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1. FUNCTION OVERVIEW

1. Support access and control by LED Player software.
2. Unique data processing method for the display with complex shape, it's easy to make a solution.
3. It supports 1,000,000 channels or cascade connection of 400 pieces controllers.
4. Use Art-Net Tool software to set the IP address of the controller online (which can also be set by key of the controller).
5. Support quickly address function, LED Player software search equipment and detection of packet loss rate.
6. Support our IAP-Loader software upgrade online.
7. 8-port data-independent signal output (with the isolation), control variety of regular chips in LED digital tube screen, LED pixel light screen, and etc.

SW Single chip: D**S, D**J.

SPI: TM180*-400K/800K, UCS19**, UCS29**, WS2811/12, TLS3001(1Mhz), SM167**.

DMX512: SW-D, SW-U, UCS512A/B/C0/C4/D/E0/EH/G4/G6, DMX512AP/SM512, SM16500P/511/512, SM17500P/512P/522P, SM17512/522, SM18522P/PH, SM16823E/824E, Hi512A0/A4/A6, TM512AB3/AL1/ACx/AD/AE, QED512P, GS8512/513/515, standard DMX512 lighting fixture on the market.

Please refer to the "CHIP SUPPORT" section for addressing.

Break-point UCS5603, WS2818, GS8206, P9883, TM1914, XT1506S.

resume:

65536 gray scale: UCS8903, UCS8904, UCS9812, SM16813.

8. With professional LED Player software, user can make any effect by themselves.
9. Encryption function is available when use with customized controller.
10. The load capacity of different lighting fixtures is different. (If frame frequency is not required, load capacity of each channel can be increased independently, and must test it in the factory.)

2. PRODUCT INFORMATION

2.1. TECHNICAL PARAMETERS

Cover material: Iron

Input voltage: AC100V - 240V

Input signal: The RGB signal of SW Ethernet Protocol

Output port: TTL & RS-485 * 8 ports

Pixel driven: Madrix software:

SPI chip: 4 universes × 512 channels × 8 ports

Standard DMX512: 2 universes × 512 channels × 8 ports

LED Player software:

Single chip: 2880 channels × 8 ports, SPI chip: 3072 channels × 8 ports,

Standard DMX512: 512 channels × 8 ports, Extensible DMX: 1024 channels × 8 ports,

Break-point resume: 2160 channels × 8 ports, 65536 gray scale: 2160 channels × 8 ports.

Output power: 5W

Working temperature: -25°C ~ 70°C

Relative humidity: ≤50%

Connecting mode: In parallel (address manually)

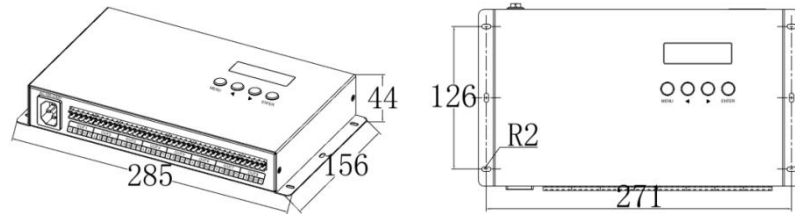
IP grade: IP20 (Prevent people from touching the components inside electrical appliance, prevent object which diameter is more than 12.5mm from getting in, no special protection to water or moisture.)

- Working environment:
1. Please do not install the controller in magnetic, high pressure, high temperature or seriously wet environment.
 2. Please do connect the earth safely in order to reduce risks of fire and damage which cause by short circuit.
 3. Please ensure AC100-240V power supply is used, and same polarity is connected between transformer and controller in order to guarantee the proper supply voltage.
 4. No waterproof function in the control system, please pay attention on rainproof and waterproof during installing.

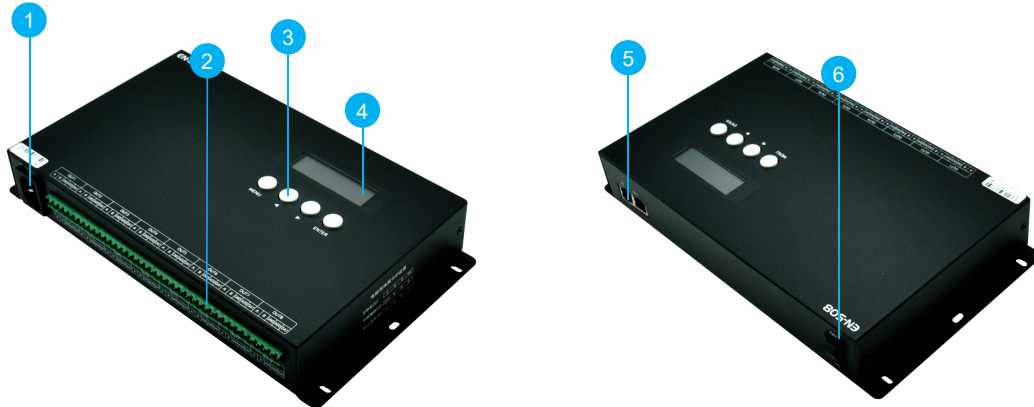
Net weight: 1.5 Kg

Size: L285*W156*H44

Unit mm



2.2. COMPONENT



① Power input AC100-240V

② Output control lighting fixture

③ Button

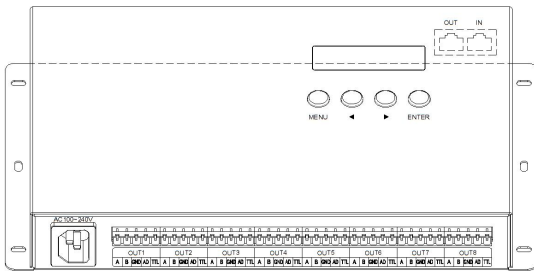
④ LCD display screen

⑤ Uplink port

⑥ Power switch

3. CONNECTION MODE

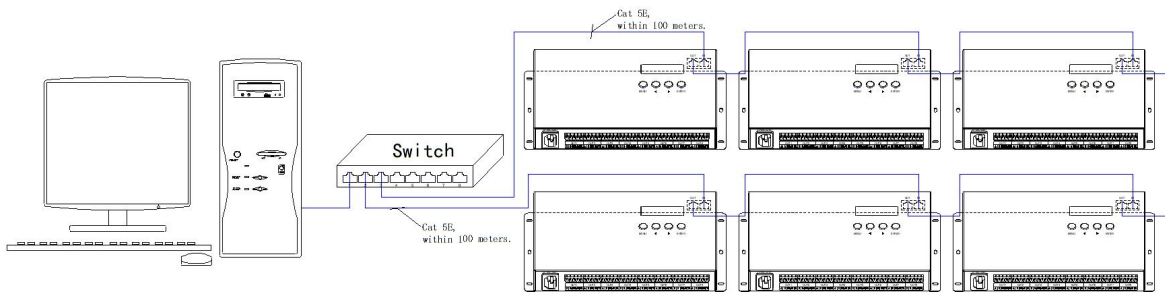
3.1. PORT INTRODUCTION



| Port | Description | |
|------|--|---|
| IN | Connect with PC / SN controller / EN controller. | |
| | Top left light | Signal indicator, flicker when the 8 output port output the correct signal. |
| | Top right light | Nonuse. |
| OUT | Connect with EN controller. | |
| | Top left light | Receive data indicator, flicker when the control gain the data completely.. |
| | Top right light | Nonuse. |

3.2. CONNECTION DIAGRAM OF CONTROLLER

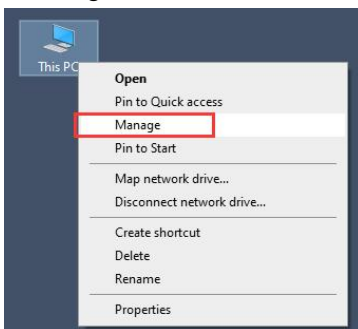
3.2.1. UNIDIRECTIONAL TRANSMISSION



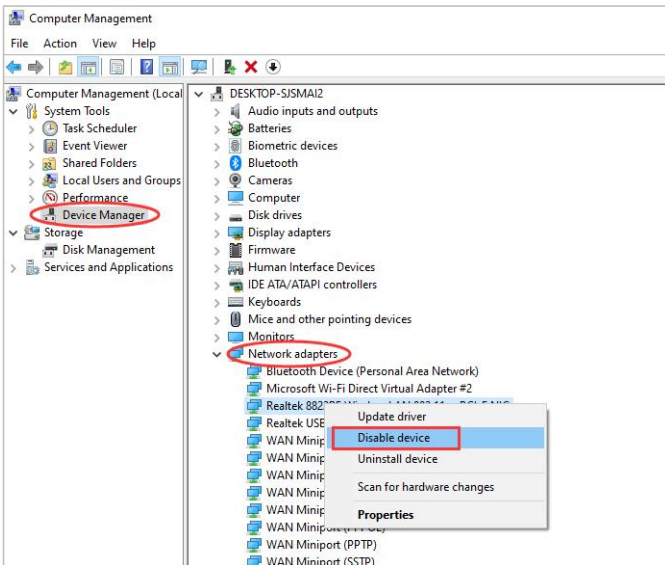
Notes,

If the controller keeps switching on/off while the LED Player is working properly, it may cause data congestion. In this case, you can directly plug and remove the network cable from the IPC, or restart the output network adapter on the IPC. To restart the NIC follows,

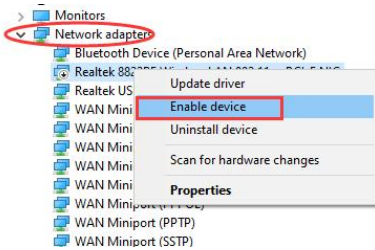
1. Right click "This PC" to click "Manage".



2. Click “Network adapters” of “Device Manager”, and right click the NIC which output control luminaires to click “Disable device”.

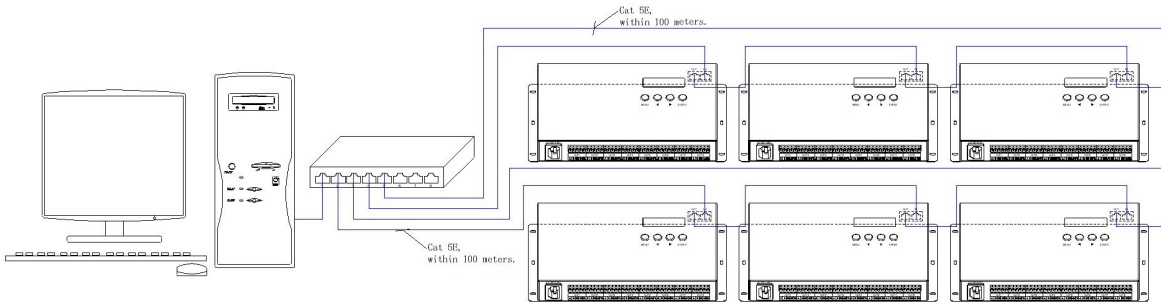


3. Right click the NIC again and click “Enable device”.

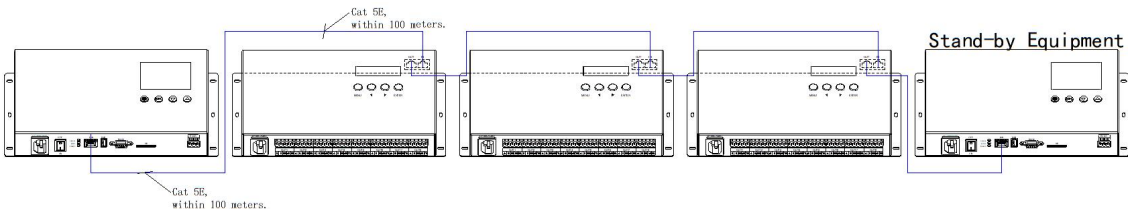


3.2.2. LOOP BACKUP

Only one master controller is required. PC, MP series, MQ series, SN series are optional.

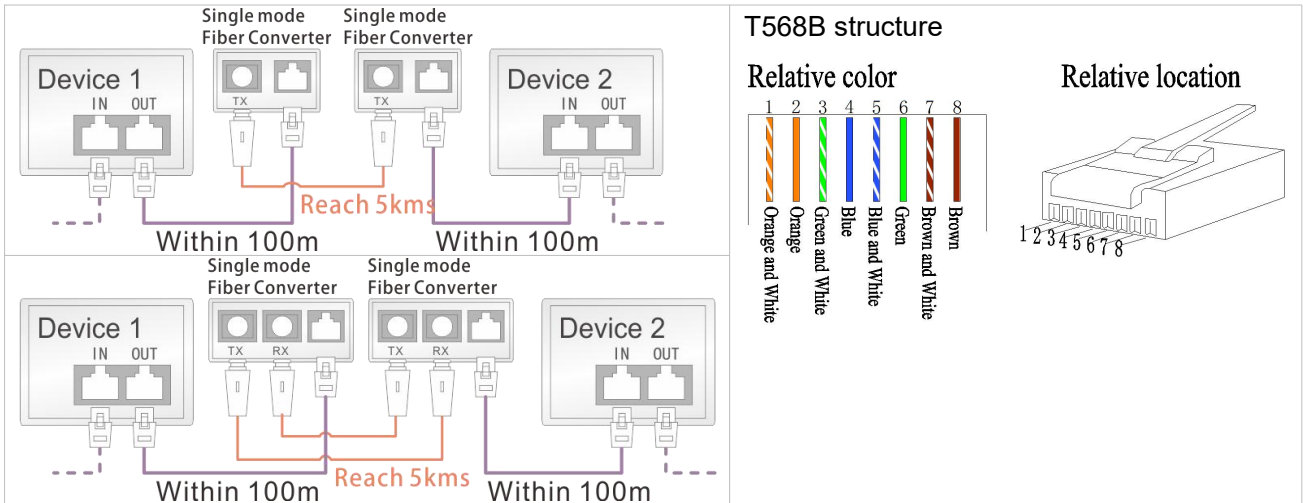


Need to connect two controllers. PC, MP series, MQ series, SN series are optional.



3.3. OPTICAL FIBER COMMUNICATION

Must use single mode transceivers. User can use single fiber or double fiber (alternative) according to on-site condition. The double fiber transceiver must be connected with two optical fibers.

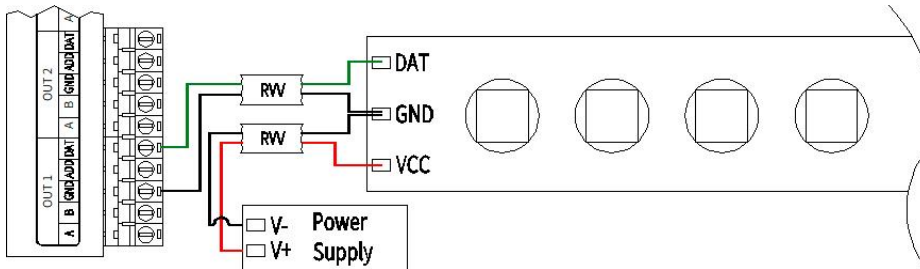


Use UTP, distance between the controllers can be 100m. It can be 5km if use the optical fiber.

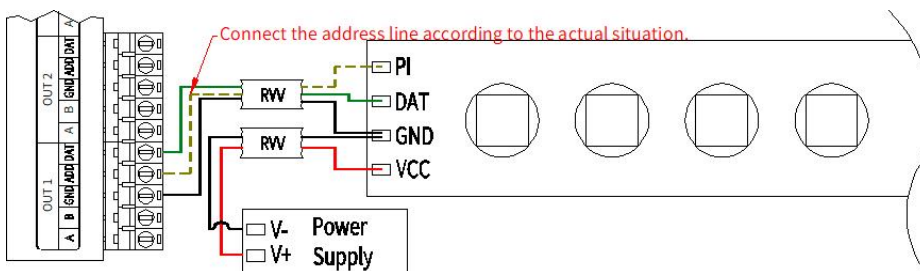
3.4. CONNECT WITH LIGHTING FIXTURE

Please connect the cables in accordance with silk print on lighting fixture.

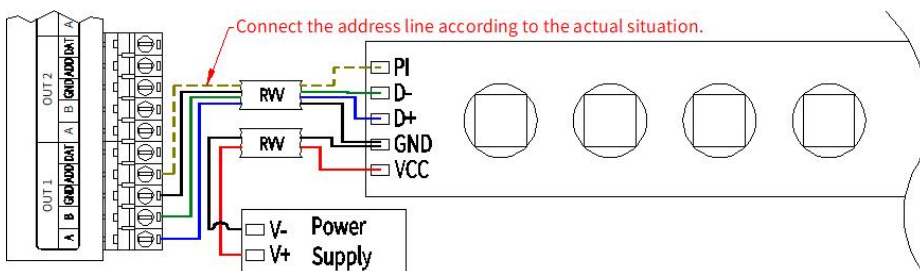
TTL signal output control SPI luminaire.



TTL signal output control DMX512 luminaire.

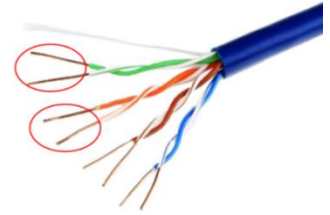


RS-485 signal output control DMX512 luminaire.



★ Signal cables connection cautions:

1. Use UTP—Unshielded Twisted Pair (resistance per 100M<10Ω), low quality Ethernet cables, telephone cables and copper wires are unavailable.
2. Use one group twisted pair, suggest green + green white or orange + orange white. The quality and color of the cable are very important. Blue and brown wires greatly influence the signal transmission. Please don't use several groups of twisted pairs together.
3. Controller signal output GND must connect directly with input GND of lighting fixture. Cannot connect with lighting fixture through power supply.
4. Switch on the controller after all hardware signal and power cables are connected. Please don't CONNECT / DISCONNECT the signal cables while the controller is power on; avoid back-flow current burning circuit and components of output port.

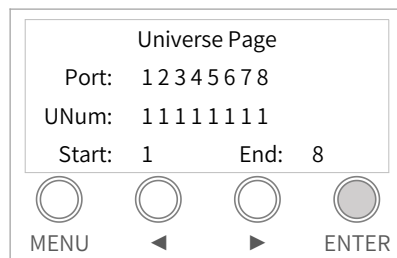
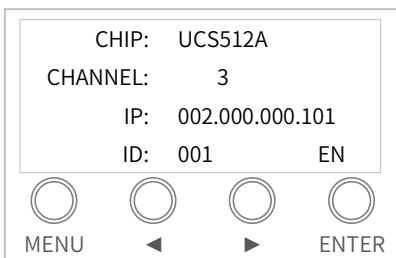


3.5. TRANSMISSION DISTANCE

| Transmission Type | Signals | Medium | Distance (M) | Remark |
|-------------------------------|----------|-----------------|--------------|--|
| MP / PC → EN controller | 100M | UTP CAT5e | 50-80 | |
| EN controller → EN controller | Ethernet | | | |
| EN controller → DMX lighting | RS-485 | UTP CAT5e | 30-50 | The address wire must be within 5m. |
| DMX lighting → DMX lighting | | Three core wire | 1-20 | |
| | | Four core wire | 1-20 | |
| EN controller → SPI lighting | TTL | UTP CAT5e | 5-20 | Controllable pixels reduce if wire is over 5m. |
| DMX lighting → DMX lighting | | Two core wire | 1-5 | |
| | | Three core wire | 1-5 | |
| SPI lighting → SPI lighting | TTL | UTP CAT5e | 1-2 | Pixels controlled less if over 1m. |
| | | Two core wire | 0.1-1 | |

4. BASIC OPERATION

4.1. MENU INTRODUCTIION



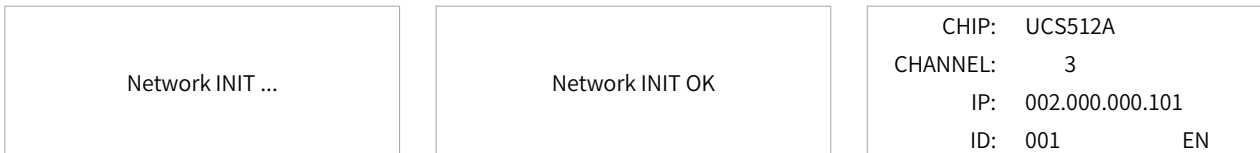
| Menu | Button | Description |
|------------|--------|--|
| / | MENU | Function list: ID Setting, IP Setting, Configurating Addressing, Test Effect, Chip, Channel, Baud Rate Setting, Language Setting, Restore factory Setting. |
| / | ENTER | Enter in setting interface. Confirm and save after modification. |
| ID Setting | ◀ | Decrease value. |

| Menu | Button | Description |
|----------------------------|--------|--|
| | ▶ | Increase value. |
| IP Setting | ◀ | Increase value. |
| | ▶ | Move the cursor to the right. |
| Auto Set ID | ◀ | Decrease value to set the first controller's ID. |
| | ▶ | Increase value to set the first controller's ID. |
| Loop Backup | ◀/▶ | Select ON / OFF to deactivate / disable the loop backup. |
| Configurational Addressing | ENTER | Long press, start addressing. |
| Test Effect | ◀ | Press to toggle the previous effect. |
| | ▶ | Press to toggle the next effect. |
| Chip | ◀ | Press to toggle the previous chip. |
| | ▶ | Press to toggle the next chip. |
| Channel | ◀ | Move the cursor to the left. |
| | ▶ | Move the cursor to the right. |
| Baud Rate Setting | ◀ | Press to toggle the previous baud rate. |
| | ▶ | Press to toggle the next baud rate. |
| 语言设置 | ◀ | Move the cursor to the left. |
| Restore Factory Setting | ▶ | Move the cursor to the right. |

4.2. PARAMETERS SETTINGS

4.2.1. STARTING UP DISPLAY

1. PC connects with controller by network cable, switch on the power. Controller screen will display "Network INIT...". After few seconds, it becomes "Network INIT OK" and jump to the page of IP address information. In this case, the network of the controller is accessible.



2. When the network of the controller is unavailable, the controller will show "Network INIT Fail Check the cable?" after the power switches on for a while. In this case, press "MENU" button to enter different options and conduct the setting.

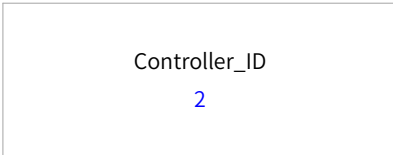


4.2.2. ID SETTINGS

1. Press "MENU" button and select ID Setting, press "ENTER" button to enter it and set the ID.

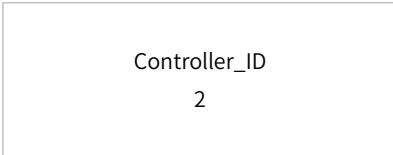


2. Press “▶” and “◀” button to decrease/increase the value.



Note: Please don't open the LED Player when you are setting ID, and restart the controller to confirm the address after the setting is completed.

3. Press “ENTER” button to save ID if it is confirmed.



4.2.3. AUTO SET ID OF CONTROLLER

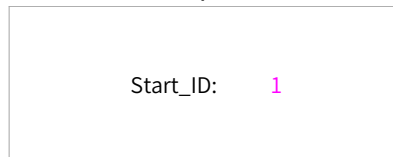
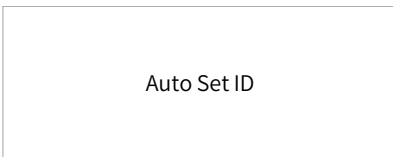
It should cascade all the sub-controls together. Set the ID data of the first controller or set by LED Player, the follow controllers in the same link will be automatically order the continuation of ID.

Note,

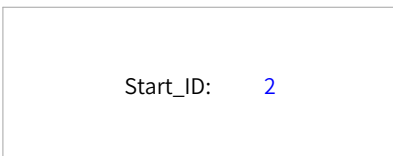
- A. The automatically order ID is not supported in the Loop backup framework.
- B. It supports cascade connection of 400 pieces controllers, and the ID of more than 400 are invalid.
- C. If the IN or OUT ports were incorrectly connected, the automatic ID setting would be fail. Please try again when the connection is correct.

Set the ID by the first controller.

1. Press “MENU” button and select Auto Set ID, press “ENTER” button to enter it and set the ID.



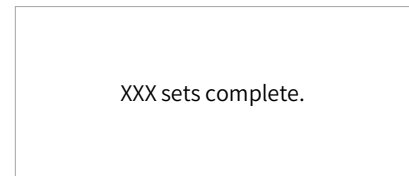
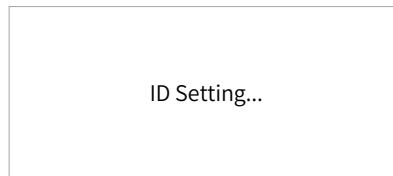
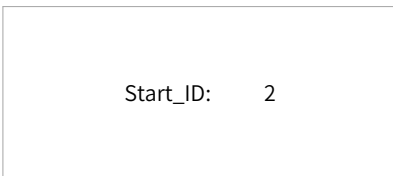
2. Press “▶” and “◀” button to decrease/increase the value.



Note,

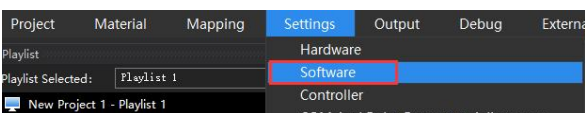
- A. Please don not open the LED Player to avoid setting up failed during the ID set by controller.
- B. To set the ID of the controller, remove the network cable from the IN port and disconnect all controllers in the front position.

3. Press “ENTER” button to set ID of all controllers in the same link if it is confirmed.



Set the ID by LED Player. (Version only for 3.2.8 or above.)

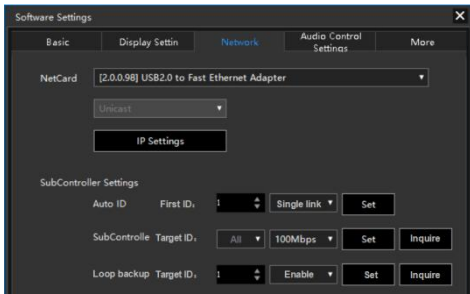
1. Click “Software” to open the software settings window.



- Click “Network” and set the first ID value. Click “Set” after select “Single link” or “Multi link”. Then the ID value of all controller will be setup.

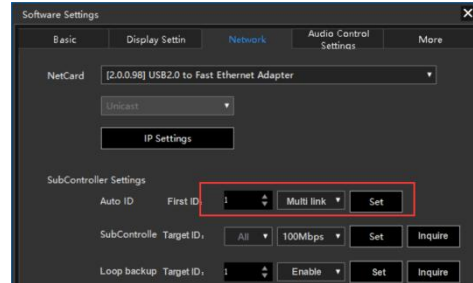
One link.

All controller of LED Player output are on one link.



Multiples link.

The controller is divided into multiple links to receive signals, and the first controller of each link has been set ID.



4.2.4. LOOP BACKUP

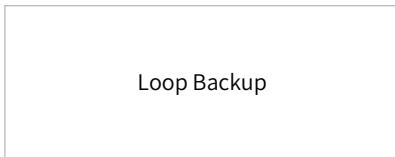
Loop operation is achieved when the receiving port and output port of all controllers are connected.

Note.

- When loop backup is enabled on the last controller, the whole link can work in two unit standby system.
- It does not support automatic order ID, online search, network diagnosis, online upgrade, and art-net Tool configuration in the two unit standby system.

The last controller sets loop bakcup.

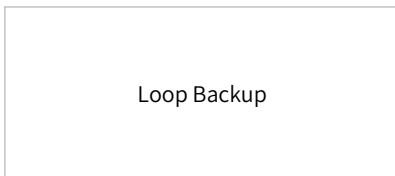
- Press “MENU” button and select Loop Backup, press “ENTER” button to enter it.



- Press “▶” and “◀” button to select on or off.

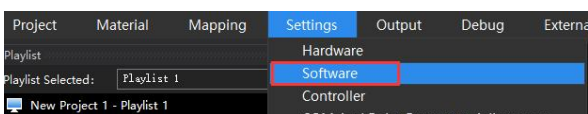


- Press “ENTER” button to confirm.

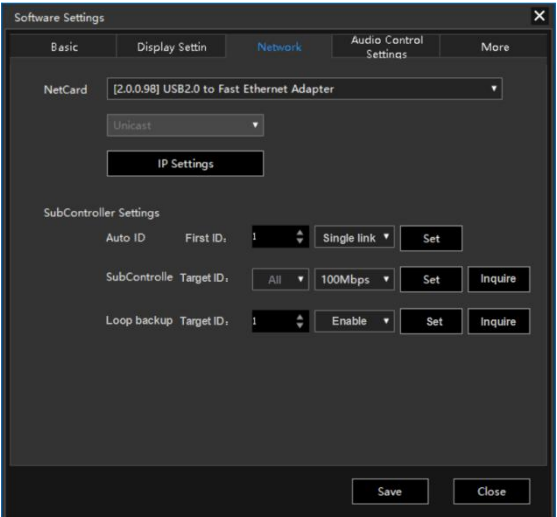


Set standby system by LED Player. (Version only for 3.2.8 or above.)

- Click “Software” to open the software settings window.



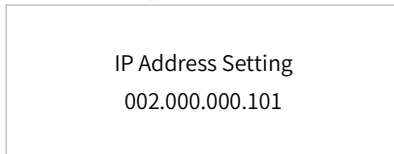
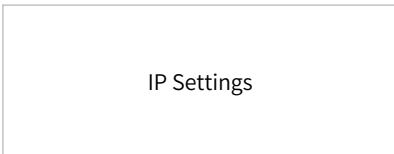
- Input the ID of the last controller in the Network. Click “Set” after select open or close.



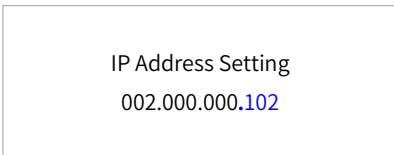
“Query” to check whether loop Backup is enabled.

4.2.5. IP SETTINGS (ONLY FOR MADRIX SOFTWARE)

- Press “MENU” button and select IP Setting, press “ENTER” button to enter it and set the IP.



- Press “▶” and “◀” button to decrease/increase the value.

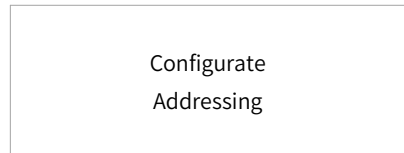
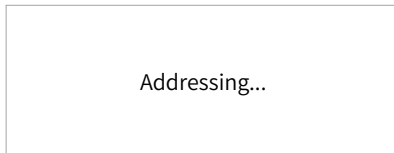
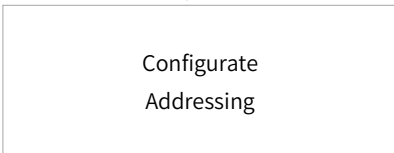


Note: All controller must be set different IP. In the meantime, Set the first controller to 101, set the second to 102, and so on. The IP segment of the controller should correspond to computer. If the IP of controller is 192.168.1.***, and computer can be set to 192.168.1.98.

- Press “ENTER” button to save IP if it is confirmed.

4.2.6. CONFIGURE ADDRESSING

- Press “MENU” button and select Configure Addressing, long press “ENTER” button to start addressing.



- When the interface returns "Configure Addressing", the address operation is completed.

Note, the feature requires LED Player to send address parameters to the controller by the addressing function.

Whether the light-fixture amp is successfully addressed actually depends on the display color of the light-fixture, refer to "UCCESSFULLY ADDRESSED AND SET PARAMETERS".

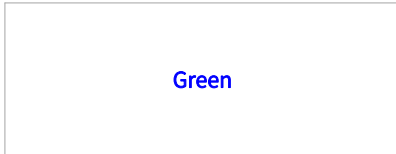
The controller without signal can also use this function by press “MENU”.

4.2.7. TEST EFFECT

1. Press “MENU” button and select Test Effect, press “ENTER” button to start playing the test effects.



2. Press “▶” and “◀” button to toggle the next effect. Support: Red, Green, Blue, White(RGB), White(W), Color Hopping, Pixel Pile-up, Single Port Pile-up, Port Check.

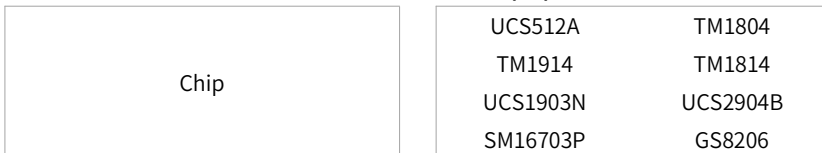


Note, The chips and channels should be set first.

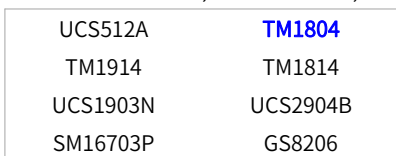
The controller without signal can also use this function by press “MENU”.

4.2.8. CHIP SETTINGS (FOR TEST FUNCTION AND MADRIX SOFTWARE)

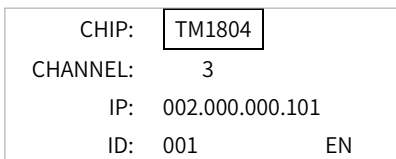
1. Press “MENU” button and select Chip, press “ENTER” button to set the chip.



2. Press “▶” and “◀” button to toggle the chip. The chips can be set via our Art-net tool software. The maximum number of chips is 32. Default: UCS512A, TM1804, TM1914, TM1814, UCS1903N, UCS2904B, SM16703P, GS8206, LX1003, P9883.



3. Press “ENTER” button to save chip if it is confirmed. The corresponding chip can be viewed on the first line of the main interface.

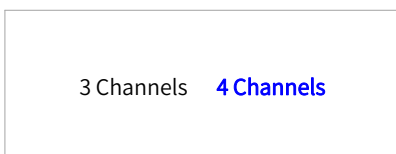


4.2.9. CHANNEL OF CHIP (FOR TEST FUNCTION AND MADRIX SOFTWARE)

1. Press “MENU” button and select Channel, press “ENTER” button to set the channel of chip.



2. Press “▶” and “◀” button to toggle the channel. The text flashed is selected or editable.



3. Press "ENTER" button to save channel if it is confirmed.

```
CHIP: UCS512A
CHANNEL: 4
IP: 002.000.000.101
ID: 001 EN
```

4.2.10. BAUD RATE SETTINGS (FOR TEST FUNCTION AND MADRIX SOFTWARE)

1. Press "MENU" button and select Baud Rate Setting, press "ENTER" button to set the baud rate.

```
Baud Rate Setting
250K
500K
```

2. Press "▶" and "◀" button to toggle the baud rate. The text flashed is selected or editable.

3. DMX512 lighting fixture supports 250k and 500k, and TTL lighting fixture supports 650k, 700k, 800k.

```
250K
500K
```

4. Press "ENTER" button to save baud rate if it is confirmed.

4.2.11. LANGUAGE SETTINGS

1. Press "MENU" button and select Language Setting; press "ENTER" button to enter it. Set the display language of the controller.

```
语言设置
中文 English
```

2. Flickering content is the one can be modified (cursor location). Press "◀" and "▶" buttons to move the cursor to the left and right.

```
中文 English
```

3. Press "ENTER" button to confirm the language selected, then it returns to the page of parameters.

4. The language selected can be seen on the bottom right corner: CH is Chinese and EN is English.

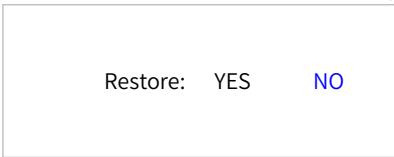
```
CHIP: UCS512A
CHANNEL: 3
IP: 002.000.000.101
ID: 001 CH
```

4.2.12. RESTORE FACTORY SETTING

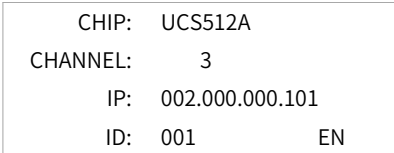
1. Press "MENU" button and select Restore Factory Setting; press "ENTER" button to enter it.

```
Restore
Factory Setting
Restore: YES NO
```

- Flickering content is the one can be modified (cursor location). Press “◀” and “▶” buttons to move the cursor to the left and right.



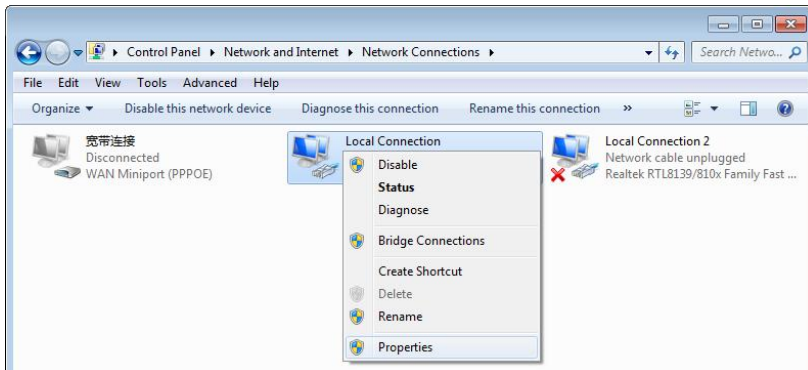
- Press “ENTER” button to save modification if it is confirmed, then it returns to the page of parameters and all parameters become factory defaults.



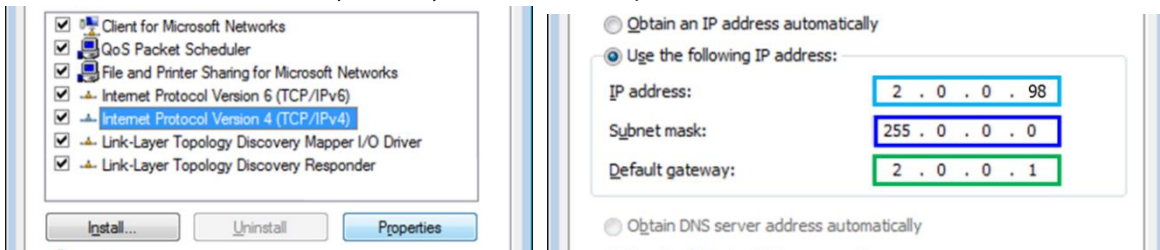
Note, parameters restored to factory state include: Chip, Channel, IP address, ID, chip list, baud rate and language.

5. IP ADDRESS SETTINGS (PC)

- Open “Network Connection” on the PC, right click “Local Connection” and select “Properties”.



- Select Internet Protocol (TCP/IP), then click “Properties”. Set the IP address as below.



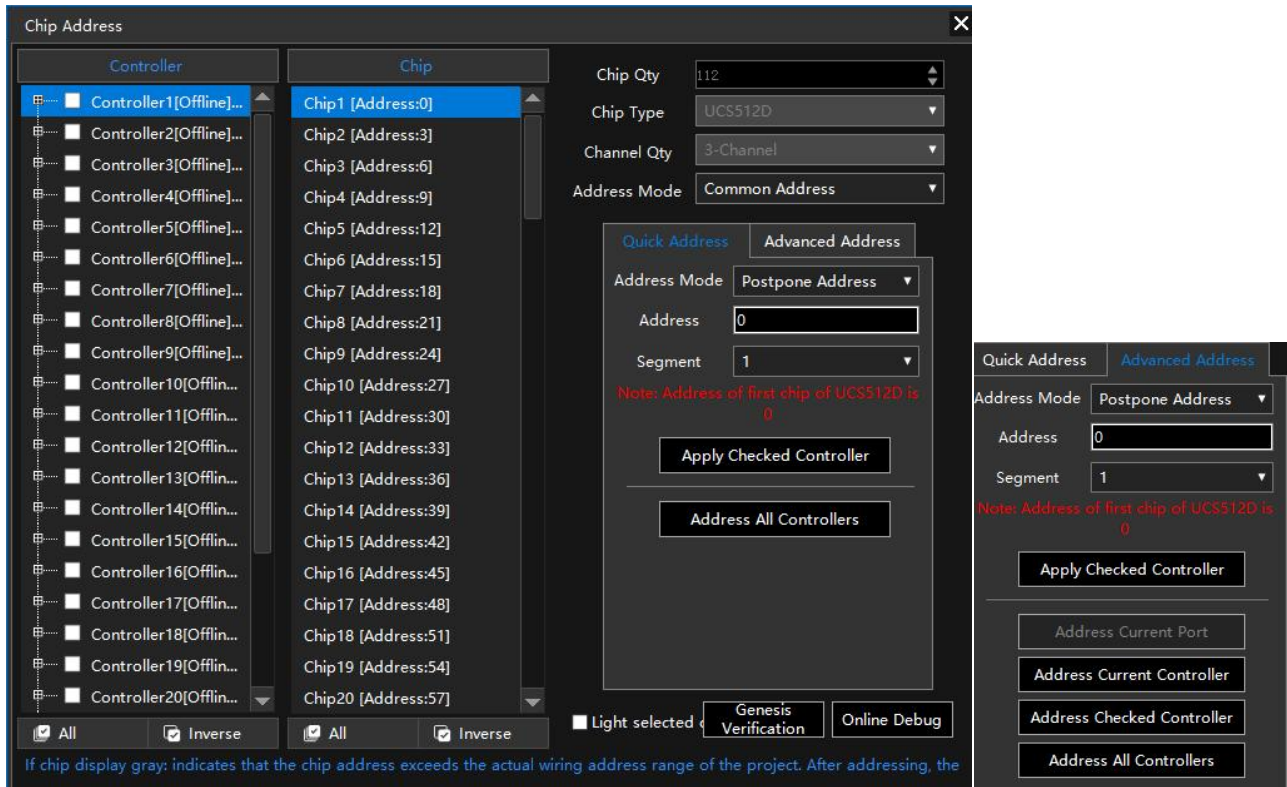
- Click “OK” after the setting is finished.

6. ADDRESSING BY LED PLAYER

Access the controller correctly and open LED Player. Click Address of Debug to open the interface.

After setting the chip address drove by the controller, click "Address All Controllers" to save address data into controllers.

Note, If the controller is offline, there is a probability that the address data cannot be saved to the controller normally if it is offline.



| | | |
|-----------------------|--------------|---|
| Hardware | Controller | Shows the number of controllers in the project. [Online] Indicates that the controller is connected properly. [Offline] Indicates that the controller will not be able to address the lighting fixtures. [Forbidden] Indicates that the driven chip is not DMX. It can be set at "Hardware" of "Settings". |
| | Chip | Shows the number of chips and address information. Maximum 960 chips per port. If the chip address is beyond the actual wiring of project, the selected chip will not "light up". |
| | Online Debug | Click and jump into the One Debug interface. |
| Chip Address Settings | Chip Qty. | The number of single drive points set by Hardware Settings. |
| | Chip Type | The chip set by Hardware Settings. |
| | Channel Qty. | The channel set by Hardware Settings. |
| | Address Mode | "Common Address" and "Auto-Increment" |
| | Address Mode | "Unselect", "Postpone Address", "Use Same Address". Unselect: When saving the current chip address parameter, the address of others will not change accordingly. Postpone Address: When saving the current chip address parameter, the subsequent will automatically change according to the |

| | | |
|---------------------|---|---|
| | | original channel value. Use Same Address: When saving the current chip address parameter, all chips are set the same address. |
| | Address | Set the selected chip address. The chip list will be updated automatically after it is fill in the address. Note, Please do not fill in the value exceeding total chips to avoid abnormal output. |
| | Segment | Sets the number of pixels driven by the selected chip. The chip list is automatically updated after it be selected the number of segments. |
| Address Application | Address All Controllers | Send the address parameters to all controllers. |
| | Advanced Address | Apply Checked Controller: Click to save the address parameter of the checked controllers. Address Current Port: Click to address the lighting fixture of current port. Address Current Controller: Click to address the lighting fixture of current controllers. Address Checked Controller: Click to address the lighting fixture of the checked controllers. Address All Controllers: Click to address the lighting fixture of all controllers. It would be addressed correctly if the controller is offline. |
| Light-up | Check it and click the chip under a port. The chip will light up RGB (of RGBW). And the location of this chip can be seen in the LED Player preview area. Please ensure that the data of LED Player is consistent with the address of the actual lighting fixture. (It is recommended that the luminaire be addressed once before lighting up.) | |

7. APPENDIX (CHIPS ADDRESSING)

7.1. CHIP SUPPORT

| Chip | Addressing | Custom Channel | Set parameters | | | | | |
|----------|------------|----------------|-----------------|------------------|---------|---------|--------|-------|
| | | | No signal State | Power-on Setting | Current | Forward | Serial | GAMMA |
| UCS512A | √ | × | × | × | × | × | × | × |
| UCS512B | √ | × | × | × | × | × | × | × |
| UCS512C0 | √ | × | × | × | × | × | × | × |
| UCS512C1 | √ | × | √ | √ | √ | × | × | × |
| UCS512C2 | √ | × | √ | √ | √ | × | × | × |
| UCS512C4 | √ | × | × | √ | × | × | × | × |
| UCS512CN | √ | × | √ | √ | × | × | × | × |
| UCS512D | √ | × | √ | √ | √ | × | × | × |
| UCS512E0 | √ | √ | √ | √ | √ | √ | × | × |
| UCS512EH | √ | √ | √ | √ | √ | √ | × | × |

| Chip | Addressing | Custom Channel | Set parameters | | | | | |
|----------------|------------|----------------|-----------------|------------------|---------|---------|--------|-------|
| | | | No signal State | Power-on Setting | Current | Forward | Serial | GAMMA |
| UCS512G4 | √ | × | √ | √ | √ | × | × | √ |
| UCS512G6 | √ | × | √ | √ | √ | × | × | √ |
| UCS512K series | √ | √ | √ | √ | √ | √ | × | √ |
| UCS512H series | √ | × | √ | √ | √ | × | × | √ |
| DMX512AP | √ | × | × | × | × | × | × | × |
| SM16511 | √ | × | × | × | × | × | × | × |
| SM16512 | √ | × | × | × | × | × | × | × |
| SM16520 | √ | × | × | × | × | × | × | × |
| SM16500 | √ | × | √ | √ | × | × | × | × |
| SM17500 | √ | √ | √ | √ | √ | × | × | × |
| SM17512 | √ | × | √ | √ | √ | × | × | × |
| SM17522 | √ | × | √ | √ | √ | × | × | × |
| SM18522P | √ | × | √ | √ | √ | × | × | √ |
| SM18522PH | √ | × | √ | √ | √ | × | × | √ |
| SW-D | √ | × | × | × | × | × | × | × |
| Hi512A0 | √ | √ | × | × | × | × | × | × |
| Hi512A4 | √ | × | √ | √ | × | × | × | × |
| Hi512A6 | √ | × | √ | √ | × | × | × | × |
| Hi512D | √ | × | × | × | × | × | × | × |
| TM512AB3 | √ | × | × | × | × | × | × | × |
| TM512AL1 | √ | × | × | × | × | × | × | × |
| TM512ACx | √ | × | × | × | × | × | × | × |
| TM512AD | √ | × | √ | √ | √ | × | × | × |
| QED512P | √ | × | √ | √ | √ | × | × | × |
| GS8512 | √ | × | × | × | × | × | √ | √ |
| GS8513 | √ | × | × | × | √ | × | √ | √ |
| GS8515 | √ | × | × | × | √ | × | √ | √ |
| GS8523 | √ | × | √ | √ | √ | × | √ | × |
| GS8524 | √ | × | √ | √ | √ | × | √ | × |
| GS8525 | √ | × | √ | √ | √ | × | √ | × |
| GS8526 | √ | × | √ | √ | √ | × | √ | × |

7.2. COLOR OF SET PARAMETERS SUCCESSFULLY

| Chip | Lighting color after power on | Addressed | | Byte + No signal + No signal | | Current parameter | | Self-Channel Setting | |
|----------------|-------------------------------|-----------------|----------------|------------------------------|----------------|-------------------|------------|----------------------|------------|
| | | First chip | Other chip | First chip | Other chip | First chip | Other chip | First chip | Other chip |
| UCS512A | White | Blue | Blue | - | - | - | - | - | - |
| UCS512A1 | White | Blue | Blue | - | - | - | - | - | - |
| UCS512A2 | White | Blue | Blue | - | - | - | - | - | - |
| UCS512B3 | White | Blue | Blue | - | - | - | - | - | - |
| UCS512C | Custom | White | White | - | - | - | - | - | - |
| UCS512C0 | - | White | White | - | - | - | - | - | - |
| UCS512C1 | - | Yellow | White | Power on | Power on | Yellow | White | - | - |
| UCS512C2 | - | Yellow | White | Power on | Power on | Yellow | White | - | - |
| UCS512C3 | Custom | White | White | Red | Red | - | - | - | - |
| UCS512C4 | Custom | White | White | Red | Red | - | - | - | - |
| UCS512CN | Custom | Yellow | White | Yellow | Power on | - | - | - | - |
| UCS512D | Custom | Yellow | White | Yellow | Power on | Yellow | Red | - | - |
| UCS512E0 | Custom | Yellow | White | Yellow | Power on | - | - | Yellow | Green |
| UCS512EH | Custom | Yellow | White | Yellow | Power on | Yellow | Red | Yellow | Green |
| UCS512G4 | Custom | Yellow | White | White (Custom) | White (Custom) | White | White | - | - |
| UCS512G6 | Custom | Yellow (Custom) | White (Custom) | White (Custom) | White (Custom) | White | White | - | - |
| UCS512K series | Custom | Yellow | White | White | White | White | White | Yellow | White |
| UCS512H series | Custom | Yellow | White | White | White | White | White | - | - |
| DMX512AP | - | White | White | - | - | - | - | - | - |
| SM16512 | - | Green | Green | - | - | - | - | - | - |
| SM16511 | - | Green | Green | - | - | - | - | - | - |
| SM16520 | - | Green | Green | - | - | - | - | - | - |
| SM16500 | Custom | Red | Green | Red | Power on | - | - | - | - |
| SM17500 | Custom | Red | Green | Red | Power on | Red | Yellow | Red | Purple |
| SM17512 | Custom | Red | Green | Blue | Blue | - | - | - | - |
| SM17522 | - | Red | Green | Red | Blue | Red | Yellow | - | - |
| SM18522P | - | Red | Green | Red | Blue | Red | Yellow | - | - |
| SM18522P H | - | Red | Green | Red | Blue | Red | Yellow | - | - |
| SW-D | - | Yellow | Green | - | - | - | - | - | - |
| Hi512A4 | Custom | Red | Green | Red_ | Green | - | - | - | - |
| Hi512A6 | Custom | Red | Green | Red | Green | - | - | - | - |
| Hi512A0 | - | White | White | White | White | - | - | - | - |
| Hi512D | - | Red | Green | Green | Green | Green | Green | - | - |
| Hi512E | - | Red | Green | Green | Green | Green | Green | - | - |
| TM512AB3 | White | Blue | Blue | - | - | - | - | - | - |
| TM512AL1 | White | Blue | Blue | - | - | - | - | - | - |
| TM512AC0 | - | White | White | - | - | - | - | - | - |




| Chip | Lighting color after power on | Addressed | | Byte + No signal + No signal | | Current parameter | | Self-Channel Setting | |
|----------|-------------------------------|------------|------------|------------------------------|------------|-------------------|------------|----------------------|------------|
| | | First chip | Other chip | First chip | Other chip | First chip | Other chip | First chip | Other chip |
| TM512AC2 | Custom | White | White | - | - | - | - | - | - |
| TM512AC3 | Blue | White | White | - | - | - | - | - | - |
| TM512AC4 | Blue | White | White | - | - | - | - | - | - |
| TM512AD | Blue | Yellow | White | Yellow | Power on | Yellow | Red | - | - |
| GS8512 | Custom | Red | Cyan | - | - | - | - | - | - |
| GS8513 | Red+Cyan | Red | Cyan | - | - | - | - | - | - |
| GS8515 | Red+Cyan | Red | Cyan | - | - | - | - | - | - |
| GS8523 | - | Red | Cyan | - | - | - | - | - | - |
| GS8524 | - | Red | Cyan | - | - | - | - | - | - |
| GS8525 | - | Red | Cyan | - | - | - | - | - | - |
| GS8526 | - | - | - | - | - | - | - | - | - |

8. ERROR CODE AND TROUBLE SHOOTING

| Display | | Measure |
|---------|---|---|
| E08 | UID does not match | Use the corresponding code to play. |
| E09 | UID in player does not match the one in controller. | The controller is bound with a specific engineering code. Use the corresponding code to play. |
| E11 | The UID of controller does not match the LED player. | <p>The engineering code of the controller is inconsistent with that of the project. The solution is as follows:</p> <ol style="list-style-type: none"> 1. The controller is bound with a specific engineering code. Use the corresponding code to play. 2. The controller is not bound to an engineering code. Use a general project to play. |
| E40 | Failed to write the parameters into the flash primary area. | The controller hardware is damaged. Contact us please. |
| E41 | Failed to write the parameters into the flash spare area. | The controller hardware is damaged. Contact us please. |
| E42 | Failed to read the parameters into the flash primary area. | The controller hardware is damaged. Contact us please. |
| E43 | Failed to read the parameters into the flash spare area. | The controller hardware is damaged. Contact us please. |
| E44 | The network of the controller is unavailable. | <p>There is no output of the controller or the next one:</p> <ol style="list-style-type: none"> 1. Ensure all ports of the controller are correctly connected. 2. Ensure the controller is in good contact with the network cable. 3. Ensure the sequence of the cable is T568B. 4. Switch to a normal controller and check whether the network cable is faulty. 5. Ensure that the length of the network cable does not exceed 100 m. Or replace the network cable with a better one. 6. After the above has been excluded, the controller hardware is damaged. Contact us please. |
| E45 | No program is written to the | 1. Wait until the controller upgrade is complete. |

| Display | | Measure |
|---------|--|--|
| | main board or the program is lost. | <ol style="list-style-type: none"> If no program upgrade is performed, the program may be removed unexpectedly. Contact us please. If the program is not upgraded and the program cannot be burned online, the hardware is damaged. Contact us please. |
| E46 | Auto addressing is timed out. | <ol style="list-style-type: none"> Ensure the controller's wiring is correct. Ensure the number of controllers in a link to less than 30. Ensure all controllers are powered on. Wait 10 seconds and try again. Ensure the faulty machines exist on the network. |
| E47 | Without the configure addressing data. | Please use software to address first. |
| None | | <ol style="list-style-type: none"> Ensure that the power supply is properly connected and supplied. The controller hardware is damaged. Contact us please. |

9. PARTS LIST

| Picture | Model | Number | Remark |
|---|-------------------------|--------|--------|
|  | 1.5m power cord | 1 | |
|  | 5P Female terminal stud | 8 | |
|  | 2meter Cat 5e (T568B) | 1 | |