



# User Manual Of Software -ImageToWiFi



Dalian Good Display Co., Ltd.

| Version | Date       | Design | Check | Mark |
|---------|------------|--------|-------|------|
| V2.0    | 2022/07/12 |        |       |      |

|  | Design Engineering  |   |   |
|--|---|---|---|
|  | Approval  | Check   | Design  |
|  |  |  |  |

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

Tel: +86-411-84619565

Email: info@good-display.com

Website: www.good-display.com

# Contents

|  |           |
|--|-----------|
| <b>CHAPTER 1 SOFTWARE OVERVIEW .....</b>     | <b>4</b>  |
| 1.1 Overview .....                           | 4         |
| 1.2 Main Characteristics .....               | 4         |
| 1.3 Operating Environment .....              | 4         |
| <b>CHAPTER 2 SOFTWARE INSTALLATION .....</b> | <b>4</b>  |
| 2.1 Installation .....                       | 4         |
| 2.2 Installation of Serial Port Driver ..... | 5         |
| <b>CHAPTER 3 SOFTWARE INTRODUCTION .....</b> | <b>6</b>  |
| 3.1 Software Preview .....                   | 6         |
| 3.2 Device Network Settings .....            | 6         |
| 3.3 Image Import .....                       | 11        |
| 3.4 Device Connection .....                  | 12        |
| 3.5 Data Transmission .....                  | 13        |
| <b>CHAPTER 4 FAQs .....</b>                  | <b>14</b> |
| <b>CHAPTER 5 ABOUT US .....</b>              | <b>14</b> |

## **Chapter 1 Software Overview**

### **1.1 Overview**

ImageToWiFi is a professional control software for controlling electronic paper display. It is a special operation software integrating mold taking and control. This software provides fast support for real-time image display of E-paper display.

### **1.2 Main Characteristics**

- 1) It can automatically take the mold of the image to be displayed for E-paper WiFi price tag with size 7.5 inch and 12.48 inch, and also support full screen demonstration.
- 2) Supported image file formats: image formats (\*.jpg, \*.bmp)

### **1.3 Operating Environment**

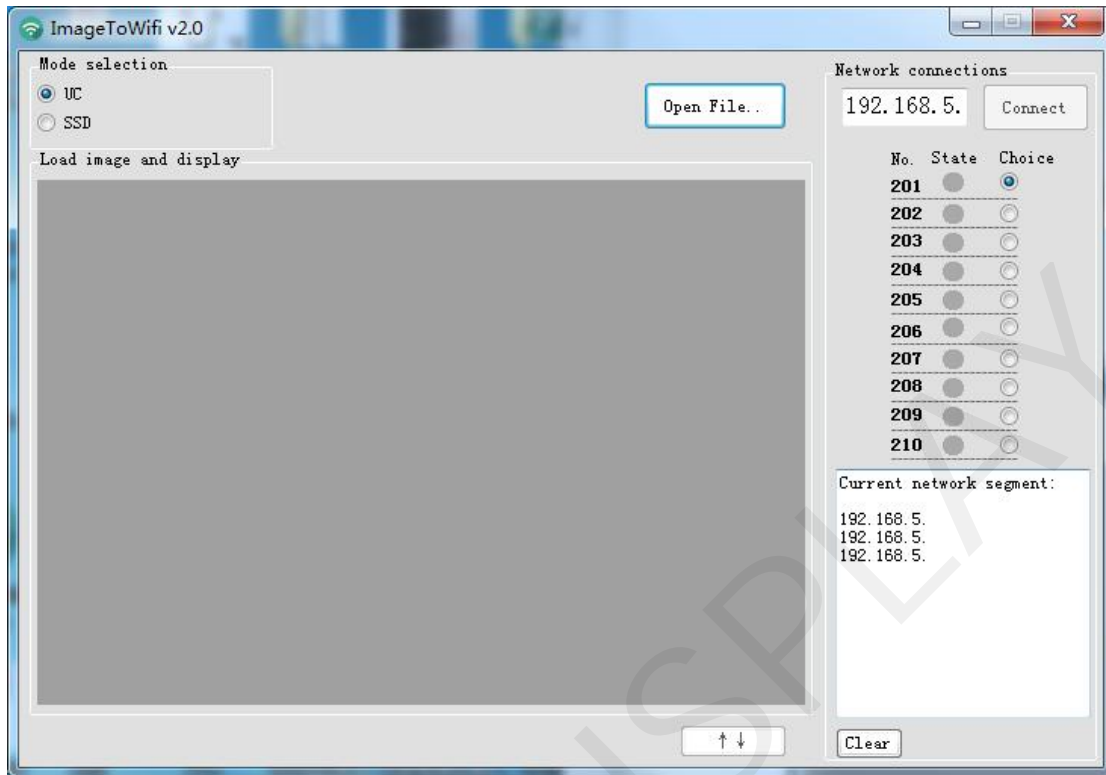
Operating System:

Windows7/10;

## **Chapter 2 Software Installation**

### **2.1 Installation**

ImageToWiFi is an installation free software. Users can directly double-click imagetowifi.exe to open the software.



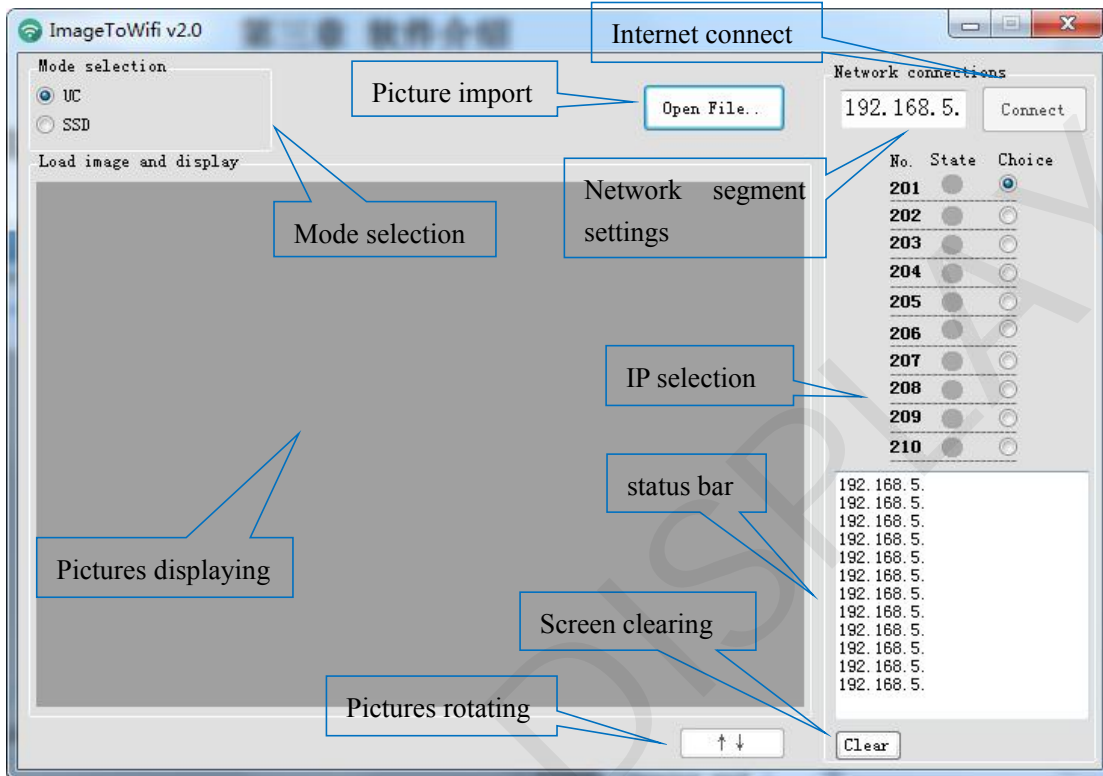
## 2.2 Installation of Serial Port Driver(CH340)

First double-click  to install the driver.

Click Complete to finish installation.

## Chapter 3 Software Introduction

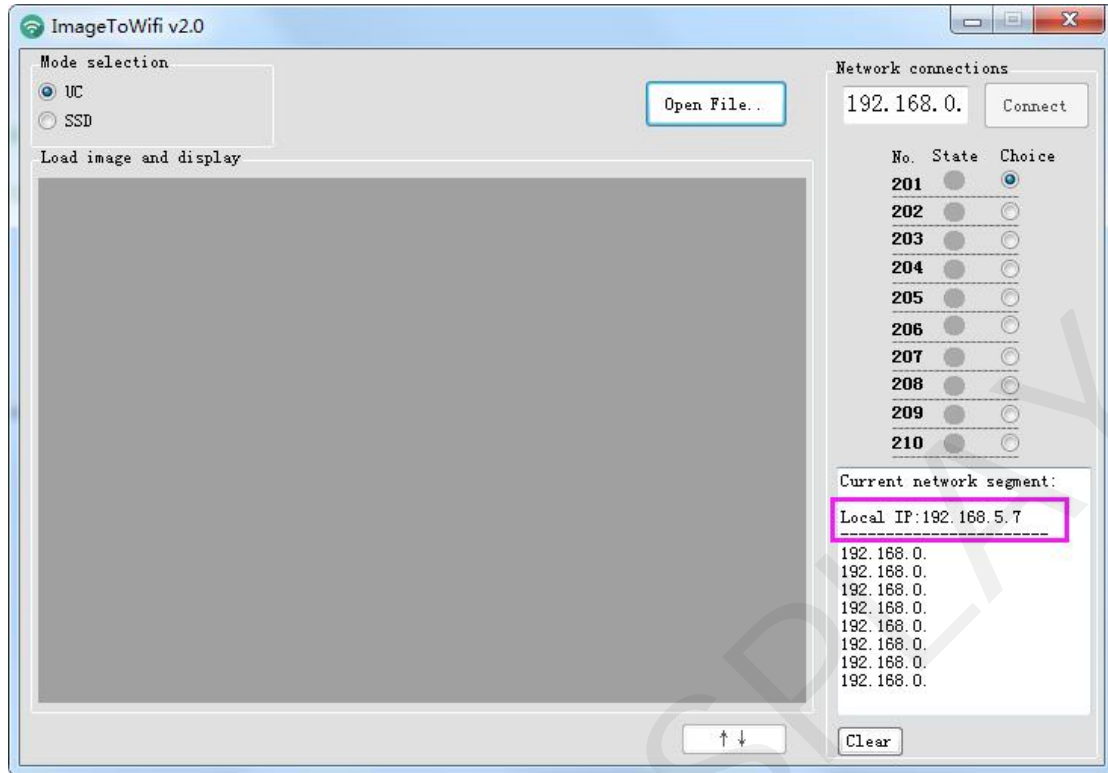
### 3.1 Software Preview



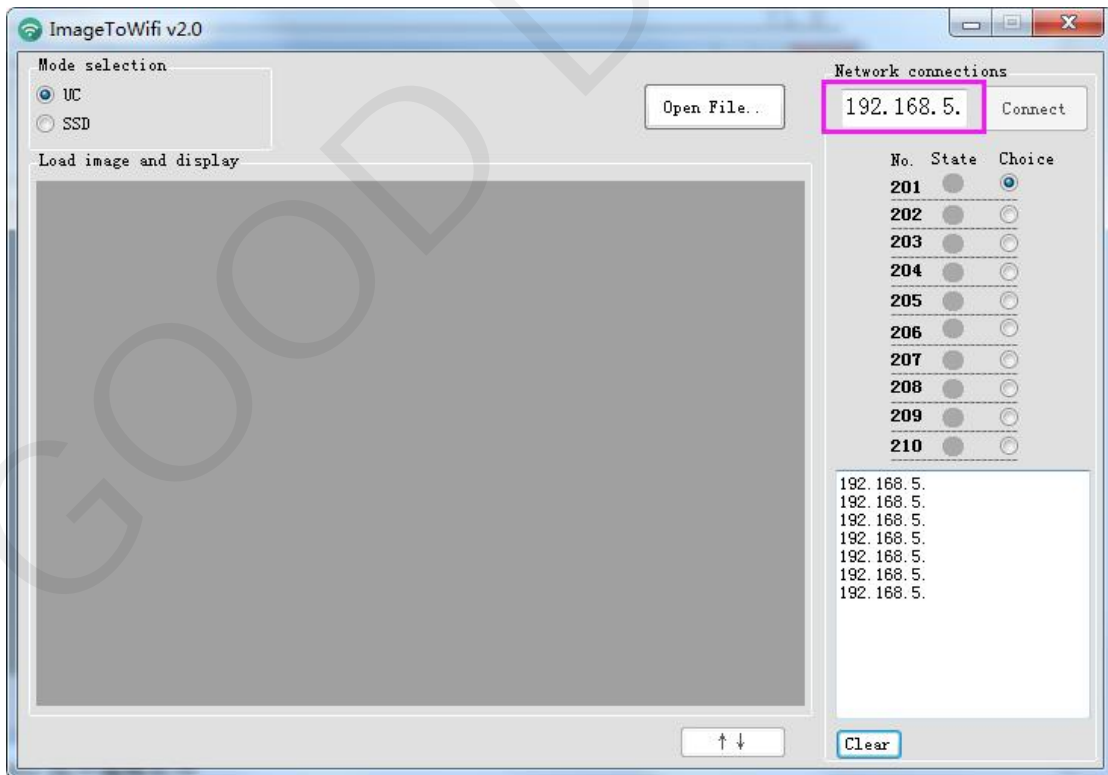
### 3.2 Device Network Settings

#### 3.2.1 Query Local IP Address

Open ImageToWiFi software, and the status bar will automatically retrieve the IP address of the current computer. Through this, you can know the current network segment. The IP address in the following figure is 192.168.5.7, and the network segment is "5" (this network segment will be used when setting the device WiFi). Change the network segment in the software to 5. Display local computer IP address:



Set current network segment



### 3.2.2 Install Arduino Program Editing Software

This development board adopts serial port to download programs, which requires Arduino programming software, type-C cable, CH340 driver and esp32\_package\_v1\_0\_2 firmware package and python-2.7.17 plug-in. The operation steps are as follows:

- 1) For the first download, install CH340 driver and ESP32 on the computer\_package\_v1\_0\_2 firmware package, python-2.7.17 plug-in.
- 2) Firmware package: esp32\_package\_v1\_0\_2. The unzipped file name is espressif. Unzip the espressif folder and put it in the arduino/hardware directory. During installation, the Arduino programming software must be closed, and the firmware package can also be searched directly in the Arduino library manager.
- 3) Use the default installation path for CH340 driver and python-2.7.17 plug-in.
- 4) Run the program file get.exe in esp32/tools(you must have installed the python plug-in), as shown in Figure 5.

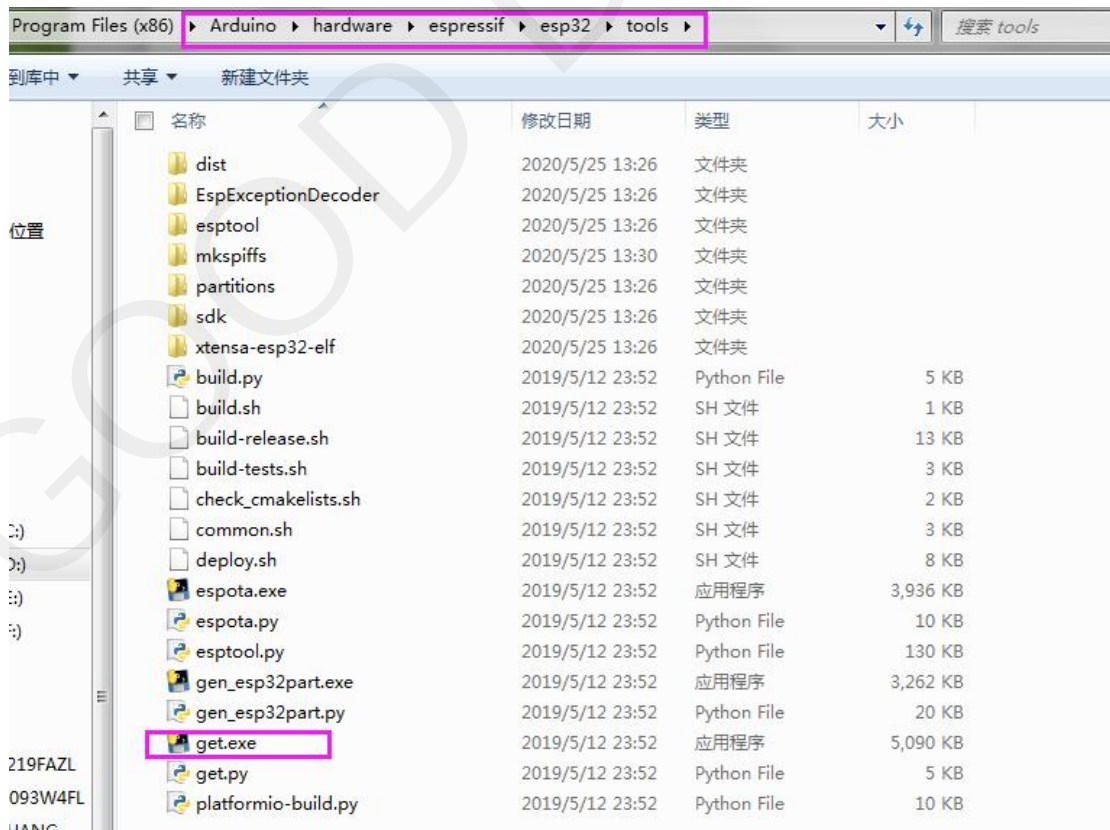


Figure 5 Run get.exe



- 5) Connect the Type-C interface of the development board to the computer with USB cable.
- 6) Open Arduino in the driver folder shown in Figure 6 with Arduino 1.8.6 ino engineering document.

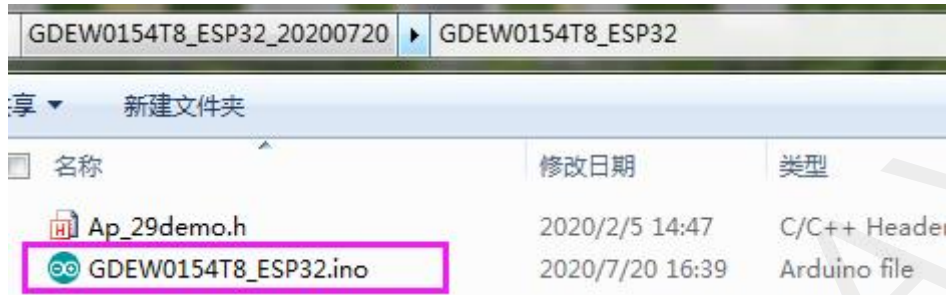


Figure 6 Open Arduino.ino

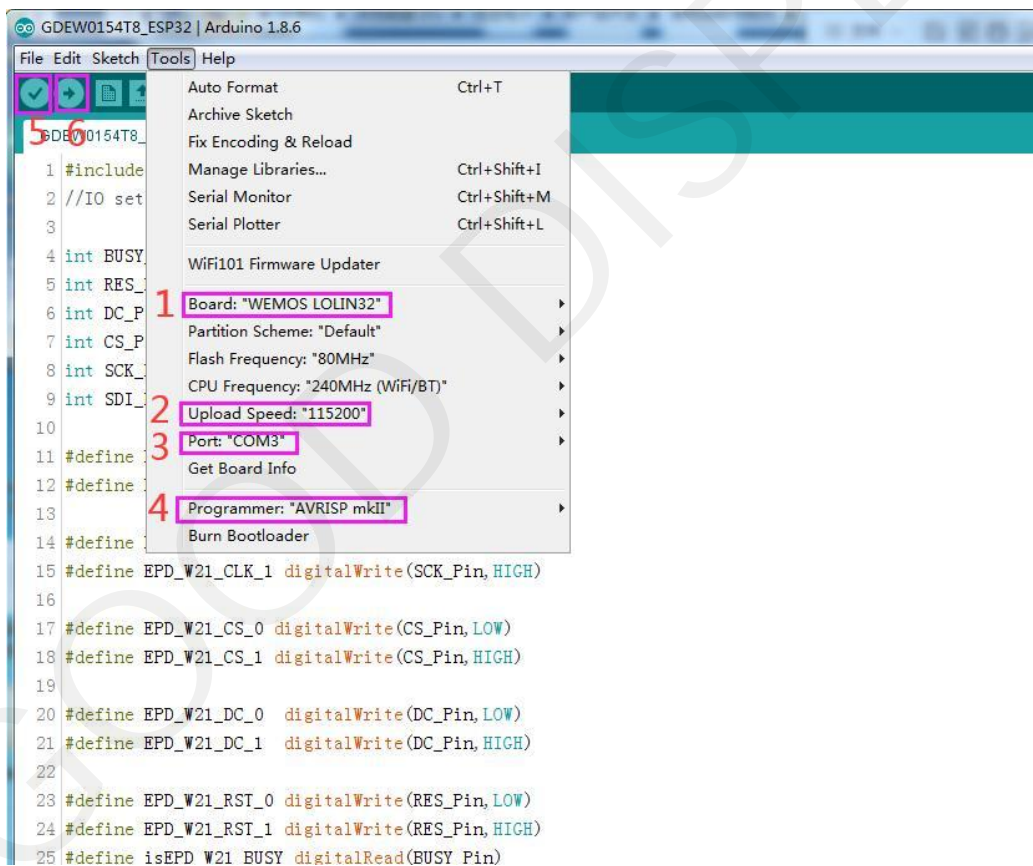


Figure 7 Program Download Steps


7) Set in "tools".


Click position 1 to select the development board model "WEMOS LOLIN32".

Click position 2 to select serial port baud rate "115200".

Click position 3 to select COM port.

Click position 4 to select the programmer model, and here select "AVRISP mkII".

Click position 5  to compile the program.

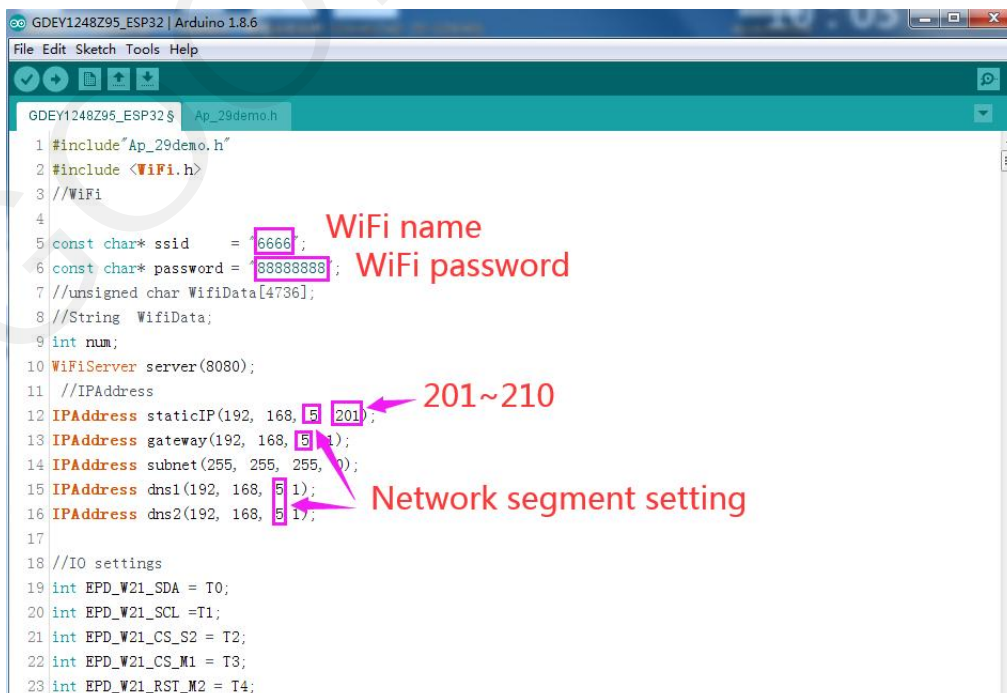
Click position 6  to download the program to the development board.

After the downloading, first power off the development board, connect the electronic paper display screen to the adapter board, and then power on again so that E-paper can display normally.

**Note:** if the compiler prompts "invalid library found" during program compilation, please ignore this prompt, which will not affect the actual program download.

### 3.2.3 Device WiFi Setting

The customer needs to put the WiFi user name, password, network segment and IP number, of which the network segment "5" is the field automatically identified by imagetowifi above, and the IP number range is 201~210. Different device numbers cannot be repeated. At present, up to 10 groups of devices are supported to be online at the same time. After setting the parameters, download the program to the corresponding device according to the above download steps.



```

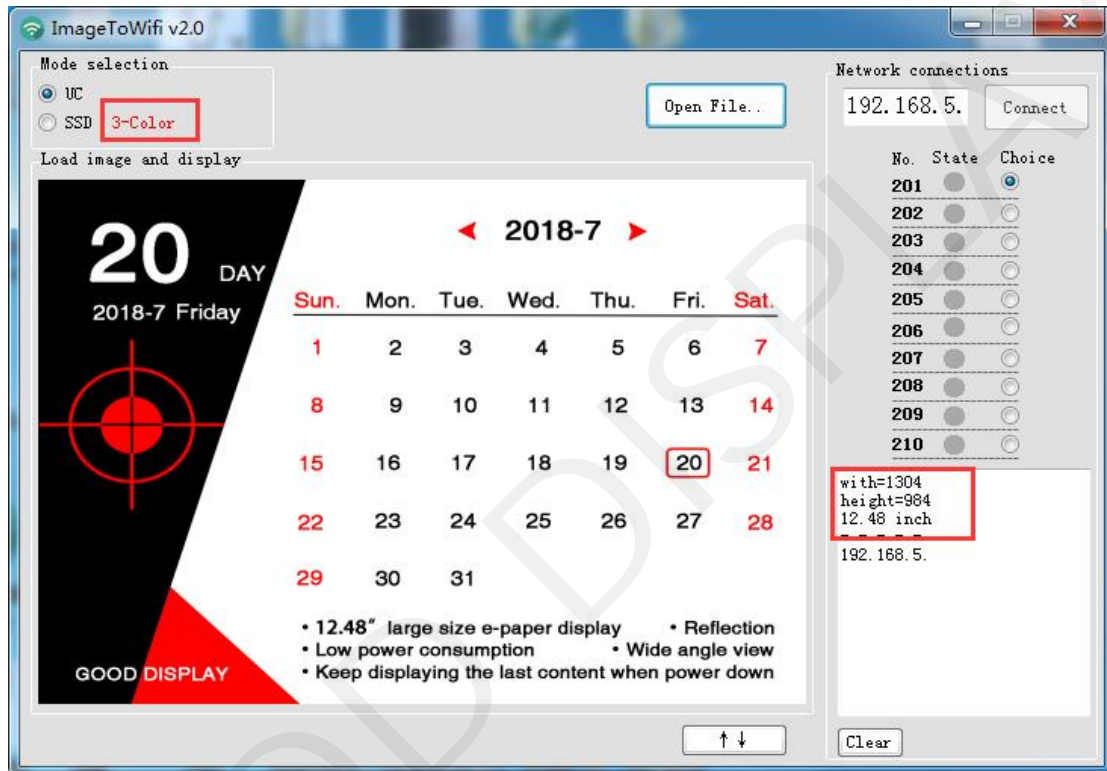
1 #include "Ap_29demo.h"
2 #include <WiFi.h>
3 //WiFi
4
5 const char* ssid = "6666";
6 const char* password = "88888888";
7 //unsigned char WifiData[4736];
8 //String WifiData;
9 int num;
10 WiFiServer server(8080);
11 //IPAddress
12 IPAddress staticIP(192, 168, 5, 201);
13 IPAddress gateway(192, 168, 5, 1);
14 IPAddress subnet(255, 255, 255, 0);
15 IPAddress dns1(192, 168, 5, 1);
16 IPAddress dns2(192, 168, 5, 17);
17
18 //IO settings
19 int EPD_W21_SDA = T0;
20 int EPD_W21_SCL = T1;
21 int EPD_W21_CS_S2 = T2;
22 int EPD_W21_CS_M1 = T3;
23 int EPD_W21_RST_M2 = T4;
    
```

Annotations in the image:

- Line 5: **WiFi name** (points to "6666")
- Line 6: **WiFi password** (points to "88888888")
- Line 12: **201~210** (points to the IP address "5, 201")
- Line 12: **Network segment setting** (points to the IP address "5, 201")

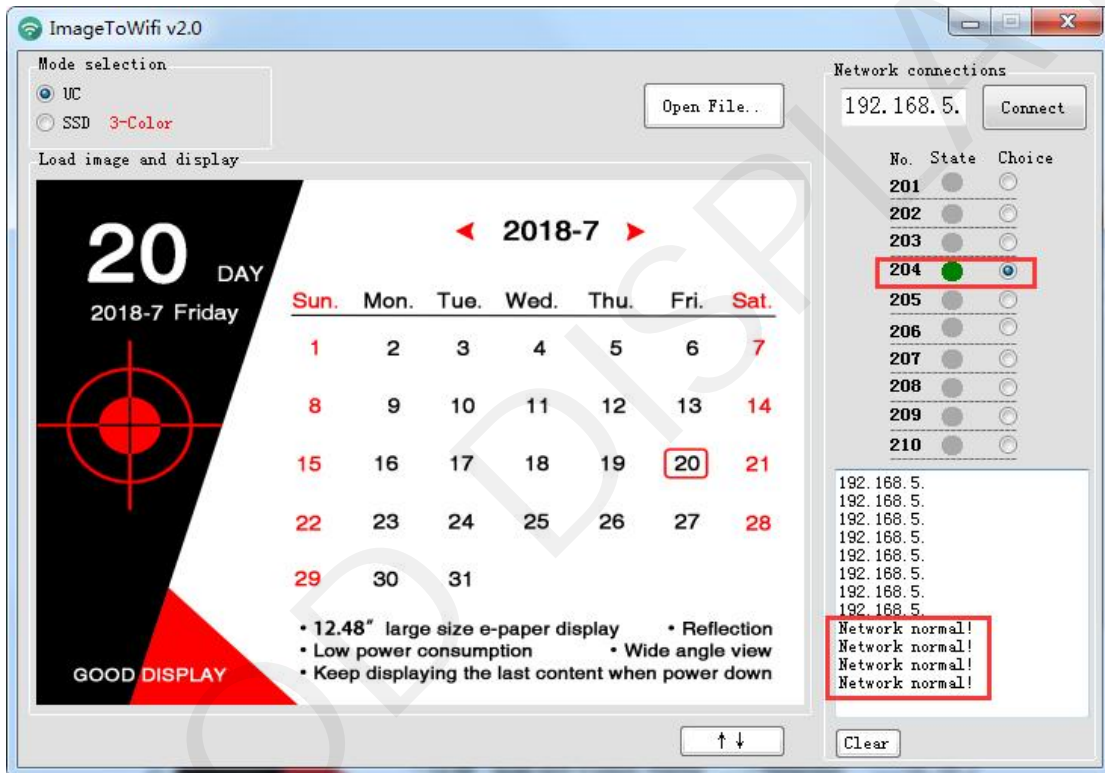
### 3.3 Image Import

Image import: click the "Open File" button, select the created image, and note that the color and resolution of the image should correspond to the current device. After the image is imported, the software will prompt the size, resolution, color and other parameters of the image to be displayed.



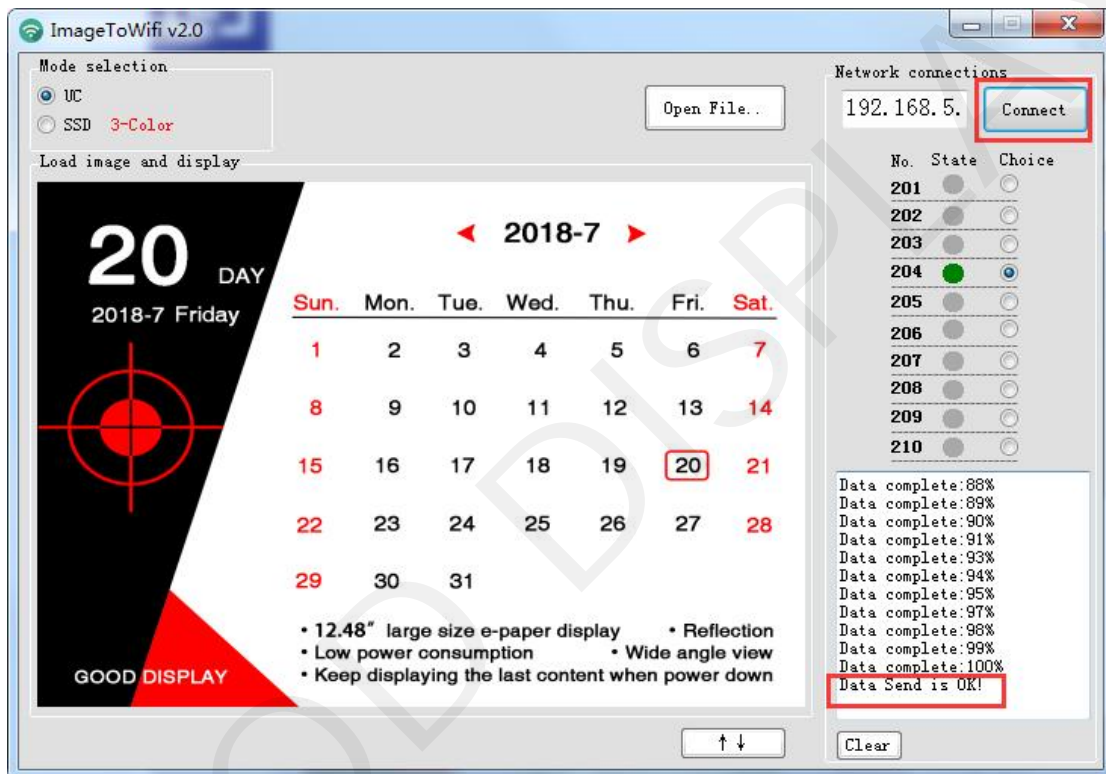
### 3.4 Device Connection

Power the device. Generally, it is recommended that the power supply is above 5v2a. Open ImageToWiFi software, and the status bar will automatically query the current online status of the device. When the status indicator turns green, it means that the device of the corresponding network segment has been successfully online.



### 3.5 Data Transmission

Select the IP number to be sent and click "connect". When the data transmission is normal, the left information bar will display the current data transmission progress. When the data transmission is completed, the software will display "Data send is OK!"



## Chapter 4 FAQs

### 4.1 Abnormal Network Connection

1. Unable to find the local IP address: the local computer is not connected to the network
2. The remote device cannot be found:
  - 1) The WiFi account, password and IP address of the device are filled in incorrectly.
  - 2) The power supply of the equipment is insufficient.
  - 3) If the device is disconnected, you need to click the "clean" button to rescan the online IP status.

## Chapter 5 About Us

### 5.1 Contact Us

Click 'About' button to get contact information. Please email our technical staff directly should you have any technical questions.

