Glensound

AES67/Dante guide

Compatibility instructions manual

Contents

Introduction

This document provides an overview of Glensound Dante products and their interoperability with AES67 and other network audio protocols including instructions for configuring Dante devices to work with AES67.

Changelog

V.1 Initial release   07/04/2020

AES67 Mode

AES67 Information

AES67 is an audio over IP standard compatible with Dante. Glensound Dante devices support AES67 mode which allows the device to work with different audio IP standards on the same network.

A Dante device can support any mix of Dante and AES67 flows up to the maximum supported on the device.

AES67 traits with Dante

AES67 flows can only be generated with the following rules:

- Multicast Only
- Non redundant
- Destination address in range 239.nnn.0.0 to 239.nnn.255.255 (239.nnn/16), port 5004
- 48kHz sampling rate
- 24 bit linear (L24) encoding
- 1 msec packet time
- Up to 8 channels per stream (dependant on dante device)

Received AES67 flows have the following rules:

- Multicast Only
- Non redundant
- Destination address in range 239.nnn.0.0 to 239.nnn.255.255 (239.nnn/16), port 5004. Must match destination address range.
- 48kHz sampling rate
- L16 or L24 encoding
- 125usec, 250usec, 333usec, 1 msec packet time
- Up to 8 channels per stream (dependant on dante device)

The saved configuration will persist if the device reboots.

AES67 Transmit flows created on a Dante device will be advertised via the Session Announcement Protocol (SAP). The announcement interval is 30 seconds.

AES67 Transmit flows are represented as virtual devices in Dante Controller, allowing configuration of AES67 Rx flows by clicking channel intersections in grid view, or drag and drop in Device View.

The receive latency for AES67 Rx flows is set to 2 Ms, this setting is not affected by changing the latency setting in Dante Controller.

Turning on AES67 mode for generic operation

Ensure you have the latest firmware for you device from Glensound. Always check www.glensound.com and the product page to check if your device is up to date. To see current version, check the Dante controller device view tab 'Status'.

Next, locate the 'AES67 Config' tab. Choose enable and reboot the device.

After the reboot go back to the AES67 tab and set the multicast prefix address to one that is suitable for your newtork. This might change if you wish to interface with various other AES67 compatable devices which will be explored later in the document.
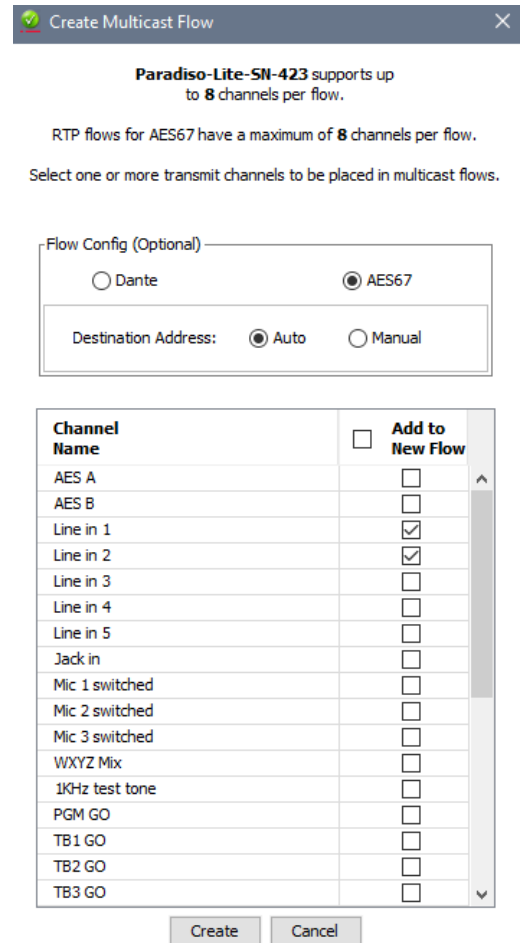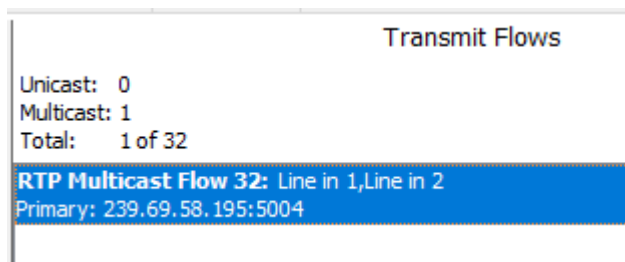
Sending AES67 Audio

To transmit AES67 audio to the network a multicast flow must first be setup.

This is done by selecting the 'Create New Multicast Flow' Icon ⬤ in the Device View.

Tick the AES67 Flow check box, then select channels to be included in the flow then click 'Create'

Once set the flows can be seen in the transmit tab of the device view.

Transmit Flows

Unicast: 0
Multicast: 1
Total: 1 of 32

RTP Multicast Flow 32: Line in 1,Line in 2
Primary: 239.69.58.195:5004

Create Multicast Flow

Paradiso-Lite-SN-423 supports up to **8** channels per flow.

RTP flows for AES67 have a maximum of **8** channels per flow.

Select one or more transmit channels to be placed in multicast flows.

Flow Config (Optional)
○ Dante   ● AES67

Destination Address: ● Auto   ○ Manual

Channel Name	□ Add to New Flow
AES A	☐
AES B	☐
Line in 1	☑
Line in 2	☑
Line in 3	☐
Line in 4	☐
Line in 5	☐
Jack in	☐
Mic 1 switched	☐
Mic 2 switched	☐
Mic 3 switched	☐
WXYZ Mix	☐
1KHz test tone	☐
PGM GO	☐
TB1 GO	☐
TB2 GO	☐
TB3 GO	☐

Create   Cancel

Receiving AES67 Audio

Once a compatible AES67 stream is detected on the network by Dante® Controller the AES67 flows will appear in the Dante® Transmitters section in the Routing tab. Non-Dante AES67 devices will appear as a blue text transmitter. This can then simply be subscribed to like normal.
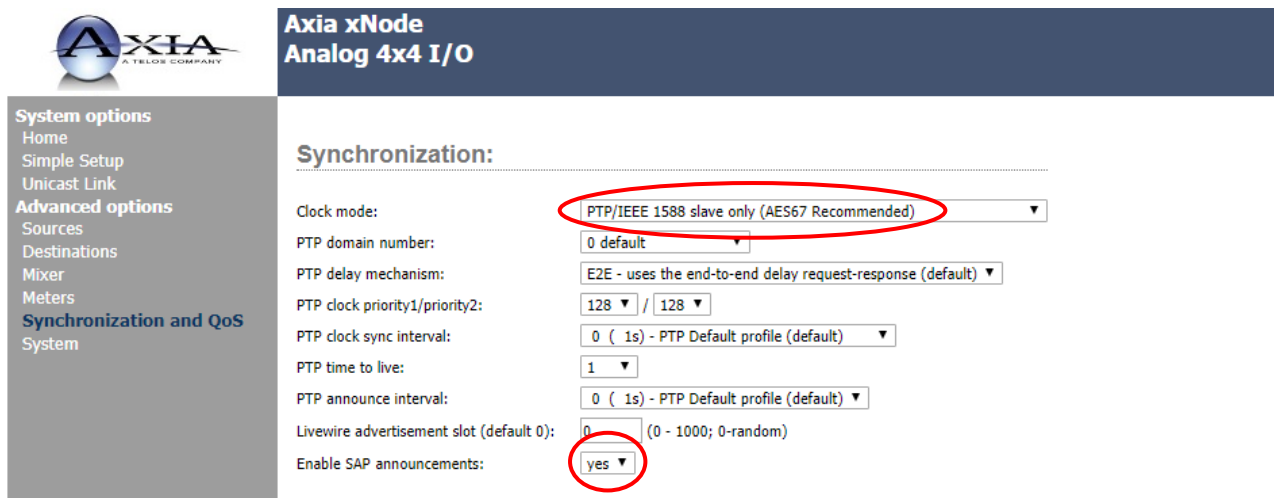
- The non-Dante device must use the channel address prefix **239.69**.xxx.xxx!

AES67 Mode with Axia xNode interoperability

Glensound Dante devices with AES67 functionality can be used to communicate with Axia network audio equipment via AES67.

Before starting, make sure that your Axia xNode is on firmware version 2.2.2 or newer so that it has support for Session Announcement Protocol (SAP).

1. Firstly, make sure your Axia xNode is configured with a valid IP address that is in the same range as your PC and other network audio devices.

2. Access the Axia xNode configuration panel by typing the IP address of the unit into your browser.

3. Navigate to the 'Synchronisation and QoS' page of the control panel. In the 'Clock mode' drop down menu select – 'PTP/IEEE 1588 slave only (AES67 Recommended)'. Also make sure you set 'Enable SAP announcements' to yes.

Subscribe Axia AES67 source to destination Dante AES67

4. Next navigate to the 'Sources' page. For your chosen source, set the mode to 'Stereo 1ms (AES67)' in the 'Stream Mode' drop down window and press apply to save the changes.

5. The channel address of your source must be set in the default Dante AES67 range; 239.69.xxx.xxx. Make sure not to set the address to an address already in use by any other network device. Make sure to press 'Apply' to save your changes. Note: you must use the default Dante address 239.69!

6. After a minute or two, the Axia device should appear as a blue transmitter device in Dante controller. This will allow you to subscribe Glensound Dante AES67 enabled devices to the Axia xNode via the AES67 protocol.

Subscribe Glensound Dante AES67 source to Axia AES67 destination

7. Create Multicast flow in Dante controller (as described on page 4). Make a note of the channel address of the AES67 flow in the transmit tab of Dante controller, typically this would be 239.69.xxx.xxx.

8. In the Axia control panel, navigate to the 'Destinations' page and select the drop-down menu for the first channel. Choose the 'AES67 SAP' window, and you should see your Dante AES67 channel address here. Click on the address number to select that address for the channel. Hit 'Apply' to save the changes. You should now have audio sent from a Glensound Dante device to your Axia device.