

Android Control Card Y12

Instructions

Version: Ver.1.1

Statement

Dear user friend , thanks for choosing SHENZHEN SYSOLUTION TECHNOLOGY CO.,LTD (hereinafter referred to as Xixun Technology) as your LED advertising equipment control system. The main purpose of this document is to help you quickly understand and use the product. We strive to be precise and reliable when writing the document, and the content may be modified or changed at any time without notice.

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Update Record

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Overview

Thank you for purchasing our LED control card. We hope you can fully experience the excellent performance of this product. The design of this LED control card complies with international and industry standards, but improper operation may still cause personal injury and property damage. In order to avoid potential hazards from the device and benefit as much as possible from your device, please follow the relevant instructions in this manual when installing and operating the product.

Y12 is a transceiver integrated control card, with an industrial grade quad core processor, running at a main frequency of 1.5GHz, and supporting 1GB+8GB of memory (compatible with 2GB+16GB requires customization) LPDDR3. The performance of industrial grade CPU is generally lower than that of commercial grade CPU, but the maximum temperature difference can reach -40 °C to 95 °C. This configuration performance can fully meet the smooth playback of images, 1080P videos with 2 hard decodes, flash animations, text, and other content simultaneously.

It can be widely used in small load scenarios such as car screens, small traffic screens, community screens, and light pole screens.

Features:

1. Stable and reliable performance, supporting wide temperature range operation from -40 °C to high temperature of 95 °C, with a wide voltage range of 5V-12V, continuous power supply for 7 * 24 hours, and a failure rate of $\leq 0.3\%$.
2. Comes with a hub 75 port, allowing for direct screen display without the need for a receiving card;
3. It can be connected to the network through Ethernet cables, WiFi, or 4G, and can be controlled through a mobile phone to configure wireless networks like a router;
4. The chip can support GSM, WCDMA, TD-SCDMA, EVDO, TDD-LTE, FDD-LTE and other standards;
5. Support accessing cloud platforms to publish programs, easily achieving remote cluster control of display screens;
6. Hardware design fully considers user on-site deployment, operation, and maintenance scenarios, with a simple structure that saves space for users, reduces wiring, and makes installation easier;
7. The software and platform are designed to run stably and maintain efficiently.

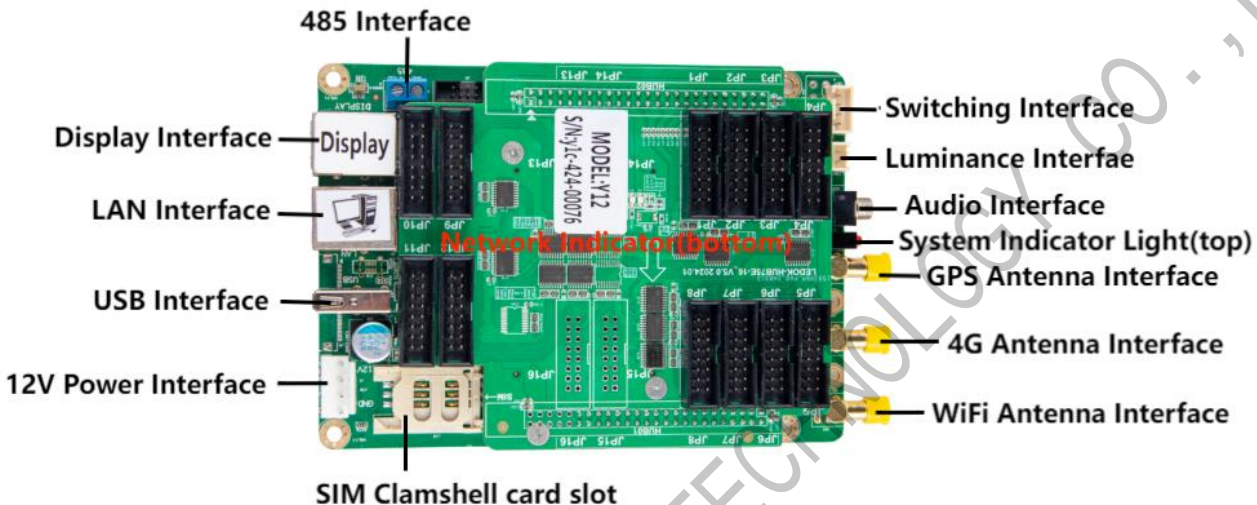
Functional Features

1. 12 Hub75 outputs for direct output, ensuring stable image transmission;
2. The onboard RS485 interface facilitates front-end devices to adjust the brightness of the rear display screen, control the led screen, and perform command operations such as power on/off. An external eight element environmental sensor R68 is connected to display environmental information, eliminating the need for secondary development;
3. Support external GPS positioning and timing modules to ensure synchronized playback of multiple screens;
4. Supports communication methods: wired network, WIFI, and 4G, making it easy to deploy in the on-site environment. The 4G module is optional, and provide specific 4g modem for different countries;
5. Support secondary development and remote cluster control on cloud platforms, such as centralized program release, setting timed power on/off, remote power off, volume, brightness, etc;
6. Support local webpage production, and support various user terminal program publishing and display screen control such as PC, mobile phone, and Pad;
7. Powerful processing performance, 4-core processor with a main frequency of 1.5GHz, supporting 1080P video hard decoding, 1GB of running memory, 8GB of internal storage space, and 4GB available to users;
8. The user terminal connects to the built-in WiFi hotspot of Y12, with a default SSID of "SN number" and a default password of "12345678";

9. Supports GPS timing/synchronization, and NTP precise automatic timing;
10. Y12 can automatically adjust the brightness of the display screen and requires a matching brightness sensor;
11. Support playing programs according to the program schedule;
12. Supports USB cameras;
13. Supporting software: AIPS4.0 cloud release platform, PC software LedOK Express, mobile app: LedOK Lite

SHENZHEN SYSOLUTION TECHNOLOGY CO., LTD

Interfaces



Technical Parameters

Product features	Description
Model	Main: Y12 (no 4G), Y12-CH (China 4G all-network), Y12-G (global, recommended abroad) Y12-NA, Y12-EU, Y12-LA (available in bulk with cost in mind, samples are recommended for global models)
Pixel	Y12: 250,000 dots, resolution 1920 (W)or1920 (H) , custom resolution support
Communication methods	Network port, WiFi, USB stick, optional 4G module
CPU	Cortex-A35 quad-core at 1.5GHz
GPU	Mali-G31MP2 OpenGL ES3.2, Vulkan 1.0, OpenCL 2.0 Dvalin-2EE
System memory	8GB Emmc+1GB LPDDR3
Operating systems	Android 9.0
WiFi	IEEE 802.11b/g/n 2.4G
GPS	GNSS GPS/Beidou/Glonass
Other interface support	<ol style="list-style-type: none"> 1. 1 stereo audio output. 2. 1 x USB 2.0 interface. 3. Support for importing and playing programmes from a USB stick. 4. 1 x RS485 interface, 1 x RS232, 1 x TTL serial port. Connection of brightness sensors, other sensors, and connection of other modules for corresponding functions.
Configuration on software	LedOK Express
Supported Bands	

Model	3G/4G bands (optional)	Certification
Y12-CH	-China (China/India) FDD-LTE: B1/3/5/8 TDD-LTE: B38/39/40/41 TDSCDMA: B34/39 WCDMA: B1/8 CDMA 1X/EVDO: BC0 GSM: B3/5/8	Mandatory certification: SRRC/ NAL/ CCC Other: WHQL
Y12-NA	-North America (North America) FDD-LTE: B2/4/5/7/12/13/17 WCDMA: B2/4/5	Carrier certification: AT&T/ T-Mobile/ Rogers/ Telus/Verizon/ AT&T (FirstNet)/ T-Mobile/ U.S. Cellular/ Rogers/ Telus Mandatory/conformance certification: FCC/ IC/ PTCRB Other: WHQL
Y12-EU	-Eurasia (EMEA/Korea/Thailand/India and other Asian countries) FDD-LTE: B1/3/5/7/8/20 TDD-LTE: B38/40/41 WCDMA: B1/5/8 GSM: B3/5/8	Operator certification: Vodafone/Deutsche Telekom/SKT/ Telefónica Mandatory/conformance certification: GCF/ CE/ KC/ NCC/ RCM/ FAC/ NBTC/ ICASA Other: WHQL

Y12-LA	-Latin America (Latin America / Australia / New Zealand) FDD-LTE: B1/3/5/7/8/28 TDD-LTE: B40 WCDMA: B1/2/5/8 GSM: B2/3/5/8	Mandatory certification: GCF/ FCC/ Anatel/ NCC/ RCM Other: WHQL
Y12-G	-Global (Global) FDD-LTE: B1/2/3/4/5/7/8/12/13/ 18/19/20/25/26/28 TDD-LTE: B38/39/40/41 WCDMA: B1/2/4/5/8/6/19 GSM: Quad-band	Carrier certification: Deutsche Telekom/ Verizon/ AT&T/ Sprint/ U.S. Cellular/ Telus Mandatory/conformance certification: GCF/ CE/ FCC/ PTCRB/ IC/ Anatel/ IFETEL/ SRRC/ NAL/ CCC/ KC/ NCC/ JATE/ TELEC/ RCM/ NBTC/ IMDA/ ICASA Other: WHQL
Y12-J	-Japan (Japan) FDD-LTE: B1/3/8/18/19/26 TDD-LTE: B41 WCDMA: B1/6/8/19	Carrier certification: NTT DOCOMO/SoftBank/ KDDI Mandatory certification: JATE/ TELEC Other: WHQL

Ledset4.0 Configuration

How to find Ledset4.0:

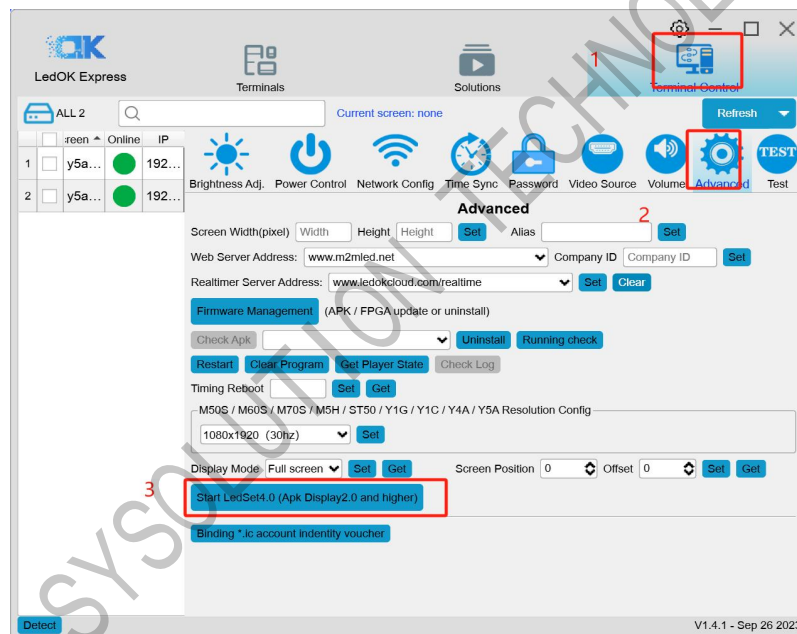
Please open Ledok Express software,

Click 'Terminal Control',

Click 'Advanced' ,

Enter password 888

Click 'start Ledset4.0' .

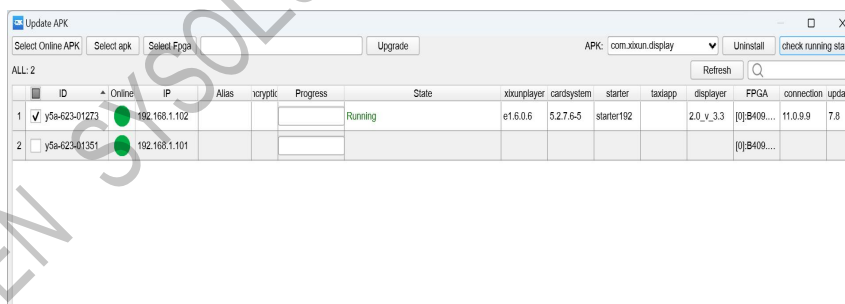
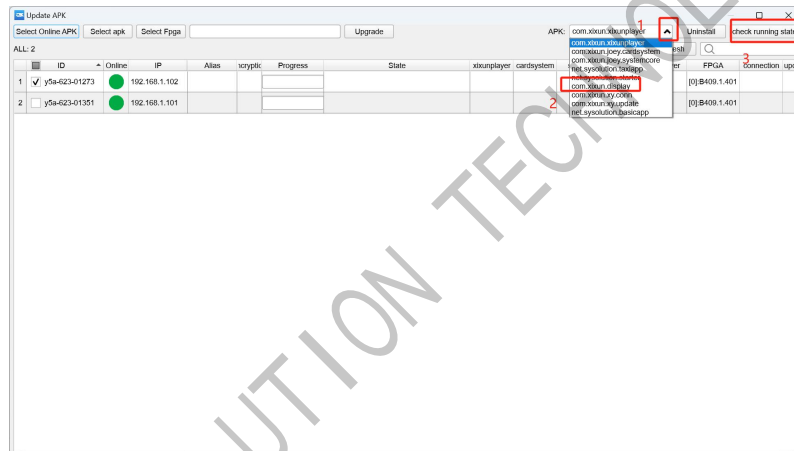


Note: Please make sure to install the display apk when using ledset 4.0.

Step 1: Tick the card, click 'Firmware management' .

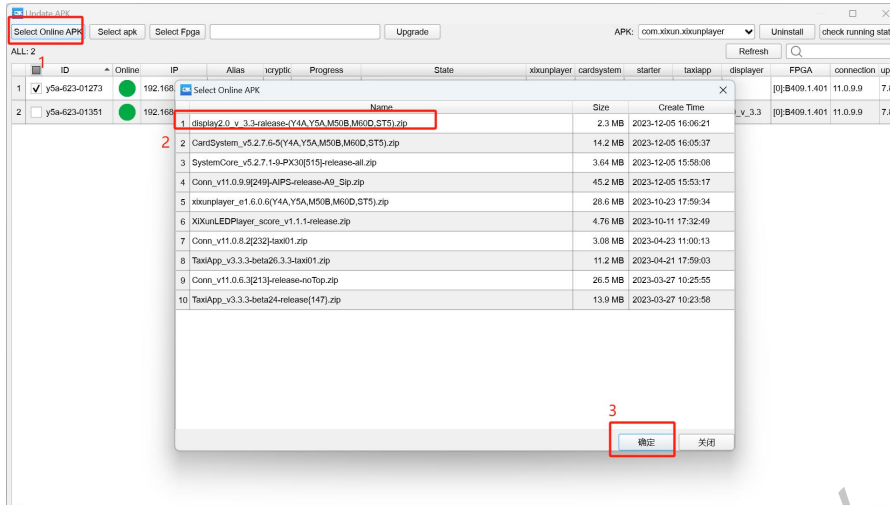


Step 2: Check whether display is running, click com.xixun.display, click 'check running state. If the state is running, you can use Ledset4.0 normally.

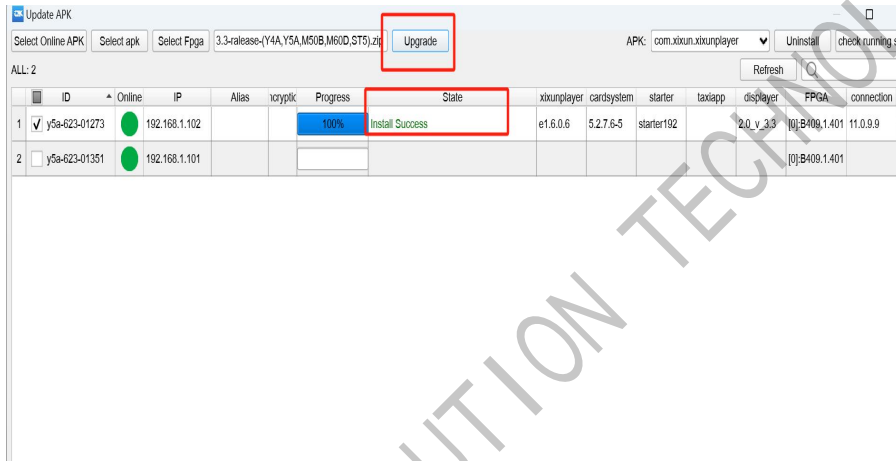


If the state is not running, follow the steps below to install display:

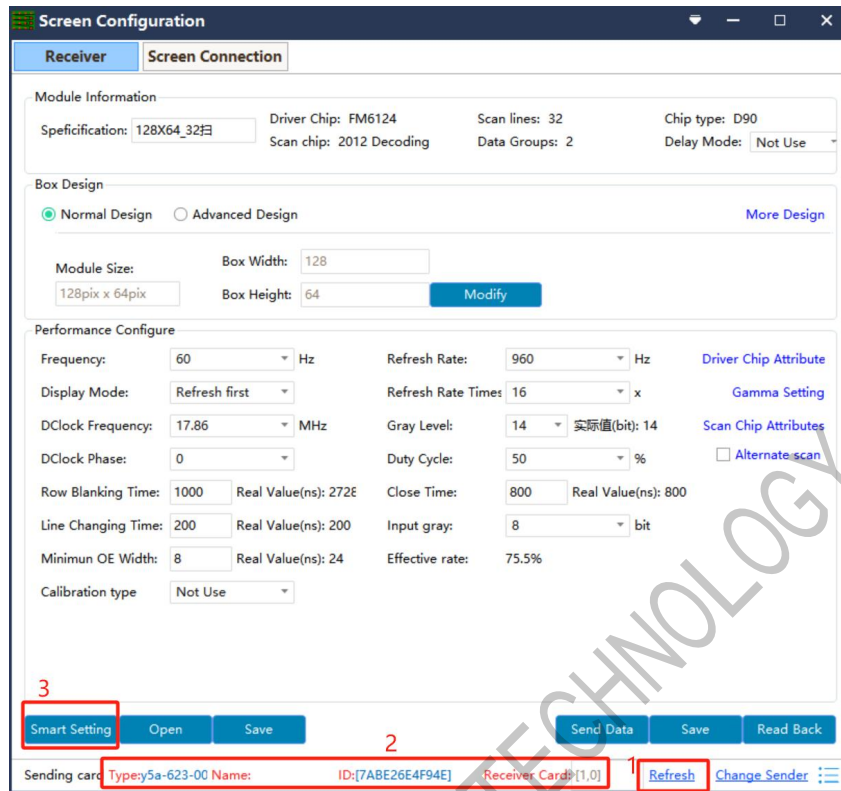
1. Click 'Select Online APK', Choose 'display', click 'ok'



2. Click 'Upgrade'. When the status is 'Install success', the display has been installed.

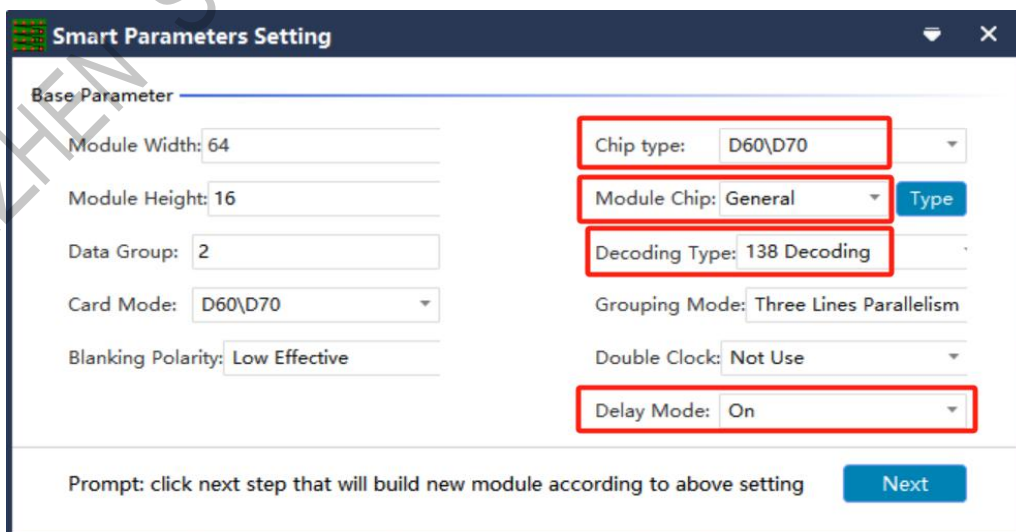


Smart Setting



Operating steps:

(1) Click on the main menu of the software 'Normal' icon, enter the receiver card configuration. click "Refresh" button and will see the cards information and receiving card number, then click on the 'Smart setting' button, according to the current LED module actual situation enter the corresponding parameters.



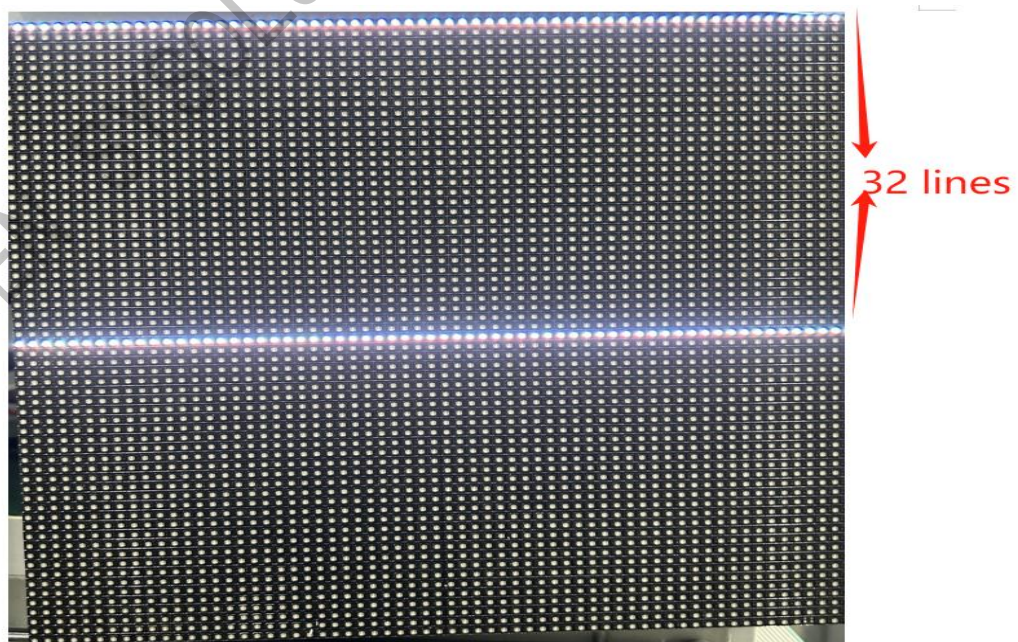
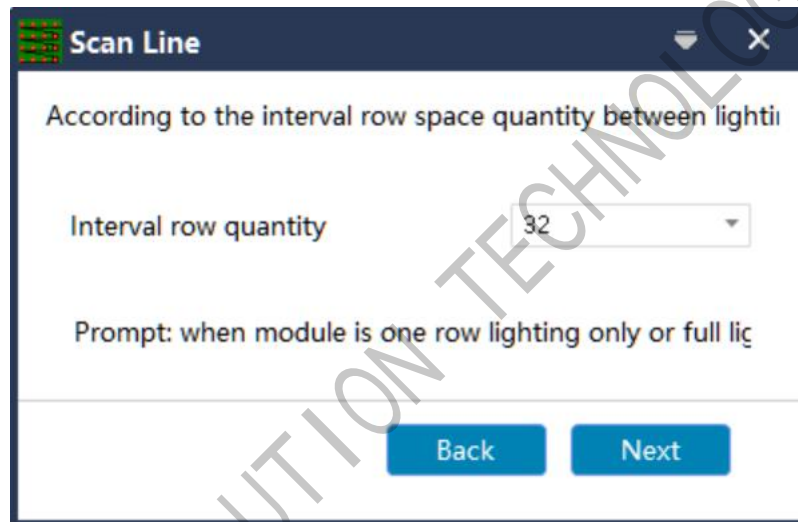
- ✓ **Module Width / Height:** Enter the actual pixel width / height of the current module.
- ✓ **Module data group:** View the module data input port interface definition, according to the module's actual number of data lines and grouping method calculation. Generally three lines in parallel, so a RGB for a group of data, such as: the module has two groups of RGB, then the module's data group is 2.
- ✓ **Card Model:** The type of receiver card currently used for debugging, you can directly view the logo on the receiver card.
- ✓ **Blanking Polarity:** Switching state 'low effective' or 'high effective', usually default.
- ✓ **Chip Type:** Select D60/D70 for debugging according to the type of receiver card currently in use.
- ✓ **Driver Chip:** Select the type of driver chip used in the current module, such as: General chip, MBI5153, ICN2053, etc. Normally for low refresh rate led module, choose General.
- ✓ **Decoding mode:** optional '138 decoding', '5958 decoding', 'high direct output' and so on.
- ✓ **Grouping mode:** View the current module data input port interface definition, such as R\G\B (red, green and blue) three color signal data, (and the module to control the red, green and blue LED driver chip is connected separately, red, green and blue chips are not connected in series), then the data type select ' three lines parallelism '; if the module only one color signal data or only one R data (except monochrome screen, and control the red, green and blue LED chips are connected in series), then select ' RGB serial '.

✓ **Double Clock:** D, E, F signals can be selected as the second clock when debugging the dual clock module, which is not used by default for debugging the normal module.

Keep default.

✓ **Delay Mode:** keep it on when use D60/D70

(4) Click 'Next' to enter the Scan Lines window. Number of rows between two bright lines plus 1 row. Select the scanning lines according to the actual display of the current module, if the led module 32scan, then choose 32; if it is 8scan module, then choose 8.



(5) Click 'Next' . Select the corresponding display color according to the status mode

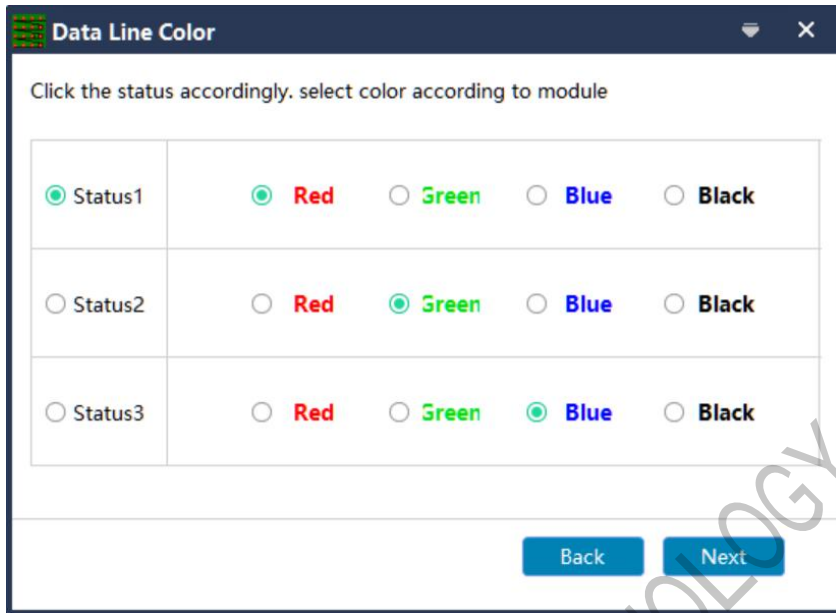
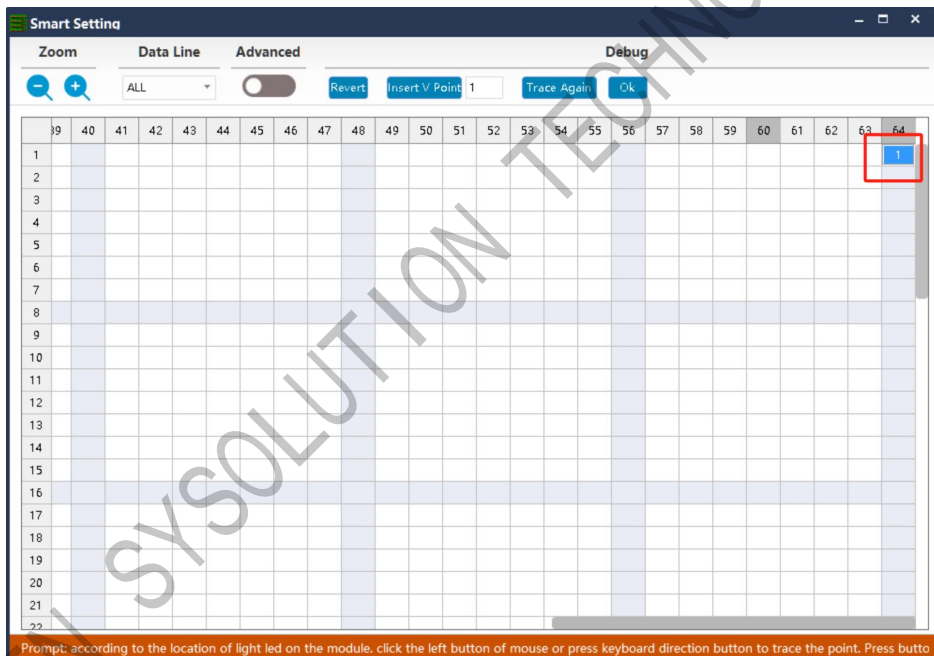
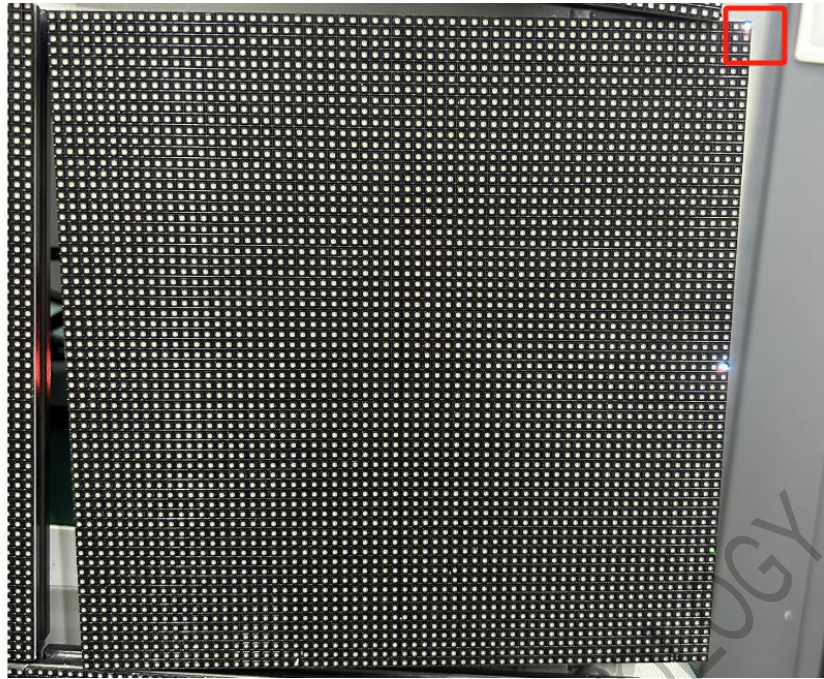
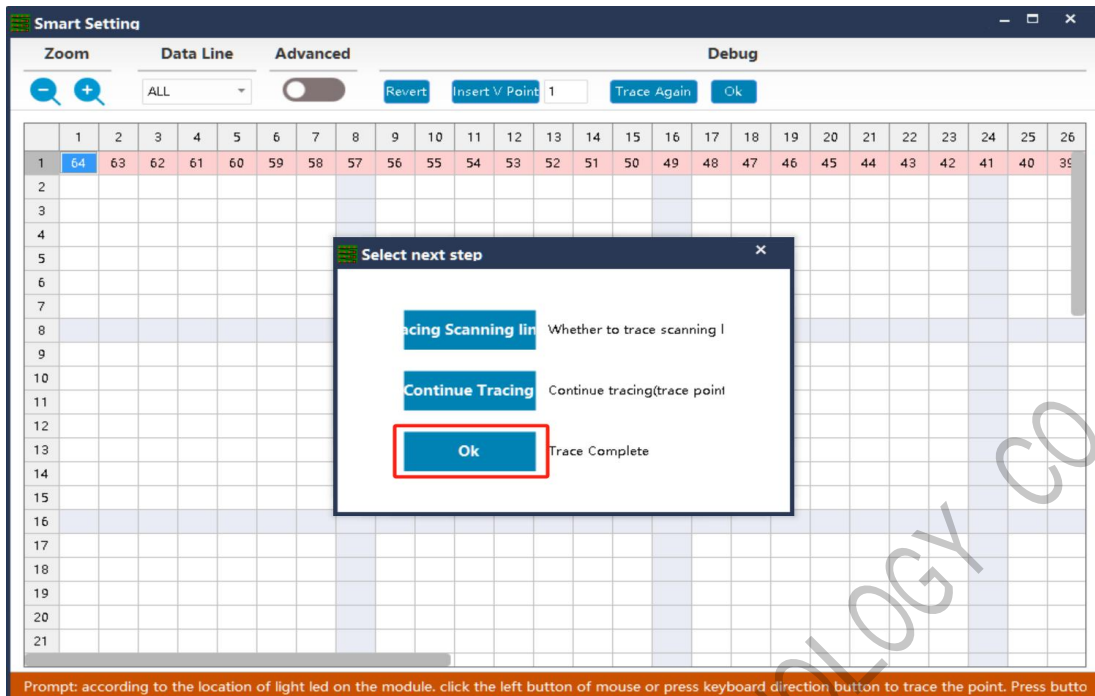


Figure 4-2-1-4 Normal screen configuration-data line color selection

(6) Click 'Next' to enter the smart setting window. According to the actual display of the current module corresponds to the point (if the module does not have pixel point blinking, please connect the LED module to the first data interface of the receiver card or change the data cable to all interfaces, or try to insert the virtual point to try).

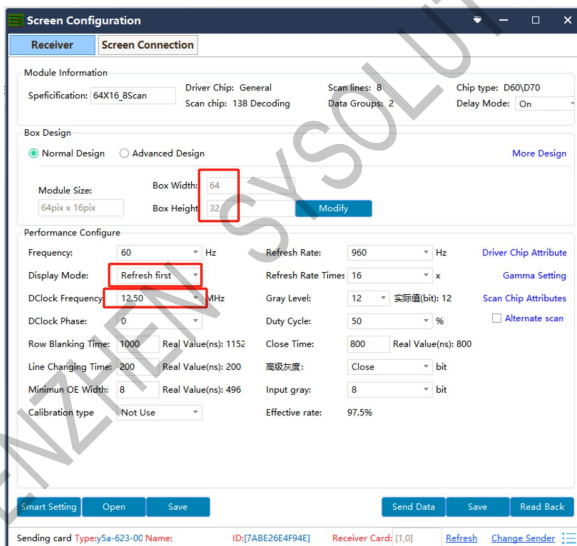


(7) Smart settings will be prompted after the completion of the window, and then click the 'trace complete' button, and then send the data to the screen

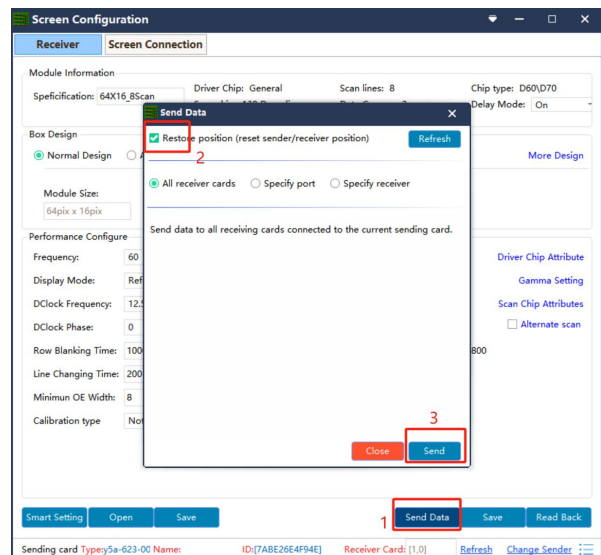


Receiver Configuration

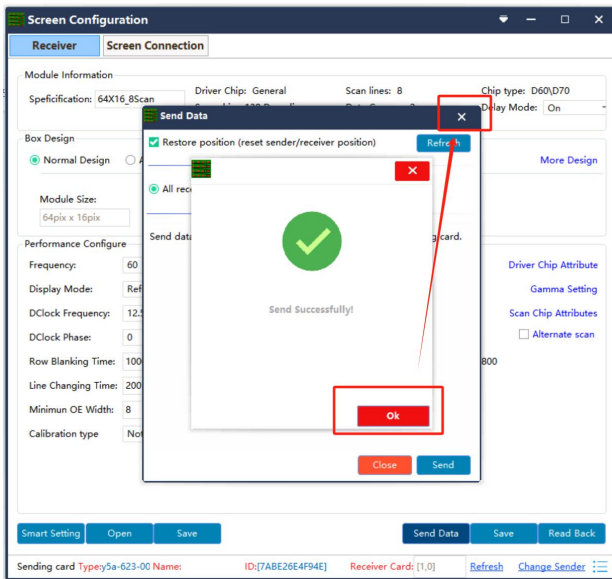
Jump back to Receiver settings and then change the box design first, choose Refresh rate first and other parameters keep default, then click the Send button in the bottom, and then click Save button to solidify the parameters ,



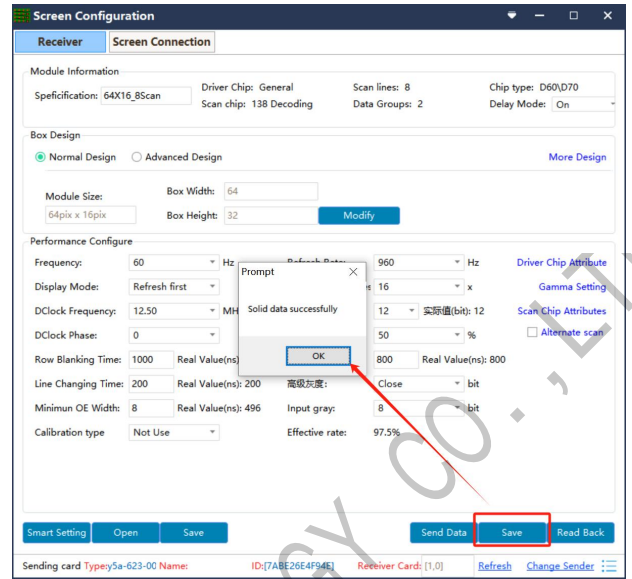
1



2



3

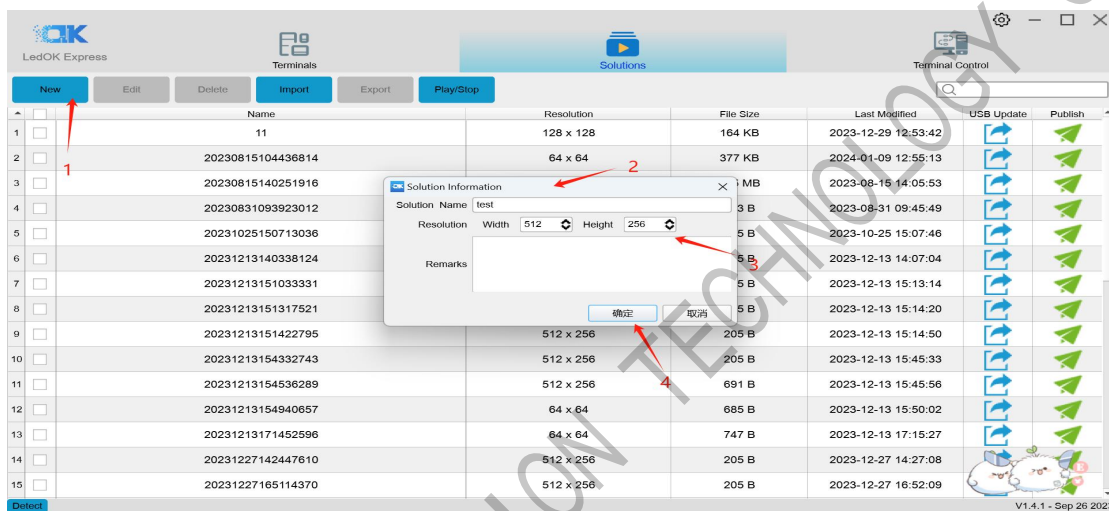


4

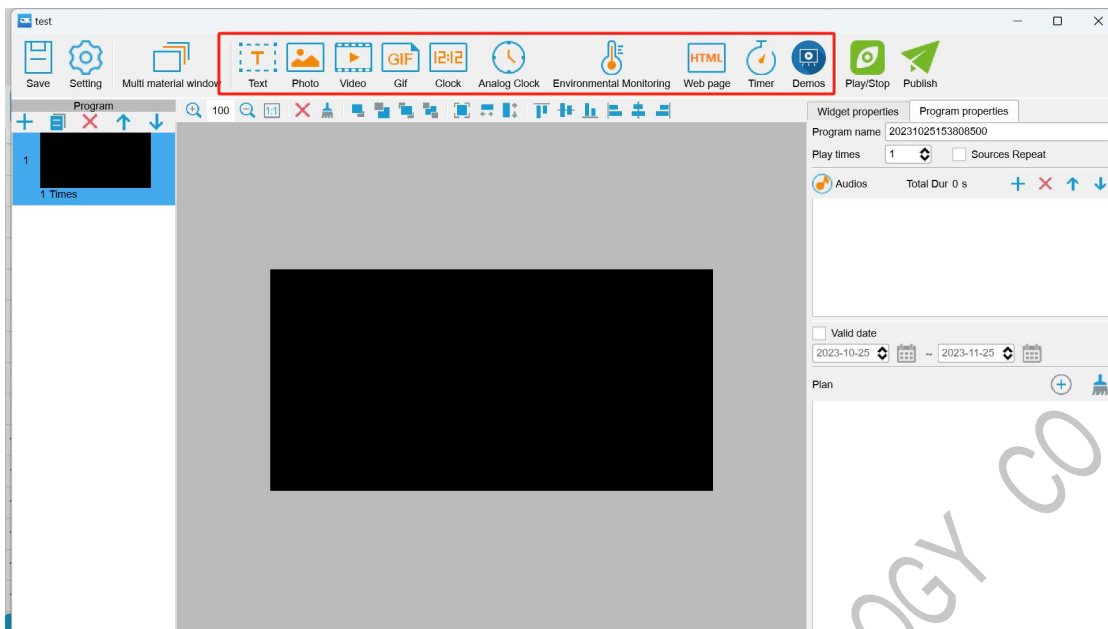
Notes : Refer to the LedSet4.0 operating manual for more details.

LEDOK Upload /Publish Program

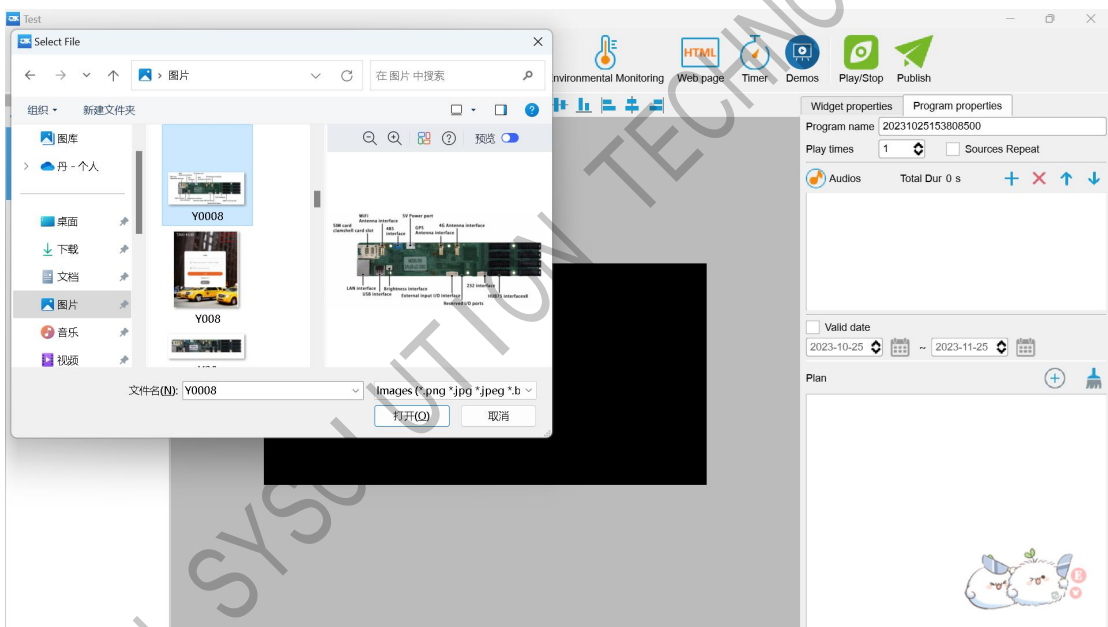
1. Open the program management interface, its name is Solution in software, then click 'New' , input the program name and size information in the dialogue box and enter the editing interface.



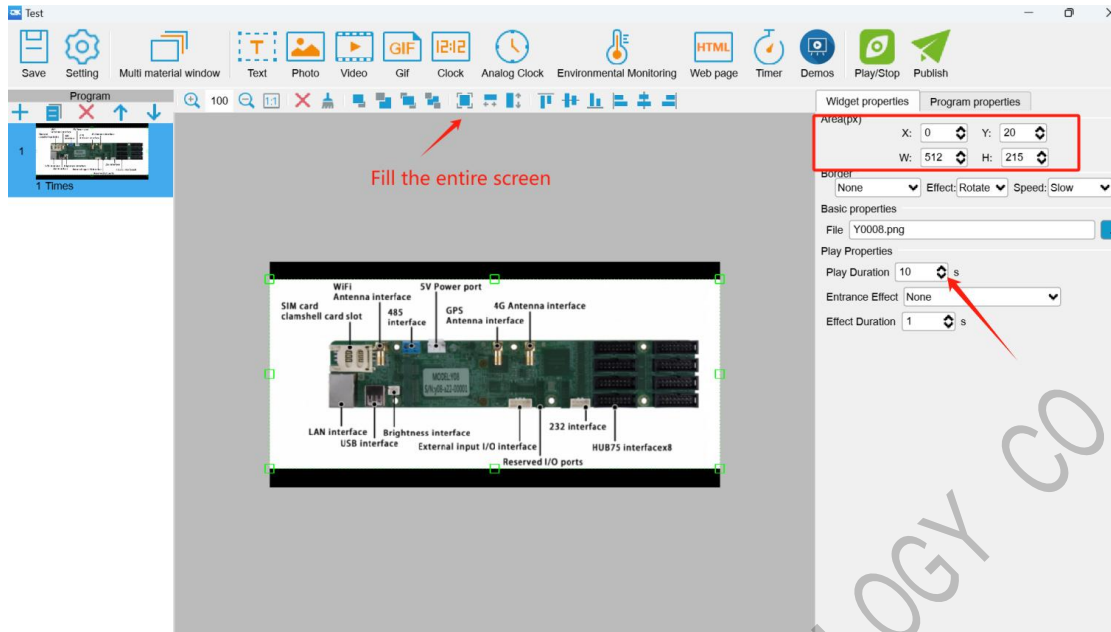
2. As shown in the figure, the top is the type of material that can be added, you can add video, pictures, text, digital clocks, analog clocks, etc., according to the need to choose, this article to pictures and videos as an example.



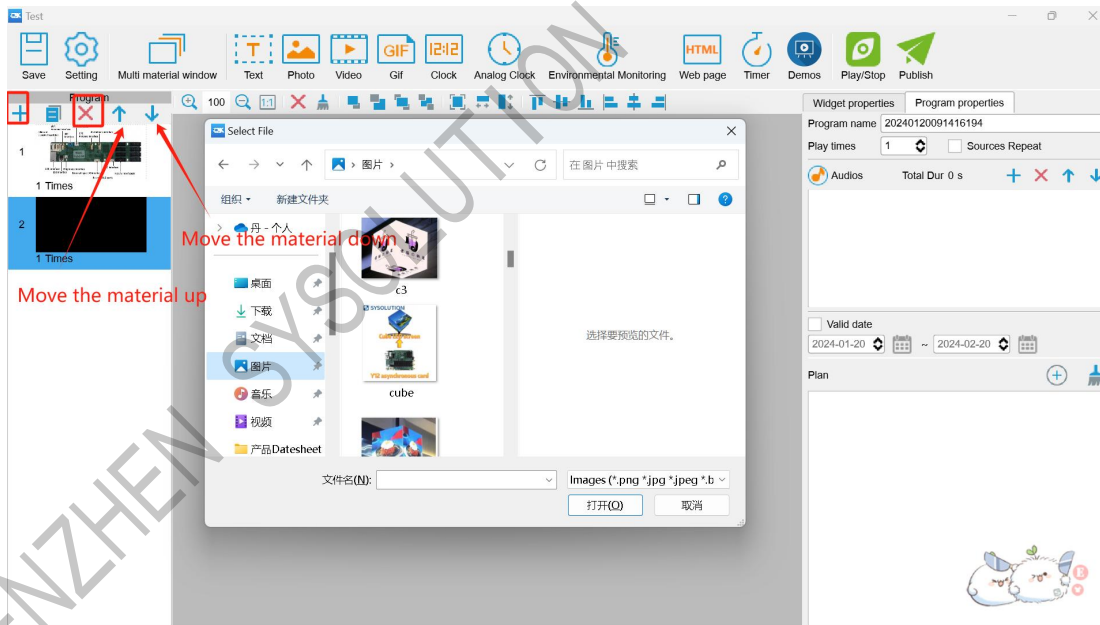
3. Click on the picture and select the picture you want to play.



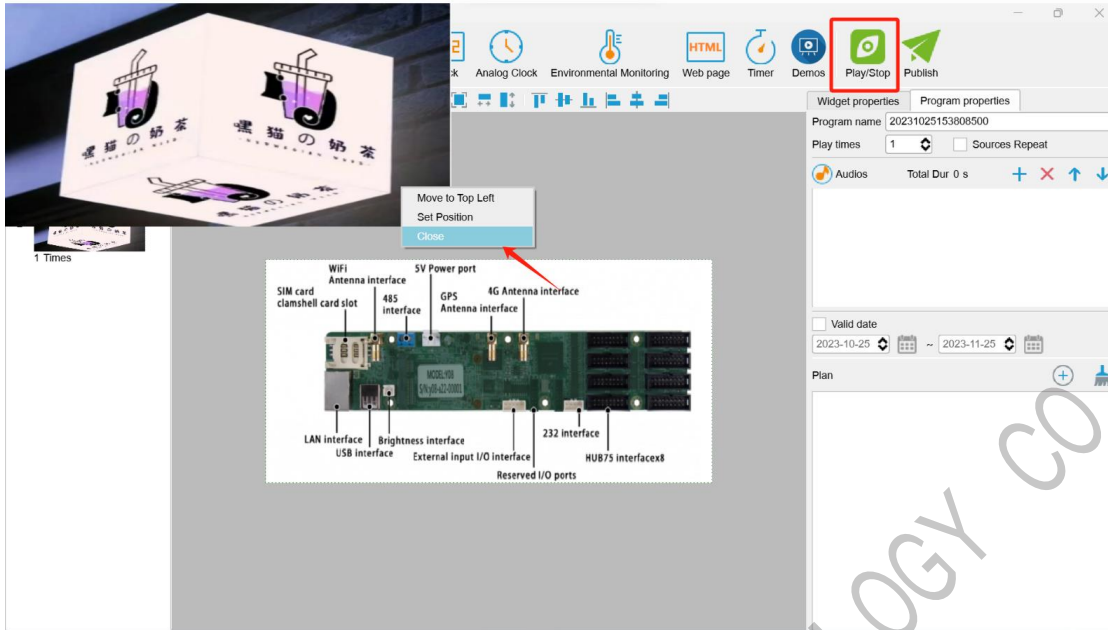
4. After the photo is added, you can click 'full screen' to make the photo spread all over the screen, or you can set the size of the material to make it full screen in the component properties on the right side. The default playback time of the added photo material is 10s, if you need to change the playback time, you can change it in the widget properties.



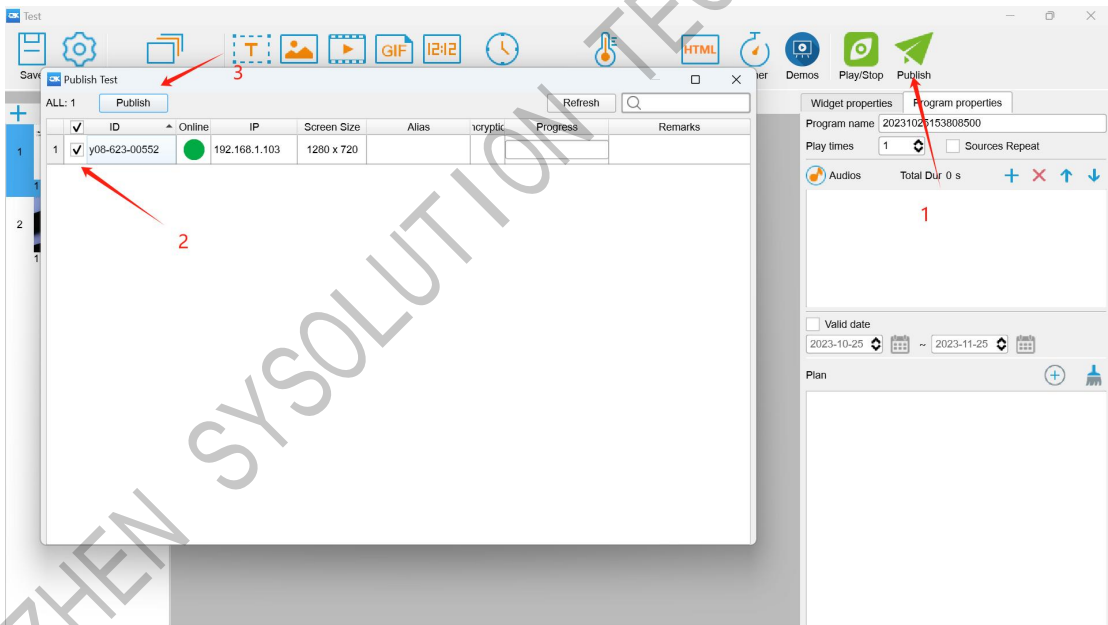
- Click the '+' at the top left to add a second material and the 'X' to delete the material page.

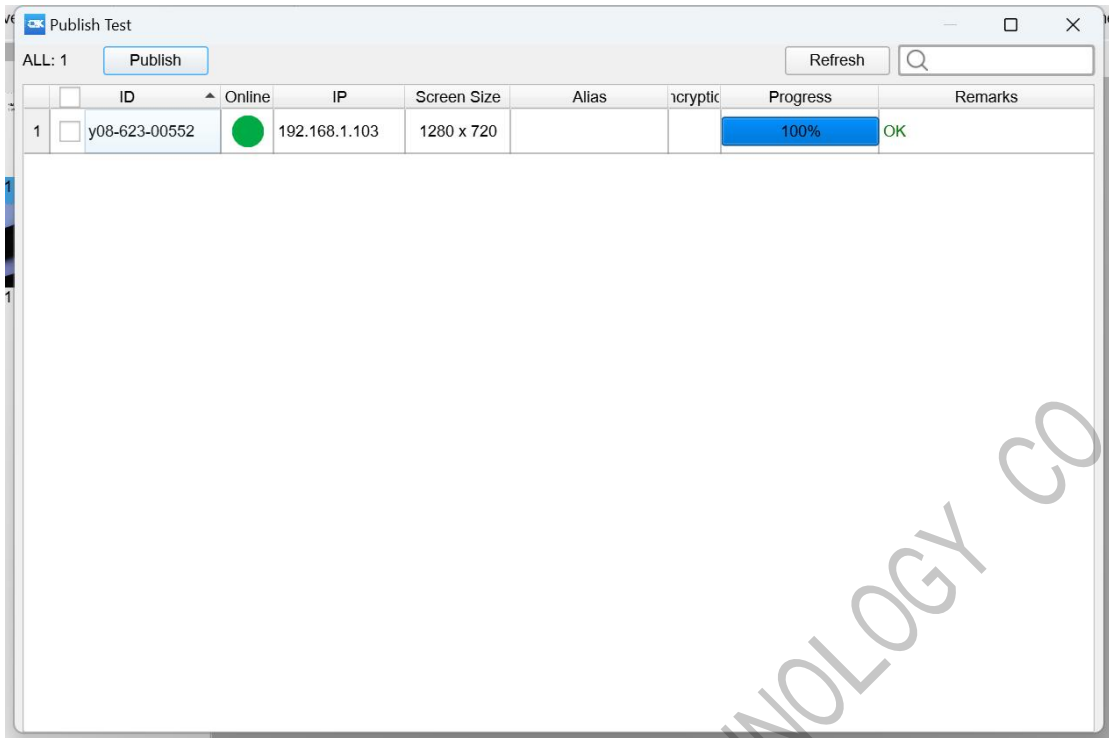


- When the program is finished, you can click 'Play/Stop' on the top to preview the program. You can close the preview by clicking the right mouse button.

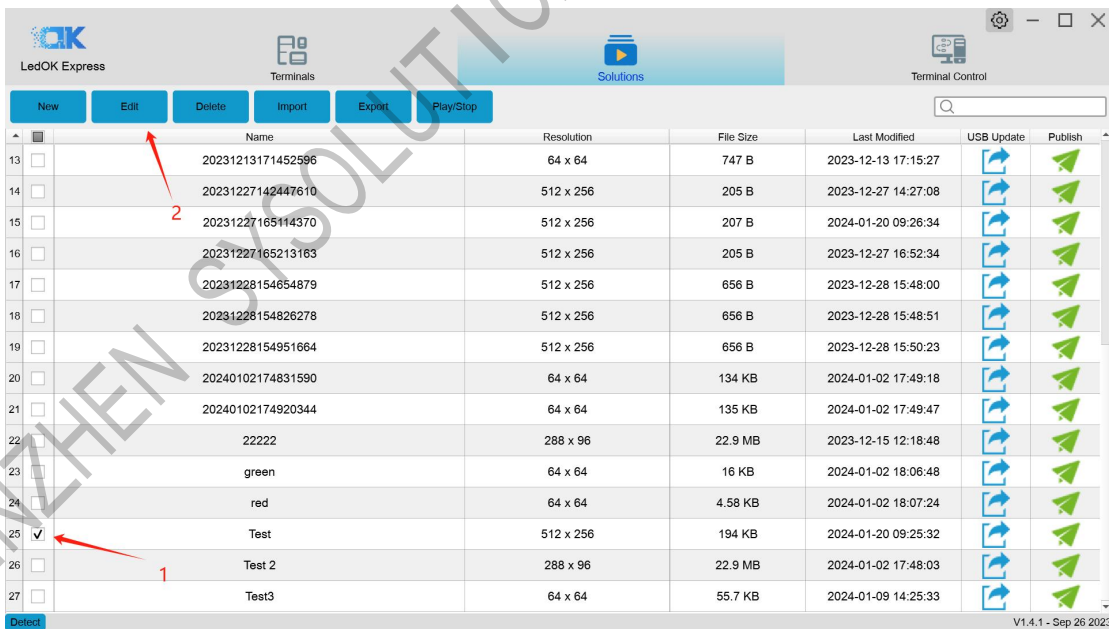


- Click publish button after done all setup, and select the controller id and click send, 100% means send success.





8. The finished program will present in the solution management. At this time, you can check the program and click "Edit" to enter the program page again to modify the program, and then follow the above steps to send the program.

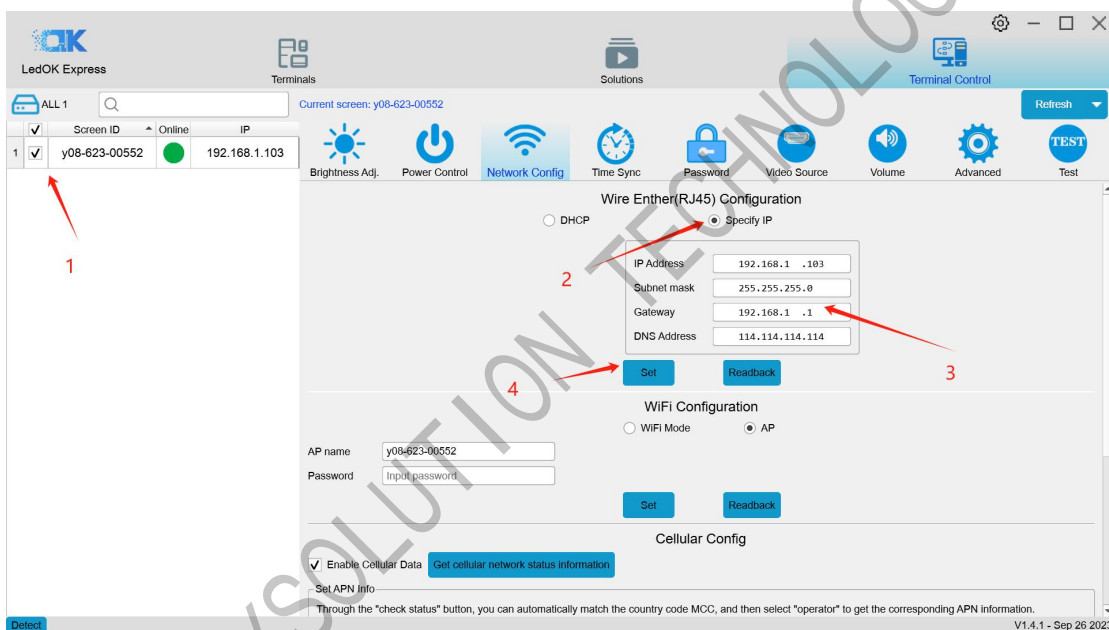


Network Configuration

There are three ways for the controller to access the network, which are Wired Ethernet, WiFi and 4G. Different models of controller according to the application to choose the way to access the network (one of the three options).

Wired Ethernet Configuration

Network configuration, first is Wire, can setup the controller IP address.



NOTES:

1. Controller will get access to internet by wire as first priority.
2. Must remove the LAN cable from controller if choose WIFI or 3G internet and choose automatically acquisition IP.
- 3.

WiFi Configuration

Turn on WIFI and scanning WIFI hotspot, then enter wifi password and click save.

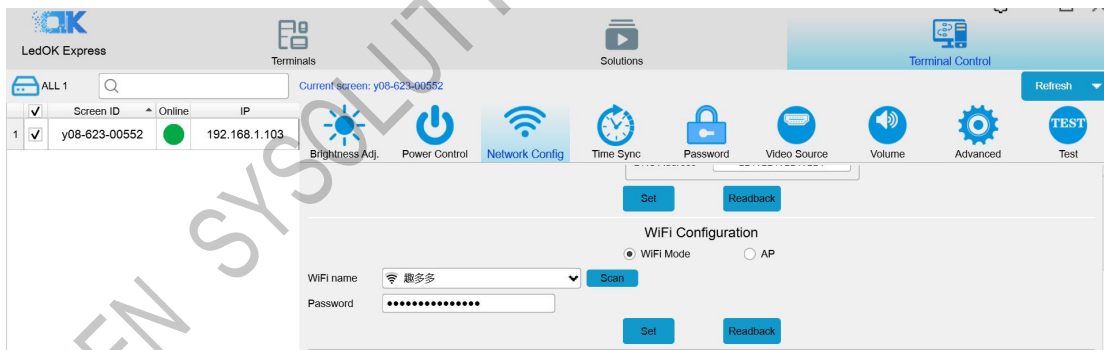
Wait for about 3 minutes, controller will come online. Please watch the "Internet" light, if it flashing regularly means online success, go to AIPS platform and check it.

Check 'WiFi' and wait for about 3 seconds, then click "Scan" to scan for available WiFi.

Select WiFi and enter the password, then click 'Save' to save the WiFi configuration to the controller.

NOTES:

If there is a network cable inserted into the controller at this time, you need to unplug the cable. If there is a WiFi dip switch on the controller, you need to dial the dip switch to the WIFI position, and the controller will automatically connect to the configured WiFi hotspot.



Wait for about 3 minutes, controller will come online. Please watch the "Internet" light, if it flashing regularly means online success, go to AIPS platform (www.ledaips.com) and check it.

NOTES:

1. If could not scanning the WiFi, please try to turn on/turn off Software or WiFi Switch.

2. If controller can't get access to internet through WiFi, please double check the steps below:
 - A. WiFi antenna plug correctly.
 - B. WiFi password is correct or not.
 - C. If the Wireless router being accessed too many terminals?
 - D. E series controller switch on WIFI mode?
 - E. Try another WIFI hot spot.
 - F. Y/M series controller, please make sure the LAN cable removed.

4G Setup

Check 'Enable Cellular Data' and select the country code MMC through the drop-down frame. Select 'carrier name' to get the APN information, and the specific identification of the carrier is shown in Figure 2; if you can't find the carrier, you can manually input the carrier information and APN information.

Click 'Set', after success, wait for about 3 minutes for the controller to automatically unplug the 4G network into the network; observe the 'internet' light of the controller flashing evenly and slowly, that is to say, it has been accessed to the cloud platform.

If the 'internet' light does not flash, check whether the APN is set correctly. If there is no error, you can reboot the controller and wait for it to go online.

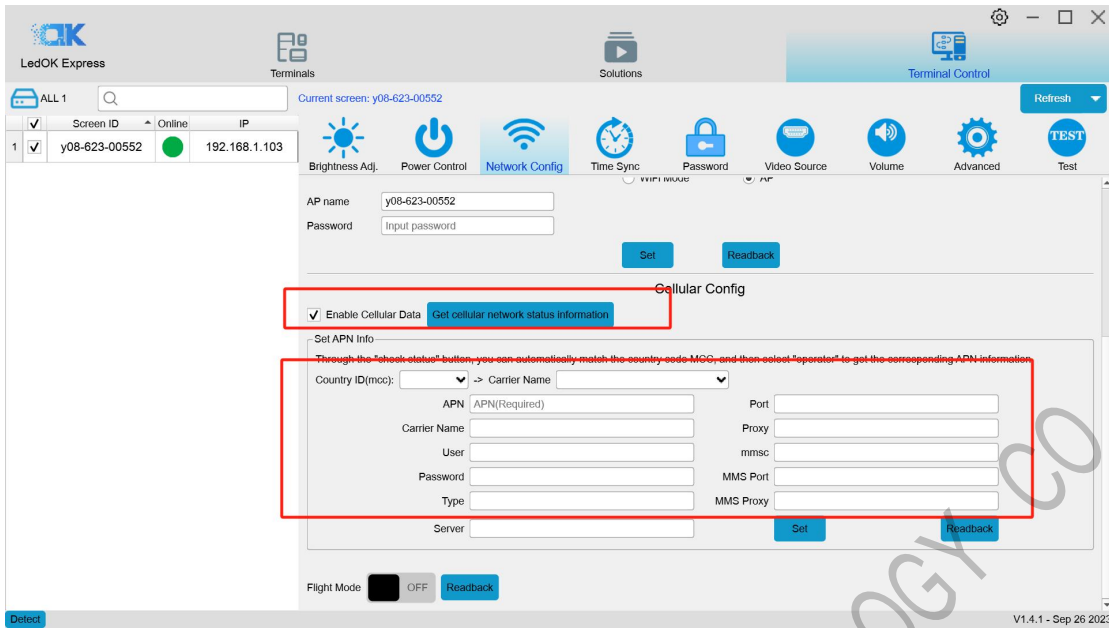


Figure 1



Figure 2

NOTES: If controller can't get online success, please checking following things:

- A. 4G antenna has plugged correctly?
- B. Y/M series controller, make sure the LAN cable removed.
- C. APN is correct or not? (Consult with the carrier" available)
- D. SIM card has activate? SIM card has enough money and 4Gdata service?

AIPS Cloud Platform Register

Register For AIPS Platform

Visit www.ledaips.com and choose Register to starting input related information, click done and verified the link sent by email, finish the register.

USER LOGIN

LANGUAGE

English

ADMIN ACCOUNT

Admin Account

ADMIN PASSWORD

Admin Password

Login

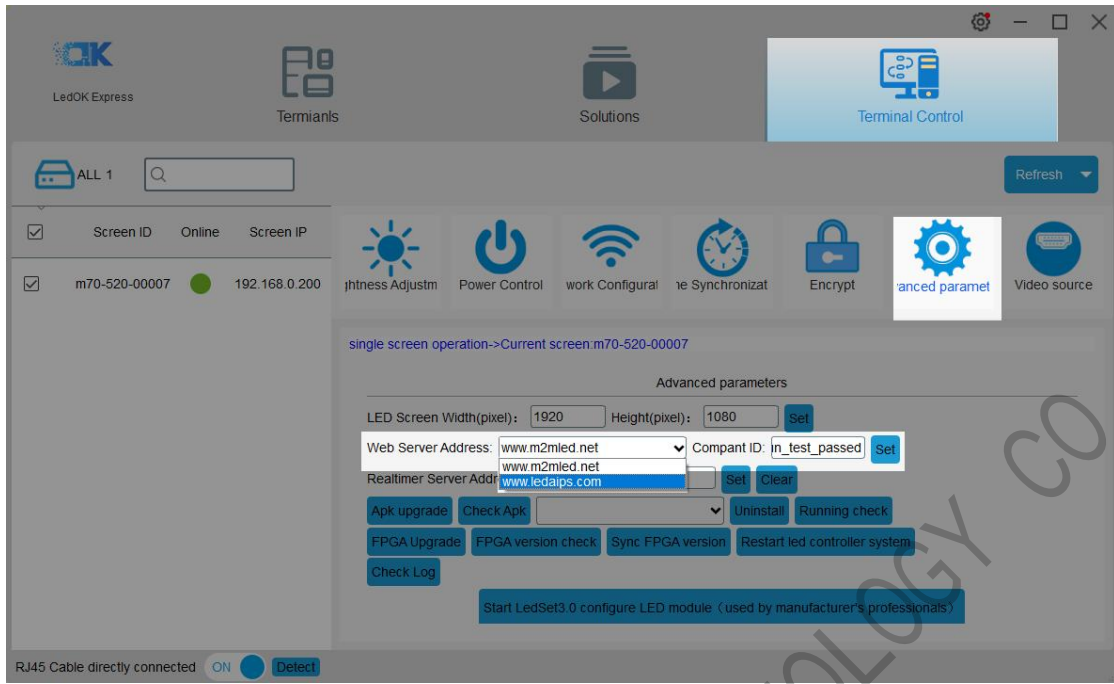
[Reset password](#) [Join](#)

[Download guide video and documents](#)

SYSOLUTION

We currently recommend the use of Google Chrome for the best experience.
[Click here to download](#)

Oversea address: www.ledaips.com



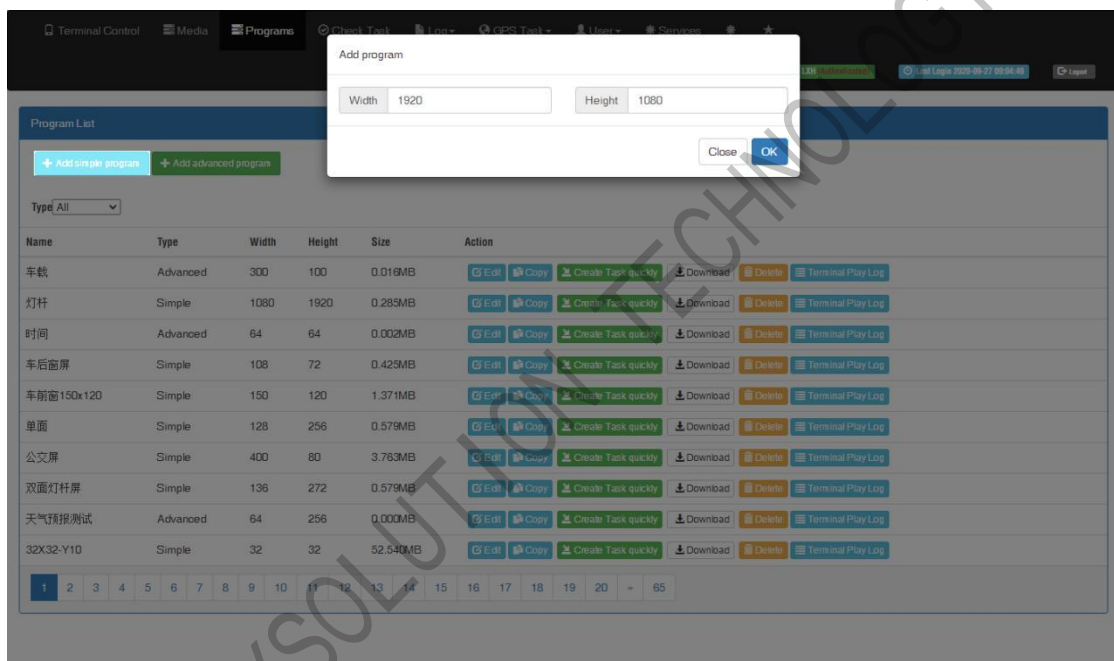
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AIPS Cloud Programing

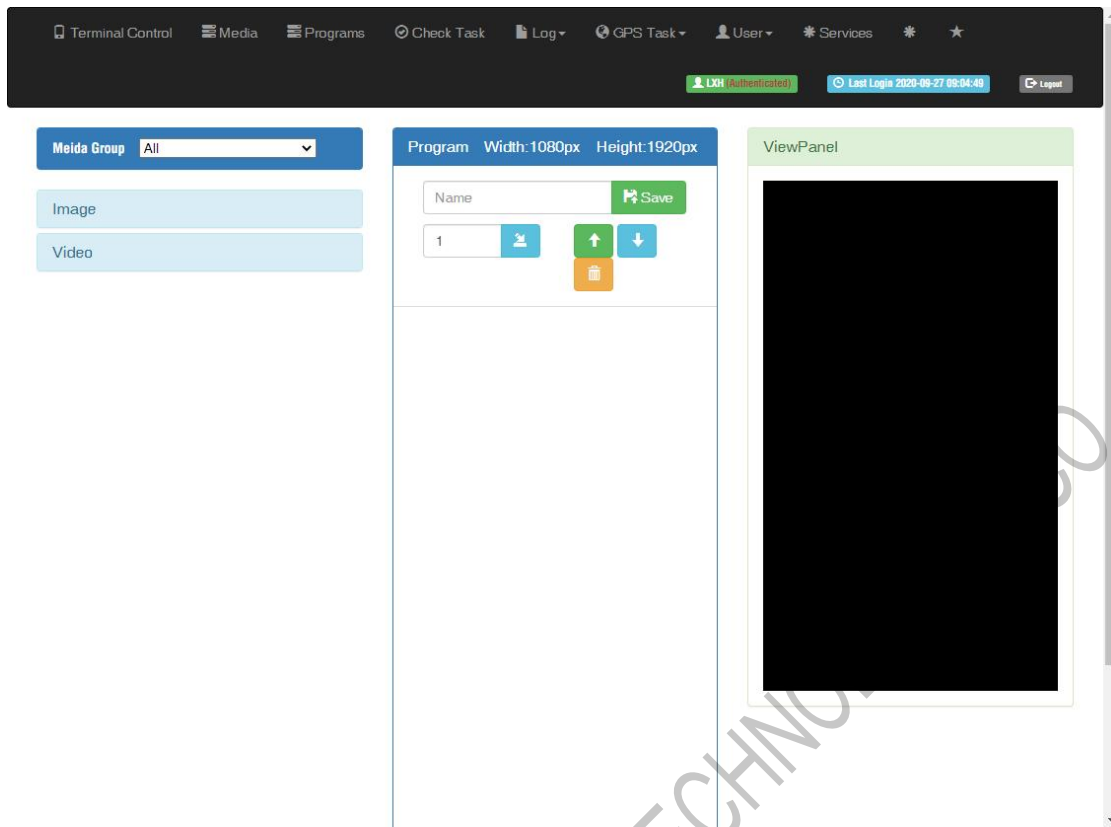
Simple Program

Make simple program ----only support image or video files

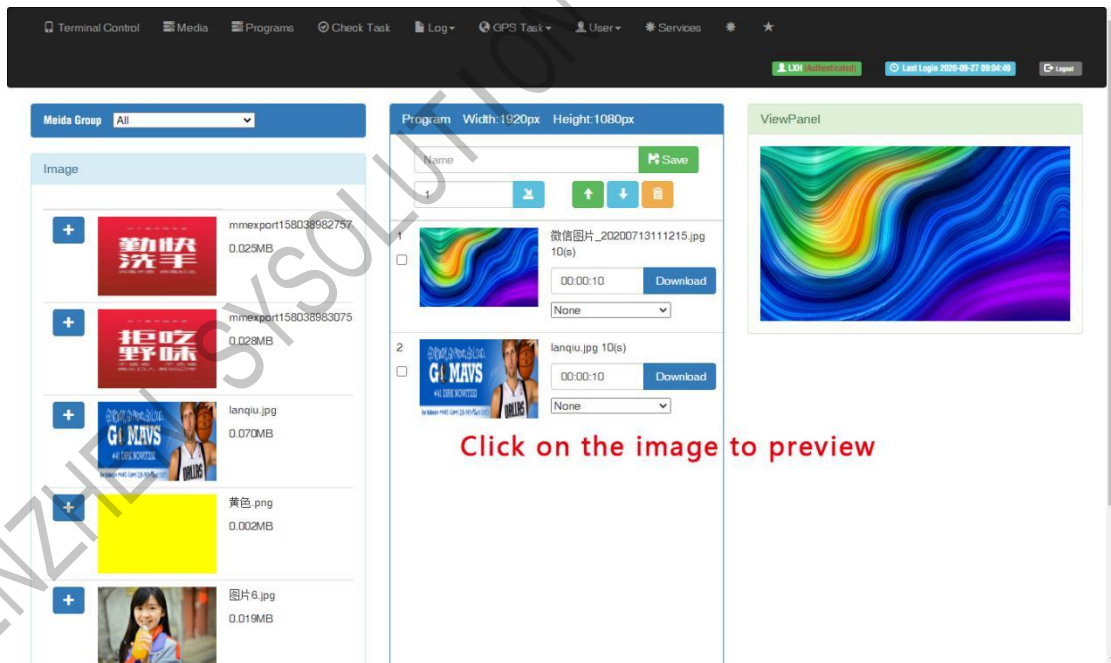
1. Click “add simple program” button and set correct screen width and height pixels and click OK.



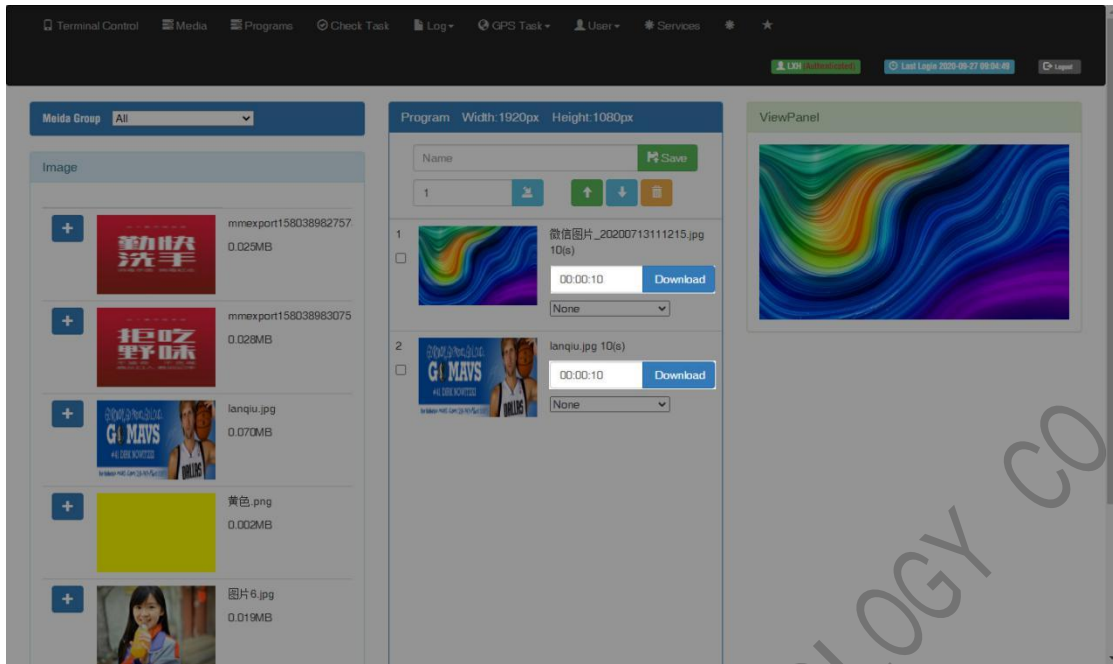
2. Input program name and select the material from left side , here are 3 zones including material in the left side , program editing in the middle and preview window in the right side.



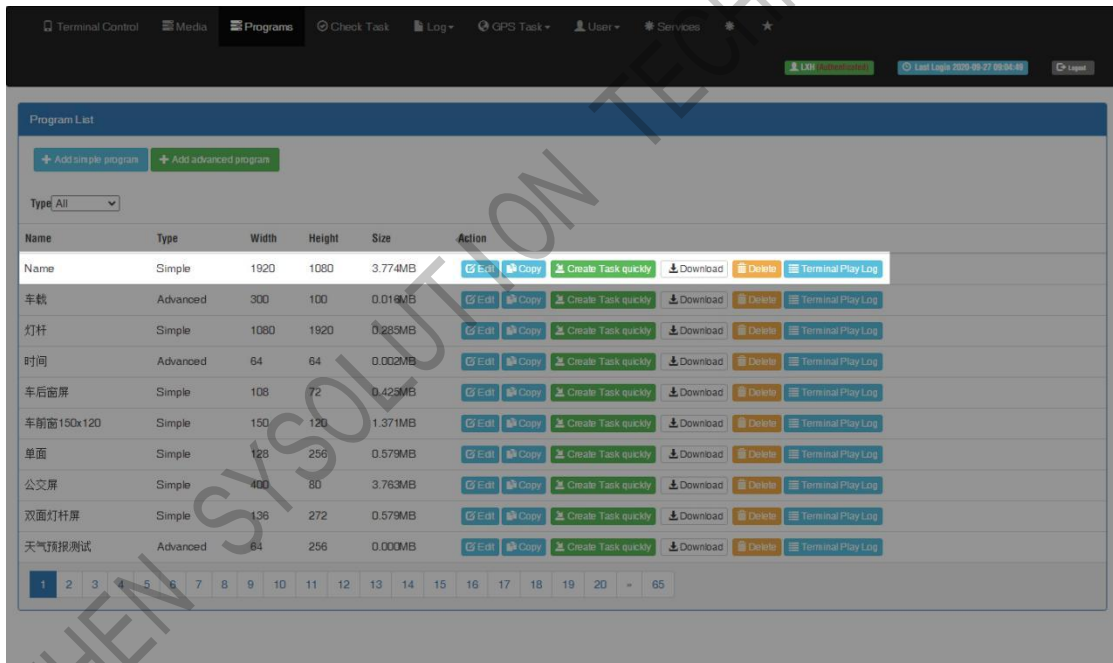
3. Choose materials and set program name, can check preview in the right window.



4. Can set the display duration time here, see screenshot in below:



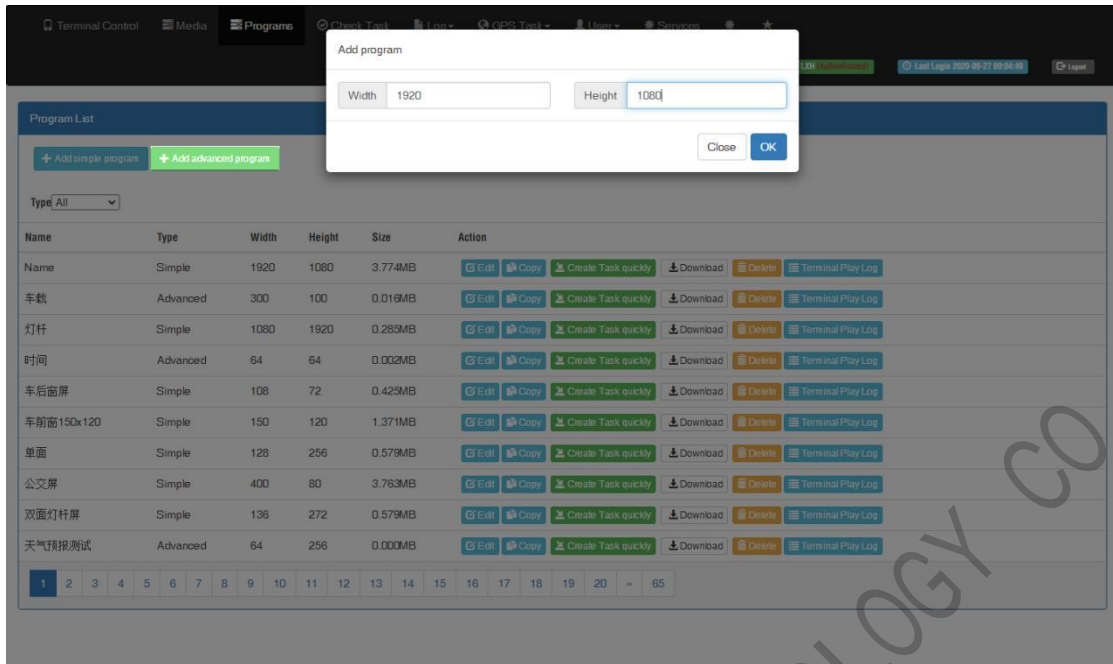
5. Will see program in the list after save.



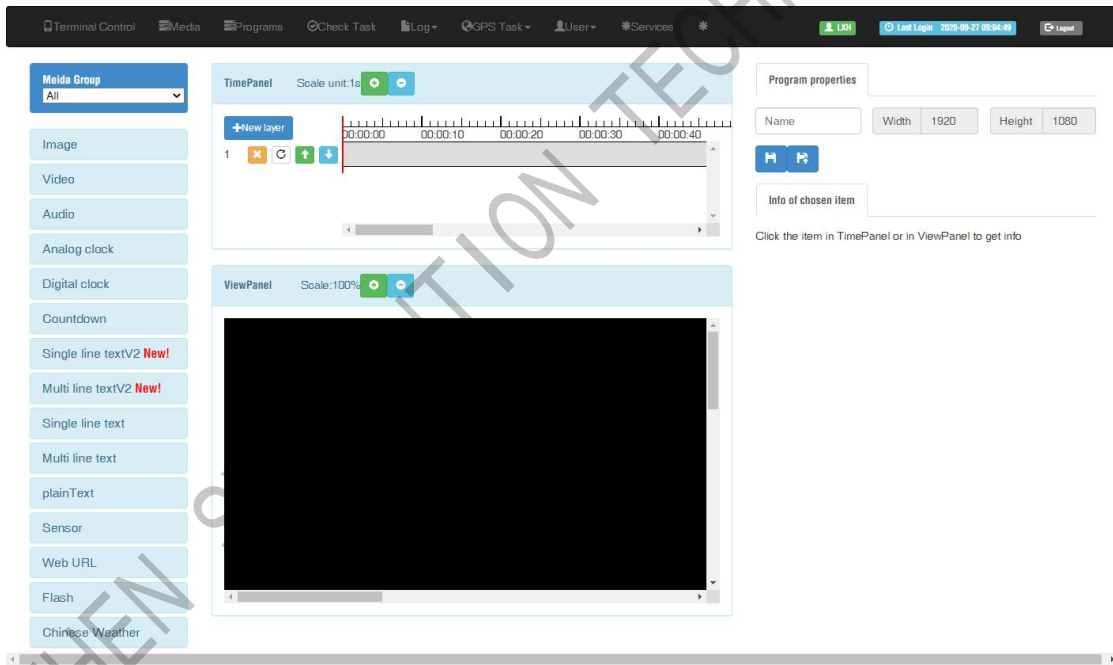
Advanced Program

Advanced program including image, video, clock, text, audio and support more layers.

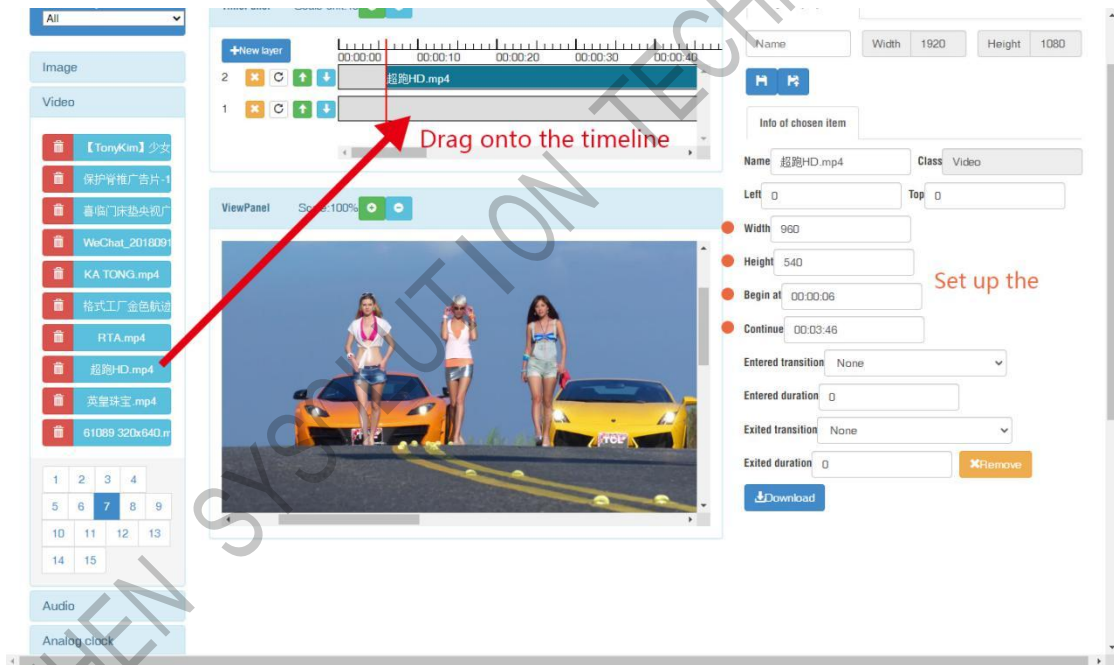
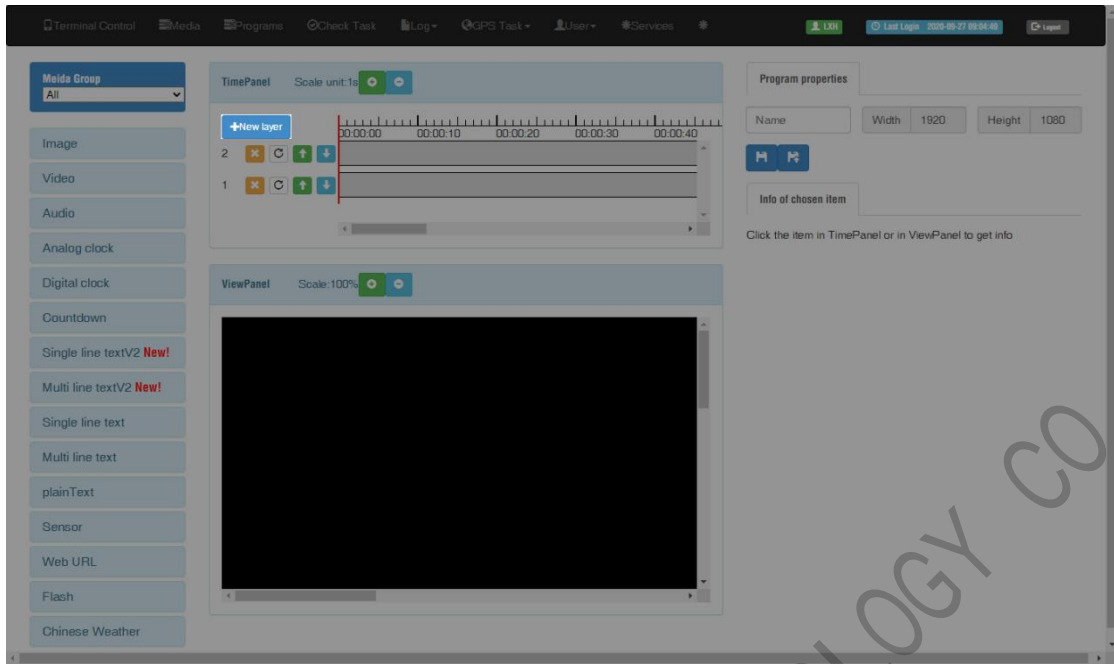
1. Click "add advanced program" button and set correct screen width and height pixels, click ok.



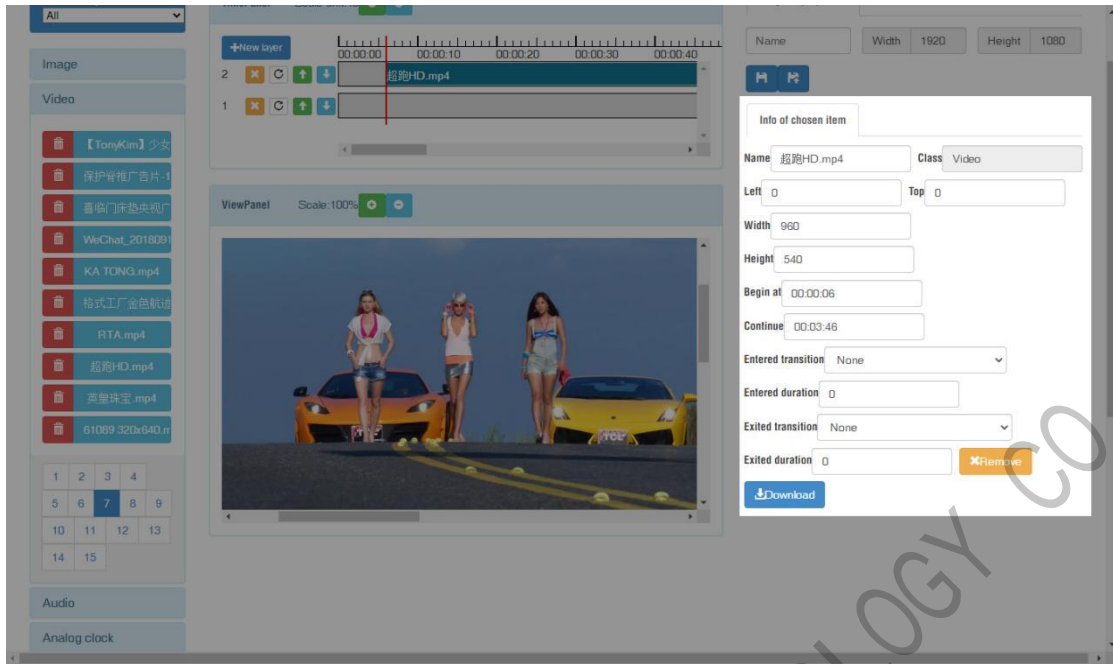
Here are 4 zones including media group, time panel, preview and program property.



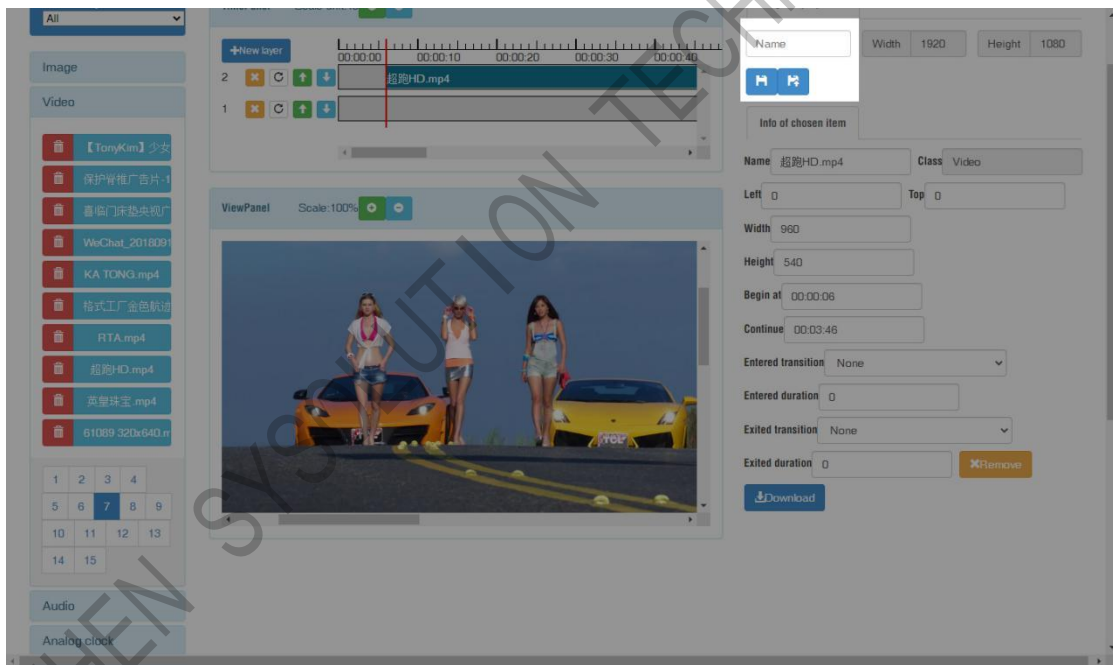
- Click "New layer" button and select media file then add to the time panel, for example: select video file and add to time panel.



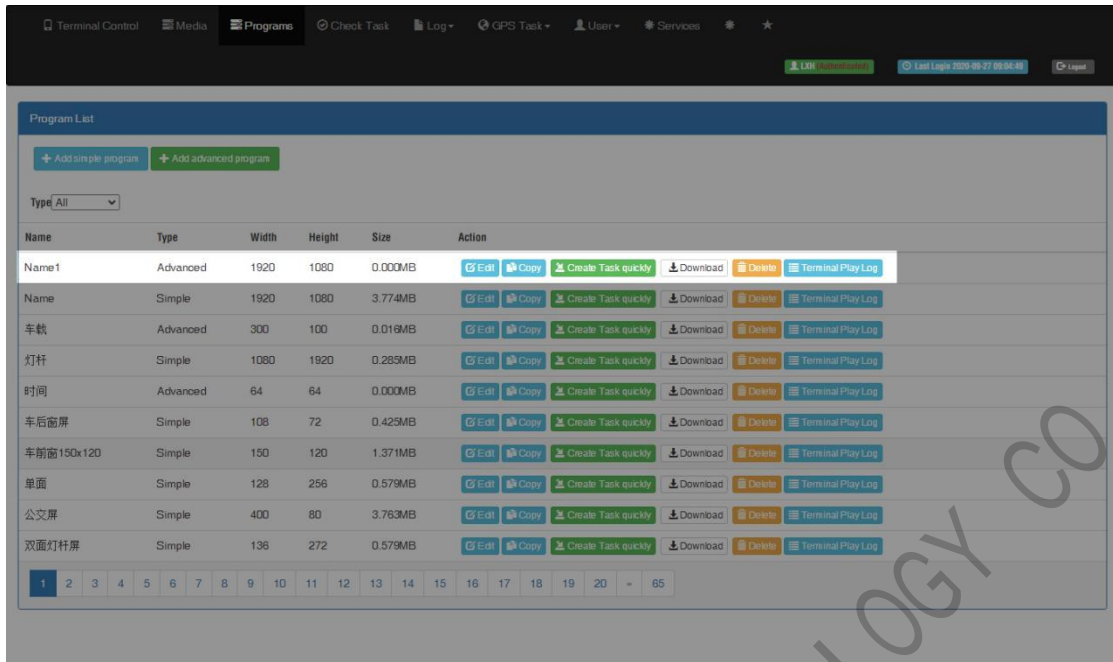
3. Can set the program parameters, start and end time,



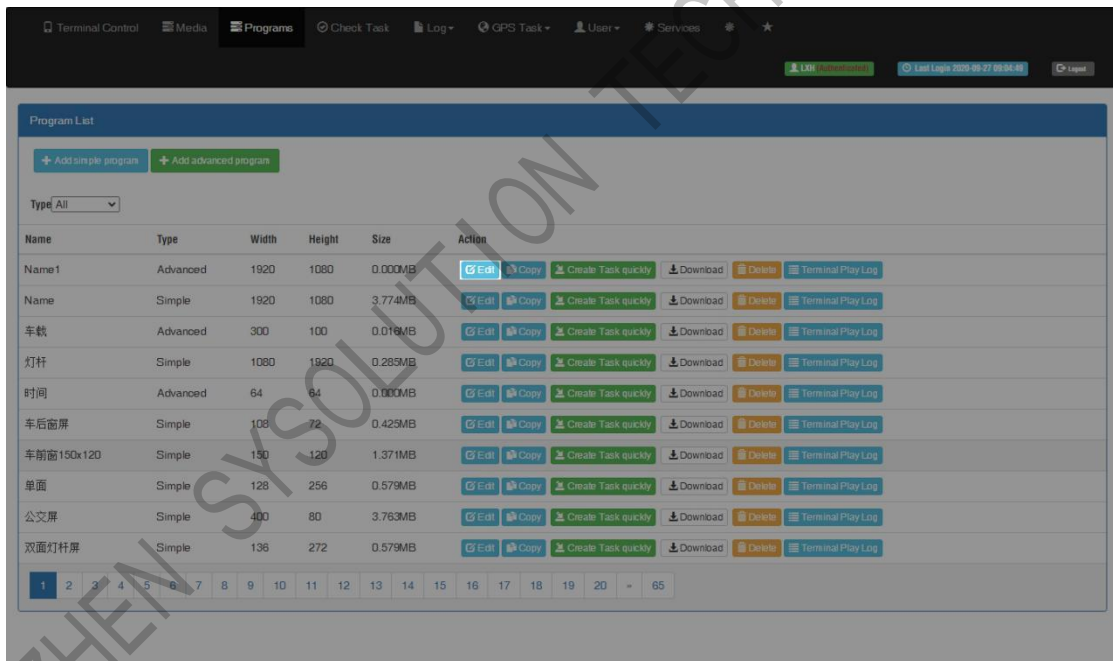
4. Save and quit after setup all parameters and program name.



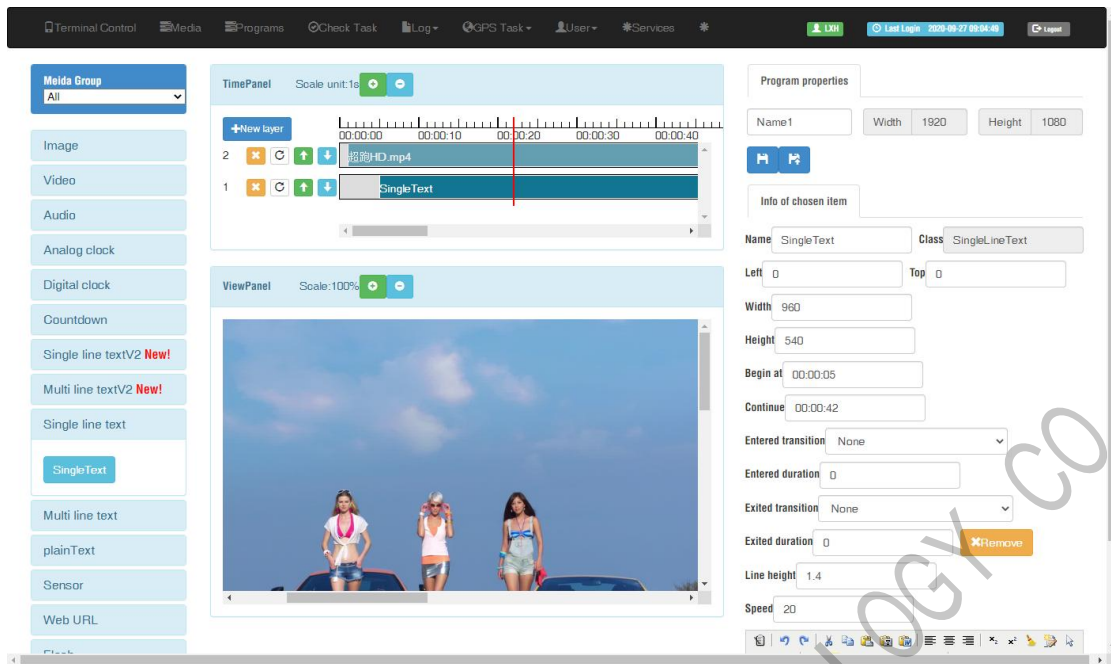
5. Then jump to program list interface , you can click green button of create task quickly and then select controller and send.



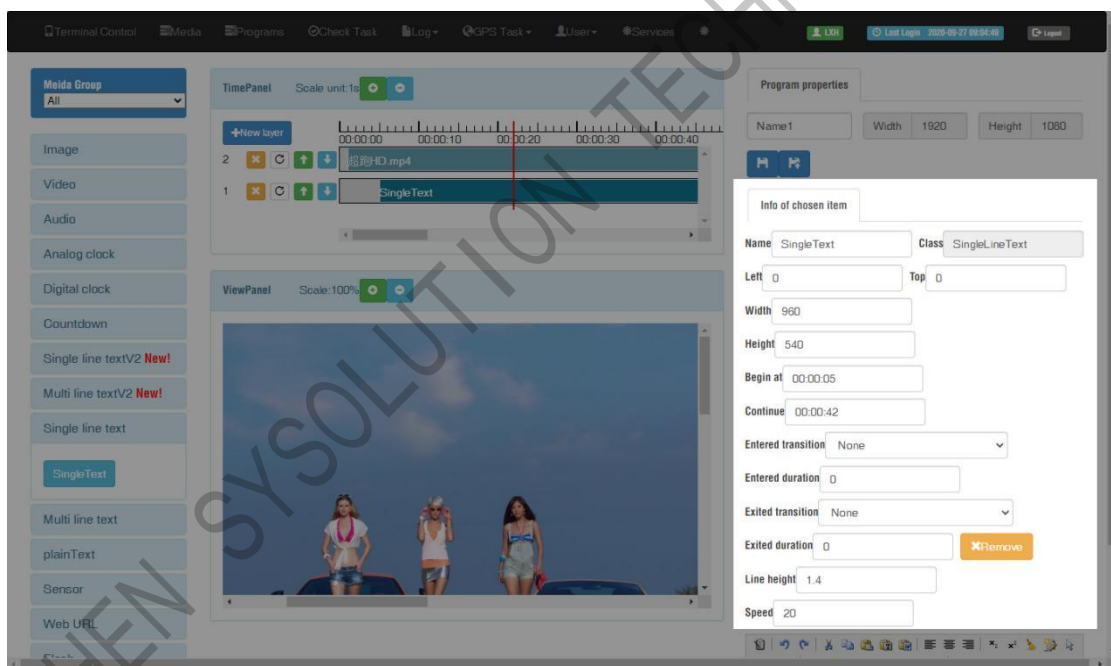
Use the "Edit" button to modify the existing program.



Add multi-line text, click the text (single or multi-text) and add to the time panel



Setup parameters for text, including the start and end time.



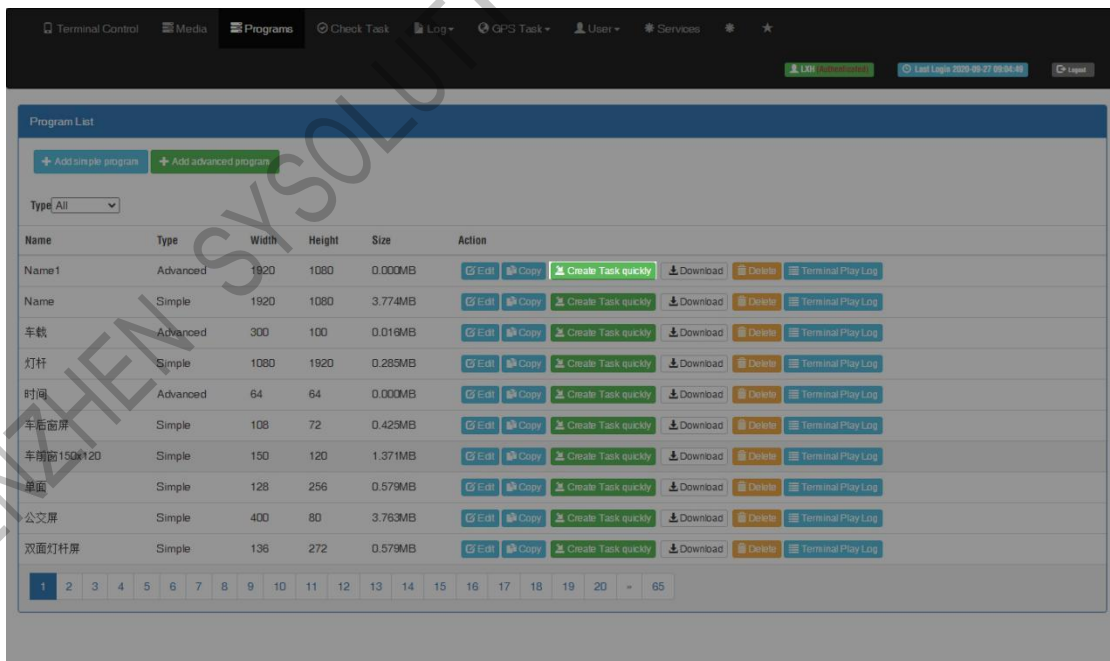
Setup the text color, font size and add more pages, please pay attention to our TIPS message in below, save and quit after finish.



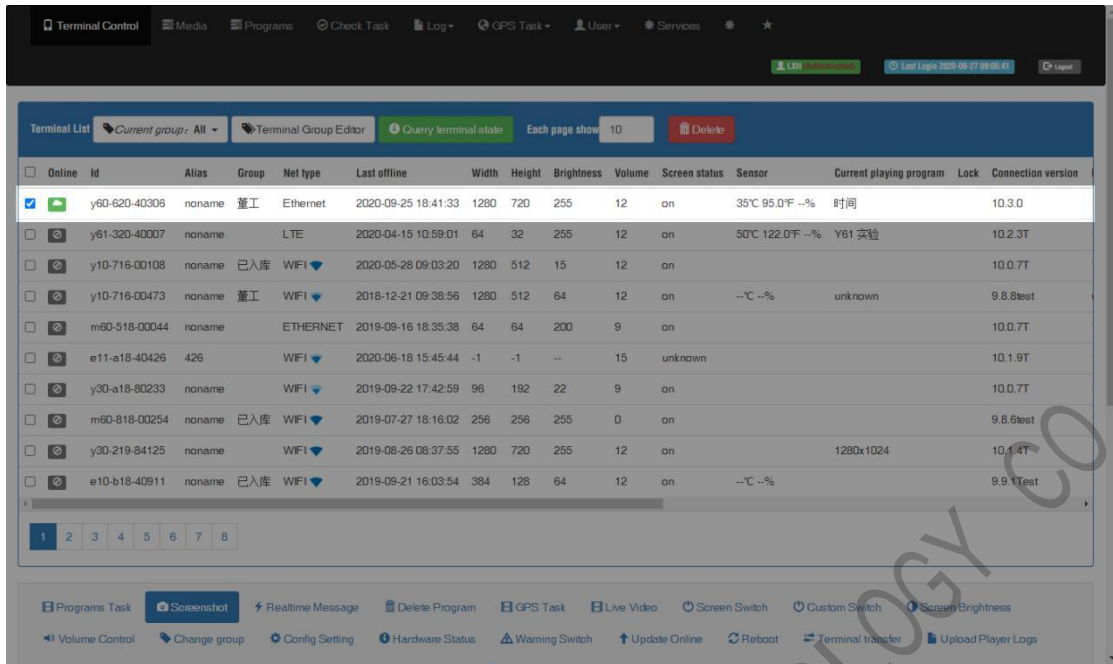
Hint Press Enter to separate next page, Press Shift + Enter to new a line. Define the following string instead of the value of sensors in terminal: %c is celcius, %f is fahrenheit, %h is humidity, (%c1 %f1) or (%c2 %f2) round to 1 or 2 digit(s) after the decimal point

Send Program

1. Click "create task quickly" button in the program list interface and will jump to the terminal interface directly.



2. Select the controller and send program



- In the bottom part of terminal interface, will see program task then choose the program task and click send.

