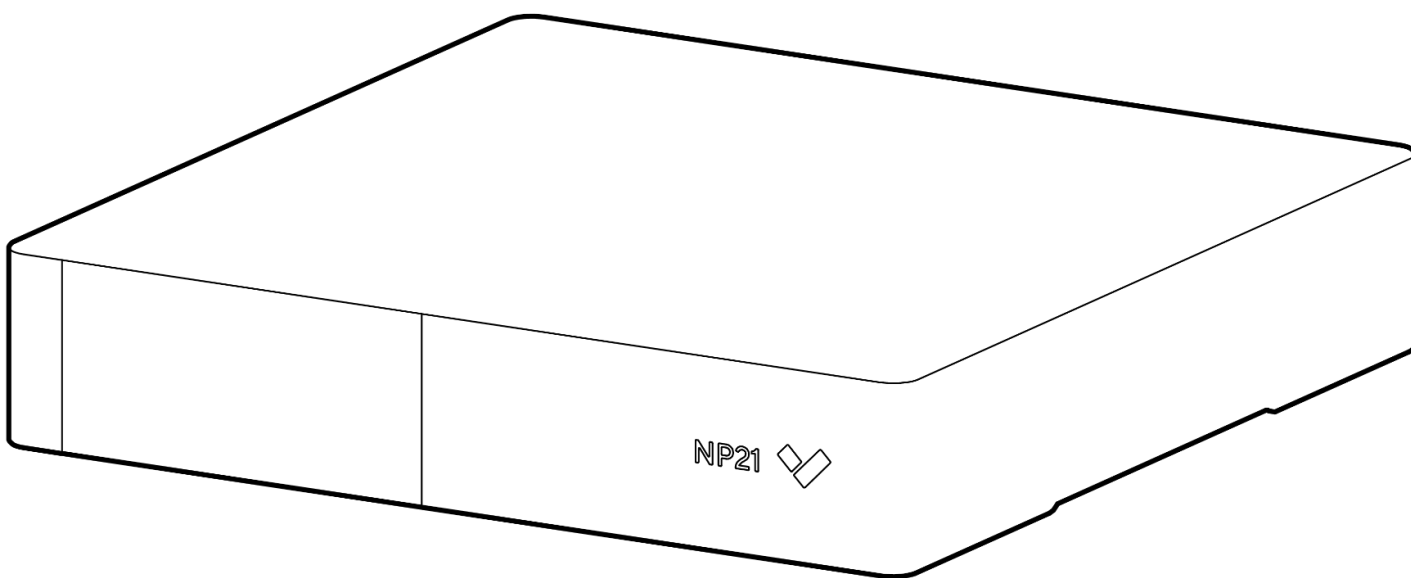


NP21 Two-Channel Network Audio Player



Document Details

Version

v1.1 (20260916)

(V1.0 published 20251208)

Firmware

Firmware version can be verified on Verkada

Command command.verkada.com.

Product Models

This install guide pertains to models:

- NP21-HW

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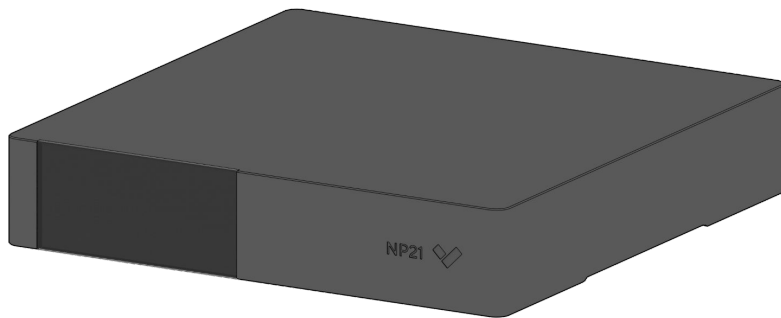
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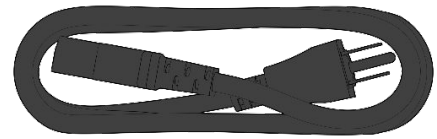
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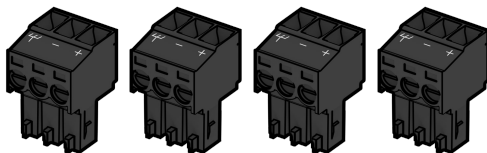
What's in the Box



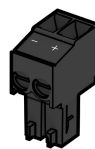
Two-Channel Network Audio Player



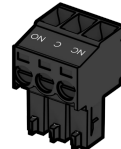
AC Cable



Line In/Line Out Terminal Block
(4 pcs)



GPIO In Terminal Block



GPIO Out Terminal Block

What you'll need

- A smartphone or laptop
- A flat head screwdriver
- A Cat5 or Cat6 Ethernet cable with a 0.2-0.25 inch diameter (5-6.5mm)

Placement

Designed for use on a tabletop.

Option for mounting on server rack with 1U space available using ACC-N-MNT-HRACK

Connect

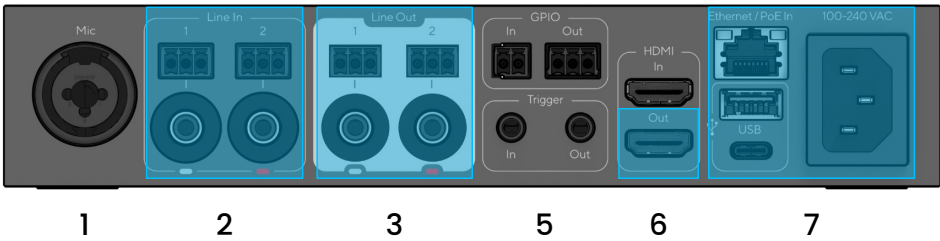
For easy registration and setup, scan the QR code on the product.

If you prefer to manually register your product, please proceed to:

verkada.com/start

Introduction

Overview



	Input/Output	Connector
1	Mic	Port reserved for future use.
2	Line In	3-pin Terminal Block (3.5mm pitch) Accepts balanced or unbalanced line-level signal (+4 dBu nominal)
		Standard RCA Connection Accepts an unbalanced signal (-10 dBV nominal)
3	Line Out	3-pin Terminal Block (3.5mm pitch) Balanced or unbalanced line-level output (+4 dBu nominal)
		Standard RCA Connection Unbalanced signal (-10 dBV nominal)
4	General Purpose (GPIO)	Ports reserved for future use.
5	Trigger In	Port reserved for future use.
	Trigger Out	Port reserved for future use.
6	HDMI	Input: Port reserved for future use.
		Output: HDMI 1.4, Standard (Type-A) Connector
7	Ethernet/PoE In	RJ45
	USB <i>Ports labeled USB are reserved for future use.</i>	USB3.2, Type-A
		USB-C
	AC Input (100-240 VAC)	C14



Audio I/O Overview

There are two Line In, and two Line out channels. These can be configured as individual mono channels or as stereo pairs.

Balanced Signal (Terminal Blocks)

The terminal blocks provide professional balanced line-level input/output (+4 dBu nominal).

Unbalanced Signal (RCA Ports)

The RCA ports provide consumer unbalanced line-level input/output (-10 dBV nominal).

Note: DO NOT use both the balanced (terminal blocks) and unbalanced (RCA) connections for the same line out channel simultaneously.

Terminal Blocks



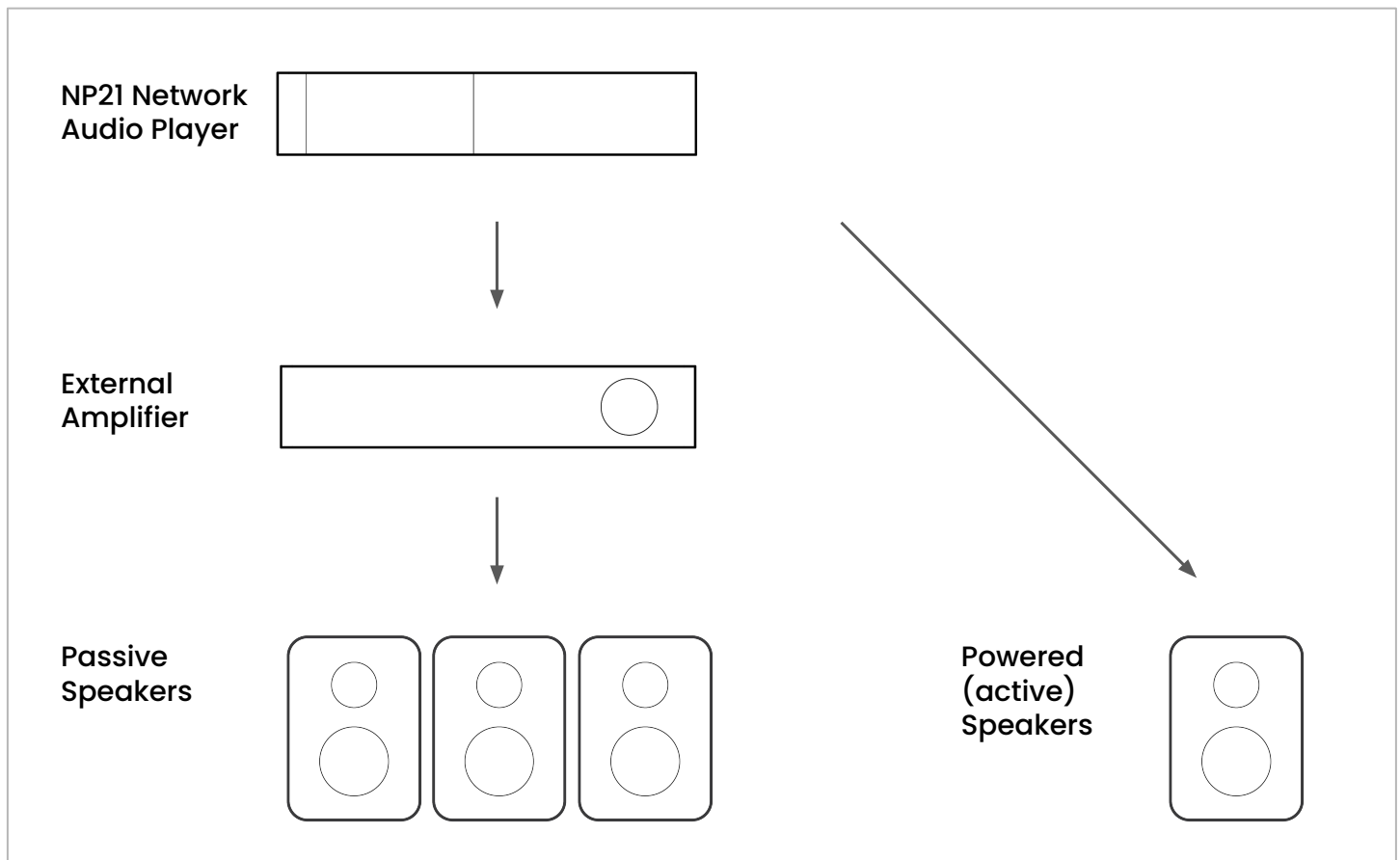
RCA Ports



Amplification Required for Passive Speakers

The Audio Player is a line-level device, not an amplifier. It cannot power passive speakers directly.

You must connect Audio Outputs to an **external amplifier** OR **powered (active) speakers**.



Technical Specifications

Input Power	AC (Recommended): 100-240VAC 0.52 - 0.25A 50/60Hz or PoE+: 42-57V  0.49 - 0.36 A (802.3at PoE Class 4) Max power consumption: 23W
Audio Inputs & Outputs	Frequency Range: 20 - 20,000 Hz +/- 3 dB Signal-to-Noise-Ratio: 100 dB Line Level Nominal: +4 dBu (balanced terminal), -10 dBV (unbalanced RCA) Max: +24 dBu, 12.3V (balanced terminal), +10 dBV, 3.16V (unbalanced RCA) Inputs: 2x balanced terminal + unbalanced RCA (2-channels total) Outputs: 2x balanced terminal + unbalanced RCA (2-channels total)
HDMI	1x HDMI Output, 2-channels
USB	1x USB3.2, Type-A, 5VDC @ 1A 1x USB-C, 5VDC @ 1A
Connectivity	Ethernet: 100/1000Mbps RJ45 for network connection
Dimensions	220mm (W) x 220mm (L) x 44mm (H) / 8.7" (W) x 8.7" (L) x H1.7" (H)
Weight	1.2 kg
Operating Temp. & Humidity	-10 - 50C 0-90% RH non-condensing
Compliance	Please refer to https://www.verkada.com/compliance/

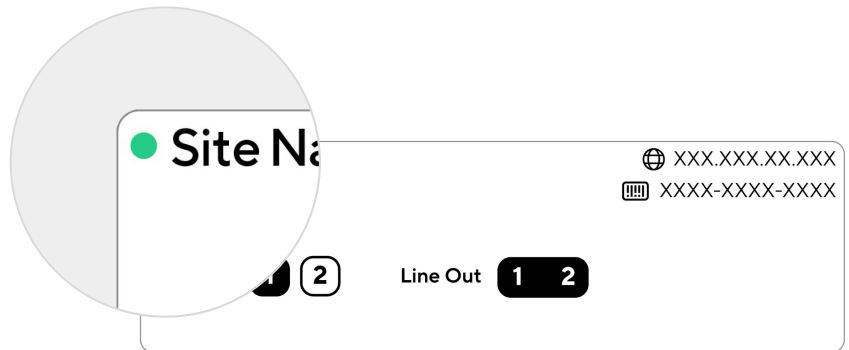
Display Behavior

The display shows the device status, including states like boot up, firmware updating, port status, and potential network errors.



Regular Operation

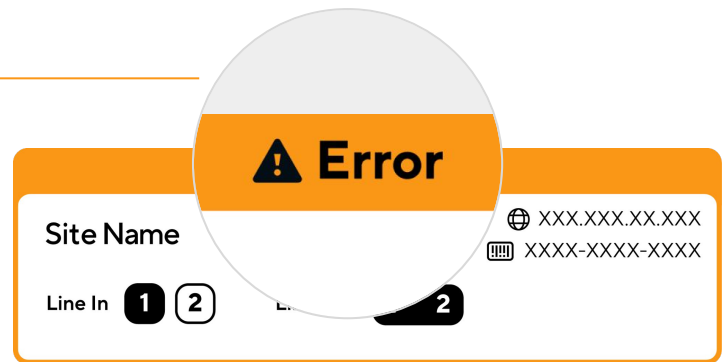
A green dot in the top left corner of the display indicates that the Audio Player is connected and operating normally.



Network Errors

If the device encounters a network error, an orange bar will appear at the top edge of the display.

The specific error state will be shown on the display:



No IP Address

Device has not received an IP address.

Duplicate IP

Device has detected duplicate IP addresses on the LAN.

No Gateway

Device is not able to reach the configured Gateway.

No Switch

Device is connected with PoE, but unable to connect to the Switch.

DNS error

Device is not able to resolve Verkada hostnames.

NTP Error

Device is not able to receive a response from the NTP Server.

Not Connected to Command

Verkada endpoints are not reachable after boot up.

Mounting Options

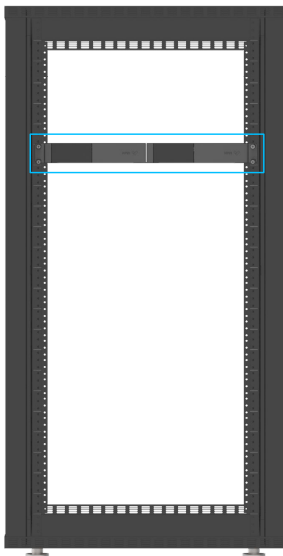
Tabletop

Place the Audio Player in its intended position and ensure that the device has adequate space for cabling.



Server Rack Mounting

The ACC-N-MNT-HRACK rack-mount accessory is required for all three 1U setups, providing the necessary width to bridge a standard 19-inch rack. This system allows you to securely rack-mount a single NP21, or a dual-unit.



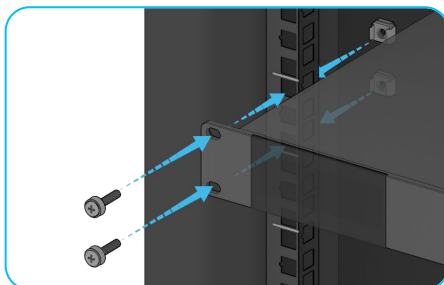
Single NP21



Dual NP21

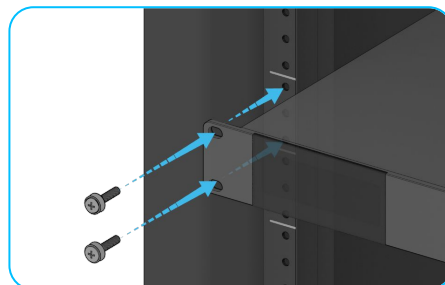
Non-threaded Rack

Install the M5 cage nuts in the rack, then use the M5 rack screws to mount the NP21.



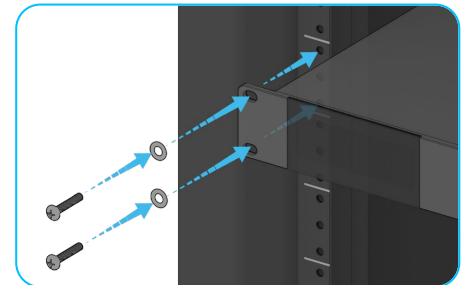
M5 Threaded Rack

Use the M5 rack screws to mount the NP21 directly.



10-32 Threaded Rack

Use the 10-32 mount screws and washers to mount the NP21 directly.

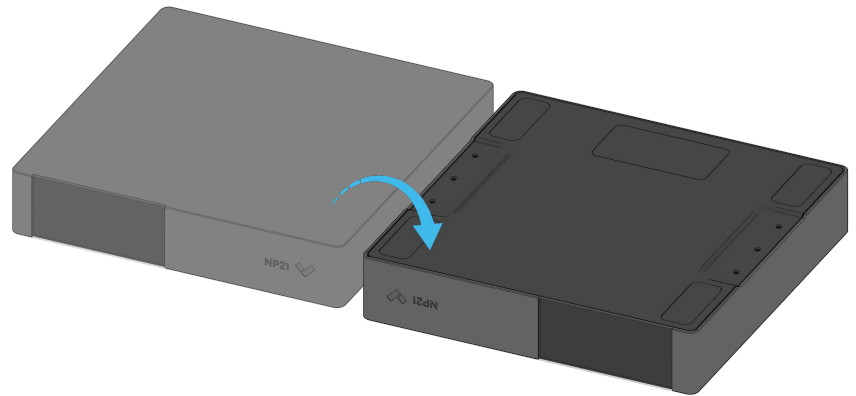


Installation

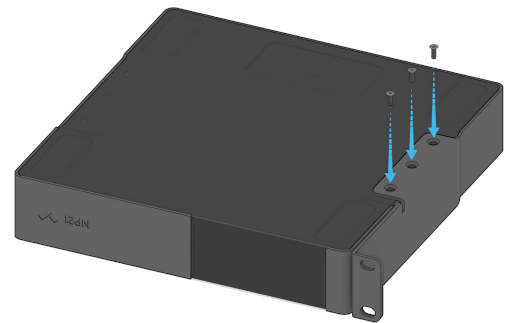
Server Rack Mounting – Single NP21

Retrieve ACC-N-MNT-HRACK (NP21 Mounting Accessory Kit).

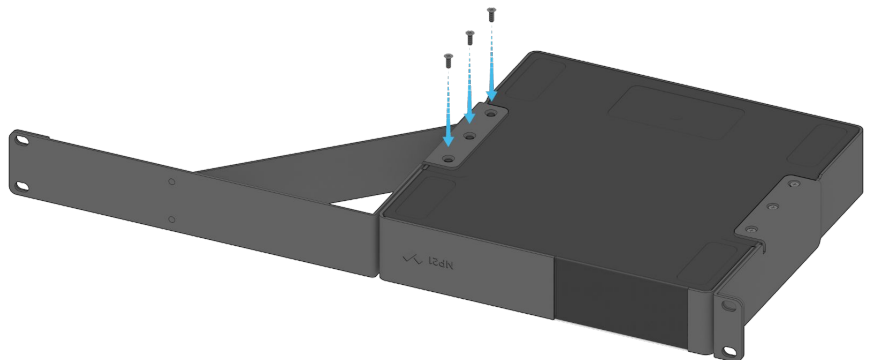
Flip the Audio Player over.



Attach the Left Bracket from ACC-N-MNT-HRACK onto the bottom left side of the Audio Player.



Attach the Spacer Bracket from ACC-N-MNT-HRACK onto the bottom right side of the Audio Player.



Mount the Audio Player in the rack using the appropriate hardware for your rack type. See **Mounting Options** for details.

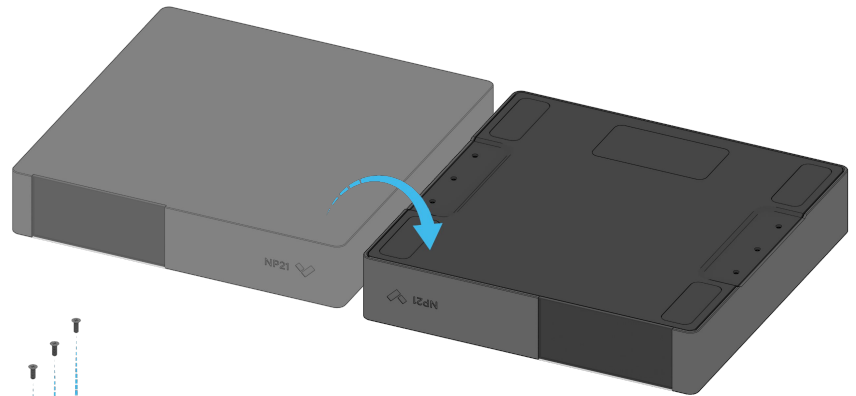


Installation

Server Rack Mounting – Dual NP21

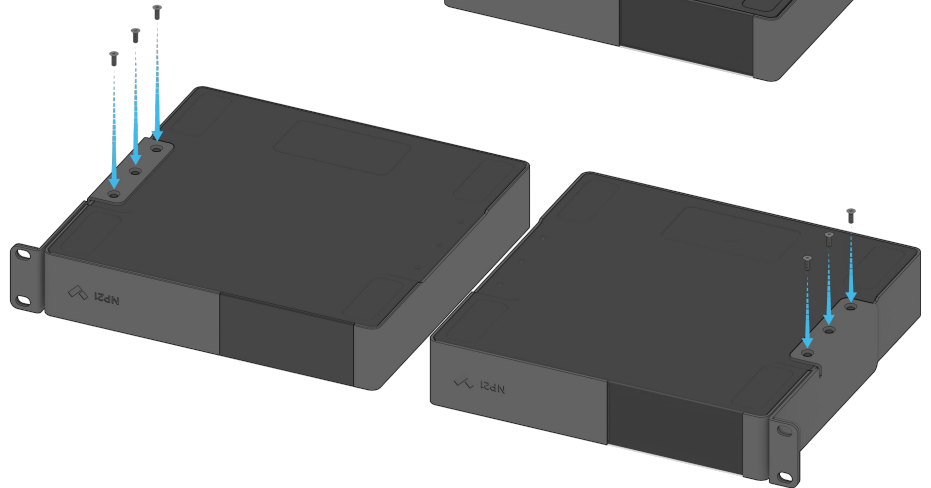
Retrieve ACC-N-MNT-HRACK (NP21 Mounting Accessory Kit).

Flip the Audio Player over.



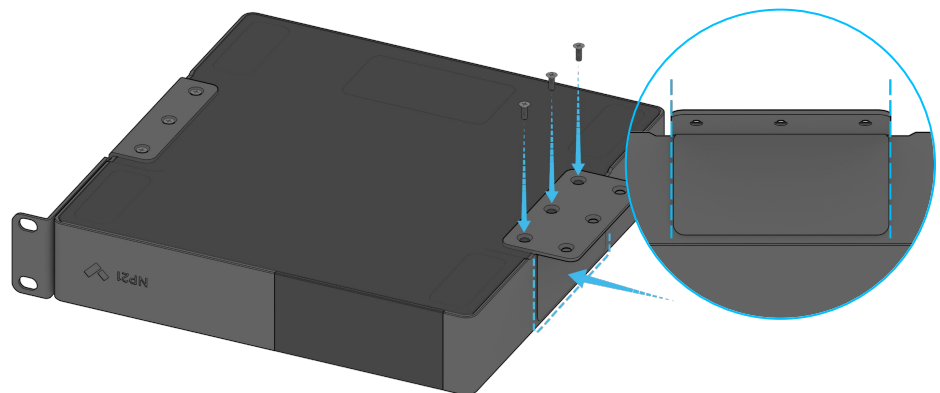
Position the two Audio Players next to each other.

Attach the Mounting Brackets onto the outer edges using the provided screws.



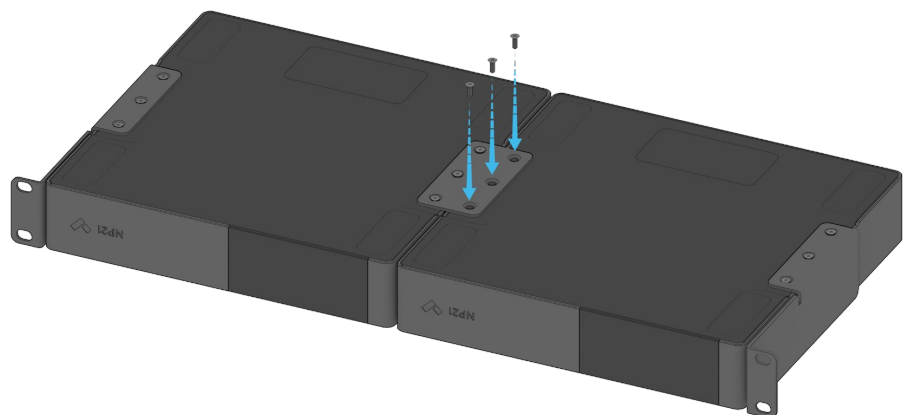
Attach the Connector Plate onto one of the Audio Players using the provided screws.

Peel the backing off the Center Isolator Pad, then align it with the edges of the Connector Plate and press it into place.



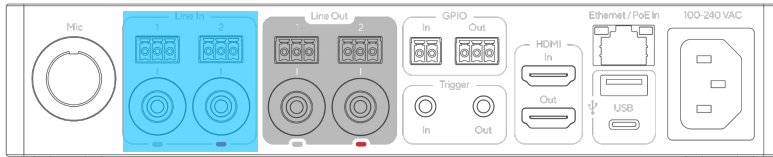
Attach the Connector Plate onto the other Audio Player using the provided screws.

Mount the Audio Player in the rack using the appropriate hardware for your rack type. See **Mounting Options** for details.



Installation

Audio Inputs 1/2 (Optional)

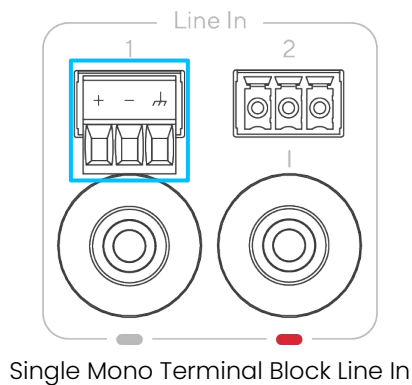


Line In Configuration

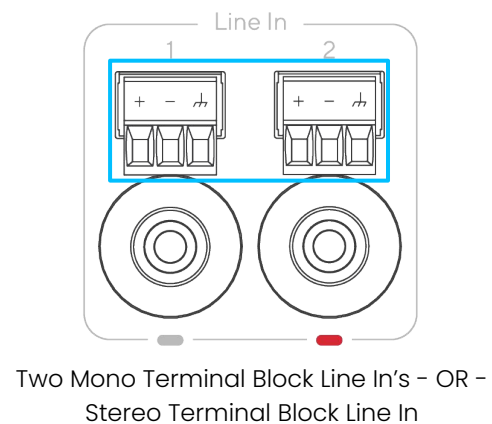
The NP21 Network Audio Player features two Line In channels. This can be configured as two individual mono channels or one stereo pair.

Balanced Line In 1,2

The terminal blocks provide professional balanced line-level input (+4 dBu).



Single Mono Terminal Block Line In

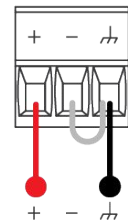


Two Mono Terminal Block Line In's - OR -
Stereo Terminal Block Line In

Recommended Wiring: Use 20–22 AWG, 2-conductor shielded wire.

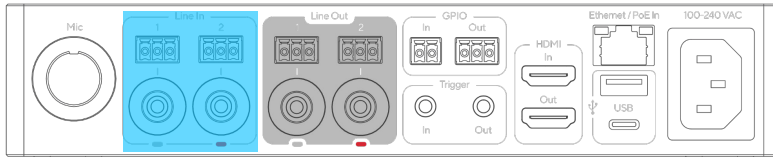
Note: To input an unbalanced signal from the terminals, install a jumper wire between the Ground (GND) and Negative (–) pins.

Unbalanced



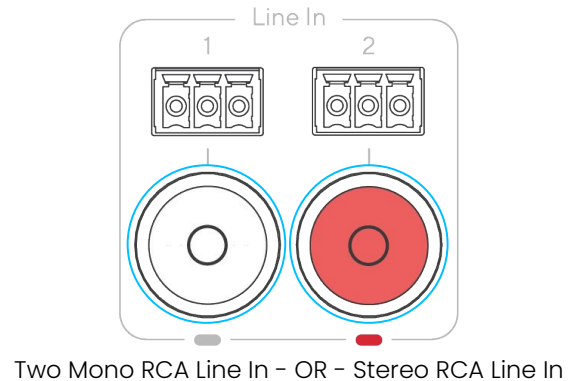
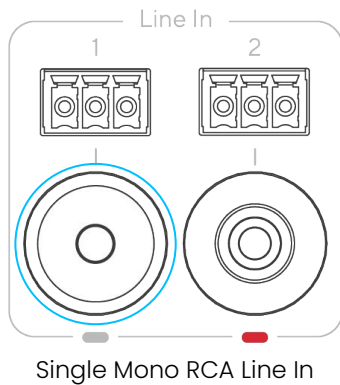
Installation

Audio Inputs 2/2 (Optional)



Unbalanced Line In

The Standard RCA inputs provide consumer unbalanced line-level input (-10 dBV) which supports RCA Line level source devices (such as media players).

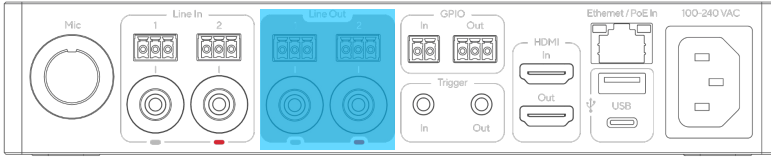


Recommended Wiring: Pre-made RCA cables.

Stereo Configuration: Always use adjacent odd/even channel pairs (e.g., Channels 1 & 2). The odd channel is always the Left channel, and the even channel is always the Right channel. Both terminal block and RCA support stereo.

Installation

Audio Outputs – Mono

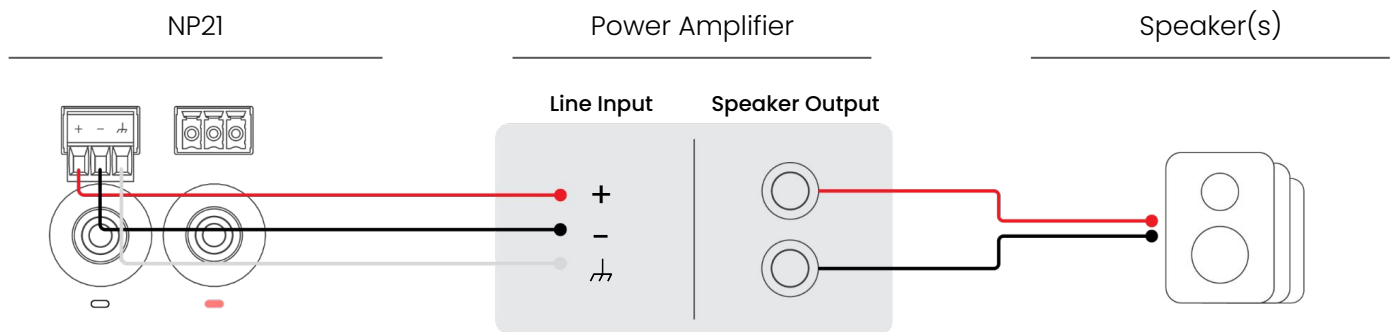


Line Output Configuration

The NP21 Network Audio Player features two Line Out channels. These can be configured as a single stereo pair or as two individual mono channels.

Balanced Mono Output (Terminal Block Wiring)

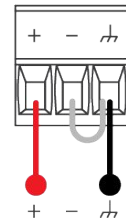
Make sure to maintain proper polarity. Use 20–22 AWG, 2-conductor shielded wire.



NOTE: DO NOT use both the balanced (terminal blocks) and unbalanced (RCA) connections for the same Line Out channel simultaneously.

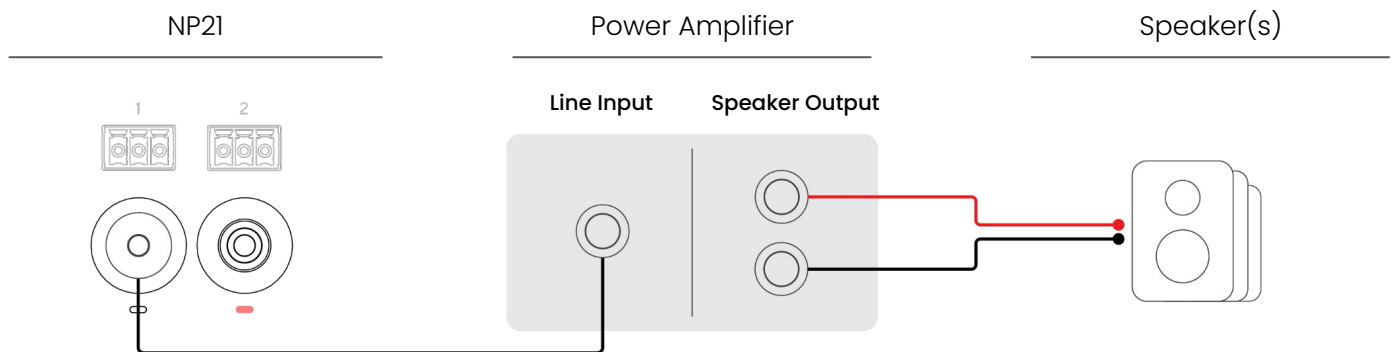
To output an unbalanced signal from the terminals, install a jumper wire between the Ground (GND) and Negative (-) pins.

Unbalanced



Unbalanced Mono Output (RCA Wiring)

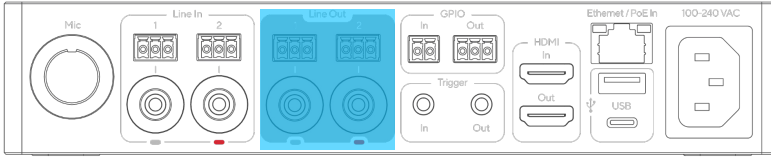
Use standard RCA cable.



Note: DO NOT use both the balanced (terminal blocks) and unbalanced (RCA) connections for the same channel simultaneously.

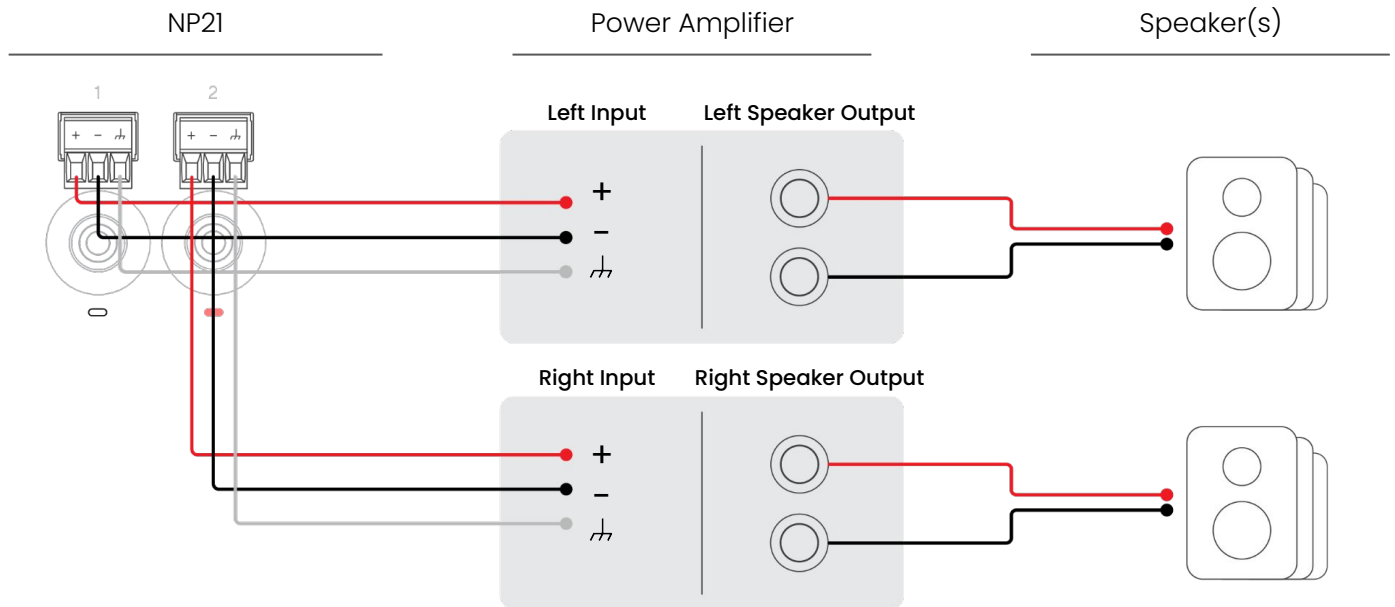
Installation

Audio Outputs – Stereo



Balanced Stereo Output (Terminal Block Wiring)

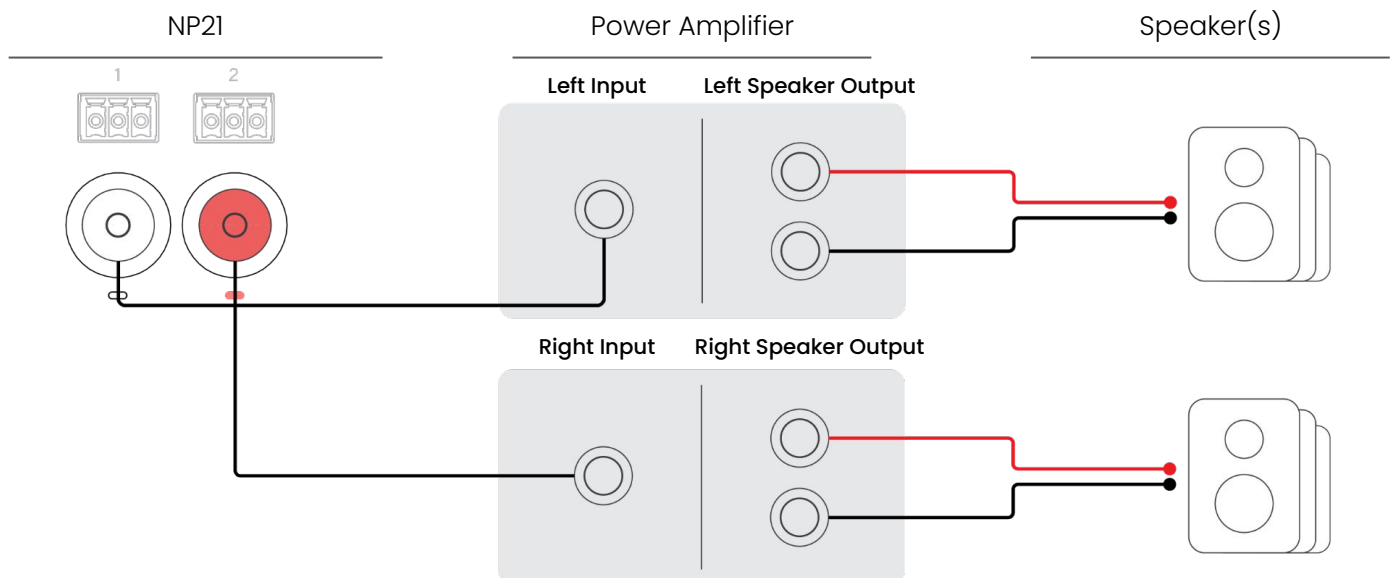
Always use adjacent odd/even channel pairs (e.g., Channels 1 & 2). The odd channel is always the Left channel, and the even channel is always the Right channel. Make sure to maintain proper polarity. Use 20–22 AWG, 2-conductor shielded wire.



Note: DO NOT use both the balanced (terminal blocks) and unbalanced (RCA) connections for the same Line Out channel simultaneously.

Unbalanced Stereo Output (RCA Wiring)

Use standard RCA cable.

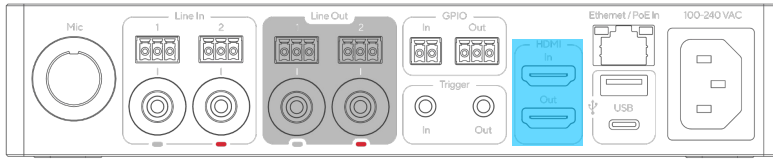


Note: DO NOT use both the balanced (terminal blocks) and unbalanced (RCA) connections for the same channel simultaneously.



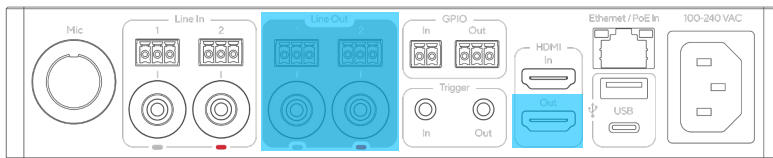
Installation

HDMI (Optional)



HDMI Output

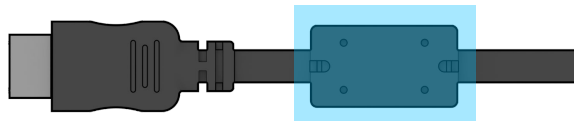
The two HDMI output ports allow you to digitally output audio that would otherwise be routed through the analog connections (RCA or terminal block).



In Verkada Command, configure your desired line out ports. Connect your destination device to the corresponding HDMI output port on the NP21. The configured ports will be available as digital audio channels via the HDMI output — no RCA or terminal block connections required.

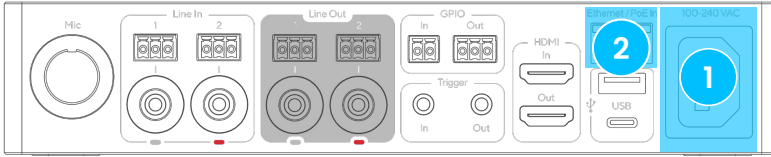
Note: HDMI output ports mirror the line output configuration set in Command. Ensure ports are configured in Command before connecting via HDMI.

Recommended Wiring: HDMI cables with integrated ferrite cores (molded chokes near each connector) for both input and output connections for better EMI noise suppression.



Installation

Power Options



Note: Connecting both AC and Ethernet is recommended to provide a secure earth ground for the device.

To power the NP21, connect a PoE-capable Ethernet cable or connect to a standard power outlet (100-240VAC) using the provided AC power cable.

Connect the NP21 to your network using the Ethernet port

- 1 AC Input (100-240 VAC)**
AC Power, using C14 AC Power Cable (Included)
- 2 PoE In**
PoE Power, using Ethernet (RJ45) Cable

Appendix

Compliance

FCC Compliance	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. 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 when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. 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.
IC Statement	This device complies with ISED's licence-exempt RSSs. 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. Radiation Exposure Statement: This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with greater than 20cm between the radiator & your body. Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable. Déclaration d'exposition aux radiations: Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à plus de 20cm entre le radiateur et votre corps.
Spotify	Use your phone, tablet or computer as a remote control for Spotify. Go to spotify.com/connect to learn how The Spotify Software is subject to third party licenses found here: https://www.spotify.com/connect/third-party-licenses.
HDMI	The Adopted Trademarks HDMI, HDMI High-Definition Multimedia Interface, HDMI trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries

Appendix

Support

Thank you for purchasing this Verkada product. If for any reason you're experiencing issues or need assistance, please contact our 24/7 Technical Support Team immediately.

Sincerely,
The Verkada Team
verkada.com/support

