

Axia xNode AES67 Interoperability with Iyo Dante

This document provides a brief overview of integrating Axia AES67 devices with AudioScience Iyo Dante products operating in AES67 mode, utilizing Dante Controller and Axia's web interface. Instructions are provided for streaming an xNode stereo Source to an Iyo Dante Destination and an Iyo Dante stereo Source to an xNode Destination.

1 Important Notes

- The Iyo Dante must be set to AES67 mode using the Dante Controller.
- SAP announcements must be enabled on the xNode (**requires firmware 2.2.2 or newer**).
- The Axia xNode and the Iyo Dante must be members of the same network subnet.
- The Axia AES67 Source transport IPv4 address must be within 239.69.1.1 and 239.69.255.255
- Utilize Axia approved switches. (<https://www.telosalliance.com/Axia/What-Ethernet-Switches-has-Axia-Approved>). Ensure IGMPv2 Snooping is enabled on all switches and **only one** switch is configured as the IGMP Querier.

2 Update Iyo Firmware

Use [Dante Firmware Update Manager](#) to update the Iyo to the latest firmware, downloaded from the AudioScience Iyo [web page](#). If the Iyo does not appear in Firmware Update Manager, ensure the selected network interface in Update Manager and the Iyo are on the same subnet (see section 5 below for help).

3 Configure the Axia xNode network interface

In order to access the Axia web interface, you will need a valid IP address assigned to the unit. You can change the IP address from the front panel of the unit. Consult the xNode manual for further assistance.



Figure 1 xNode front panel network settings

4 Update the Axia xNode Firmware

Once you have an IP address, open a browser and type the unit's IP address in to access the xNode's web interface. Your unit will need firmware version 2.2.2 or newer. The "Software Version" shown on the Home page indicates the currently installed version. If you are not running 2.2.2 or newer, you will need to update it. Click "System", and follow the standard Axia procedure for updating and loading firmware. Consult the xNode manual for further assistance.

5 Configure Iyo Network Interface in Dante Controller

Use Dante Controller to discover and configure the network interface of the Iyo. The Iyo is in DHCP mode by default. If a static IP is required, double click the Iyo in the “Dante Receivers” section of the “Routing” tab to bring up the “Device View” window and navigate to the “Network Config” tab. Click “Manually configure an IP Address”.

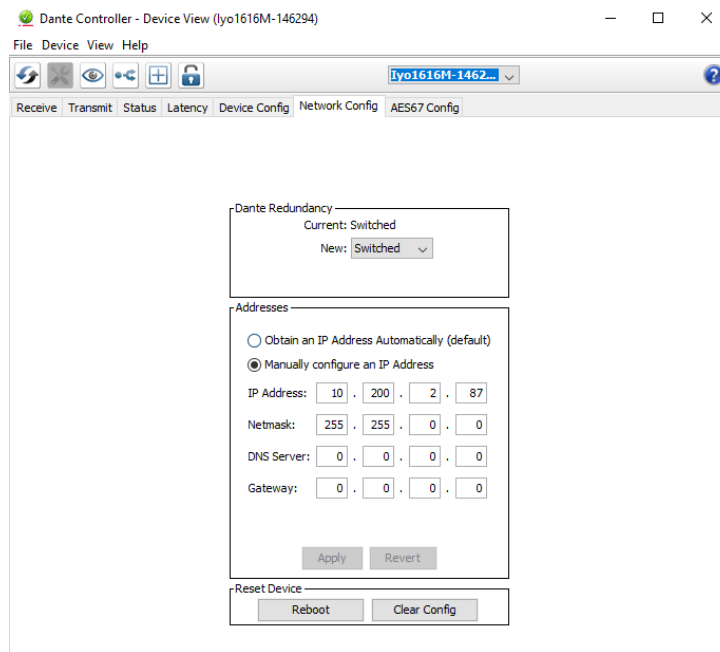


Figure 2 Assign static IP to Iyo

Dante Controller will display an error (see below) if the subnet of the Iyo and the selected Dante Controller network interface do not match. The example below is an interface with a static IP address trying to communicate with a default Iyo connected to a network without a DHCP server. Match the selected Dante Controller network interface subnet to the Iyo’s network interface subnet in order to configure the device.

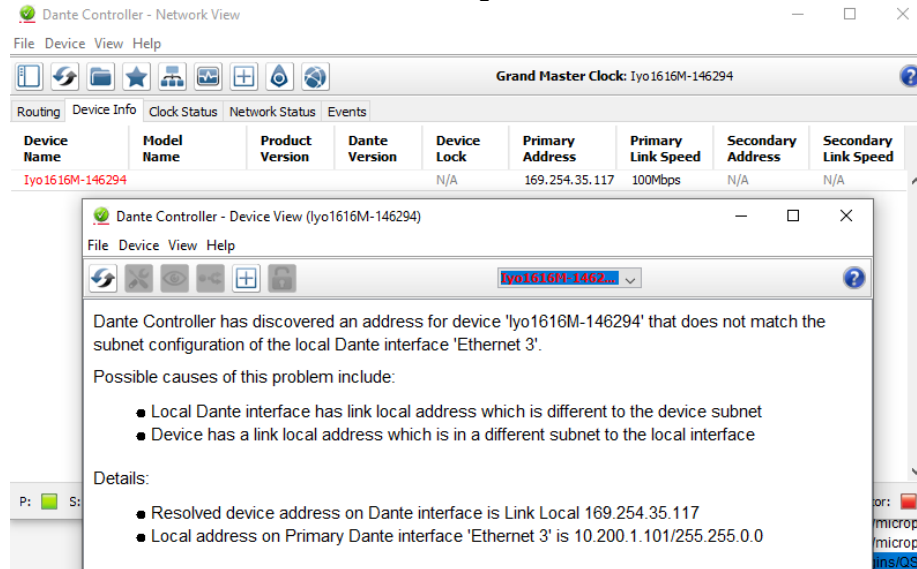


Figure 3 Dante Controller Iyo subnet mismatch

6 Configure the Iyo Dante for AES67 operation

From Dante Controller, double click the Iyo in the “Dante Receivers” section of the “Routing” tab to bring up the “Device View” window. Select the “AES67 Config” tab. In the “AES67 Mode” section, check the “Current” status. If it is “Disabled” then open the drop-down next to “New” and select “Enabled”. You will see a warning that this change will require a reboot. Click “Yes”, then click “Reboot” in the “Reset Device” section and confirm the operation. Your Iyo will restart.

7 Configure the Axia xNode Synchronization and SAP settings

Open the “Synchronization and QoS” page in the Axia web interface. Set “Clock mode” to “PTP/IEEE 1588 slave only (AES67 Recommended)”, set “Enable SAP announcements” to “yes” and click Apply.

8 Connect an Axia xNode Source to an Iyo Dante Destination

Open the Sources page in the Axia web interface. Set the Stream Mode to “Stereo 1ms (AES67)” and click Apply. Next, you will need to set the Channel/Address. This needs to be an address within the default Dante range of 239.69.1.1 and 239.69.255.255. Any address within that range is suitable as long as it is not already being used on the same network. In the example below, SRC 1 has been assigned 239.69.1.3. Click Apply.



Figure 4 Axia xNode AES67 stereo source

The Axia Source will appear (allow up to a minute) as an option in the Dante Transmitters section on the Routing tab in Dante Controller. Click to connect the Source channels to Dante Receiver (Destination) channels, as shown below.

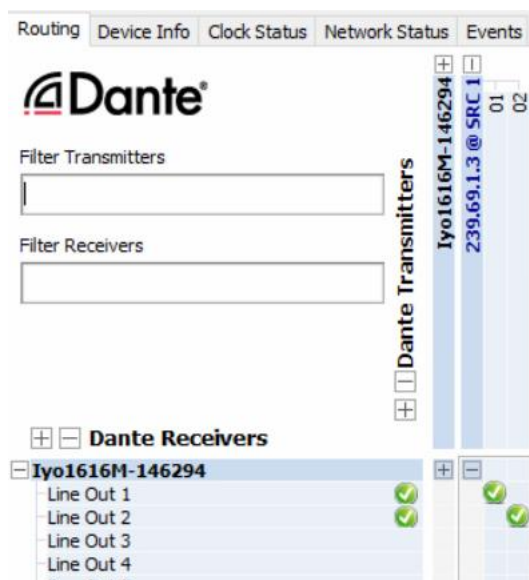


Figure 5 Connect xNode stereo Source to Iyo Dante Destination

9 Connect an Iyo Dante Source to an Axia xNode Destination

From Dante Controller, double click the Iyo in the “Dante Receivers” section of the “Routing” tab to bring up the “Device View” window. Click on the “Create a multicast flow” button in the top row of icons.

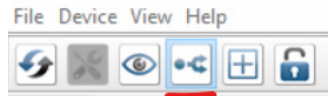


Figure 6 Create a multicast flow toolbar button

This will open the “Create Multicast Flow” dialog. Click the “AES67 Flow” check box and the “Add to New Flow” checkboxes for each input you wish to include, then click “Create”. The example below shows the creation of a 2 channel AES67 flow. Channels are assigned to flow slots in incrementing order, i.e. Mic/Line In 1 -> Slot 1, Mic/Line In 2 -> Slot 2.

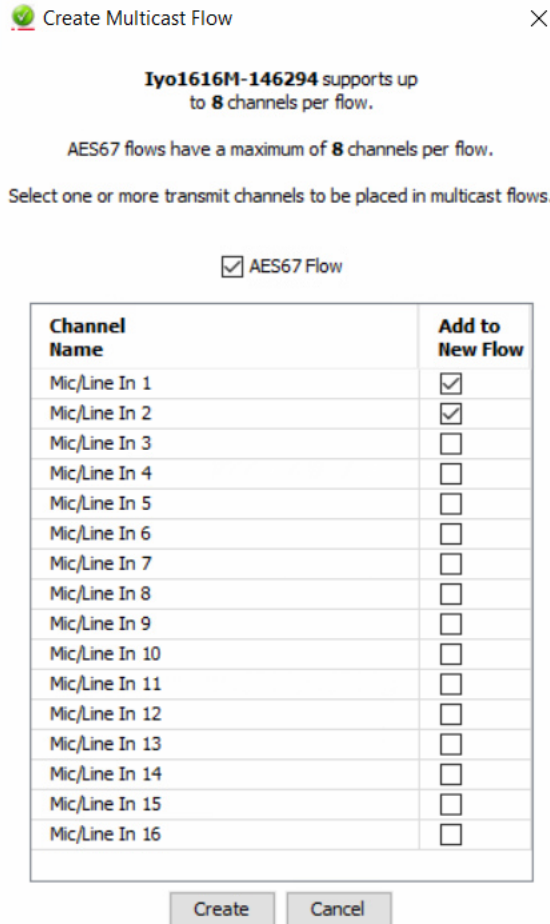


Figure 7 Dante Controller Create Multicast Flow dialog

Axia xNode to Iyo Dante AES67 Setup

Navigate to the Transmit tab in the Dante Controller Device View to view the IP Address of the newly created Source flow.

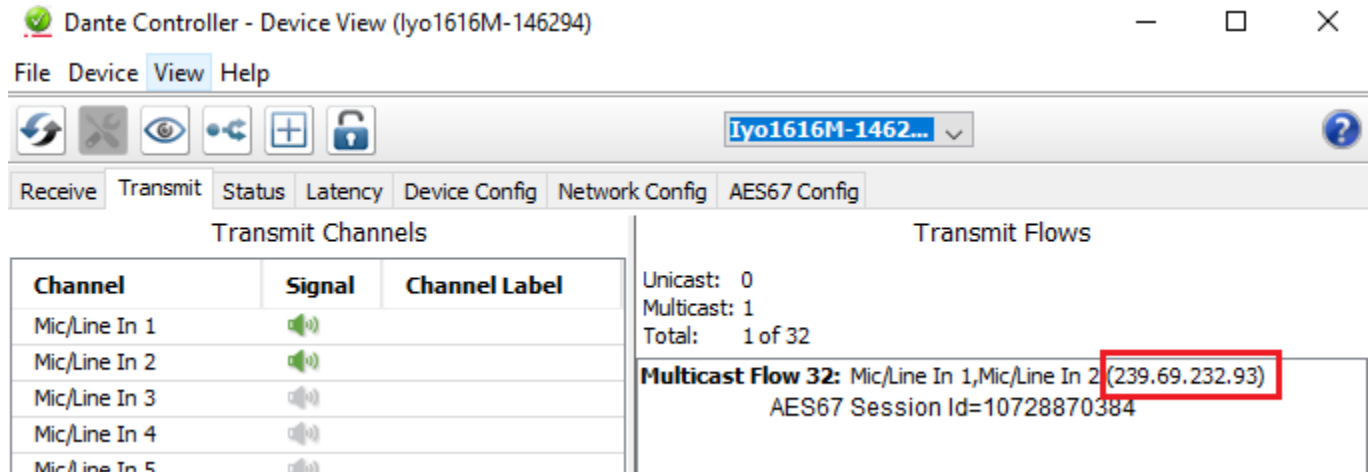


Figure 8 Iyo Device View Channel/Address

From the Destinations page of the Axia web interface, click the drop down next to the desired Destination. In the "Select Source" popup, click the "AES67 SAP" tab.

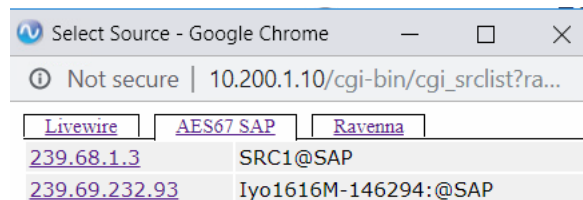


Figure 9 Axia xNode Source selection dialog

Find and click on the IP address associated with the Iyo Dante Source. The Destination page should now look like this:

Axia xNode to Iyo Dante AES67 Setup



Figure 10 Connect Iyo Dante stereo Source to xNode Destination

Click Apply to connect the Iyo Source to the Axia Destination.

10 Troubleshooting

This section contains some helpful hints if you are experiencing trouble.

- 10.1 **Streams will not connect, show a red circle slash in Dante Controller.** In this example everything has been set but when you try to enable a stream the boxes show the following:



Figure 11 Dante Controller connection error

This is likely due to the fact that the Channel/Address setting for the Axia node has been set outside the acceptable range. As you can see by looking at the device in the Dante Transmitters section above, the name shows the address as 239.68.1.3 which is not valid. It would need to be 239.69.1.3. Change the address on the Axia Source page to a valid address.