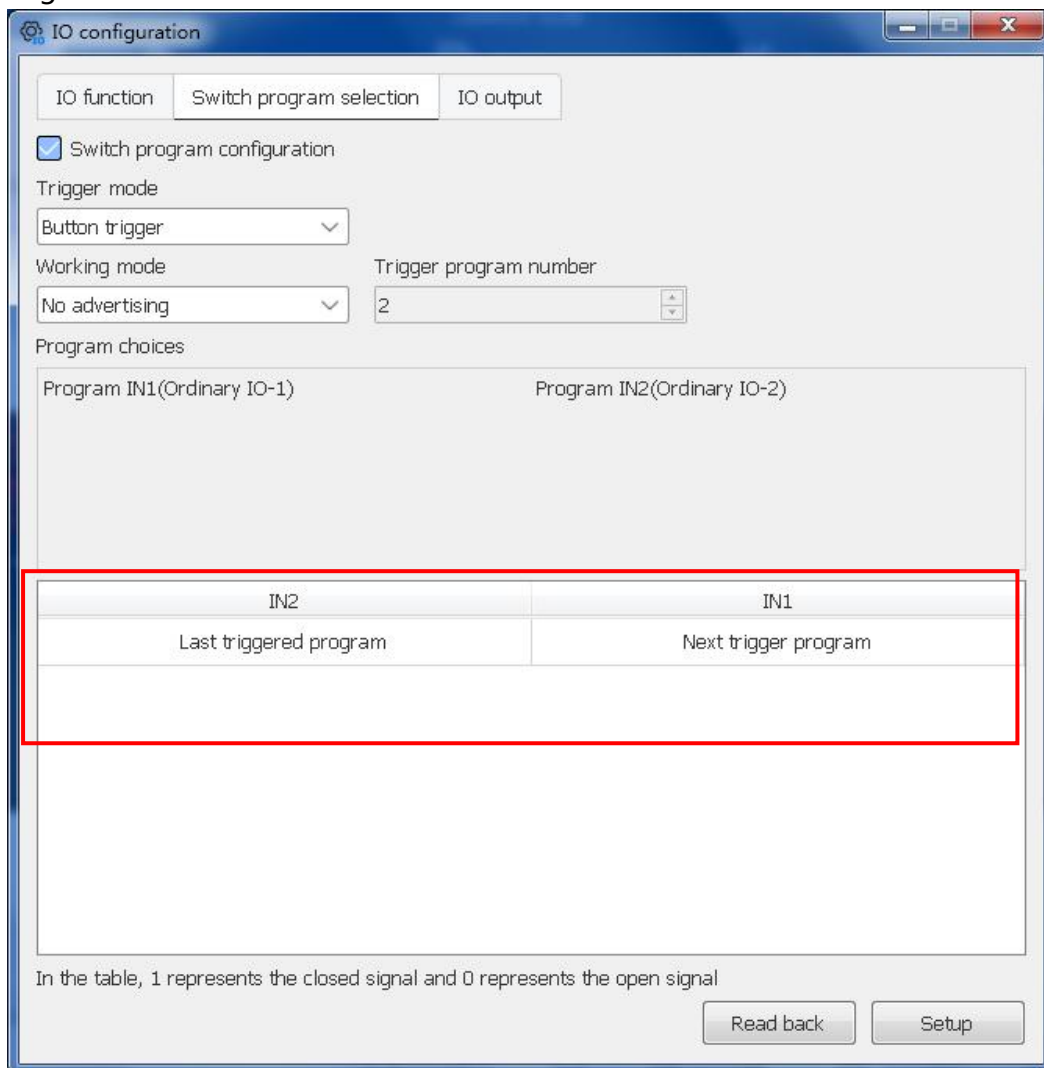
2. Logic control

When "trigger mode" is selected as "switch trigger", the logic control can be selected as "single logic control" or "combined logic control".

- Single logic control

The default is single logic control, when the program is less usually use single logic control, usually the default with ordinary IO-1" and "ordinary IO-2", click "Set" to complete the configuration, so that you can achieve the switch to select the program function.

Logic control is like bellow:

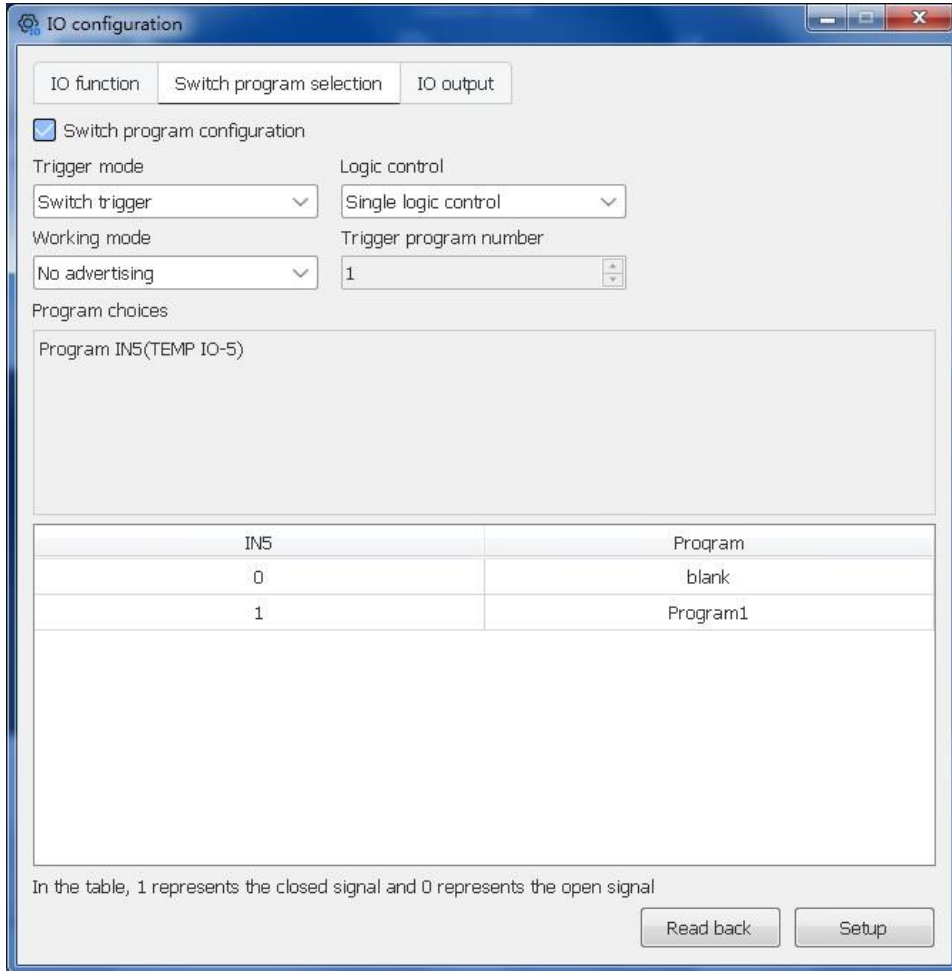


- Combination logic

Combination logic is usually used when there are more programs. In addition to checking

"Normal IO-1" and "Normal IO-2", more pins can be used to control the program switch, and click "Set" to complete the configuration. Click "Set" to complete the configuration, so that you can achieve the function of switch selection program.

For example, using TEMP IO-5 pins and IN1 and IN2, the control logic is as follows.



3. Working mode

- **Advertisement+single logic control**

Select "with advertisement" working mode, when the IO pin is not shorted, the advertisement program will be played (all programs other than the trigger program can be considered as advertisement program), when the pin is shorted, the corresponding trigger program will be displayed.

IO configuration

IO function Switch program selection IO output

Switch program configuration

Trigger mode: Switch trigger Logic control: Combinational logic control

Working mode: There are advertisements Trigger program number: 2

Program choices

Program IN1(Ordinary IO-1) Program IN2(Ordinary IO-2)

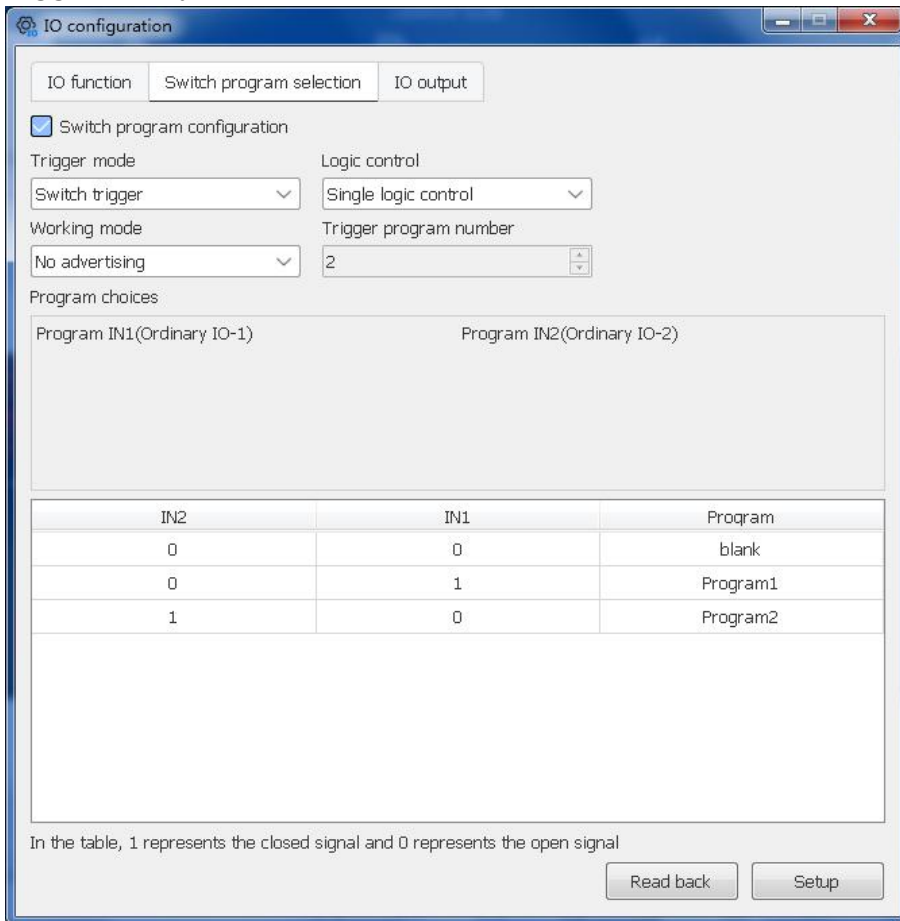
IN2	IN1	Program
0	0	Program1
0	1	Program2
1	0	Program3
1	1	Program4

In the table, 1 represents the closed signal and 0 represents the open signal

Read back Setup

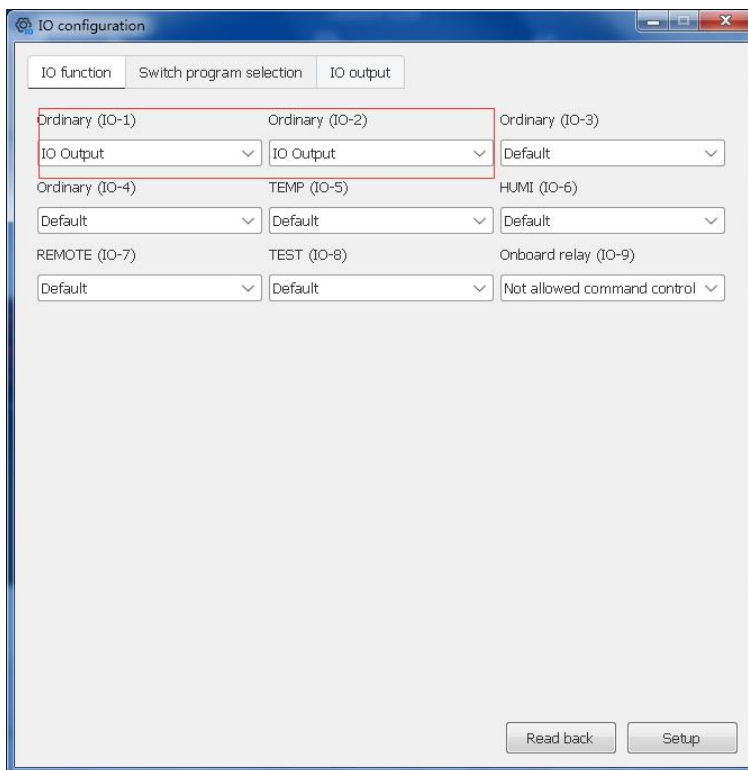
- **No advertisement+single logic control**

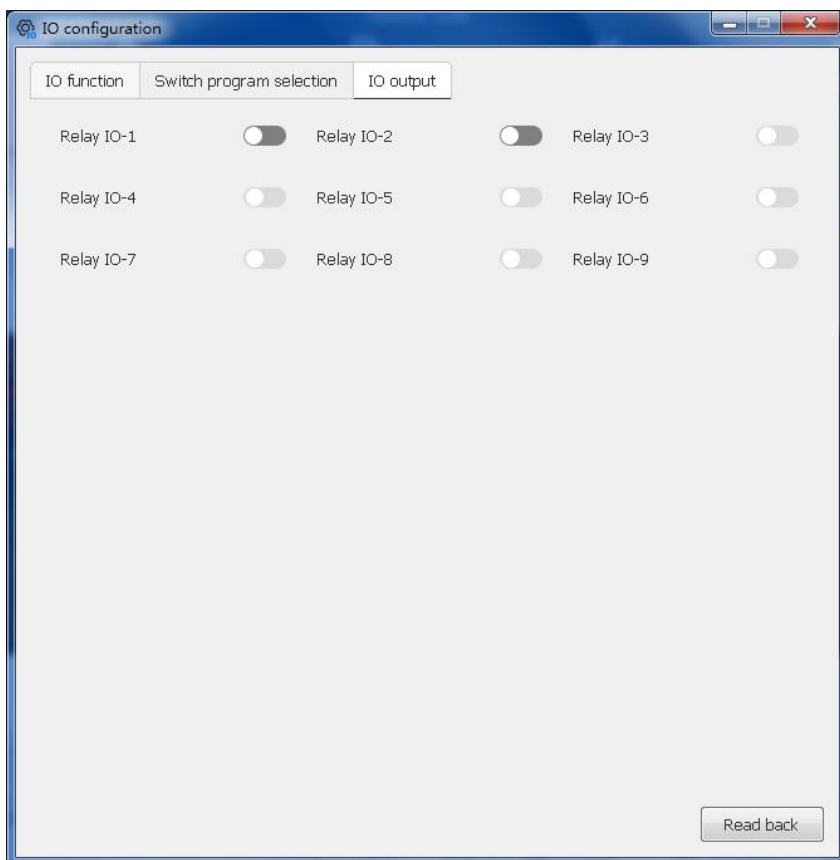
默认为无广告，选择“无广告”工作模式，在不短接 IO 管脚时，显示为黑屏，当管脚短接时，才会触发对应的节目。The default is no advertisement, select "no advertisement" working mode, the display will be black when the IO pin is not shorted, and the corresponding program will be triggered only when the pin is shorted.



IO output

The IO output function allows direct connection of relays for relay switching control. Select "Normal IO-1" and "Normal IO-2" for the "IO output" function in the "IO function" screen. "Then click "IO Output" interface, and click to open the relay switch, as shown in the figure below.





Note: there is no IO output function for the REMOTE and TEST port

Contact us

Shanghai ONBON Technology Co.,ltd (Headquarters)

Address: 7 Floor, Tower 88, 1199#, North Qinzhou Road, Xuhui District, Shanghai City,

China

Tel Phone: 086-21-64955136

Fax: 086-21-64955136

Website: www.onbonbx.com

ONBON (Jiangsu) Optoelectronic Industrial Co.,LTD

Address: 1299#, Fuchun Jiang Road, Kunshan City, Jiangsu Province, China

Sales Contacts

Tel: 0086-15921814956 0086-15800379719

Email: onbon@onbonbx.com

Second Development

Tel: 0512-66589212

Email: dev@onbonbx.com

iLEDCloud

Website: <http://www.iledcloud.com/>