

H1 Hybrid Audio Network Bridge User's manual

H1 Firmware version 1.8.3

H1 Controller Software version 1.0.4



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In accordance with the company policy of continuous upgrade and products improvement, specifications and functions are subject to change without prior notice. This document was true at the time of writing, please contact our local distributor or visit our website to date with the latest updated versions.

IMPORTANT SAFETY INSTRUCTIONS



This symbol signifies the presence of uninsulated dangerous voltage within the product's enclosure that may be sufficient to constitute a risk of electric shock for persons.



This symbol is intended to alert the user to the presence of important operating and maintenance instructions in the literature joined to this product, particularly in this document.

- 1 Read these instructions.
- 2 Take in consideration.
- 3 Follow all instructions.
- 5 Do not use this device near water.
- 6 Clean only with a dry cloth
- 7 Do not close any ventilation or air-cooling reserved space.
- 8 Install in accordance with the manufacturer's instructions.
- 9 Do not install near any heat source as radiators, or other devices that produce heat.
- 10 Do not remove the grounding electrical connection. This device must be powered with three ways IEC 13 shucko (L/N/G).
- 11 Only use fixations and accessories specified by the manufacturer.
- 12 Unplug this device during maintenance service and when one of its hoods is removed.
- 13 Unplug this device when unused for long periods.
- 14 Use one or two twice power cords to disconnect the device from the mains. The device is not equipped of main power switch.
- 15 To reduce the risk of electric shock or fire, do not expose this device to rain, water, or any liquids and ensure that no objects which contains liquids are placed on the equipment.



EC DECLARATION OF CONFORMITY

1. Product identification: H1-HRPS-OPTKMM-OPTKSM
2. Name and address of the manufacturer or his authorized representative: AGORA SAS

43, Avenue de Châtellerault – 86440 MIGNE-AUXANCES - FRANCE
3. This declaration of conformity is issued under the sole responsibility of the manufacturer:
AGORA SAS
4. Object of the declaration:
 - H1
 - HDMM/OC: Optical fiber DUAL OpticalCon NEUTRIK - Multimode - on front
 - HDSM/OC: Optical fiber DUAL OpticalCon NEUTRIK - Singlemode - on front
 - HQMM/OC: Optical fiber QUAD OpticalCon NEUTRIK - Multimode - on front + recovery of fiber 3/4 on the rear panel OC DUAL
 - HQMM/OC: Optical fiber QUAD OpticalCon NEUTRIK - Singlemode - on front + recovery of fiber 3/4 on the rear panel OC DUAL
 - HRPS: Redundant Power supply option for H series

5. The object of the declaration described in point 4 is in conformity with the relevant Union harmonization legislation:

- Low voltage Directive 2014/35/EU of 26 February 2014
- Electromagnetic Compatibility Directive 2014/30/EU of 14 October 2014
- Radio Equipment Directive (RED), 2014/53/EU of 22 May 2014
- ROHS2 Directive 2011/65/EU of 7 January 2011

6. References to the relevant harmonized standards used, or references to the specifications in relation to which conformity is declared:

- 2004/108/EC: EMC Directive
- 2006/95/EC: Low voltage Directive

Signed for and on behalf of:

MIGNE-AUXANCES – FRANCE – March 31st, 2021

David ROCHER, CEO



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CHAPTER 1: Getting Started

Before installing, setting up or operating this equipment, make sure you have read and fully understand all of the “IMPORTANT SAFETY INSTRUCTIONS” at the end of this document.

Important: You must set up the IP address and netmask of your computer (PC Windows 7 to 10 32/64 bits) before using it for the first time.

Unpacking

Carefully unpack your H1 equipment package. Then, inspect the device for any signs of damage that may have occurred during transit and notify the courier immediately if you discover any. Please retain the original packing in case you should need to return the equipment to the manufacturer or supplier, or transport or ship the unit later.

Installation

When installing the unit, take the following into consideration.

- Do not install the equipment in places of poor ventilation.
- Do not install this equipment in a location subjected to excessive heat, dust, or mechanical vibration.

Allow for adequate ventilation around the equipment, making sure that its vents are not obstructed. To prevent excessive heating of the equipment, avoid mounting it directly above power amplifiers or other devices that radiate significant amounts of heat, such as radiators and heaters. Keep the equipment out of direct sunlight.

- This 1U half-rack unit is designed for mounting in any 19” EIA standard rack. Removable brackets and linking plates are provided for rack mounting and are designed to fully support the weight of the units in the rack. Optional truss mount or wall mount systems are available.

Avoid over-tightening the rackmount screws, as this could damage the front panel.

Handling the Equipment

Completely isolate the equipment electrically and disconnect all cables from the equipment before moving it. When lifting or moving the equipment, always take its size and weight into consideration.

EMC Regulatory Statements

Europe CE (EN55022)

Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

U.S.A.FCC Class A

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. Operation of this equipment in a residential area may cause interference in which case the user will be required to correct the interference at his own expense.

Canada

This product complies with Class A Canadian EMC requirements. CAN ICES-3 (A) / NMB-3 (A)
Changes or modifications not expressly approved by Agora could void the user's authority to operate the equipment.

Australia/New Zealand

This product complies with Australia/New Zealand EMC Class A requirements.

Electric fields

Caution: In accordance with Part 15 of the FCC Rules & Regulations, "... changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment."

These are safety class I products and have protective earth terminals. There must be an uninterruptible safety earth ground from the main power source to the product's input wiring terminals, power cord, or supplied power cord set. Whenever it is likely that the protection has been impaired, disconnect the power cord until the ground has been restored.

For LAN cable grounding:

- If your LAN covers an area served by more than one power distribution system, be sure their safety grounds are securely interconnected.
- LAN cables may occasionally be subject to hazardous transient voltages (such as lightning or disturbances in the electrical utilities power grid). Handle exposed metal components of the network with caution.

In accordance with EN 60950-1 the base of power socket must be installed near the equipment and must be free of access for the disconnection of the power supply in case of danger.

Chapter 2: General Information

Thank you for purchasing an Agora H1 Hybrid Audio Network Bridge System. The H1 System is a user-friendly, high-performance, network bridge especially designed to meet the requirements of AV IT professional's applications. Both the H1 and GHOST/FAST II units complement each other. All these devices can coexist in the same network topology.

Your H1 System was developed by Agora to offer AV professionals high-performance network bridge equipment, designed to provide no-compromise network builder and an easy-to-use interface to build the most complex networked/bridged system in a minimum of time. H1 can be simultaneously a standalone audio bridge and an AoIP LAN switch which makes possible the most sophisticated audio network topologies.

All this is backed up, of course, by five years warranty for all materials and accessories.

Finally, enjoy your Agora H1 Hybrid Audio Network Bridge System!

About

The **H1 System** provides:

- A fully manageable L2/L3 switch with:
- 4 User ports (3 Ethercon™ on the front panel and 1 RJ45 on the rear panel) fully manageable with the H1 Controller

- 3 Transmit ports for units interconnexion:

T1 and T2 are 2 Gigabit 1000BaseX OpticalCon™ Duo ports in Single mode or Multimode (chosen at purchase)

Optical fiber ports must be connected in Single mode OR Multimode.

UNDER **NO** CIRCUMSTANCES A MULTIMODE PORT CAN BE CONNECTED TO A SINGLE MODE.

The T3 Gigabit Ethercon™ port on the front panel can be used for control and monitoring of H1 switch.

The three supported Transmit ports are dedicated to make Different topologies and redundant links.

- 99 Groups can be managed at once.

A Status LED and one Traffic LED is appointed on each port. The three front panel User ports are appointed of an LCD screen and an ID LED fully manageable in the H1 Controller.

- One audio matrix (up to 128x128 connexions) between:
- 2 internal ports connected to **Audinate™** Brooklyn II primary and secondary interfaces.

and

- a rear slot which accept all the **AuviTran™**'s AxC interface cards

The units can be equipped in option by a redundant power supply unit.

About this manual

This is the operator manual for the H1 unit and the H1 Controller. It is intended to help get your units installed and in operation as quickly as possible by giving you unpacking, installation, connection, configuration and setting up instructions.

To help familiarize you with the units, there is a description of the front and rear panels, along with easy-to-follow user instructions.

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Chapter 3: H1 architecture

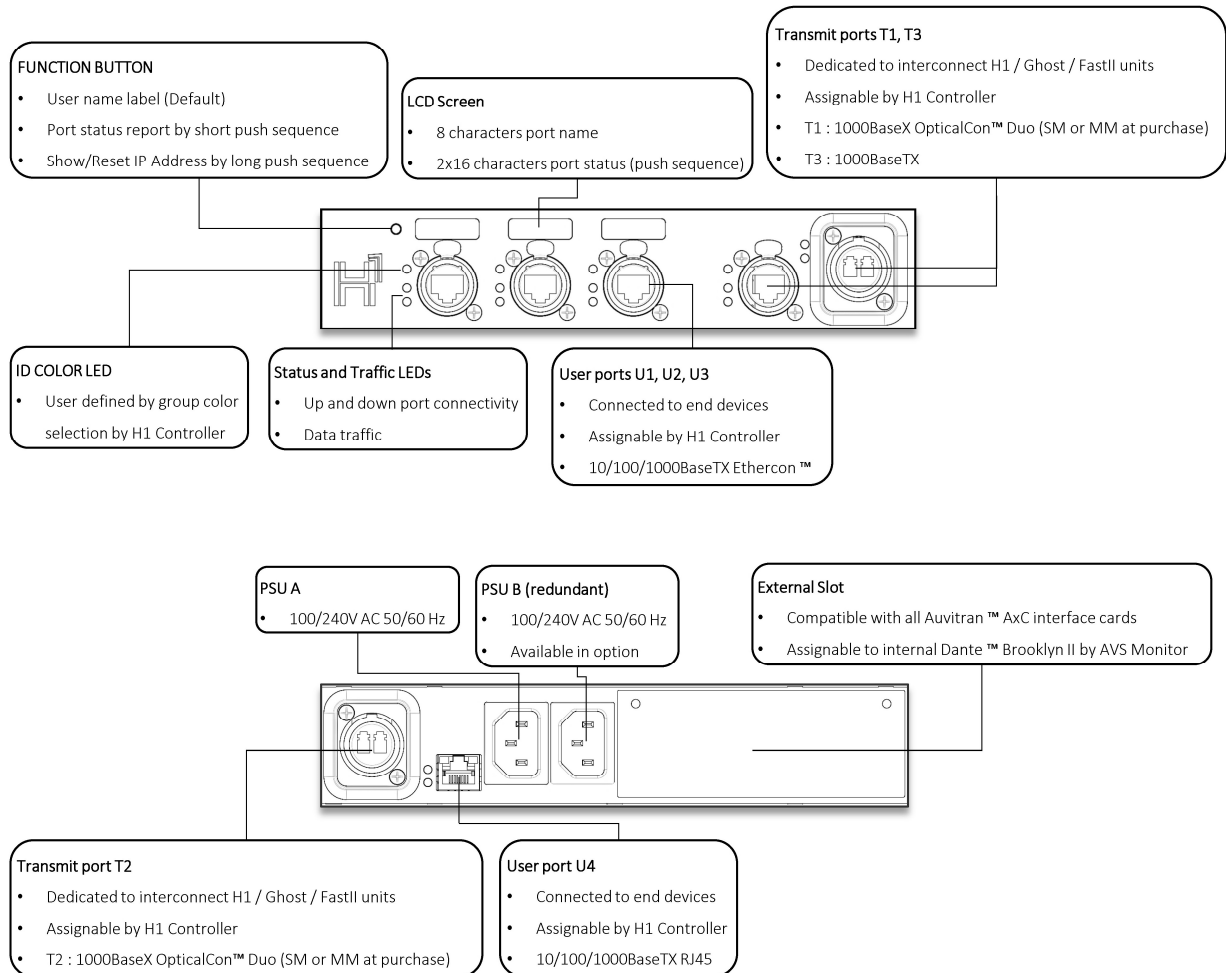


Figure 1 : H1 Front and rear panels

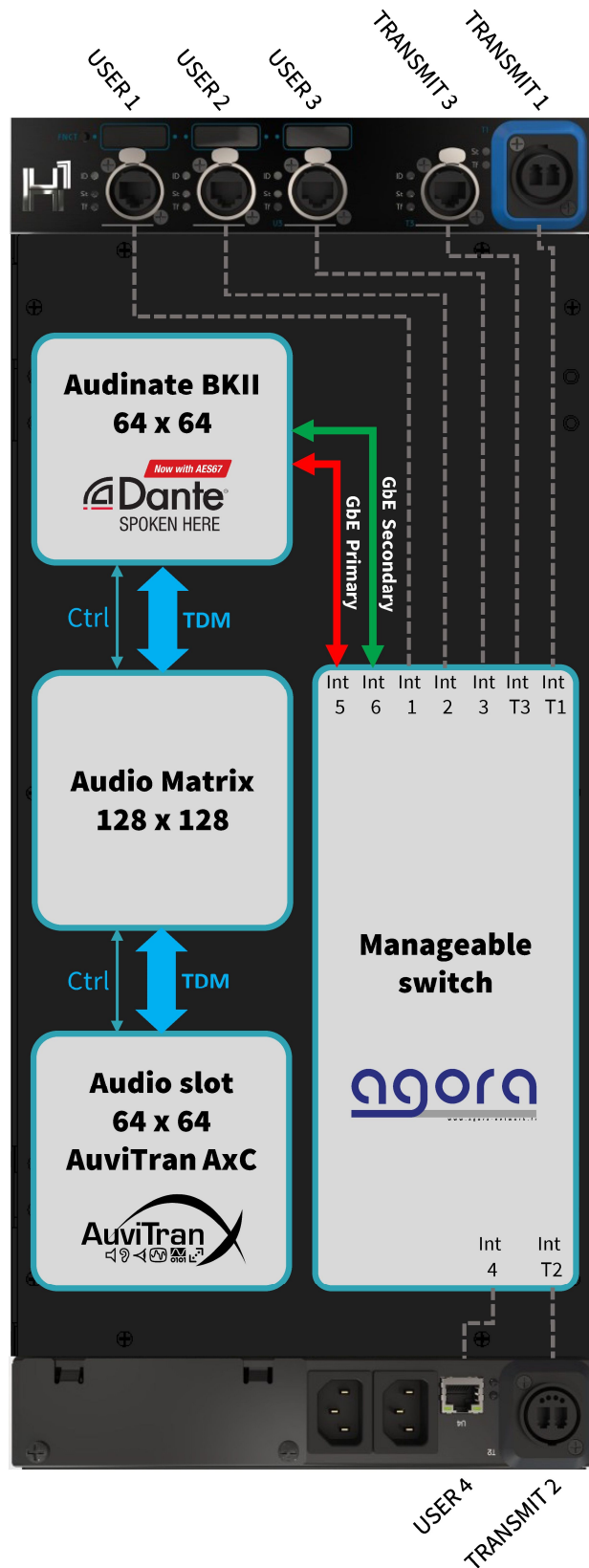


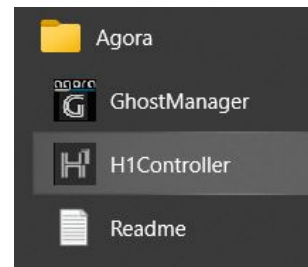
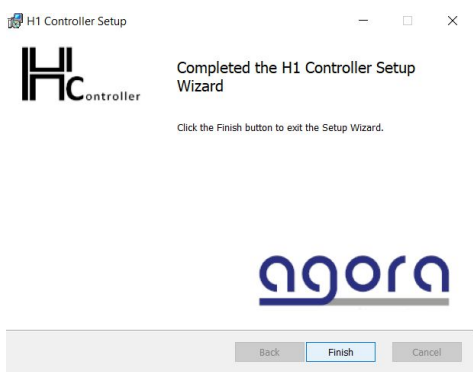
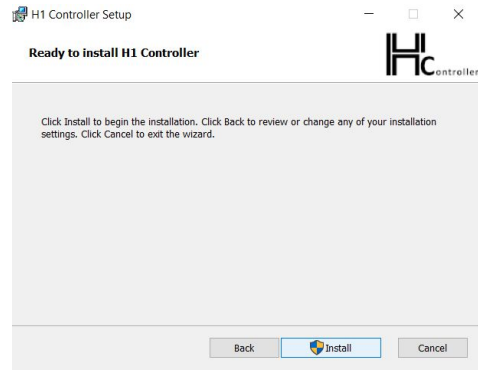
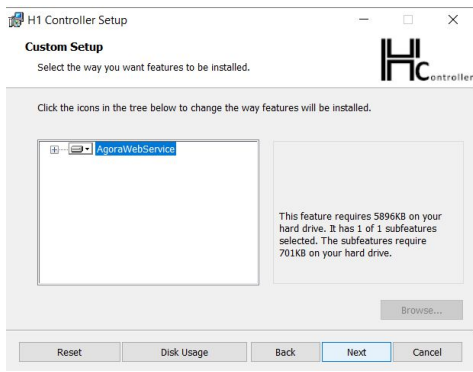
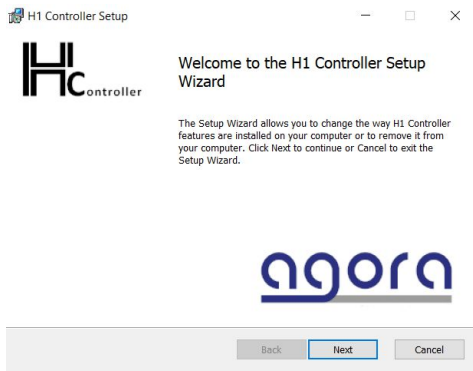
Figure 2: H1 internal architecture

Chapter 4: Configure H1

For a full H1 configuration you will need a PC running Windows (7-10) and to install the following programs:


4.1.1 Install H1 Controller on your PC for H1 Network switch configuration

- Download “H1Controller_v1.0.4.zip” or higher version at: <https://www.agora-network.fr>
- Unzip this folder to your local disk.
- Double click on “H1Controller_v1.0.4.msi” or higher version
- Choose Execute in case of a windows security message and follow the instructions to complete the setup.



H1Controller program in Start Menu

4.1.2 Install Auvitrán™ AVS Monitor on your PC for H1 Dante Audio Bridge configuration

- Download latest version of AVS Monitor at:
<https://www.auvitran.com>
- Unzip this folder to your local disk.
- Double click on “ AVS-MonitorSetupV6.74.XX.exe”
- Follow the instructions to complete the setup.

4.1.3 Install Audinate™ Dante Controller on your PC for H1 Dante configuration

- Download latest version of Dante Controller at:
<https://www.audinate.com/products/software/dante-controller>
- You need to have or create a user account.
- Follow the instructions to complete the setup.

4.2.1 Connect H1 device to your network

Connect the H1 unit to the rest of your Network equipment, as shown in the following diagrams.

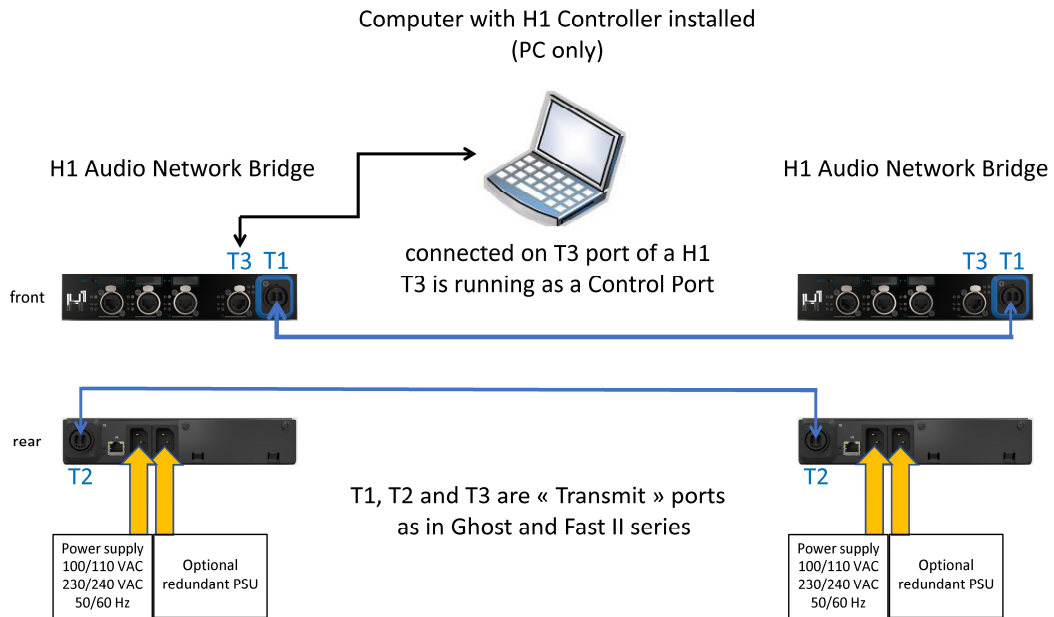


Figure 3: Example of two H1 units connected

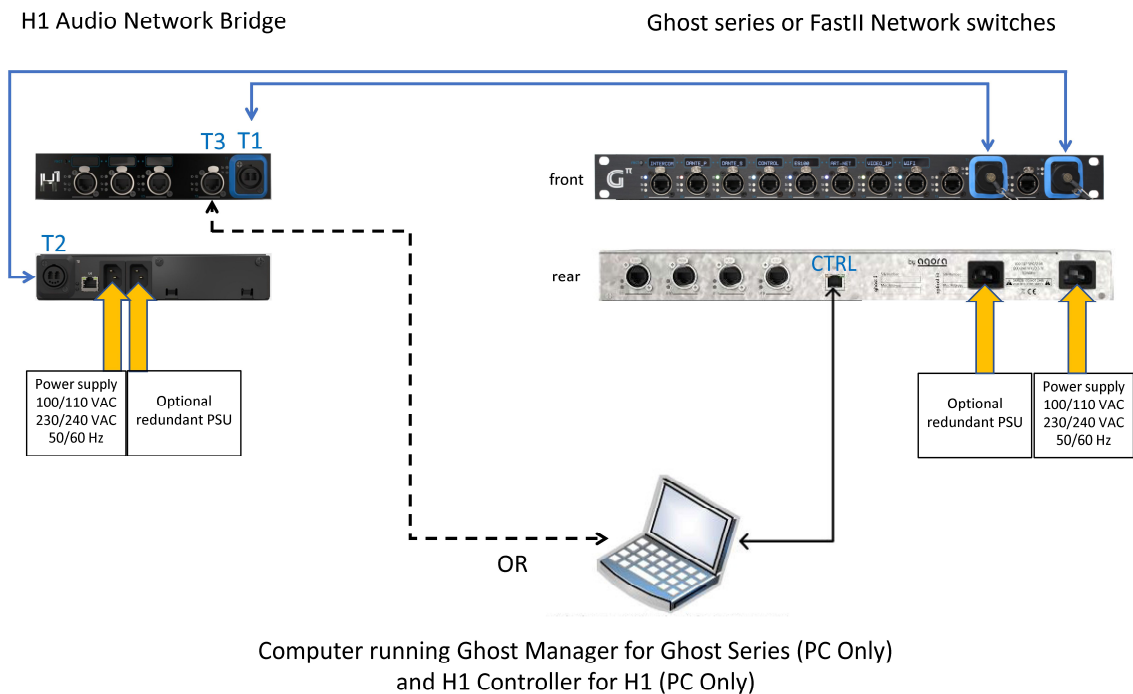


Figure 4: Example of one H1 unit connected to a Ghost unit.

4.2.2 IPv4 settings for H1 Network switch configuration:

- To configure the Network switch of your H1 device, your PC Network Interface Card must be connected to the **T3 port** or a Ghost/Fast II **Control port** and a **static IPv4 address in the same network** with the **same subnet mask** must be defined on the network adapter by the Windows control panel.
- The Factory delivered H1 IPv4 address is **192.168.1.151 / 255.255.255.0**
- The current H1 IPv4 address appears on LCD screens by pressing and hold the FNCT button on the front panel.
- To revert to factory IPv4 Address press hold 3 times successively the FNCT button.
- Every network device must have a unique IPv4 address.

To change H1 Ipv4 address see Network switch configuration.

4.2.3 IPv4 settings for H1 Dante Audio Bridge configuration:

- To configure the Audio Bridge and Dante settings on your H1 device, your PC Network Interface Card must be connected to a H1/Ghost/Fast II **User port** assigned to the same User Group as H1 Brooklyn.
- **IPv4 address in the same subnet as your Dante network** must be defined on the network adapter by the Windows control panel.
- Dante devices use “ZeroConf” IPv4 addressing per default (subnet 169.254.0.0/16) if no DHCP server is present nor manually fixed IPv4 address has been set by User.

Key points note:

Two separate Network adapters may be used on the same PC to configure both:

Network switch (4.2.2 settings)

and Dante Audio Bridge (4.2.3 settings)

If you have only one Ethernet adapter, you will have to alternate between 4.2.2 and 4.2.3 settings.

4.3 Launching H1 Controller for Network Switch configuration

Apply 4.2.2 IPv4 settings

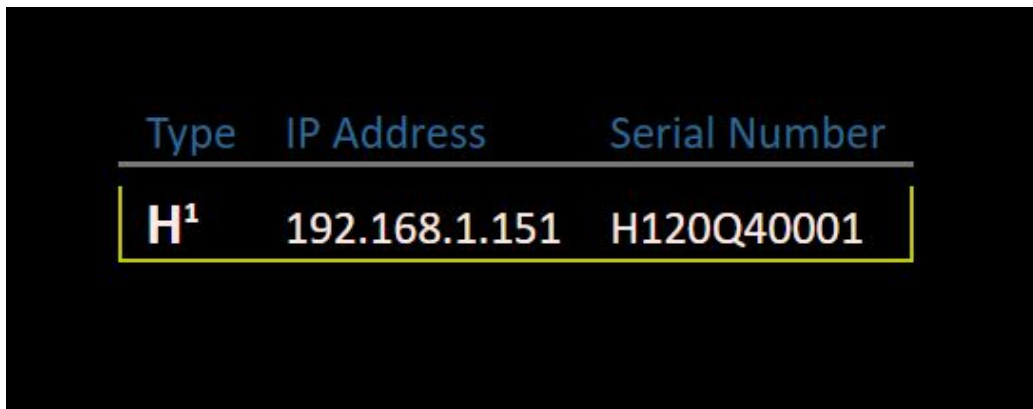
In Windows Start Menu, launch « **H1Controller** » from Agora file.

In your default web browser, a discovery appears of the H1 devices connected on your network.

Click on the H1 device you want to configure.

The Framework will be loaded after few seconds.

You can control multiple devices in different tabs.



Type	IP Address	Serial Number
H ¹	192.168.1.151	H120Q40001

Figure 5: Example of H1 Controller devices discovery

4.4 H1 Controller Framework

Framework is the idle screen of H1 Controller. He resumes the connected unit and build groups in the system.

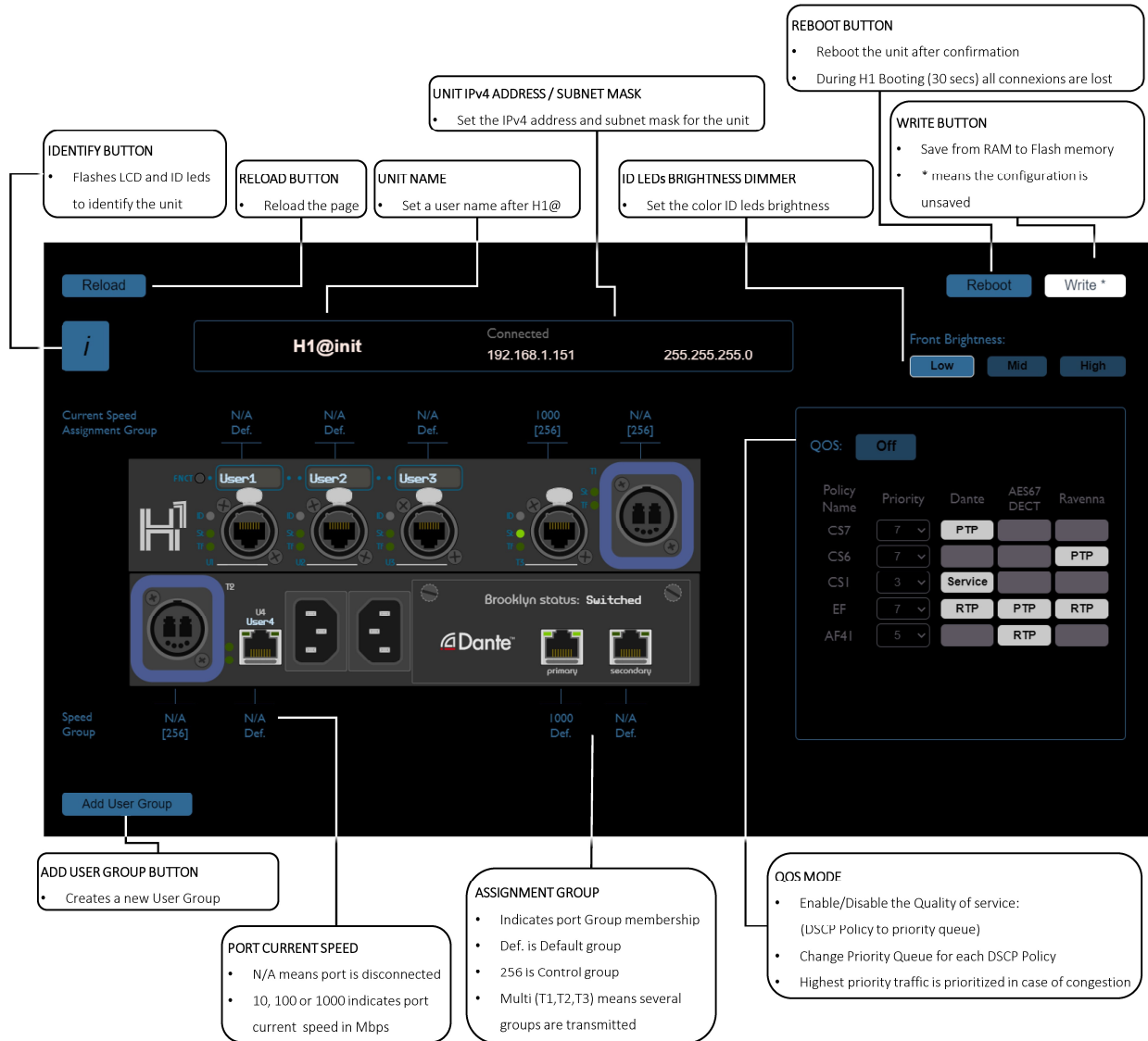


Figure 6: H1 Controller Framework

Key points note:

The Dante card shown in the framework always represents the status of the internal Brooklyn II of the H1 unit.

There is no representation nor discovery of the external Auvitrans AxC card in H1 Controller.

Refer to 4.5 H1 Dante Audio Bridge Configuration for that purpose.

4.4.1 Add User Group

Groups are defined as simple VLANs.

By Group we understand: a VLAN ID, a Group name, Identification color, if necessary, Mode settings, for all the User ports assigned in the group. Group is the main tool which helps the user to prepare a protocol-based topology.

Click **Add User Group** button:

The screenshot shows a dark-themed 'Add Group' dialog box with the following fields and callouts:

- Group Name:** A text input field. Callout: Click on the label, Write the Group name (8 characters, no space), Use Tab or mouse to continue.
- Ident (1-99):** A dropdown menu labeled 'Select group...'. Callout: Click on the selector, Choose one of the unused Group IDs (1-99), Use Tab or mouse to continue.
- Color:** A dropdown menu labeled 'Select color...'. Callout: Click on the selector, Select the desired color for software and ID leds, Use Tab or mouse to continue.
- Mode:** A dropdown menu labeled 'Select mode...'. Callout: Click on the selector, Select the desired protocol mode, Use Tab or mouse to continue.
- OK / Cancel Buttons:** Two buttons at the bottom. Callout: Validate the group building, By Ok validation, the group is ready to assignment in the Groups list, If Canceled, operation is aborted.

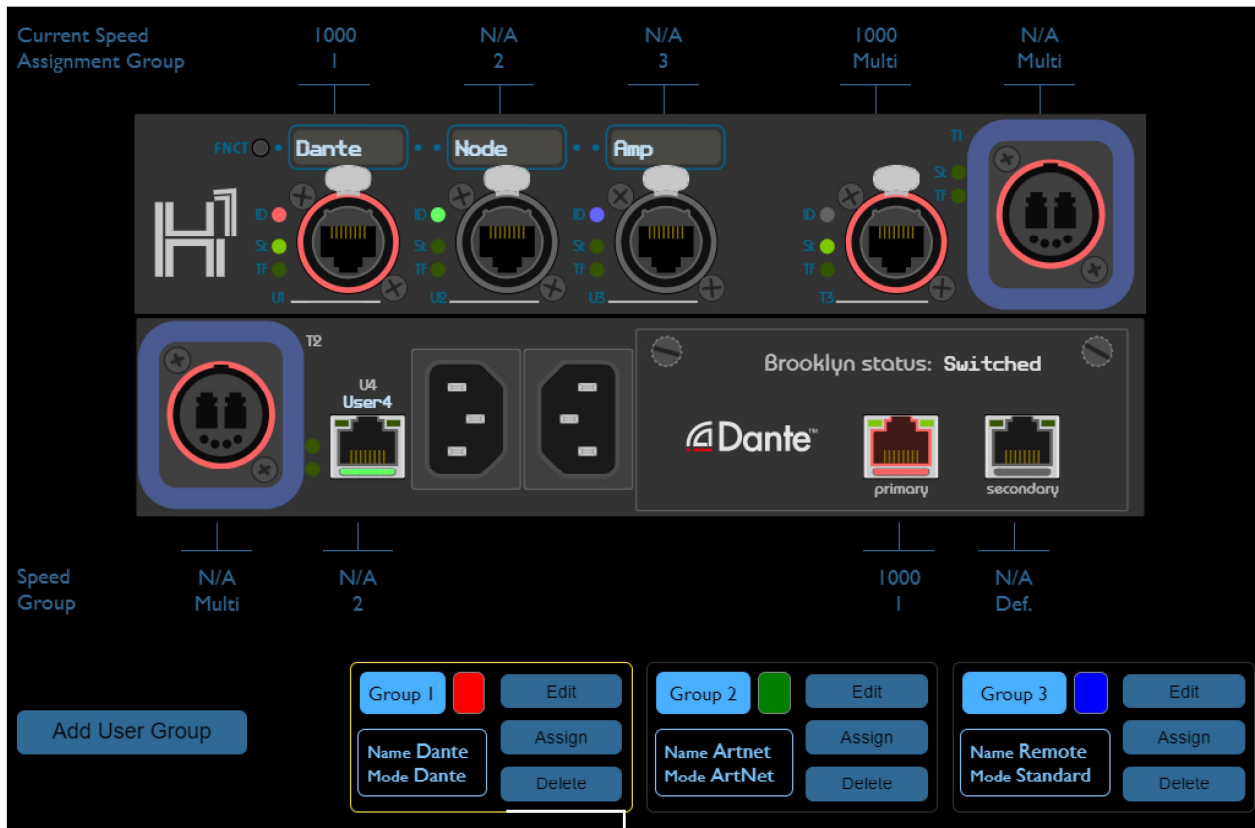
Figure 7: Add Group procedure

Key points note:

For your information and for IT switches tagged link interoperability:

User Group ID 1 corresponds to VLAN ID 101, Group ID 2 = VLAN 102 and so on until Group ID 99 = VLAN 199

4.4.2 Group management



Group Selection

- Click in the Group frame to select
- Group frame is highlighted (yellow), his member ports are highlighted (group color) in the framework
- Click on Edit button to change Group settings (name, color or mode)
- Click on Assign button and
- click on User/Transmit Ports to assign them to the Group, click again to remove ports from the Group
- Delete button deletes Group (after confirmation)

Figure 8: Group management

Key points note:

If no User group is created or no user assignment is done to a User port (including internal Brooklyn ports), this port will be reassigned to Default Group (VLAN 1)

Note that Default group is not transmitted by Transmit ports.

Only Transmit ports can be assigned to different Groups.

4.4.3 User Port Edit Window

The user port edit window gives to user an access to advanced parameters.

This window pops up by a single click on the port icon in the Framework.

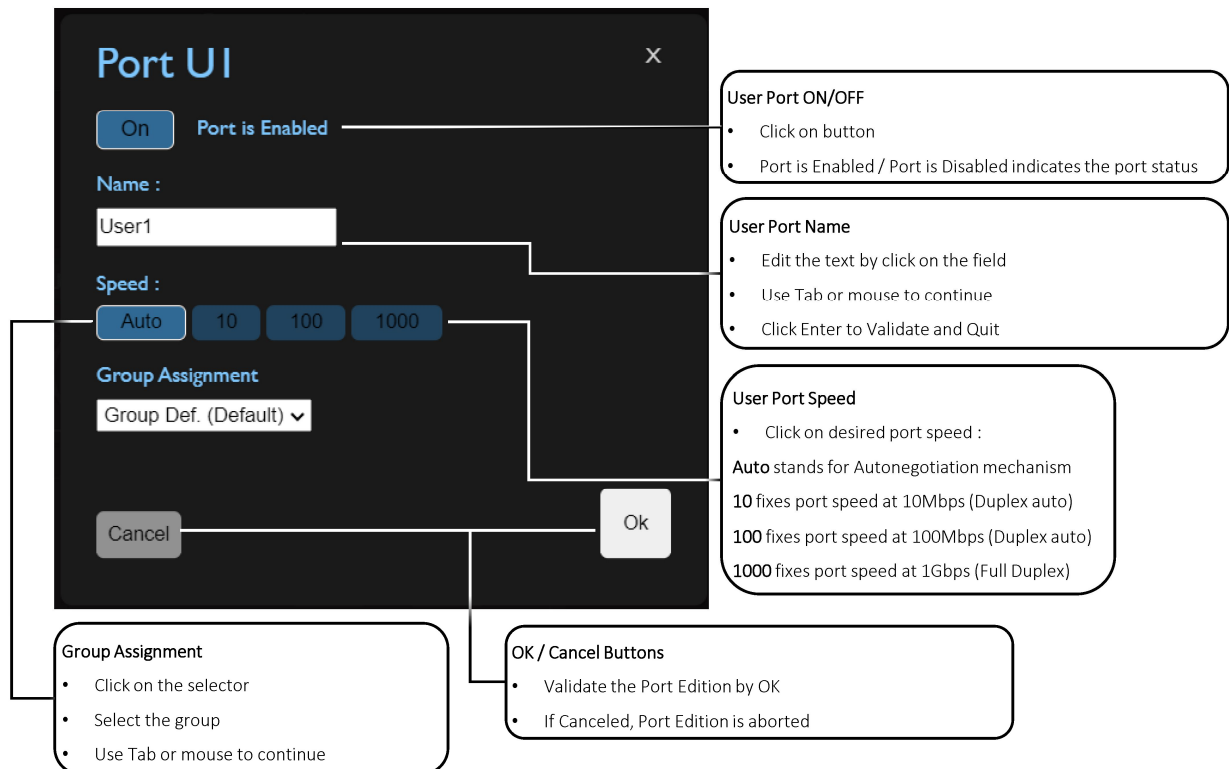


Figure 9: User Port Edit window

4.4.4 Transmit Port Edit Window

The Transmit port edit window gives an access to advanced parameters.

This window pops up by a single click on the port icon in the Framework.

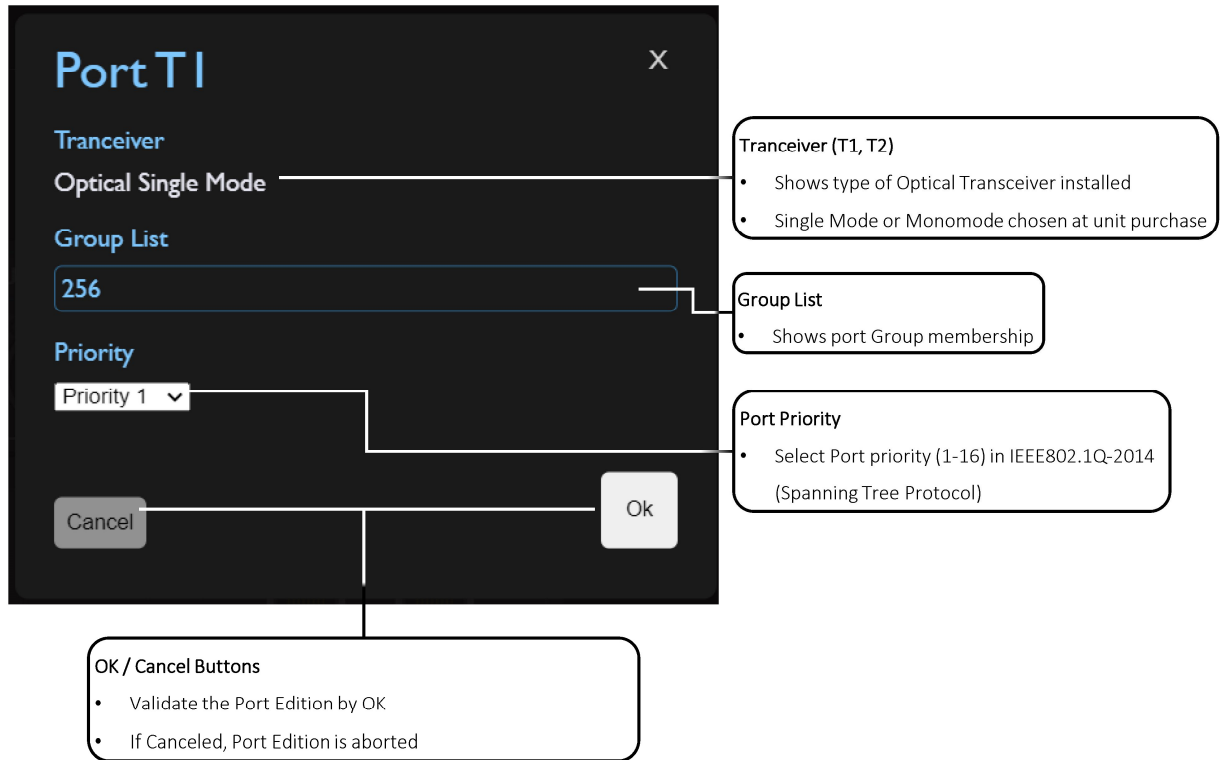


Figure 10: Transmit Port Edit window

4.5 H1 Dante Audio Bridge Configuration

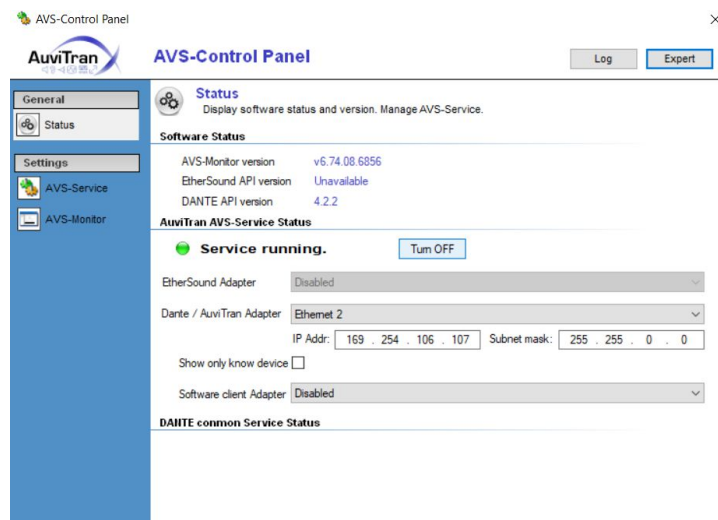
Launch **AuviTran AVS Monitor** software:

Apply 4.2.2 and 4.2.3 IPv4 settings for both Dante Audio Bridge and Network switch configuration.

Launch **AVS- Control Panel** (CTRL+P):

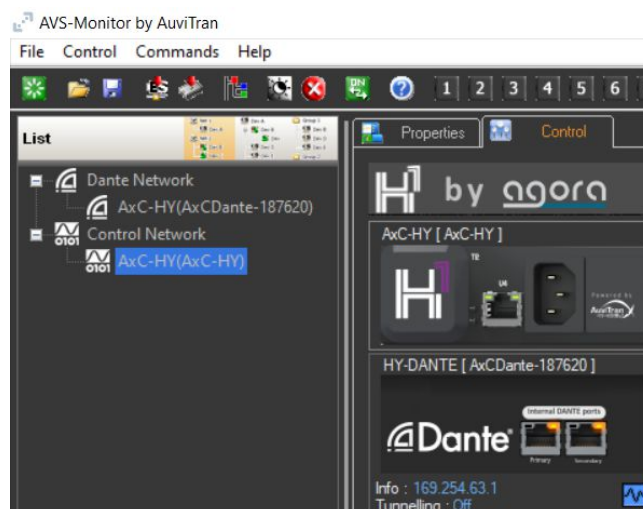
Make sure service is running. If Service is stopped: Click Turn ON

Select the Dante/AuviTran Adapter which is connected to a User Port assigned to the same group as the internal Brooklyn card:



Make sure « Online mode » is active (CTRL+O)

H1 appears as AxC-HY (AudioToolBox type) in device list as shown below:



4.5.1 H1 Dante Audio Bridge Framework

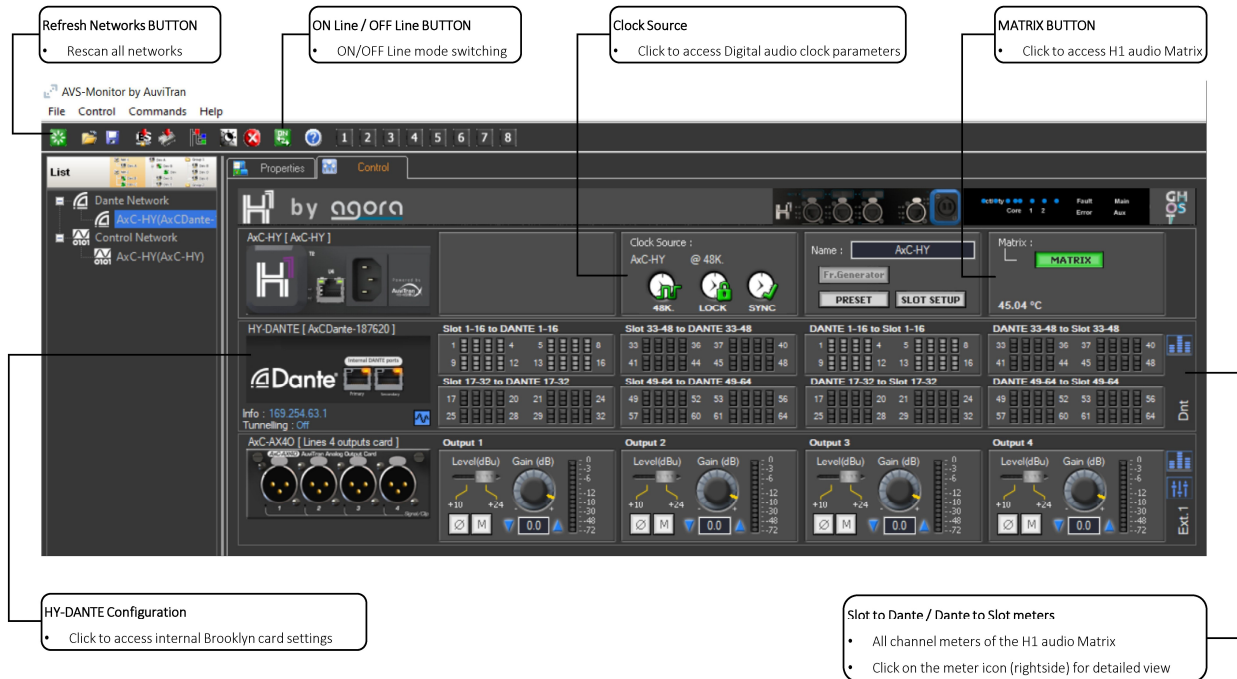


Figure 11: AVS Monitor H1 framework

Example with an AxC-AX40 card inserted in external slot.



Figure 12: AVS Monitor H1 framework

Example with an AxC-ES100 card inserted in external slot.

4.5.2 H1 audio clock source settings

As in any digital audio system, you must define a **unique Master Audio Clock** for your H1 Dante Audio Bridge

It can be either:

- the onboard oscillator (AxC-HY)
- the internal Brooklyn II card (HY-DANTE)
- the AxC Card inserted in the external slot (if it has an onboard oscillator)

Click in **Clock Source** in the framework to access Clock source settings:

Rack Setup

Clock Source: AxCDante-187620 (Dante) -from Network / Master(off). @ 48K.

Sample Rate: 48 k

Source	Name	Slot	Freq.	Lock	Sync	Sample Rate Capability (in KHz)
<input type="checkbox"/>	AxC-HY	Onb	48K	✓	✓	44.1 / 48 / 88.2 / 96
<input checked="" type="checkbox"/>	AxCDante-187620 (Dante) -from Network / Master(off).	Dnt	48K	✓	✓	44.1 / 48 / 88.2 / 96
	Lines 4 outputs card (Out)	Ext.1	N/A	✓	✓	44.1 / 48 / 88.2 / 96

Revert to Factory settings

Close

Clock Source
• Click to select desired clock source

Sample Rate
• Click to select desired sample rate for H1 Audio Bridge

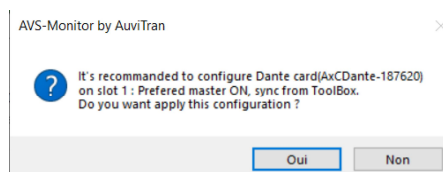
Figure 13: Clock source settings

Key points note:

If you choose Axc-HY (Onboard oscillator) or Ext slot oscillator as the Clock source, then the internal HY-Dante card of the H1 must be set to "Sync from toolbox" in HY-Dante configuration (Enable Sync to External in Dante Controller)

Consequently, HY-Dante card must become Preferred Leader (formerly Preferred Master) for Dante Network Clocking

AVS Monitor pops up a menu which proposes you to automatically execute the right settings, choose "Yes"



4.5.3 HY-Dante internal Brooklyn card settings

Click in **HY-DANTE** in the framework to access internal Brooklyn card settings (via Slot setup):

Ha Remote Setup

- For Yamaha HA remote management

I/O Setup

- Set number of channels (by 4 / up to 64) used in Dante to Slot and Slot to Dante MATRIX

Slot Setup

Dnt (HY-DANTE) Sl.2 (AxC-AX40)

AxC-Dante Settings

HA Remote Setup

Mode: Off (Def)

ID: ID = 1

I/O Setup

Dante=>Slot: 16 Ch.

Slot=>Dante: 16 Ch.

Clock Setup

Clock Source: From Toolbox

Preferred Master: On

DANTE IP Status

Primary IP address: 169 . 254 . 63 . 1

Subnet mask: 255 . 255 . 0 . 0

Avoid controlling AudioToolBox from this card.

UpTime : 1 days, 1 hours, 17 min, 29 sec.

DANTE IP status

- Shows IPv4 settings for HY-DANTE card (click icon to change IP settings)

Clock Setup

- Clock Source for HY-Dante:
- From Toolbox means Onboard or Ext slot shall be MASTER/ From Dante network means HY-Dante card shall be MASTER
- Preferred Leader (formerly Master) for Dante network On/Off

Figure 14: HY-DANTE setup

Key points note:

A seen in Clock Source setup, if HY-Dante card clock source comes from Toolbox (Onboard or External slot) then it must be sync to External Clock and Preferred Leader.

If HY-Dante card takes its clock source from Dante Network, then it must become the clock source for H1 audio bridge. Note that it is not necessarily Leader for Dante network

4.5.4 H1 Matrix

Click on **MATRIX** Button to access H1 audio MATRIX.

Clear MATRIX routing

- Clear all routing after confirmation

Channel group

- Group channel by 2,4,8,16 or 32 for rapid routing

Expand to individual channels

- Click on + to expand view to individual channels
- Click on – to return to channel group view

Create a Dante to Slot / Slot to Dante connexion

- Click in the grid to create an audio connexion
- Click again to delete the connexion

RECEIVERS

- HY-DANTE input channels (limited by HY-DANTE Setup)
- External slot card inputs (from HY point of view)

SOURCES

- HY-DANTE output channels (limited by HY-DANTE Setup)
- External slot card outputs (from HY point of view)

Figure 15: H1 matrix (expanded view to the right)

Example with an AxC-AX40 card inserted in external slot.

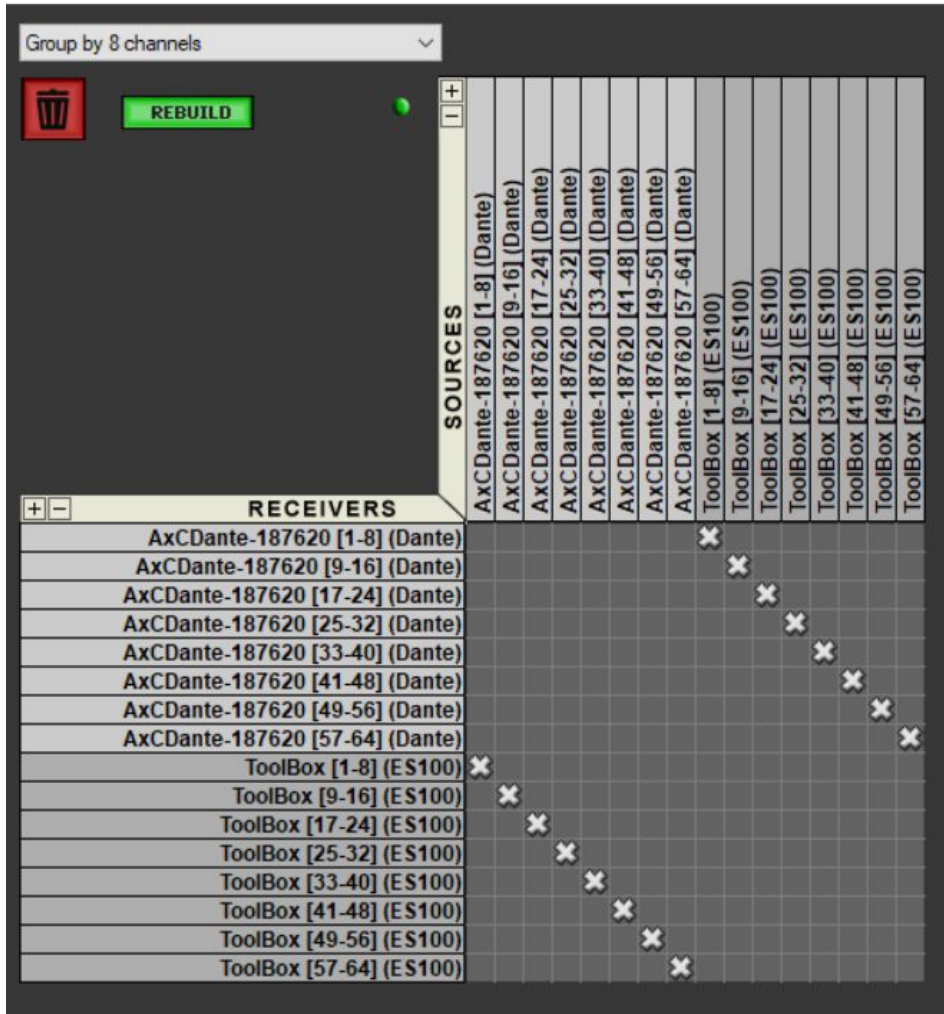


Figure 16: H1 matrix (expanded view to the right)

Example with an AxC-ES100 card inserted in external slot.

Key points note:

For advanced Dante settings such as Routing, Monitoring, Switched / Dual Redundant configuration, you must use Dante Controller software. Please refer to Audinate documentation at <https://dev.audinate.com/GA/dante-controller/userguide/pdf/latest/>

Chapter 5: Service and maintenance information

Restoring the Factory IP Address

By pressing hold 3 times on the Function button the H1 unit IP address will be reset to factory 192.168.1.151 / 255.255.255.0

- First push: display the Unit IP Address
- Second push: invite to reset.
- Third push: Confirm.

Note that after a manual reset, reload the page in H1 Controller Framework

Routine Maintenance

To help keep your H1 unit in good working order and to make sure it gives you optimum performance, we recommend that you carry out the following at monthly intervals:

- Clean the unit (see “Cleaning” below).
- Check the controls for freedom of operation.
- Check the functionality of all controls, that is, control knobs, pushbuttons, and LEDs.

You can carry out a visual check of all illuminated items (LEDs etc.) by switching the unit off and then on again, as they should all illuminate during power up.

- Check the functionality of the equipment.


Cleaning

Switch off the unit and electrically isolate it from the mains *before* cleaning. Clean the H1 device using a dry, lint-free cloth. Do not use harsh abrasives or solvents. When cleaning the unit, take great care not to damage control knobs, pushbuttons etc.

To clean the LCD screen, wipe it carefully with a soft, lint-free cloth using ethanoic liquid, such as a screen cleaner for LCDs, or by using a screen wipe specially designed for the purpose. When cleaning the LCD screen, please take the following precautions:

- Do not use harsh abrasives, such as paper towels.
- Do not apply liquids directly to the screen.
- Do not use ammonia-based cleaners and solvents, such as acetone.

Appendix A: Technical Specifications

Technical specifications	
GENERAL	
Size WxDxH (mm)	220 x 433.9 x 43.3 (hors accessoires)
Weight (without options)	3.8 kg
Power consumption	100-127 VAC / 0.5 A 200-240 VAC / 0.25 A
Power supply	100/240 VAC 50/60 Hz
Idle power*	25 W
Maximum power rating**	50 W
Storage temperature / Humidity	70°C > T > -40°C / 90% > H > 10% without condensation
Operating temperature / Humidity	40°C > T > 0°C / 90% > H > 10% without condensation
Altitude	Up to 10 000 ft (3 km)
Acoustic	Fanless
CONNECTIVITY & INTERFACE	
Front panel	3 x 10 Base-T / 100 Base-TX / 1 000 Base-T Ethercon® ports with LCD screens 1 x 10 Base-T / 100 Base-TX / 1 000 Base-T Ethercon® ports 1 x 10 Base-T / 100 Base-TX / 1 000 Base-T OpticalCon® Duo ports 2 x Internal port connected to the Audinate Dante primary & secondary interfaces 3 leds (Statut, traffic, ID) on each Ethercon® User port 2 leds (Statut et traffic) on each OpticalCon® & Ethercon® transmit port 1 x Configuration and navigation function switch
Rear panel	1 x 10 Base-T / 100 Base-TX / 1000 Base-T RJ45 ports 1 x 10 Base-T / 100 Base-TX / 1000 Base-T OpticalCon® Duo ports 1 x AxC – Auvitrans slot 1 x Power cord (secondary in option)
Software	Web service for Switch board control Switch, Audio matrix and interface cards remote is available on Auvitrans AVS Monitor software Audinate® Brooklyn II control and monitoring is available on Audinate Dante controller software Service and maintenance window
PROCESSING	
Switch mother board	99 x Groupes disponibles Capacité de 2 x 8K MAC Address IEEE 802.1p Qos
Network capacity	99 x Groups available Capacity of 8K MAC Address IEEE 802.1p Qos
Audio matrix	128 x 128 audio channels @ 48 kHz Internal slot : up to 64 x 64 audio channels @ 48 kHz External slot : up to 64 x 64 audio channels @ 48 kHz Network streaming capacity: up to 64 x 64 audio channels @ 48 kHz / 32 simultaneous streams Dante® / AES67 Clocking : Two onboard oscillators – Dante / Internal – Software switchable
PACKAGE & WARRANTY	
Package includes	1 x H® engine 1 x IEC13 lock power cord 1 x USB stick with Software, firmware and owner's documents 20 x M3 screw 1 x Removable short angle bracket 1 x Removable long angle bracket 2 x Removable wall-mount bracket (OPTION) 1 x M10 removable plate (OPTION) 1 x 5030-B Truss clamp (OPTION) 2 x Linking plate
Warranty	5 years parts and service
TRUSS MOUNT OPTION	
Package includes	1 x M10 removable plate (OPTION) 1 x 5030-B Truss clamp (OPTION)
WALL MOUNT OPTION	
Package includes	2 x Removable wall-mount bracket (OPTION)
	
<p>www.agora-network.fr</p> <p>* Idle power is the actual power consumption of the device with no ports connected. ** Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the total power budget available to all PoE ports. Photos et données non contractuelles. Les spécifications du produit sont susceptibles de changer sans avertissement préalable.</p>	

DATASHEET_EN

Appendix B:

H1 Options technical specifications

OPTK-MM

The Multi-mode Optical Kit optionally installed in H1 is a class 1 laser certified for 1000Mbps over 550m.

The Multi-mode Optical kit includes:

- 2 SFP-SX-MM-H 1.25G 850nm transceivers
- 2 OM3 duplex patch cords
- 2 Neutrik OpticalCon™ duo sockets

OPTK-SM

The Single Mode Optical Kit optionally installed in H1 is a class 1 laser certified to 1000Mbps over 10Kms.

The Single Mode Optical kit includes:

- 2 SFP-LX-SM-H 1.25G 1310nm transceivers
- 2 Single mode 9/125 duplex patch cords
- **2 Neutrik OpticalCon™ duo sockets**

HRPS

The redundant power supply delivers a highly secured power saving strategy.

The Redundant Power Supply Kit includes:

- 1 power supply identic
- 1 redundant Diode card to host the two power supplies and delivers a secured output regulated power.
- 1 IEC13 sockets
- 1 cable kit

All the options are mounted in factory on order. Any option ordered individually will require the return of materials for mounting operations.

Appendix C:

H1 - Mechanical mounting and electrical safety



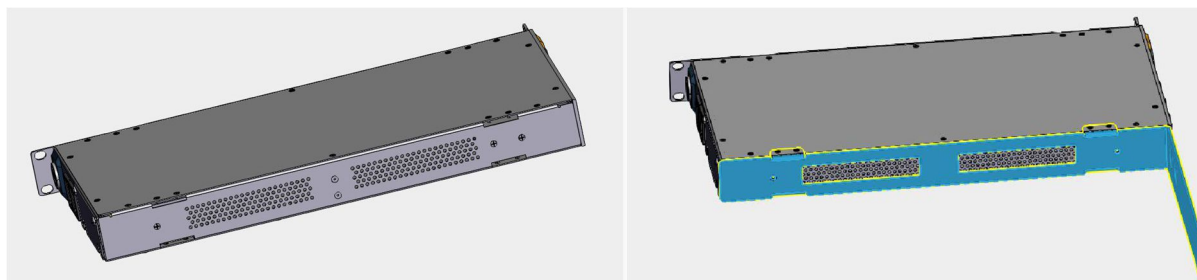
To avoid any risk of electrical shock H1 can be only used with mounted side bracket. Agora disclaim any responsibility in case of use that does not comply with these instructions.

H1 is delivered with mounting brackets and coupling plates. Please read the assembly instructions below.

Package includes:

- 20 x Hexa screws M3*5mm
- 1 x long bracket
- 1 x short racket

1: Long bracket mounting instructions:

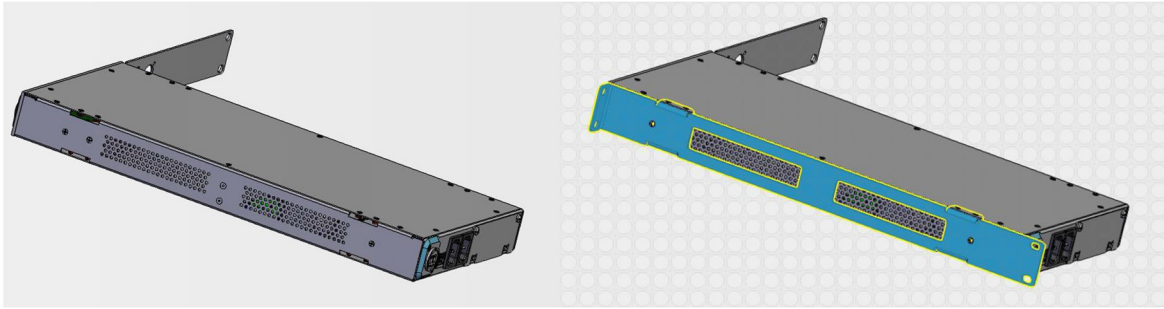


1: insert the plates of the bracket in the reserved spaces on the side of the box

2: screw the 8 x M3*5mm in the designated holes (white circles)

3: Complete by screwing 2 x M3*5mm on the side of the bracket

2: Short bracket mounting instructions:



1: insert the plates of the bracket in the reserved spaces on the side of the box 2:

screw the 8 x M3*5mm in the designated holes (white circles)

3: Complete by screwing 2 x M3*5mm on the side of the bracket

3: Rack coupling mounting instructions:

1: mount the short brackets on the external sides of both units (see chapter 2)

2: insert two plates on the upper spaces of the first unit - Screw them with 4 x M3*5mm in the designated holes (white circles).

3: insert two plates on the lower spaces of the Second unit - Screw them with 4 x M3*5mm in the designated holes (white circles).

4: pair the two units and fix them by screwing the last screws in the designated holes (white circles)