



Outdoor Guidance Screen

User's Manual



Foreword

General

This manual introduces the functions and operations of the outdoor guidance screen (hereinafter referred to as "the screen").

Safety Instructions

The following signal words might appear in the manual.

Signal Words	Meaning
 DANGER	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
 WARNING	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
 CAUTION	Indicates a potential risk which, if not avoided, could result in property damage, data loss, reductions in performance, or unpredictable results.
 TIPS	Provides methods to help you solve a problem or save time.
 NOTE	Provides additional information as a supplement to the text.

Revision History

Revision Content	Release Time	Revision Content
V1.0.1	Updated code configuration under display settings.	August 2021
V1.0.0	First release.	June 2021

Privacy Protection Notice

As the device user or data controller, you might collect the personal data of others such as their face, fingerprints, and car plate number. You need to be in compliance with your local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures which include but are not limited: Providing clear and visible identification to inform people of the existence of the surveillance area and provide required contact information.

About the Manual

- The manual is for reference only. Slight differences might be found between the manual and the product.
- We are not liable for losses incurred due to operating the product in ways that are not in compliance with the manual.
- The manual will be updated according to the latest laws and regulations of related jurisdictions. For detailed information, see the paper user's manual, use our CD-ROM, scan the QR code or visit our official website. The manual is for reference only. Slight differences might be found between

the electronic version and the paper version.

- All designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual. Please contact customer service for the latest program and supplementary documentation.
- There might be errors in the print or deviations in the description of the functions, operations and technical data. If there is any doubt or dispute, we reserve the right of final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and company names in the manual are properties of their respective owners.
- Please visit our website, contact the supplier or customer service if any problems occur while using the device.
- If there is any uncertainty or controversy, we reserve the right of final explanation.

Important Safeguards and Warnings

This section describes the contents covering proper handling of the Device, hazard prevention, and prevention of property damage. Read these contents carefully before using the Device, comply with them when using, and keep the manual well for future reference.

Operation Requirements

- Transport, use and store the device under allowed humidity and temperature conditions.
- Prevent liquids from splashing or dripping on the device. Make sure that there are no objects filled with liquid on top of the device to avoid liquids flowing into it.
- Do not disassemble the device.
- Only use the device within the rated power range.
- Make sure that the power supply of the device works properly before use.
- Do not pull out the power cable of the device while it is powered on.

Installation Requirements

- Observe all safety procedures and wear required protective equipment provided for your use while working at heights.
- Do not expose the device to direct sunlight or heat sources.
- Do not install the device in humid, dusty or smoky places.
- Install the device in a well-ventilated place, and do not block the ventilator of the device.
- Strictly abide by local electrical safety standards, and make sure that the voltage in the area is steady and conforms to the power requirements of the device.
- Use the power adapter or case power supply provided by the device manufacturer.
- Connect the device to the adapter before power on.
- Do not connect the device to more than one power supply. Otherwise, the device might become damaged.
- The power supply must conform to the requirements of ES1 in IEC 62368-1 standard and be no higher than PS2. Note that the power supply requirements are subject to the device label.
- Connect class I electrical appliances to a power socket with protective earthing.

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1 Overview

Introduction

The outdoor guidance screen displays all the available parking spots in a parking lot. With its highlight display module and powder-sprayed metal casing, it can be used in outdoor environments. The screen supports displaying content such as Chinese characters, letters, numbers, arrows, and the handicap parking signs in 1, 2 or 3 lines. It is applicable for use in the parking lots of industrial parks, scenic areas and malls.

Functions

- Displays content in 1, 2 or 3 lines.
- Displays content such as Chinese characters, letters, numbers, arrows, and the handicap parking signs.
- Supports highlighting and adjusting brightness levels.
- Controls multiple screens at the same time and supports displaying in partitions.
- Modifies IP and updates the program with the configuration application.

2 Structure

Appearance

According to the lines of content display, the screen can be categorized into 3 types: One-way, two-way and three-way guidance screens.

Figure 2-1 One-way guidance screen

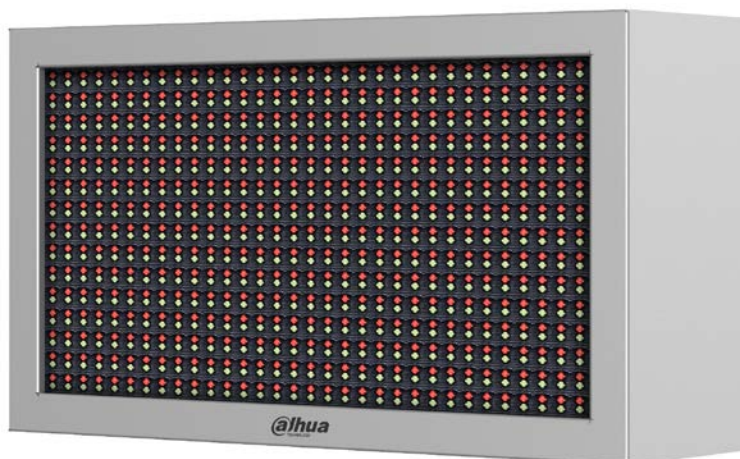


Figure 2-2 Two-way guidance screen

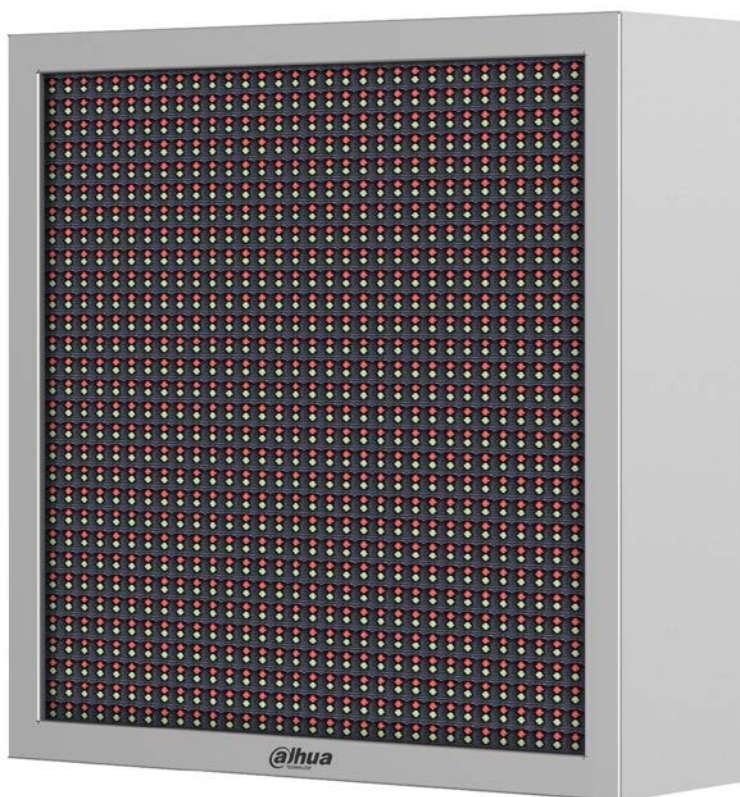
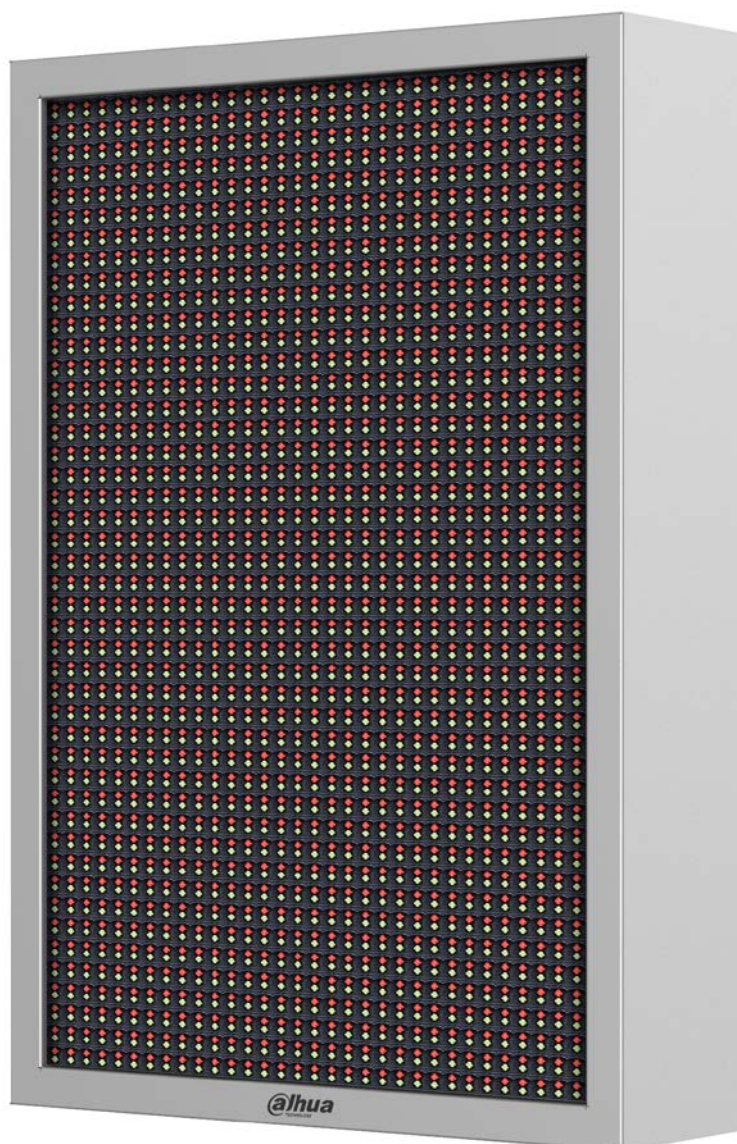


Figure 2-3 Three-way guidance screen



Product Dimensions

Figure 2-4 One-way guidance screen (mm[inch])

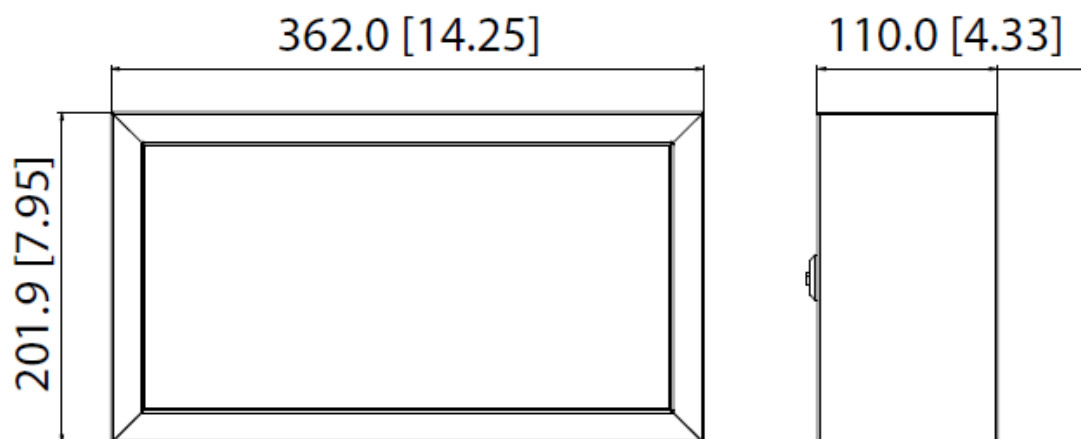


Figure 2-5 Two-way guidance screen (mm[inch])

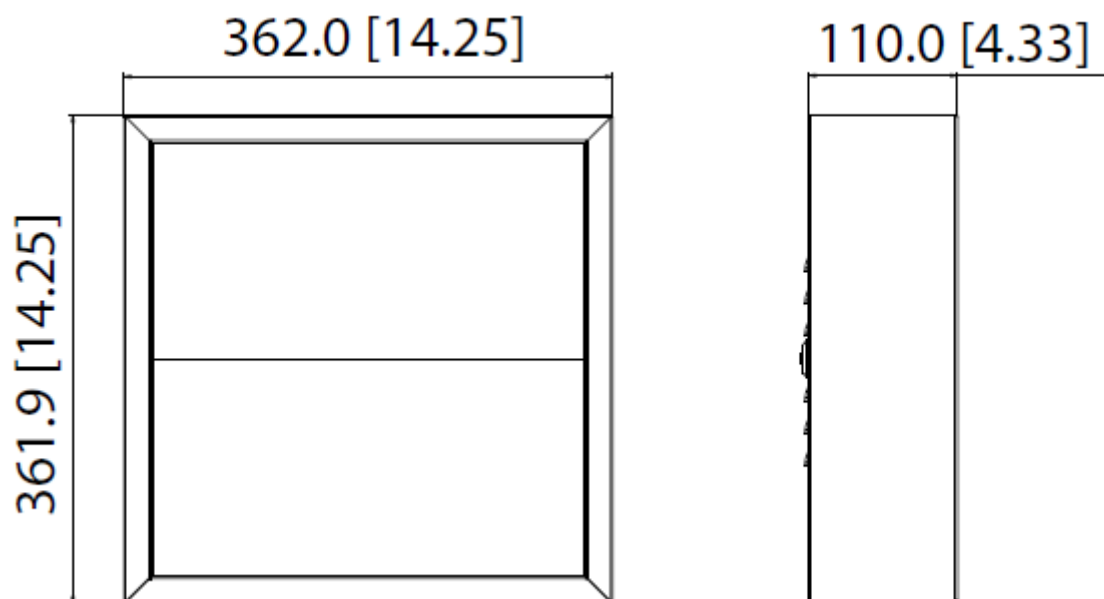
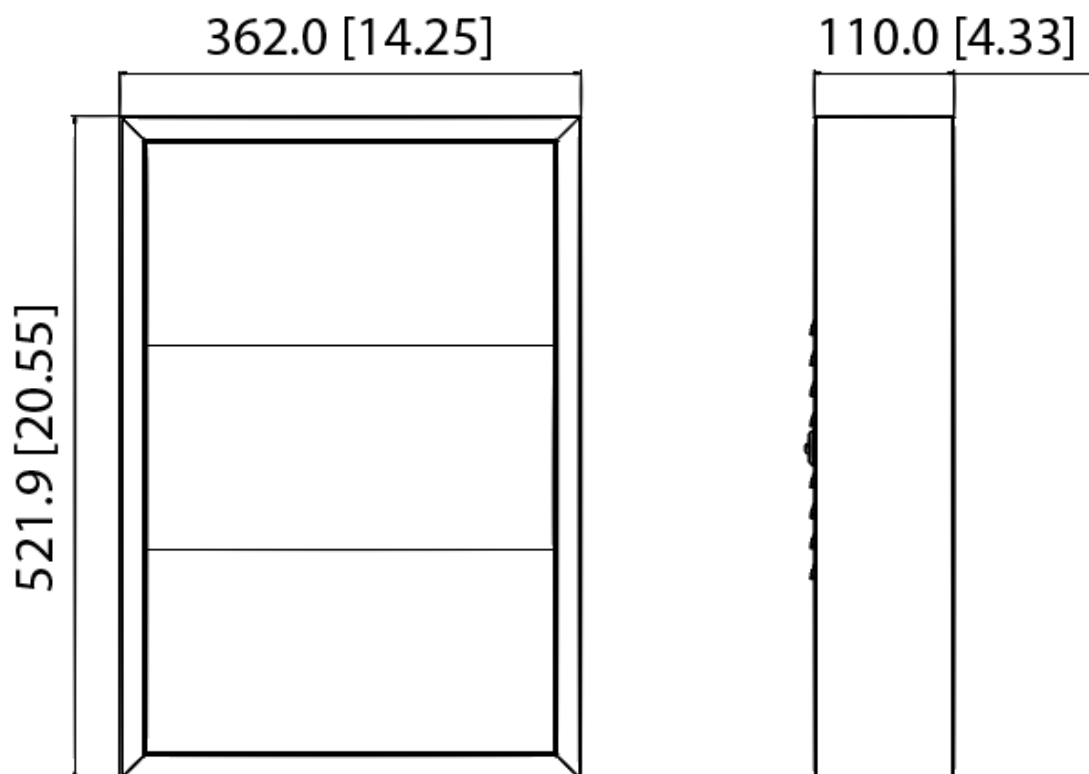


Figure 2-6 Three-way guidance screen (mm[inch])



Cable

- Power supply: One 100–240 VAC port.
- Network: One 100/1,000 Mbps Ethernet (RJ-45) port.

3 Installation

3.1 Preparation

Background Information

- Read the manual carefully before use.
- Check the items against the package checklist (model and number) when you receive the product.
- If any items are damaged or deformed, contact our technical support.

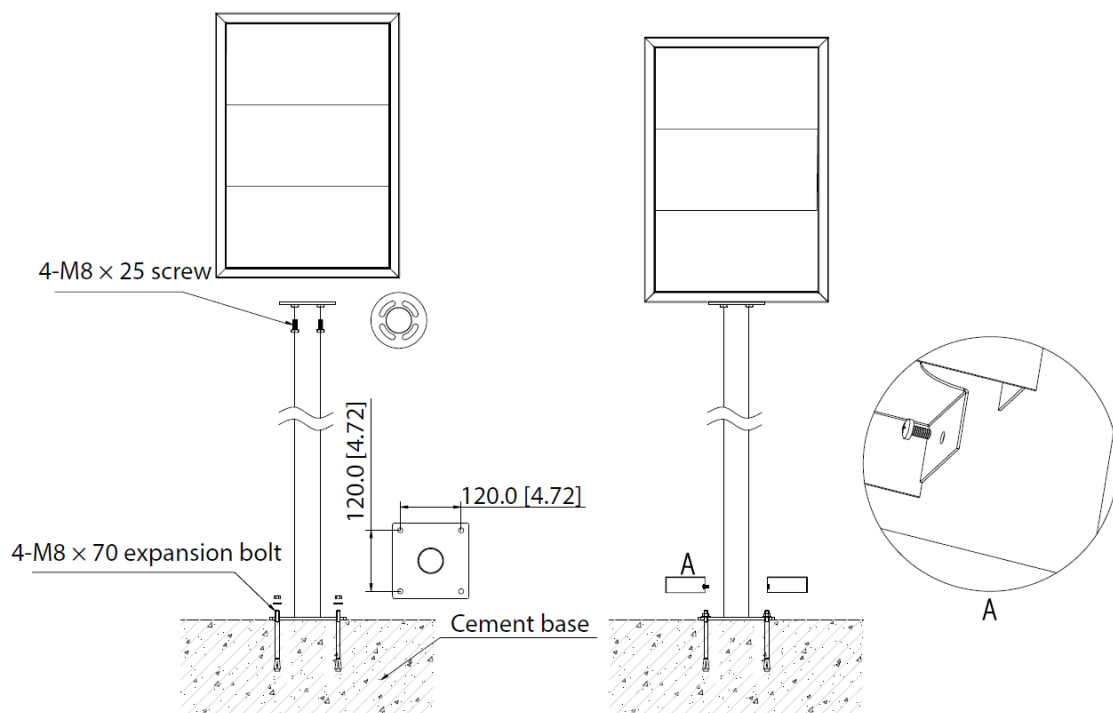
3.2 Requirements

Background Information

- The metal casing of the screen is rust-proof and anti-corrosive. Do not break or put pressure on the screen.
- The screen can only be attached to a pole directly through the fixed holes on its bottom or back.
- The interior of the screen is not water-proof. Be careful during installation and maintenance.

3.2.1 Pole Mount (without pole mount bracket)

Figure 3-1 Installation (mm [inch]) (1)



Procedure

- Step 1 Connect the screen and the pole with screws.
- Step 2 Drill holes into the ground according to the fixed hole position of the pole, and then insert expansion bolts into the holes.
- Step 3 Fasten the pole to the ground with the expansion bolts.
- Step 4 Place both decorative boards on each side of the pole about a hand-span away from the ground, and then attach them together from the inside with screws .
- Step 5 Put down the decorative boards.

3.2.2 Pole Mount (with pole mount bracket)

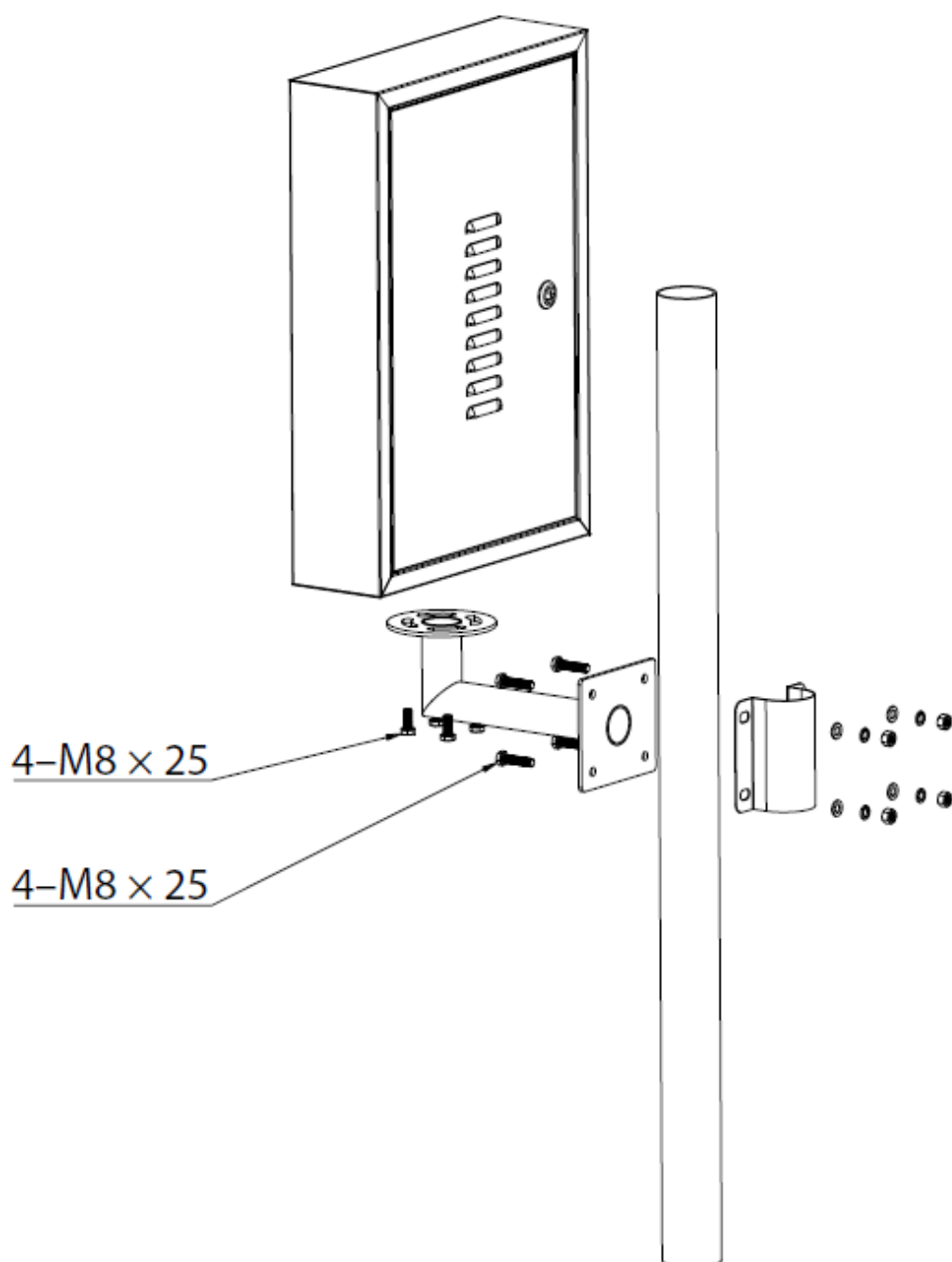
Background Information

You can use the pole mount bracket that came with the product to install the screen onto any pole.



The pole mount bracket supports installing the screen on to poles that are 50–70 mm in diameter.

Figure 3-2 Installation (mm [inch]) (2)



Procedure

- Step 1 Connect the screen and the bracket with screws.
- Step 2 Find a proper spot on the pole, and then attach the pole mount bracket with the screen bracket to the pole.

4 Product Configuration

You can configure the screen parameters, cable connections and display modules through the corresponding configuration application of the screen.

4.1 LED Parameter Settings

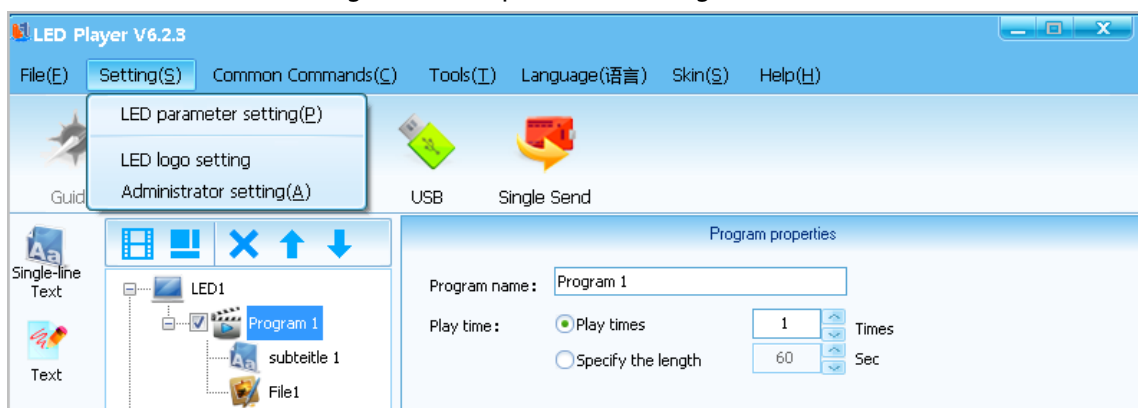
You can configure the screen parameters on the **LED Parameter Setting** page.

4.1.1 Network Communication

Procedure

Step 1 Select **Settings > LED Parameter Setting**.

Figure 4-1 LED parameter setting

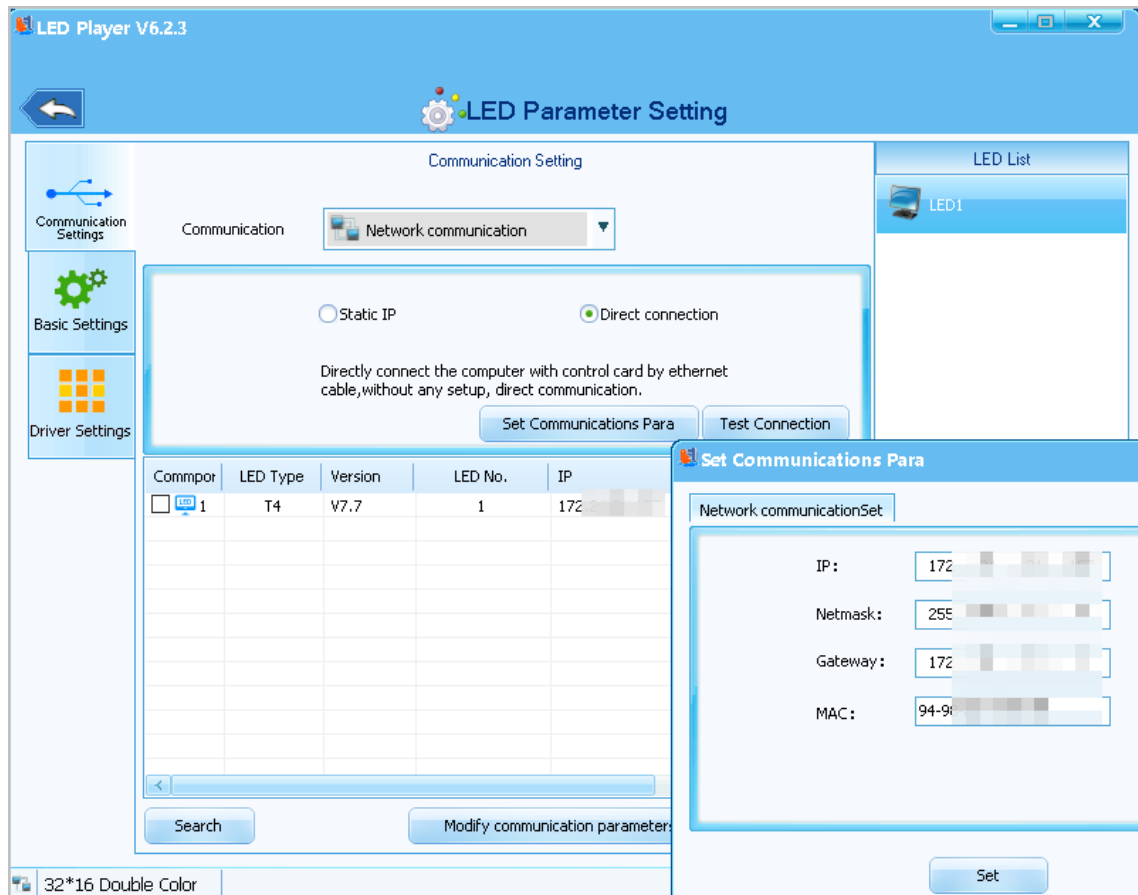


Step 2 Enter the password 888, and then click **OK** to enter the parameter settings page.

Step 3 Set **Network Communication** as **Communication**.

- **Direct Connection:** Used when the screen is directly connected to the computer with a network cable. Select **Direct connection > Test Connection**. Click **Search** when the controller is successfully connected, and then click the IP of the result to change it.

Figure 4-2 Direct connection



- Static IP. Connect through static IP address. Click **Test Connection** to confirm.



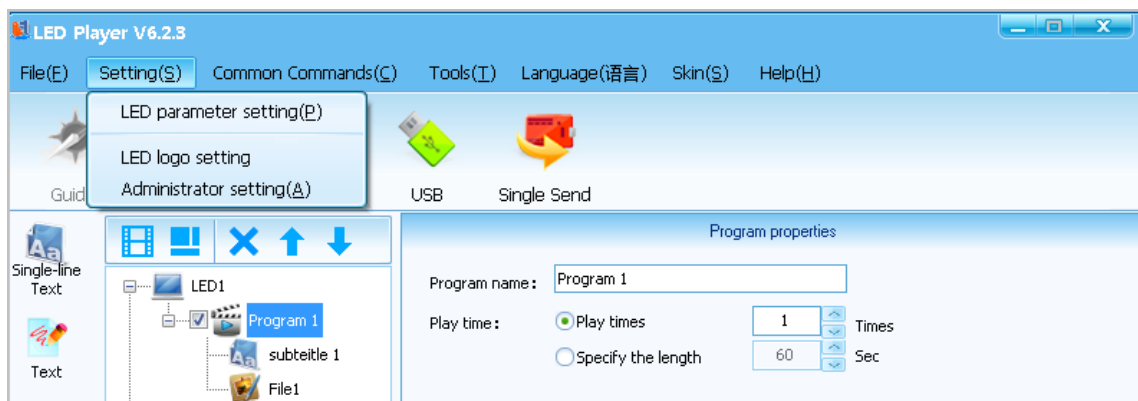
The default IP is 192.168.1.99. Make sure that the IP addresses of the computer and the screen are in the same network segment.

4.1.2 Driver Settings

Procedure

- Step 1** Select **Settings > LED Parameter Setting**.

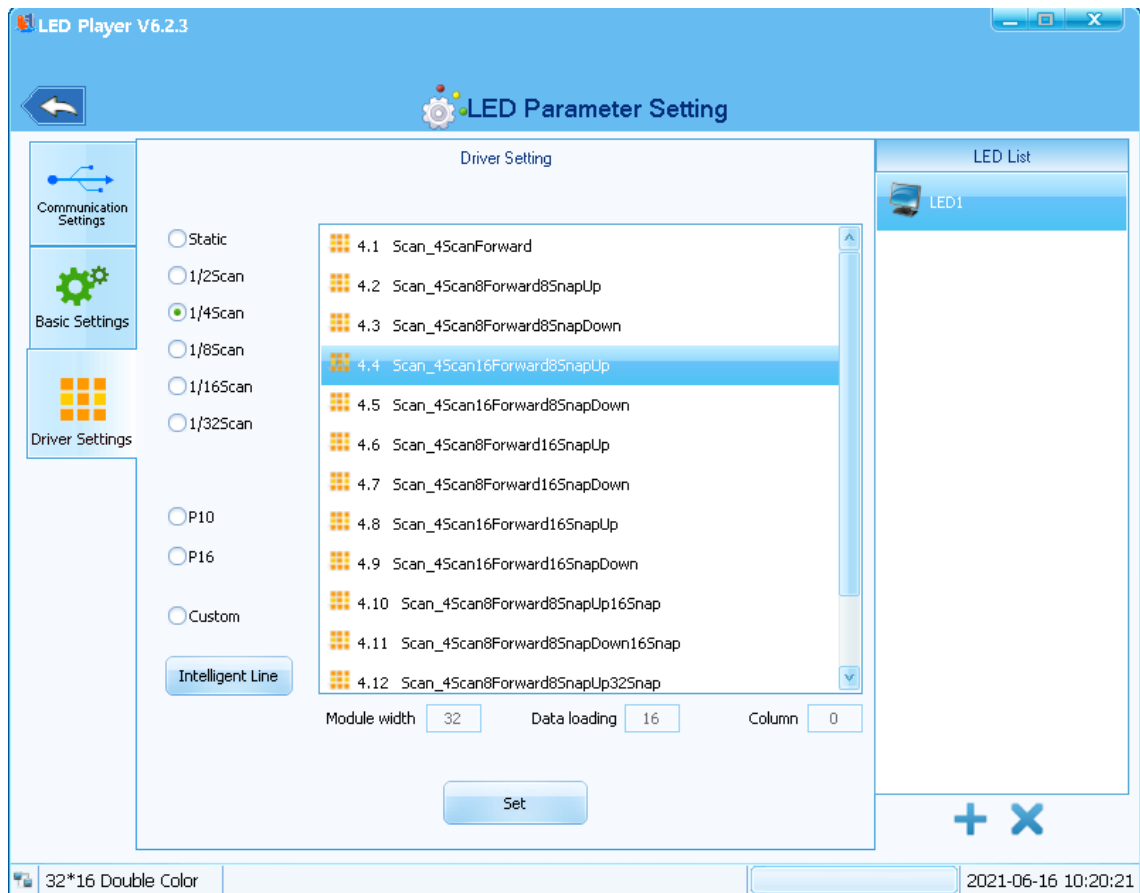
Figure 4-3 LED parameter setting



- Step 2** Enter the password 888, and then click **OK** to enter the parameter settings interface.

- Step 3** Click **Driver Settings** on the left, and then select **1/4Scan > 4.4 Scan_4Scan16Forward8Snapup**.

Figure 4-4 Hidden figure



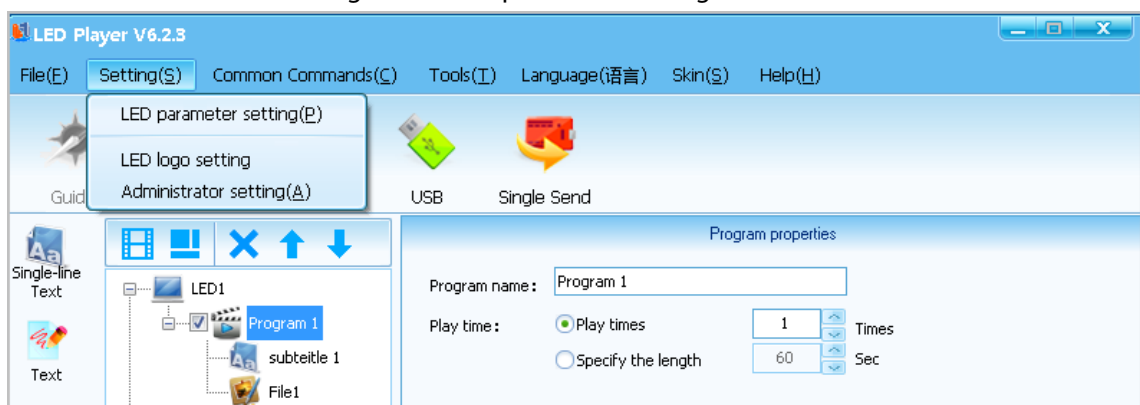
- Step 4** Click **Set**.

4.1.3 Basic Settings

Procedure

- Step 1** Select **Settings > LED Parameter Setting**.

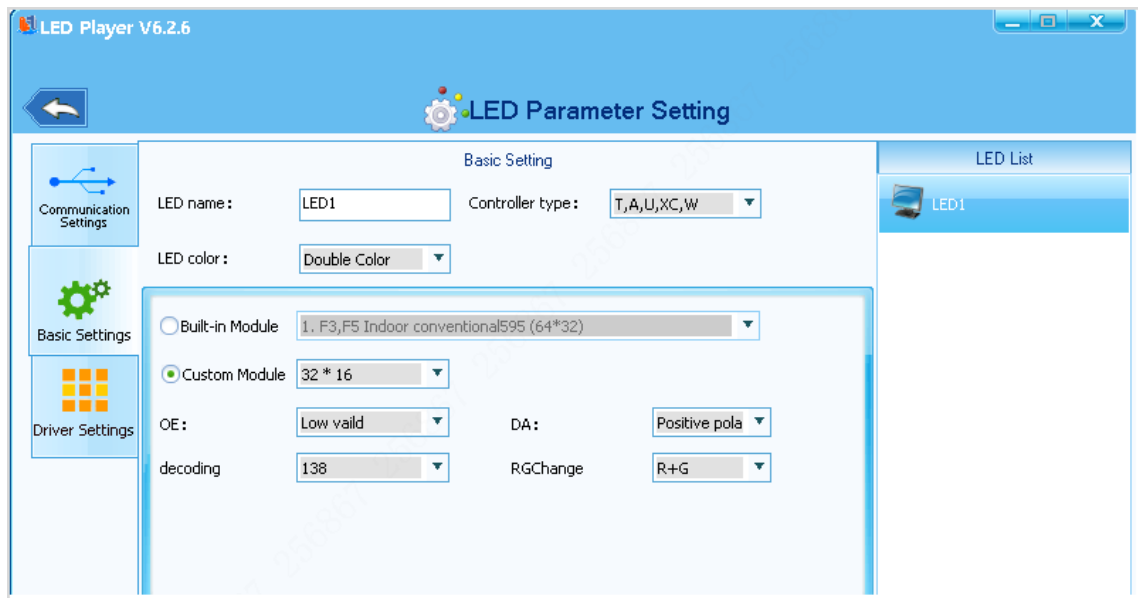
Figure 4-5 LED parameter setting



- Step 2** Enter the password 888, and then click **OK** to enter the parameter settings page.
- Step 3** Click **Basic Settings** on the left, and then you can configure the basic parameters of the

screen such as controller type, LED name and color and module parameters as shown in the figure below.

Figure 4-6 Basic settings



Step 4 Configure module parameters as shown in the following figures.

Figure 4-7 Single direction

	Width		Height		
Number :	1	x	1	=	1 Piece
Points :	32	x	16	=	512 Dot



Figure 4-8 Double direction

	Width		Height		
Number :	1	x	2	=	2 Piece
Points :	32	x	32	=	1024 Dot



Figure 4-9 Triple direction

	Width		Height		
Number :	1	x	3	=	3 Piece
Points :	32	x	48	=	1536 Dot



Step 5 Click **Set** and then the screen displays the model of the controller.

4.2 Display Settings

The screen can display content in partitions. Click **Single Send** when completing configurations.

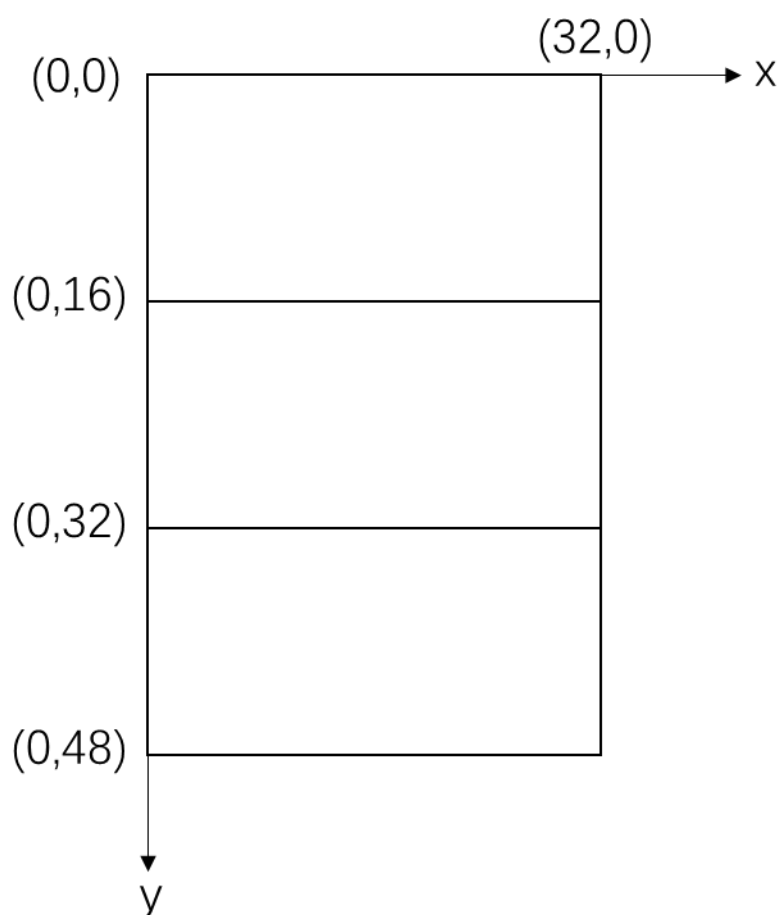
4.2.1 Area Settings

You can add programs to each screen on the main page. Under the program, display content such as text and image are available, and the area is adjustable.

Background Information

The rule for setting the area coordinates is that the upper-left corner is the original point, X axis is horizontal and Y axis is vertical.

Figure 4-10 Area coordinate rule



Take 3-way guidance screen as an example, based on the rule that 1 arrow and 3 numbers are displayed on one way, you can divide the screen into 6 areas with 3 text areas (arrow) and 3 code areas (number).

Table 4-1 Area settings

Area	X	Y	Width	Height
Text 1	0	0	8	16
Text 2	0	16	8	16

Area	X	Y	Width	Height
Text 3	0	32	8	16
Code 1	8	0	24	16
Code 2	8	16	24	16
Code 3	8	32	24	16



Display content in each area can be independently controlled.

4.2.2 Adding Code

After setting the code area, you can add text into the area such as Chinese characters, letters and numbers. In addition, you can configure the font color and display mode.

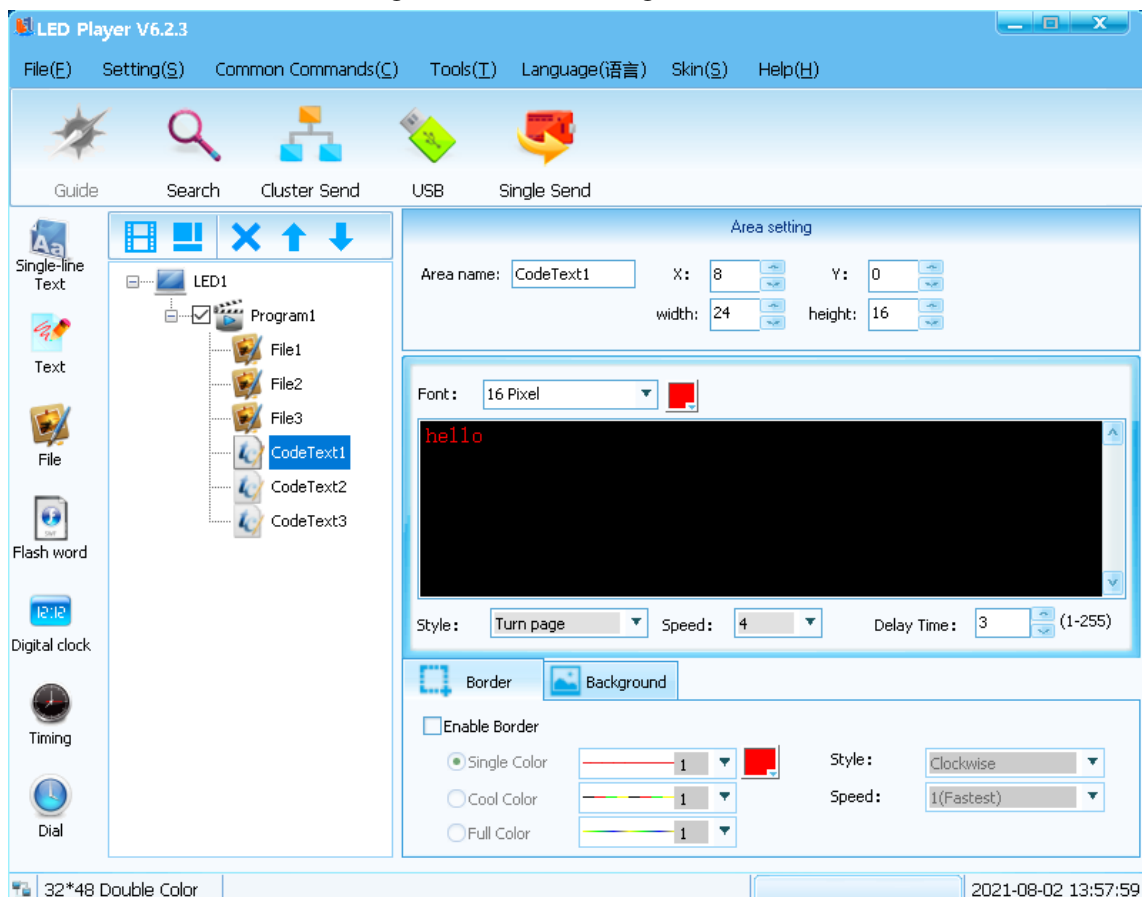
Procedure

Step 1 Right-click the program of the screen on the main page, and then select **Add Area > Code**.



If there are no programs, right-click the screen and then click **Add program**.

Figure 4-11 Code settings



Step 2 Enter content in the code area such as characters number and letters, and then click **Send**.

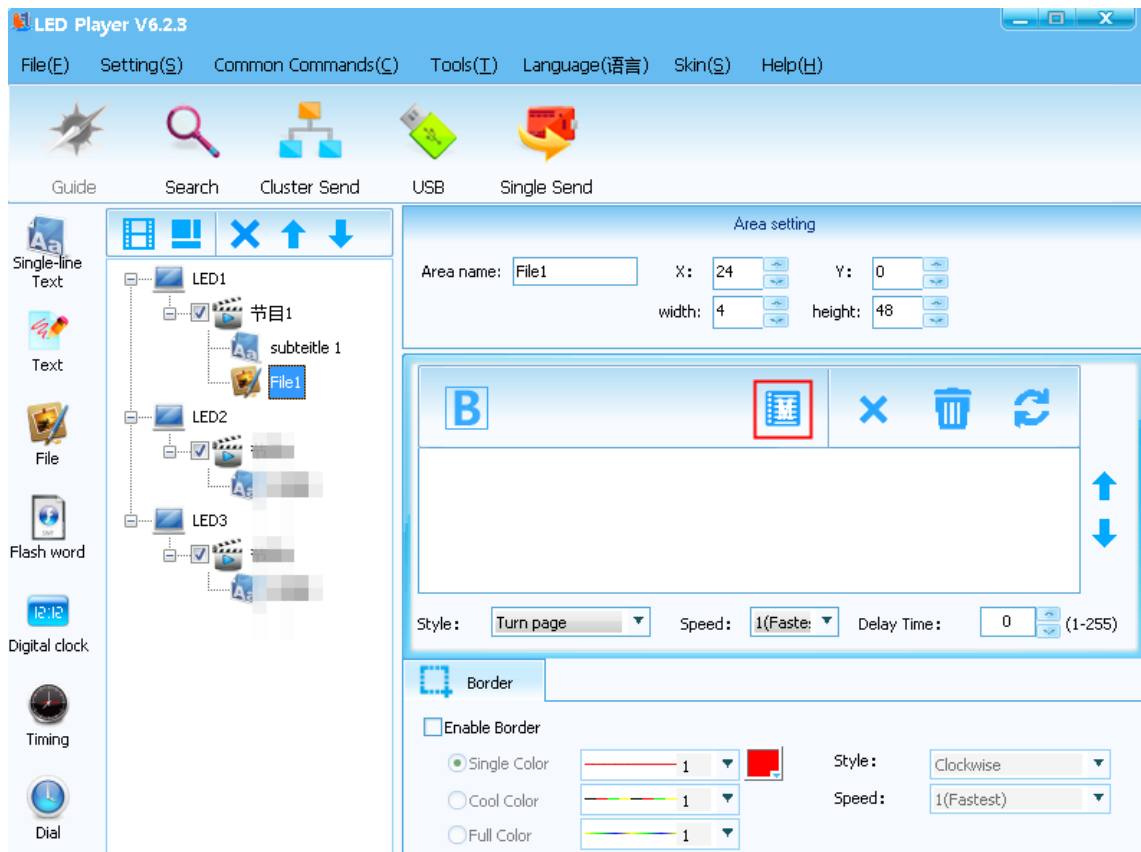
4.2.3 Adding Image

After setting the area, you can add images. General images such as the arrow and the handicap parking sign can be drawn from the image library.

Procedure

Step 1 Right-click the program of the screen on the main page, and then select **Add Area > File**.

Figure 4-12 Image settings



Step 2 Click **Add**, select an image and then click **Open**.

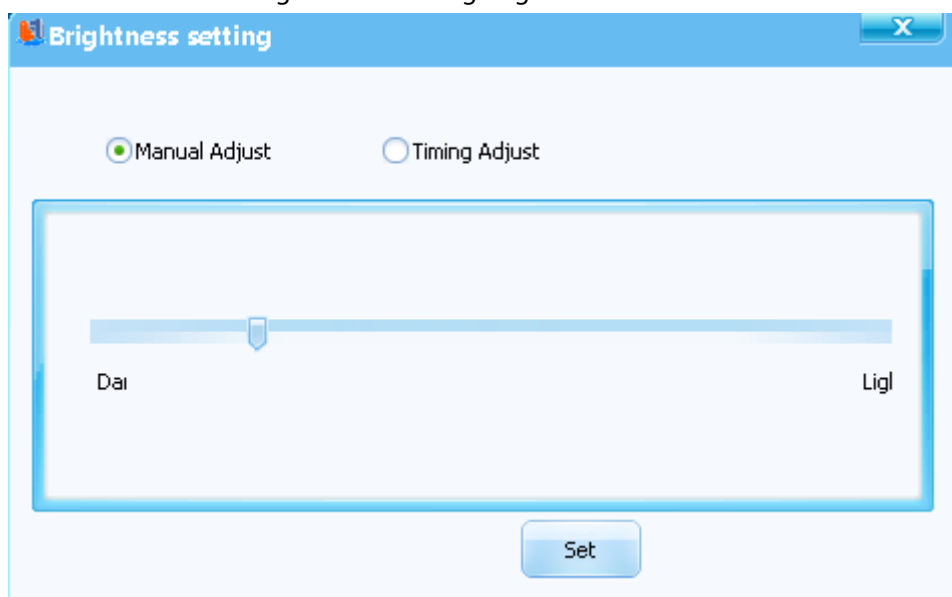
Step 3 You can adjust the display style, speed and delay time of the image.

4.2.4 Setting Brightness

Procedure

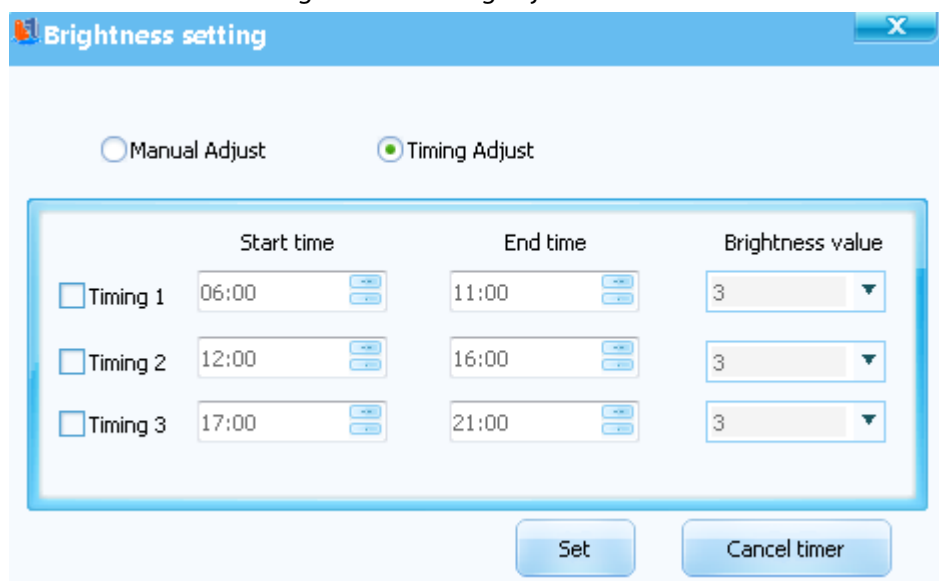
Step 1 Select **Common Commands > Brightness**.

Figure 4-13 Setting Brightness



- Click **Manual Adjust**, and then drag the slider to adjust brightness.
- Click **Timing Adjust**, and then set the time period and the corresponding brightness.

Figure 4-14 Timing adjust



Click **Cancel Timer** to clear all configurations of timing adjustment.

Step 2 Click **Set**.

5 Update

You can update the controller and pixel font of the screen through the application.

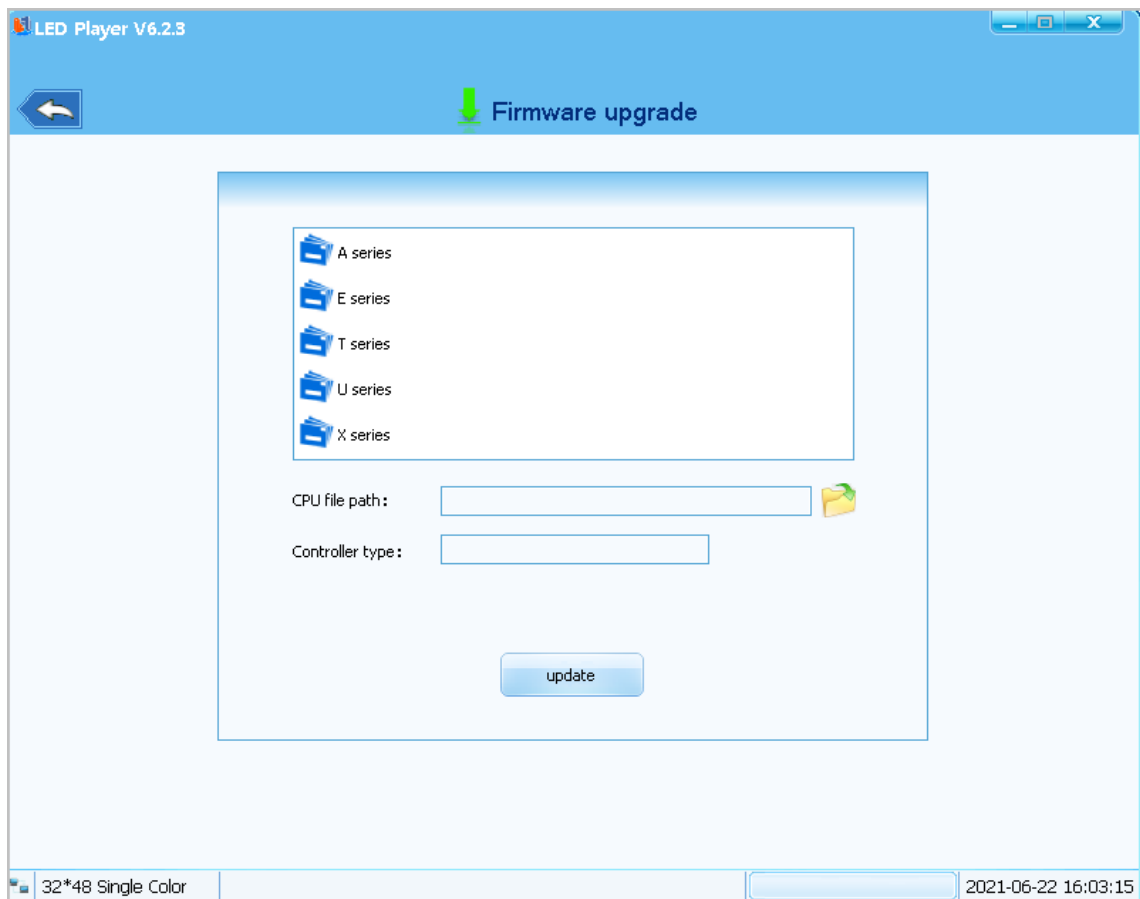
Prerequisites

Check whether the connection is correct by sending random commands to the screen. If it displays properly, the communication is normal. Fix the issue if it has no response.

Procedure

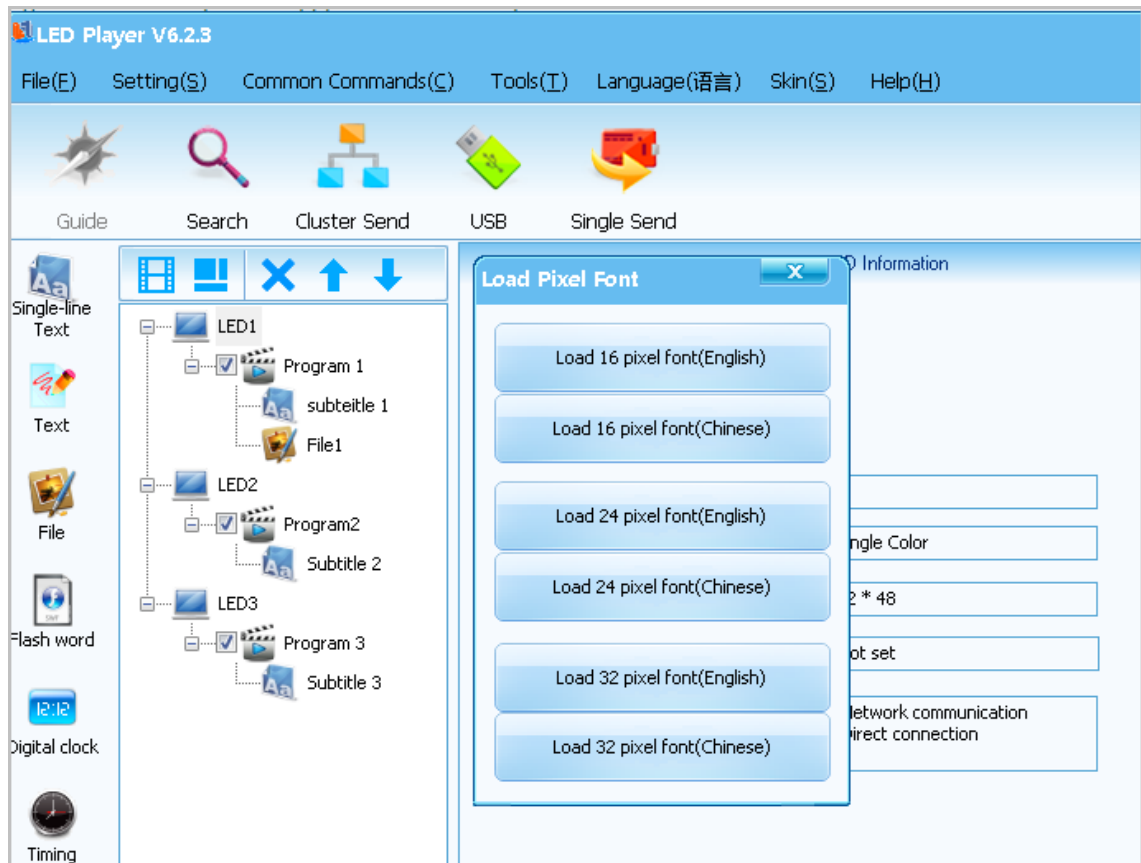
- Step 1 Select **Common Commands** > **Firmware Upgrade**.
- Step 2 Select **T series**, and then import the file to start online update. When the update completes, a prompt pops up and the screen shows the new program version.

Figure 5-1 Firmware upgrade



- Step 3 Select **Common Commands** > **Load Pixel Font**.
- Step 4 Select both Chinese and English pixel fonts of 16 and 32. A prompt pops up when the fonts are loaded successfully.

Figure 5-2 Pixel font loading



- Check the update progress through the progress bar.
- Do not exit during the update. Otherwise failures might occur.
- Contact technical support if the update keeps failing or shutting down.

6 FAQ

Precautions for installing the guidance screen.

- The metal casing of the screen is rust-proof and anti-corrosive. Do not break or put pressure on the screen.
- The screen can only be attached to a pole directly through the fixed holes on its bottom or back.
- The interior of the screen is not water-proof. Be careful during installation and maintenance.

The screen does not light up when powered on.

- Check whether the cables of the air switch and power supply are correctly connected.
- Check whether the communication indicator of the control card is flashing.
- Check whether the cables of the LED module and power supply are correctly connected.
- Check whether the color of the sent font and background is black.

Single LED module does not light up.

- Check whether the power and signal cables of the module unit board are connected.
- Check whether the control card has recognized the module port.

Screen flickering.

- Check whether the control card is working properly.
- Check whether the signal cable is broken or short, and whether it is correctly connected.

Dim, blurry or jumbled screen display.

- Check whether the LED parameters are configured correctly.
- Check whether the driver is loaded correctly.

The IP address of the screen cannot be searched for.

Check whether the IP address of the computer and the screen are in the same network segment. If not, set up a direct connection and then change the IP.

Overlapping areas in the program.

Check whether the area coordinates overlap.

Font color cannot be changed.

There are two ways to change font color:

- Select font color and then enter the text.
- Select the entered text and then select font color.

Font color stays red and cannot be changed.

Check whether the screen color is set to double color.

Appendix 1 Cybersecurity Recommendations

Cybersecurity is more than just a buzzword: it's something that pertains to every device that is connected to the internet. IP video surveillance is not immune to cyber risks, but taking basic steps toward protecting and strengthening networks and networked appliances will make them less susceptible to attacks. Below are some tips and recommendations on how to create a more secured security system.

Mandatory actions to be taken for basic equipment network security:

1. Use Strong Passwords

Please refer to the following suggestions to set passwords:

- The length should not be less than 8 characters;
- Include at least two types of characters; character types include upper and lower case letters, numbers and symbols;
- Do not contain the account name or the account name in reverse order;
- Do not use continuous characters, such as 123, abc, etc.;
- Do not use overlapped characters, such as 111, aaa, etc.;

2. Update Firmware and Client Software in Time

- According to the standard procedure in Tech-industry, we recommend to keep your equipment (such as NVR, DVR, IP camera, etc.) firmware up-to-date to ensure the system is equipped with the latest security patches and fixes. When the equipment is connected to the public network, it is recommended to enable the "auto-check for updates" function to obtain timely information of firmware updates released by the manufacturer.
- We suggest that you download and use the latest version of client software.

"Nice to have" recommendations to improve your equipment network security:

1. Physical Protection

We suggest that you perform physical protection to equipment, especially storage devices. For example, place the equipment in a special computer room and cabinet, and implement well-done access control permission and key management to prevent unauthorized personnel from carrying out physical contacts such as damaging hardware, unauthorized connection of removable equipment (such as USB flash disk, serial port), etc.

2. Change Passwords Regularly

We suggest that you change passwords regularly to reduce the risk of being guessed or cracked.

3. Set and Update Passwords Reset Information Timely

The equipment supports password reset function. Please set up related information for password reset in time, including the end user's mailbox and password protection questions. If the information changes, please modify it in time. When setting password protection questions, it is suggested not to use those that can be easily guessed.

4. Enable Account Lock

The account lock feature is enabled by default, and we recommend you to keep it on to guarantee the account security. If an attacker attempts to log in with the wrong password several times, the corresponding account and the source IP address will be locked.

5. Change Default HTTP and Other Service Ports

We suggest you to change default HTTP and other service ports into any set of numbers between

1024~65535, reducing the risk of outsiders being able to guess which ports you are using.

6. **Enable HTTPS**

We suggest you to enable HTTPS, so that you visit Web service through a secure communication channel.

7. **MAC Address Binding**

We recommend you to bind the IP and MAC address of the gateway to the equipment, thus reducing the risk of ARP spoofing.

8. **Assign Accounts and Privileges Reasonably**

According to business and management requirements, reasonably add users and assign a minimum set of permissions to them.

9. **Disable Unnecessary Services and Choose Secure Modes**

If not needed, it is recommended to turn off some services such as SNMP, SMTP, UPnP, etc., to reduce risks.

If necessary, it is highly recommended that you use safe modes, including but not limited to the following services:

- SNMP: Choose SNMP v3, and set up strong encryption passwords and authentication passwords.
- SMTP: Choose TLS to access mailbox server.
- FTP: Choose SFTP, and set up strong passwords.
- AP hotspot: Choose WPA2-PSK encryption mode, and set up strong passwords.

10. **Audio and Video Encrypted Transmission**

If your audio and video data contents are very important or sensitive, we recommend that you use encrypted transmission function, to reduce the risk of audio and video data being stolen during transmission.

Reminder: encrypted transmission will cause some loss in transmission efficiency.

11. **Secure Auditing**

- Check online users: we suggest that you check online users regularly to see if the device is logged in without authorization.
- Check equipment log: By viewing the logs, you can know the IP addresses that were used to log in to your devices and their key operations.

12. **Network Log**

Due to the limited storage capacity of the equipment, the stored log is limited. If you need to save the log for a long time, it is recommended that you enable the network log function to ensure that the critical logs are synchronized to the network log server for tracing.

13. **Construct a Safe Network Environment**

In order to better ensure the safety of equipment and reduce potential cyber risks, we recommend:

- Disable the port mapping function of the router to avoid direct access to the intranet devices from external network.
- The network should be partitioned and isolated according to the actual network needs. If there are no communication requirements between two sub networks, it is suggested to use VLAN, network GAP and other technologies to partition the network, so as to achieve the network isolation effect.
- Establish the 802.1x access authentication system to reduce the risk of unauthorized access to private networks.

- Enable IP/MAC address filtering function to limit the range of hosts allowed to access the device.

ENABLING A SAFER SOCIETY AND SMARTER LIVING

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