



**13.3 inch Black/White/Red
E-paper Display Signage
GDP133RW1**



Dalian Good Display Co., Ltd.

Product Specifications



Customer	Standard
Description	13.3" E-PAPER SIGNAGE
Model Name	GDP133RW1
Date	2024/03/26
Revision	1.0

	Design Engineering		
	Approval	Check	Design
			

No.18, Zhonghua West ST,Ganjingzi DST,Dalian,CHINA

Tel: +86-411-84619565

Website: www.good-display.com

Contents

1. Overview	1
2. Product Advantages	1
3. Mechanical Specifications	1
4. Product Structure	2
5. Display Updates	4
6. Packaging and Installation	8
7. Notes	9

GOODDISPLAY

1. Overview

The GDP133RW1 ePaper display employs a popular WiFi communication method, coupled with companion software installed on the host computer. Through this software, users can directly update the current display content on the PC without the need for modeling operations. This design streamlines the updating process, eliminating the need for users to engage in complex operations; they only need to import the desired images into the software. With WiFi communication and the host software, users can achieve real-time updates of the content displayed on the ePaper display board. This feature proves particularly useful in applications where frequent content changes or real-time information updates are necessary. By adopting this communication method, user operation becomes more convenient, requiring no specialized skills; even ordinary users can effortlessly update and control the display content. Leveraging the bistable nature of ePaper, GDP133RW1 doesn't require internal batteries, ensuring long-term stable display performance.

2. Product Advantages

- Ultra-wide field of view, ultra-low power consumption
- Dual-state display (retains the last image even after power loss)
- WiFi-enabled for updating display content
- Supports image file formats: JPEG (*.JPG), BMP (*.BMP)

3. Structure Specification

Model	GDP133RW1
Display Parameters	Screen Size: 13.3 inch Screen Type: Black, White and Red E Ink Display Resolution: 960x680
Port Parameters	USB Interface: Supports firmware updates via USB

Power Consumption	Operating Voltage: 5V Update Power Consumption: 0.35W
Software Parameters	Full Update Time: 20s Update Method: WiFi Language: English
Mainboard Specifications	WiFi Frequency Band: 2.4G MCU: ESP32-WROOM-32D RAM: 520KB ROM: 448KB
Specifications	Weight: 550g Outline Size: 310x240x16.5mm
Temperature and Humidity Parameters	Operating Temperature: 0°C to 40°C Storage Temperature: -25°C to 70°C Operating Humidity: 40% to 70%

4. Product Structure



Figure 1 :The Front of GDP133RW1

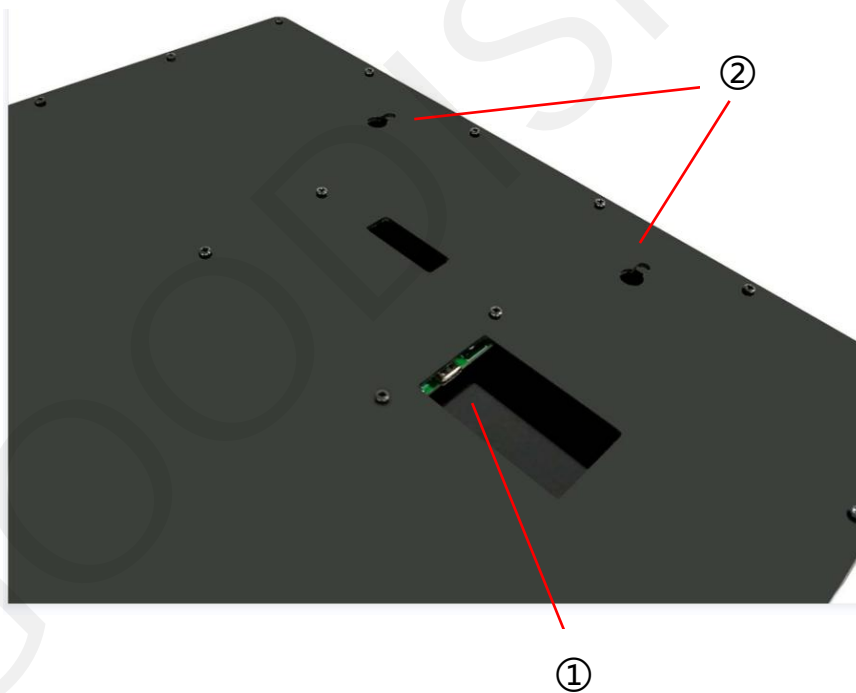


Figure 2 :The Back of GDP133RW1

- ① Micro USB port
Insert Micro USB.
- ② Wall-mounting hole
Used for mounting the device onto the wall, with a maximum support for wall-mounting screw diameter of 4mm.

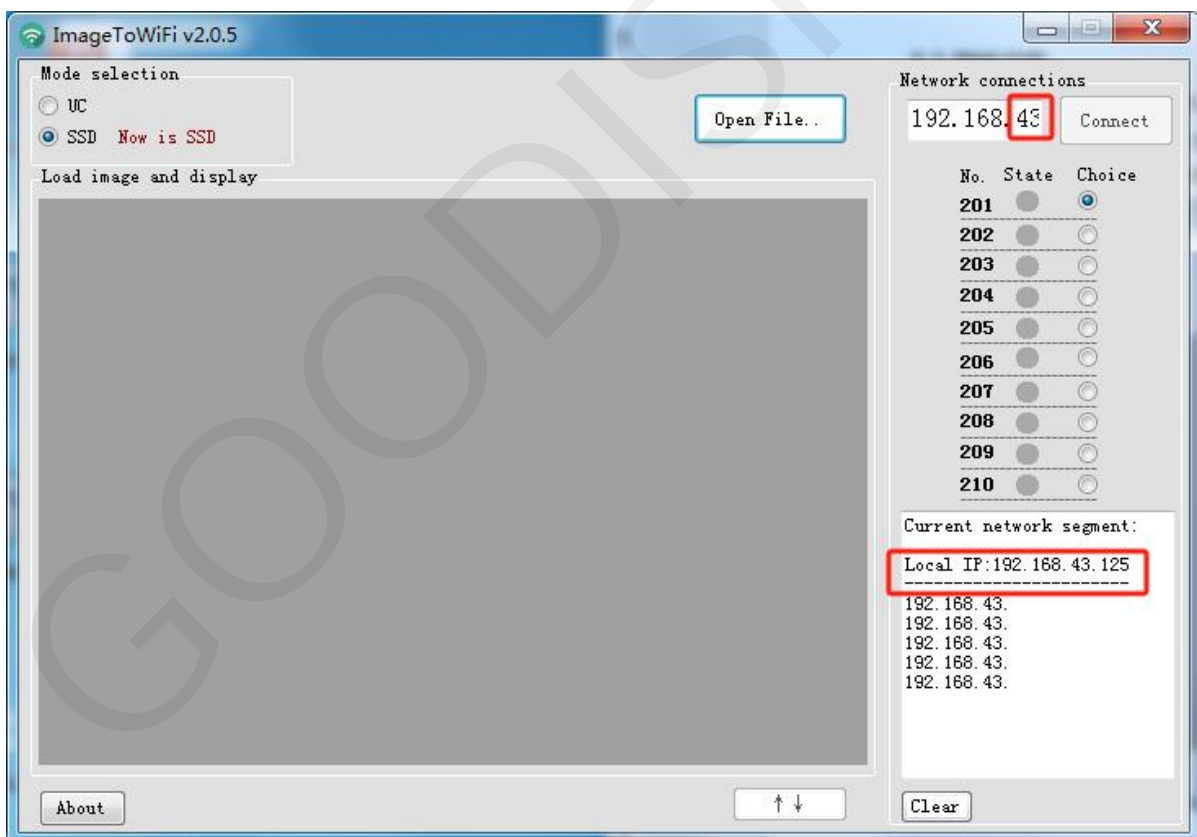
5. Display Updates

5.1. Picture Requirements

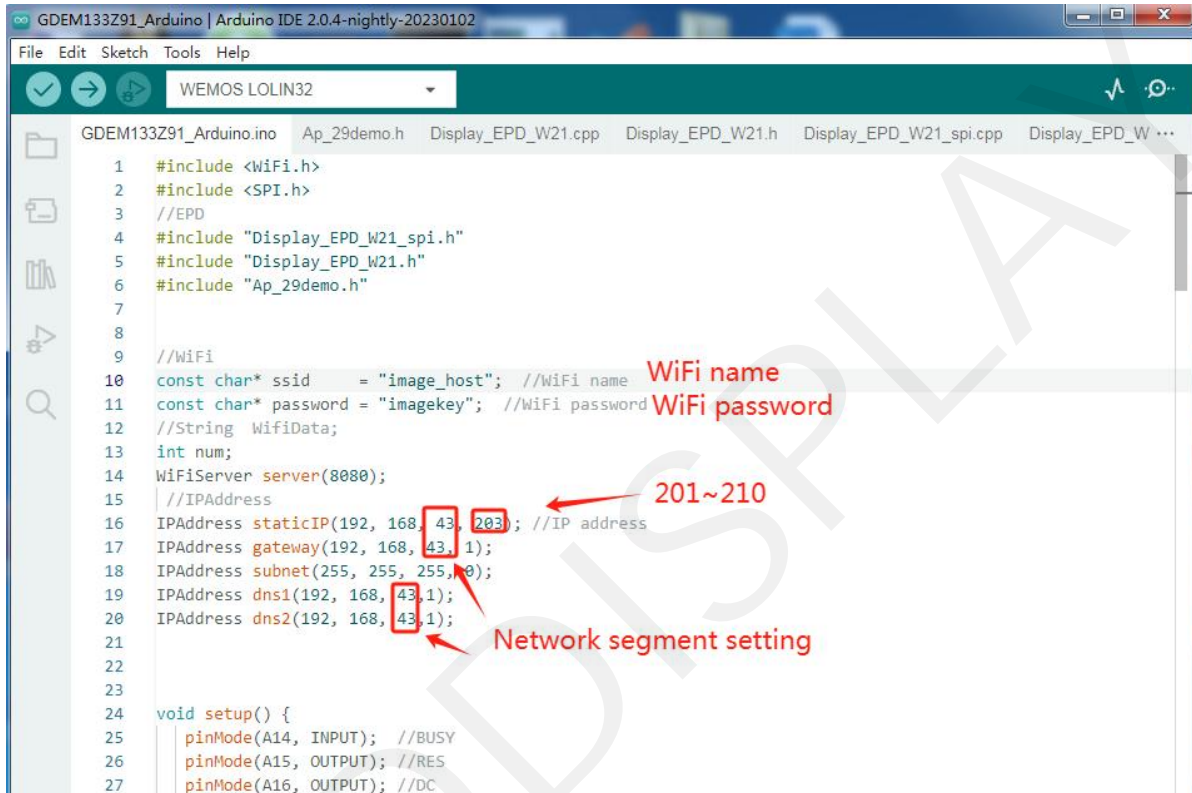
- 1.bmp、jpg
- 2.Resolution: 960*680.
- 3.Use the ImageToWiFi.exe tool to import the image into the picture.

5.2. Network settings

1. Open the ImageToWiFi software, and the status bar will automatically retrieve the IP address of the current computer. This allows you to determine the current network segment. In the example below, the IP address is 192.168.43.125, and the network segment is "43" (which will be used in the device's WiFi settings). Simply change the network segment in the software to "43", then close the ImageToWiFi software.



2. The customer needs to modify the underlying code of the device to change the WiFi username, password, network segment, and IP address. The network segment "43" is automatically identified by the ImageToWiFi. The IP address range is from 201 to 210, and different device numbers cannot be repeated. Currently, it supports a maximum of 10 sets of devices online simultaneously. Once the parameters are set, follow the download steps above to download the program to the corresponding device.



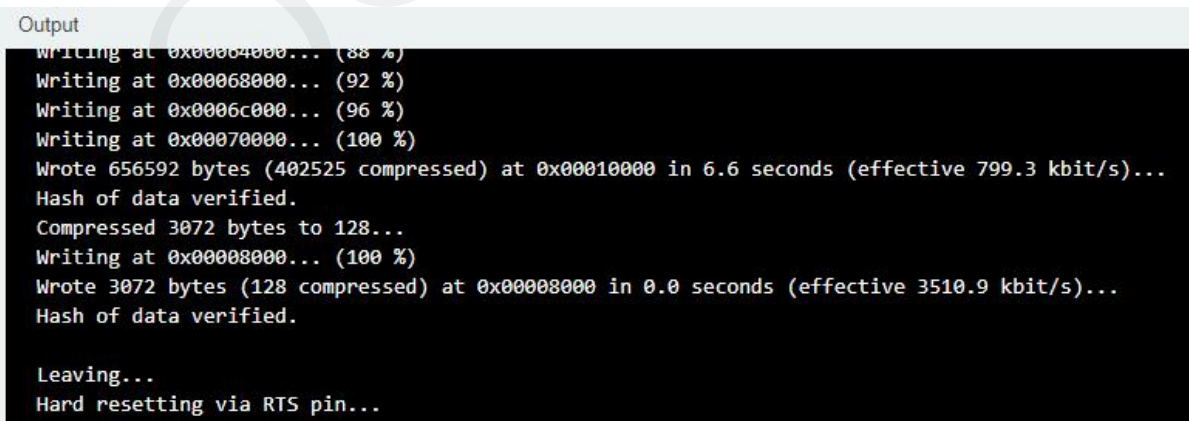
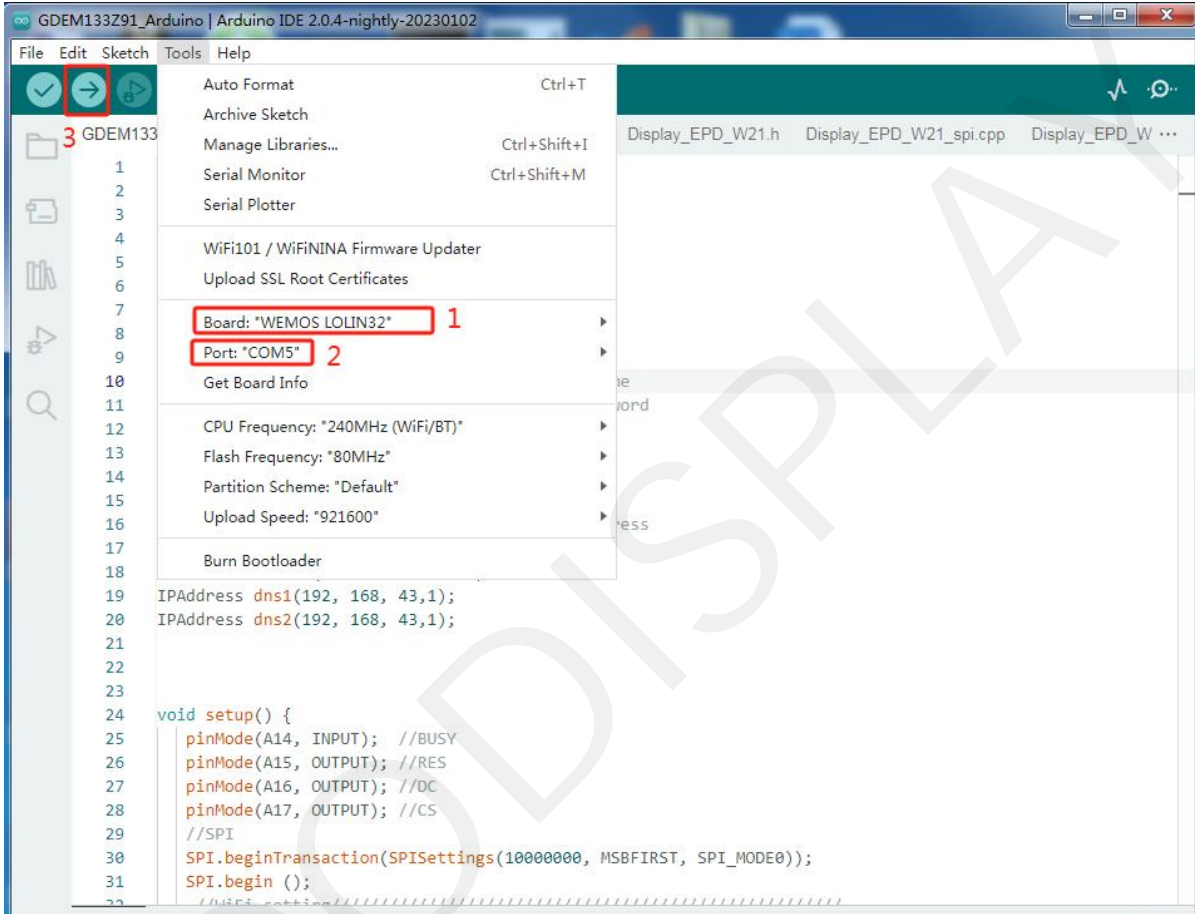
```

1  #include <WiFi.h>
2  #include <SPI.h>
3  //EPD
4  #include "Display_EPD_W21_spi.h"
5  #include "Display_EPD_W21.h"
6  #include "Ap_29demo.h"
7
8
9  //WiFi
10 const char* ssid = "image_host"; //WiFi name
11 const char* password = "imagekey"; //WiFi password
12 //String WifiData;
13 int num;
14 WiFiServer server(8080);
15 //IPAddress
16 IPAddress staticIP(192, 168, 43, 203); //IP address
17 IPAddress gateway(192, 168, 43, 1);
18 IPAddress subnet(255, 255, 255, 0);
19 IPAddress dns1(192, 168, 43, 1);
20 IPAddress dns2(192, 168, 43, 1);
21
22
23
24 void setup() {
25   pinMode(A14, INPUT); //BUSY
26   pinMode(A15, OUTPUT); //RES
27   pinMode(A16, OUTPUT); //DC
  
```

The screenshot shows the Arduino IDE interface with the following annotations:

- WiFi name:** Points to the `ssid` variable on line 10.
- WiFi password:** Points to the `password` variable on line 11.
- 201~210:** Points to the `staticIP` variable on line 16, specifically the last octet `203`.
- Network segment setting:** Points to the `43` value in the `staticIP` and `gateway` variables on lines 16 and 17.

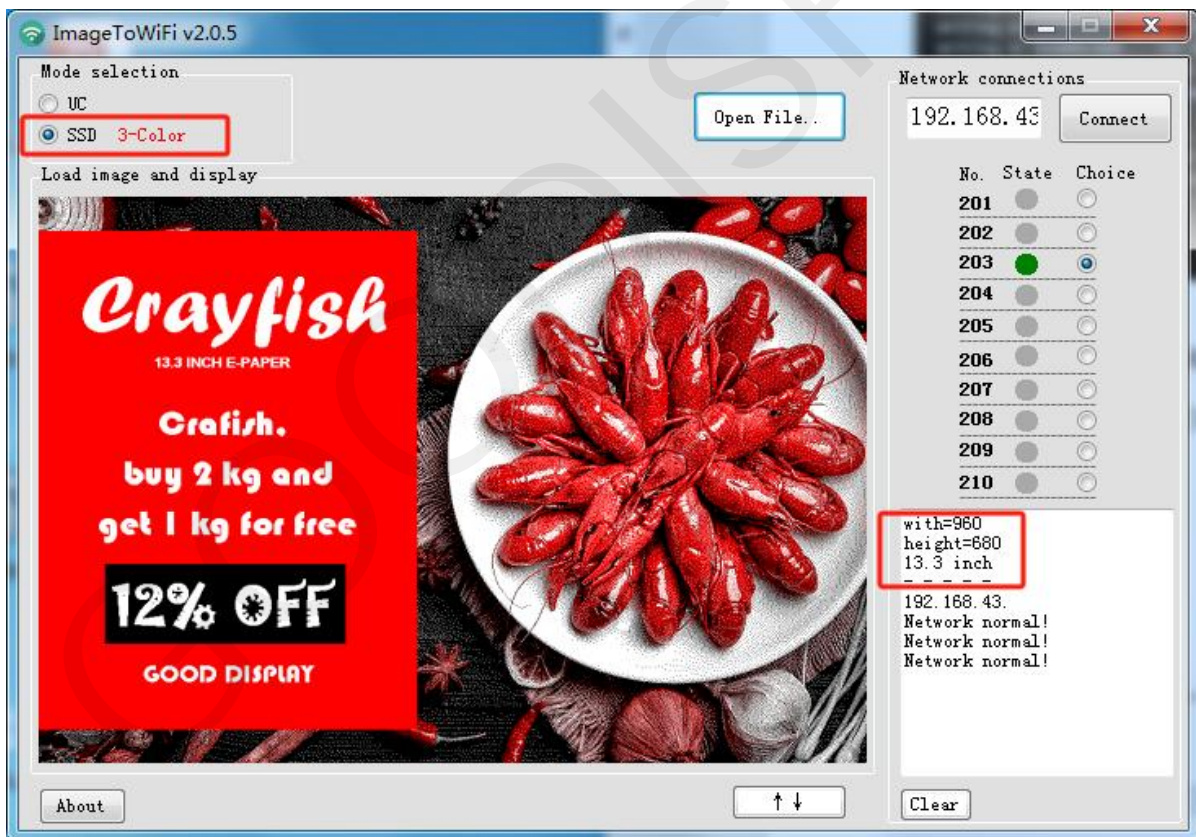
3. Download the device's underlying code onto the device, open the Arduino software, configure the relevant parameters. Choose the board model as "WEMOS LOLIN32" and select the current recognized port for the COM port. Click the upload button and wait a few seconds for the program to be automatically uploaded to the device.




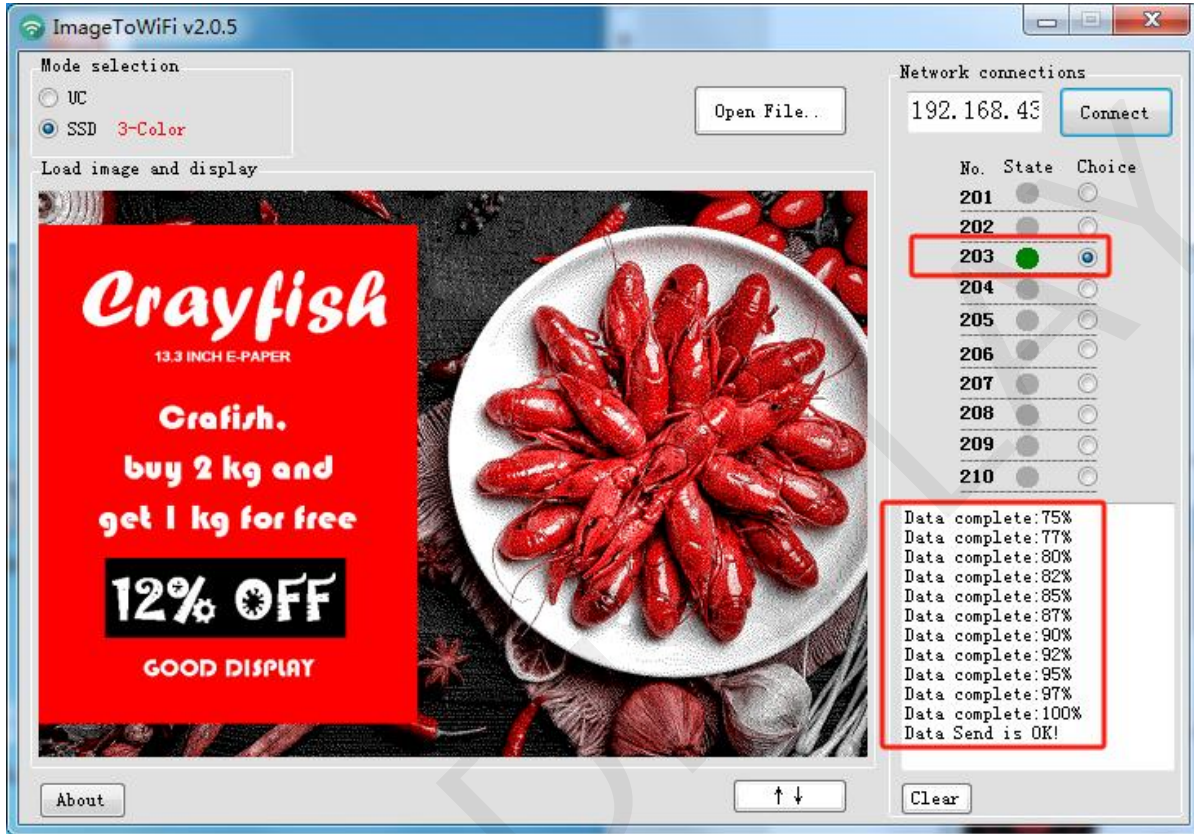
5.3. Display Image

1. Power on the device, it is generally recommended to use a power supply of 5V1A or higher.
2. Open the ImageToWiFi software, click the "Open File" button, select the prepared image (960x680 resolution black, white, and red tricolor image). After importing the image, the software will display parameters such as the image's size, resolution, and color.

The left-side status bar of the software will automatically check the current device's online status. When the status indicator turns green, it means that the corresponding device on the network segment has successfully come online.



3. Select the desired IP number to send, then click the "Connect" button  . If data transmission is successful, the left information panel will display the current progress. Once data transmission is complete, the software will show "Data Send is OK!"



5.4. Common Questions

Issue	Solution
Unable to locate local IP address	The local computer is not connected to the network
Unable to locate remote device	Incorrect input of device WiFi account, password, or IP address
	Insufficient power supply to the device
	The device has disconnected. Click the "Clean" button to rescan the online device IP status.

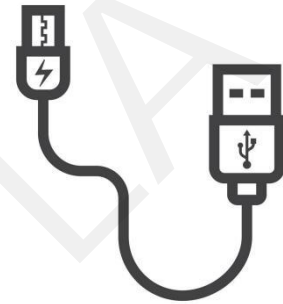
6. Packaging and Installation

6.1 Please verify if you have received the following items containing the package contents:

- E Ink Screen Signage x1
- USB Data Cable x1



E Ink Screen Signage



USB Data Cable

6.2 Product Installation

- The product should be installed on a flat surface to prevent tipping over. Leave adequate space for ventilation between the back of the product and the wall. Avoid installing the product in kitchens, bathrooms, or exposed to damp areas, as this may shorten its lifespan.
- Do not install the product at altitudes of 3000 meters or above, as this may lead to malfunctions.

7. Notes

7.1 Transportation Precautions

- Pay attention to waterproofing during transportation to prevent damage to the display signs.
- Avoid squeezing the display signs during transportation to prevent screen damage.
- Ensure that the ambient temperature does not exceed 70°C during transportation.

7.2 Usage Instructions

- Operate the display sign within an environment temperature range of 0°C to 40°C.
- Regularly clean the screen to ensure the display sign remains tidy.
- Do not dismantle the display sign without authorization.
- Take precautions against water damage during use.
- Avoid collisions while using the display sign.

7.3 Storage Precautions

- The storage environment should be fireproof, moisture-proof (humidity should not exceed 70%), heat-resistant (temperature should not exceed 70°C), pressure-proof, dirt-proof, crush-proof, and damage-proof.