


Q-NEX NPS100

Quick Guide



1. NPS100 Components

Network Presentation Switcher * 1	Touch Panel * 1
 <p>A black, rectangular Network Presentation Switcher with the Q.nex logo on the front right and two indicator lights (NET STATE and POWER) on the front left.</p>	 <p>A tablet-style touch panel displaying a control interface. The screen shows a time of 08:38, date WED 23 OCTOBER, and various control panels for Relay Control and Presentation Switch. The Q.nex logo is visible at the bottom of the device.</p>

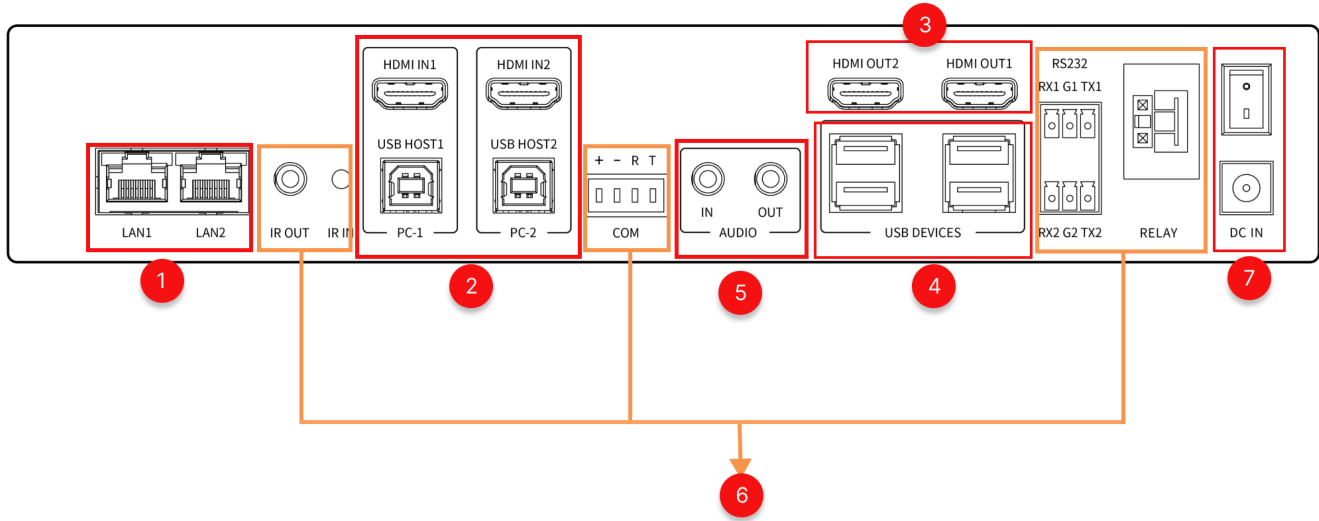
2. NPS100 Interface

2.1 NPS100 Front View



Indicator Lights	Descriptions
NET STATE	<ul style="list-style-type: none"> - Green (On): Device is online with a normal network connection. - Blinking: Device is engaged in network communication. - Off: Device is offline and unable to connect to the network."
POWER	Shows the power status of the NPS100 device.

2.2 NPS100 Rear View



No.	Parameter	Description
1	LAN *2	Network connectivity for local and remote control
2	HDMI In * 2	Inputs for two PCs, supporting 4K resolution and HDCP.
	USB Host * 2	Host ports for USB connectivity to shared devices.
3	HDMI-Out * 2	Outputs for connecting to display devices with 4K support.
4	USB-Device * 4	Connect USB devices like cameras, microphones, and more.
5	Audio-In * 1	Input for audio sources, such as microphones.
	Audio-Out * 1	Auido output for connecting external devices.
6	IR-In * 1	Infrared input for learning device control codes.
	IR-Out * 1	Infrared output for controlling devices like air conditioners.
7	Relay port * 1	Relay port for controlling devices like curtains or lamps.
	RS232 *2	RS232 ports for controlling PTZ cameras, projectors, etc.
	COM port * 1	COM port for additional control capabilities.
7	DC In	Power input for the Networked Presentation Switcher
	Power Switch *1	Power switch to turn the device on and off.

3. NPS100 Wiring and setup

3.1 Get ready for NPS100

3.1.1 Connect Touch Panel to NPS100

1. Power the Touch Panel:

The Touch Panel supports two power supply methods:

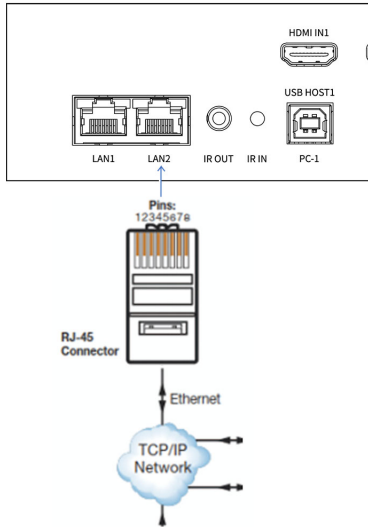
- Use a power adapter.
- Use PoE (Power over Ethernet). The Touch Panel supports PoE.

⚠ Warning:

Do not power the Touch Panel using both the adapter and POE simultaneously, as it may cause a short circuit and void the warranty.

2. Connect to the Network:

- Connect the Touch Panel to the NPS100 LAN port

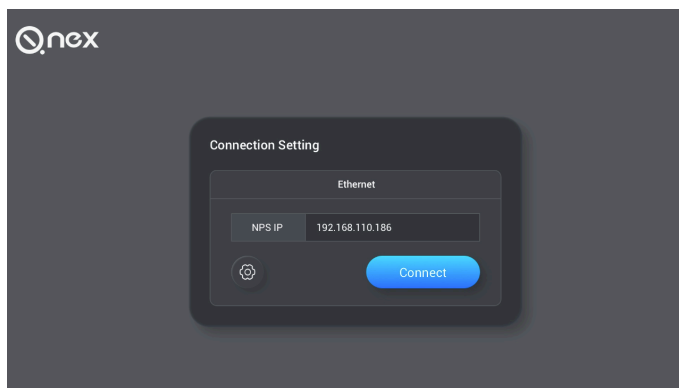


- Or connect the Touch Panel to the router/switch, ensuring the Touch Panel and NPS100 are on the same LAN.

3. Enter IP Address: After connecting to the network, input the NPS IP address on the Touch Panel.

<input type="checkbox"/>	Device Name	Status	Type	Groups	IP Address	A
<input type="checkbox"/>	LQ NPS	●	NPS	3F	192.168.5.235	
<input type="checkbox"/>	NPS-01	●	NPS	TEST	192.168.110.186	

: As pictured above, retrieve the NPS IP address from the 'Devices >> Processor Manage' page. Input this address on the Touch Panel and click 'Connect.'"



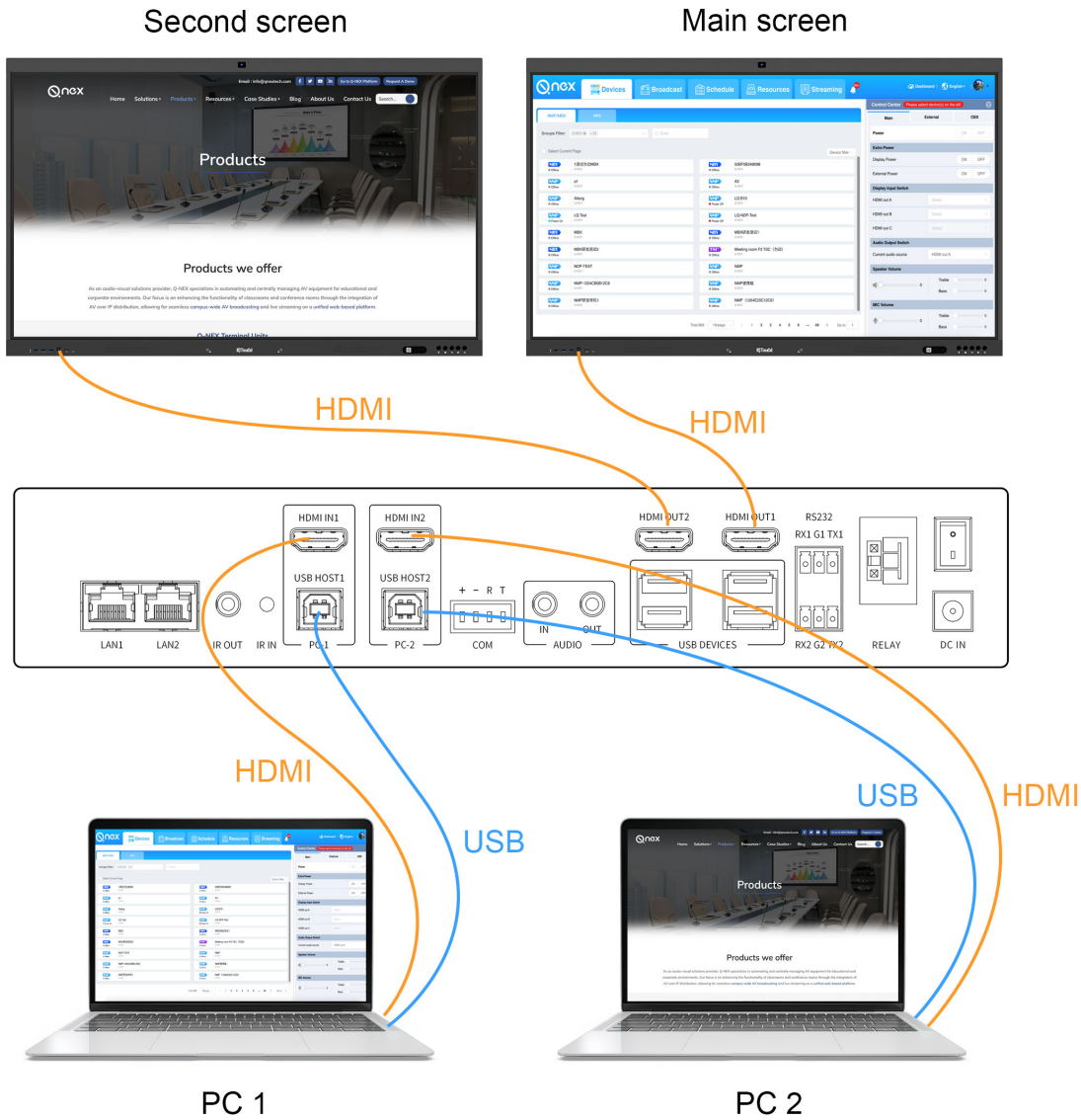
: If connection issues arise, use the router device or NPS config Tool.exe to identify the correct IP address, particularly in situations where DHCP changes may not be immediately reflected in the web-based backend.

3.2 Presentation Switch

NPS supports a 2x2 matrix switch, and the PC connected to the main screen (HDMI OUT A) gains access to the permissions of four USB devices (BYOM).

For detailed operational steps, please refer to the 'User Manual'

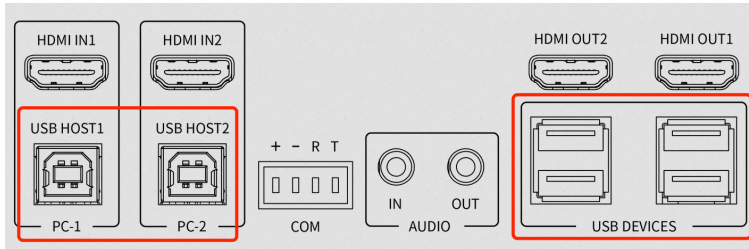
3.2.1 PC connection & Display connection



3.2.2 USB Devices connection

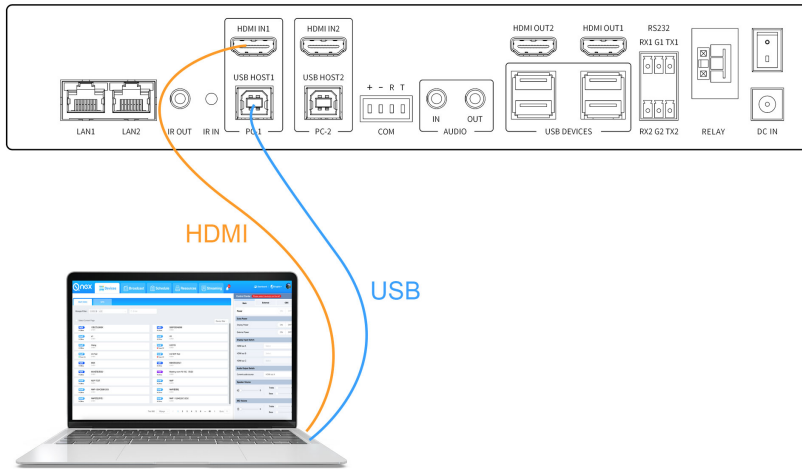
1. USB Interfaces

NPS100 provides 2 USB Host interfaces and 4 USB Device interfaces.



2. USB HOST

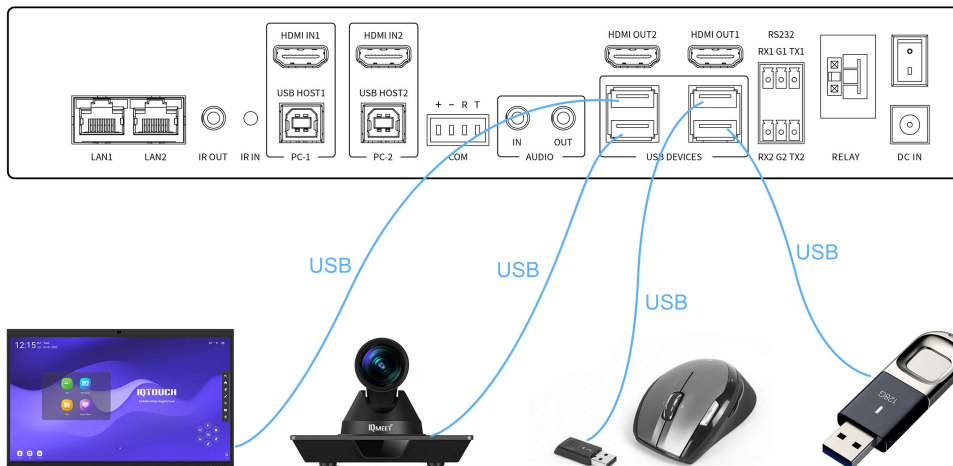
USB Host corresponds to the HDMI IN input device.



For example: Connect HDMI and USB from the same PC to NPS100.

3. USB Device

Four USB Devices can be connected to microphones, keyboards, mice, PTZ cameras, USB flash drives, IFP, etc.




- o Connecting the USB Touch interface of the IFP to the NPS's USB Device enables touch control..

: IFP needs to be connected to the HDMI OUT1 port.

- Connecting a keyboard, mouse, and USB flash drive enables operational control and access by the PC.
- Connecting a USB PTZ camera to the USB device enables PC control during video conferences

: Ensure proper selection of camera channels on the PC side.

: These operations require HDMI OUT1 to be connected to a display device, and the connected devices on the USB Device can only be accessed by the PC when it is the input source for that display device.

3.3 Audio Control

NPS100 provides an Audio IN and an Audio Out interface.

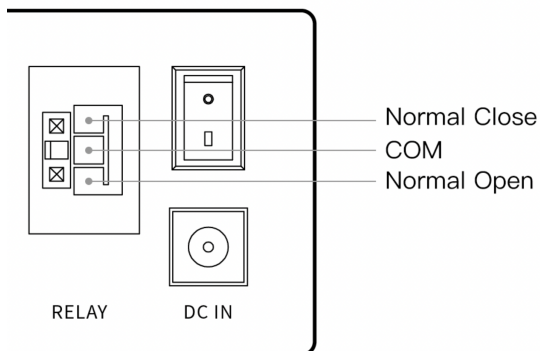


1. Audio IN: Connect external audio devices, such as microphones.
2. Audio OUT: Connect external sound amplification devices, such as speakers or amplifiers, to accommodate various applications.

For detailed operational steps, please refer to the 'User Manual'.

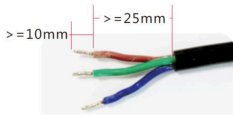

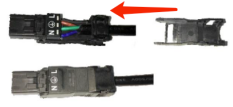
3.4 Device Control Settings

3.4.1 Relay control



NPS100 provides a Relay interface, allowing users to control various devices, such as lamp, electric curtain etc. The following is an illustration using lighting control:

1. Wago interface cable preparation:

Step	Screenshot	Instructions
S1		<ol style="list-style-type: none"> 1. Uncovered copper wire length $\geq 10\text{mm}$ 2. Wire cable with insulation paste $\geq 25\text{mm}$ 3. Tighten the single copper wire
S2		To insert a wire, use a screwdriver to open the slot cover, then insert the wire and tighten it. The wire should be clamped by the slot cover after removing the screwdriver. Pull the wire gently to check if it's securely clamped.
S3		Once the wires are arranged, use cable ties to secure them. Then, install the base and cover of the casing.

⚠ Warning:

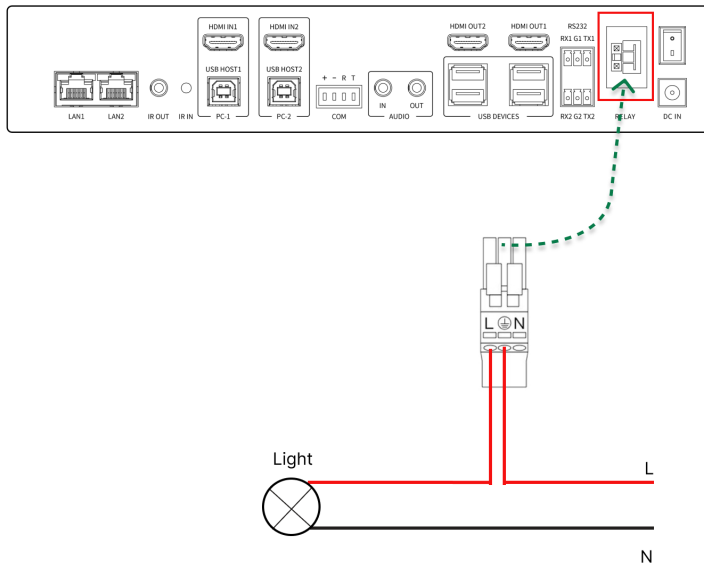
During installation, be cautious not to connect the neutral and live wires of the AC power supply (positive and negative poles of the DC power supply) to the Relay port simultaneously, as it may cause a short circuit.


2. Implementing lighting control

There are two methods to achieve lighting control with NPS via Relay interface: direct connection and integration with an SPDT switch.

2.1 Direct Connection to NPS:

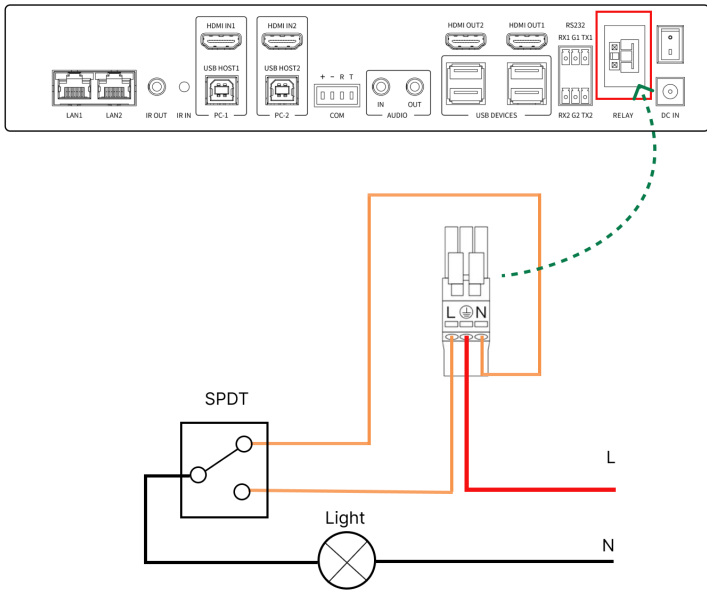
In this mode, user gains the ability to manage the lighting control by NPS.




: The current-carrying capacity of the "Relay" should not exceed 1200W

2.2 Integration with SPDT Switch:

By replacing the existing switch panel with a Single Pole Double Throw (SPDT) switch and connecting it to NPS, both NPS and the switch panel gain control over the light.

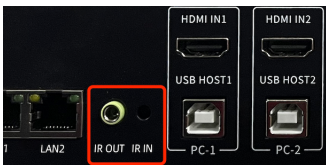


: The current-carrying capacity of the “Relay” should not exceed 1200W

3. After completing the wiring for the Relay port, you can control it on the Touch Panel and Web-Console.

3.4.2 IR Control

The NPS100 is equipped with both an IR IN and an IR OUT interface, allowing users to manage IR devices efficiently.



To control IR-enabled devices (e.g., air conditioner, TV, projector), NPS100 supports batch application of infrared control codes, enabling efficient control without repetitive learning.

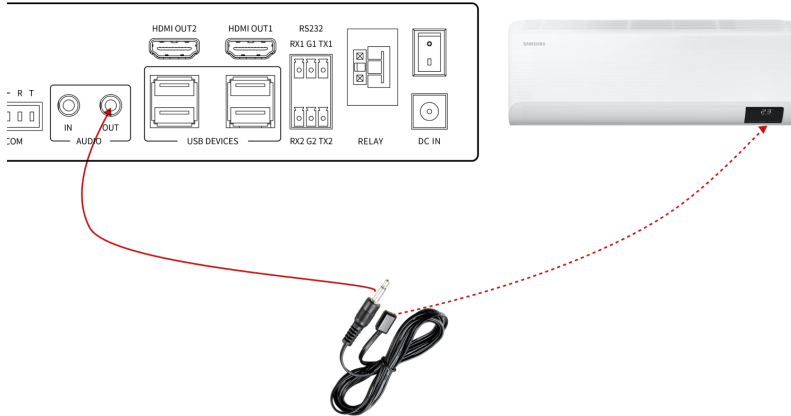
Here's a simplified guide for using IR functionality with an air conditioning unit:

1. Check if your air conditioner brand is in the Q-NEX database. If your air conditioner is recognized in the Q-NEX database, identify the control codes to manage and control it through the Touch Panel or Web-console.
2. If not in the database, use IR Learning on the Touch Panel or Web-console for control.

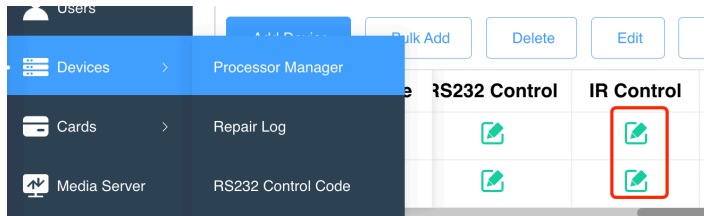
Air Conditioner-Identified in the code database

Follow these steps:

1. Connect the infrared emitter to the 'IR' port on NPS, aim it at the air conditioner, ensuring no obstacles between the emitter and the air conditioner:

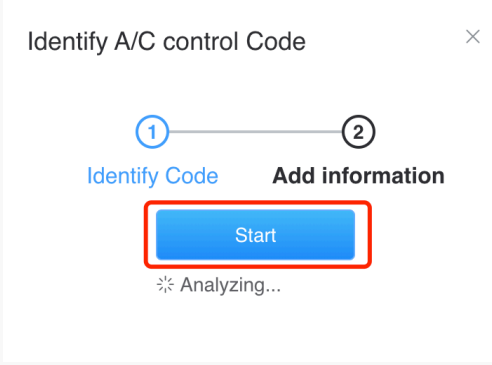

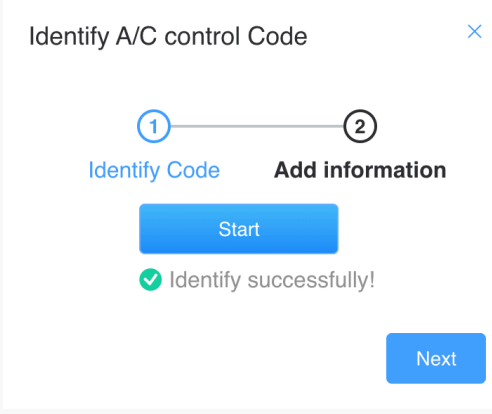
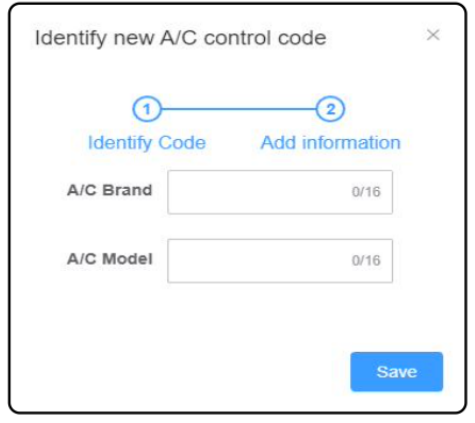


2. Log in to Q-NEX Console -> Dashboard -> Devices -> Processor Manager. Choose your NPS device, in the 'IR Control' module, click on the 'Edit' button:



3. Follow these steps:

Step	Screenshot	Instructions
S1		In the IR control page, click "Identify New A/C control code"

<p>S2</p>		<p>Click the "Start" button</p>
<p>S3</p>		<p>Align the remote control with the IR interface, press the power button, and the system will automatically identify the remote control code.</p>
<p>S4</p>		<p>Upon successful identification, it will display " Identify successfully."</p>
<p>S5</p>		<p>After identification, enter the air conditioner's brand and category, then click Save.</p>

S6

IR Control Setting
✕

A/C Control Setting:

Q-NEX AC

New A/C control code

Remote Control Setting:

TV Power

Projector power

Fan power

A/C Mode 1

Projector input

New remote control code

Save

Save and apply to...

Cancel

You will be redirected to the IR Control Setting page. Select the newly added air conditioner name and click Save.

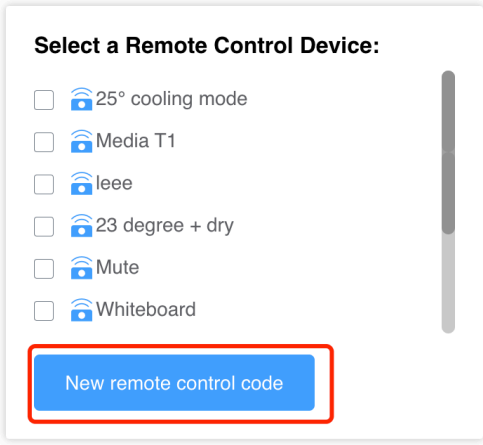
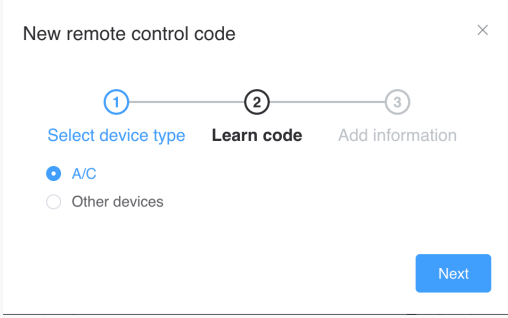
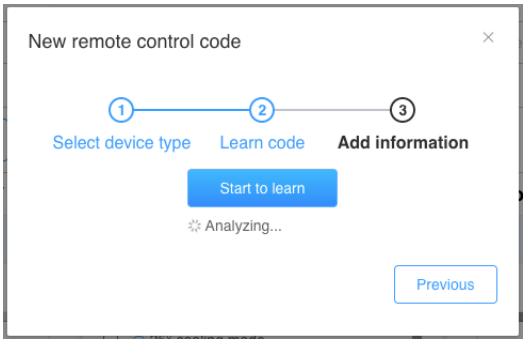


4. After successful saving, control the air conditioner on the Touch Panel or Web-console:

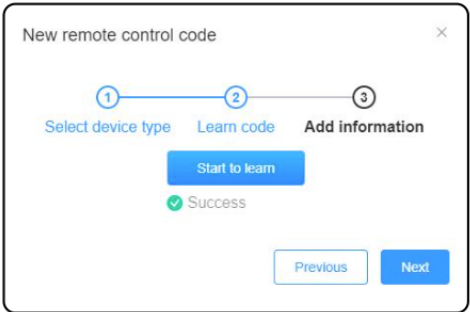
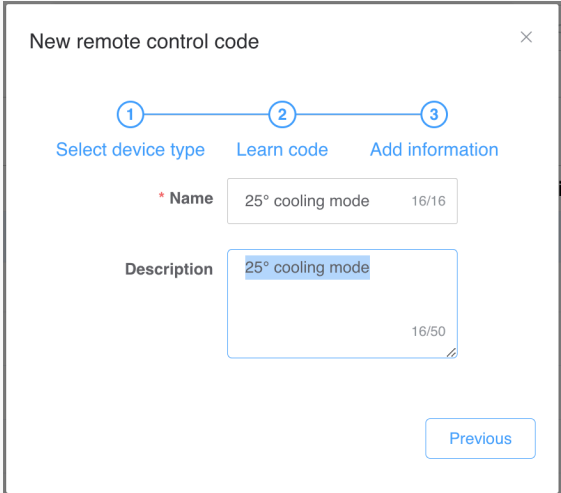
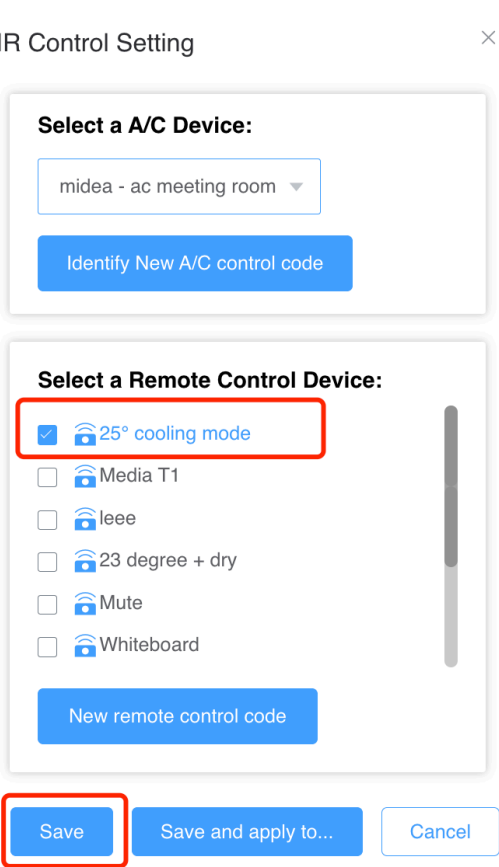
Air Conditioner-Unable to Identify in the Code Database

IR remote control module is available for unrecognized air conditioners or other devices using infrared remote control. Connect infrared transmitter to "IR" port of NPS, and aim the transmitter at the device, and ensure there will be no blocks in between the transmitter and the device.


1. Log in to the "Q-NEX console -> Dashboard -> Devices -> Processor manager". Select your NPS device, and in the "Infrared Control" module, click the "Edit" button. Follow the instructions below:

Step	Screenshot	Instructions

<p>S1</p>		<p>In the IR control interface, click "New remote control code." button</p>
<p>S2</p>		<p>Selecte A/C click Next.</p>
<p>S3</p>		<p>Click "Start to learn"</p>
<p>S4</p>		<ol style="list-style-type: none"> 1. On the remote control, select the desired mode, such as setting the temperature to 25 degrees and choosing the cooling mode. 2. Power off the remote, then aim the remote at NPS's "IR IN" port, and press the remote's power button again. 3. The system will start learning the selected air-conditioning mode. <p>:To learn the power-off function, aim the remote at the IR port and power off directly.</p>
		<p>After successful learning, a "Success"</p>

<p>S5</p>		<p>prompt will appear. Then click "Next" button</p>
<p>S6</p>		<p>Enter the corresponding function name here</p>
<p>S7</p>		<p>Then you will be redirected to the "IR Control Setting" page. Then, select the newly added function name and click Save.</p>

2. After successfully saving, you can operate the device on the Touch Panel or Web-Console

: To learn additional modes for the air conditioner, follow steps S1 through S7. Additionally, note that the process for learning codes on other infrared devices is similar to the above steps

3.4.4 RS232 Control

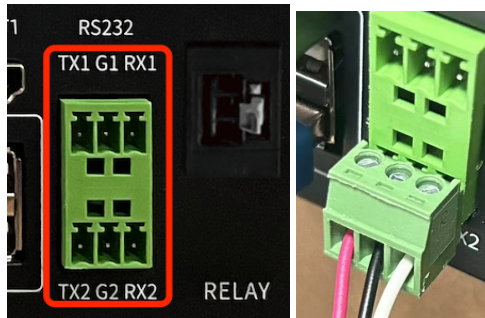
NPS provides two RS232 interfaces, enabling control of devices such as IFP, projectors, and PTZ cameras.

Using a PTZ camera as an example, the following explains how to achieve preview and control of the PTZ camera's image through the NPS Touch Panel.

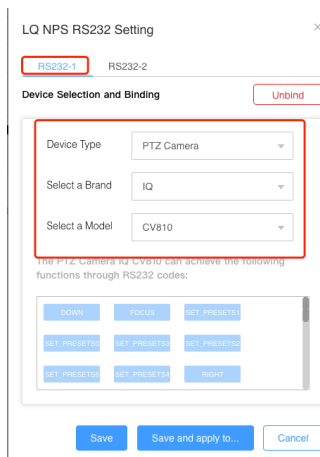
1. Prepare cable for RS232 connection



2. Insert the RS232 connector into the RS232 interface on NPS, as shown in the diagram:



3. The other end of the RS232 cable should be connected according to the instructions in the camera's manual.
4. Log in to Q-NEX console -> Dashboard -> Devices -> Processor manager. Select the device type as "PTZ Camera" on "RS232 Control" module .



5. Enter the RTSP address of the PTZ camera on the Touch Panel for preview. For detailed operational steps, please refer to the 'User Manual'

4. Contact US

Q-NEX (<https://qnextech.com/>) is a subsidiary of Returnstar Interactive Technology Group Co, Ltd, a company that has been dedicated to the education industry since 2006.

Q-NEX is focused on delivering a Smart Campus Solution that converges AV and IoT control across all campus facilities. Q-NEX offers deeply customized options that assist school IT administrators in managing all electronic facilities and allows teachers to simplify the operations of a multimedia classroom.



Call us

0086-591-38202368
0086-13285947663



Our location

6th Bldg. High-Tech Base.Fuzhou
Fujian Prov. China.



Email

Info@qnextech.com