SYSOLUTION

LCD Controller

L20 Instructions

Version：Ver.1.0

Statement

Dear user friend, thanks for choosing Shanghai Xixun Electronic 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

No.	Version	Details	Date
1	Ver.1.0	Initial	18th Sep 2020

Note:The document is subject to change without prior notice.

Catalogue

Overview

L20 board integrates multimedia decoding, LCD driver, Ethernet, HDMI, WIFI, 4G, Bluetooth, supports most of the current popular video and picture format decoding, supports HDMI video output/input, dual 8/10-bit LVDS Interface and EDP interface, can drive various TFT LCD displays, greatly simplify the system design of the whole machine, TF card and SIM card holder with lock, more stable, very suitable for high-definition network playback box, video advertising machine and picture frame Advertising machine.

Note：

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Operation is subject to the condition that this device does not cause harmful interference.

Functions And Features

1. High integration: Integrate USB/LVDS/EDP/HDMI/Ethernet/WIFI/Bluetooth into one, simplify the design of the whole machine, and can insert TF card;
2. Save labor costs: The built-in PCI-E 4G module supports various PCI-E 4G modules such as Huawei and Longshang, which is more suitable for remote maintenance of advertising all-in-one machine and saves labor costs;
3. Rich expansion interfaces: 6 USB interfaces (4 pins and 2 standard USB ports), 3 expandable serial ports, GPIO/ADC interface, which can meet the requirements of various peripherals in the market;
4. High-definition: Maximum support 3840×2160 decoding and LCD display with various LVDS/EDP interfaces;
5. Complete functions: Support horizontal and vertical screen playback, video split screen, scrolling subtitles, timing switch, USB data import and other functions;
6. Convenient management: The user-friendly playlist background management software is convenient for advertising playback management and control. it is easy to understand the playback situation through Play log;
7. Software: LedOK Express.

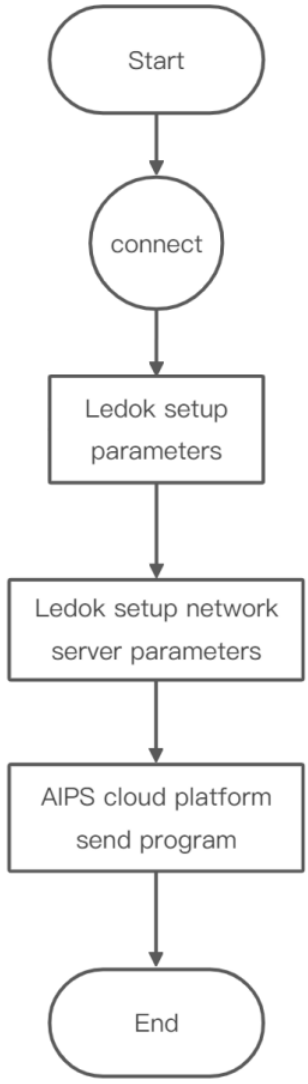
Interfaces

Technical Parameters

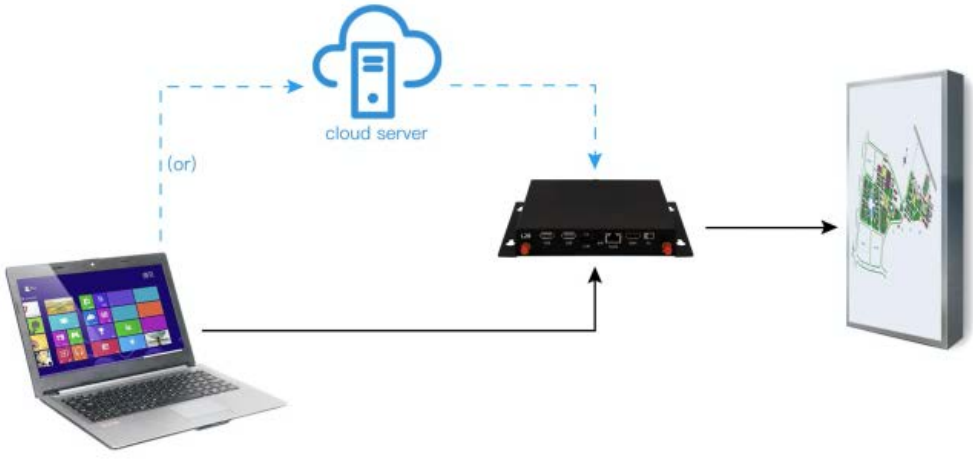
Main Hardware Indicators	
CPU	Rockchip RK3288 is the strongest quad-core 1.8GHz Cortex-A17 quad-core GPU Mail-T764
RAM	2G (default) (up to 4G)
Built-in Memory	EMMC 16G(default)/32G/64G(optional)
Built-in ROM	2KB EEPROM
Decoded Resolution	Supports a maximum of 3840 * 2160
Operating System	Android 7.1
Play Mode	Supports multiple playback modes such as loop, timing, and insertion
Network Support	4G, Ethernet, support WiFi/Bluetooth, wireless peripheral expansion
Video Playback	Support MP4 (.H.264, MPEG, DIVX, XVID) format
USB2.0 Interface	2 USB host, 4 USB sockets
Mipi Camera	24 pin FPC interface, support 1300w Camera (optional)

Serial Port	Default 3 TTL serial port sockets (can be changed to RS232 or 485)
GPS	External GPS (optional)
WIFI、BT	Built-in WIFI, BT (optional)
4G	Built-in 4G module communication (optional)
Ethernet	1, 10M/100M/1000M adaptive Ethernet
TF Card	Support TF card
LVDS Output	1 single/dual channel, can directly drive 50/60Hz LCD screen
EDP Output	Can directly drive EDP interface LCD screen with various resolutions
HDMI Output	1, support 1080P@120Hz, 4kx2k@60Hz output
HDMI Input	HDMI input，30pin FPC custom interface
Audio and video output	Support left and right channel output, built-in dual 8R/5W power amplifier
RTC real time clock	Support
Timer Switch	Support
System Upgrade	Support SD card/computer update

Software Operation Procedures

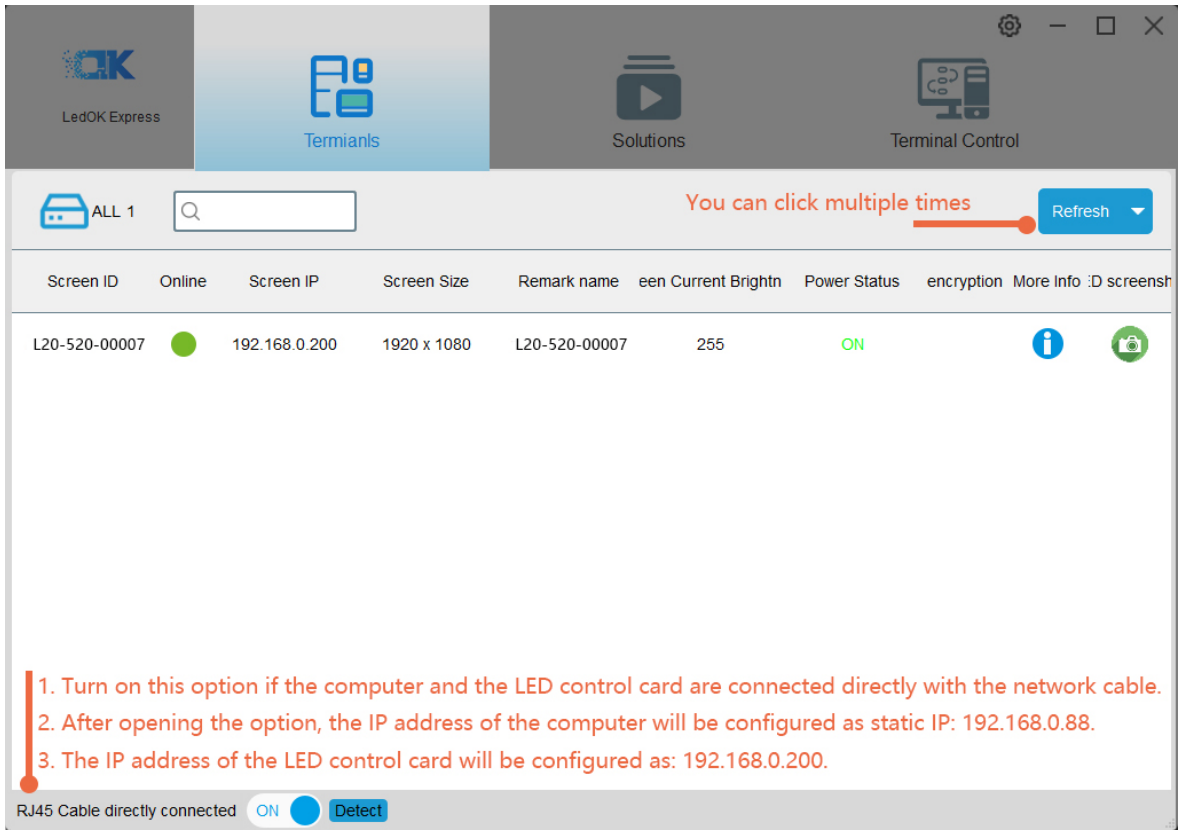


Hardware Connection Diagram



Software Connection

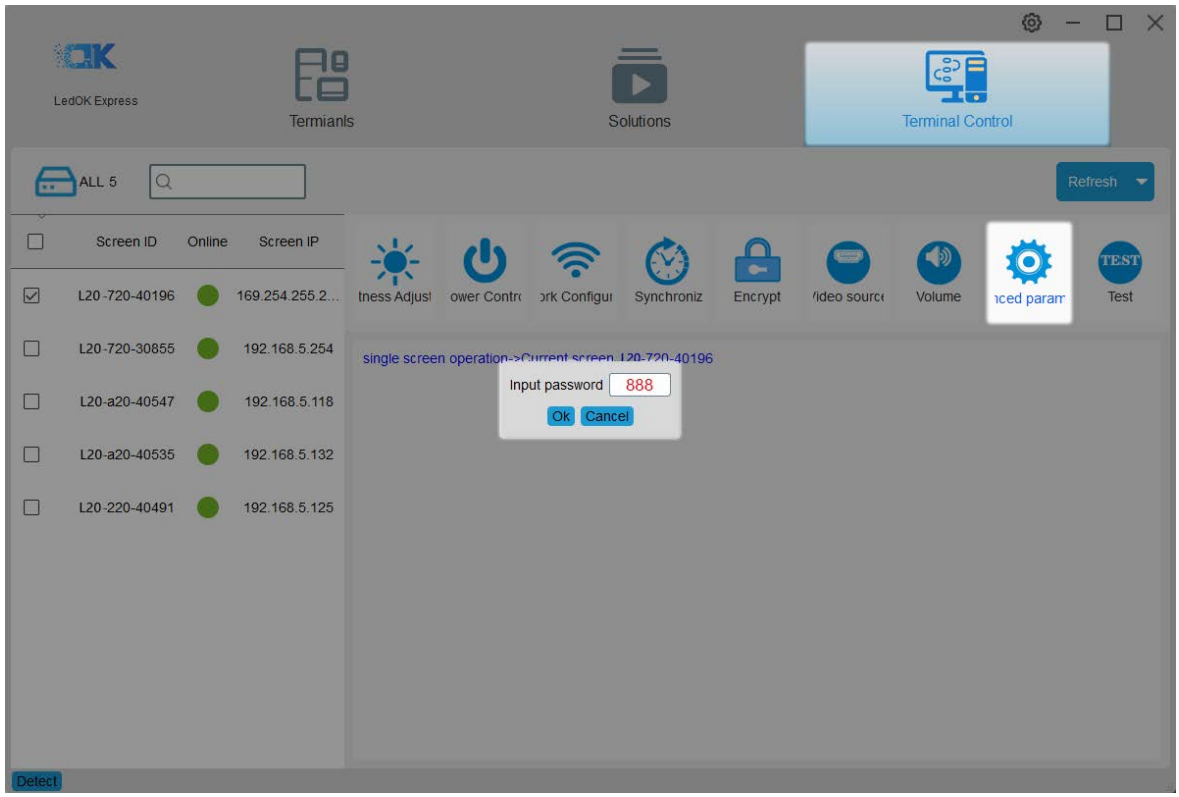
Confirm the hardware connection, open the LedOK Express software, and the sending card can be automatically detected in the device management interface. If the sending card cannot be detected, please click the refresh button on the right side of the software interface. If it is connected by a network cable, please open the "RJ45 Cable directly connected" in the lower left corner of the software interface.



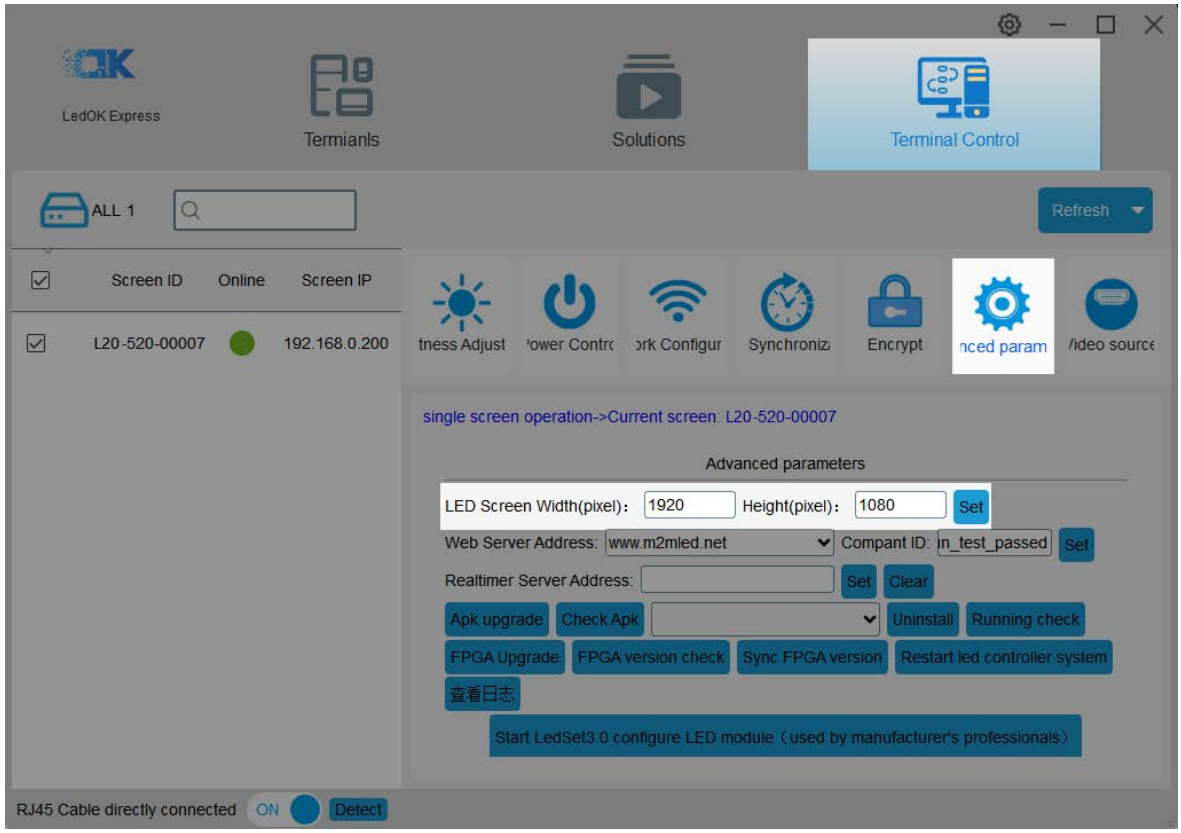
LedOK System Parameters

LED full screen width and height settings

Click Terminal control and select the controller，go to Advanced parameters and input password 888 to enter setup interface.



In the advanced configuration interface, enter the LED screen width and height parameters and click "Set" to prompt success.

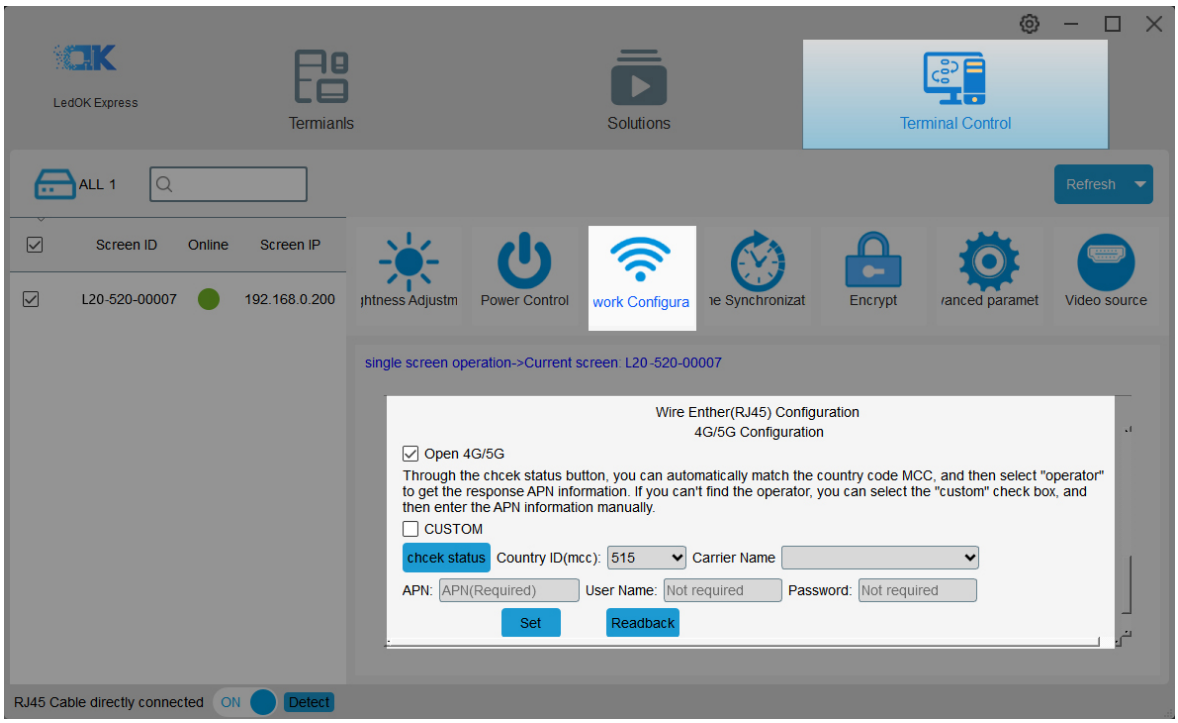

LedOK Express
Termianls
Solutions
Terminal Control
ALL 1
Refresh
Screen ID
Online
Screen IP
L20-520-00007
192.168.0.200
tness Adjust
'ower Contrc
ork Configur
Synchroniz
Encrypt
nced param
/ideo source
single screen operation->Current screen: L20-520-00007
Advanced parameters
LED Screen Width(pixel): 1920
Height(pixel): 1080
Set
Web Server Address: www.m2mled.net
Compant ID: in_test_passed
Set
Realtimer Server Address:
Set
Clear
Apk upgrade
Check Apk
Uninstall
Running check
FPGA Upgrade
FPGA version check
Sync FPGA version
Restart led controller system
查看日志
Start LedSet3.0 configure LED module（used by manufacturer's professionals）
RJ45 Cable directly connected
ON
Detect

LedOK Configuration Network

There are three ways for the control card to access the network, namely, network cable access, WiFi access, 3G/4G network access, and different types of control cards can choose the network access method according to the application (choose one of the three).

Method 1: Wired network configuration

Then open the network configuration interface, the first is the wired network, you can set the IP parameters of the selected control card.

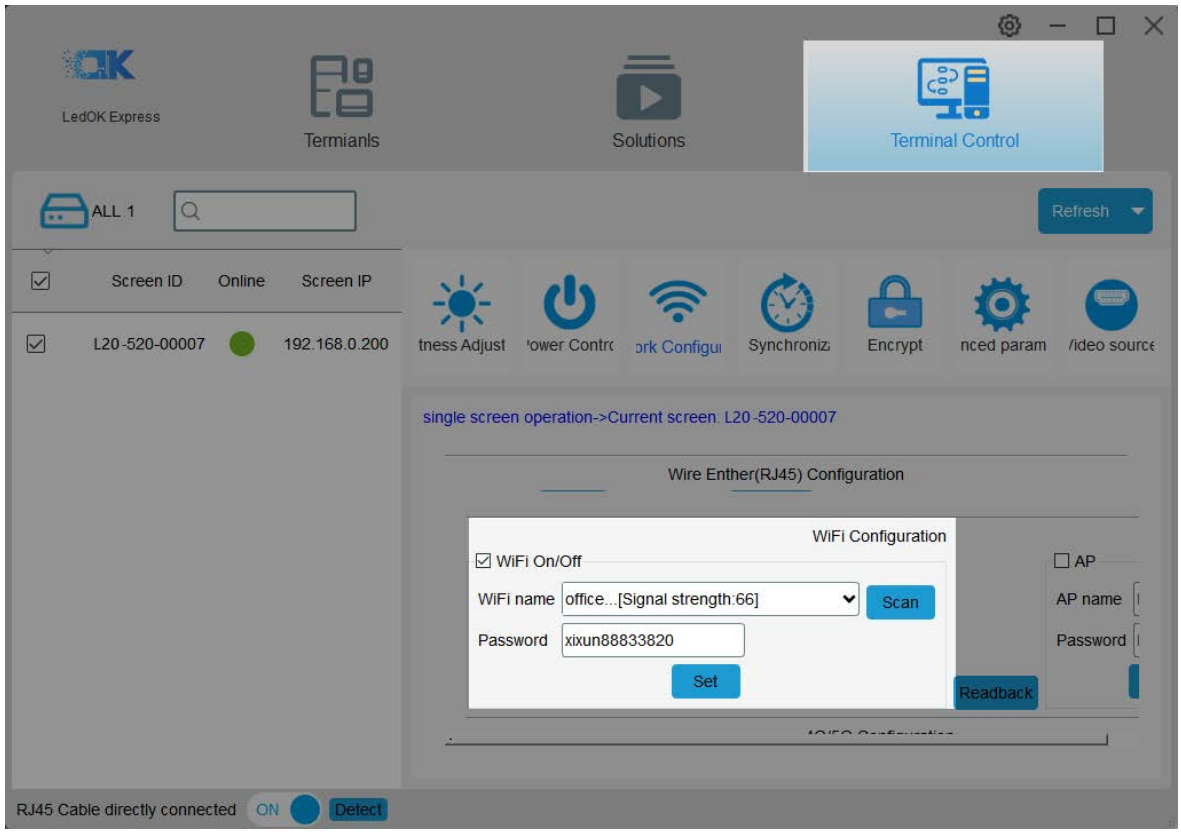


Control card access network priority wire network.

When selecting wireless WiFi or 4G network access, the wired network must be unplugged, and the IP address of the sending card is obtained automatically.

Method 2: WiFi enabled

Check WiFi Enable and wait for about 3 seconds, click Scan WiFi to scan available WiFi nearby, select the WiFi and enter the password, click Save to save the WiFi configuration to the control card.



After about 3 minutes, the control card will automatically search for the WiFi hotspot connected to the configuration, and the "internet" light on the control card will flash uniformly and slowly, indicating that it has connected to the cloud platform. At this time, you can log in to the cloud platform www.m2mled.net to send the program.

Tips

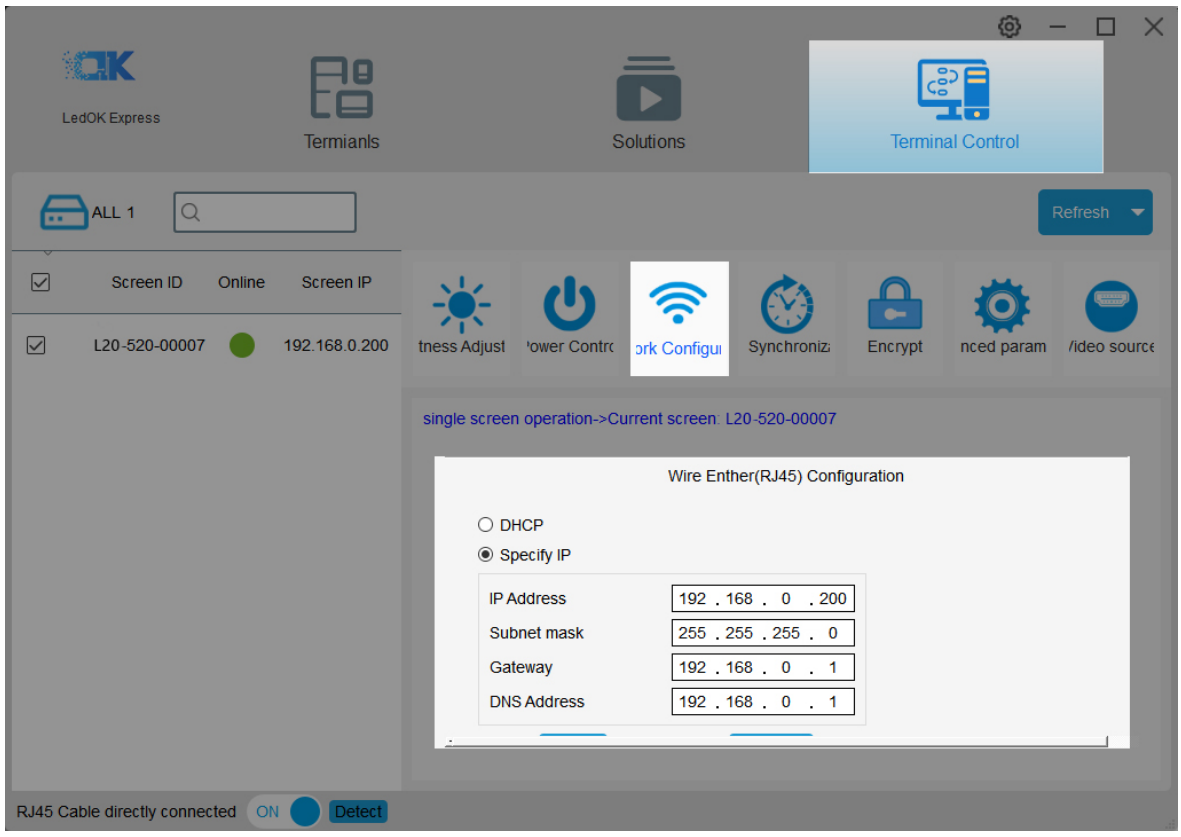
If the WiFi cannot go online, you can troubleshoot the following situations:

1. Check whether the WiFi antenna is tightened;

2. Please check if the WiFi password is correct;
3. Check whether the number of router access terminals has reached the upper limit;
4. Whether the E-card code is in the wifi location;
5. Re-select a WiFi hotspot to configure the connection;
6. Is the Y/M series wired network unplugged (priority wired network).

Method 3: 4G configuration

Check Enable 4G, the country code MMC can be automatically matched by the Get Status button, and then select "Operator" to get the corresponding APN information, if the operator cannot be found, you can check the "Custom" checkbox, Then manually enter the APN information.



After setting the 4G parameters, wait for about 5 minutes for the control card to

automatically dial the 3G/4G network to access the network; observe the "internet" light of the control card flashing uniformly and slowly, which means that the cloud platform has been connected, and you can log in to the cloud platform at this time. www.ledaips.com to send programs.

Tips

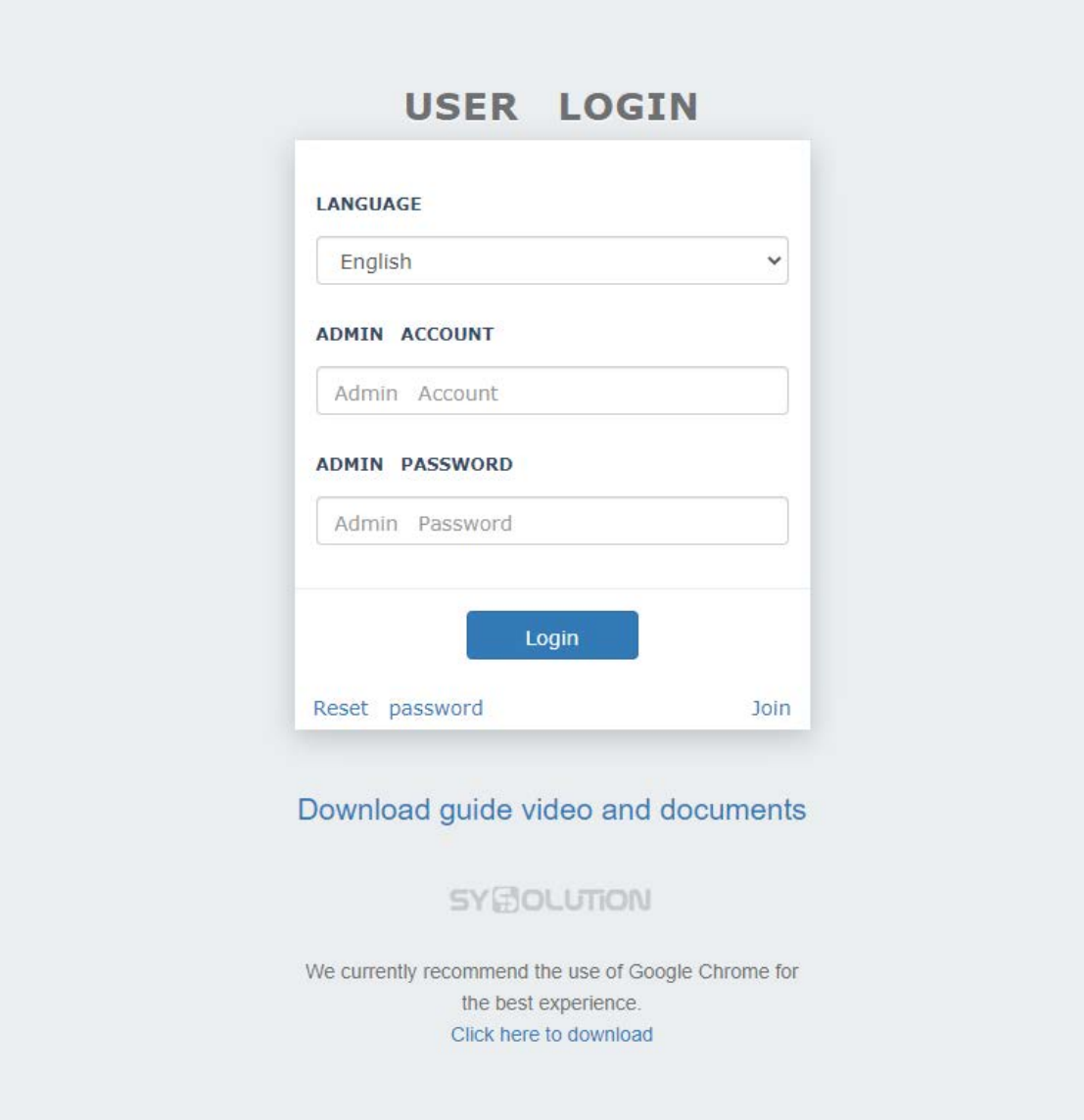
If 4G cannot go online, you can check the following situations:

1. Check whether the 4Gantenna is tightened;
2. Is the Y series wired network unplugged (priority wired network);
3. Check whether the APN is correct (you can consult the operator);
4. Whether the status of the control card is normal, and whether the available flow of the control card in the current month is greater than 0M;
5. Check whether the 4G signal strength is above 13, and the 3G/4G signal strength can be obtained through "Network Status Detection".

AIPS Cloud Platform Register

Cloud platform account registration

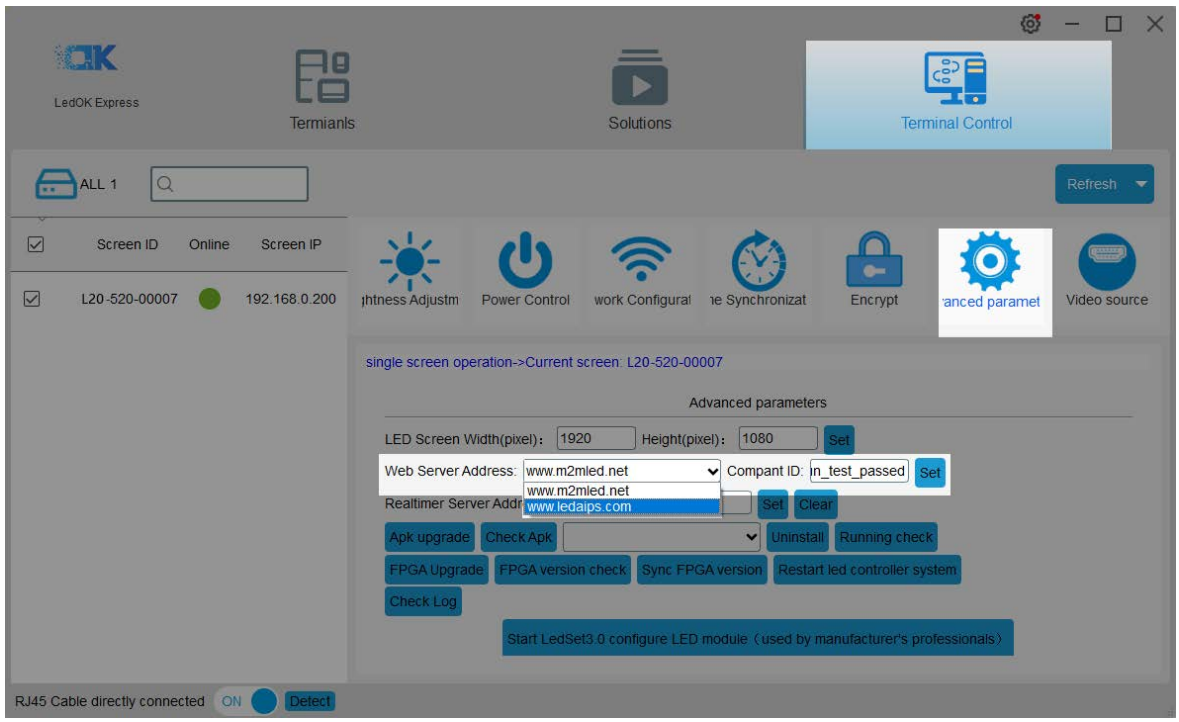
Open the cloud platform login interface, click the registration button, input information according to the relevant prompts and click submit. After receiving the confirmation email, click the link to confirm and complete the registration.



Cloud platform account binding

Enter the web server address and company ID and click Save.

The foreign server address is: www.ledaips.com



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For more information on the Internet cluster control solution for LED advertising equipment control, as well as related instruction documents, please visit our website: www.ledok.cn for detailed information. If necessary, the online customer service will communicate with you in time. The industry experience will definitely give you a satisfactory answer, Shanghai Xixun sincerely looks forward to the follow-up cooperation with you.

Best regards

Shanghai XiXun Electronics Co., Ltd.

March 2022

FCC Statement

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled

environment .This equipment should be installed and operated with minimum distance 20cm between the radiator& your body.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.