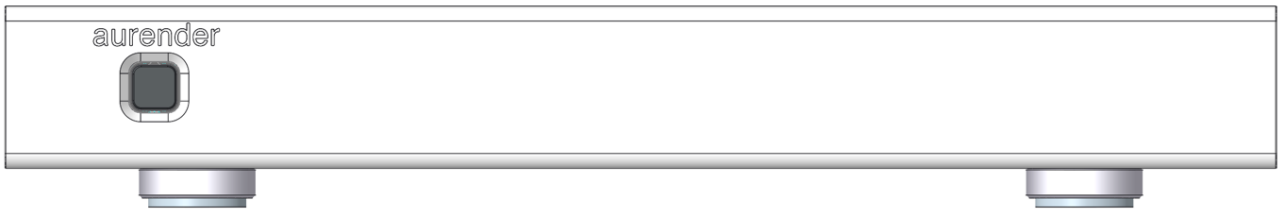
NH10 Hardware Guide

Not yet followed by anyone

1. Product Warranty

Remote technical support is always free and available for any Aurender owner, regardless of warranty status. In the unlikely event of hardware repair becoming a necessity, Aurender's manufacturer's warranty covers the cost of parts, labor, and return shipping for 2 years following the purchase from an authorized Aurender dealer. The warranty is non-transferrable. Damage caused by improper use or damage caused by repairs or modifications by individuals other than the manufacturer or its dealers is not covered by the warranty even within the warranty period.



Warranty claims and technical support inquiries can be made via email to support@aurender.com

No registration is required for Aurender products. Please simply retain your dated receipt/proof of purchase for any warranty claims.

2. Safety & Precautions

1. Be careful not to damage the device due to improper handling or dropping.

2. Do not disassemble the device.

3. Avoid exposure to oil, dust, water, high humidity or smoke.

4. Ensure that there is at least 5cm(2") of space on each side for proper ventilation.

5. Cleaning: use a soft non-abrasive cloth to gently wipe the outside of the device. Water or other cleaning solutions should be avoided.

6. Should the product require hardware repair, work must be performed only by qualified technicians of Aurender headquarters or distributors/dealers. Failure to observe this precaution will void the warranty.

7. Shut down or unplug the power cable when not in use for an extended period or when there is severe lightning.

8. Be sure to shut the unit down when connecting or disconnecting cables.

9. Do not stack objects on top of NH10 and do not expose to water or liquid.

10. NH10 is very heavy and can generate significant heat, so be very careful when moving the device to avoid personal injury.

3. Product Overview

The NH10 is an Internet-based network switch that builds on Aurender's network technology to deliver more reliable and higher quality network performance.

We have taken great care to create a clean power source.

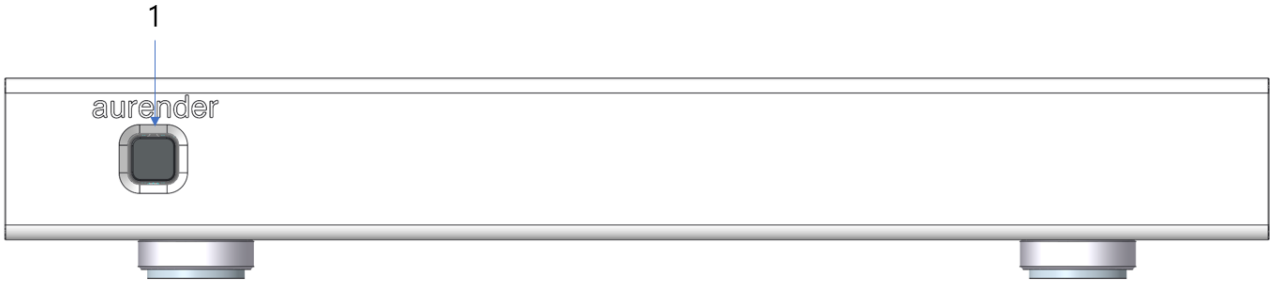
We adopted a high-performance AC filter and organized a full linear power circuit, and the network circuit is also designed with a full linear power supply instead of a switching power supply.

In addition, a multi-stage network multi-filter is applied to eliminate network noise that may be introduced from the outside, so that a more stable and high-quality network signal can be delivered to devices such as audio systems and NAS connected to the NH10 Network Switch.

Internally, a high-performance OCXO oscillator is used, and the circuitry is configured so that the entire system can be synchronized through the output from this oscillator, and it is processed to accept an external Master Clock input separately.

4. Anatomy of NH10

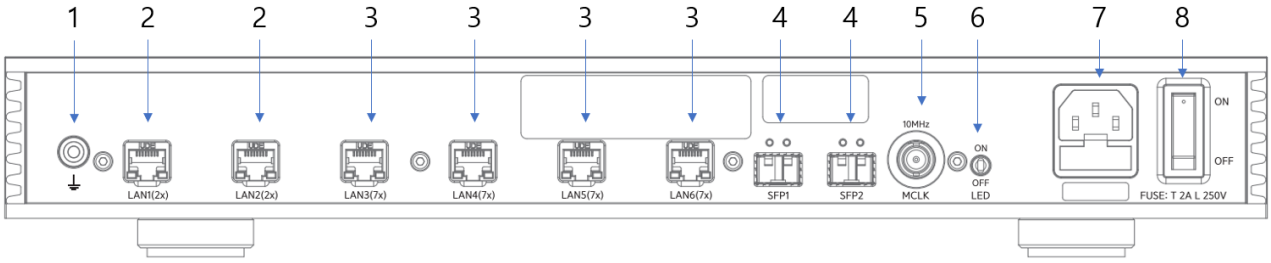
<Front Panel>



1. Power Button and LED halo : Press the button to power on/off the NH10. The LED halo on the border of the button indicates the status of the device. In "off" mode, the light is dim white. In "on" mode, it is displayed in white/blue.

If a Master Clock is connected, it will light blue.

<Rear Panel>



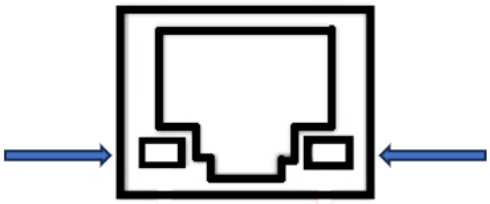
1. Ground : Connecting audio devices with a ground terminal to match the ground level can stabilize operation and enhance audio performance, however it is optional to connect a ground cable and no harm will come from omitting this connection.

2. LAN(2x) Ports : RJ-45 8pin network connection port, used to connect equipment with network multi-filter applied.

3. LAN(7x) Ports : RJ-45 8-pin network connection port; used to connect network general network equipment.

- LAN Port LED Indicate

Link LED	
Off	No Link
Orange	Linked
Blink	Data activity



Speed LED	
Off	연결되지 않음
Orange	1000Mbps Connection
Green	100Mbps Connection

4. SFP Ports : Use to connect 1 Gbps communications using SFP modules

5. Master Clock In(50ohm) : Used to connect a 10 MHz master clock device such as the MC10 or MC20 to a 50ohm terminal with a 50ohm BNC cable.

6. LED ON/OFF : A switch to turn the front power button LED and the Link/Act LED on the network port on or off.

7. AC power connector and fuse : Connect IEC power cable. Fuses are user-replaceable.

(Fuse specification : Capacity: 2A, Size: 5mm x 20mm, Type: Slow-blow)

8. AC power switch- The AC power switch governs AC current to NH10. To power on NH10, first turn the AC power switch to the "on" position. Then, press the front power button to boot up NH10. "I" equals on, "0" equals off.

5. Basic Operation

- Connect the AC power cord to the AC socket on the back of the Product.

- When plugging in the power cable, be sure to plug it into a grounded socket outlet.

Optional : Master Clock In (10 MHz) uses a BNC cable to connect to the Master Clock output device.

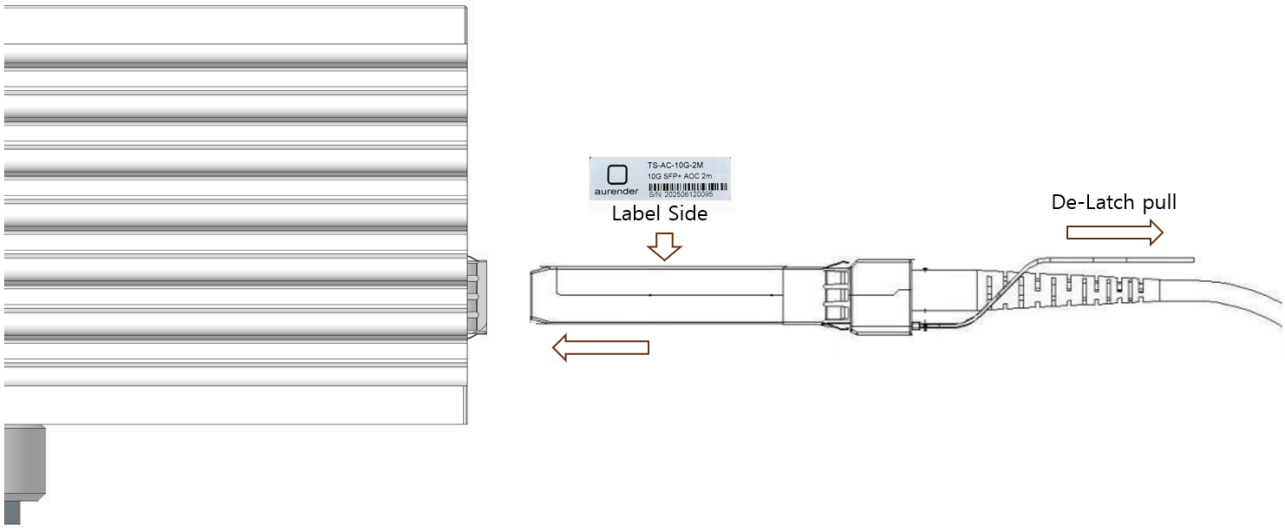
- It is recommended that all devices are plugged in before powering them on.

- When connecting a network line (LAN Cable), if both sides of the network line are connected to the NH10 at the same time (Loop), problems will occur in the network environment.

- The back LED On/OFF switch should be in the ON position.

- The SFP cable is locked by pushing it all the way in in the direction shown below.

To disconnect, pull the black handle to release it easily.



<Caution> Severe bending of the SFP fiber can cause internal damage and result in communication problems.

- After all connections are complete, turning on the rear AC switch will automatically start the product's boot process without needing to press the front power button.

(After a power outage and restoration, the NH10 will automatically resume operation without any action required.)

It will enter operational status approximately 6 seconds after power is applied.

[If the power button is pressed while the back LED On/Off switch is off, the power button LED will blink white three times and then turn off.

If the power button is pressed while the power LED is off, the button LED will stay white for 7 seconds and then turn off if the button is pressed again within 7 seconds. If left alone, the system will operate with the button LED off.

(When the Master Clock is connected, it will light up green.)]

- To protect your device, we recommend that you use the front power button to turn it off.

- After pressing the front power button, the power button will turn a dull white color and go into standby after two seconds.

At this point, you can turn off the rear AC switch.

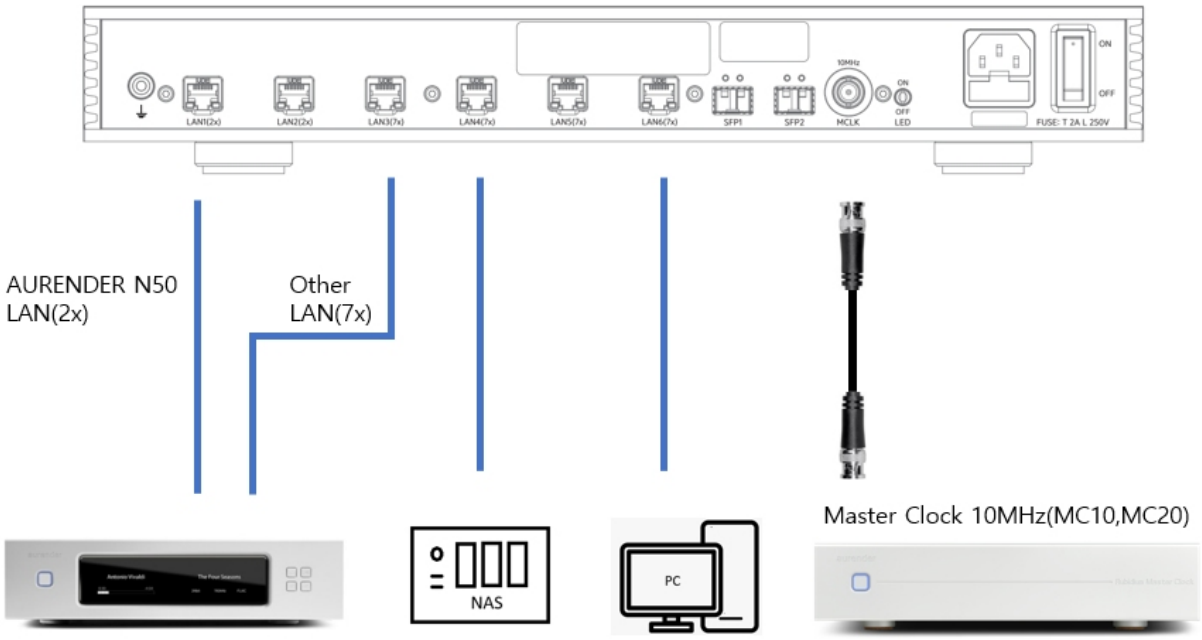
- The product may become warm while in use.

This is normal because the internal power source is a linear power source.

1) Connection Summary

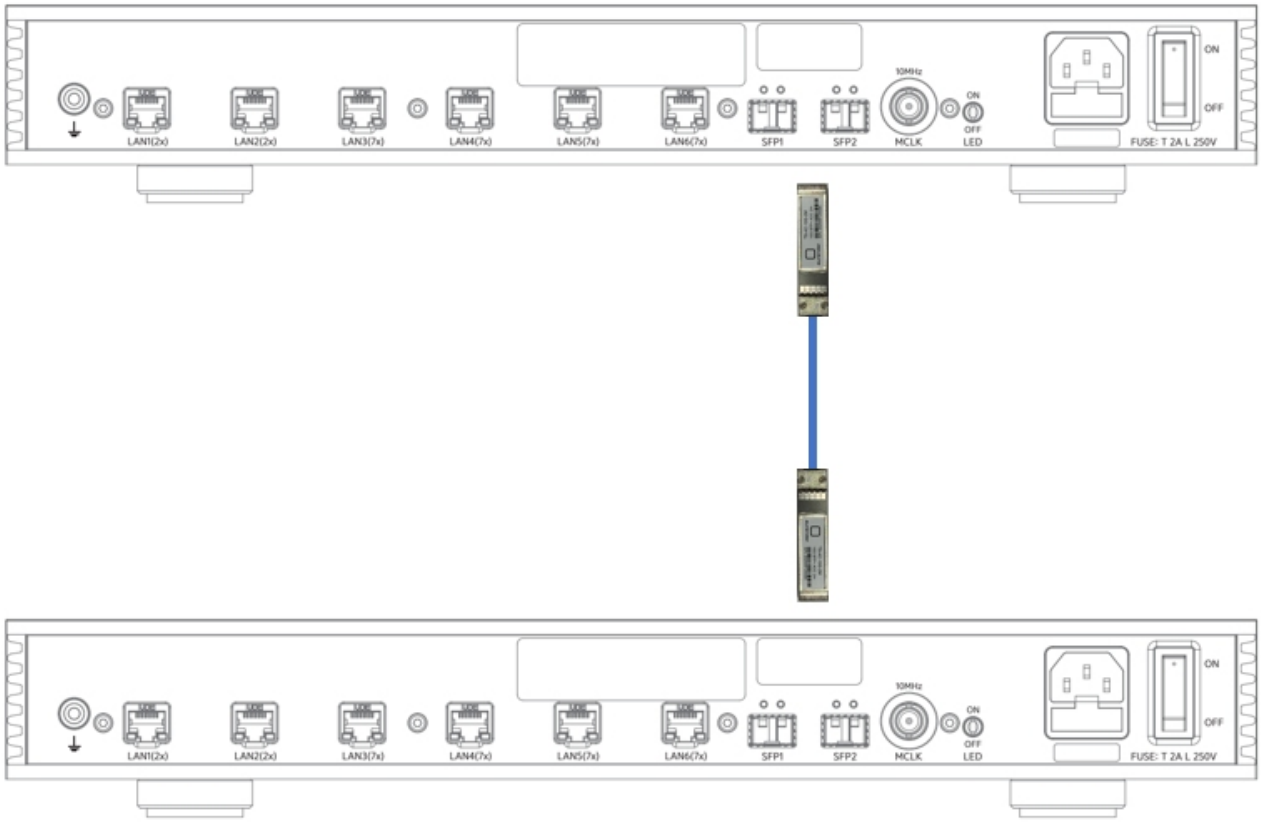
If your Aurender product has a built-in 2x Isolation Filter, or if it was released earlier, or if you have a PC, NAS, or network router, please connect it to the LAN (7x) port.

Devices with multiple filters built into the LAN port, such as the Aurender N50, should be connected to the LAN (2x) port.



2) Connecting more than one NH10

Please connect the NH10 and each other with an SFP cable.



7. Technical Specifications

- Standards Compliance: IEEE802.3i, IEEE802.3u, IEEE802.3ab, IEEE802.3z
- Data Transfer Rate: LAN1-6 : 100Mbps/1000Mbps, SFP1-SFP2 : 100Mbps/1000Mbps
- Number of Port(Filter): LAN Ports : LAN1-2(2x), LAN3-LAN6(7x), SFP Ports : 2
- Connector Type: RJ-48 8pin, SFP
- Transmission Distance: 100m(Max)
- LED On/Off: Toggle Switch
- OCXO Spec: Frequency Stability : < 0.005ppm
- Master Clock In Spec: 10MHz, 0.7Vrms, BNC(50ohm)
- Input Voltage: 110V / 220V (Fuse: 2A, 5mm x 20mm, Slow-blow)
- Operating Temperature: 10°C to 35°C
- Size: 430 x 355 x 5.6 mm (unit only), With Spike(6.8 mm)
- Weight: 8.0kg(17.6lbs)
- Power Consumption: Stand by : 3.1W, Power On : Start Warm-up 26W(Max), State Lock: 20W(Max)