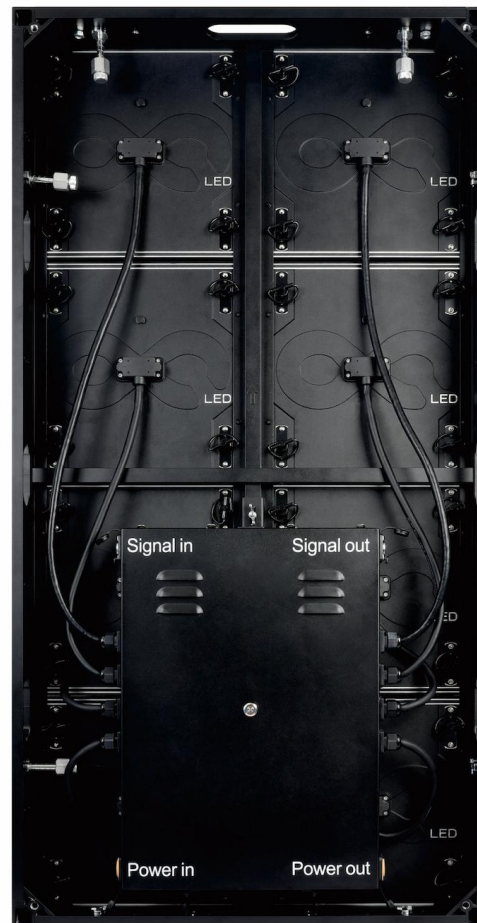


# FT SERIES MANUAL

Version 4.1



# Messages to client

Dear Clients,

Thank you for using the products of Shenzhen Lion Optoelectronics Technology Co.,Ltd.(hereinafter referred to as "Lionled")outdoor FT series!Please read this instruction manual carefully before use.This manual will introduce the technical information of the product composition,performance,characteristics,installation,commissioning, and maintenance methods in the form of illustrations and text descriptions.This manual may stillcontain errors and is subject to change without prior notice.If you have any questions or suggestions while using this manual, please contact us.We will do our best to help you solve the problem in a timely manner and sincerely appreciate your suggestions.

## Copyright

This manual is the property of Lionled.No part of the manual may be transcribed,disseminated,reproduced, translated,edited,published,stored in a retrieval system or used in any form by any person or organization

# Safety Information



Warn!

Please read the safety precautions listed in this section carefully before installation, switching, operation, and maintenance



(1) This product is intended for professional use only.  
(2) In the event of fire, fall, and electric shock, this product is a risk of injury and death.



Before installing, supplying power, operating, or maintaining this product, please read the instruction manual carefully to understand the meaning of the marks marked on the instruction manual and the product, and strictly follow the requirements listed in the safety precautions.

# Safety Information



## Protection against electric shock

- (1) This product is only allowed to access voltages in the range of 100V-240V and frequencies in the range of 50-60Hz.
- (2) The grounding wire of the product is always on, please turn off the power when it is not working.
- (3) Before using this product, make sure all devices are in good condition.
- (4) Do not use a damaged, defective, or overheated cord or plug.
- (5) Please do not open any lids.



## Fire prevention

- (1) Do not modify this product by any method not described in the manual.
- (2) Do not operate this product at full power in an outdoor environment where the outdoor temperature is higher than 65°C or below -30°C.

# Safety Information



## **Injury prevention**

- (1) When you install, maintain, or move this product, block off work areas or access.
- (2) Check that all exterior masks and hardware are properly locked.
- (3) When hoisting, it should be installed from top to bottom and disassembled from bottom to top.



## **Important Warning**

- (1) The outside temperature range of this product in normal use: up to 65°C, minimum -30°C.
- (2) In order to avoid the risk of electric shock due to high leakage currents, it is necessary to ground correctly and in accordance with the requirements during installation.
- (3) To prevent electric shock, this product must be grounded

# Safety Information



## **Power supply system**

(1)Power Cable--The power cord connected to the system has a special protective nature and cannot be used by the user.If the power cord is damaged, it can only be replaced with a new one,do not attempt to repair it.

(2)Signal Cable--The signal cables connected to the system have special protective properties and are not available to the user.If the signal cable is damaged,it can only be replaced with a new one,do not attempt to repair it.

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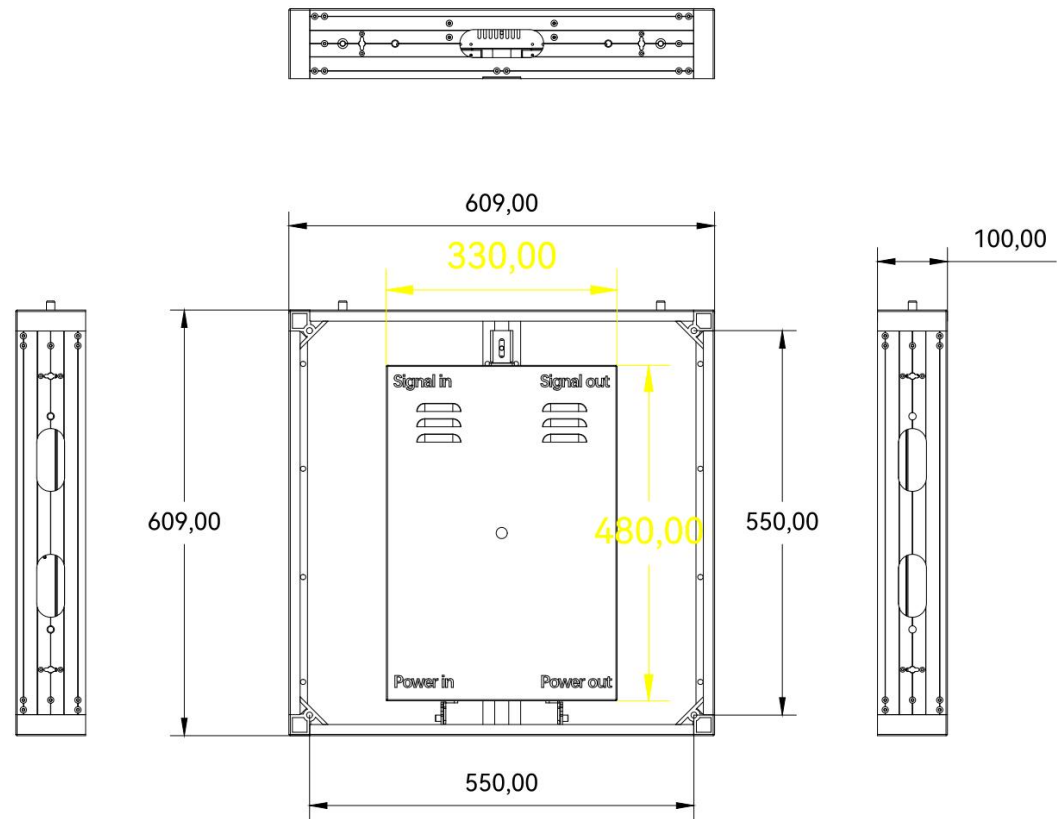
# 1.Introduction of FT series

## 1.1 About FT Series

FT series is an outdoor aluminum screen independently developed by Lionled, which has the characteristics of low power consumption, environmental protection and energy saving, protection grade IP68, high brightness, etc., and can resist harsh weather environments and extreme temperatures. At the same time, it can provide a variety of sizes, which are widely used in outdoor signboards, highway billboards, city squares, commercial pedestrian streets, public transportation, stadiums and other fixed installation scenarios.

# 2.Features and specifications

## 2.1 Size



Remark: Can custom the size up to 1x1ft module. Normally do 2x2ft, 2x3ft, 2x4ft, 3x3ft.

## 2.2 FT Series Features

- 1.Outdoor high-brightness products,excellent display effect,box design fits the American market;
- 2.Lower power consumption,common cathode energy-saving technology;
- 3.Aluminum material has excellent thermal conductivity and fast heat dissipation;
- 4.Protection level:waterproof rate IP68;
- 5.Brightness:8000-10000nits;
- 6.Complete front and rear maintenance and installation;
- 7.Fully certified products UL and ETL;

## 2.3 Cabinet Main Part







## 2.4 FT Series Specification

Model No.		P4.23	P6.35	P9.525
Module	Pixel Pitch(mm)	4.23	6.35	9.525
	LED Type	SMD 1921	SMD 2727	SMD 2727
	Module Dimension(W^H)(mm)	1x1ft(304.8mmx 304.8mm)		
	Module Resolution(W*H)(Pixel)	72x72	48x48	32x 32
	Pixel Density(Pixel/m <sup>2</sup> )	55800	24800	11022
	Scan Mode(S)	8	6	2
Cabinet	Cabinet Dimension(W^H)(mm)	2x2(609.6mmx 609.6mm)		
	Cabinet Resolution(W^H)(Pixel)	144x144	96x96	64x64
	Cabinet Material	Aluminum Extrusion		
	Cabinet Weight(Kg)	25		
Display	Best Viewing Distance(m)	4	6	9
	Brightness(nits)	8000-10000		
	Ingress Protection(Front/Rear)	IP68		
	Viewing Angle	H:140°V:140°		
	Color Temperature	3200-9500K		
	Gray Level	14-16bit		
	Max Power Consumption(W/m <sup>2</sup> )	450		
	Average Power Consumption(W/m <sup>2</sup> )	150		
	Refresh Rate(Hz)	1920-3840		
	Maintenance Method	Rear/Front Maintenance		
	Operating Temperature	-40℃ -80℃		
	Operation Humidity	10%-95%HR		
	Input Voltage	AC110-220V±15%50/60Hz		
	MTBF(Hours)	50000		
Life Time(Hours)	100000			

### 3.Installation

#### 3.1 Preparing before installation


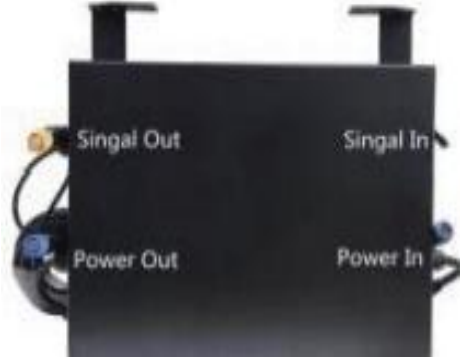
##### THE LIST OF ACCESSORY

	Name	Specs	Picture
TOOL	Connecting Plate between cabinets	143x77mm	
	Screw for the cabinet left and right fixed	M10*60 M10*20	
	T-type Allen wrench, for Platinum module 1ftx1ft	M2.5	
	Hex wrench for connect plate screws	M8	

# 3.Installation

## 3.1 Preparing before installation

### THE LIST OF ACCESSORY

	Name	Specs	Picture
Controller	WIFI Antenna	V314N 500ft Distance	
	WIFI Controller	Novastar TB30	

### 3.Installation

#### 3.1 Preparing before installation

##### THE LIST OF ACCESSORY

	Name	Specs	Picture
Power and Signal Cord	Signal Cord for 2 sides	1.5m One male, one female	
	Power Cord for 2sides	1.5m One male, one female	
	Main Power Cord	5m 12AWG	

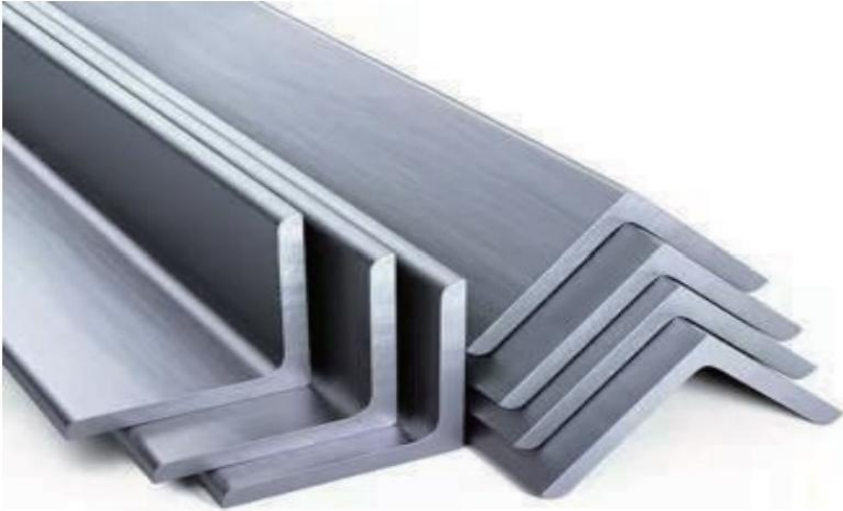
## 3.2 Electricity Meter

### REQUIREMENTS FOR LED SIGN INSTALLATION

Our new sign is controlled by an internal computer. For the sign to operate properly, it is essential that you provide proper electrical power to the sign. The following steps should be taken to protect your warranty.

1. It is imperative that the sign be on a dedicated electrical circuit. If there is anything else on the circuit, it could cause the voltage to fluctuate there by interrupting the display and the programming.
2. The LED sign is wired for 120 volts or 230 volts .
  - (1) If you have a single sided LED sign. Single sign draws 220V 55W/Modules / 120V 55W/Modules . Your electrician should provide dedicated circuit(s). ( For details, please refer to the following Power Parameter Table )
  - (2) **Each sign requires its own circuit.**
  - (3) If you have a ID section of the sign requires , you can connect the power supply from the LED sign. Your electrician should provide the proper size wire to ensure proper voltage at the sign (120 volt $\pm$ 3% or 230 volt $\pm$ 3%) when in operation. For assistance calculating the wire size you can refer to McLamb's LED Signs engineer.
3. Customer needs to supply an earth ground rod and a ground wire attached to the ground lug of each cabinet.
4. Electric wire and communication cable may be run in the same trench. It is necessary that they are in separate conduit and separated as far as possible in the trench.
5. Please be sure all communication connections are made with the power off. Failure to do so may damage the programming and/or sign display

## 3.3 Installation



Step 1: Weld 40x40 or 20x40 square passes to the structure

Step 2: Weld the 40x40 angle iron to the bottom of the screen structure as the screen support.

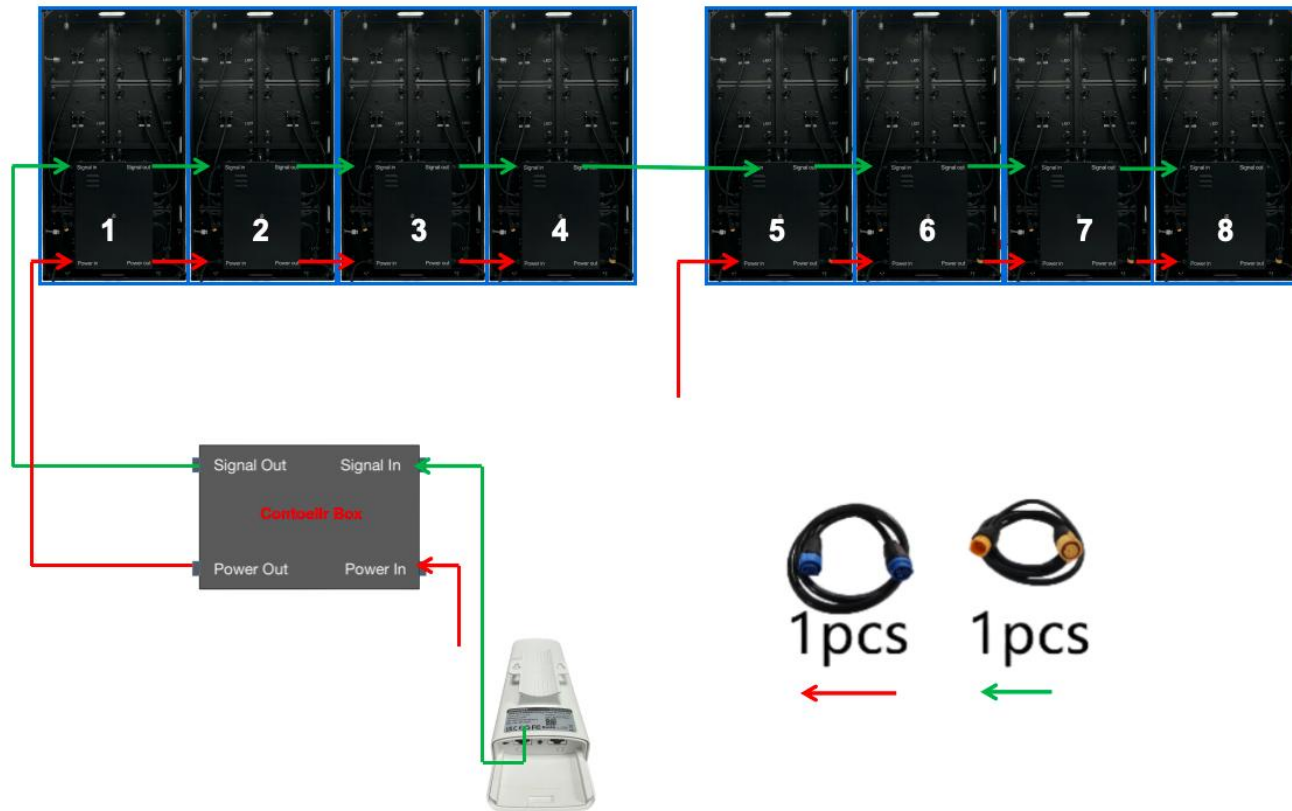
### 3.3 Installation



Step 3: Take out the box and spread it out on the ground to connect the box, power cable, signal cable, locker between the cabinets, and pay attention to the box according to the upward arrow

Step 4: Use a crane to lift the spliced box to the structure assemble together

### 3.3 Installation



Step 5: Manually place the screen flat and use the connector to fix the screen on the square pass

Step 6: Repeat the above steps on the second side

Step 7: Connect the power cable and signal cable (as shown above) according to the wiring diagram provided by your sales, and upload the program video you need

## 4. Screen maintenance

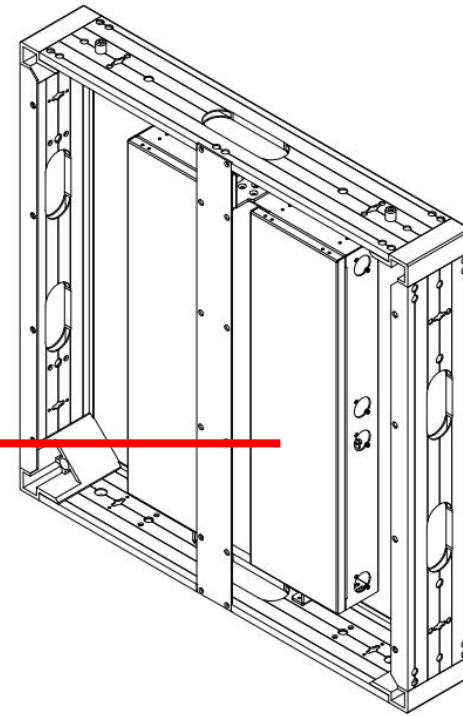
Front Access



Step 1: Use the front maintenance tool to unscrew the mechanism locks at the four corners.

Step 2: Hold the module with your hand and use a screwdriver to remove the screws of the module's power cord to remove the module and replace it with a new one

## 4.2 Maintenance of power supplies, receiving cards, and cables



Step 1: Open the waterproof cover of the power box and use a screwdriver to replace the problematic power supply, receiving card, and cable

## **5. Novastar control system**

### **5.1 Overview of the system**

This product uses Nova receiving card, with the control software Nova

VIPLEX, the user can control all the key information of the display through the control software, and realize various settings for the LED display.

### **5.2 Requirements of the working environment**

In order to ensure the stability and safety of the system during operation, the following requirements are required for the working environment:

- (1) Hardware requirements: brand computer, I7 processor/16G memory/1T hard disk/4K independent graphics card/23-inch monitor.
- (2) System requirements: the operating system is win10 or above.
- (3) Network requirements: The display screen needs to be connected to the network when it is connected for correction.

## 5.3 Install Viplex express

Download Viplex Express And Install It

Website:<https://www.novastar.tech/downloads/>



### Nova Cloud Software

#### ViPlex Handy

APP (Recommend)

- ViPlex Handy User Manual
- Software QR code

#### ViPlex Express

V2.23.0.1001

- ViPlex Express (x64)
- ViPlex Express (x32)
- Async Mode User Manual
- Studio Mode User Manual
- Release Notes

1,Connect Controller WIFI WIFI Name:AP-----

Password:SN2008@+(If no correct , pls try 12345678)

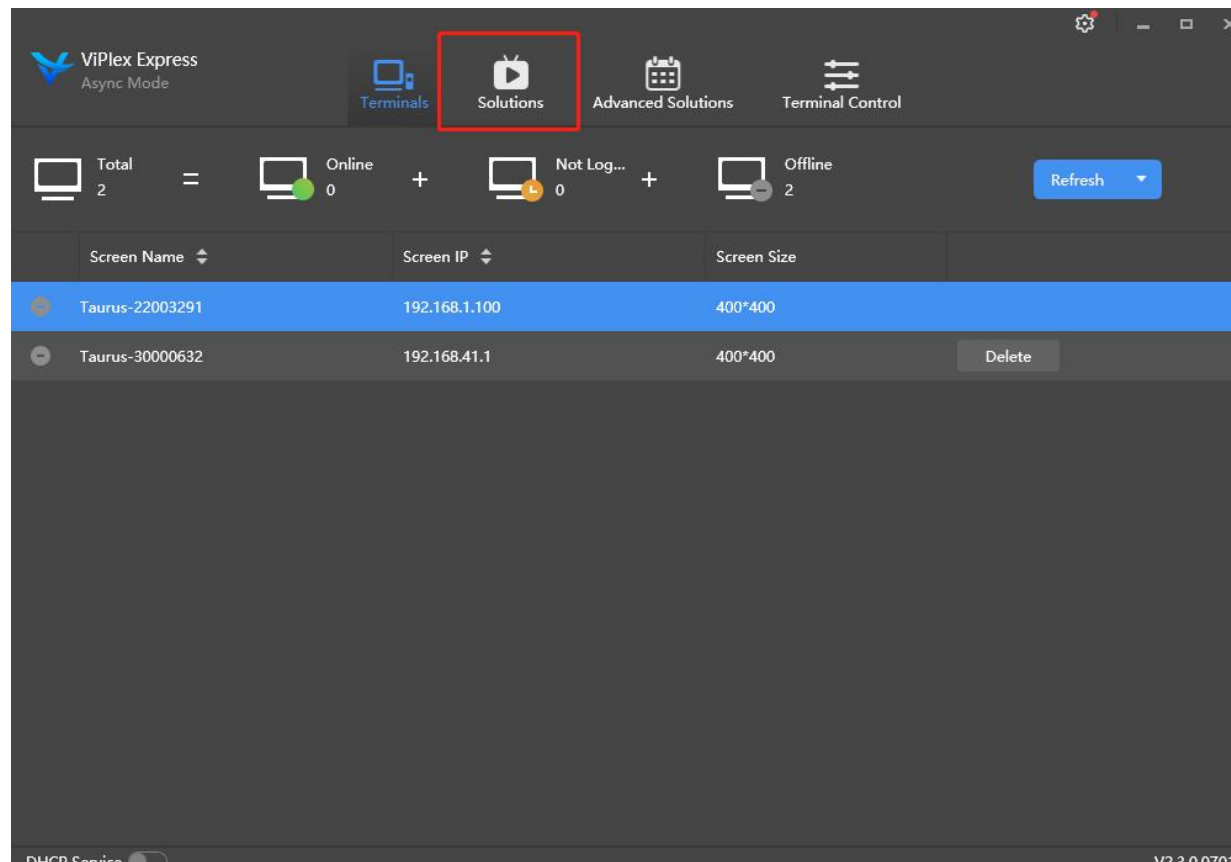
(For long distance connection use LED SIGN ANTENNA WIFI

Password:12345678)

2,Open Solution Program Software Vplex Express



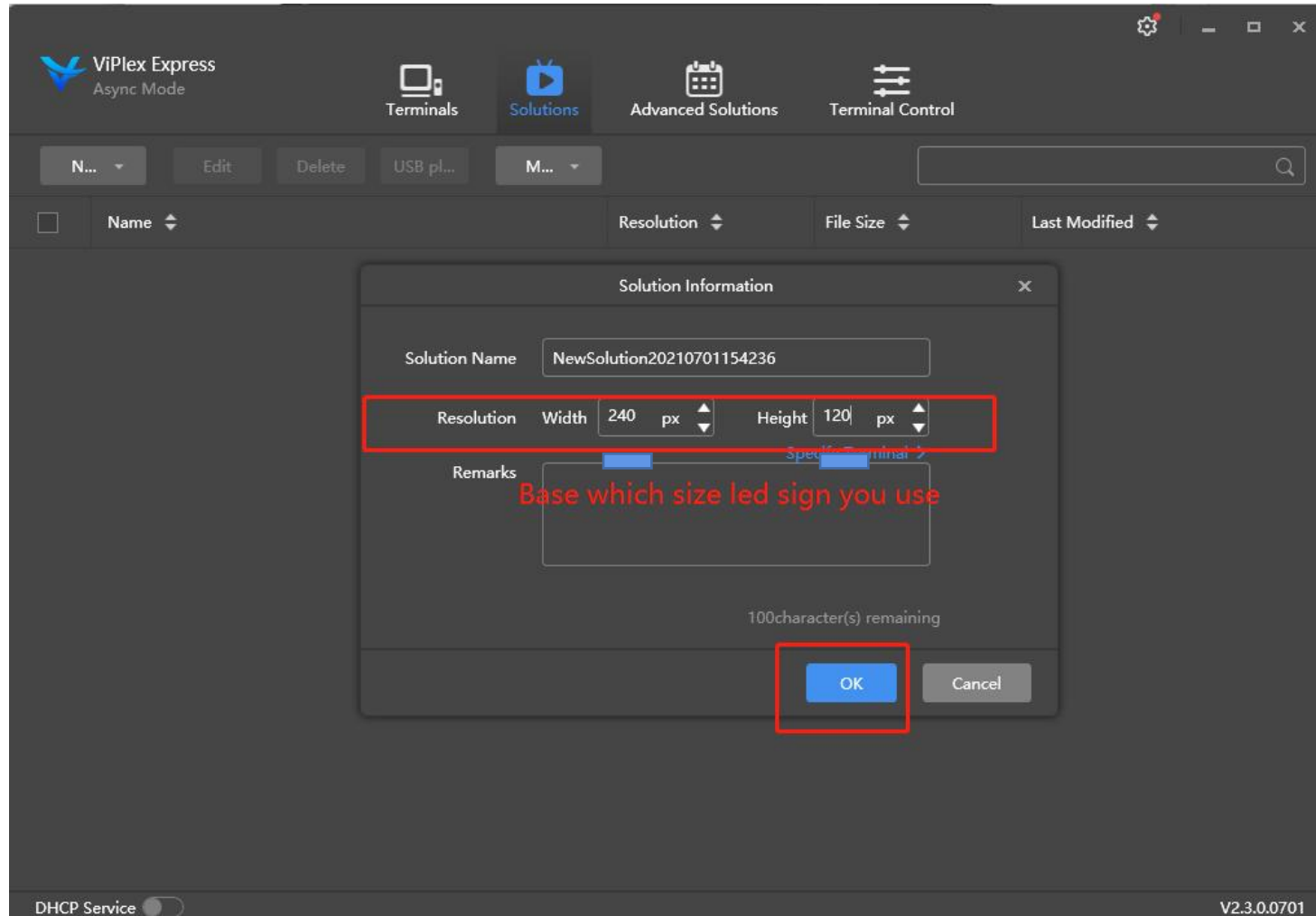
3,Connect Led Sign And Open Solution



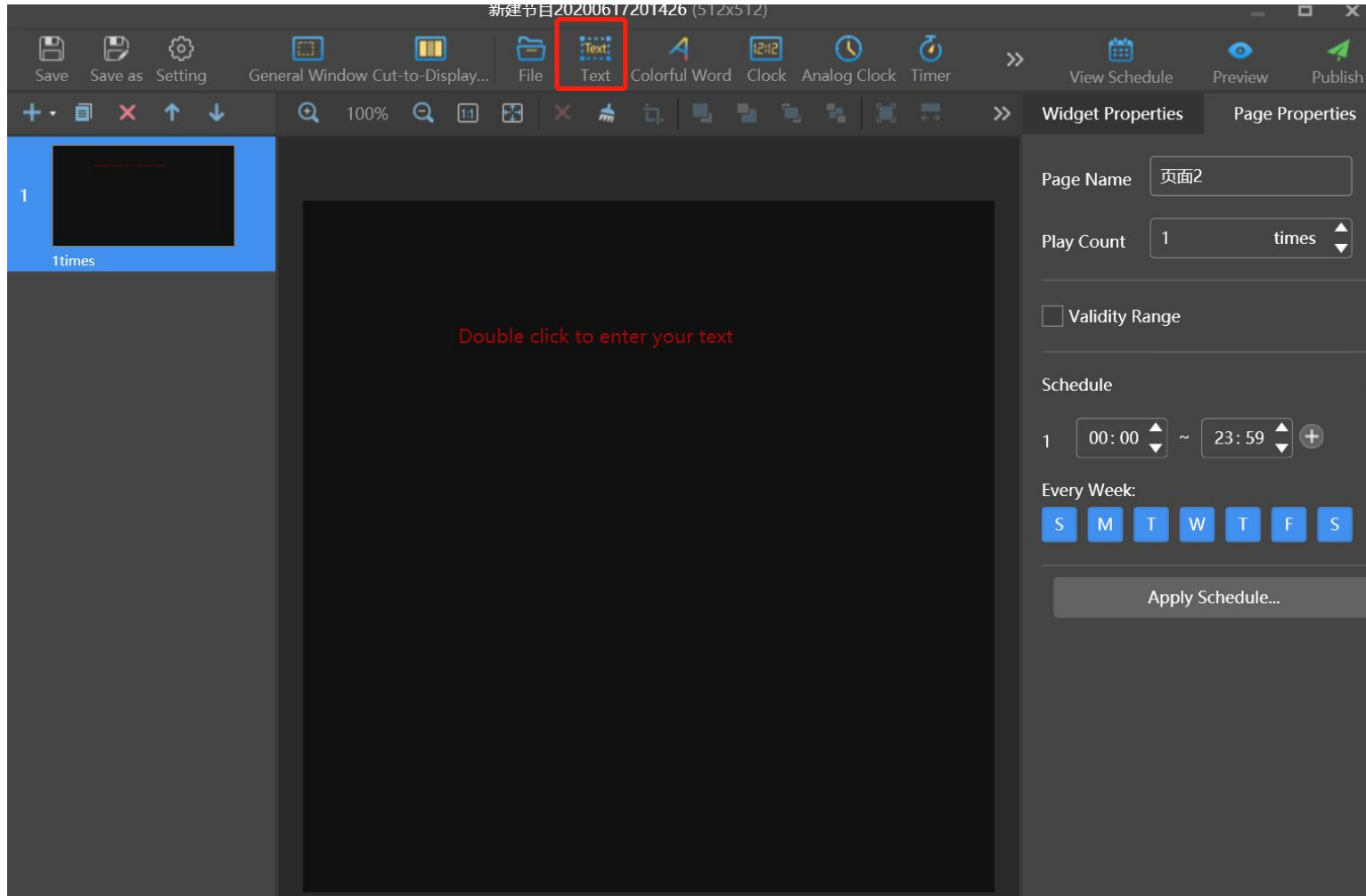
## 4,Choice Regular Size

The screenshot displays the ViPlex Express interface in Async Mode. The top navigation bar includes icons for Terminals, Solutions (highlighted), Advanced Solutions, and Terminal Control. Below the navigation bar is a toolbar with buttons for 'N...', 'Edit', 'Delete', 'USB pl...', and 'M...'. A dropdown menu is open under the 'M...' button, showing two options: 'Regular S...' and 'Ultra-Lon...'. The 'Ultra-Lon...' option is highlighted with a red rectangular box. To the right of the dropdown menu are columns for 'Resolution', 'File Size', and 'Last Modified'. The main content area is currently empty, displaying a 'No data' message with a camera icon.

## 5, Enter Resolution



6, Select the file or text you need to play



## 7, Push solution

The screenshot shows a software interface with a top toolbar containing various icons. The 'Publish' icon, which is a green arrow pointing right, is highlighted with a red box. Below the toolbar is a main workspace area with a dark background and a blue sidebar on the left. A 'Widget Properties' panel is visible on the right side of the workspace, showing 'Page Name' as 'Page1' and 'Play Count' as '1 times'. A 'Publish' button is also visible in this panel, highlighted with a red box.

A 'Publish' dialog box is open in the foreground. It has a title bar with the text 'Publish' and a close button. The dialog contains the following information:

- Solution Name: NewSolution20210701154236
- Terminal Name: [Searchable input field]

<input checked="" type="checkbox"/>	Terminal Name	Screen Size	Terminal IP	Progress
<input checked="" type="checkbox"/>	Taurus-22003291	400X400	192.168.41.1	

At the bottom of the dialog, there are three buttons: 'Refresh', 'Publish' (circled in red), and 'Done'.

## 6.Packaging,shipping and storage



6.1 Packing:Packed in cartons

6.2 Shipping

The cabinet must be packed before transportation,the product must not be upside down or horizontally,and it must be protected from wind,rain,direct sunlight and corrosive liquids during transportation.

6.3 Storage

The cabinet should be stored in an environment with an ambient temperature of-30°C to+60°C and a relative humidity of 10%to 60%RH.Do not store the box in an environment with volatile,corrosive,or flammable chemical products.



## **7.Maintenance and Repair**

### **7.1 LED display maintenance**

Symptom 1:The display does not light up as a whole

Check whether the display screen has electricity and whether the indicator light of the switching power supply is on normally.

Check if the green signal light on the sending card is flashing.

Whether the graphics card has an output screen.

The signal light on the receiving card is not flashing normally.

Check if the receiving card profile is correct.

Check the output signal of the previous cabinet receiving card,or replace the signal cable.

#### **Symptom 2:The display screen is misaligned,blurred or flickering**

Check if the receiving card profile is correct.

Check that the monitor's screen refresh rate is not at 60Hz.

#### **Symptom 3:The video file cannot be played**

Check if the computer has an audio and video file player installed.

Check if the player supports the format of the file.

#### **Symptom 4:Some modules in the cabinet cannot be lit**

Check whether the area loaded by the receiving card is not lit,whether the indicator light of the receiving card is flashing,and whether the network cable input to the receiving card is normal.

Troubleshooting methods:

Check whether the connector input to the unit board is loose.

## **Symptom 5: The image is incomplete or displayed in an incorrect position**

The connection file of the screen is incorrect.

Poor contact between the receiver card signal cables between the boxes.

Incorrect display position and screen size settings. Troubleshooting methods:

Check that the signal cable connection method of the monitor is the same as the loaded file xxxx.scr.

Check whether the signal cable is connected to the box receiving card. If the receiving card is faulty, replace the receiving card.

Check that the display position and screen size on the software are set to the actual screen size.

## **7.2 LED display repair**

1. The display lamp beads belong to precision electronic components, please wear gloves when installing or dismantling the indoor small spacing module, and pay attention to handling gently.

2. The indoor display screen should not be installed near the air outlet of the air conditioner, so as to avoid the lamp beads being damp and causing the lamp beads to be damaged by short circuit.

3. When the display screen is not used for a long time, please power on at least 2 times a week for 30 minutes each time for dehumidification

## **7.3 Technical support**

High pressure danger! Do not disassemble the internal power supply and receiving card of the box, in case of problems, contact the LED display manufacturer for help.

## 7.3 Technical support

High pressure danger! Do not disassemble the internal power supply and receiving card of the box, in case of problems, contact the LED display manufacturer for help.

## 7.4 Disclaimer

We do not assume any warranty liability for defects or damage caused by:

- 1) Unless otherwise agreed in a contract or agreement, this warranty policy does not apply to consumables, including but not limited to connectors, networks, fiber optic cables, power cables, signal cables, aviation connectors, and other wires and connections.
- 2) Defects, malfunctions or damage caused by improper use, improper handling, improper operation, improper installation/removal of the monitor, or any other misconduct of the customer. Defects, malfunctions or damage caused during transportation.
- 3) Dismantling and repairing without the permission of Lionled
- 4) Improper use or maintenance, not in accordance with the provisions of the product manual.
- 5) Man-made damage, physical damage, accident damage and product misuse, such as component defect damage, PCB board defect, etc.
- 6) Product damage or failure caused by force majeure events, including but not limited to war, terrorist activities, floods, fires, earthquakes, lightning, etc.-
- 7) The product should be stored in a dry and ventilated environment. Any product defect, malfunction, or damage caused by storage in an external environment that does not conform to the product manual, including but not limited to extreme weather, humidity, salt spray, pressure, lightning, sealed environments, compressed space storage, etc.

8)Products used under conditions that do not conform to product parameters,including but not limited to lower or higher voltages,extreme or excessive power surges,inappropriate power supply conditions.

9)Defects,malfunctions or damage caused by non-compliance with technical guidelines,instructions or precautions during installation.

10)Natural loss of brightness and color under normal conditions.Normal degradation of product performance and normal wear and tear.Lack of necessary maintenance.

11)Other repairs not caused by product quality,design and manufacturing.

12)Unable to provide valid warranty documents.The serial number of the product is torn or damaged.Damage to the product casing or other external parts.

13)Repair after the warranty period.

14)Products that have caused significant damage due to improper handling,accidents,improper maintenance, and non-compliance with the product manual.

15)Product malfunction caused by mismatched games or control devices not provided by Lionled.If the product is damaged due to the above-mentioned mismatched equipment and needs to be repaired by Lionled,it shall be charged according to the regulations.

## **7.5 Process warranty service**

Remote Service Process:

Use the warranty card or contract number to submit service requirements through service channels such as website,email,and telephone.The specific content and contact information of the services to be provided.

## **Repair process:**

Through the website, email, telephone and other service channels, submit service requirements with the contract number. A packing slip for the returned product and information on receiving the repaired product should be provided.

Customers are required to provide:

A brief failure report should be provided (can be attached to the surface of the repair item)

A packing list should be provided (including the contract number, model and quantity of the repair item)

Receipt information should be provided (company name, address, consignee, contact information, etc.)

To avoid damage to the returned product during shipping, please pay attention to the packaging and protection of the product. Lionled is not responsible for any damage to returned products or parts during delivery.

## **7.6 Others**

This warranty policy is standard for Lionled. No other third party (including any agent, distributor or sales representative) is authorized to make any representations or warranties that differ from this warranty policy. Any warranty provision that conflicts with this warranty policy will be deemed automatically void unless confirmed by Lionled in writing in the form of a contract or other document. The final interpretation of this warranty policy belongs to Lionled.