



Q-nex NMP221-R-CP Networked Media Processor User Guide

[Home](#) » [Q-nex](#) » Q-nex NMP221-R-CP Networked Media Processor User Guide 

Contents

- [1 Q-nex NMP221-R-CP Networked Media Processor](#)
- [2 Product introduction](#)
- [3 Components of NMP](#)
 - [3.1 Control panel features](#)
- [4 Get ready before installation](#)
- [5 Wiring and setup](#)
 - [5.1 For Touch Panel](#)
 - [5.2 Power control](#)
- [6 Common problems and solutions](#)
- [7 Documents / Resources](#)
 - [7.1 References](#)
- [8 Related Posts](#)



Q-nex NMP221-R-CP Networked Media Processor



Product introduction

The Q-NEX Networked Media Processor integrates the Ethernet connection into the device control system, allowing users to remotely control the device. It is mainly designed for assisting school's IT admin to well manage various electronic facilities in a school, and freeing teachers from complicated operation of a multimedia classroom.

Components of NMP



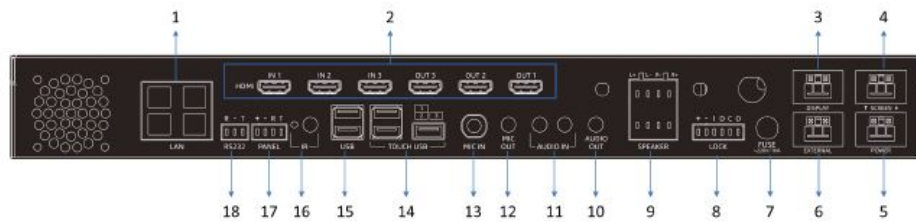
NMP front view



1. Wireless microphone channel
2. RF: wireless microphone radio frequency indicator
3. DOWN: switch channel down
4. UP: switch channel up
5. AF: wireless microphone audio frequency indicator

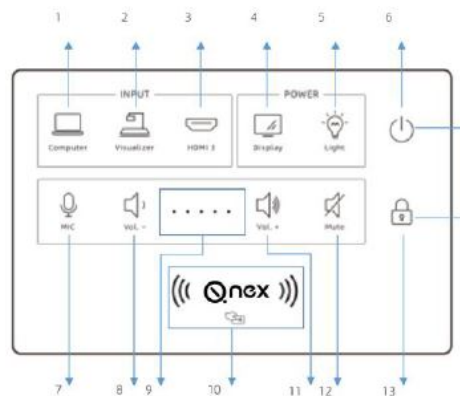
6. POWER-VOL: wireless microphone volume knob

NMP rear view interfaces



1. LAN Switch
2. 3* 3HDMI matrix
3. Display power supply
4. Electronic projection screen power supply
5. NMP power supply
6. External device Single pole double throw power relay
7. Power fuse
8. Electric lock control
9. External speaker output
10. Audio output
11. Audio input
12. Mic output
13. Mic input
14. Smart touch USB ports (1&2 for USB Host, 3 for USB Device)
15. USB2.0 ports
16. IR learner port
17. Control Panel connection
18. RS232

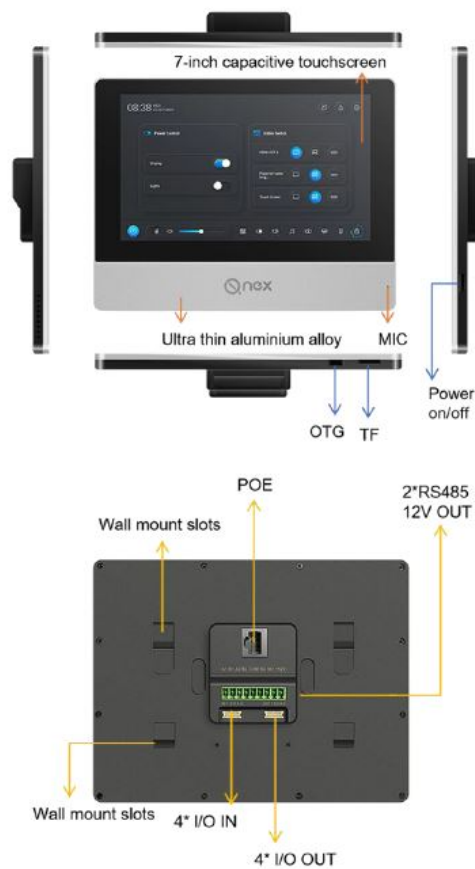
Control panel features



1. Computer: indicator on means HDMI out A switched to HDMI in 1, recommend PC as input.
2. Visualizer: indicator on means HDMI out A switched to HDMI in 2, recommend visualizer as input
3. HDMI 3: indicator on means HDMI out A switched to HDMI in 3

4. Display: indicator on means power on the device connected to Display
5. Light: indicator on means power on the device connected to External, recommend light
6. Main power: indicator in blue/red means power on/off
7. MIC: to control volume of mic when the indicator is on, to control volume of speaker when the indicator is off
8. VOL.-: the indicator is on when volume is down to the least
9. VOL indicator light: more indicators on as volume increases
10. IC Card Area tap the IC card to unlock the panel can power on NMP when it's off
11. VOL.+: the indicator is on when volume is up to the max.
12. Mute: indicator on means the speaker is mute
13. Lock: indicator on means the panel is locked

Touch panel features



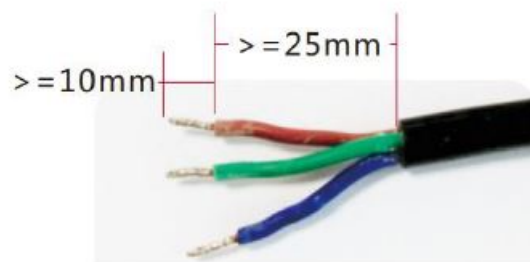
Wireless mic features



1. Windshield
2. LED screen
3. Upward selection
4. Downward selection
5. Settings / Laser light on/off: Cooperate with “VOL +” and “VOL-” to set; long press to turn on the laser light
6. Volume up
7. Volume down
8. External microphone connector
9. Power / Mute button
10. USB interface for charging
11. laser pointer for presentation

Get ready before installation

1. Require an Admin account of Q-NEX Console from Q-NEX team.
Log in <https://mg.qnextech.com/>. and bind in NMP devices to a created virtual organization in the system for identification.
2. Prepare the power cable for power out of Display:
 - Uncovered copper wire length \geq 10mm
 - Wire cable with insulation paste \geq 25mm
 - Tighten the single copper wire



- Pry open the shrapnel inside the hole with a screwdriver, in the meantime, insert the thread. Release the screwdriver, the thread will be fastened inside the WAGO. At last, pull the wire to check if it is fixed tightly.

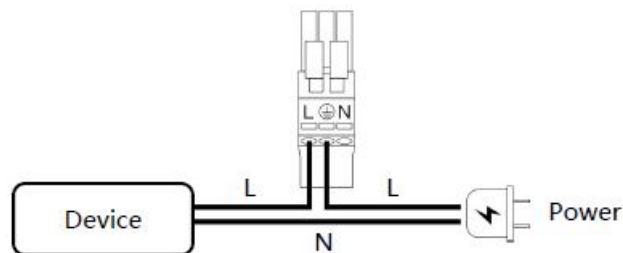
L—Fire Wire ⊕—Groud Wire N—Zero Wire



- After placing the wires, use the Wire Protection Clip to fasten.
Then put on the Shell Base and Shell Cover.

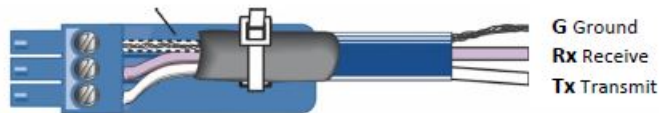


3. Prepare the power cable for SPDT switch of External:

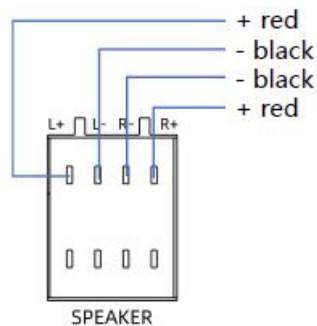


4. RS232 connection for projector:

For the other end, wiring according to the wiring instructions of the controlled equipment.

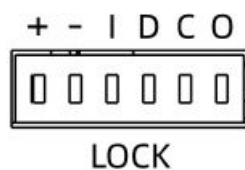


5. Speaker connection



6. Electric lock connection

Please connect the required interface according to your electronic lock type.



- +: Power output 12V800mA
- -: Power ground (negative level)

- **I:** Door switch interface
- **D:** Door lock status interface
- **C:** Relay common end, load capacity DC3A/30V
- **O:** Relay normally open, load capacity DC3A/30V

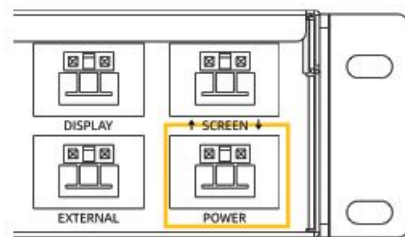
Wiring and setup

Please follow the instructions below to connect the cables

Note: Installation and repair should only be performed by authorized personnel.

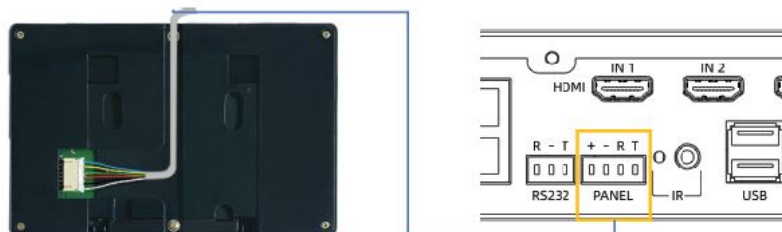
Basic installation

Connect the NMP power cable to “POWER IN”.

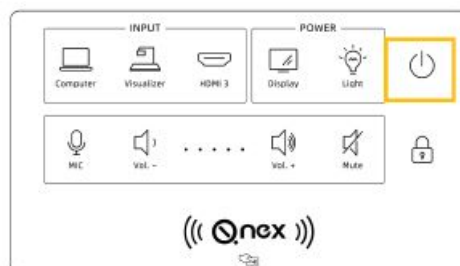


For Control Panel

Connect the control panel to the NMP “PANEL” port:



If the power indicator on control panel is red, that shows the connection is well done. Now touch the main power button, the power indicator light turns in blue, which means it is booted successfully.



For Touch Panel

(Connect to NMP with CAT Cable)

1. Screw the wall mount bracket to the desktop stand.

2. Connect the Touch Panel to LAN and power up. There are three ways for connection:

- Connect Touch Panel to one of NMP's LAN switch ports by CATx cable, and power through 12V adapter.
- Connect Touch Panel and NMP to the same LAN by router/switch, and power Touch Panel through 12V adapter.
- Connect both Touch Panel and NMP to one PoE switch and under the same LAN by router, then no power supply is required for Touch Panel.

Note:

- LAN switch ports of NMP 220-R does NOT support PoE.
- Touch Panel must be on the same LAN as NMP.

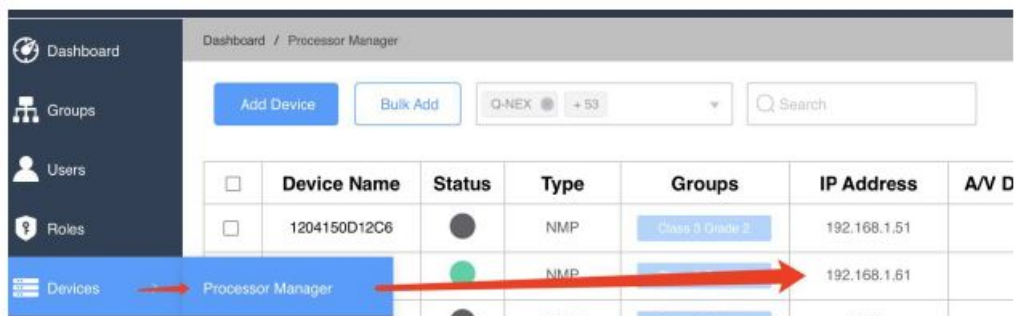
Warning

Do not power Touch Panel through adapter and PoE at the same time, otherwise, it will cause Touch Panel to be short-circuited and burned. This kind of damage is not covered by the warranty.

3. Fasten the wall-mounted bracket into the slots of Touch Panel and make sure it is fixed.

4. Initial settings

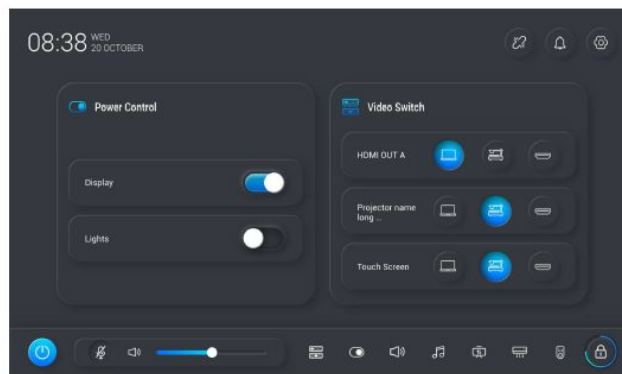
Make sure that NMP is joined in a LAN. Log in to the Q-NEX Dashboard-Devices-Processor Manager and check the IP address of this NMP.



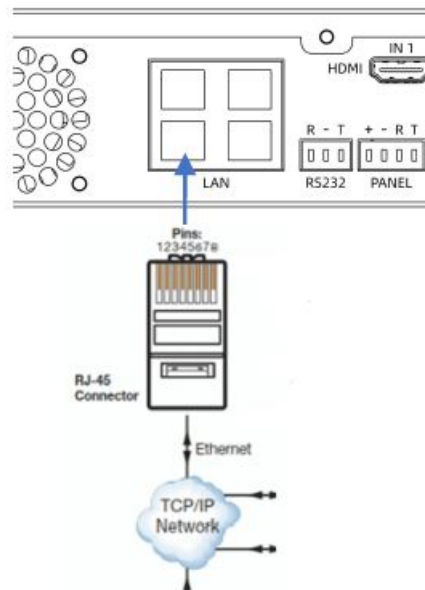
Input the IP address on the Touch Panel and click Connect.



It will enter the homepage of Touch Panel after connecting successfully.

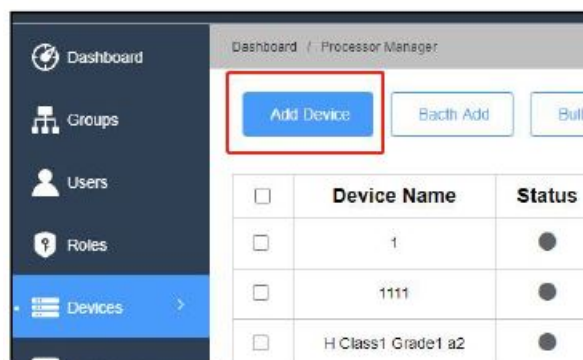


Connect NMP to LAN :



If the yellow and green LED light of Ethernet port is flickering, which means the network connection is successful.

Add NMP to Console By web



Log in to Q-NEX dashboard (check your email for the initial administrator account/password), enter the Device/Processor Manager page, and click on the “Add Device” to add a new NMP into the system:

Put in a device name (can be “Classroom One”, for example) and device ID indicated on NMP (product S/N). Select a group where the NMP is classified (for example, “Grade One” in a school). Set the startup linkage parameters as required, and click Save:

Device name:

Device ID:

Group:

Startup Options

Starting up method:

Control Panel to Start

Start with

☐ Display
 ☐ External

Default Channel

HDMI A:

Last Setting

HDMI B:

Last Setting

Electric Lock Setting

Electric lock type

Power off to UNLOCK

Electric lock closing

Manual switch

Save

Save and apply to...

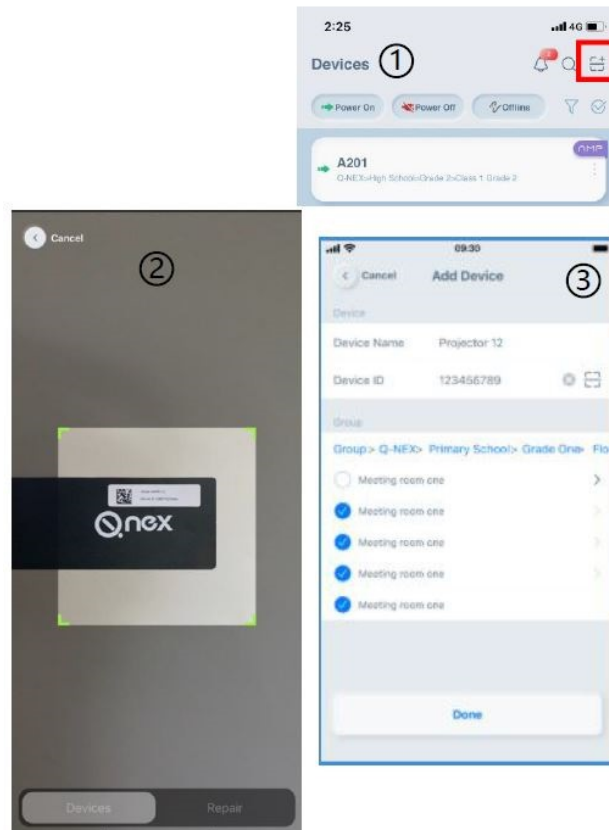
Cancel

When the NMP device info is successfully submitted, and verified by Q-NEX system online, the “Status” will turn green.

<input type="checkbox"/>	Device Name	Status	Groups
<input type="checkbox"/>	A201 office	<div></div>	<div>Grade 1</div>
<input type="checkbox"/>	A202	<div></div>	<div>Class 2 Grade 1</div>
<input type="checkbox"/>	A203	<div></div>	<div>Grade 2</div>

Add NMP to Console By APP

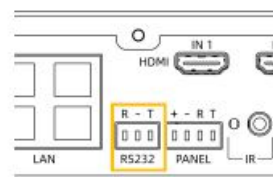
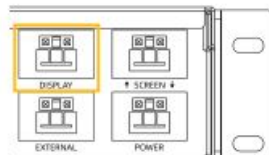
Scan the QR code on the NMP through the scan button on the device page and follow the steps to add the new NMP.



Power control

DISPLAY:

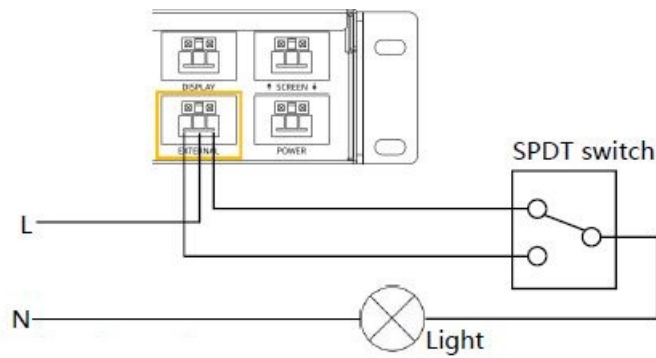
Replace the plug of the display devices (projector and projection screen, TV, IFP, etc.) with WAGO connector, Connect the WAGO connector to the DISPLAY port of NMP.



To realize power control of devices with RS232 connection (e.g., projector), please connect the device through the RS232 of NMP as well.

EXTERNAL:

For other devices that need to control power, such as lights, please connect the device to the EXTERNAL power switch control port according to the installation of a single-pole double-throw switch:



Warning: Do not input power to “External”, otherwise it will cause NMP irreparable fatal failure.

Note:

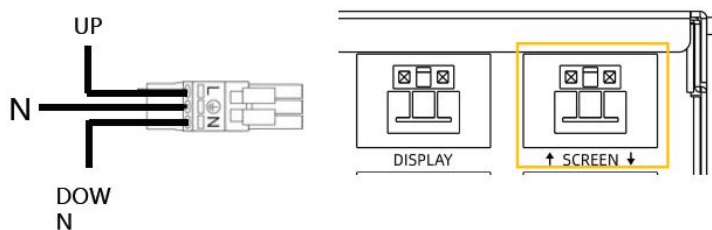
1. Keep the gross output power of both “Display” and “Screen” port under 1,200 W.
2. The current-carrying capacity of the “External” switch should not exceed 1200W

Feature of power control on Control Panel or Touch Panel:



SCREEN:

Replace the plug of projection screen with WAGO connector, connect to SCREEN port. (Note: Projection screen only)

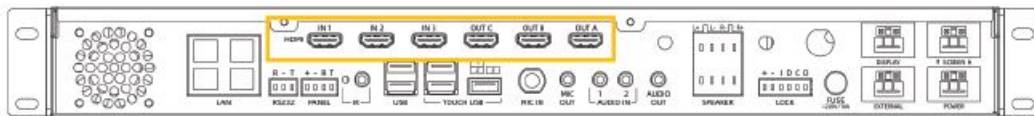


Rolling up or down projection screen can be done via Q-NEX Console, mobile APP or Touch Panel after successful connection.

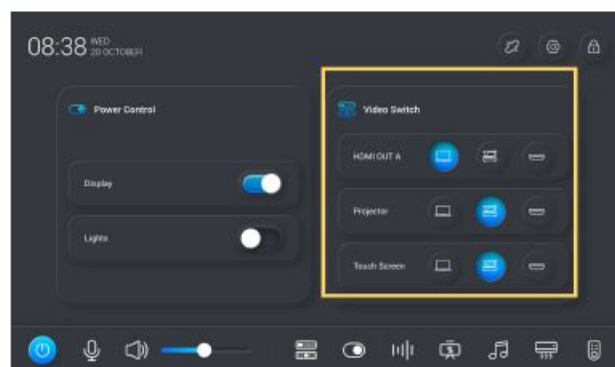
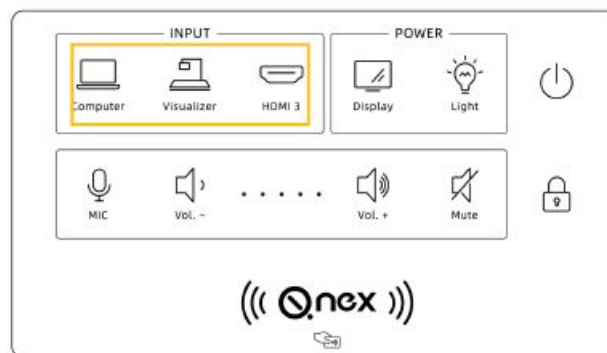


Video matrix switch

NMP supports HDMI output to three displays. Connect display devices, like TV, projector, and IFP, to HDMI OUT, and connect HDMI devices, such as PC, document camera, IQShare etc., to HDMI IN.



Control Panel can only switch input sources of HDMI out A, while Touch panel can control the switching of three input and three output sources. Besides, the touch panel can realize the control of one input source to multiple displays.



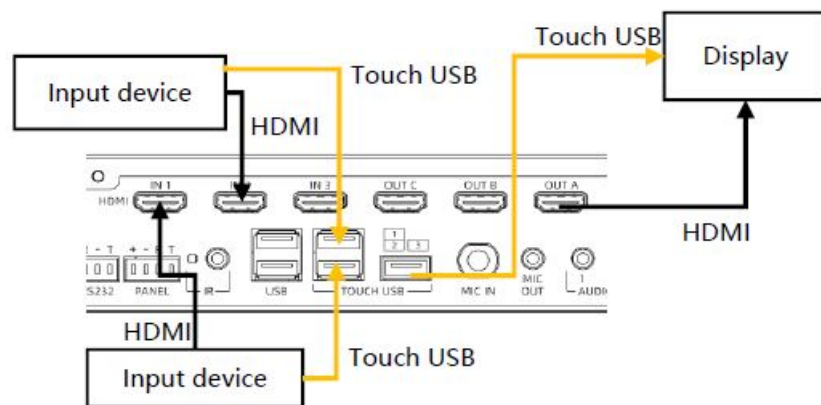
Switching of three input and three output sources are also supported on Q-NEX Console and mobile App.

Touch USB: Route touch signals from different HDMI inputs to a touch display (should be HDMI A).

For example, if an interactive flat panel (as HDMI A) can work with a PC for 10 touches, but only one touch with a document camera, then when switching signal from PC to document camera, the interactive flat panel will

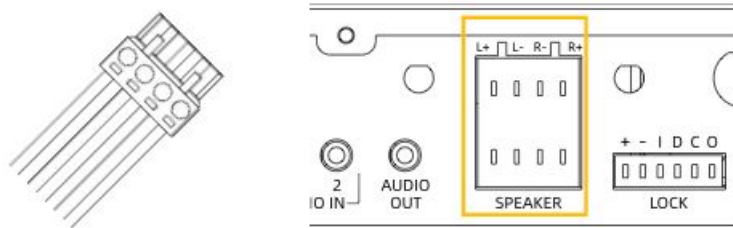
accordingly enable 10 touches to one touch.

Note: The Touch USB feature works only when the touch display is compatible with the input devices for touch.

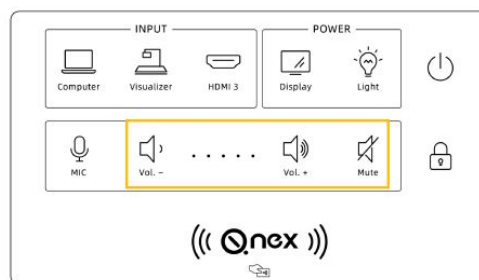


Audio control

NMP has a built-in power amplifier, 2*(40w+40w), that can be connected to passive speakers. Replace the speaker cable with a Phoenix audio connector and plug into the speaker interface. Up to two pairs of passive speakers can be connected.

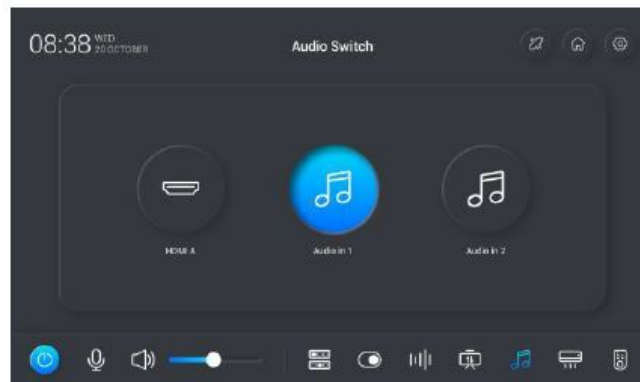


Volume adjustment or mute can be operated via control panel or touch panel. Sound muted when MUTE lights up.

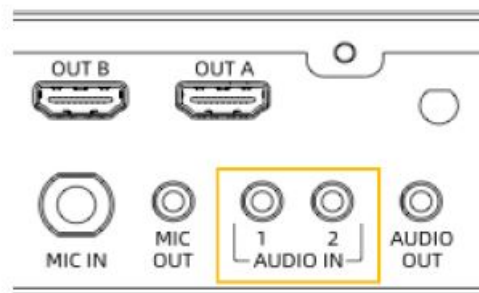


On Touch Panel users can adjust treble and bass of audio sources to speakers, and switch audio inputs.





Through 3.5mm line in, NMP can support devices with audio output such as mobile phones, operation can be done via control panel-AUDIO.



Microphone control

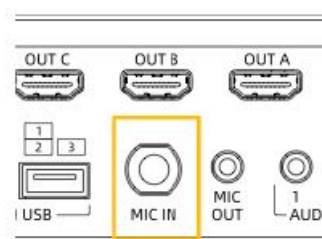
1. Wireless microphone connection:

Put the wireless microphone close to the NMP and turn it on.

After frequency pairing is successful, there will be a beep and the corresponding MIC indicator on the front of the NMP will light up.

2. Wired microphone connection:

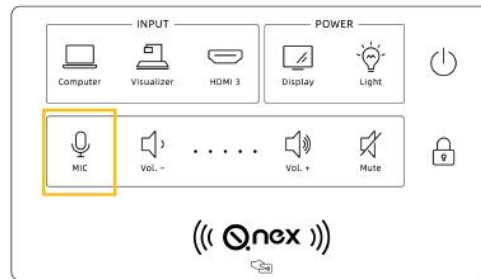
The wired microphone can be connected to the NMP through a 6.5mm mic cable. Sound of wired and wireless microphone get mixed and output.



3. Microphone volume adjustment:

For Control Panel

The microphone is under control when it lights up. At this time, the operations of increasing the volume, decreasing the volume and muting are only for the microphone.



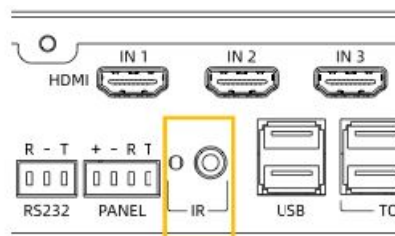
For Touch Panel

Touch Panel can adjust microphone volume, treble and bass.



Air-conditioner control

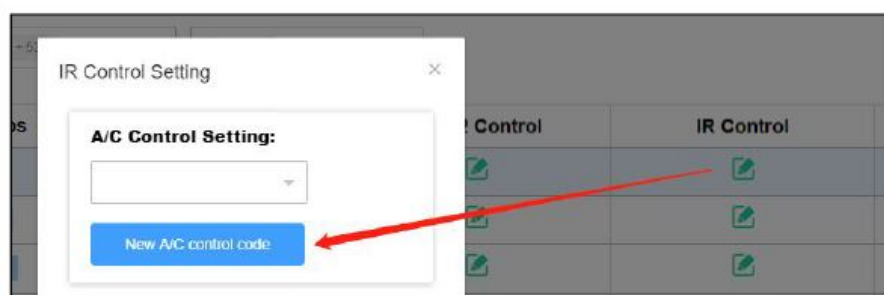
Connect infrared transmitter to "IR" port of NMP, and aim the transmitter at the air conditioner, and ensure there should be no blocks in between the transmitter and the air conditioner.



Login Q-NEX console -> Dashboard -> Devices -> Processor manager.

Select infrared control edit module of a certain NMP to identify the new A/C control code, follow the instruction as below

1. Click the "New A/C control code" then the "start " button.



2. While analyzing, aim the A/C remote control at the infrared learning hole on NMP, and press the power button.
3. After identified successfully, fill in the A/C brands, models, and save.

4. Select the air-conditioner control code from pull-up menu, and save.

5. Now control the air conditioner on Q-NEX Console or Touch Panel.

Q-NEX Console

Touch Panel

IR remote control settings

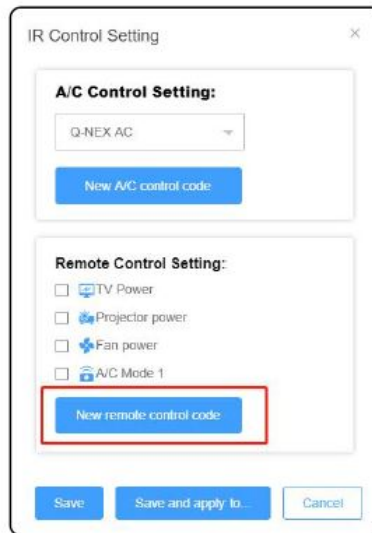
IR remote control module is available for unrecognized air conditioners or other devices using infrared remote control.

Connect infrared transmitter to "IR" port of NMP, and aim the transmitter at the device, and ensure there will be no blocks in between the transmitter and the device.

Login Q-NEX console -> Dashboard -> Devices -> Processor manager.

Select infrared control edit module of a certain NMP to learn the new remote control code, follow the instruction as below:

1. Click the "New remote control code".



IR Control Setting

A/C Control Setting:

Q-NEX AC

New A/C control code

Remote Control Setting:

☐ TV Power

☐ Projector power

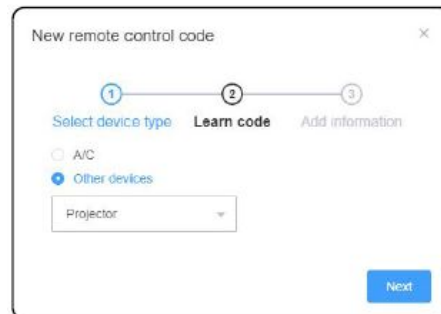
☐ Fan power

☐ A/C Mode 1

New remote control code

Save Save and apply to Cancel

2. Choose the type of IR control device.



New remote control code

1 2 3

Select device type Learn code Add information

☐ A/C

☒ Other devices

Projector

Next

3. Click “start to learn”.



New remote control code

1 2 3

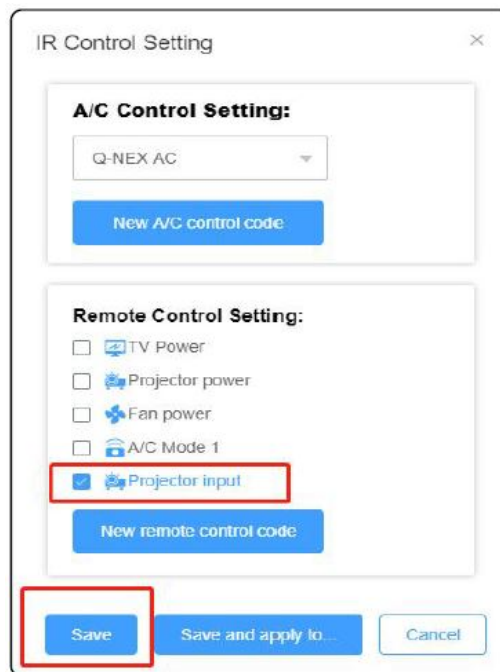
Select device type Learn code Add information

Start to learn

Success

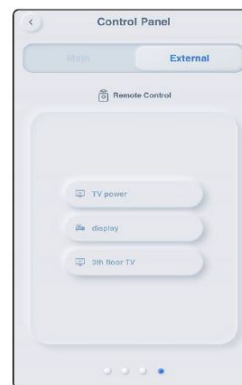
Previous Next

4. While analyzing, aim the remote control at the infrared learning hole on NMP, and then press the function button.
5. After identified success, add information of control code and save.
6. Select the target remote control code, save and done.

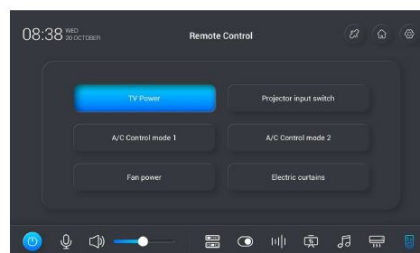


7. Remote control on Q-NEX Console or Touch Panel.

Q-NEX Console



Touch Panel



Note: When NMP is not connected to Internet, IR remote control feature on Touch Panel can NOT be used.

Common problems and solutions

Problem:

The microphone button will flash when you long press it. It means entering the pairing state of the WX-U32 microphone.


Solution:

It is non-fault problem. No need to operate, just wait a few seconds and use it as normal.

If you encounter any problems during installation and use, please contact us: info@qnextech.com

As of the date of manufacture, the product has been tested and found to comply with specifications for CE marking.

Documents / Resources

	Q-nex NMP221-R-CP Networked Media Processor [pdf] User Guide NMP221-R-CP, NMP221-R-LP, NMP221-R-CP Networked Media Processor, NMP221-R-CP, N etworked Media Processor, Media Processor, Processor
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References

- [Q-NEX | Smart AV Solutions for Higher Education by Control Processor](#)
- [Q-NEX](#)