

AoIP22 AES

&

AoIP44 AES

AES3 INTERFACE FOR DANTE®/ AES67

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Visit our Website at www.glensound.com

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Glensound Electronics Ltd

Thank you for choosing a new Glensound product.

All rights reserved.

Information contained in this manual is subject to change without notice, if in doubt please contact us for the latest product information.

If you need any help with the product then we can be contacted at:

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The Design Buildings
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ME14 1HE
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Technical enquires: techinfo@glensound.com

Sales enquires: sales@glensound.com

IMPORTANT SAFETY INSTRUCTIONS

Read this safety sheet prior to installation or initial use. This generic safety sheet covers multiple product configurations across our range. The full operating & installation manual and model-specific technical specifications are available online at: www.glensound.com

 DANGEROUS VOLTAGE: This symbol is intended to warn that dangerous voltages within the product are present and constitute a risk of electric shock.	 IMPORTANT INSTRUCTIONS: This symbol is intended to highlight that there are important operating, installation, and maintenance instructions in the literature accompanying this unit.
 **THIS UNIT MUST BE EARTHED (Class I Mains Models):** English: This symbol highlights that the equipment must have a valid earth connection with the protective earthing conductor. Danish: *Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord.* Finnish: *Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan.* Norwegian: *Apparatet må tilkoples jordet stikkontakt.* Swedish: *Apparaten skall anslutas till jordat uttag.*	**CAUTION – SHOCK HAZARD: DISCONNECT ALL POWER SOURCES:**  This symbol warns that the product can be energised simultaneously from more than one power source (e.g., dual AC mains supplies, external DC power, and/or PoE). Care must be taken if accessing internal components. Ensure that ALL connected power supplies are fully disconnected.

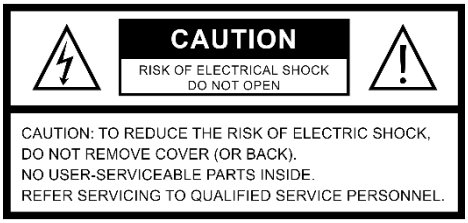
1. Read & Keep Instructions: Read these instructions, keep these instructions, heed all warnings, and follow all instructions.

2. Indoor Use & Moisture: Unless otherwise specified in the model-specific manual, this product is intended for indoor use only. Do not use this apparatus near water, and do not expose this product to rain or moisture.

3. Ambient Temperature: The intended ambient operating temperature of this product is 0°C to 40°C (or 0°C to 50°C where specified in the model-specific technical specifications in the online user manual).

4. Cleaning & Heat Sources: Clean only with a dry cloth. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

5. Cable & Cord Protection: Protect all power cords and network cables from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.





6. Attachments & Lightning: Only use attachments/accessories specified or supplied by the manufacturer. Unplug this apparatus during lightning storms or when unused for long periods of time.

7. Servicing & No User-Serviceable Parts: The product contains no user-serviceable parts and must not be disassembled or modified in any way. Doing so could result in personal injury and/or product failure. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when a power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

8. Professional Environment: This equipment is not suitable for use in locations where children are likely to be present.

POWER SUPPLY & DISCONNECT INSTRUCTIONS (APPLICABLE BY MODEL CONFIGURATION)

9. Simultaneous / Redundant Power Sources (Mains, DC & PoE): Depending on the model, this product may be powered by a single source or simultaneously by multiple redundant power sources (dual AC mains inlets, an AC mains inlet, an external DC power input, and/or Power over Ethernet [PoE]). Disconnecting a single power lead will NOT isolate the unit if another power source remains connected. To completely de-energize the equipment, unplug ALL connected AC mains cords, DC barrel jack/external DC connectors, and PoE RJ45/etherCON network cables.

10. AC Mains Disconnect Devices (Single or Dual IEC Inlets): Where AC mains inlets are fitted, the mains plug(s) and rear-panel IEC appliance coupler(s) serve as the disconnect device(s). On dual-mains models, both mains' cords must be unplugged to isolate the unit from AC mains power. The socket-outlet(s) used for mains power must be installed near the equipment and be easily accessible.

11. Plug Grounding & Polarization (AC Mains Models): Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has 2 blades with one wider than the other. A grounding-type plug has 2 blades and a third grounding prong provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

12. Approved Detachable Earthed Mains Cords (Class I AC Mains Models): Use only approved detachable 3-core earthed mains cords (minimum H05VV-F 3G0.75 mm² with IEC 60320-1 C13 connector) rated for the country of installation: • United Kingdom: Use a BS 1363-1 approved molded plug fitted with a 5 A ASTA-approved BS 1362 fuse. • European Union: Use a CEE 7/7 (Schuko/French) earthed plug. • Denmark: When connecting to wall socket-outlets in Denmark, use an approved 3-pin earthed plug complying with DS 60884-2-D1 (Standard Sheet DK 2-1a) to ensure protective earthing is maintained. • USA/Canada: Use a UL-listed / CSA-certified 3-conductor grounding power cord [minimum 18 AWG, SVT/SJT] with a NEMA 5-15P plug. • All other regions: Use a nationally safety-approved 3-core earthed mains cord rated for the country of installation.

13. Internal Primary Fusing & Neutral Fusing Warning (AC Mains Models – Service Personnel Only): Internal primary fuse(s) are located between the Live terminal of the IEC inlet and the Live input of the power supply and should only be changed by a qualified service engineer using a correctly rated replacement as specified in the product handbook. WARNING – Neutral Fusing: Because the AC mains plug may be reversible in some electrical distribution systems, the internal primary fuse may be located in the neutral conductor. Always disconnect all AC mains power cords completely from the IEC inlet(s) to de-energize all phase conductors before opening the enclosure or servicing the unit.

14. Power over Ethernet (PoE) Models: Unplugging the RJ45 / etherCON network cable disconnects PoE power from the unit. The Ethernet cable intended to be connected to the unit is for indoor building routing only and must not exit the building structure without appropriate primary surge protection.

15. External DC / USB Power Input Models: Connect only the manufacturer-supplied AC/DC power adaptor (where provided), or a safety-approved external DC or USB power supply complying with BS EN IEC 62368-1 (classified as ES1 and PS2/Limited Power Source [LPS]) that matches the voltage, minimum current rating, and pin polarity marked adjacent to the DC/USB input connector or specified in the product manual. The external power adaptor plug and the DC/USB input connector serve as the DC disconnect devices and must remain readily accessible; unplugging the DC/USB connector disconnects external DC power only and will not isolate the unit if AC mains or PoE remains connected.

INSTALLATION, THERMAL, MECHANICAL & OPTICAL SAFETY (APPLICABLE BY MODEL CONFIGURATION)

16. Ventilation & Sealed Heatsink Enclosures: Do not block any ventilation openings; install in accordance with the manufacturer's instructions. On models where the aluminum enclosure acts as the units heatsink, do not cover the unit or speaker grille with soft furnishings, cloths, or curtains, and allow free airflow around the housing.

17. 19-Inch Equipment Rack Installation (Rack-Mount Models): Rack-mounted models are designed for stationary installation in a standard 19-inch equipment rack. Secure the unit to the front rack rails using all four mounting holes on the integral rack ears with appropriate rack screws (e.g., M6 screws and cage nuts). Ensure that ventilation openings on the chassis are not obstructed by rack walls or cabling.



18. Carts, Stands, Brackets & Tip-Over Hazard: Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

19. Optical SFP Transceiver Modules (Where fitted): Any optical SFP transceiver modules installed in this product must be certified Class 1 Laser Products in accordance with IEC/EN 60825-1. Do not look directly into open optical ports or fiber-optic cable ends while the equipment is energized.



Disposal (WEEE): the crossed-out wheeled bin symbol means this product must not be disposed of with household waste. Take it to an approved electrical and electronic equipment recycling point, or contact Glensound for advice.
Declaration of conformity: Glensound declares that this product complies with the applicable UK and EU legislation. The full declaration of conformity is available at www.glensound.com.
Manufacturer: Glensound Electronics Ltd, The Design Buildings, 6 Brooks Place, Maidstone, Kent, ME14 1HE, UK · Tel: +44 (0)1622 753662 · Email: sales@glensound.com · www.glensound.com

SAFETY WARNING

The AIOP22 contains no user serviceable parts and **must not** be dissasembled in any way.

CE

EU DECLARATION OF CONFORMITY FOR:

AoIP22 AES & AoIP44 AES

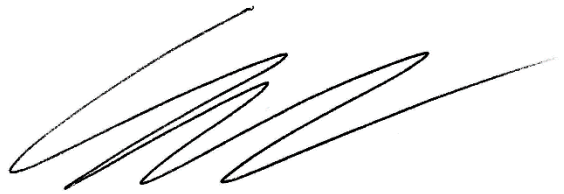
Two channel AoIP, Analogue I/O interface

This declaration of conformity is issued under the sole responsibility of the manufacturer.

This equipment is manufactured by Glensound Electronics Ltd of Brooks Place Maidstone Kent ME14 1HE is CE marked and conforms to the following Union harmonisation legislation:

Emissions:	BS EN55032:2015
Immunity:	BS EN55035:2017
Safety:	EN62368-1 :2018

Signed for and on behalf of Glensound Electronics Ltd.



Gavin Davis, Managing Director
Maidstone, Kent, England

Date: 07/006/2018

RoHS DIRECTIVE

EC directive 2002/95/EC restricts the use of the hazardous substances listed below in electrical and electronic equipment.

This product conforms to the above directive and for this purposes, the maximum concentration values of the restricted substances by weight in homogenous materials are:

Lead	0.1%
Mercury	0.1%
Hexavalent Chromium	0.1%
Polybrominated Biphenyls	0.1%
Polybrominated Diphenyl Ethers	0.1%
Cadmium	0.01%

WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT REGULATIONS 2006 (WEEE)

Glensound Electronics Ltd is registered for business to business sales of WEEE in the UK our registration number is:

WEE/JJ0074UR

GLENSOUND AOIP22 AES & AOIP44 AES

Handbook Contents

Issue 1

Description Page No.

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OVERVIEW

The Glensound AOIP22 AES and AOIP44 AES is an analogue to digital and digital to analogue converter designed to connect line level analogue audio circuits to a Dante® audio network.

Dante® network audio is a common protocol for distributing high quality linear audio over standard IP networks and it is widely used by many audio equipment manufacturers. The AOIP22 AES and AOIP44 AES Dante® audio interface is compatible with all Dante® audio interfaces across all manufacturers. Further details of Dante® network audio can be found at www.audinate.com

Intended for live on-air broadcast applications, the AOIP22 AES and AOIP44 AES is built into a rugged lightweight aluminium chassis with anaodised and laser etched panels. Holes suitable for temporarily attaching the unit with cable ties to hold it in place are provided for ease of installation.

AES67 is supported by the Audinate's Ultimo chipset and can be easily turned on/off via Dante® controller.

Sample frequencies from 44.1 to 96kHz are supported by the unit when connected to a Dante® network and 48kHz is supported when in AES67 mode.

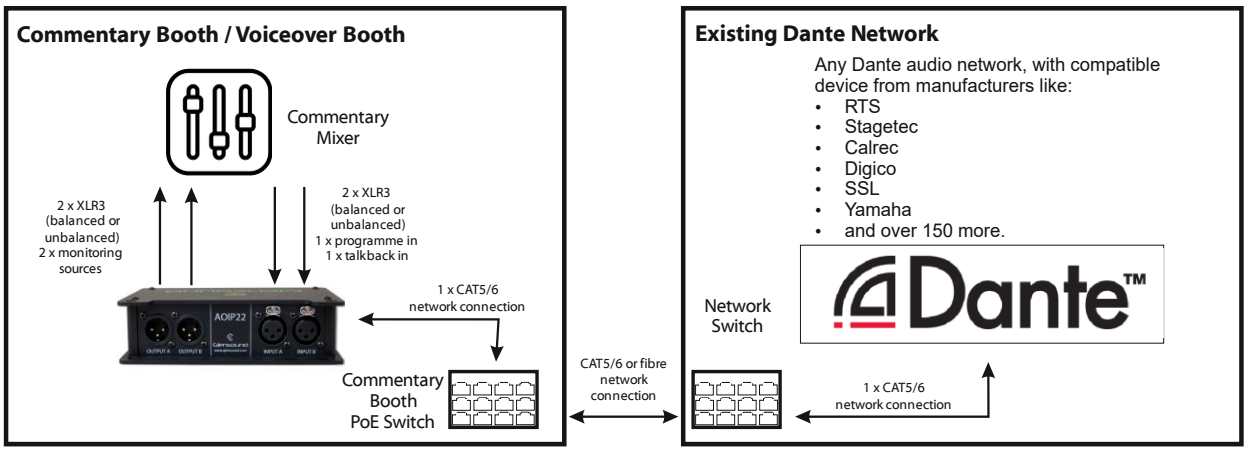
As per our other Dante® equipment 0dBu = -18dBfs

EXAMPLES OF USE

Example 1

Interface To Existing Dante Network

Commentary Unit Connection To An Existing Dante Network



There are over 150 manufacturers that design Dante compatible equipment. In this example, the broadcaster has an established Dante® network. This is most likely to be an audio console, or an intercom system.

The broadcaster needs to expand the network by adding an existing commentary booth / voice over position. Using the AoIP22, the commentary position can be added to the existing Dante® network very cost effectively.

The AoIP22 is located in the commentary booth, and connected into the broadcast network via a single CAT5/6 cable.

The Glensound GS-CU008A is a popular and widely used commentary unit by broadcasters. It provides a programme output, and has a talkback outputs These connect to the inputs of the AoIP22 via XLR connections.

The AoIP22 outputs connect to the headphone monitoring inputs on the GS-CU008A via XLR. This allows the commentator to hear 2 audio channels. These are typically the programme audio, and talkback return.

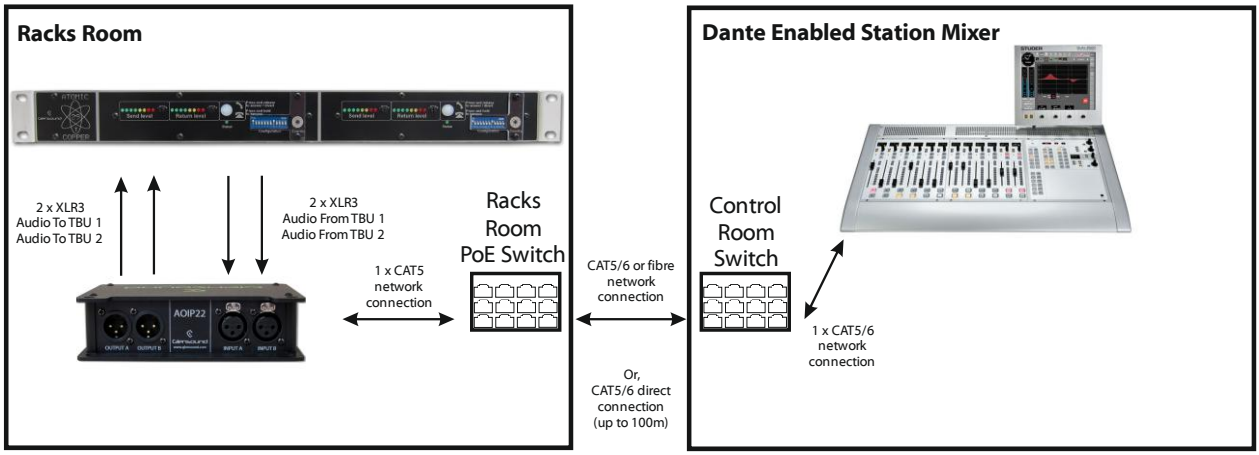
The audio routing can be configured via the Dante® Controller software. Simply run Dante® Controller on any PC connected to the network. All available sources and destinations will be shown on the AoIP22, and all other Dante® compatible devices on the network. Click the check boxes to route the audio in the desired directions, and the system is now ready to be used.

Audio routing only needs to be configured by Dante® Controller on the first time the AoIP22 is connected to the network as all routes are stored locally on the device.

Example 2

Interface To Existing Codec or TBU in Racks Room

Two channel audio interface to existing equipment



The AoIP22 is the perfect choice for installing in the back of a rack for interfacing legacy analogue audio equipment to your Dante network.

In this example the AoIP22 is used to interface to a two channel Telephone Hybrid but this could also easily be a two channel ISDN or Ip Codec. The AoIP22 is installed in the back of the rack using cable ties through the fastening points.

It is then connected to the network switch in the station's racks room, this switch provides power to the AoIP22 via PoE. If the switch doesn't supply PoE then a mid span PoE injector can be used.

The two audio inputs to the AoIP22 are connected to the two output audio circuits of the telephone hybrid, and they are converted to network audio streams sent across the network to stations desk where they appear as two input channels.

Two return clean feed output circuits are routed across the network from the desk to the AoIP22s outputs. These are then connected on XLR cables to the two audio inputs on the telephone hybrids.

Using the AoIP22 in this way will allow you to continue using your existing analogue based equipment on a modern networked audio infrastructure.

AOIP22 AES & AOIP44 AES FRONT PANEL LAYOUT

2. Analogue Audio Inputs



1. Analogue Audio Outputs



1. **Analogue Audio Outputs**

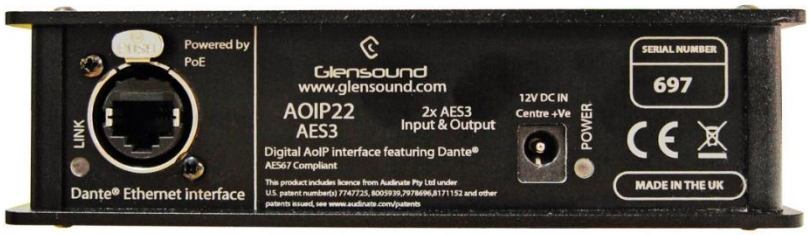
   The is balanced analogue XLR outputs provide outputs from the Dante® / AES67 network.
   They are electronically balanced and set to a line up level whereby full scale (0dBFs) on the digital network equates to an analogue output of +18dBu.

2. **Analogue Audio Inputs**

   The are balanced analogue XLR inputs provide inputs to the Dante® / AES67 network.
   They are electronically balanced but can be wired unbalanced.
   They are set such that an analogue input of +18dBu equates to full scale (0dBFs) on the digital network.

AOIP22 AES & AOIP44 AES REAR PANEL LAYOUT

3. Network Connection





3. Network Connection

The Ethercon connector can mate with Neutrik XLR based network cables and standard RJ45s.

This should be connected to a PoE enabled switch or to a normal network switch via a Mid Span PoE injector.

It is a 100Mb connection.

AOIP22 AES & AOIP44 AES LEFT SIDE PANEL LAYOUT

5. Reset Button
6. Micro USB Connector



4. Reset Button

The recessed reset button's main function is to allow the firmware within the AoIP22 to be updated…..Please see the 'Updating Firmware' section of this handbook for more information.

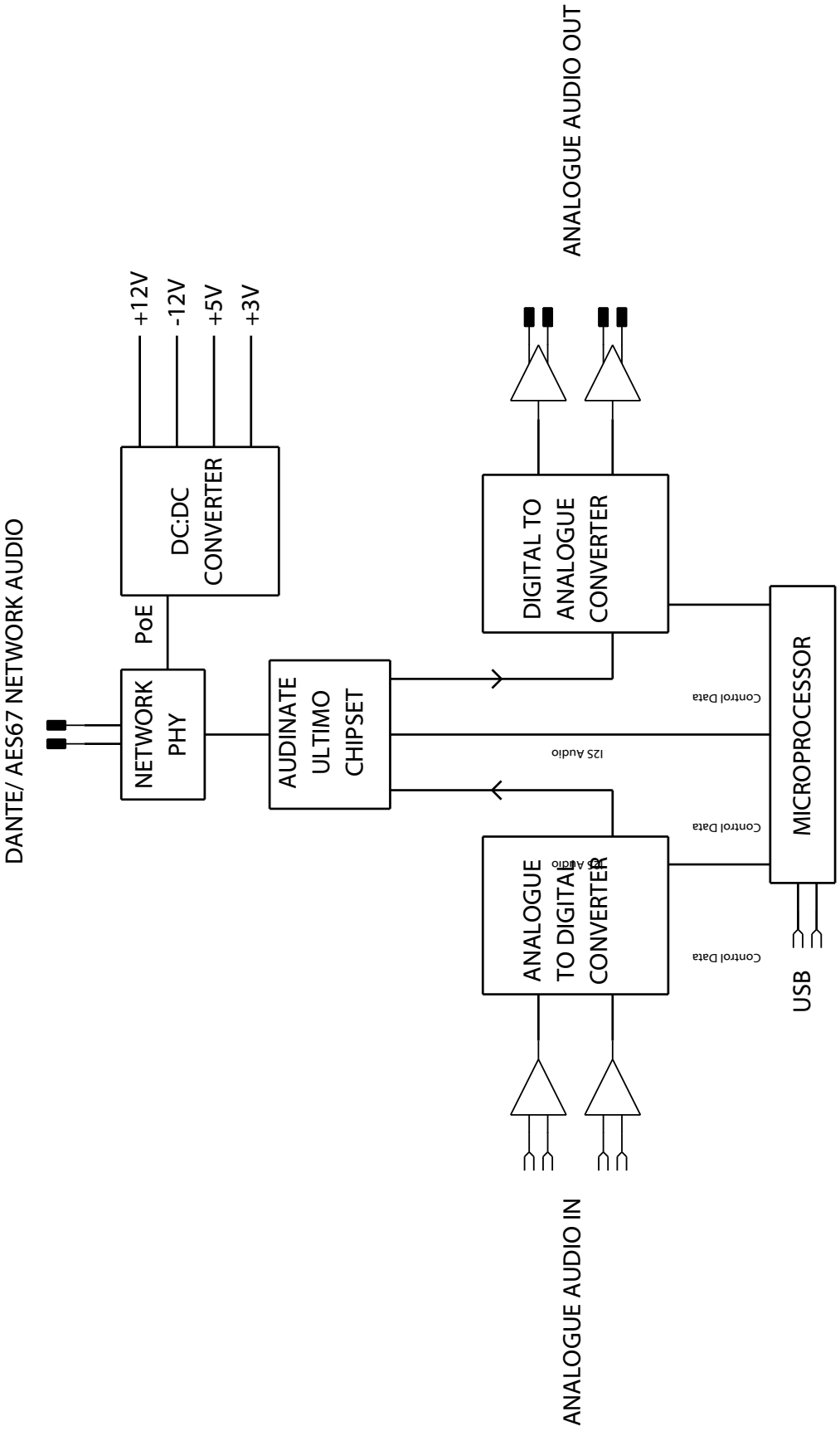
5. Micro USB Connector

The Micro-USB connector is used for connecting the AoIP22 to a PC when updating its firmware…. Please see the 'Updating Firmware' section of this handbook for more information.

6. Link Status LED

The status LEDs flash to show when data is being correctly communicated with the attached switch.

SIMPLIFIED BLOCK DIAGRAM



CONNECTING THE UNITS TO A DANTE NETWORK

The AoIP22 AES & AOIP44 AES is a network audio device utilizing the reliable and versatile Dante® audio over IP protocol. Dante® is a widely used proprietary system made by Audinate.

For full details of the power of Dante® network audio and instructions for using it, visit www.audinate.com

Getting Dante Controller

If you are connecting the AoIP22 AES & AOIP44 AES to a new Dante® network the first thing you will need to do is to get the free Dante® controller software from Audinate.
This can be downloaded by visiting Audinate's web site at www.audinate.com

Connecting Units To the Network

The AoIP22 AES & AOIP44 AES can be connected to the network that you are going to use for your audio distribution simply by plugging in the network connection on the front panel. Once connected to the network it will be possible to see the AoIP22 AES & AOIP44 AES from within the Dante® controller and route its' audio circuits.

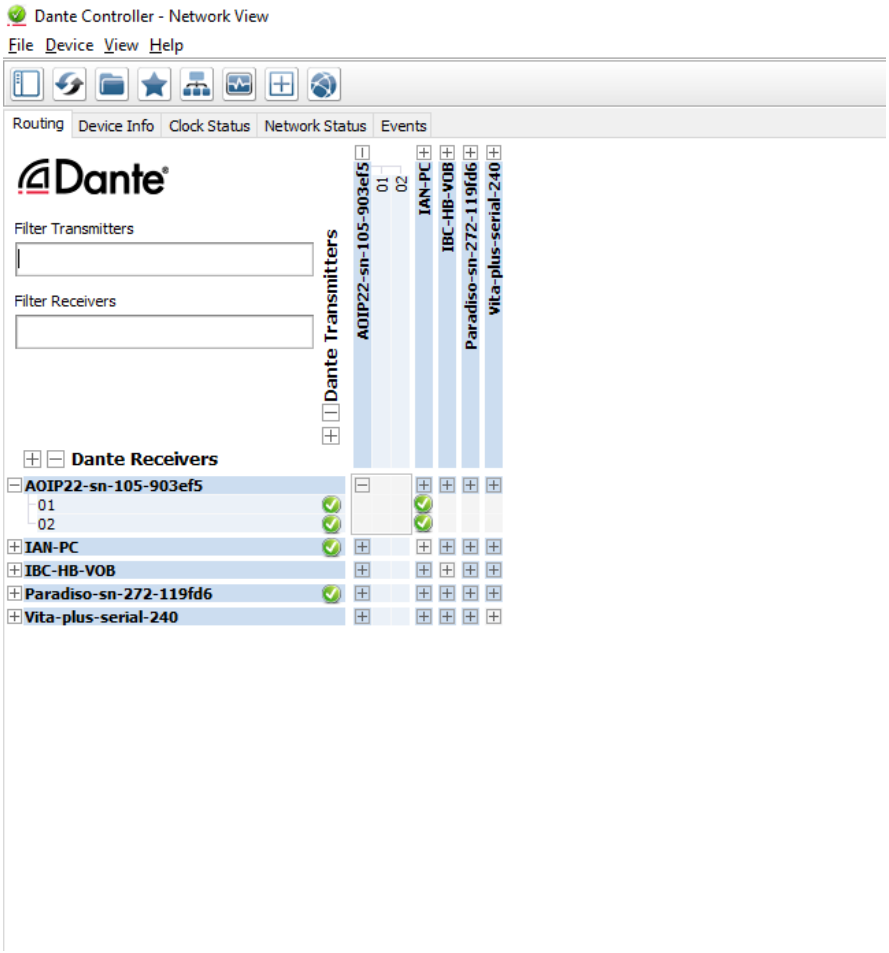
Audio Over IP Network

We strongly recommend that you consider your network topology carefully and would not recommend sharing broadcast audio and general data on the same network.

For more details of audio over IP network structure please visit www.audinate.com

Running Dante Controller

At the time of writing this manual the Dante® Controller looks as per the screenshot below:



The AoIP22 will have been named at the factory during test to allow them to be identified by the Dante® controller.

The format used for the factory name is:

‘AOIP22-sn-105-903ef5’

Where ‘AOIP22-sn-105 refers to the Glensound product and its serial number and ‘903ef5’ refers to its MAC address.

Dante Controller TIP

If you have never run Dante® controller before then make sure that on the bottom left of the Dante controllers’ screen ‘P’ or ‘S’ is next to a green square as this indicates that it is connected to a network. By clicking ‘P’ or ‘S’ a pop up box opens to allow you to set what network interface the controller is using.

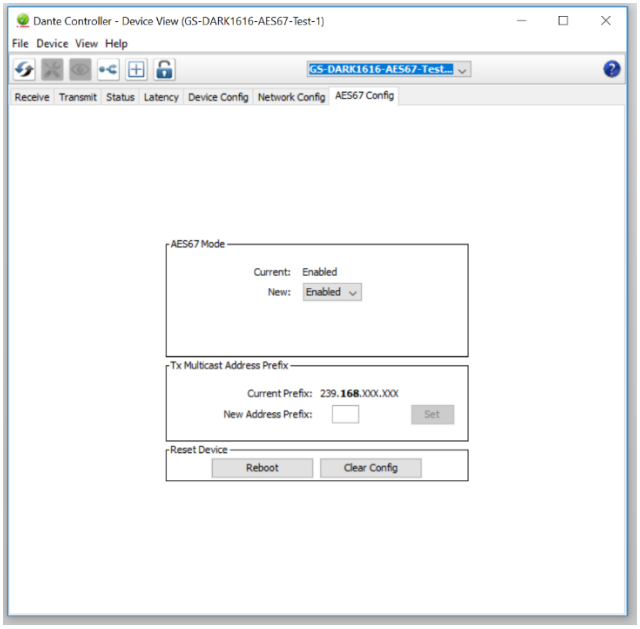
AES67 MODE

The AoIP22 AES & AOIP44 AES uses a chipset from Audinate called Ultimo for its network audio interface. Audinate are the company behind Dante® and as such the chipset's primary network audio protocol is Dante®, however Audinate have enabled their chipset to comply with AES67 and therefore the AoIP22 AES & AOIP44 AES can be set to AES67 mode for interaction with other AES67 devices.

Please note however that Glensound are relying on Audinate's AES67 interface and are unfortunately not able to provide full AES67 support for the unit. AES67 support should be sought directly from Audinate.

1. Turning On AES67 Mode

If you want to use your AoIP22 AES & AOIP44 AES on an AES67 network and it has not been set to AES67 mode then this can be set in Dante ®controller by double clicking the AoIP22 AES & AOIP44 AES to open the Device View window where you will find an AES67 tab to enable AES67 support.

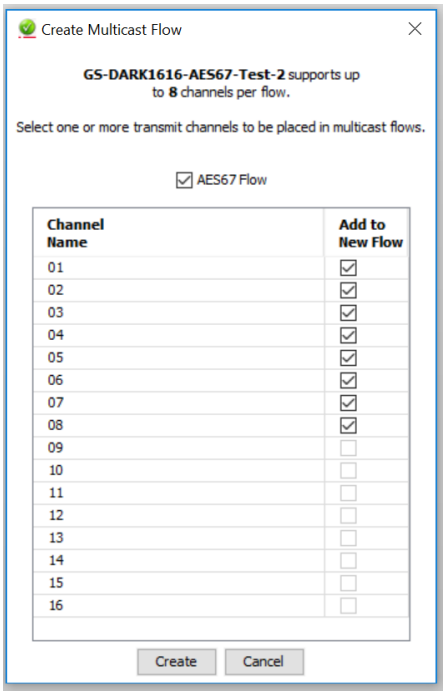


Once the AES67 drop down box has been enabled you'll have to reboot the AoIP22 AES & AOIP44 AES for the change to take effect. After the reboot go back to the AES67 tab and set the multicast prefix address to one that is suitable for your newtork.

2. Sending AES67 Audio

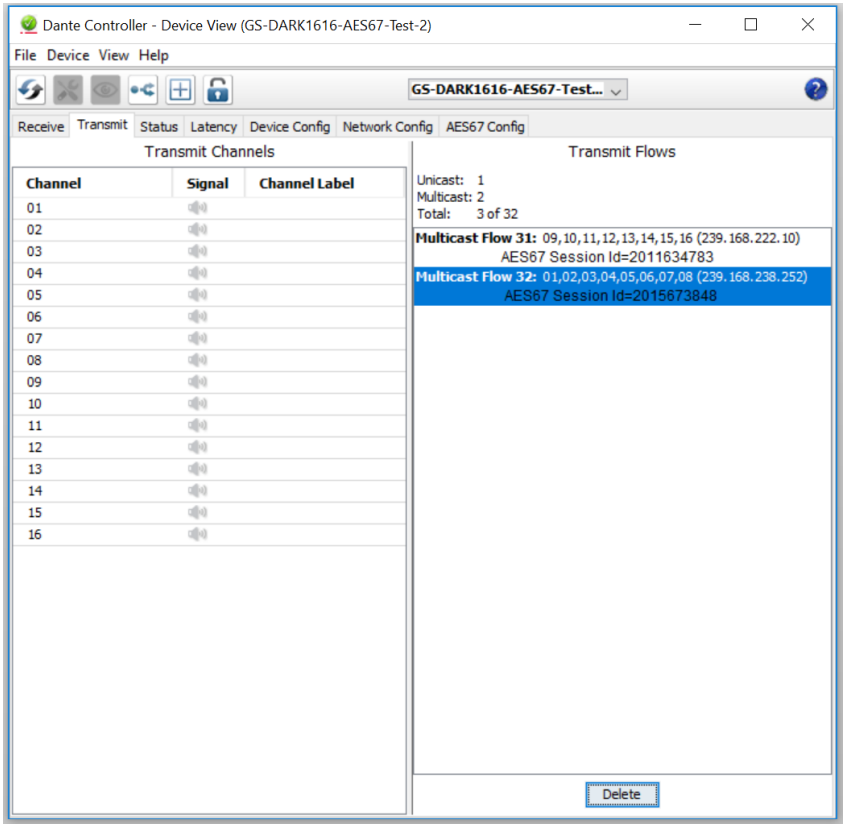
To transmit AES67 audio to the network a multicast flow must first be setup.

This is done by selecting the ‘Create New Multicast Flow’ Icon  in the Device View.



Tick the AES67 Flow check box, then select up to 8 channels to be included in the flow then click ‘Create’ (The AoIP22 only has 2 channels so no more than that can be created).

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



3. 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.

4. AES67 Restrictions

AES67 flows can only be generated with the following constraints:

- 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

Received AES67 flows have the following constraints:

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

UPDATING FIRMWARE

The AoIP22 AES & AOIP44 AES is a digital audio system comprising of a Micro Controller and ADC and DAC converters. These items run software and may need to be occasionally updated.

Equipment needed

- A windows based PC
- USB Type A to Micro B cable
- A copy of 'DfuSe Demo' software
- The latest firmware from Glensound
- An AoIP22 AES or AOIP44 AES

Instructions

1. Download and install DfuSE Demo

   'DfuSE Demo' is a firmware updating tool that is required for loading new firmware on to the AoIP22.

   It can be downloaded from the STMicroelectronics website found here: https://goo.gl/AbzhsA. It is the file named "STSW-STM32080".

   Once you have downloaded this file you will need to extract the .exe "DfuSe_Demo_V3.0.5_Setup.exe", then run and install it.

2. Install DFuSE driver
   Once DFuSE is installed, navigate to the following location on your machine:

   C:\Program Files (x86)\STMicroelectronics\Software\DfuSe v3.0.6\Bin\Driver\Win10

   You now need to run the following driver.
   - If your machine is 64 bit run 'dpinst_amd64.exe'
   - If your machine is 32 bit run 'dpinst_x86.exe'

   This will install the driver you need.

3. Download firmware

   The latest firmware for the AoIP22 can be found on the Glensound website, under the product page for AoIP22. Once you have downloaded the file, place it in a folder or location of your choice.

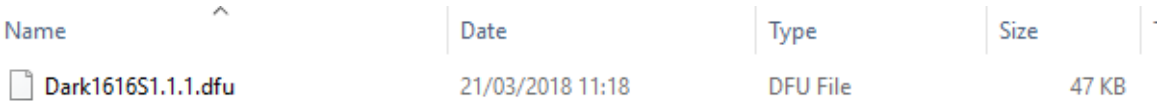


Figure 1 Example filename

4. Connect To A PC

Connect the unit to the PC via the USB cable. The Micro USB connector is located on the left panel of the AoIP22 AES or AOIP44 AES.

5. Firmware update preperation

To prepare the AoIP22 AES or AOIP44 AES for a firmware update;



Figure 2 Left panel USB connector

1. Press and hold down the reset button
2. Power on the unit (connect to a PoE switch)
3. Release the reset button

Your PC should make an audible sound when this process is successful as windows is detecting a new USB device.

6. Loading the firmware

Now open DfuSe Demo.

If the AoIP22 successfully entered DFU mode then it will appear as ‘STM Device in DFU Mode’ under the ‘Available DFU Devices tab’.

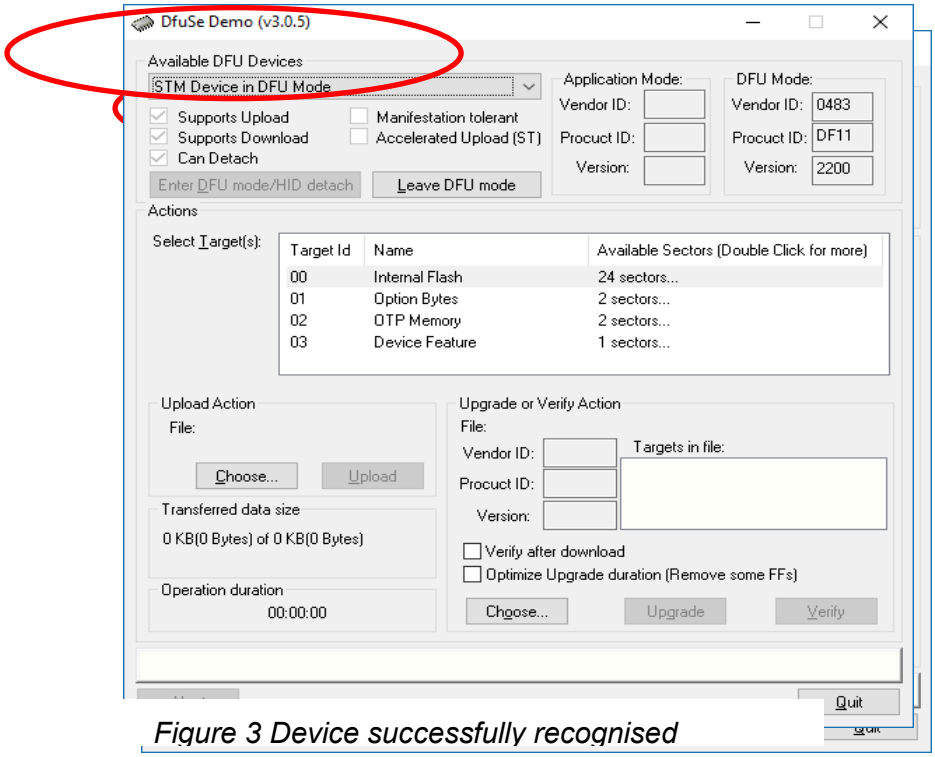


Figure 3 Device successfully recognised

Figure 4 Device successfully recognised

Now the .dfu file needs to be selected so that DfuSe Demo knows the correct firmware to put on to the AoIP22.

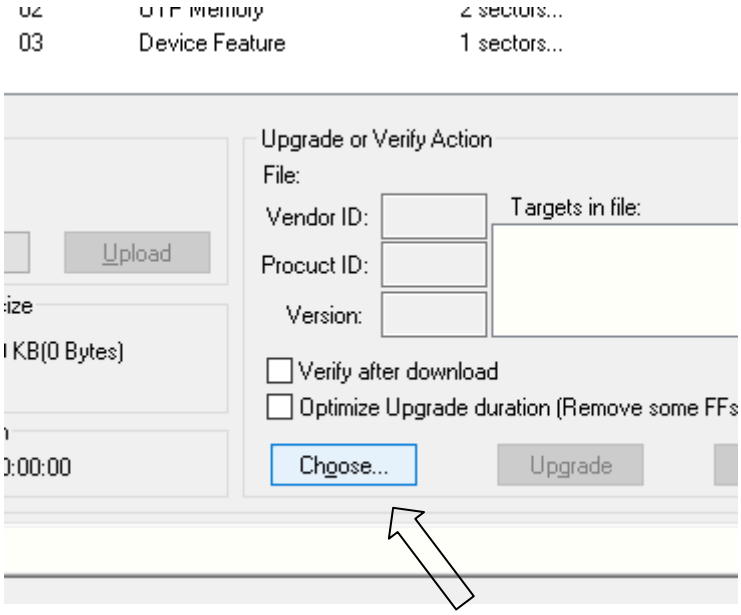


Figure 5 Choose .dfu file

Click choose and then select the .dfu file that you downloaded from the Glensound website. This will be located in your downloads folder by default.

If the file loads successfully then it will read along the bottom ‘File correctly loaded’.

7. Upgrading the AoIP22 firmware

The firmware is now ready to be put on to the AoIP22. Tick the 'Verify after download' box first and then click 'Upgrade'.

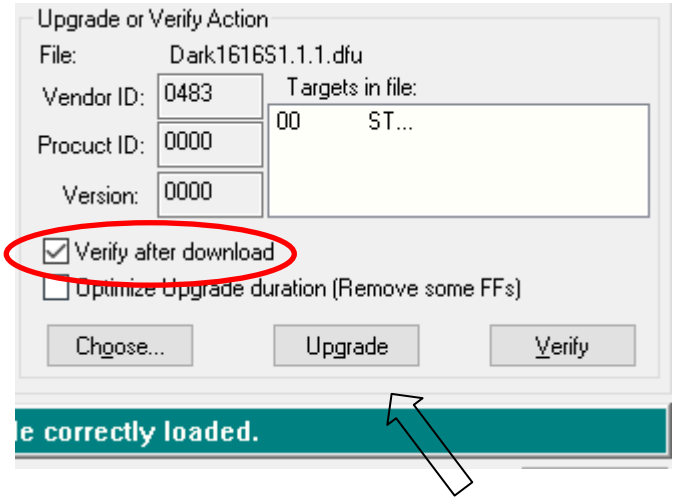


Figure 7 Upgrade

Click yes to proceed.

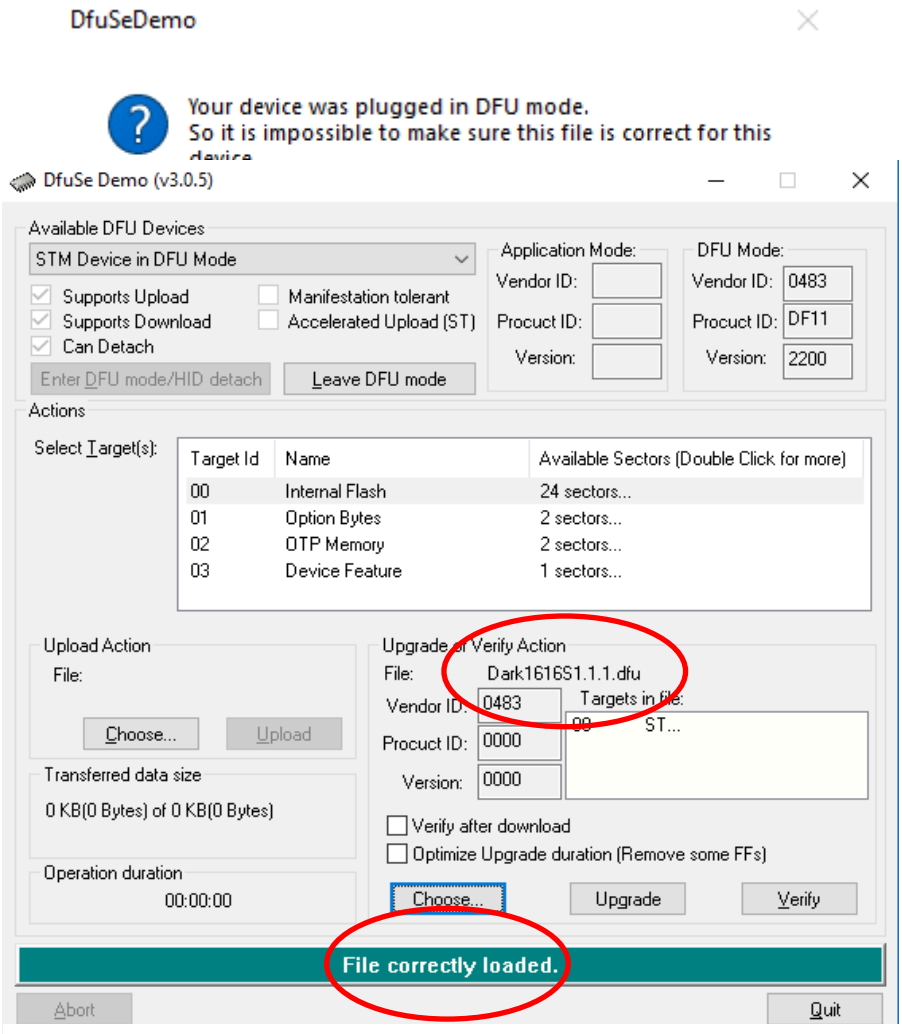


Figure 6 .dfu successfully loaded

The progress bar along the bottom will show the status of the operation.If the operation was successful, DfuSe Demo will report that “Targery 00: Verify Successful!”.

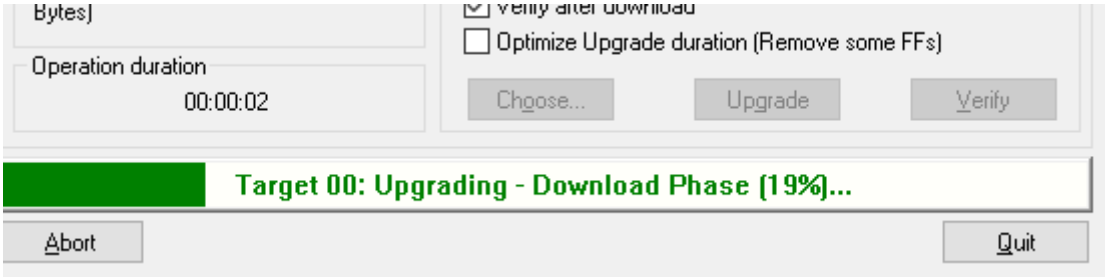


Figure 9 Upgrade status

You may also see that it will report how much data was successfully transferred.

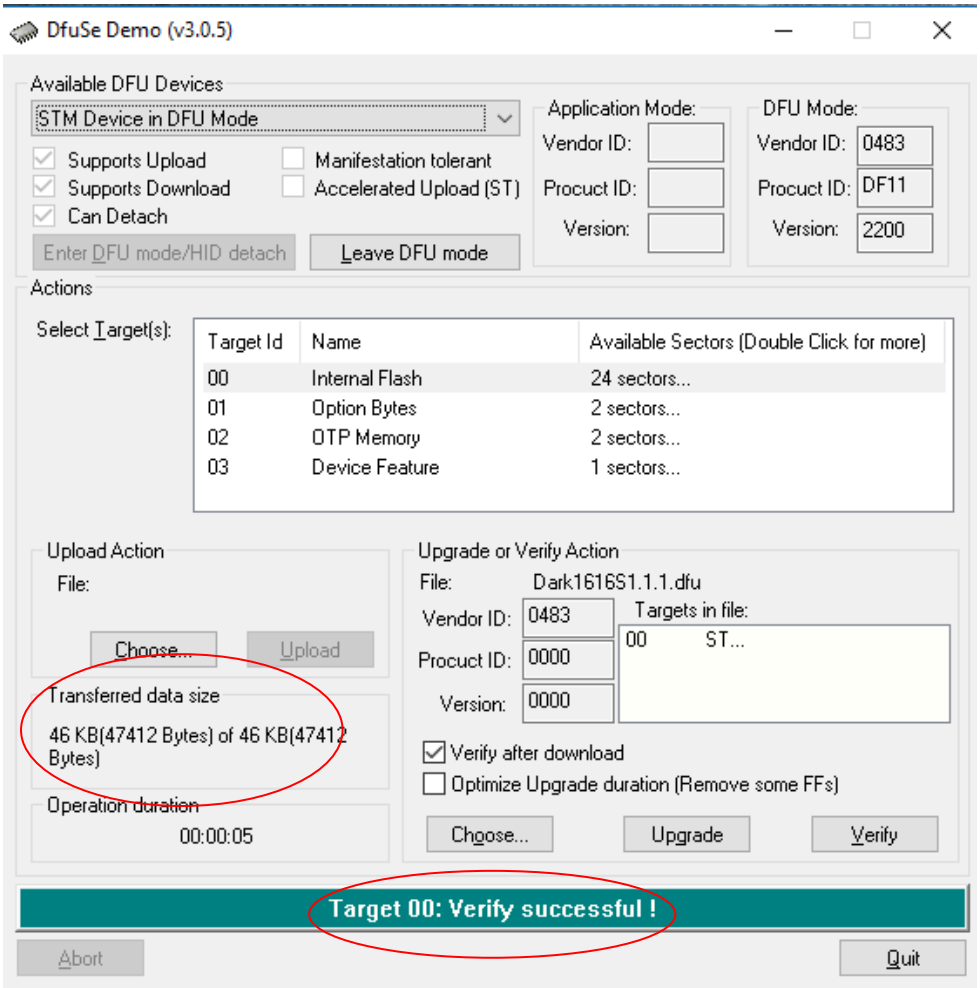


Figure 10 Successful upgrade!

8. Final steps

Now click “Leave DFU mode” to finish the procedure.

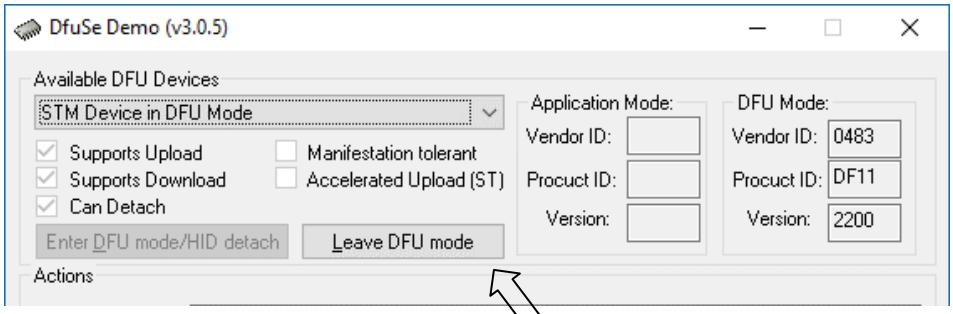


Figure 11 Final step

You may now disconnect the USB cable and continue to use the AoIP22 with the freshly updated firmware!

UPDATING THE ULTIMO CHIPSET

The Ultimo Chipset is a device supplied by Audinate that does most of the processing for the actual Dante/ AES67 network audio streams. There is one Ultimo Chipset in each AoIP22 AES & AOIP44 AES. We supply special code (a .dnt file) that sets up/ initiates the Ultimo Chipset and makes it work in particular way that is compatible to the AoIP22 AES & AOIP44 AES.

1. Finding Out Current Installed Version

Using Dante® controller double click on the AoIP22 AES or AOIP44 AES device name in the routing tab to open the Device View box.
Ion the Device View box open the Status Tab.

The 'Product Version:' shows the currently installed version of Ultimo Chipset dnt code.

2. Finding Out What The Latest Available Version Is

Go the AoIP22 AES or AOIP44 AES web and open the 'Firmware Latest Version' Tab.
This will give both the latest version numbers/ file names and also the location to download the file from.

3. Updating the Ultimo Chipset

The firmware that runs in the Ultimo Chipset is updated using Audinate's Firmware updating tool. The updating tool and a user guide can be downloaded from Audinate's website:

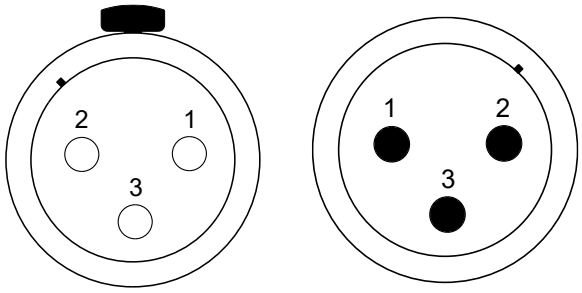
https://www.audinate.com/products/firmware-update-manager

NOTE:

Please note we strongly advise that when you do the update that only your PC and the AoIP22 that you want to update are on the network to save accidently updating the wrong Dante device.

WIRING INFORMATION

1. Standard Pin Outs



XLR SOCKET (FEMALE) XLR PLUG (MALE)

STANDARD XLR AUDIO PINOUTS:

1: Ground/ Earth

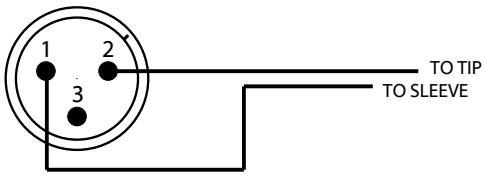
2: INPHASE/ POSITIVE/ MIC +

3: MATE/ NEGATIVE/ MIC -

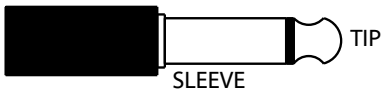
2. Wiring to unbalanced devices

The input & output circuits of our equipment can be connected to unbalanced (domestic style) devices. The wiring diagrams below show a mono jack plug as the unbalanced end of the cable but this of course could easily be a different type of connector such as an RCA Phono or 'D' type connector.

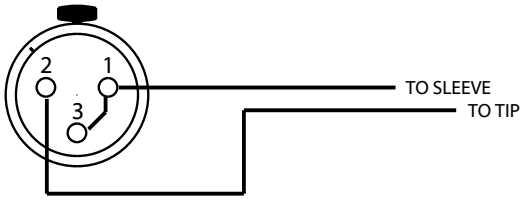
BALANCED OUTPUT



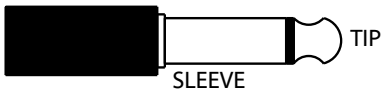
UNBALANCED INPUT



BALANCED INPUT



UNBALANCED OUTPUT



Domestic devices generally work on different audio levels than professional devices such as ours. This may mean that the output of the AoIP22 seems a little high and the input seems a little low when the AoIP22 is interfaced to a domestic device.

SPECIFICATION

Audio
Frequency Response: Flat to 22kHz
Maximum Input before clip: 0dBFs
Maximum Output Level: 0dBFs
Input Impedance: 110 Ohms
Output impedance: 110 Ohms
Distortion: 0.00006% THD+N @ 1kHz Reference to +18dBu output
Input Type: Transformer balanced on Neutrik 3 pin XLR socket
Noise: >-123dBu (Residual)
Dynamic Range: 141dBs
Input Frequency 32 – 192kHz
Output Frequency ****Note:** 44.1,48,88.2,96kHz 1 x AES3 Channel driven 44.1 & 48kHz 2 x AES3 driven locked to DANTE

Power
PoE: 1.2 Watts
Source: PoE Enabled switch or mid-span PoE Injection

Network Audio
Compatible Audio Networks: DANTE uncompressed, low latency audio. AES67
Network Connection: Neutrik RJ45 EtherCON
DANTE Network Sample Rate: 44.1k,48k,88.2k,96k,192k
AES67 Network Sample Rate: 48k

Physical
Size: 153 x 105 x 41mm (WxDxH) Excluding belt-clip
Weight: 405g
Mechanics: All aluminium construction, anodized and laser etched

Environmental
Operating Temperature: 0 to +50°C (32 to 122°F)
Storage Temperature: -20 to +70°C (-4 to 158°F)
Relative Humidity: 0 to 95% non-condensing