

Using HDA Audio with a Netgear M4250-10G2XF-PoE+ Network Switch

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URC HDA devices and software provide countless options to configure and optimize audio settings to achieve performance and flexibility for almost any application.

In most cases, the URC HDA-SW5 switch capacity is sufficient for most installations. However, if additional AVB ports are required the

Netgear M4250-10G2XF-PoE+ Network Switch can be used in a URC HDA audio system.

The following article details the required settings needed to use the Netgear M4250-10G2XF-PoE+ Network Switch with URC HDA Audio.

The Netgear M4250-10G2XF-PoE+Network Switch is an AVB-enabled switch that supports ten RJ45 ports and two SFP network ports for AVB steamed over fiber or additional SFP RJ45 ports.

Note: Many Netgear network switches now include the AVB profile. If the AVB profile is not visible, please update the switch firmware.)

This short guide defines the required settings needed to use the Netgear M4250-10G2XF-PoE+Network Switch with HDA Audio. This guide was written to get you started with using this switch with URC HDA Audio. Any other custom settings you set or change in the Netgear M4250-10G2XF-PoE+Network Switch are up to you and may affect the performance of HDA Audio.

****The Netgear M4250-10G2XF-PoE+ Network Switch is fully compatible with the URC HDA-SW5 AVB Network Switch.***

Note: Tested with HDA firmware v1492 (minimum required), HDA-SW5 firmware v148 (minimum required).

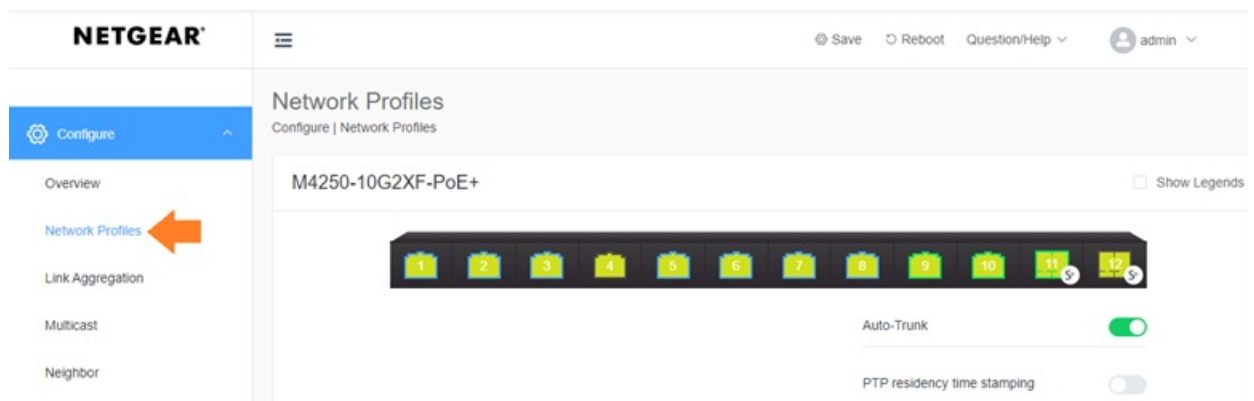
Testing with Netgear M4250-10G2XF-PoE+Network Switch firmware version 13.0.2.34 (minimum required).

Netgear M4250-10G2XF-PoE+Network Switch user manuals and documentation [can be found here](#).

Netgear M4250-10G2XF-PoE+Network Switch initial setup documentation [can be found here](#).

Setting up the switch to use with HDA Audio

1. Once you are logged into the switch, select the “Network Profiles” option.



2. Scroll down to “Configured Profiles” and select “Edit”.



3. Select “Profile Template”, then select the “Audio Video AVB” option.

The “Profile Name” will remain “Default.”

The VLAN ID will remain “1”.

“Edit VLAN Routing / DHCP Server” was left disabled. You may choose to change this if you are using this switch with devices using other streaming technologies.

Profile Settings

Configure your profile settings and preferences.

Profile Name
Default

Profile Template
Data

Audio AES67
Audio Dante
Audio Q-SYS
Audio Video AVB
Data
Lighting
Video

VLAN ID
1

Edit VLAN Routing / DHCP Server

VLAN IP Settings
DHCP client

Subnet Mask
255.255.255.0

4. Scroll up on the switch setup webpage and check all the ports on the switch. They should display a green checkmark.

Select the ports where this profile will apply. "Default"

1 2 3 4 5 6 7 8 9 10 11 12

Untag all

Later, you can adjust the AVB port assignments if you need to use another VLAN in the system.

Select "Apply".

Edit VLAN Routing / DHCP Server

VLAN IP Settings
DHCP client

Subnet Mask
255.255.255.0

Audio Q-SYS
Audio Video AVB
Data
Lighting
Video



Cancel Apply

Once applied, the "Configured Profiles" screen shall display the "Default Profile" as "Audio Video AVB", on VLAN 1.

A dynamic “VLAN2” is automatically created by the Netgear switch to prevent conflicts with the “Audio Video AVB” profile on “VLAN1”.

Important Note: *In addition to clicking “Apply” in the area where you create a new network profile for AVB, **you also have to hit “Save” at the top of the page** . Otherwise, all the settings go away if the switch is rebooted.*

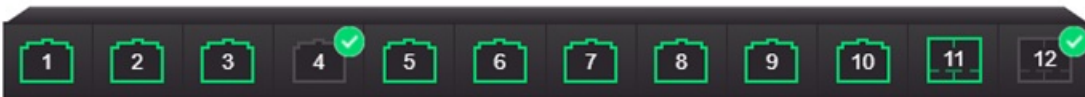
Configured Profiles

Profile Name	Profile type	VLAN ID	IP Address	# of Assigned Ports
 Default	Audio Video AVB	1	192.168.1.204	12
 VLAN2	Dynamic	2	N/A	0

Total 2 10/page < 1 > Go to 1

Setting up the switch to use with other streaming technologies

Any port on the Netgear switch needed for other streaming technologies like Dante, Q-Sys or video streaming should reside on their own VLAN within the Netgear switch, like the example shown below:



Untag all

LAG

Profile Settings

Configure your profile settings and preferences.

Profile Name
Video

Profile Template
Video

VLAN ID
10

Color
#1AD617

Edit VLAN Routing / DHCP Server

VLAN IP Settings
Static

VLAN IP Address

Subnet Mask

DHCP Server
Off

Cancel

Apply



Configured Profiles

Profile Name	Profile type	VLAN ID	IP Address	# of Assigned Ports	
Default	Audio Video AVB	1	192.168.1.204	10	
VLAN2	Dynamic	2	N/A	0	
Video	Video	10	N/A	2	

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The Netgear switch supports templates for multiple streaming technologies that can be used when creating individual VLANs.

Profile Templates

[Create AV Template](#)

Audio AES67

To connect IP Audio AES67 devices and their controller



Audio Dante

To connect IP Audio Dante devices and their controller



Audio Q-SYS

To connect IP Audio Q-SYS devices and their controller



Audio Video AVB

To connect IP Audio Video AVB devices and their controller.



Data

To connect PCs and other Control network devices.



Lighting

To connect sACN, Art-Net, and MANet lighting devices.



Video

To connect IP Video devices and their controller. Audio can be sent and received using another VLAN tag in another profile simultaneously. Supported devices include NVX, AMX, ZeeVee, Aurora, Kramer, Atlona, LibAV, Visionary, Dante Video, SDVoE & etc.



Using the Netgear Switch PoE and PoE+ with HDA-IO and HDA-130 Amplifier

The Netgear switch can power the HDA-IO stream injector/receiver and the HDA-130 amplifier. Select the “Power Over Ethernet” option and “PoE Interface Settings” in the switch configuration tool.

The screenshot displays the Netgear switch configuration interface. On the left, a sidebar menu includes 'Configure', 'Overview', 'Network Profiles', 'Link Aggregation', 'Multicast', 'Neighbor', 'Power over Ethernet' (highlighted with an orange arrow), and 'Port configuration'. The main content area is titled 'Power over Ethernet (PoE)' and 'Configure | Power over Ethernet'. It shows the switch model 'M4250-10G2XF-PoE+' and a 'Show Legends' checkbox. Below this is a 'PoE Schedule' section with a 'Create Schedule' link. The central part of the interface features a row of 12 port status indicators, numbered 1 through 12. Ports 1 through 8 are highlighted with blue circles and green checkmarks, indicating they are powered on. A power consumption bar at the bottom shows a current usage of 39W out of a 240W maximum. An orange arrow points to the 'PoE Interface Settings' link in the top right corner of the main content area.

Select the ports requiring PoE and click Apply. For more information about other PoE settings, refer to the Netgear documentation for this switch.

PoE Interface Settings

Select the ports where the PoE Interface settings will apply.

12

11

10

9

8

7

6

5

4

3

2

1

☐ Select All PoE Ports

Enable PoE

PoE Standard

802.3at

Detection Type

4ptdot3af

Priority

Low

Power Limit Type

Class

Power Limit (Watts)

32.00

PoE Schedule

None

3W minimum - 32W maximum

Cancel

Apply

SFP Ports



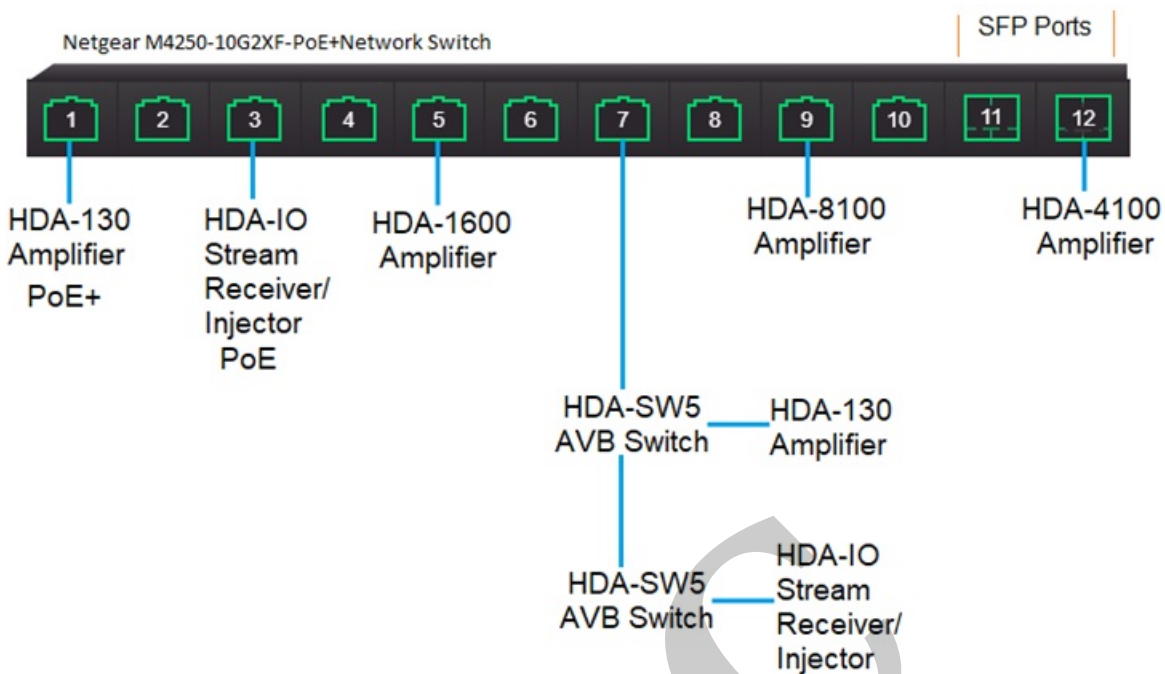
The SFP ports of the Netgear M4250-10G2XF-PoE+Network Switch were tested using SFP RJ45 adapters. No issues were found using this configuration.

SFP adapters used for these tests:

10Gtek Fiber SFP Adapters – product information [can be found here](#).

The SFP Ports of the Netgear switch also support fiber SFP adapters.

Tested HDA Connections - Example



Important Note: In addition to clicking “Apply” in the area where you create a new network profile for AVB, **you also have to hit “Save” at the top of the page** . Otherwise, all the settings go away if the switch is rebooted.

Additional Information & Resources:

Netgear M4250-10G2XF-PoE+Network Switch user manuals and documentation [can be found here](#).

Netgear M4250-10G2XF-PoE+Network Switch initial setup documentation [can be found here](#).

More information on using third-party AVB network switches [can be found here](#).

More information on using PreSonus AVB network switches [can be found here](#).

More information on using Luminex Gigacore AVB network switches [can be found here](#).

More information on using L-Acoustics AVB network switches [can be found here](#).

To learn more about HDA products and programming, please see the [HDA Programmers Guide](#) or the Accelerator 3 online [Programming Guide](#).

Please contact **Netgear ProSupport** for Netgear-specific technical support questions:
<https://www.netgear.com/support/product/netgear-prosupport/>