HD2020 LED

Control System Operation Manual

Document	HD2020 LED Control System Operation Manual
Version	V1.0
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Appendix 1 – Control Card Catalog

Appendix 1.1 Control Card Selection

Model	Single	Dual	Full Color	Memory	Gray Level	HUB Port
HD-U6A	320*32	/	/	1M	None	2*HUB12
HD-U60	512*32	256*32	320*16	2M	Highest 8	1*HUB08, 2*HUB12
HD-U6B	1024*48	512*48	640*16	8M	Highest 8	3*HUB12, 1*HUB08
HD-U62	768*64	384*64	512*32	8M	Highest 8	2*HUB08, 4*HUB12
HD-U63	512*128	256*128	320*64	8M	Highest 8	4*HUB08, 8*HUB12
HD-U64	512*256	256*256	320*128	8M	Highest 8	1*50PIN
HD-U60-75	/	/	640*64	8M	Highest 256	2*HUB75E
HD-S63	1024*128	512*128	672*64	8M	Highest 8	4*HUB08, 8*HUB12
HD-E62	1024*64	512*64	672*32	8M	Highest 8	2*HUB08, 4*HUB12
HD-E63	1024*128	512*128	672*64	8M	Highest 8	4*HUB08, 8*HUB12
HD-E64	1024*256	512*256	672*128	8M	Highest 8	1*50PIN
HD-W60	1024*32	512*32	640*16	2M	Highest 8	1*HUB08, 2*HUB12
HD-W60-75	/	/	640*64	8M	Highest 256	2*HUB75E
HD-W6B	1024*48	512*48	640*16	8M	Highest 8	1*HUB08, 3*HUB12
HD-W62	1024*64	512*64	672*32	8M	Highest 8	2*HUB08, 4*HUB12
HD-W63	1024*128	512*128	672*64	8M	Highest 8	4*HUB08, 8*HUB12
HD-W64	1024*256	512*256	672*128	8M	Highest 8	1*50PIN
HD-W62-75	/	/	640*160	32M	Highest 256	5*HUB75E
HD-W66	2048*512	1024*512	1344*256	8M	Highest 32	2*50PIN
HD-W00	320*32	160*32	192*16	2M	None	2*HUB12
HD-W02	512*32	256*32	320*16	2M	None	2*HUB12
HD-W03	512*48	256*48	320*24	2M	None	3*HUB12
HD-W04	512*64	256*64	320*32	2M	None	4*HUB12

Chapter 1 – Overview

1.1 Features

The “HD2020” control system is a major new generation of LED sign controllers. Duplicated controller models have been consolidated to simplify selection, the control range has been made more flexible, and pricing is more moderate – enough to cope with the current trend of taller, longer and more diverse screens.

The software interface keeps the familiar style of simple operation and powerful functions: easy to learn and use, supporting graphics (JPG, BMP, GIF, text, etc.), text, animated characters, Excel, time, timing, counting, lunar calendar, temperature and humidity, prayer times and weather. It supports serial (both RS232 and RS485), network port, Wi-Fi, USB flash drive and other control methods, meeting the needs of many different applications.

1.2 Operating environment

The operation interface supports 23 languages (Chinese, Traditional Chinese, English, Arabic, Bulgarian, French, German, Indonesian, Hindi, Iranian, Italian, Japanese, Korean, Mongolian, Polish, Portuguese, Romanian, Russian, Serbian, Spanish, Thai, Turkish, Vietnamese).

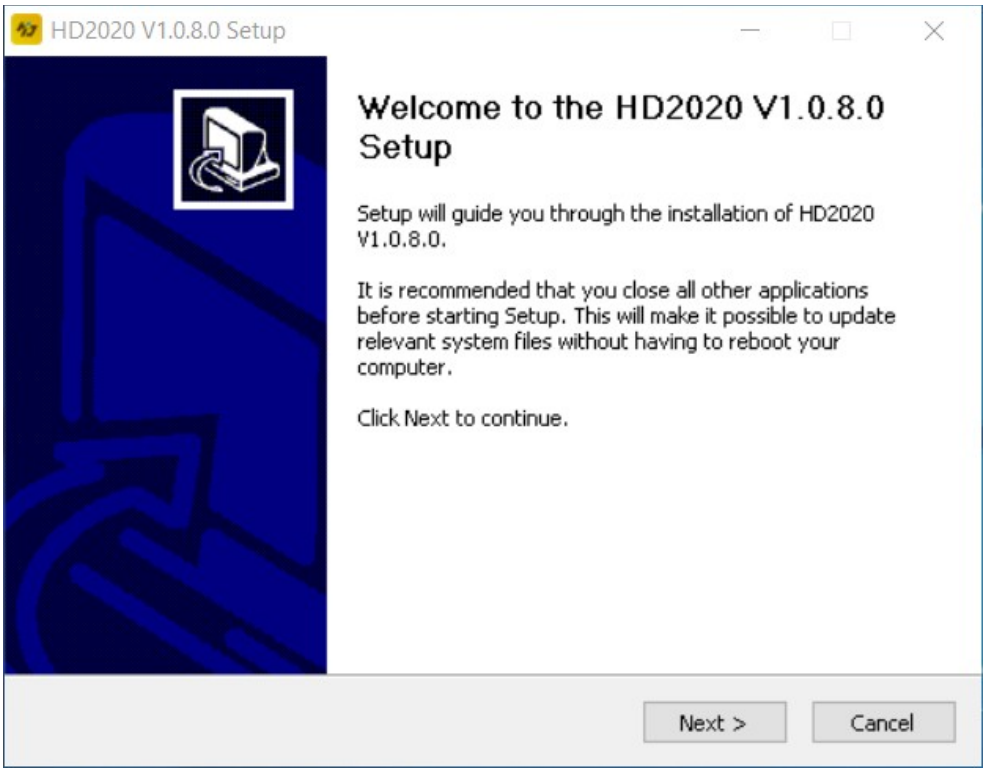
Operating system: Windows XP SP3 / Win7 / Win8 / Win10, etc.

Chapter 2 – Installation and Uninstallation

2.1 Installation

Installing the “HD2020” software is very easy:

Locate the file HD2020 V1.0.8.0.exe (on your CD, or download it from www.rousis.gr) and double-click it. The software installation wizard will start, as shown below:

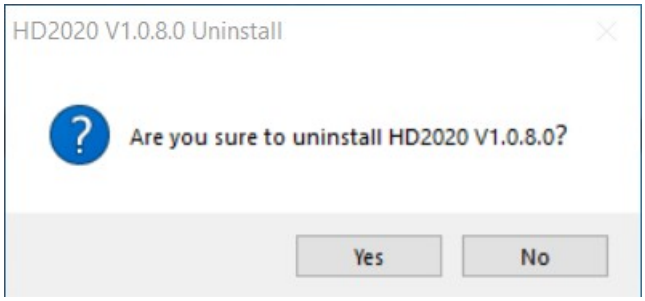


Follow the on-screen prompts (Next) to complete the installation.

After the installation of the “HD2020” software is completed successfully, the “HD2020” program group will appear in [Start] / [Programs]. Click HD2020 to run it. You can also open the software from the HD2020 desktop shortcut.

2.2 Uninstallation

The “HD2020” software package provides a complete uninstall function; users can easily delete all documents, program groups and shortcuts of “HD2020”. Choose Uninstall HD2020 in the [Start] / [Programs] / HD2020 program group to complete the software uninstall operation.

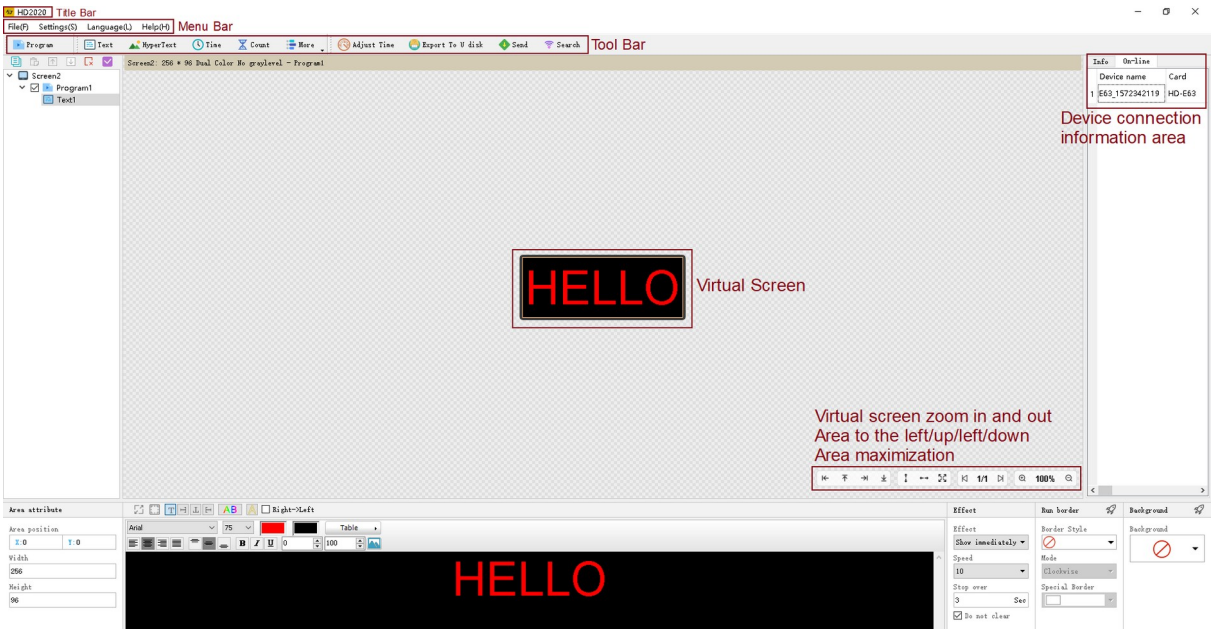


Chapter 3 – Detailed Use of Tools

3.1 Software main interface

Open the main interface of the “HD2020” software as shown below.

The toolbar can be divided into two columns or displayed as one column. The information window shows whether the current command was sent successfully, and displays the currently online devices.



3.2 Title bar

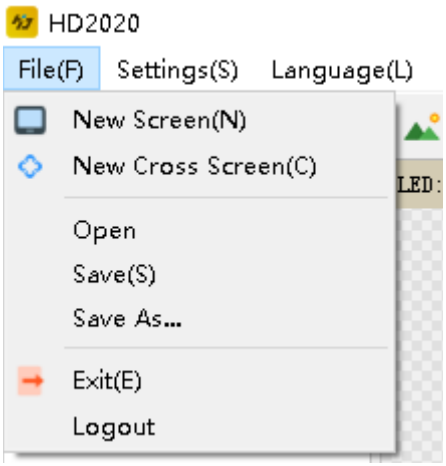
Used to display the software name.

3.3 Menu bar

Includes File, Settings, Language, Help and more.

3.3.1 File menu

Contains the New Screen, New Cross Screen, Open, Save, Save As, Exit and Logout options, as shown in the figure:



New Screen: used to create a new display. There is no restriction on the number of screens HD2020 can manage.

New Cross Screen: used to create a new cross screen.

Open: used to open a saved display file.

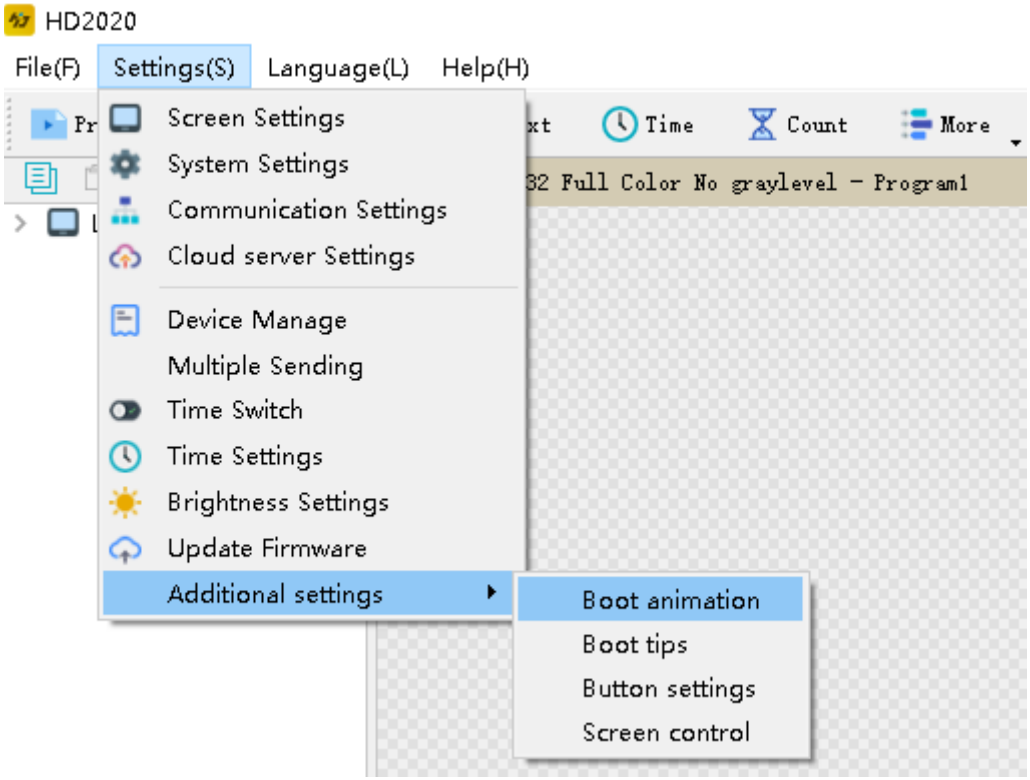
Save / Save As: used to save the current display file, optionally with a custom path.

Exit: closes the HD2020 software.

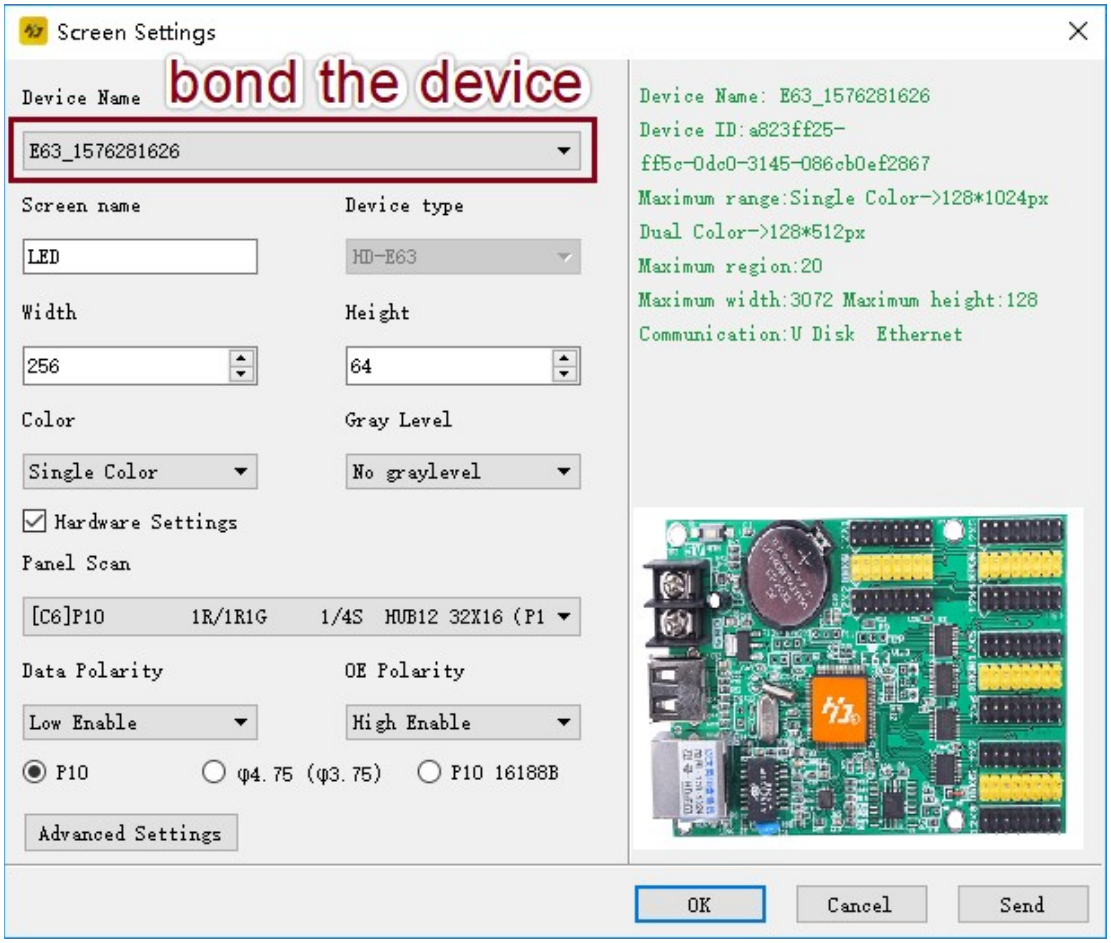
Logout: used to log out of the current account.

3.3.2 Settings menu

Includes screen parameter settings, system settings, communication settings, cloud server settings, device management, cluster sending, timing switch on/off, time settings, brightness settings, firmware updates and additional settings (boot screen, boot prompt, button settings, screen control), as shown below:

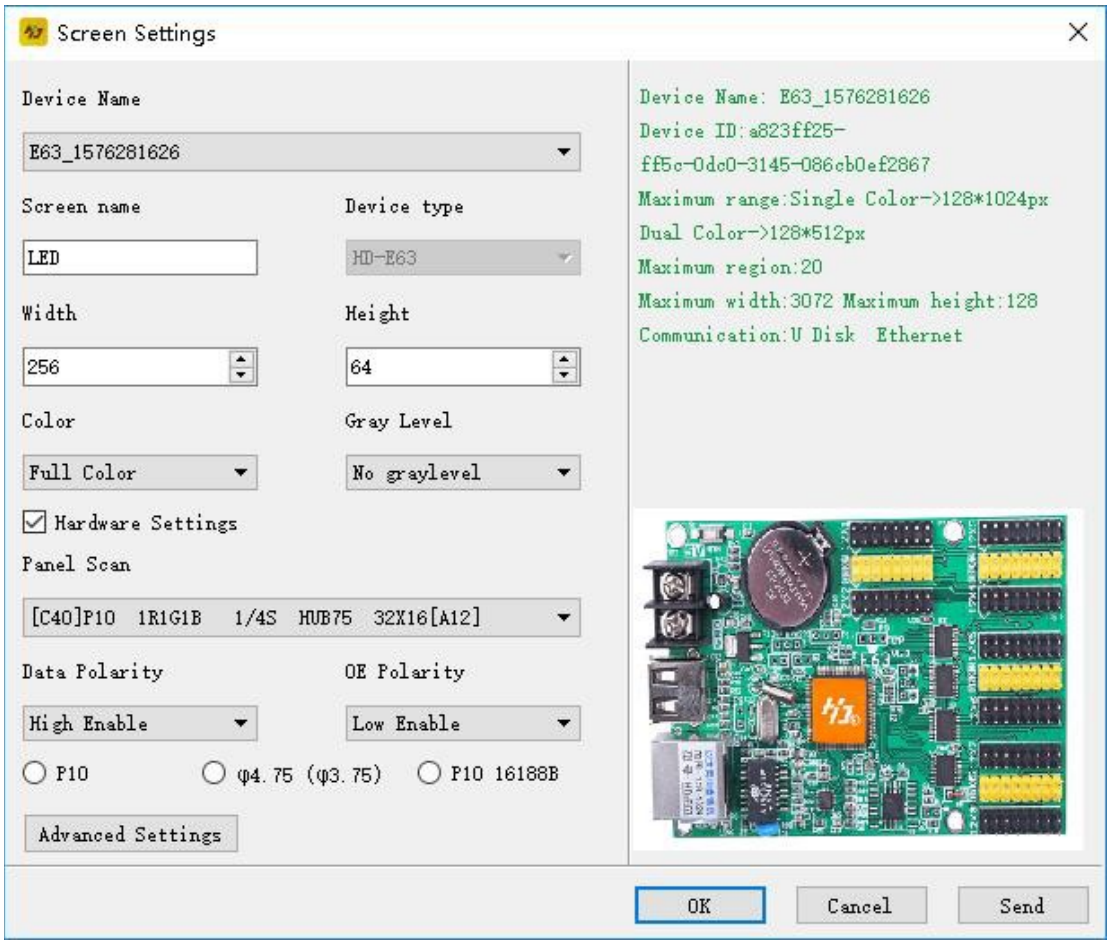


Screen parameter settings: used to bind the device and set the basic parameters of the display, as shown in the figure:

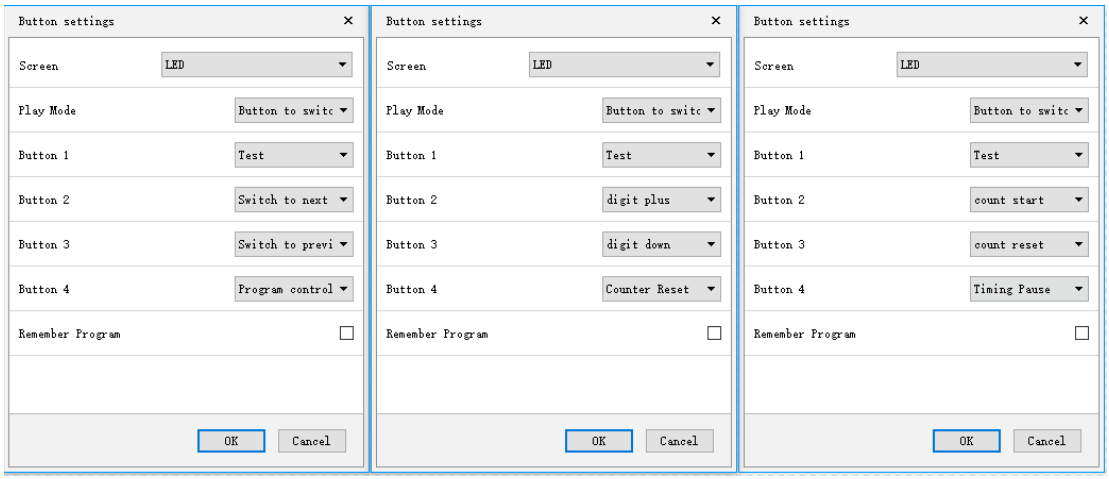


In the first step, if the control card already displays correctly, you only need to change the screen width, height, color and gray level. If the screen does not display correctly, you need to set the hardware.

The second step is hardware settings. For regular screens, select one of the common smart settings. For non-conventional screens, perform the smart-setting procedure (smart settings can only be performed when a device is found; USB-disk-only cards cannot be used for smart settings).

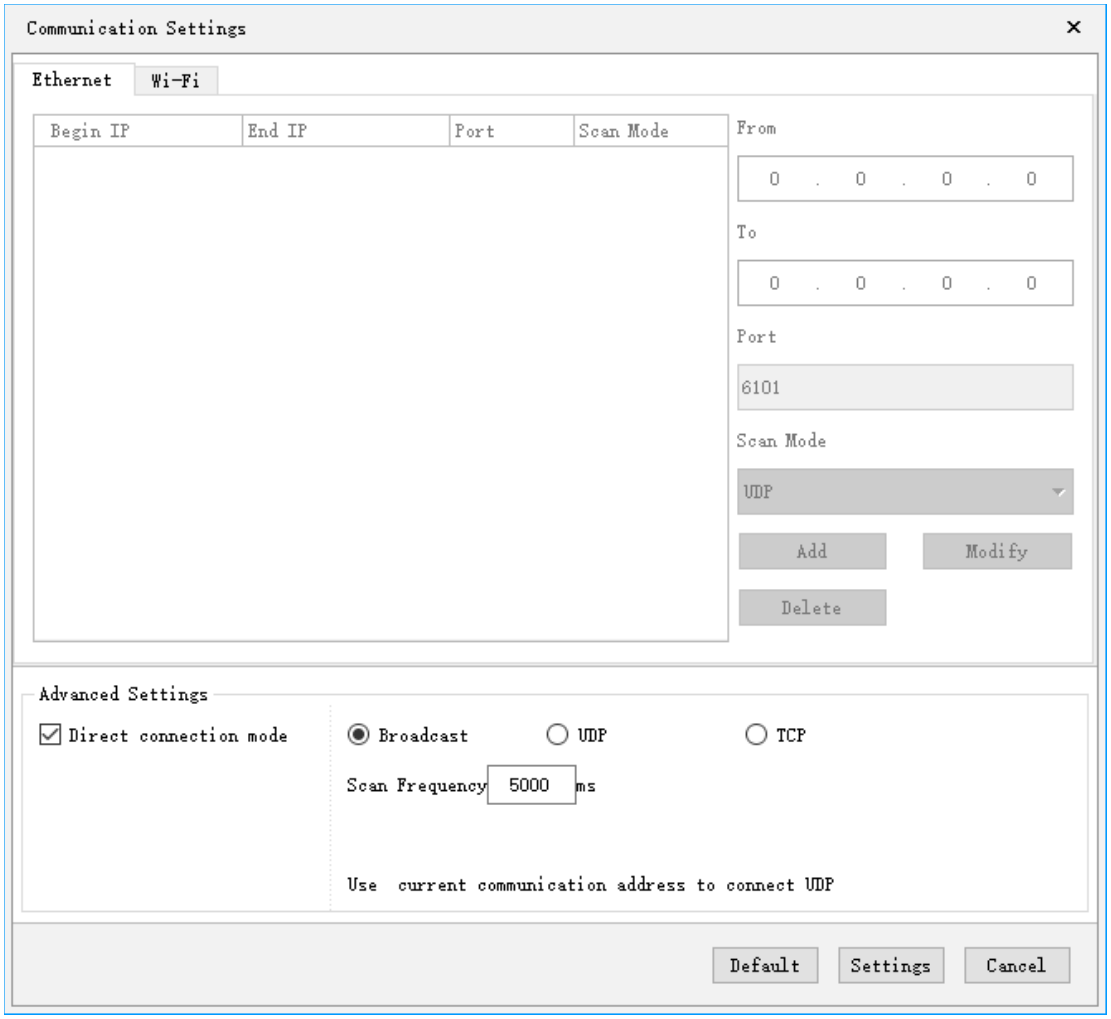


The button settings are found under Settings → Additional Settings → Button Settings, and are used to adjust the functions of the four keys, as shown in the figure below:

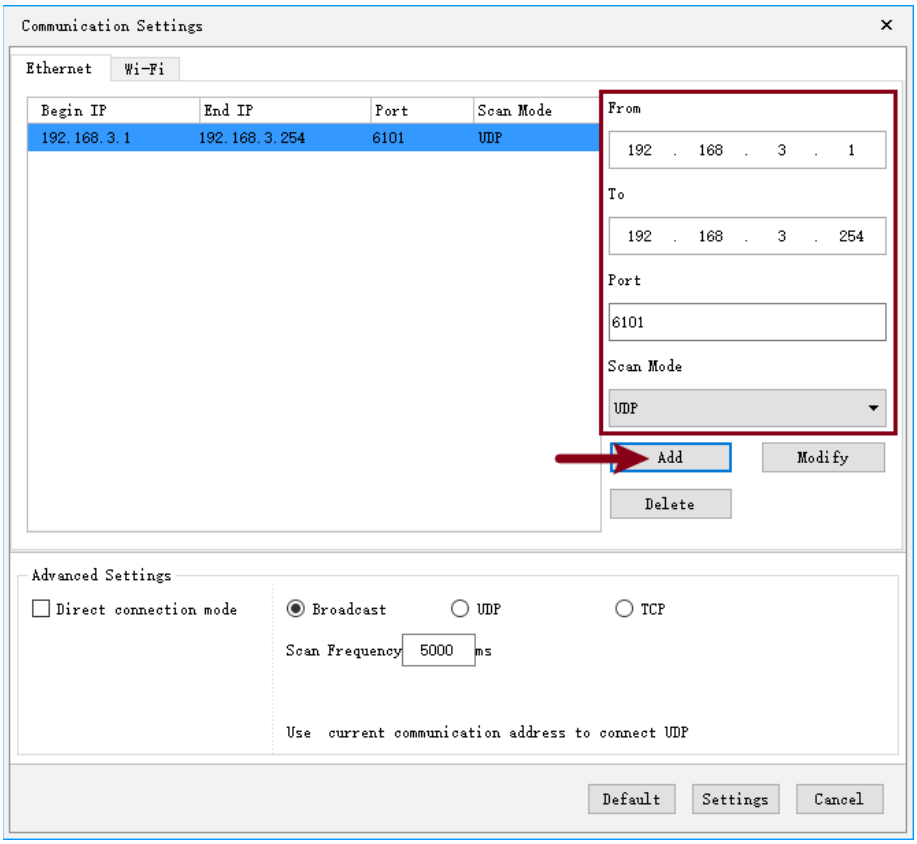


Communication settings: used to modify the communication settings when multiple cards are connected.

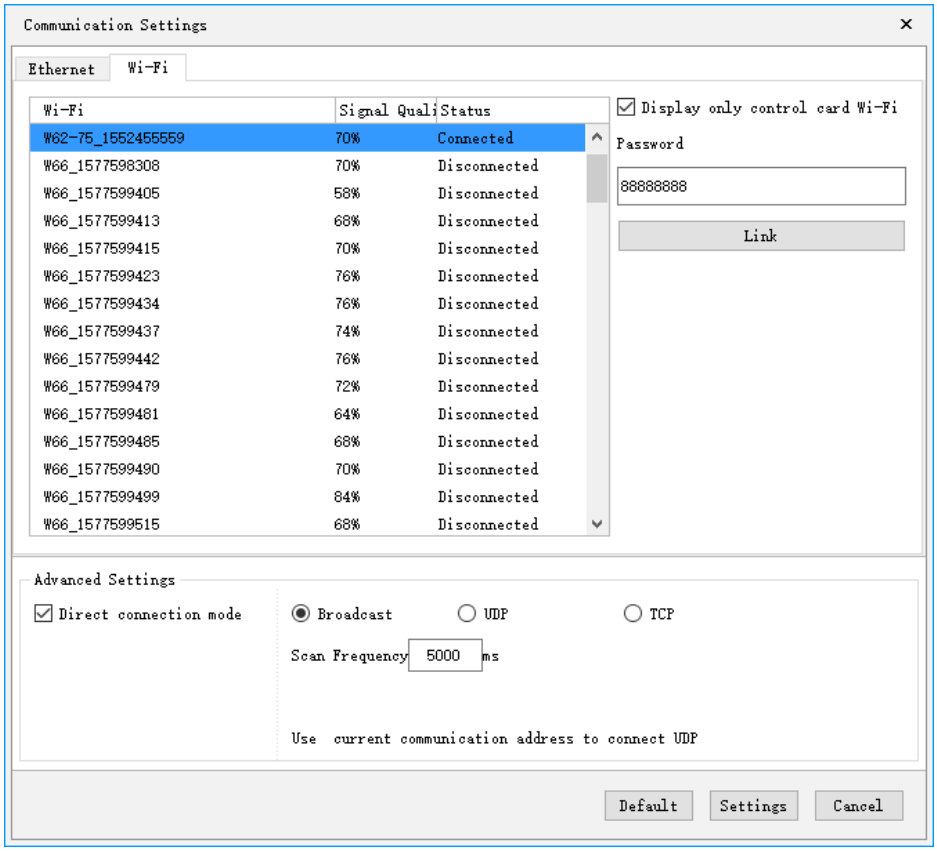
1. The default Ethernet mode is single-machine direct connection: when only one card is connected to the computer there is no need to change any settings – as long as the network cable is connected properly, the device will be found.



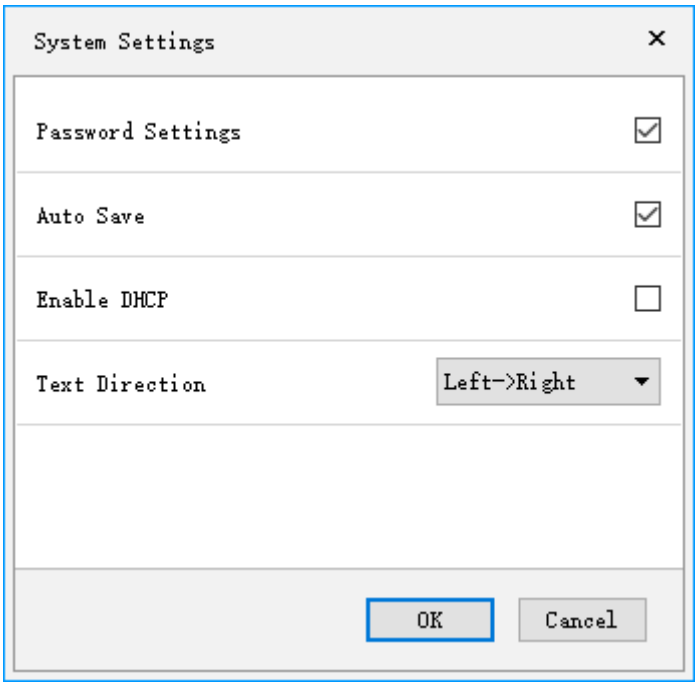
2. When single-machine direct connection mode is not checked (the control card and the main computer are not directly connected and are not in the same network segment), you need to add the IP range of the network segment where the control card is located, as shown in the figure. After adding, the card can be found on the 192.168.3.* network segment.



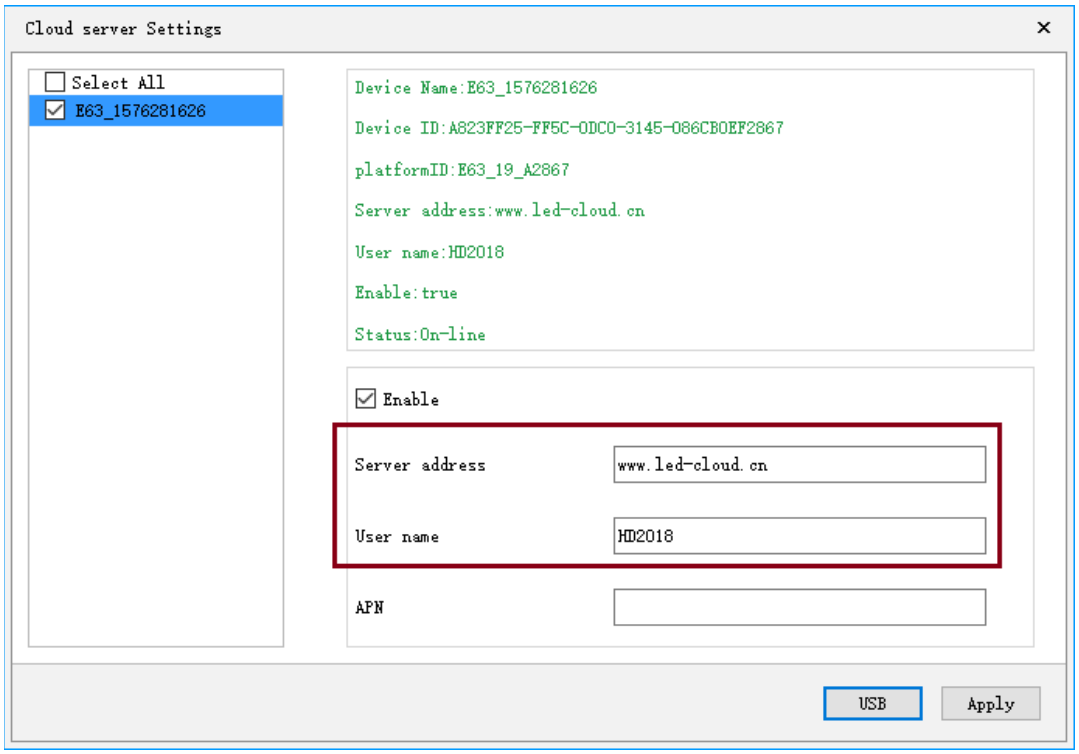
3. The Wi-Fi tab is used to connect to the Wi-Fi signal of the control card. Enter the default connection password 88888888, as shown below:



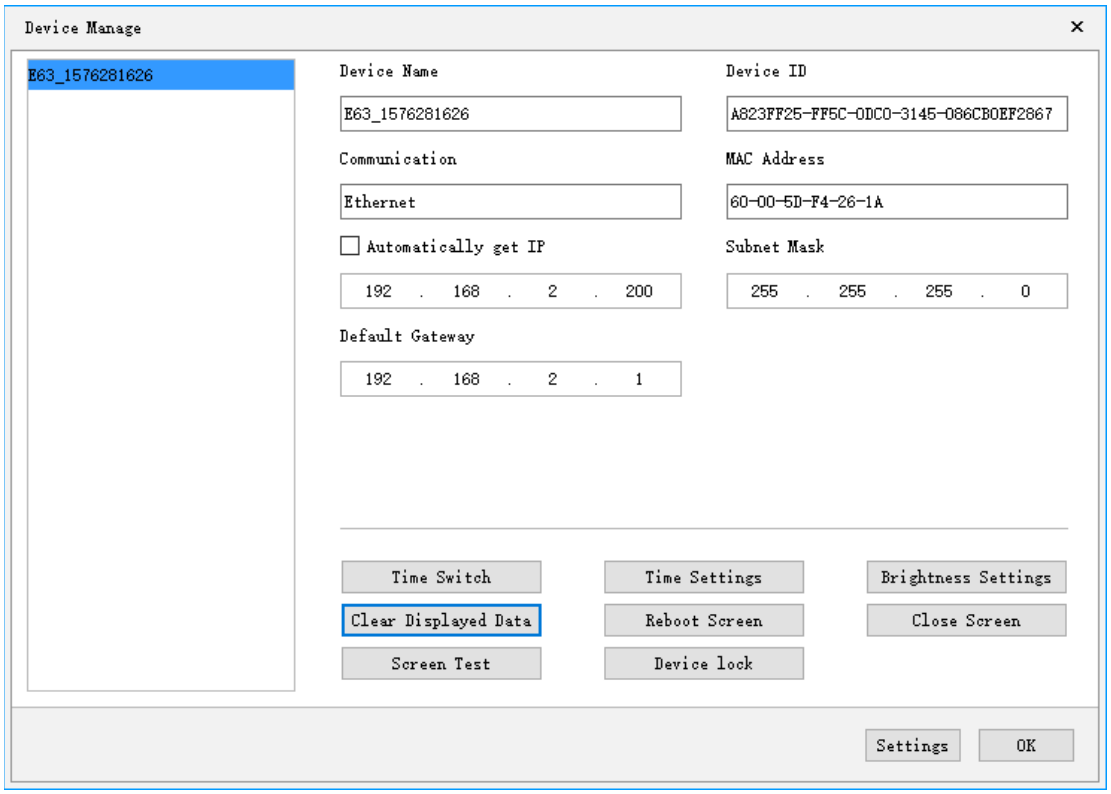
System settings: used to set system parameters (changing them is not recommended), as the picture shows:



Cloud server settings: used to bind a network port card to the cloud platform; enter the registered user name and server address, as shown in the following figure:

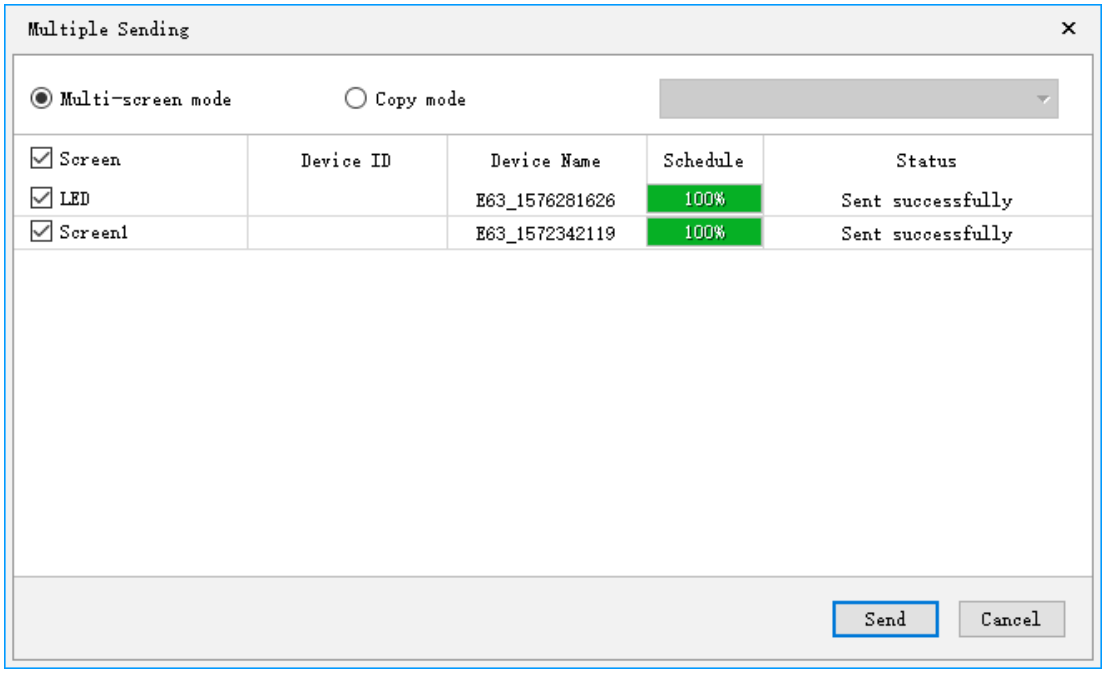


Device management: used to rename any device that can be found and modify the IP address of a network port card; it can also manage the current device: clear display data, time settings, brightness settings, timer switch, display test, open screen, restart display and Wi-Fi settings.



Cluster sending: used to send multiple display files. There are two modes: multi-screen mode and copy mode.

1. Multi-screen mode: requires that a device name is selected in the screen parameter settings, with one device bound to each screen.
2. Copy mode: select the display file to send, and send it to all found devices.



Time settings: set the time on the control card; it can be the current system time, or a past or future time.

Brightness settings: three adjustment types – manual, automatic (requires an additional sensor), and by time schedule.

Timer power on/off: set the startup and shutdown times of the control card.

Startup screen: enable the startup (boot) screen; click OK after loading the file, or export the file to a USB flash drive.

Firmware update: used to upgrade the control card.

Power-on prompt: used to configure the power-on prompt of the control card: do not display / show all / firmware version / control card + memory size.

Screen control: used to control the on / off / play / pause state of the display.

3.3.3 Language menu

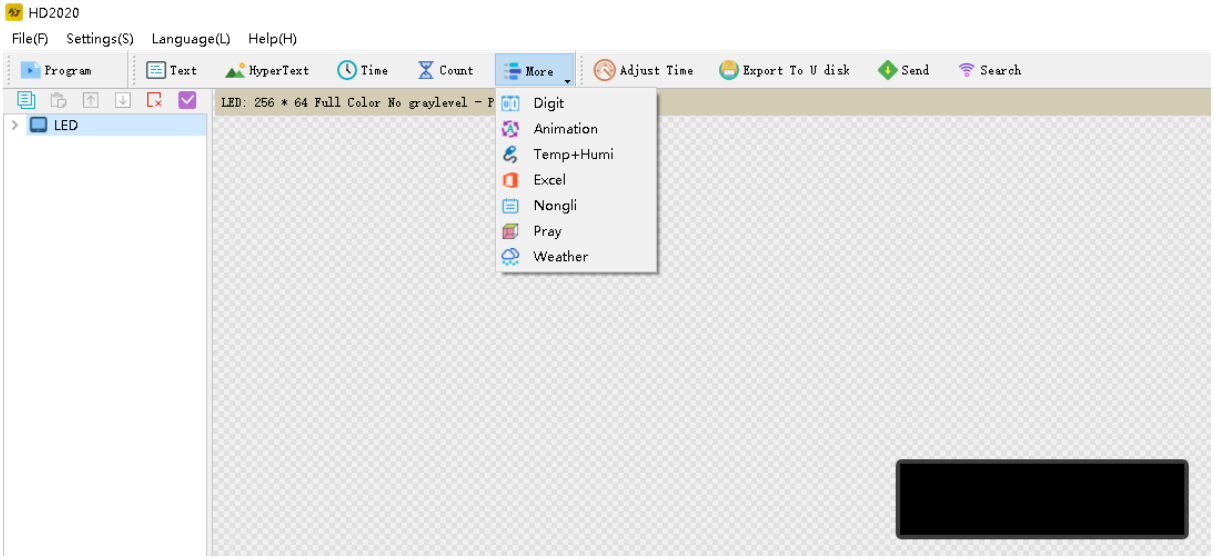
Includes 23 languages – Simplified Chinese, Traditional Chinese, English, Arabic, Bulgarian, French, German, Indonesian, Hindi, Iranian, Italian, Japanese, Korean, Mongolian, Polish, Portuguese, Romanian, Russian, Serbian, Spanish, Thai, Turkish and Vietnamese – for switching the user-interface language.

3.3.4 Help menu

Used for viewing the version number of the HD2020 software.

3.4 Toolbar

Contains programs, text, graphics, time, timing, counting, animated characters, temperature and humidity, Excel, lunar calendar, prayer, weather, time calibration, USB export, send, search for devices and other tools, as shown in the figure:



Program: used to create a new program (a program is the next-level directory under the display screen). Global program: only for cross screens.

Graphic: for creating a new graphic area; you can add pictures, GIFs and text.

Text: text supports 90°, 180° and 270° rotation, and supports a regional background.

Animated characters: used to create new animated character areas; hollow characters and font strokes can be built, and classic backgrounds and image backgrounds are supported.

Excel: adds an Excel area; supports horizontal and vertical screenshots and area background.

Time: supports digital clock and dial clock, AM/PM display in the dial, and regional background.

Timing: supports four modes: count-up, countdown, button count-up, button countdown; cycle counting by button; and region background.

Counting: can count from small to large or from large to small; supports regional background.

Temperature and humidity: temperature, temperature + humidity and PM2.5 require different sensors for displaying the current ambient values (a temperature sensor, temperature and humidity sensor, or PM2.5 sensor must be added).

Lunar calendar: can display the day, the lunar calendar, solar terms and festivals; supports regional background.

Prayer: displays the prayer times.

Weather: displays the weather (temperature, wind speed, wind direction, PM2.5, conditions).

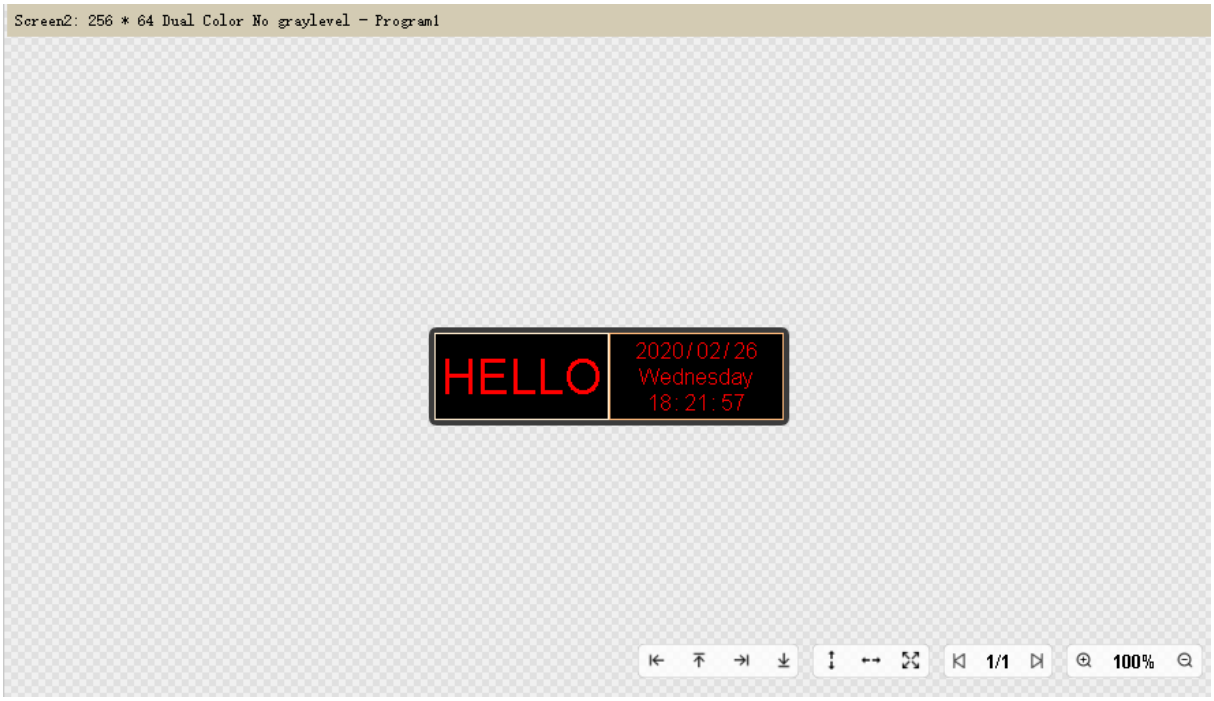
Time calibration: corrects the time of the control card (synchronizes the control card clock with the computer).

USB export: for USB-disk cards; the current display file and time are saved to a USB flash drive (USB update).

Send: used to send the current display file.

Search: used to find the control card.

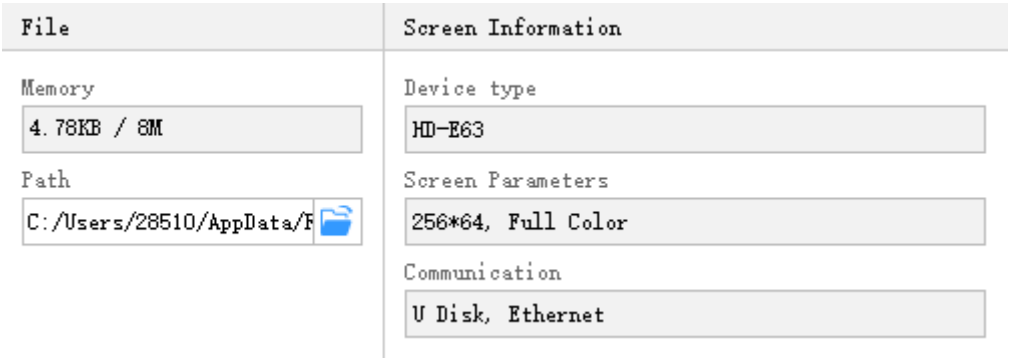
3.5 Preview display



Please note: there is a toolbar row below the preview display. Used well, it helps you edit the display file more conveniently (zooming the simulation window in/out, moving the current area left and right, maximizing an area, flipping the display content, etc.).

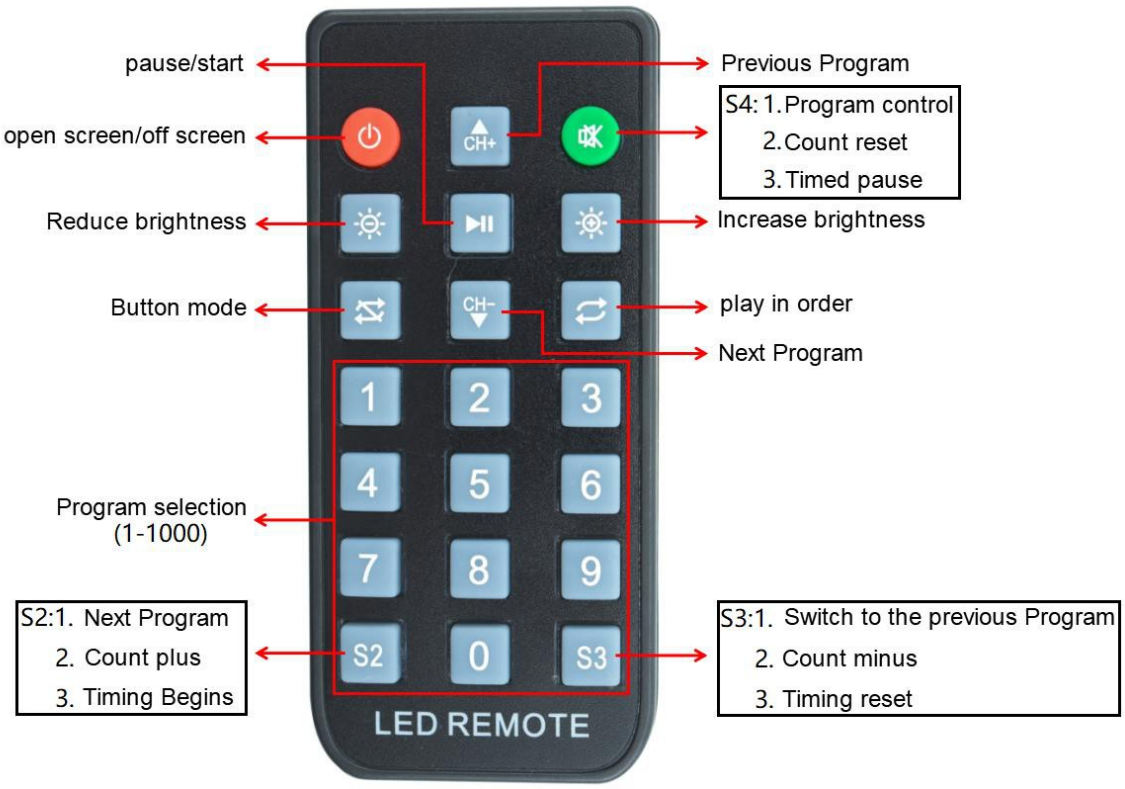
3.6 Display property bar

This column shows the current display information → device type → screen parameters → communication method → display file size.



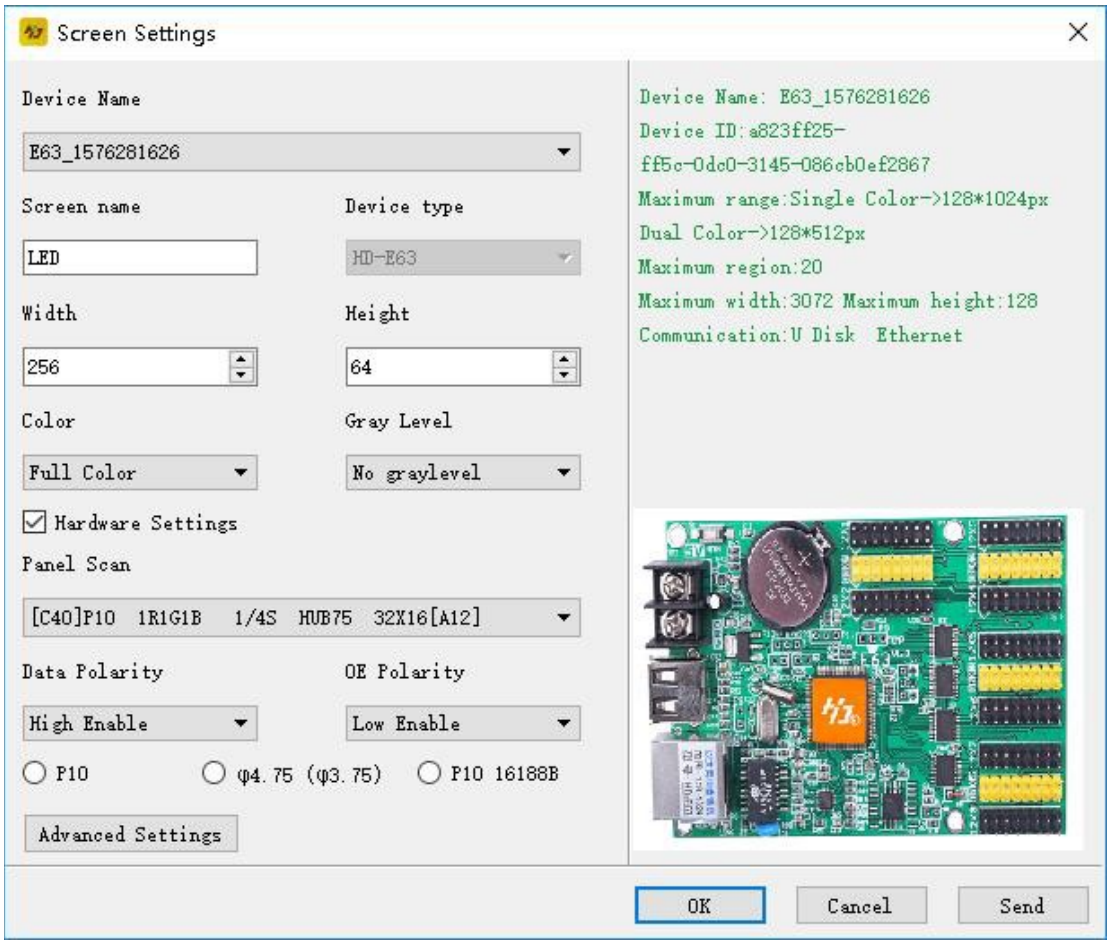
3.7 Using the remote control

An infrared remote control sensor must be soldered on. The use of the remote control is shown below:

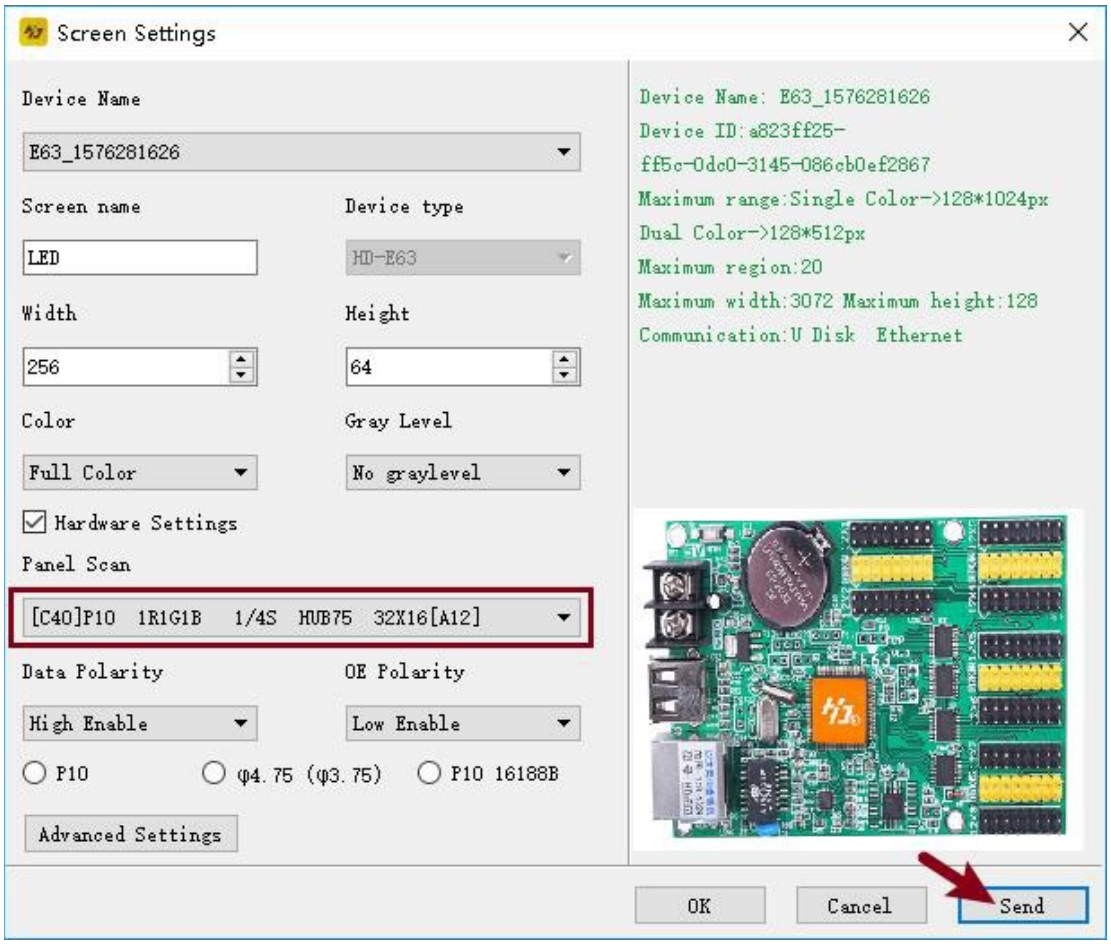


3.8 Smart setting method

a. Select the device in the screen parameter settings and set the color of the module.

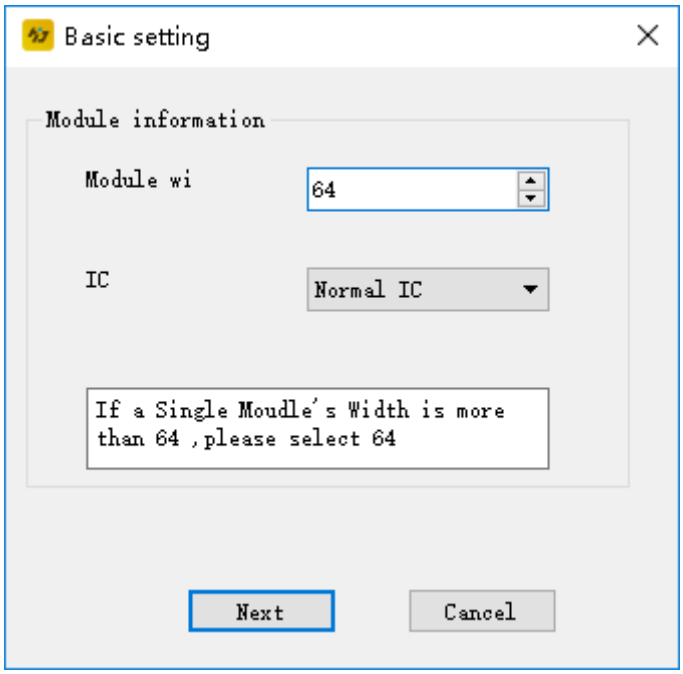


b. Perform smart settings. If the commonly used smart settings already include parameters for the unit board you are using, you can select them directly and click Send, as shown in the figure below:



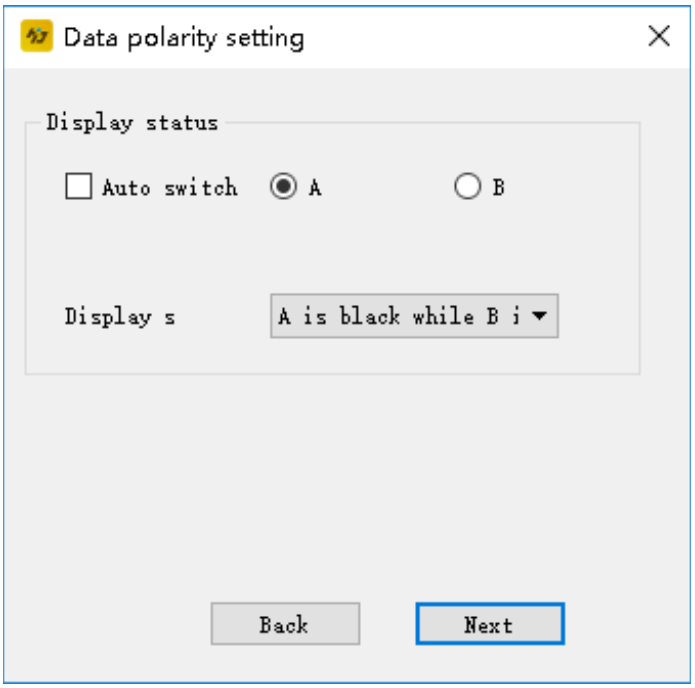
If you cannot find your unit board in the common smart settings, follow the smart-setting procedure below.

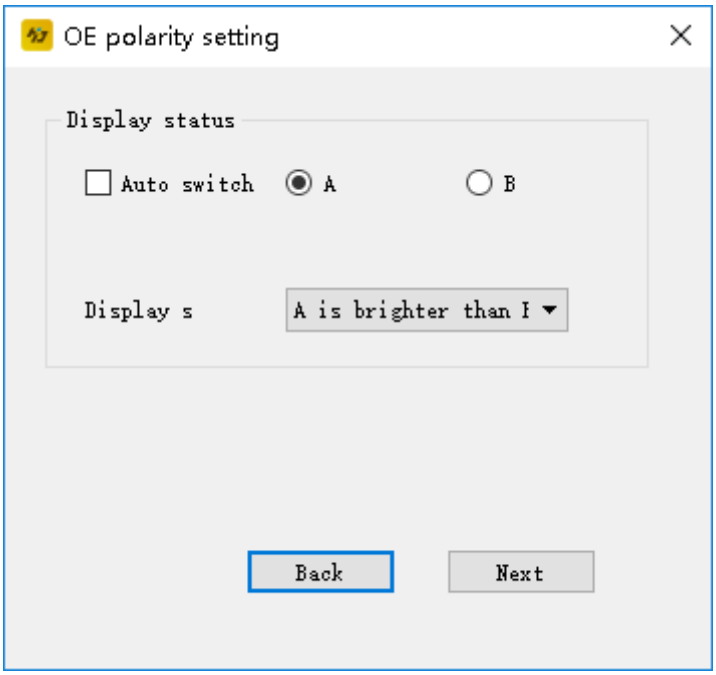
(1) Set the width of one unit board.



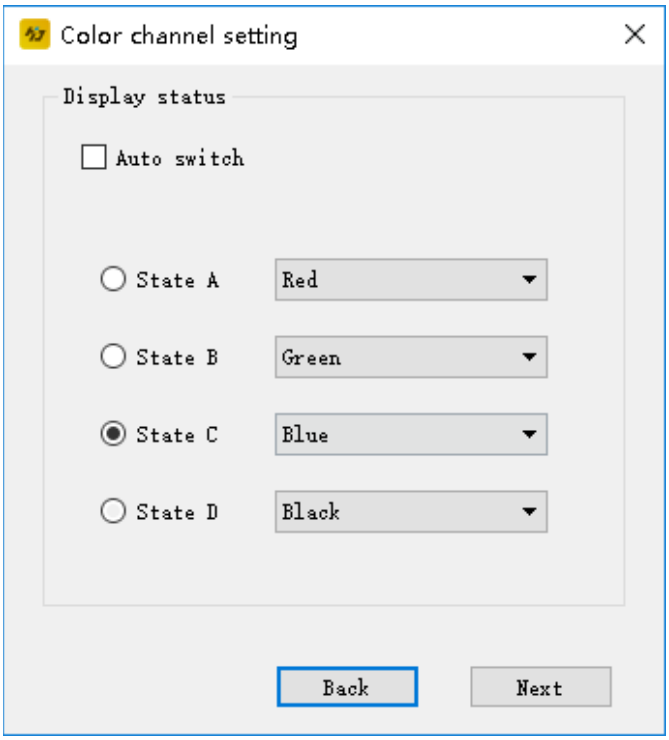
(2) Select the data polarity and OE polarity of the unit board.

When A is on and B is off, the data polarity is low-active. When A is brighter than B, the OE polarity is low-active; when B is brighter than A, the OE polarity is high-active. If nothing changes, there is no 138 decoder.

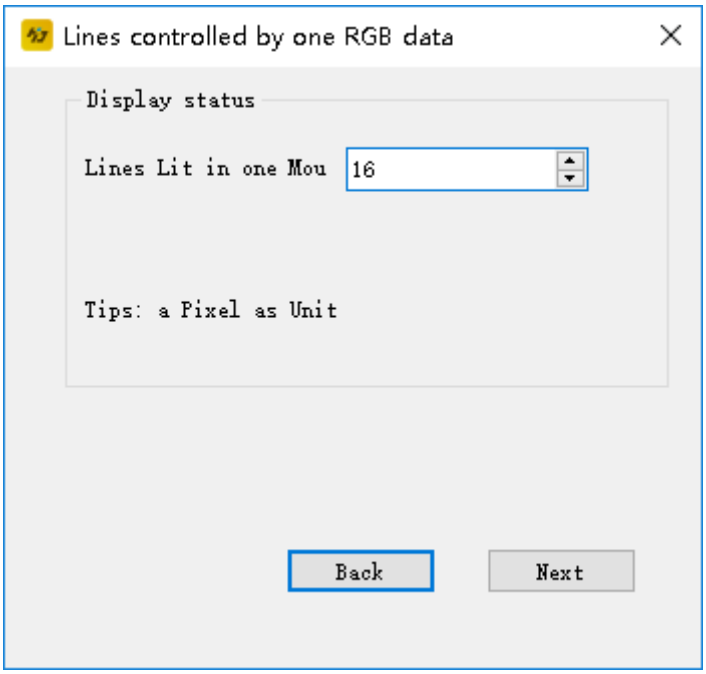


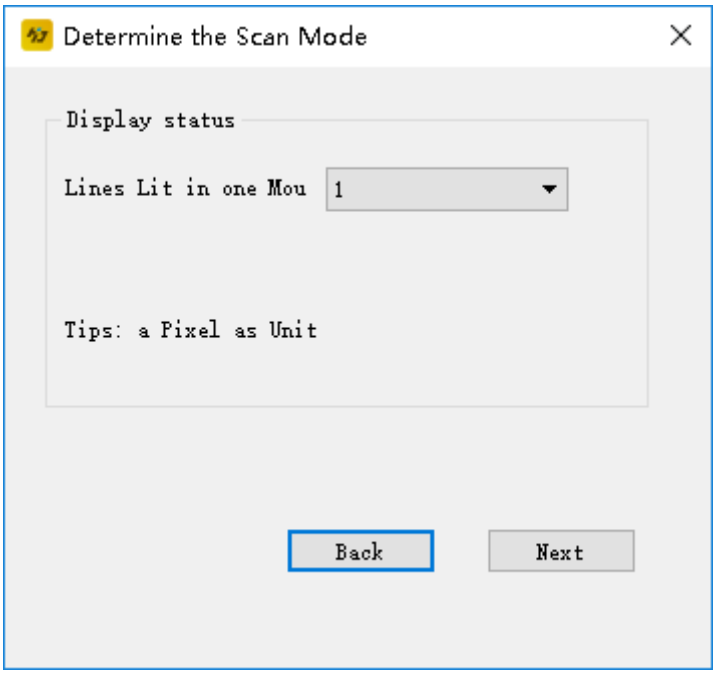


(3) The color channel is selected according to the actual behaviour of the display. There is no option for single-primary colors, and only two states (A and B) are available.

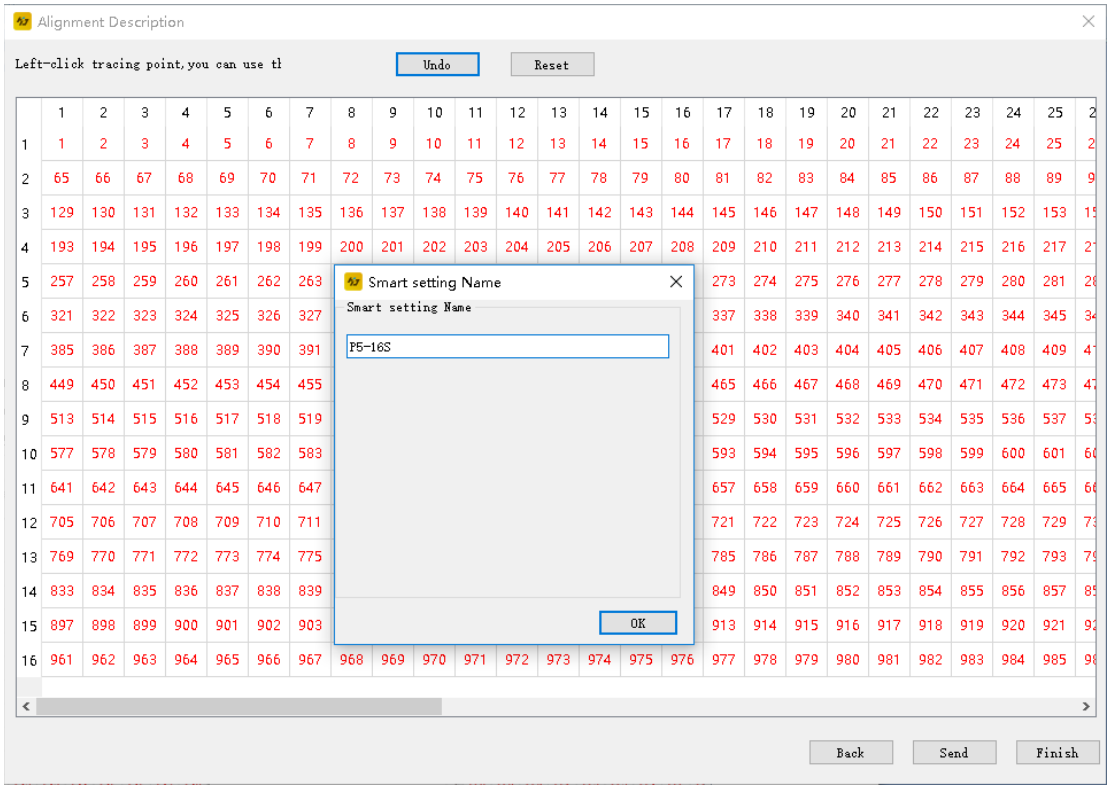


(4) Determine the scanning method of the unit board. As shown in the figure, 16/1 = 16, so the current unit board is 16-scan.



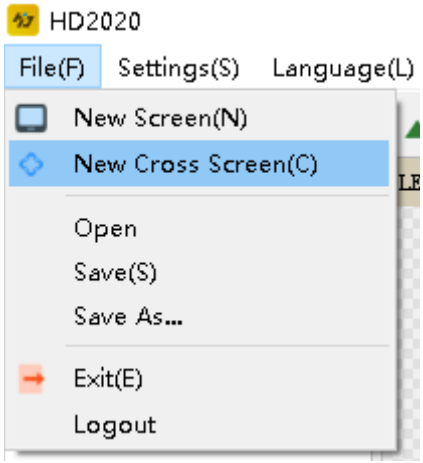


(5) Determine the lighting method according to the lighting behaviour of the unit board. Trace the points according to the position of the first lit pixel on the screen. If you make a mistake you can click “Back” to redraw the point, or reset all points and start again. After tracing is complete, name the smart-setting file and click OK.

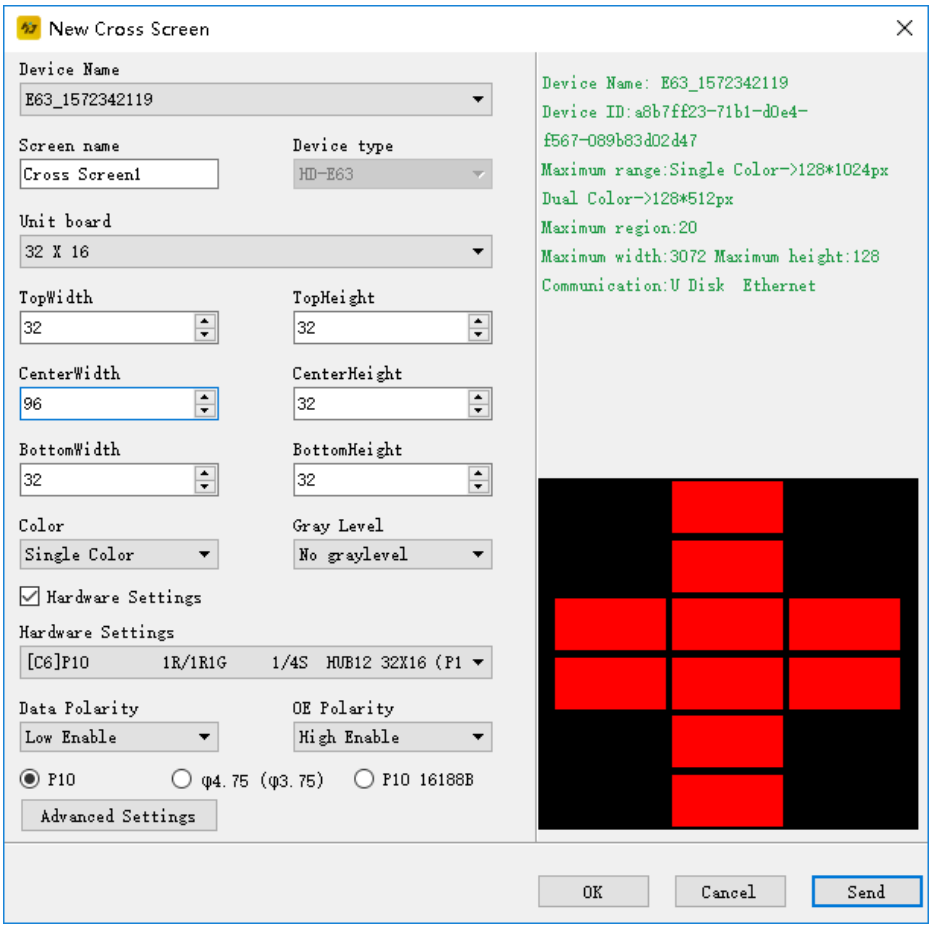


3.9 Cross screen setting method

Create a new cross screen, as shown in the figure:



The module selection and basic settings of the cross screen follow the screen parameter settings described above. The size of the cross screen is divided into three parts: top, middle and bottom.

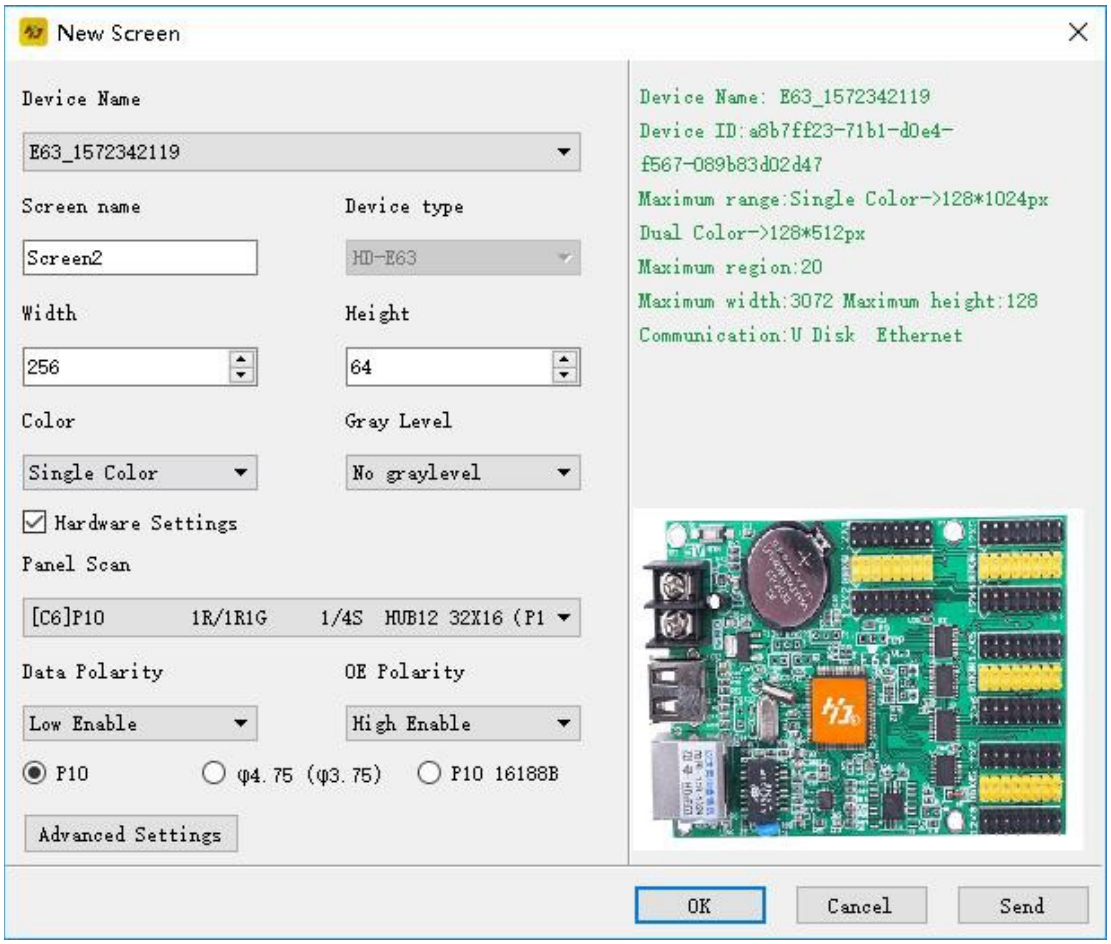


The cross screen supports global programs and ordinary programs. Global programs display one area across the top, middle and bottom as a whole; ordinary programs can display content in multiple areas.

Chapter 4 – Display Program Creation Process

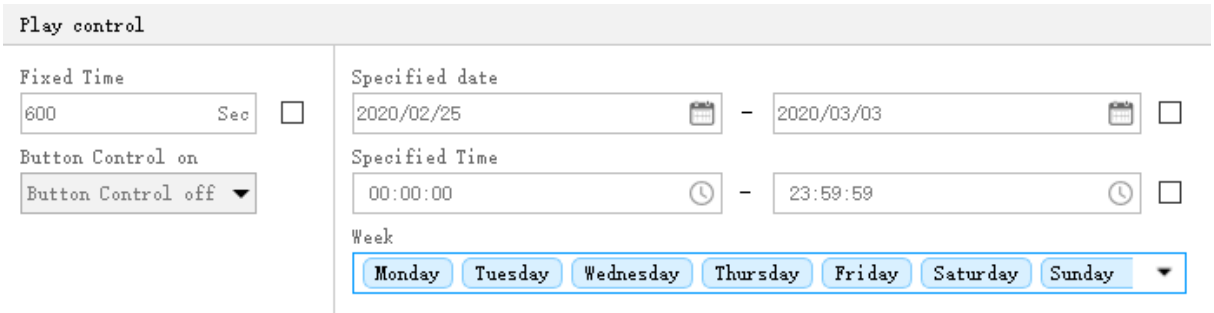
4.1 New display and program files (first-level content)

Method: click File → New Screen (the password is 168) and the settings page pops up as follows:



If the control card already has the correct parameters (text displays normally), create the new display screen and click OK – a display screen and a program are created.

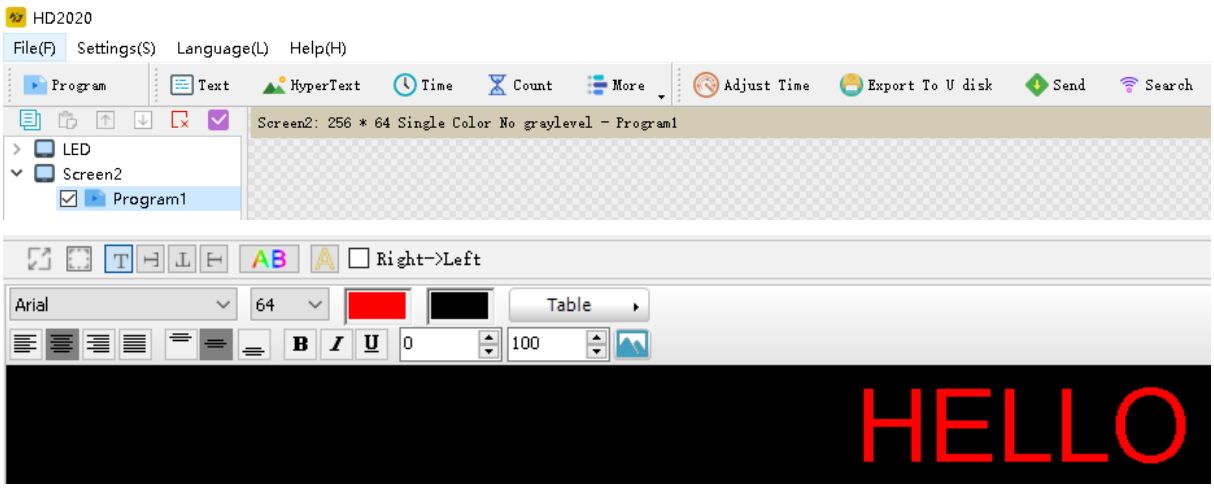
If the control card does not have the correct parameters (text is not displayed normally), select the device, select the color, set the width, height and gray level; then enter the hardware setting interface and configure the display scanning method, i.e. the common smart settings. Smart settings can be sent over network cable, serial cable or Wi-Fi.



Note: each of the 1000 possible programs can have different properties. These properties include playback time, fixed-length playback and border settings.

4.2 New partition (second-level content; each program can hold up to 20 partitions)

Method: after selecting the program, click Graphic, Text, Time, Timing, Counting, Temperature and Humidity, Animated Characters, Lunar Calendar, etc. to create the different types of partitions, as shown below:



4.3 Program production completed

With the two steps above, the creation of a display file is complete. If you need to control multiple display screens from one software installation, create multiple display screen files by repeating steps 1 and 2.

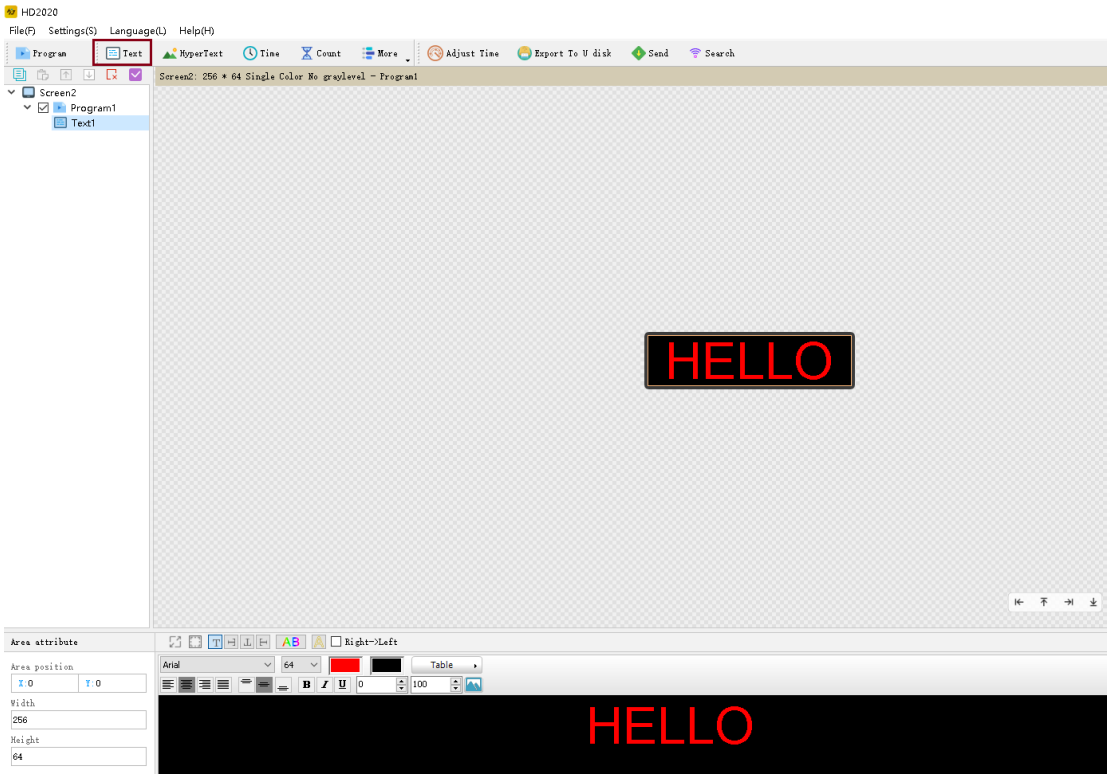
The simulation screen shows a live dynamic preview of each program, and the display mode can be adjusted. When you are satisfied, send the content to the display via the Send button.

Chapter 5 – How to Display Different Contents

5.1 Text display

For text-only content, a text area covers all requirements. Text supports left rotation, right rotation and reverse; you can customize tables, add borders and add a background.

Steps: create a display screen by referring to 4.1. Click Text and the text area appears (coordinates, width and height can be set freely).

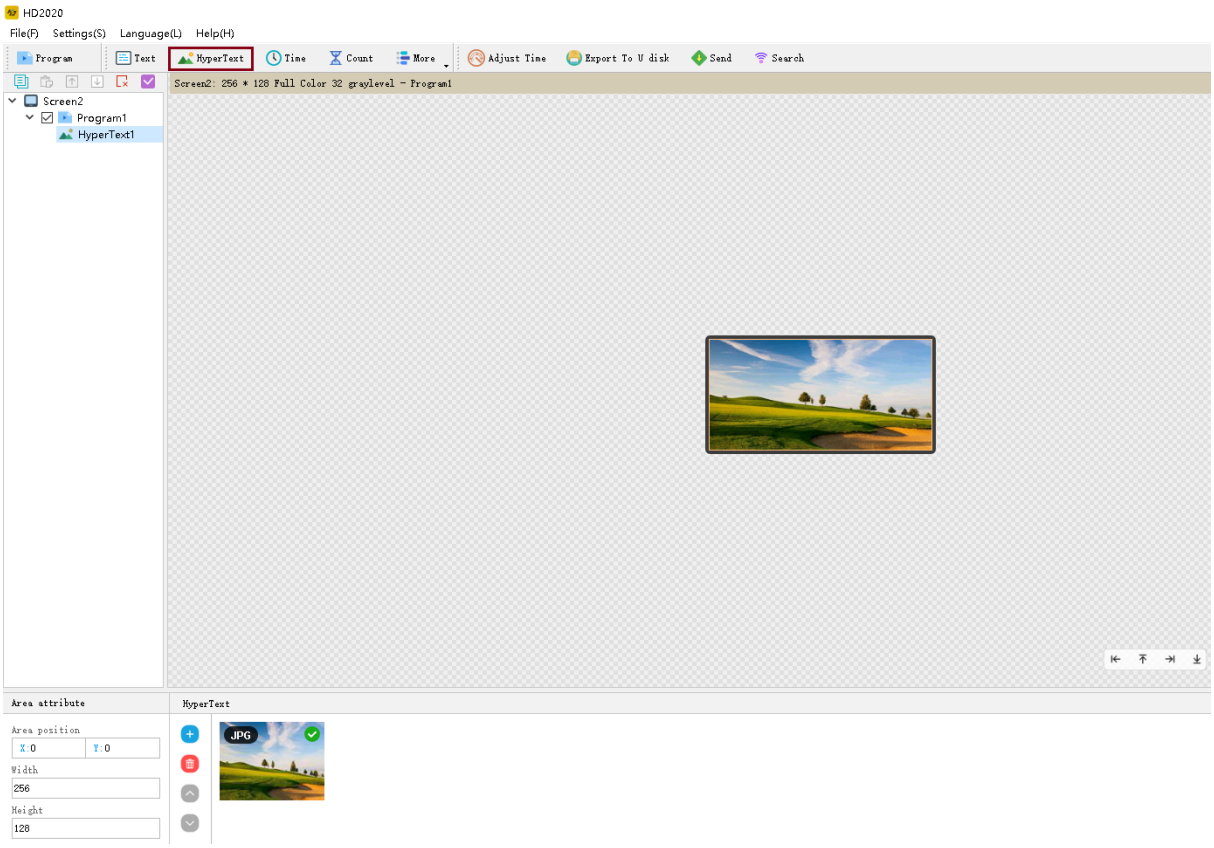


The HD2020 software editor is powerful and can even change the font size of a single character.

5.2 Graphic display

To display a logo or picture on the display (JPG, BMP, PNG, GIF, etc. only), proceed as follows:

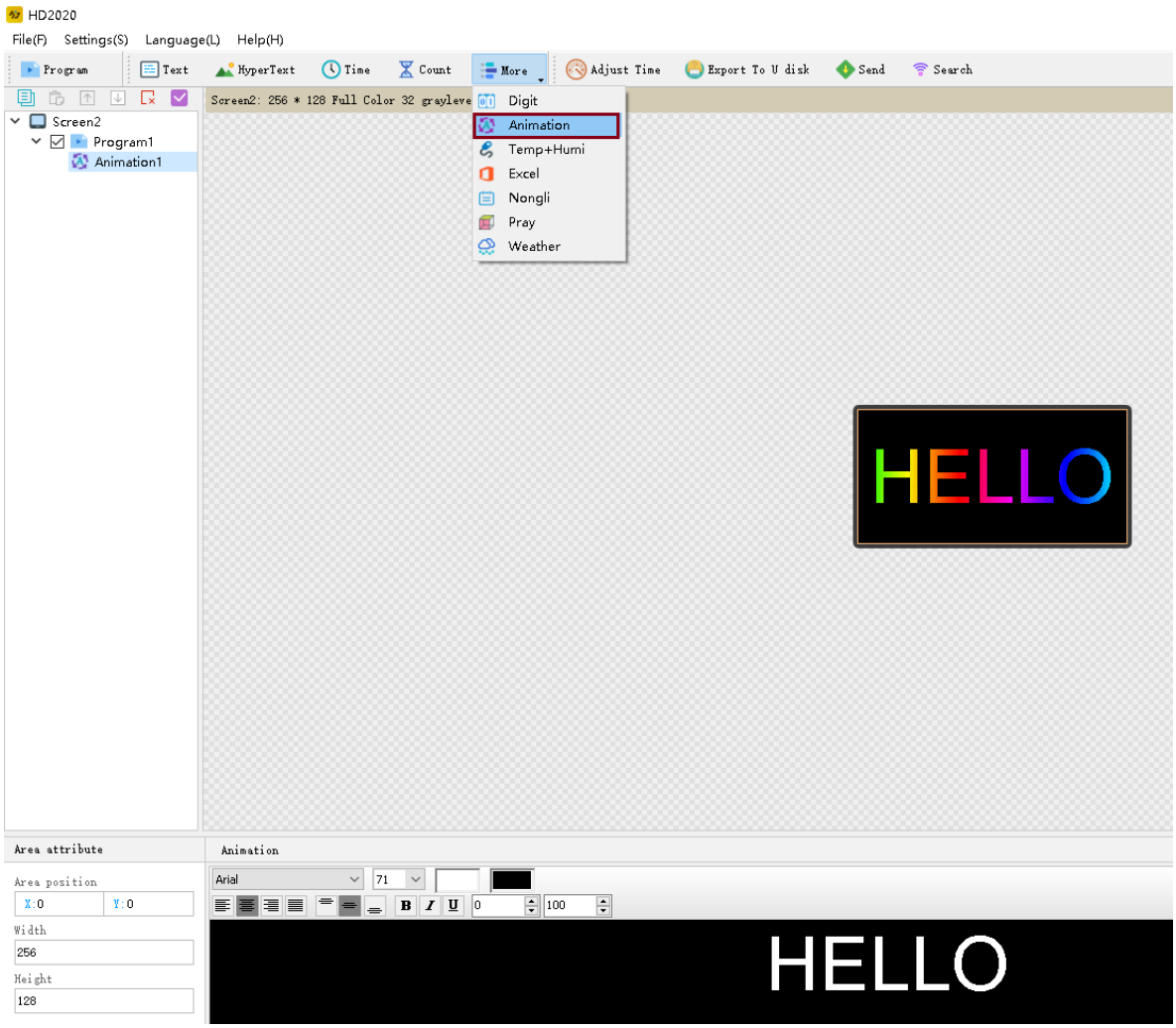
Steps: create a display screen by referring to 4.1. Click HyperText; the graphic area appears (coordinates, width and height can be set freely). Add the picture to be displayed using the blue “+” icon, as shown below:



5.3 Animated word display

Steps: create a display screen by referring to 4.1. Click Animation; the animated word area appears, and you can enter the text content in the editor below, as shown:

Animated words can use image backgrounds and also support the classic background displays.

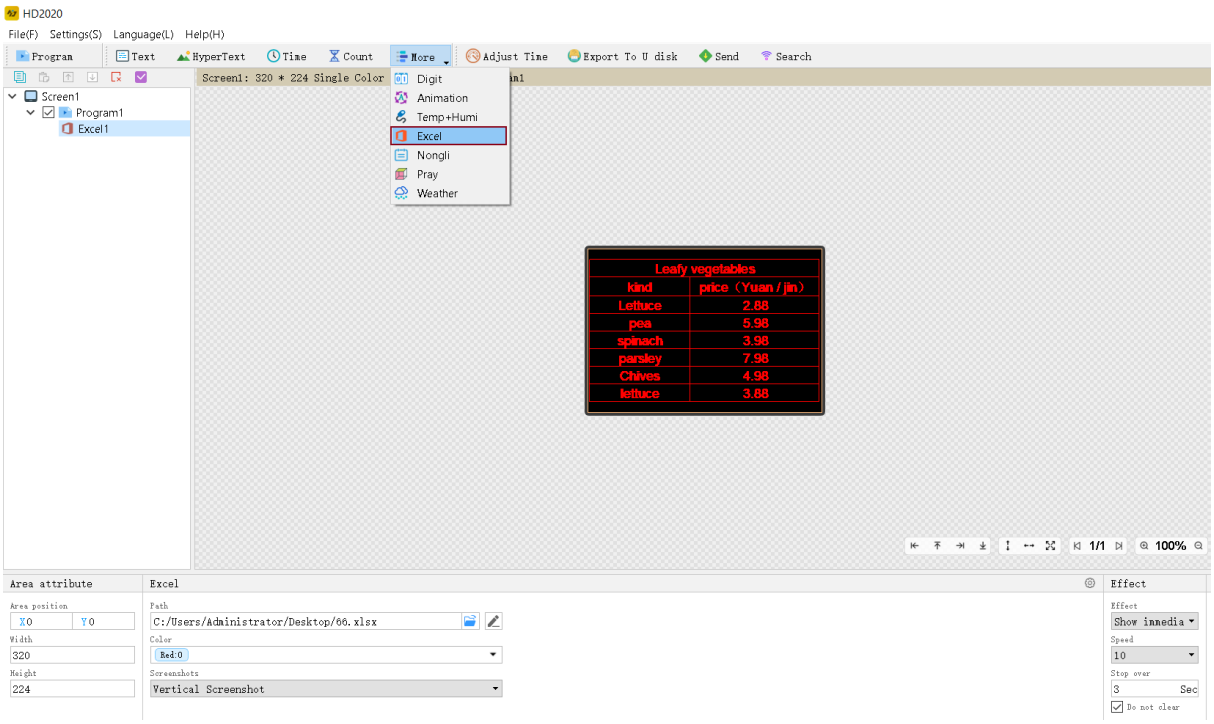


5.4 Excel display

To display an Excel sheet on the display, follow these steps:

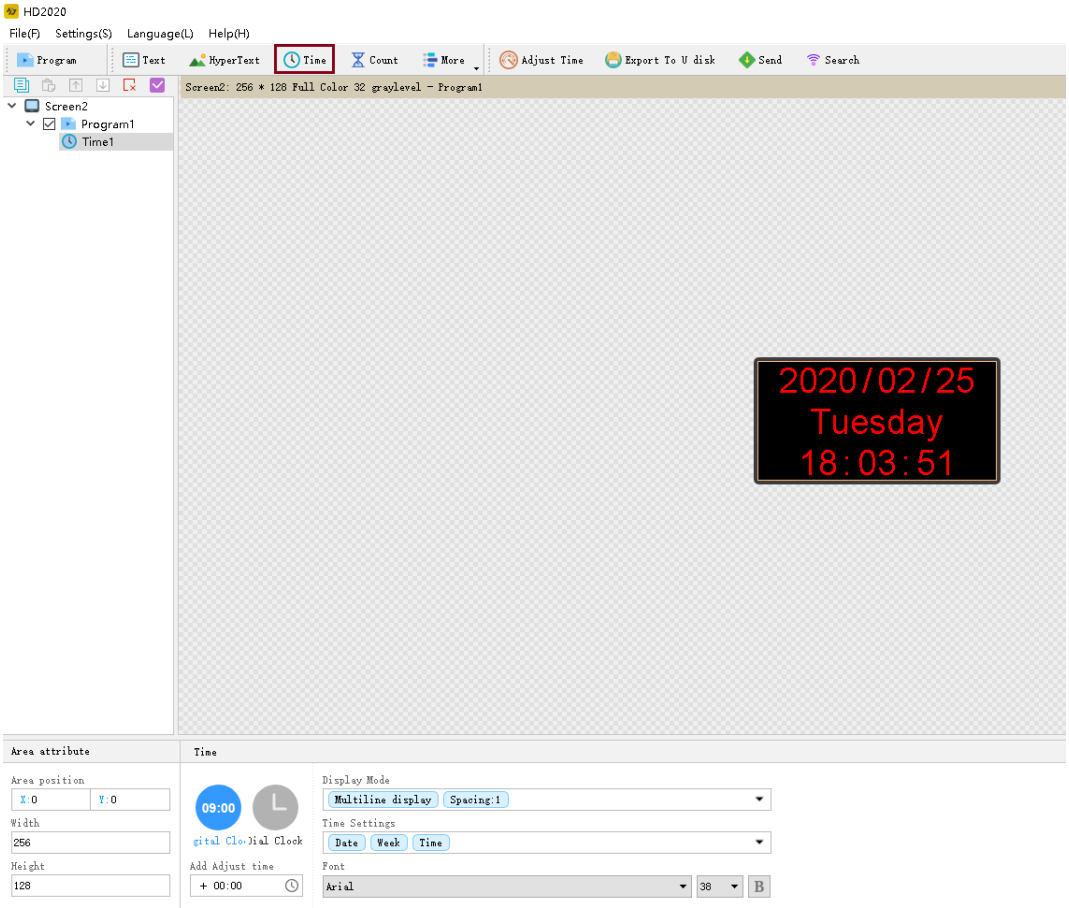
Steps: create a display screen by referring to 4.1. Click Excel; the Excel area appears, and you can add the Excel file to be displayed in the path field below, as shown:

Excel display requires the full version of Microsoft Office to be installed in order to load properly. Screenshots can be taken horizontally or vertically.



5.5 Time display

Displaying the time is similar to text and graphics. Steps: create a display screen by referring to 4.1. Click Time; the time area appears. The settings are simple and the position can be set freely, as shown in the figure below:

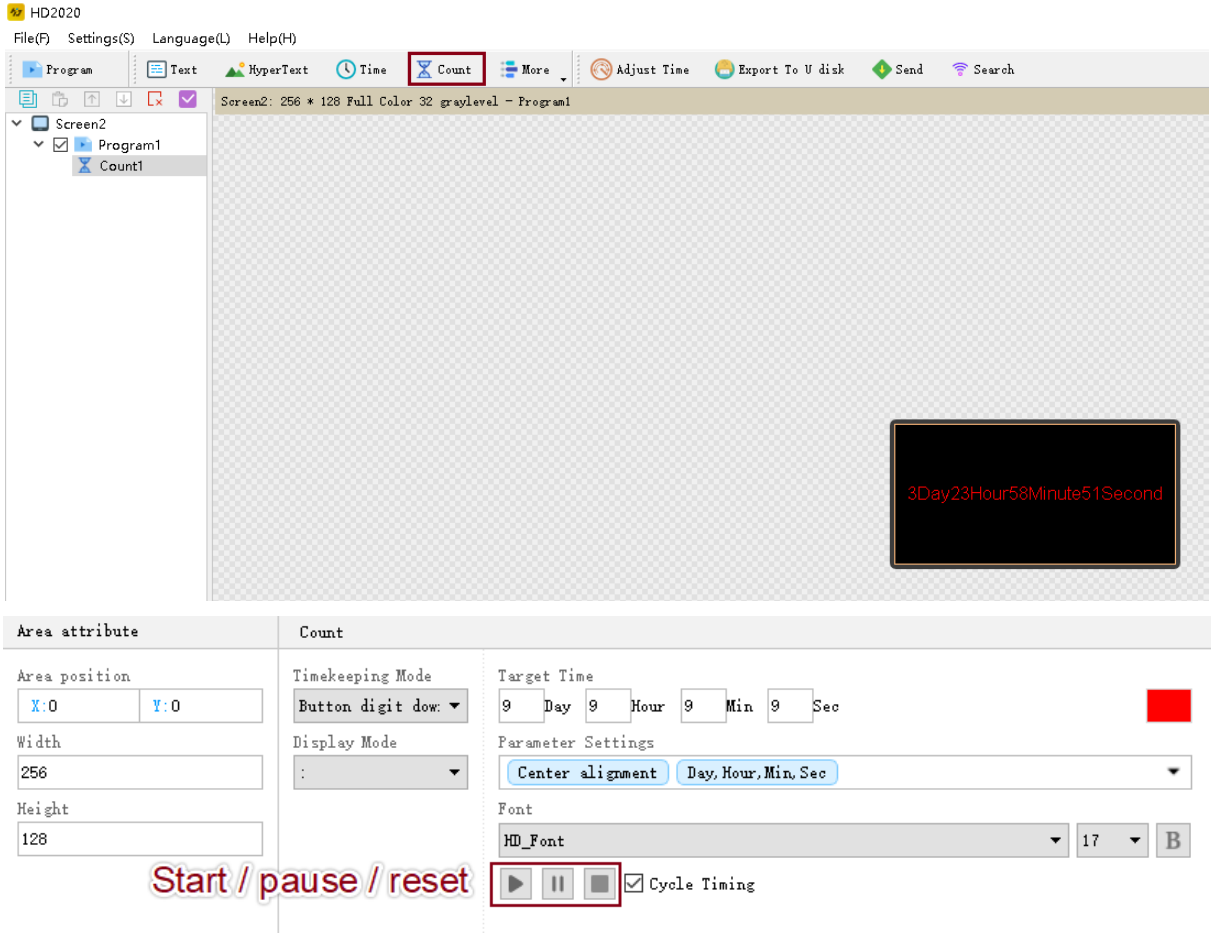


5.6 Count-up / countdown display

The display shows a count-up / countdown, or a button-triggered count-up / countdown.

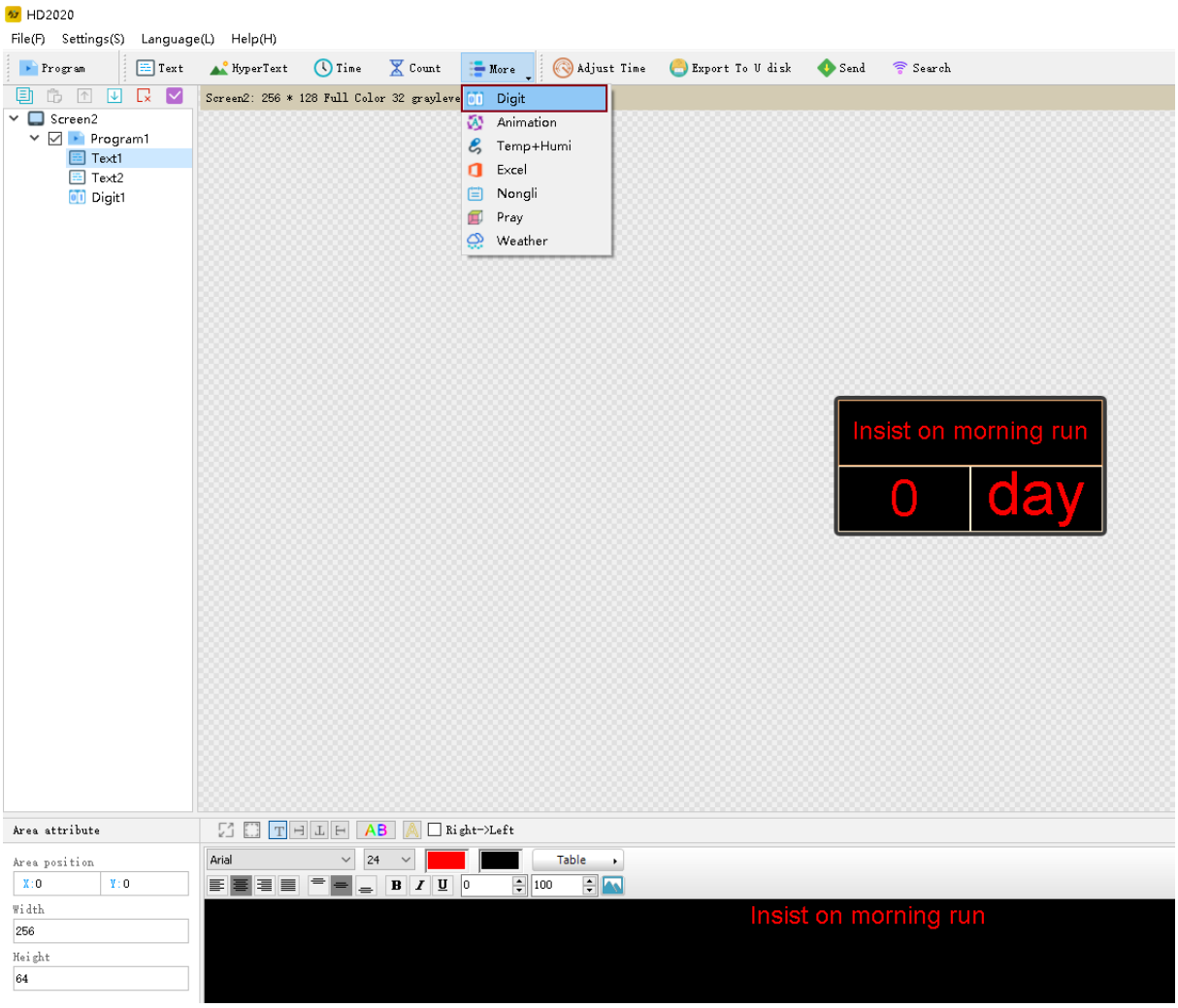
Steps: create a display screen by referring to 4.1. Click Count (timing) to create the timing area (coordinates, width and height can be set freely), as shown in the figure.

Cycle timing is supported: automatic reset and restart after the countdown completes.



5.7 Count display

Steps: create a display screen by referring to 4.1. Click Digit to create the count area (coordinates, width and height can be set freely), as shown in the figure:



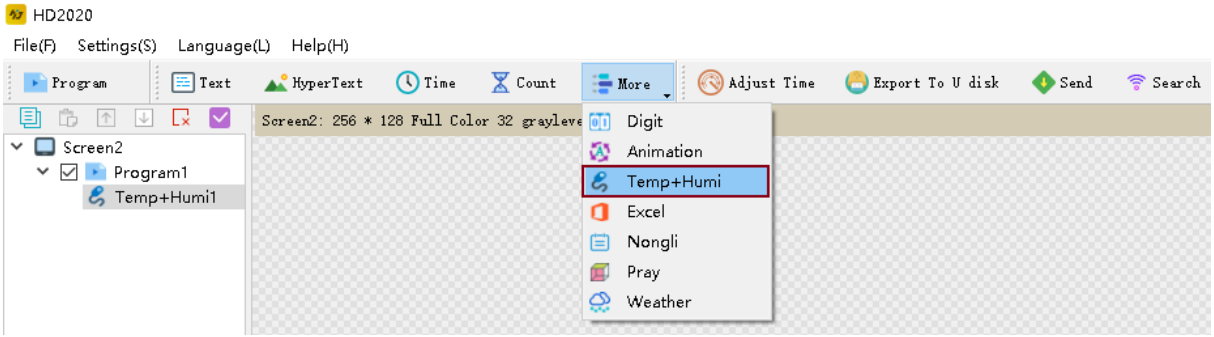
The initial state can count from large to small or from small to large, with a configurable jump threshold for increase/decrease, and minimum and maximum pictures can be added. The maximum value that can be set is 9,999,999.

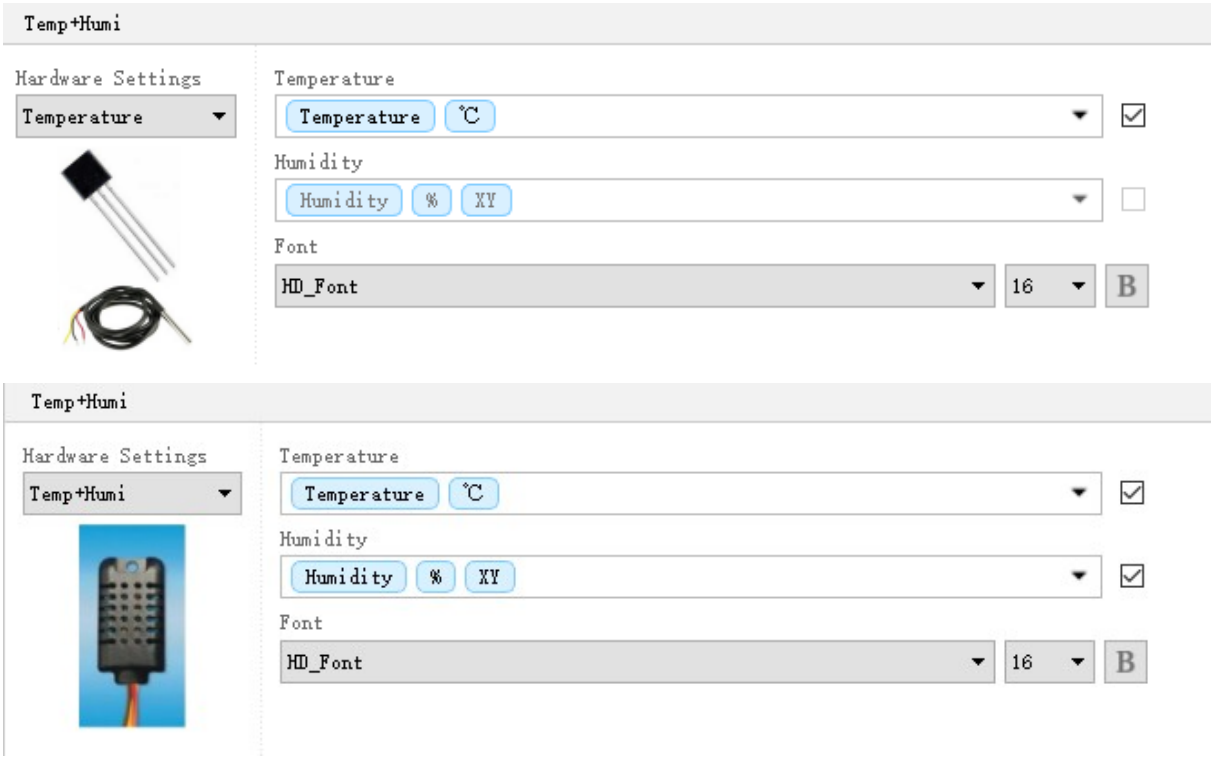
5.8 Temperature / temperature-and-humidity / PM2.5 display (sensor required separately)

The display shows the current ambient temperature, temperature and humidity, or PM2.5.

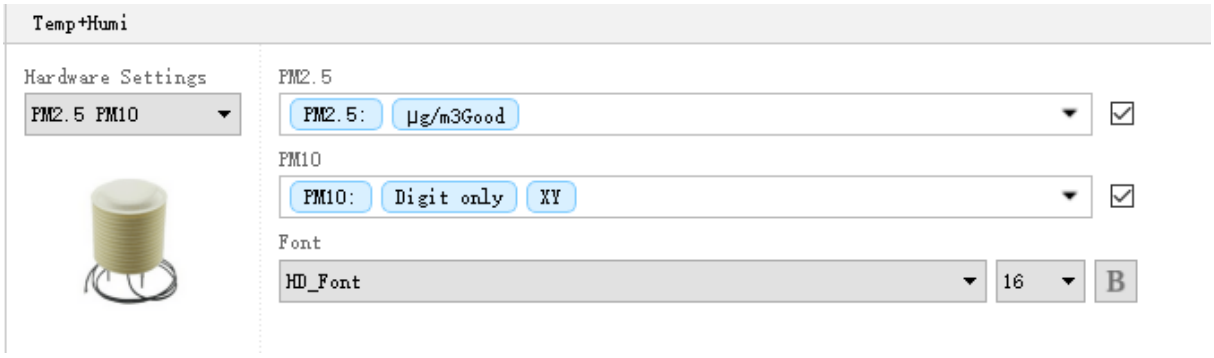
Steps: create a display screen by referring to 4.1.

1. Click Temp+Humi to create the temperature and humidity area (coordinates, width and height can be set freely). Temperature and temperature+humidity use different sensors, as shown in the figure:



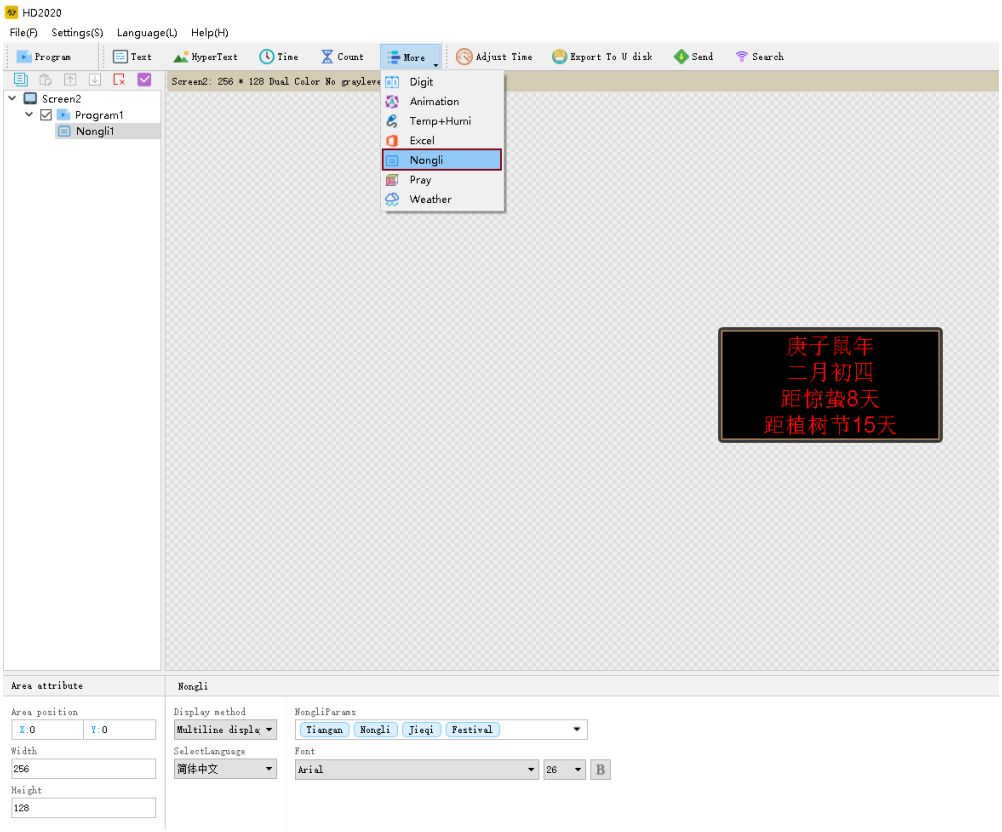


2. The PM2.5 sensor is shown below:



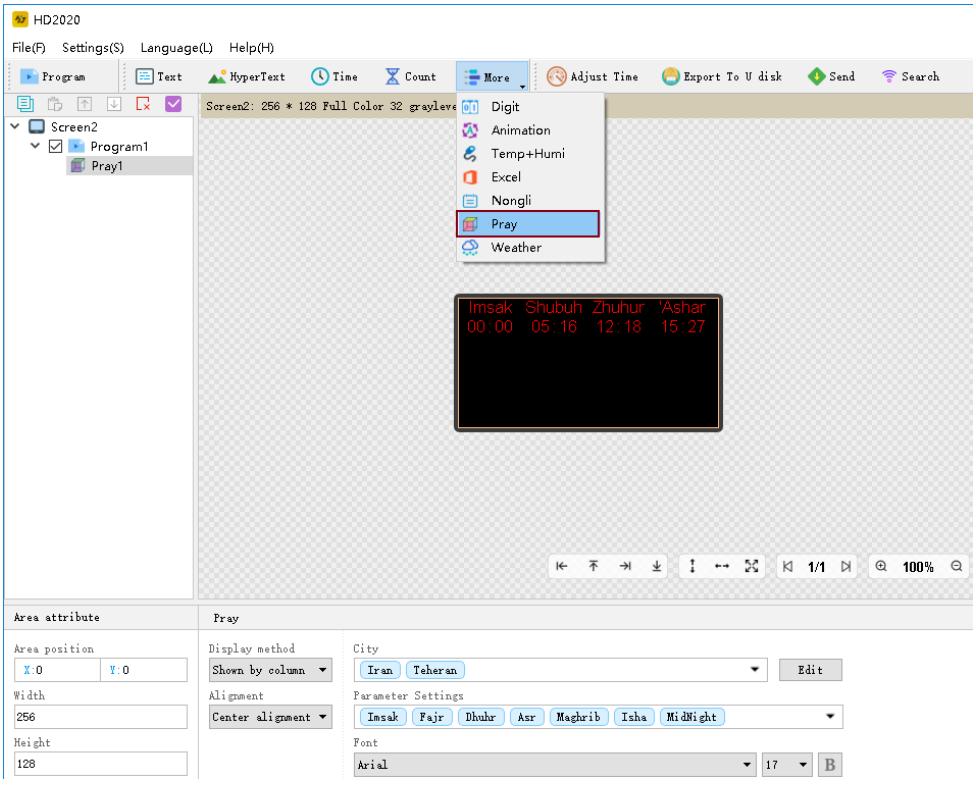
5.9 Lunar calendar

Steps: create a display screen by referring to 4.1. Click Nongli (lunar calendar) to create the lunar calendar area. It can display the day, the lunar calendar, solar terms and festivals:



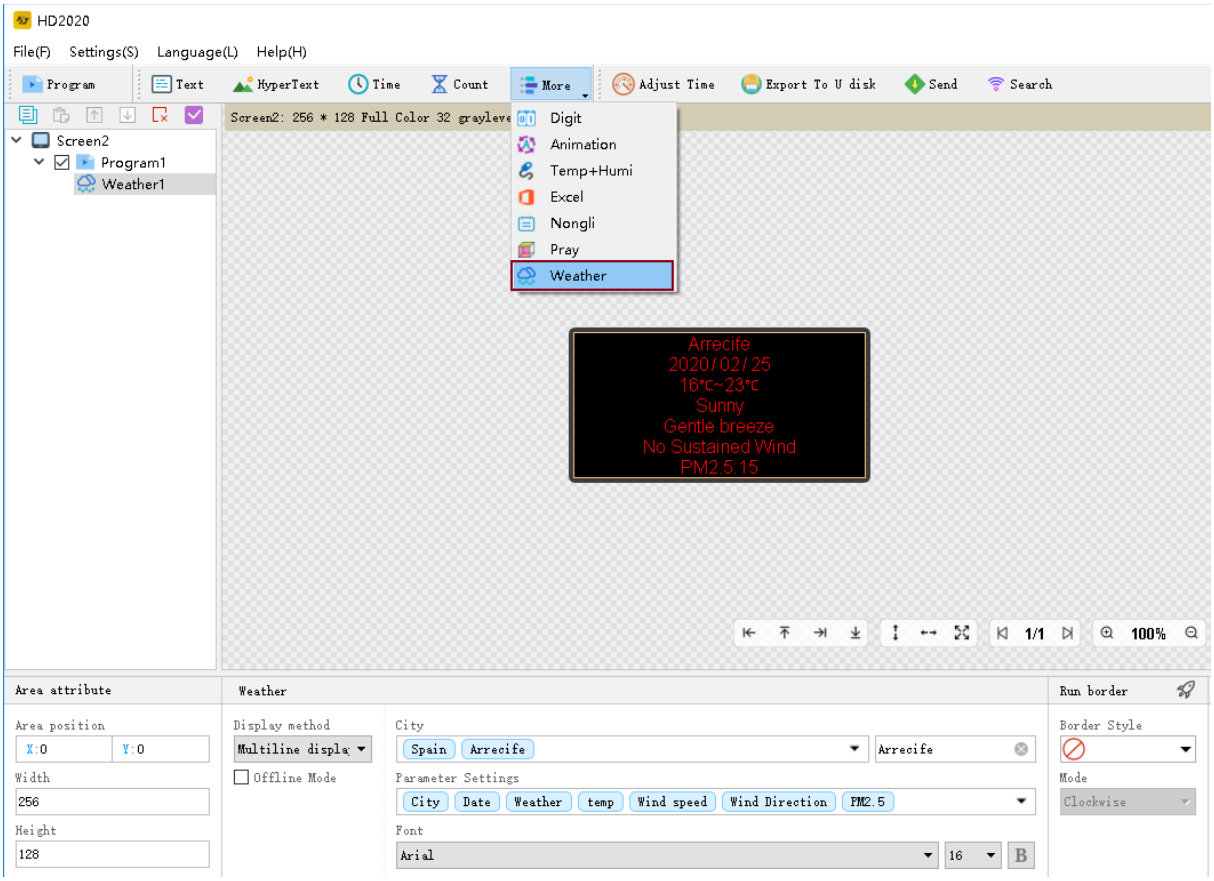
5.10 Prayer

Steps: create a display screen by referring to 4.1. Click Pray to create the prayer area, and select the country and city whose prayer times should be displayed, as shown in the figure:



5.11 Weather

Steps: create a display screen by referring to 4.1. Click Weather to create the weather area, and select the country and city whose weather should be displayed, as shown in the figure:



A. Software version: HD2018 or HD2020.

B. Online weather mode is currently supported only by network interface cards, and requires firmware 4.15 or above.

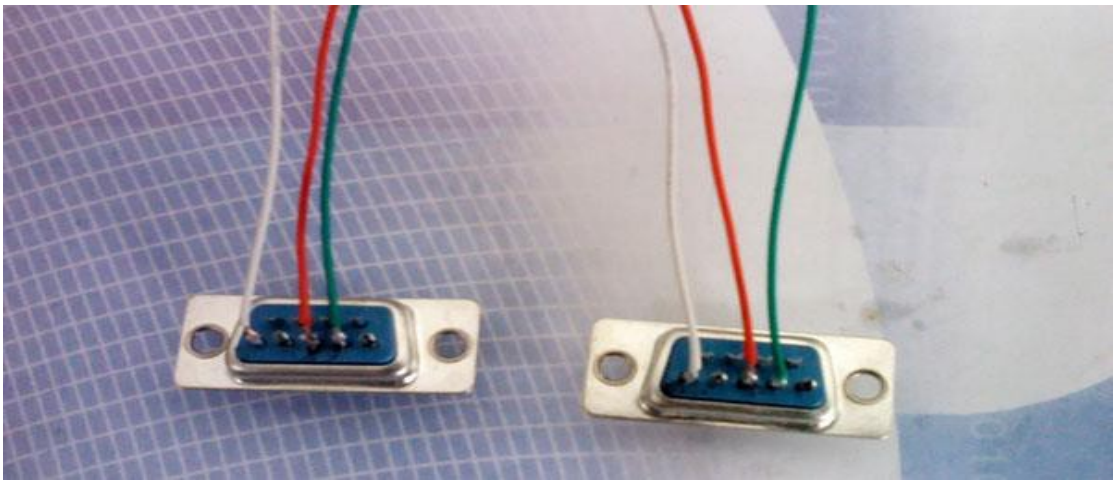
C. The network port card must be connected to a router with Internet access. The controller retrieves weather data once every hour.

Sections 5.1 – 5.11 show that the software supports multi-function and multi-region content – enough to cover display applications in all common scenarios.

Chapter 6 – Communication Settings

6.1 Making a serial cable

The system uses a straight-through RS232 communication cable. The finished cable is shown in the figure:



6.2 Communication settings (serial port)

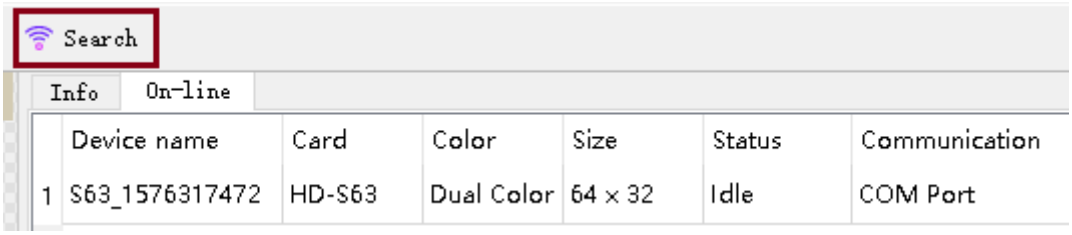
There are two types of serial connection: RS232 and RS485.

6.2.1 RS232 communication

RS232 serial port connection: after the driver is installed successfully, the current device can be found. A computer can connect only one RS232 serial card.

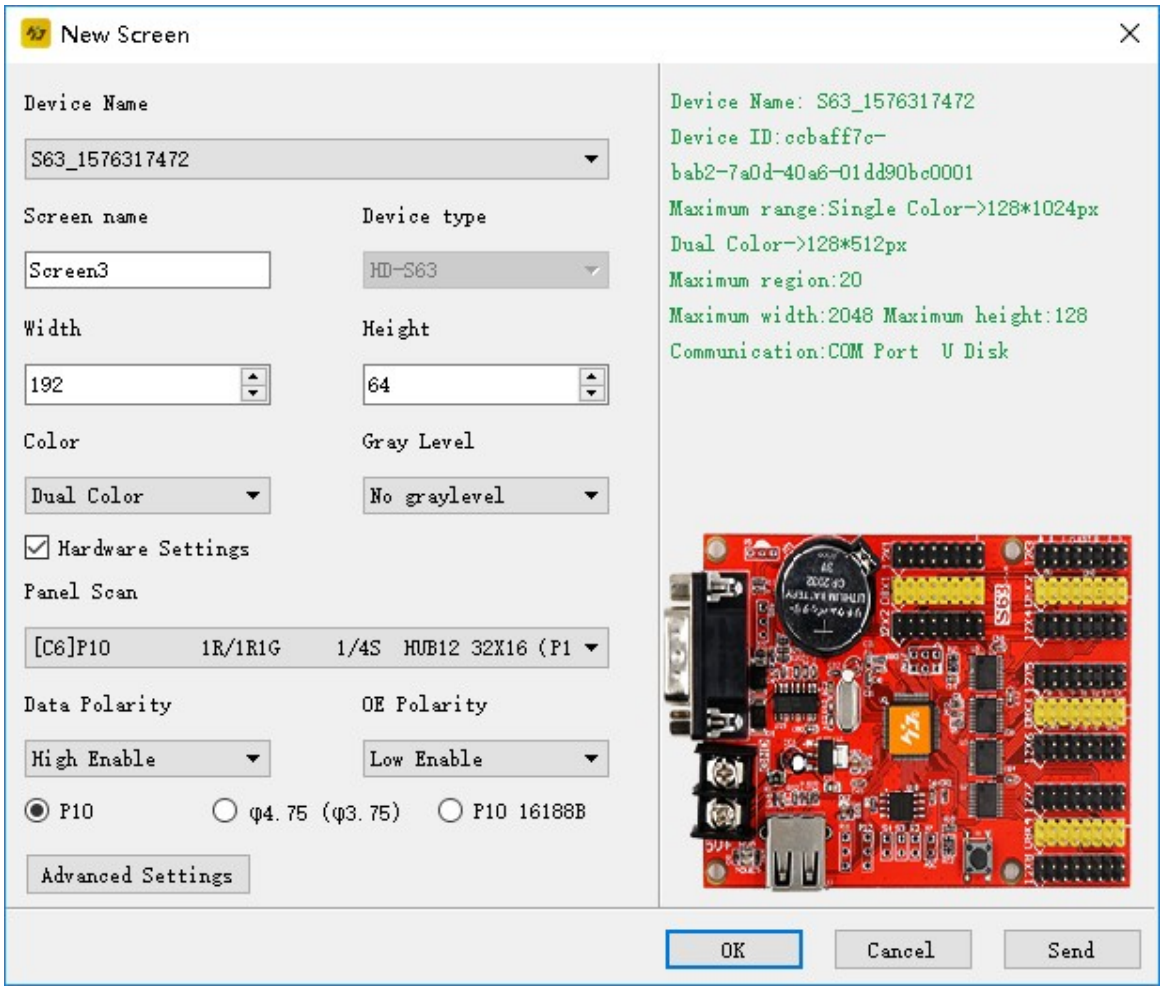
After the information window reports that the device has been found, select the current device name in the screen parameter settings to send parameters and programs to that control card. When the device is found, the information window displays its details.

If the device is not shown in the information window, click the Search button, located as shown below:



If it is still not found, check the serial cable.

If the message window shows “The device is not bound to the selected screen”, go to Settings → Screen Parameter Settings and select the device name, as shown in the figure:

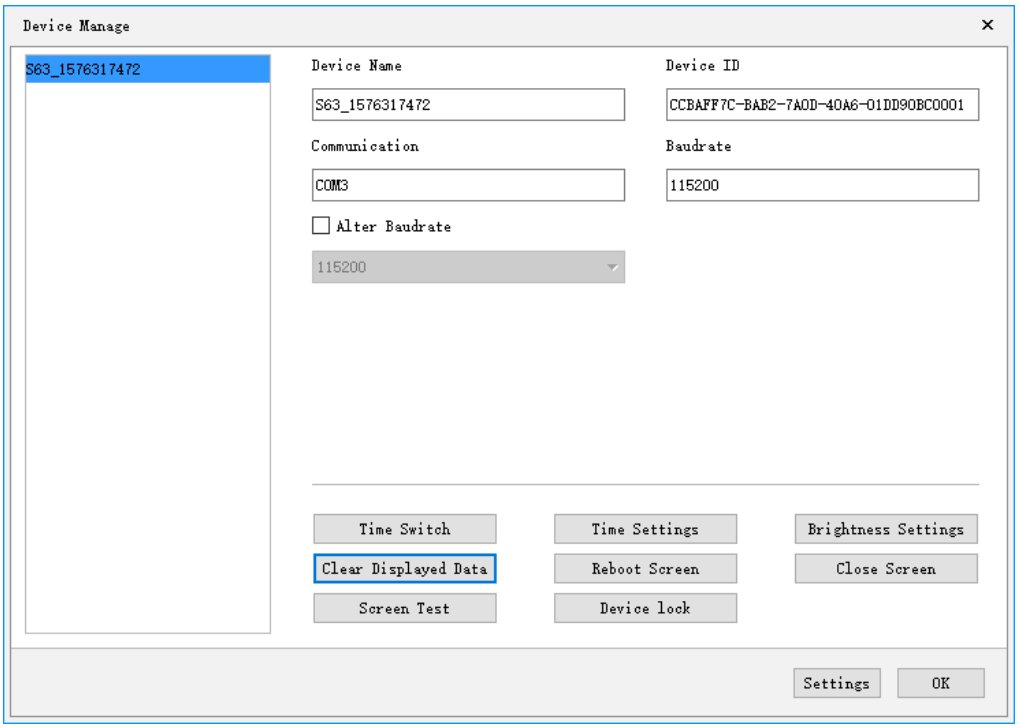


6.2.2 RS485 communication

Method two: RS485 serial port connection. An RS485 converter is required; a computer supports only one RS485 serial card. The connection method is as follows:

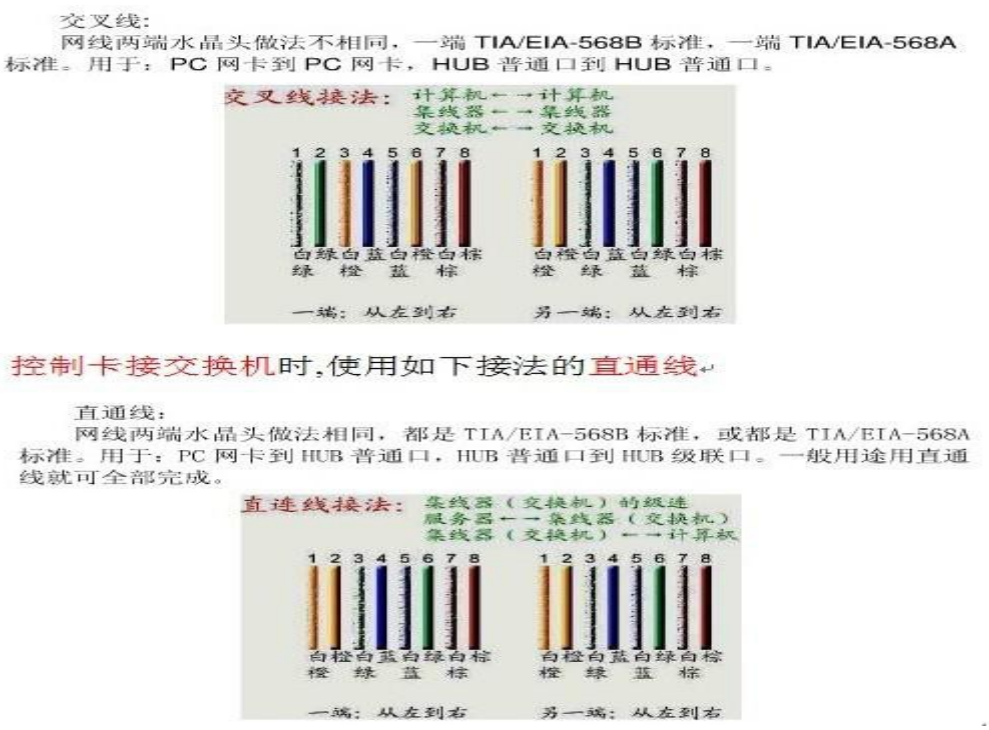
The positive pole of the converter connects to the square hole on the control card, and the negative pole of the converter connects to the middle hole of the 485 interface on the control card.

The device management interface shows the ID number of the control card, indicating that the device has been found, as shown in the figure:



6.3 Making a network cable

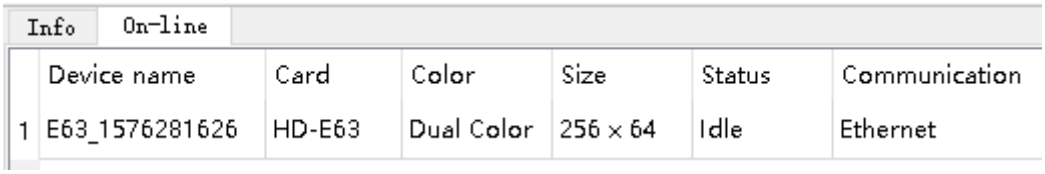
There are two kinds of network cables: crossover cables (used when the control card connects directly to the computer) and straight-through cables (used when the control card connects to a router):



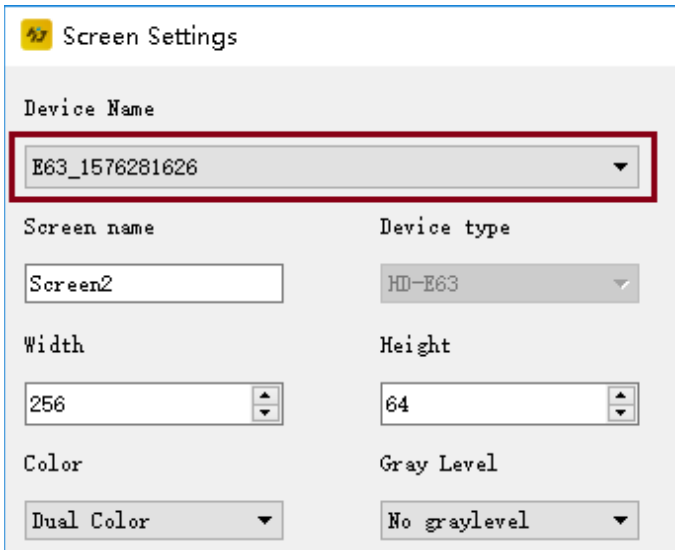
6.4 Communication settings (network port)

6.4.1 LAN single network card (e.g. HD-E63) communication

Method: no settings are required. After a single device is connected directly to the computer, the information window → On-line tab will show the connected device, as shown in the figure:

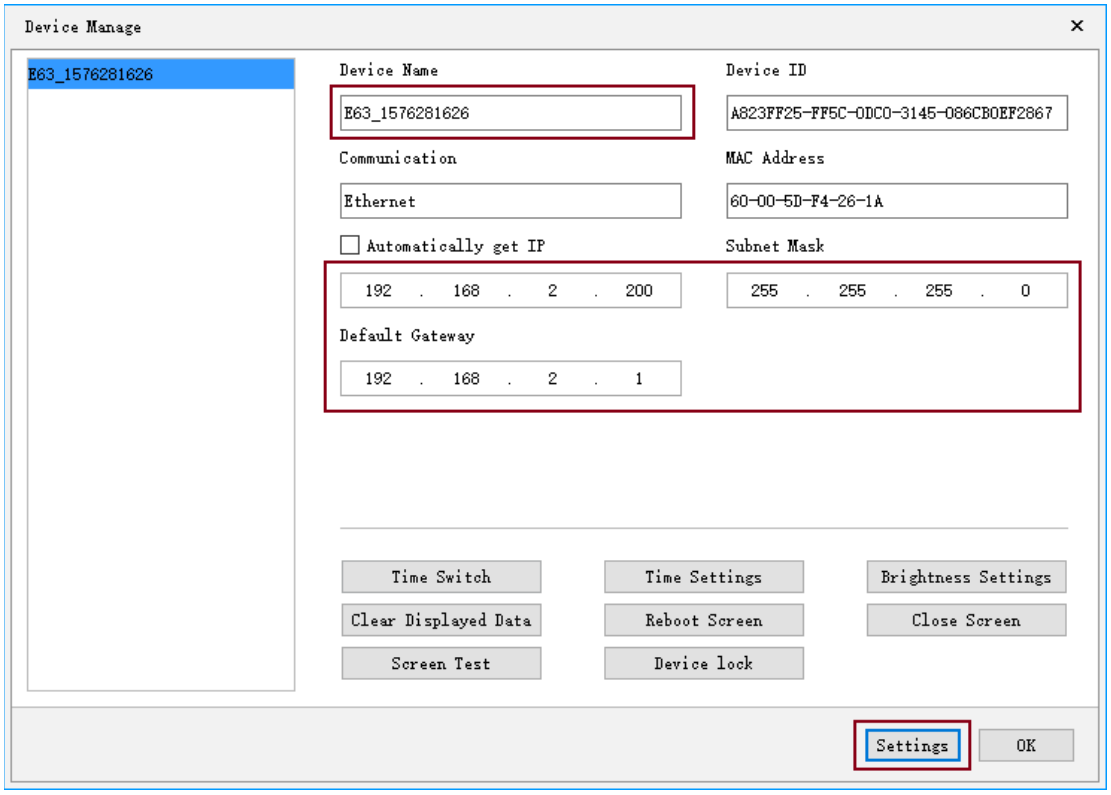


If the message window shows “The device is not bound to the selected screen”, open the screen settings and select the device name, as shown:

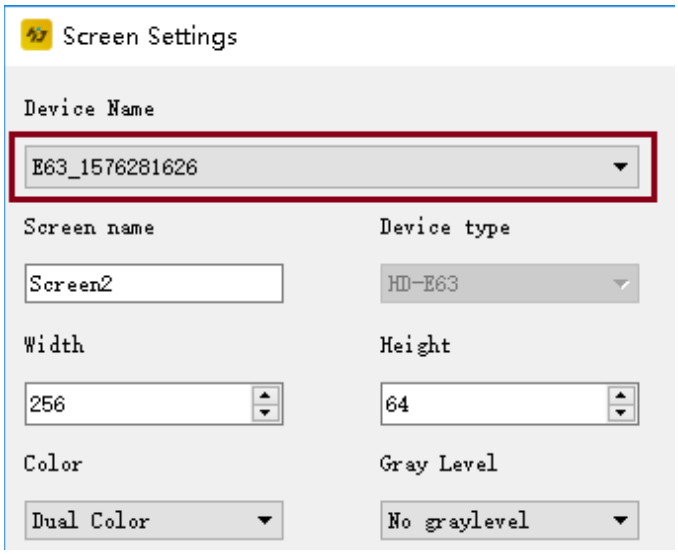


6.4.2 LAN multiple network card communication

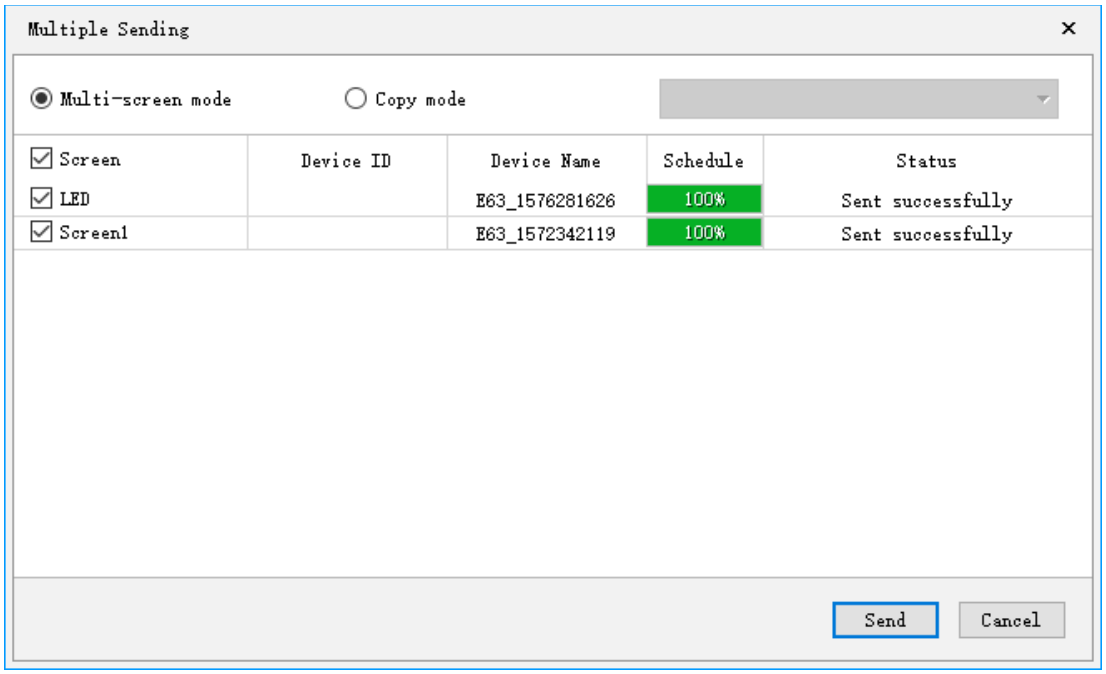
1. When there are multiple network port cards, change the IP address of each control card to the same network segment as the current LAN. As shown in the figure, change the IP address and device name of the control card in the device management interface.



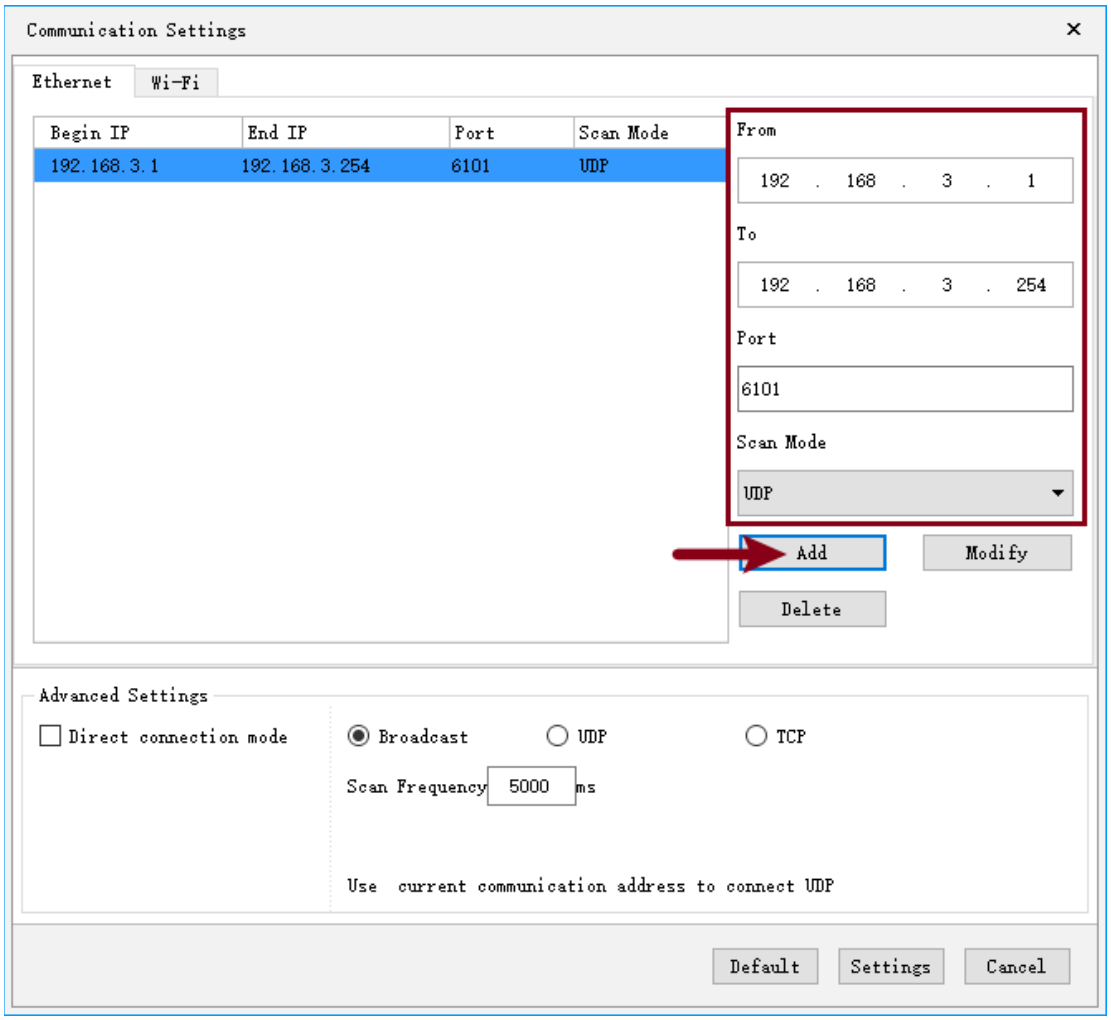
2. After the IP address is modified, create a new display in the software and bind the device name when setting the screen parameters.



3. Use cluster sending to send the program: tick all the displays and click Send, as shown in the figure:



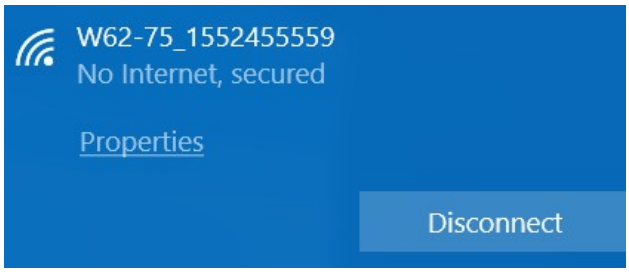
4. If the control cards are on the same network segment, steps 1–3 complete the setup. If the control card's network segment differs from the main computer's, add the control card's network segment in the communication settings. For example, if the control card is on the 192.168.3.* segment and the computer is on 192.168.5.*, add the control card IP 192.168.3.* in the communication settings, or add the whole IP range 192.168.3.1 – 192.168.3.254, as shown in the figure:



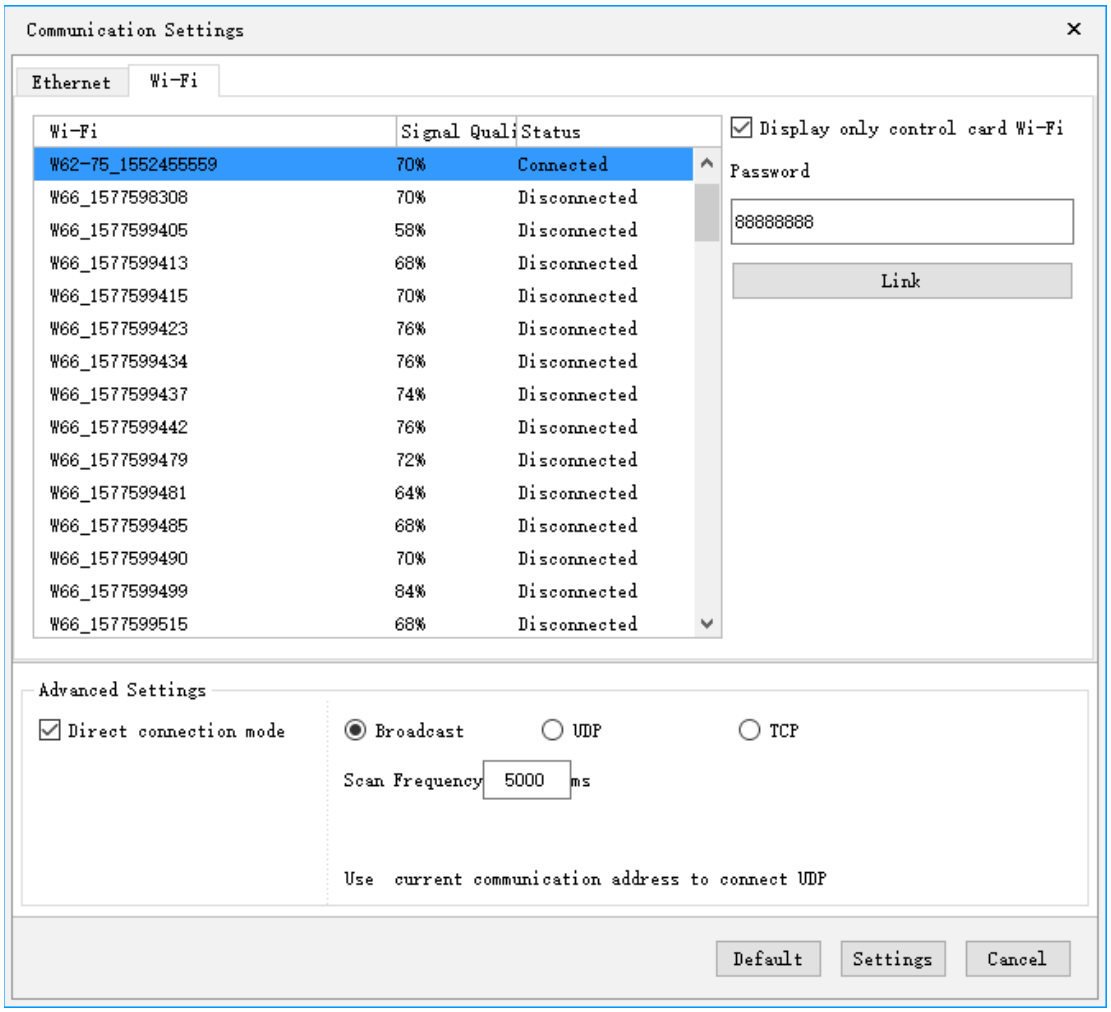
6.5 Communication settings (Wi-Fi card)

6.5.1 Wi-Fi card connection

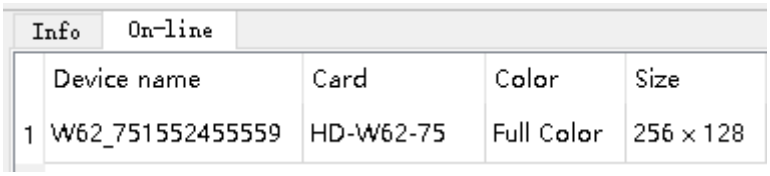
To use a Wi-Fi card, first connect to the Wi-Fi signal broadcast by the control card (the computer must have a wireless network adapter; for a desktop computer, be sure to purchase one – generally a laptop with built-in Wi-Fi is used). Note: here one Wi-Fi card has already been connected to the current network:



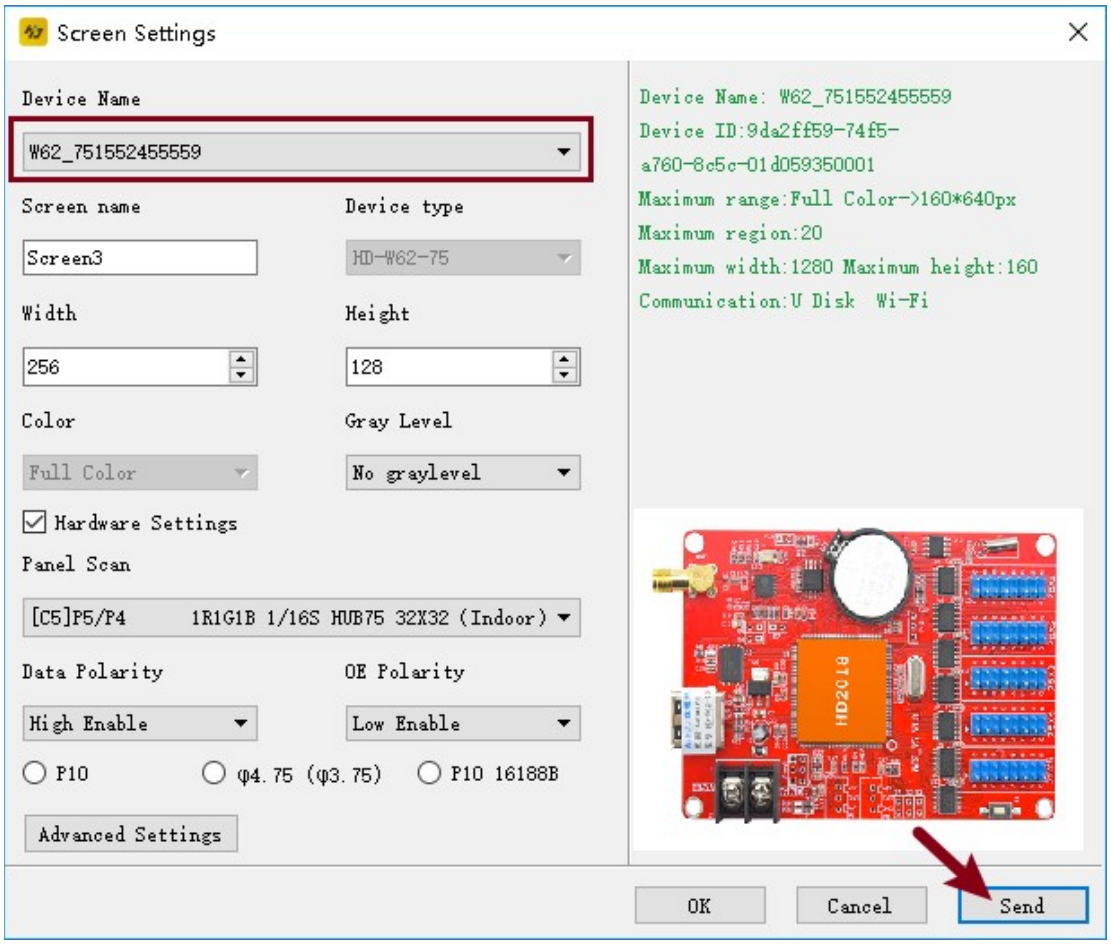
When connecting to the Wi-Fi signal, the default password is “88888888”. If you connect from within the HD2020 software you must also enter the “88888888” password, as shown in the figure. Click Link; the default password can also be changed later.



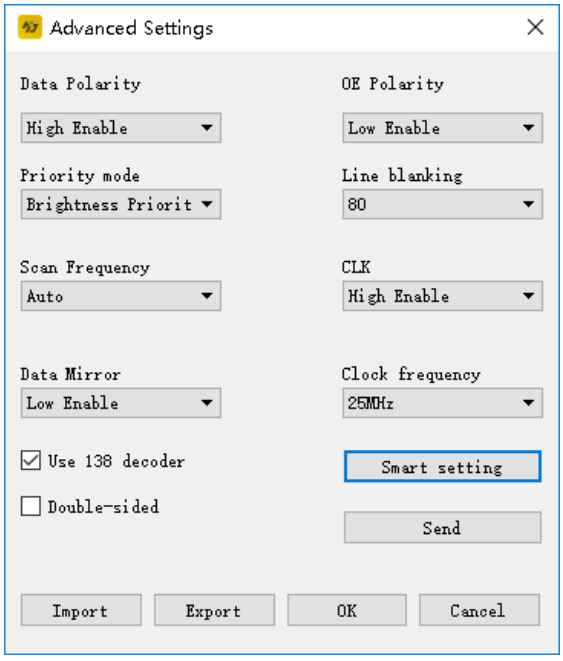
Once Wi-Fi is connected, the device can be found in the software. As shown in the figure, the control card appears in the On-line tab of the information window together with its details:



Select the current device in the screen parameter settings, and you can then send content to the control card, as shown in the figure:

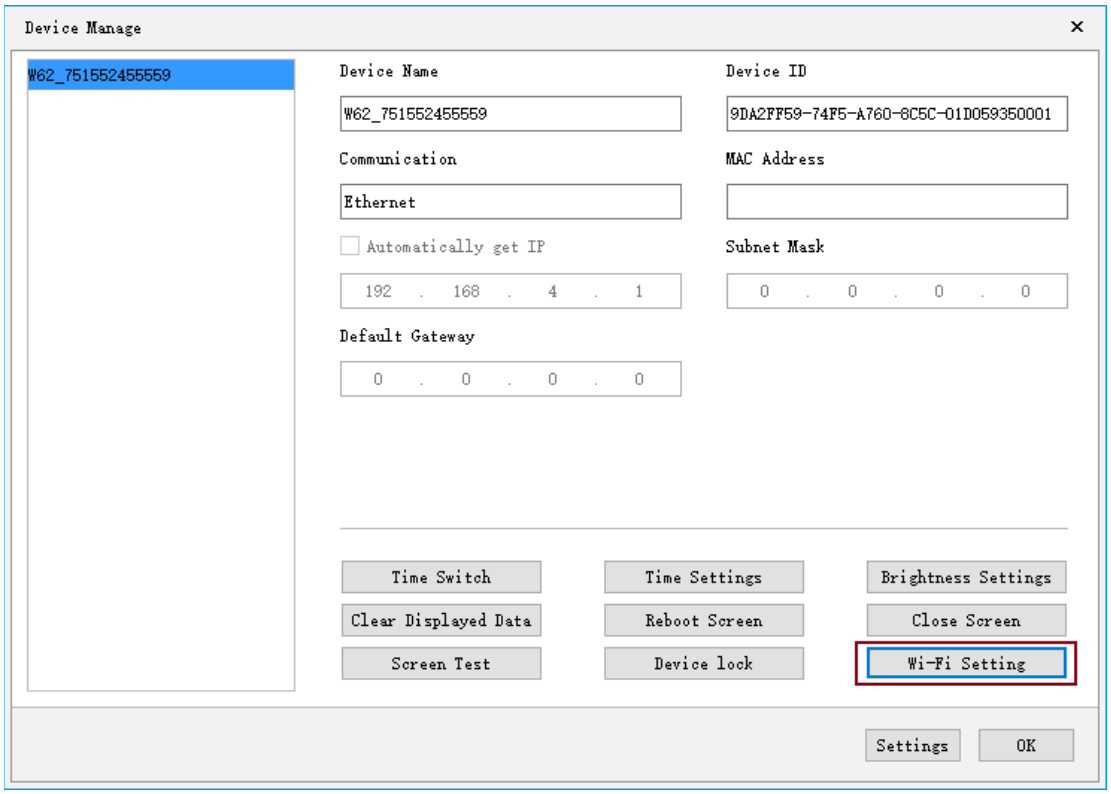


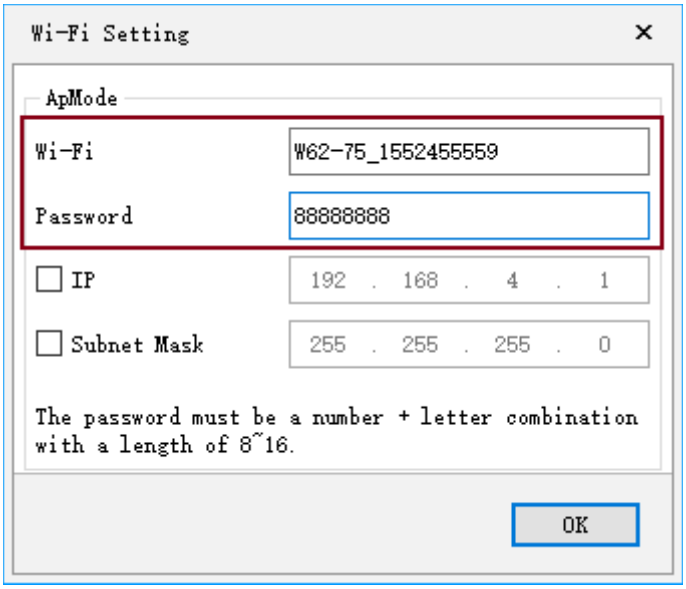
If the display output is abnormal, configure the smart-setting parameters in the advanced settings of the hardware setup. If the display is normal, there is no need to enter the hardware setup. (Regular screens only need one of the common smart settings; non-standard screens can run the smart-setting procedure.)



6.5.2 Changing the SSID and password of the Wi-Fi card

In the menu bar of the main interface, click Settings → Device Management → Wi-Fi Settings; there you can change the card's SSID and password.

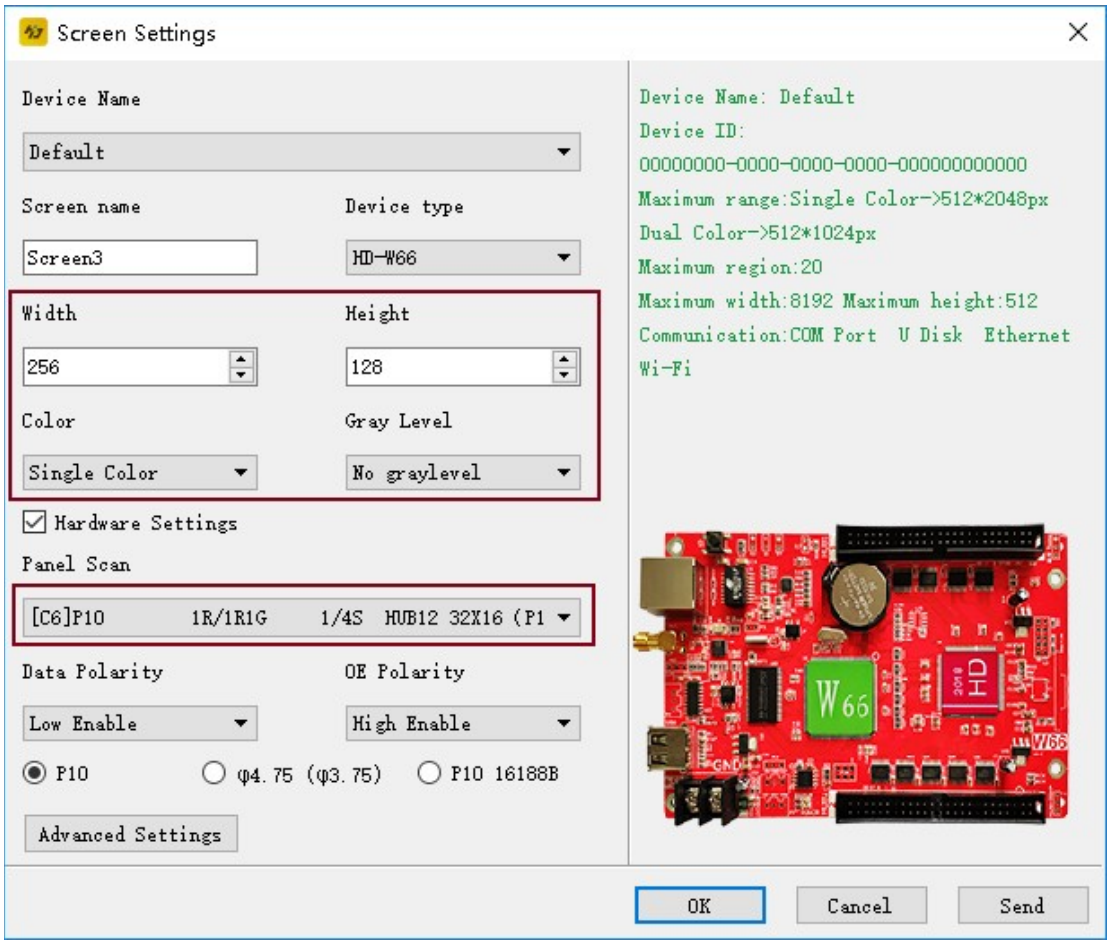




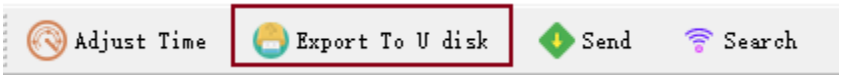
6.6 How to use a USB flash drive

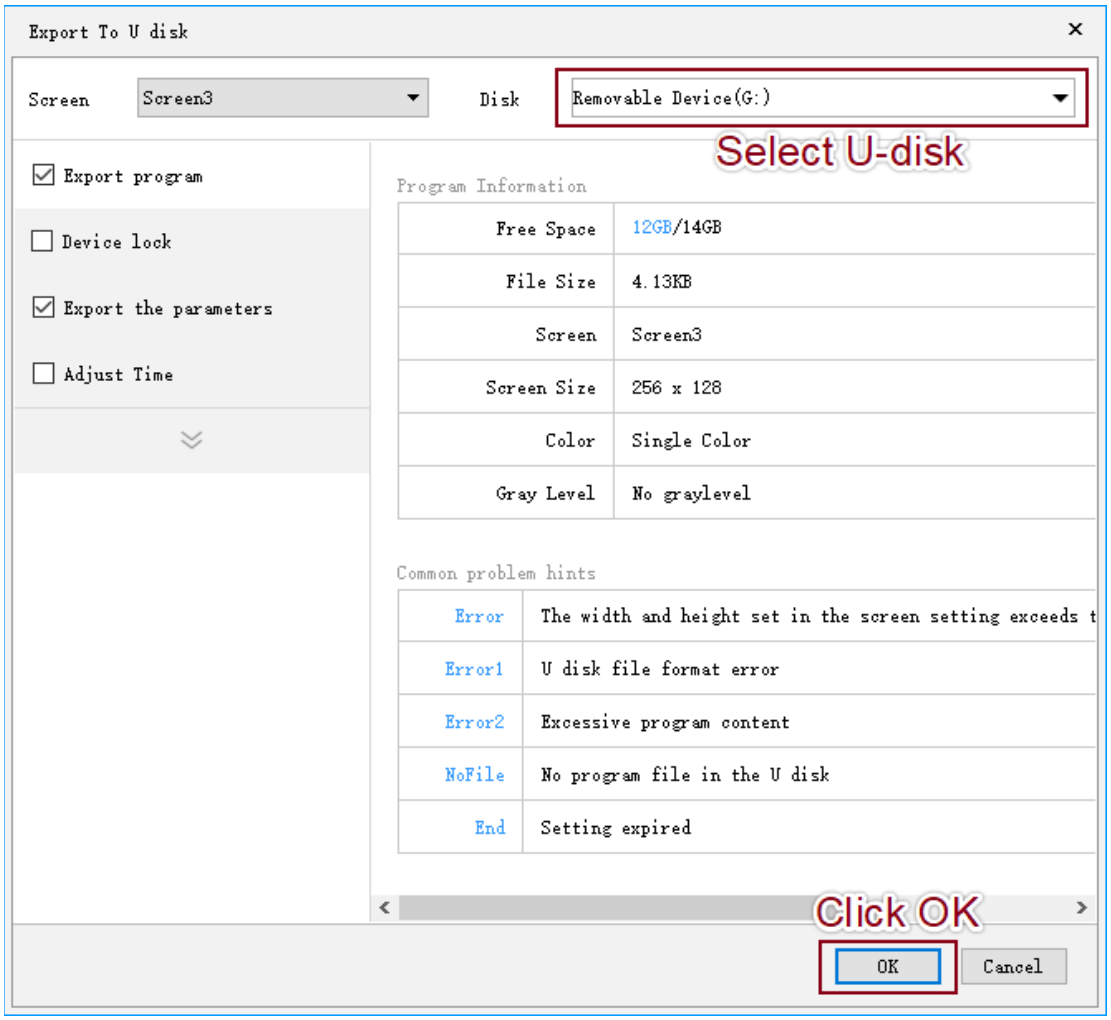
A USB-disk card needs no wiring and is easy to use. Taking the conventional P10 monochrome module as an example:

1. Set the screen parameters of the display: select the control card model and the hardware parameters. Enter the screen parameter settings and set the display color, screen width, screen height, gray level and the other parameters.



2. After adding the content, text and other areas, click Export To U disk.





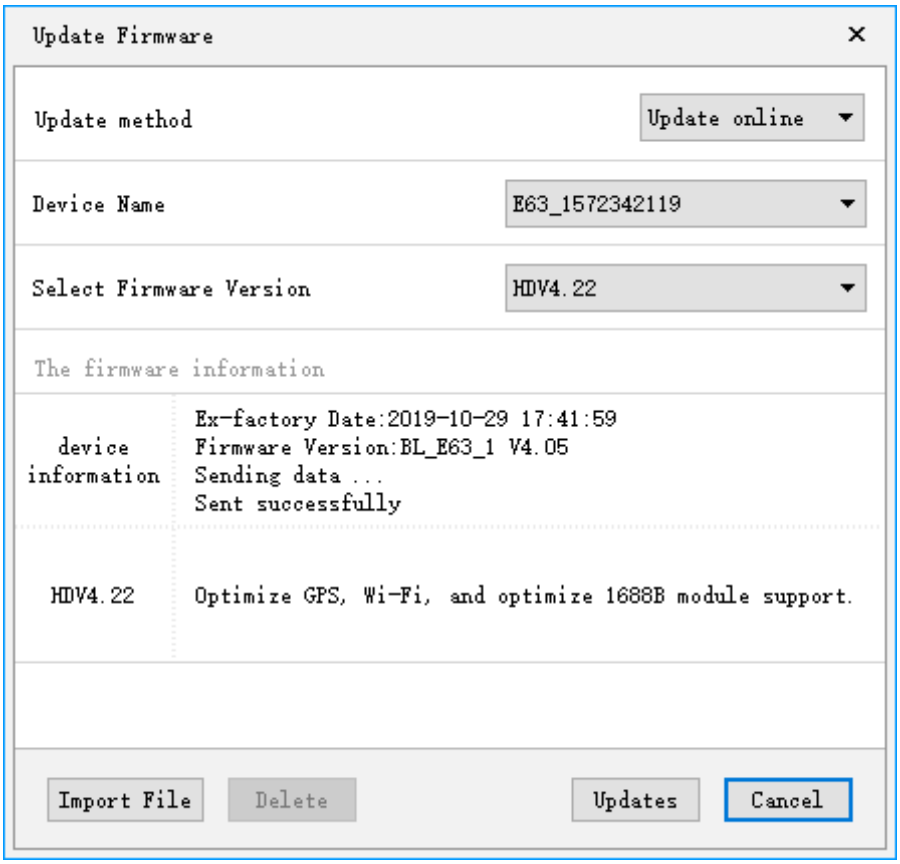
Note: if the time shown on the display is not correct, tick Adjust Time and export to the USB flash drive again.

Appendix 2 – Common Settings During Use

Appendix 2.1 How to upgrade the control card

The control card upgrade is mainly used to add product functions or fix major bugs; under normal circumstances an update is not required. The upgrade method is as follows:

Click Settings → Firmware Update → select the corresponding firmware version → then click the update icon on the right, as shown below:



Click Update in the dialog and select the corresponding firmware version to complete the operation. (The firmware can be upgraded via USB flash drive, serial cable, network cable or Wi-Fi.)

Appendix 2.2 How to restore the control card to factory settings

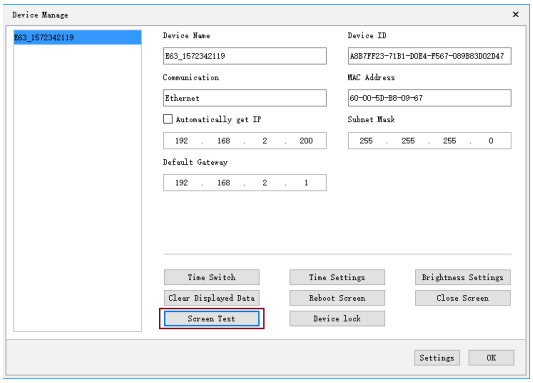
1. First disconnect the power of the display.
2. Press and hold the test button on the control card and do not release it.
3. Power the display on and, after about 10 seconds, release the test button.

Appendix 2.3 How the control card tests the display

There are two methods for running the display test patterns – hardware and software:

Hardware test: after the parameters have been set, press and hold the S1 button of the control card (with power on); release it once the test state is entered, then press repeatedly to cycle through the different test modes.

Software test: Settings → Device Management → Screen Test opens the test dialog, as shown in the figure:



Note: the software display test can be used once the software has found the device.

Appendix 2.4 Display timing switch

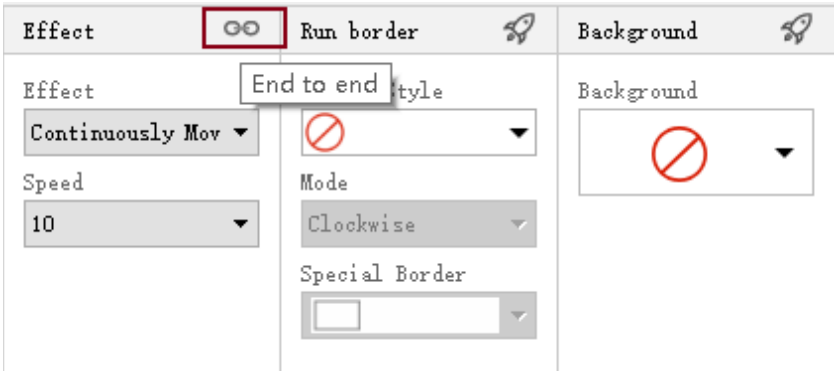
Timed on/off of the display: Settings → Time Switch → Enable → set the startup time and shutdown time.

Appendix 2.5 How to make text stand still

For static text, select the “Display Static” effect, as shown in the figure:

Appendix 2.6 Continuous, uninterrupted text movement

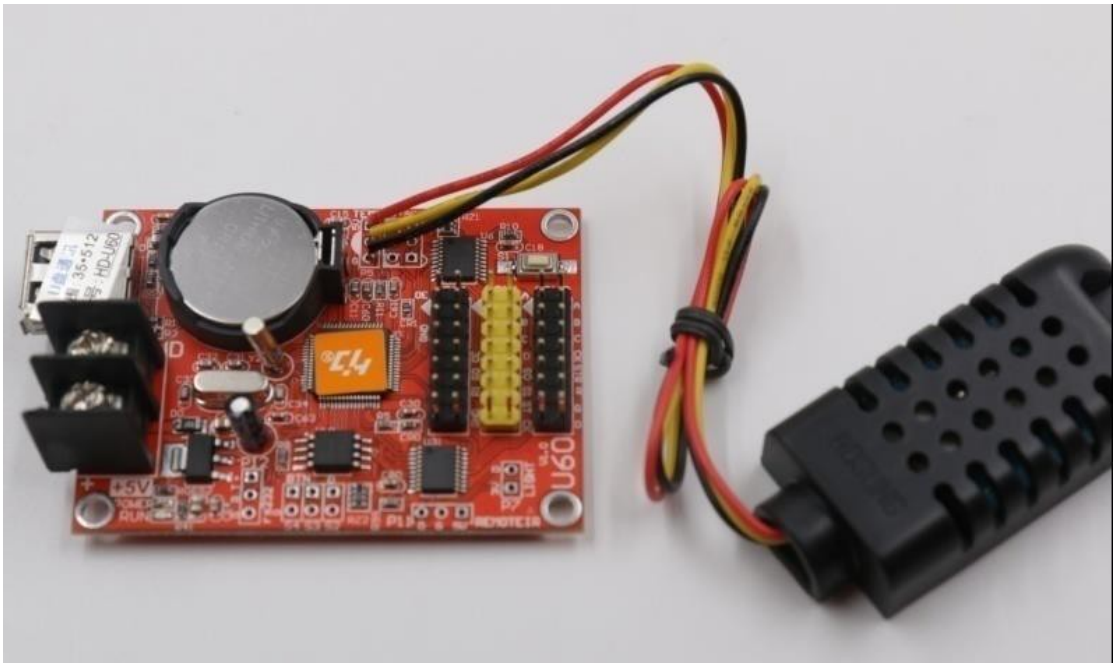
Create a text area with the effect “Continuously Move Left”. When “End to End” is ticked, the content scrolls to the left continuously without a gap. If “End to End” is not selected, the blank space after the content is displayed before the text repeats.



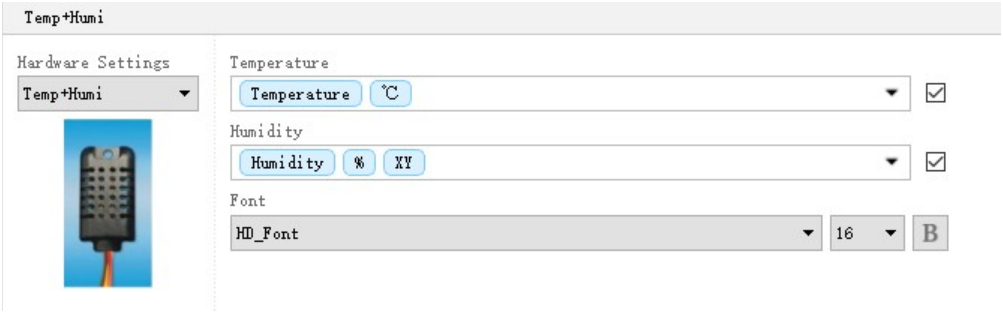
Appendix 2.7 Operating instructions for temperature, temperature + humidity, and PM2.5

1. Temperature and humidity sensor – operating instructions

1. Wiring: as shown in the figure below, the red wire connects to the right (square) pin, the yellow wire to the middle pin, and the black wire to the third pin.



2. Sensor specifications – model AM2301. Operating voltage: 4.2–5.2 V. Humidity range: 0–99.9% RH. Temperature range: −40 to +80 °C. Humidity accuracy: ±3% RH. Temperature accuracy: ±0.5 °C.
3. Software settings: (a) create a new temperature and humidity area (see section 5.8); (b) in the hardware settings, select “Temp+Humi” – the default is temperature only; (c) if the readings are not accurate, fine-tune them via the temperature and humidity correction; (d) background and border are supported.



2. Temperature sensor – operating instructions

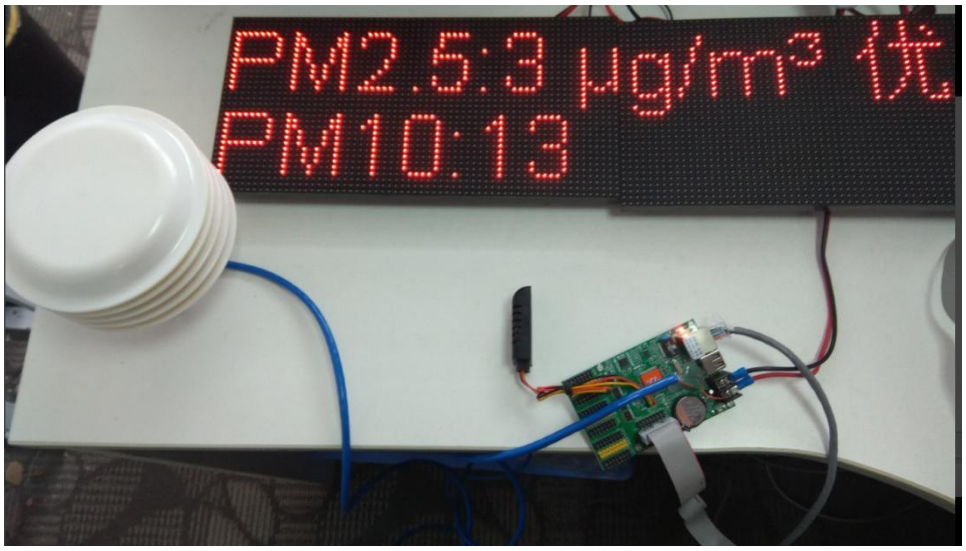
1. Waterproof temperature sensor: the red wire connects to the positive (square) pin, the yellow wire to the middle pin, and the black wire to the third pin.

2. Sensor specifications – model DS18B20. Operating voltage: 4.2–5.5 V. Temperature range: −40 to +80 °C. Temperature accuracy: ±1 °C.
3. Software settings: (a) create a new temperature area (see section 5.8); (b) if the temperature is not accurate, fine-tune it via the temperature correction; (c) background and border are supported.

3. PM2.5 – operating instructions

1. Firmware version: V4.15.
2. Supported PM2.5 controller models: E62, E62P, E63, E64, E66, U63, U64, U60PLUS, U62PLUS, U60-75, S63, W60-75, W63, W64, W62-75, W66.
3. Wiring:

No.	Network cable color	Wiring position (P12)
1	Brown / white-brown	P12 round hole
2	Orange / white-orange	5V
3	Green / white-green	P12 middle round hole
4	Blue / white-blue	P12 square hole



4. Software settings: (a) create a new temperature and humidity area (see section 5.8); (b) set the PM2.5 parameters; (c) if PM2.5 and PM10 are not accurate, fine-tune them via the PM2.5 and PM10 calibration; (d) background and border are supported.