PBOX150 Quick Start Guide

Stable, Reliable and Powerful

Rev1.0.0 NS120100105

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PBOX150 Features

1) With synchronous and asynchronous dual-mode and supports full zoom of video input in synchronous mode;
2) Supports HDMI Loop;
3) Supports WiFi function to enable wireless communication;
4) WiFi function supports AP+Sta at the same time and you can build your LAN while connecting public network;
5) Supports a load capability of 600,000 pixels and maximum width up to 2048 pixels and maximum height up to 1024 pixels;
6) Supports redundancy backup of Gigabit Ethernet port;
7) Supports audio output with stereo dual-channel;
8) One-click to switch between synchronous and asynchronous mode, including the switch of both audio and video;
9) Supports USB playing and playing programs imported from USB drives ;
10) Supports three modes of brightness adjustment: timing, automatic and manual adjustment;
11) Supports screen locking and blackout;
12) Supports screen on/off via power switch;

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13) Supports SD card memory expansion;
14) Supports remote cluster control and play over the Internet;
15) Supports various media formats such as video, picture, text, weather, clock, countdown, Flash(Versions higher than V7.0 are not supported for the moment.), Word, Excel, Txt…;
16) Supported chips: a full range of driving IC products of Macroblock, CHIPONE, Sumacro, Mingyang, IT, Bright Way, Hangzhou Silan etc. are supported in cascading mode;
17) Support full-color static to 32 scan;
18) Field frequency up to 60Hz;
19) With settable gray level and supports a maximum gray level of 16bits 65536 grades;
20) Refresh frequency: A scanning screen is up to 3840Hz and static screen up to 6000Hz;
21) Supports brightness and chroma calibration;
22) Able to connect multifunction card MFN300.

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PBOX150 Appearance

VIDEO SWITCH	Audio and video switching button The indicator light is on in HDMI mode and off in asynchronous mode.
WiFi	Connecting antenna
SD CARD	Plugging SD card
Default IP	The factory default IP of PBOX150 is 192.168.0.220

100~240VAC. 50/60Hz	Power interface	
PWR&RUN	Status indicator	PWR: power indicator
		RUN: signal indicator
LAN/WAN	100Mbps interface for connecting control computer or accessing the Internet.	
USB	USB interface for plugging USB drives	

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RESET	Factory reset button
TEMP	interface for temperature sensor
LIGHT	interface for light sensor
HDMI IN	HDMI input
HDMI LOOP	HDMI Loop output
AUDIO OUT	Audio output
LED OUT	Gigabit Ethernet port, LED output
BACKUP	Gigabit Ethernet port, LED backup output

Network Connection

PBOX150 can be connected to play& control computer through three methods: network cable, LAN and WiFi.

Method1 Network cable

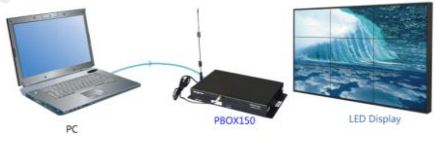

Fig. 0-1Network cable

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Method2 LAN

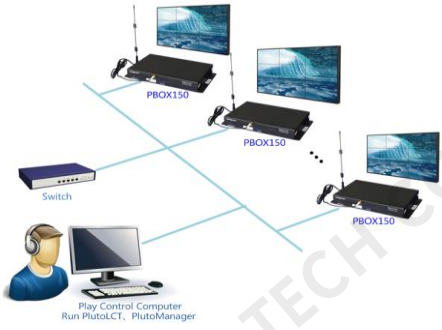

Fig. 0-2 LAN

Method3 WiFi

Tip:

1) The WiFi function of PBOX150 has DHCP service which is disabled and in route mode by default.
2) Please do not access PBOX150 into local area network by network cables when DHCP is enabled. Because the DHCP service of this card and DHCP service of routers in the LAN will distribute IP address simultaneously, and then conflict occurs.
3) When PBOX150 access external routers by searching

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hotspot, following router models are recommended to guarantee connection: Huawei, TP-link, Tenda and Netgear etc.

4) When bridge pattern is used, make sure that the upper router has WDS function while bridging, otherwise bridging will fail. Bridging among PBOX150 units is supported. If bridging upper routers, you can confirm whether the WDS of the router is enabled. Generally, it defaults to enabled.
5) The default factory settings of control card are that DHCP service is disabled.
6) The default factory settings of control card are in router mode. Users could set it to bridging pattern through webpage.

PBOX150 is integrated with WiFi function to enable wireless communications. Meanwhile, it supports AP+Sta function. It allows to build LAN while connecting public networks. So WiFi deployment has the following four modes.

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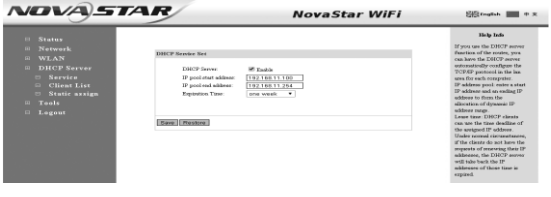
Mode I: PBOX150 does not connect external networks

Tip: In this case, publishing and management terminal devices cannot connect external network. PBOX150 itself can build a new network through its connected WiFi.

1) Connect PBOX150 to user computers by network cables;
2) Set computer's IP address to static IP: 192.168.10. *;
3) Open the browser and input 192.168.10.1 in the address bar, to enter the setting interface of wireless routers. Both the Login Username and password are admin by default. Enter DHCP server >DHCP service and enable DHCP services;



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4) Use a mobile device to search the hot spot of WiFi module for connection: The SSID is nova****** (check information label) and the default password is 0123456789.

Mode II: connect the WiFi card with external network by wireless network:

1) Set computer's IP address as static IP: 192.168.10. *;
2) Open the browser and input 192.168.10.1 in the address bar, to enter the setting interface of wireless routers. Both the Login User and the password are admin by default. Enter the DHCP server ->DHCP service and enable DHCP service for wireless setting -> scanning hot spots and decide the spot for connection:

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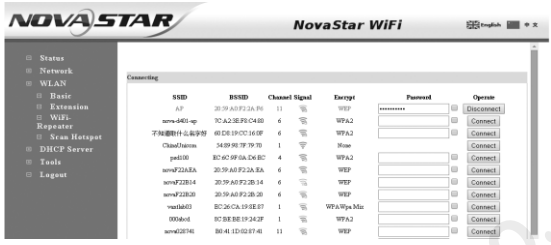
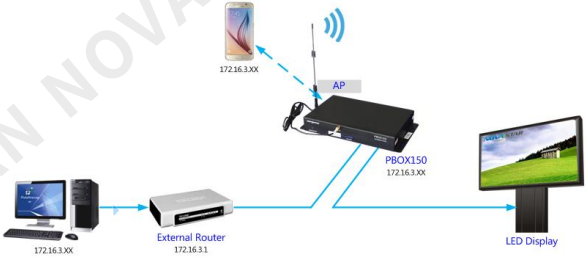


3) After the connection status shows that it is connected (see the Figure above), you can use mobile devices to search hotspot of WiFi module and connect it. The SSID is nova****** (check information label) and the default password is 0123456789.

Mode III: WiFi card connects external network by network cables:



Tip: Please disable DHCP service before setting wireless network parameters.

Connect PBOX150 to external routers by network cables and then use

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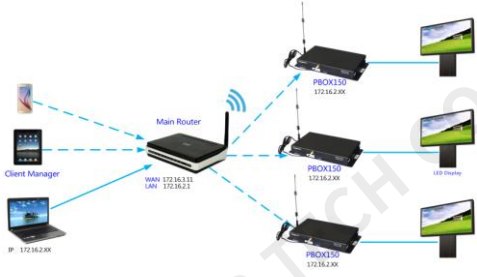
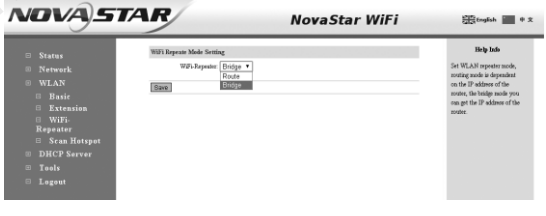
mobile devices to search WiFi hot spots: The SSID is nova****** (check information label) and the default password is 0123456789;

Mode IV: Bridge mode:



Tip: Please disable DHCP service before setting wireless network parameters.

1) Open the browser and input 192.168.10.1 in the address bar, to enter the setting interface of wireless routers. Both the Login User name and password are admin by default. After successful login, configure the Relay mode -> Bridge connection;



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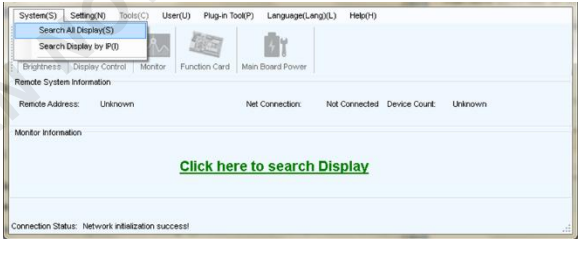
2) After configuration, select Wireless setting -> Scan hot spots and select the hot spot for connection. Then reset the computer IP to auto obtain. The topological graph of bridge connection mode is as shown in the figure.

IP Smart search

Tip: If the DHCP service is enabled, both the IP addresses of the laptop and the control card are 192.168.10. *. If the DHCP service is disabled and external routers are connected by network cables, laptop and control card all use the IP addresses distributed by external routers. After the wireless control card is successfully connected, the IP addresses of the laptop and the control card are in the same network segment, for easier software search.

1) Install and run the Nova LCT-Pluto in broadcast control computers and click **System** -> **Search All Display(s)**;



2) After required display is searched, click **Connect Display**;

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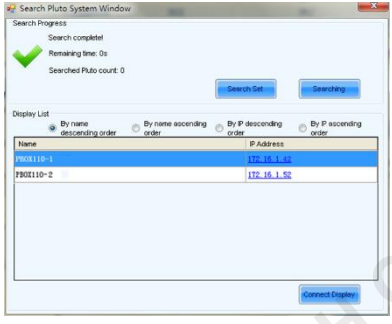
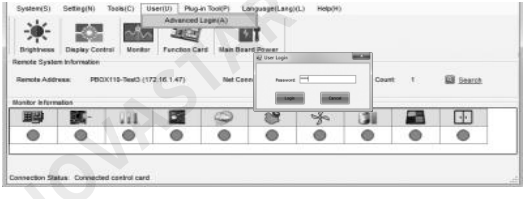


3) Click **User** -> **Advanced login**, enter the password "admin" and click for **logging in**;



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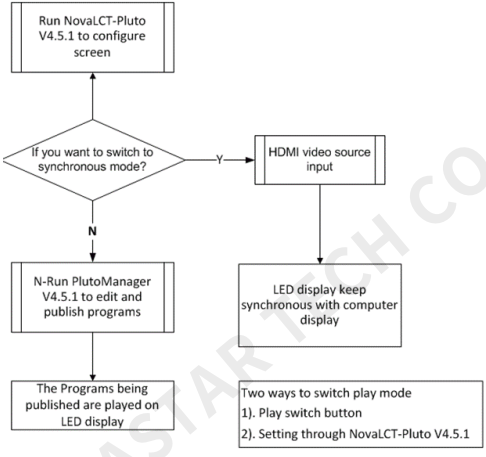
PBOX150 Operation Flowchart



Play Mode Switching

PBOX150 supports synchronous and asynchronous modes of playing. In addition, these two modes could switch quickly from one to the other.

The video source of PBOX150 is HDMI input in synchronous play mode.

Program editing and sending need to work together with

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play& control software PlutoManager in asynchronous play mode. The following two methods for switching of play modes are provided to select:

Methods I: Switching by button. Press "SWITCH" on the front panel of PBOX150 and the indicator light is on showing the current play mode is switched to synchronous.

Methods II: Switching by software. Run Nova LCT-Pluto. Click "Screen Configuration" and then modify input source configuration on "Sending card" page.

Note: PBOX150 will default to synchronous mode after power on if HDMI input source has the access to signal.

Synchronous Mode

HDMI input source could obtain images on computer automatically and keep synchronous with computer display. Then edit program on computer to play in real time.

Asynchronous Mode

Run play& control software PlutoManager on control computer to set program window, edit mode and send. (Please view the operating steps in Program Editing and Publishing by Applying

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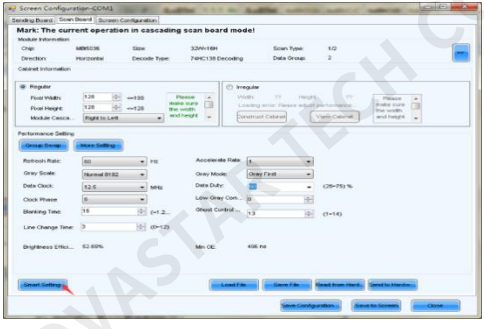
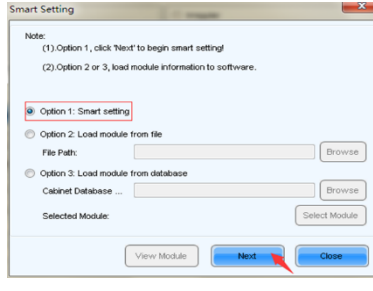
PlutoMnager).

Screen Configuration

1) Click **Screen Configuration** on the LCT homepage;
2) Click **Smart Setting** on the left lower corner in **"Scan Board"** page;



3) Select **Option 1** and click **Next** for starting Smart Setting;



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4) Screen configuration can be done according to Smart setting wizard.

Tip: Please visit the website of NovaStar (www.novastar.tech) and view the NovaLCT-Pluto User's Manual in the Download Center, for detailed introductions to the Smart wizard.

5) LED display configuration

Click Screen Configuration on the LCT homepage and then click Screen Configuration, to switch to the LED display screen configuration page.

Screen can be divided into three types: simple screen, standard screen and complex screen.

Fill in as per practical information and click Save to Screen.

Tip: Please visit the website of NovaStar (www.novastar.tech) and view the NovaLCT-Pluto User's Manual in the Download Center, for detailed introductions to the operations of cascading Scan Board.

Playlist Creating and Publishing

Create Playlist:

Install and run PlutoManager.

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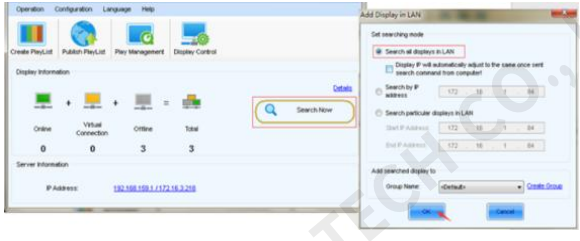
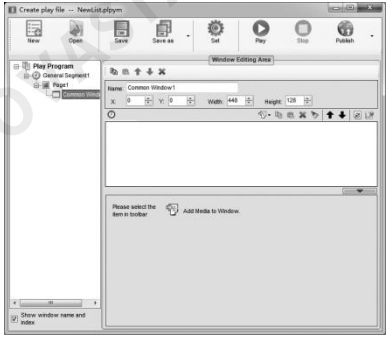
1) Click **Search Now** on the main interface of PlutoManager to search all the terminals, specified IP terminals and part of terminals of the LAN. The searched terminals could be added to specified groups.



2) Select **BillBoard** as edit mode. Click "**Create PlayList**" to enter the interface as shown below.



The play program consists of several general segments and one or more inserted segments. Both general segment and inserted

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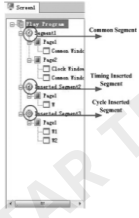
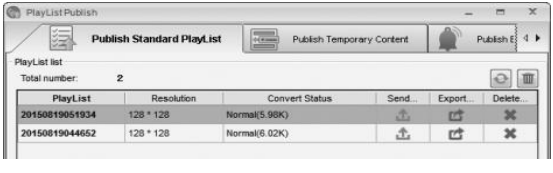
segment consist of one or more program pages. Each of the pages has one or more windows. Windows can be classified into Common Window, Clock Window, Scroll Text Window, Countdown Timer Window, and Weather Window. Common Windows can be added with one or more different types of media.



Publish Playlist:

Publish Playlist includes Publish Standard Playlist, Publish Temporary Content，Publish Immediate Notification.

1) In the main interface of PlutoManager, click **Publish PlayList** or directly click **Publish** on the Play-Program creating page to enter the playlist publishing interface.



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2) Select the playlist to be converted or hold down "Ctrl" key to select more playlists. Right click the mouse and then choose and click "Convert" to complete the conversion according to the instructions.
3) Click "Send" buttons of the playlists successfully converted.
4) Select the terminal of the playlists to be sent.

Electrical Parameters

Input power	AC100V~240V, 50/60Hz
Overall power consumption	15W
Operating temperature	-20℃-60℃
Storage temperature	-40℃-80℃
Dimensions(LxWxH)	218.5x107.49x45.5(mm)
Net weight(antenna included)	980g

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