AU-BT413WP-DA

Wall panel 4x3 Dante/AES67 interface with Bluetooth

All Rights Reserved

Preface

Read this user manual carefully before using the product. Pictures shown in this manual are for reference only. Different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated till January 2023. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

FCC Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. It 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 harmful interference in a commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.

SAFETY PRECAUTIONS

To ensure the best performance from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment.

- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.

- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.

- Using supplies or parts not meeting the products' specifications may cause damage, deterioration, or malfunction.

- Refer all servicing to qualified service personnel.

- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.

- Do not put any heavy items on the extension cable in case of extrusion.

- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.

- Install the device in a place with good ventilation to avoid damage caused by overheating.

- Keep the module away from liquids.

- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.

- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

- Unplug the power cord when left unused for a long period of time.

- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.

About Dante/AES67

Dante/AES67 audio networking utilize standard IP networks to transmit high-quality, uncompressed audio with near-zero latency. It's the most economical, versatile, and easy-to-use audio networking solution, and is scalable from simple installations to large-capacity networks running thousands of audio channels. Dante/AES67 can replace multiple analog or multicore cables with a single affordable Ethernet cable to transmit high quality multi-channel audio safely and reliably. With Dante software, the network can be easily expanded and reconfigured with just a few mouse clicks. Dante/AES67 is the audio networking choice of nearly all professional audio manufacturers, with hundreds of Dante-enabled audio products now available.

For more information, please visit the Audinate website at _www.audinate.com_.

Table of Contents

1. Product Introduction

The AU-BT413WP-DA adopts Dante AES67 audio transmission solution to distribute uncompressed audio via standard Ethernet networks with near-zero latency. It features stereo Bluetooth wireless audio input along with two RCA inputs and one 3.5mm line input and 3.5mm line output.

The unit is designed to fit into most EU boxes and is PoE enabled, in addition, the front panel also contains different indicators for easy display of the various states.

1.1 Features

- One-button Bluetooth pairing with back-lit indication.

- LED status indications on front panel: POWER, SYS, SYNC, ERROR.

- Bluetooth 5.0 support.

- Supports Bluetooth audio transmission to Dante/AES67 network.

- Customizable Bluetooth friendly name.

- Supports Call & Media Bridging.

- Features additional 2 channel analog input and 2 channel analog output.

- Powered by network switch via PoE(802.3af).

- Web UI for device configuration.

- Compatible with most smartphones, Apple iPads, and Android tablets.

- Controllable by Dante Controller or Dante Domain Manager software.

- Open API for third party control.

1.2 Package List

- 1x AU-BT413WP-DA
- 1x User Manual
- 4x White or black screw cover plates (depending on model)

Note: *Please contact your distributor immediately if any damage or defect in the components is found.*

2. Technical Specification

Input	
Inputs	Stereo Bluetooth 5.0 audio receiver L+R stereo unbalanced audio on RCA Stereo unbalanced audio on 3.5mm TRS
Bluetooth Range	Recommended max 15m (depending on source Bluetooth device and installation environment)
Output	
Outputs	One channel Bluetooth 5.0 audio transmitter Two unbalanced line level outputs on 3.5mm TRS
Audio Performance	
Gain	Input: -12 ~ +18dB, 6dB per step
Frequency Response	20Hz - 20KHz (±0.5dB)
Max Input Level	+12dBu @ 0dB input gain
Max Output Level	+12dBu @ 0dB input gain
Output Noise	<-79dBu @ 0dB gain
THD	<0.05% at 0dBu,1kHz, 0dB gain
Dante	
Bit Depth	24
Sample Rate	44.1kHz or 48kHz
Latency	1,2 or 5ms (configurable using Dante Controller)
Network Transport	Dante Audio over IP AES67 RTP
Control	
Control	(1) Dante Network (1) Pair button
Control Connector	(1) RJ45 (1) Bluetooth button
General	

Model Names	AU-BT413WP-DA-WH (white front) AU-BT413WP-DA-BL (black front)
Power	802.3af PoE
Operation	-10℃ ~ +55℃
Storage Temperature	-25℃ ~ +70℃
Relative Humility	10%-90%
Power Consumption	4.22W (Max)
Dimension (WxHxD)	151mm x 80mm x 42mm
Net Weight	195g
Shipping Dimension (LxWxH)	178mm x 108mm x 55mm
Shipping Weight	300g
Compliance	FCC, CE
Environmental	RoHs, WEEE

3. Panel Description

3.1 Front Panel
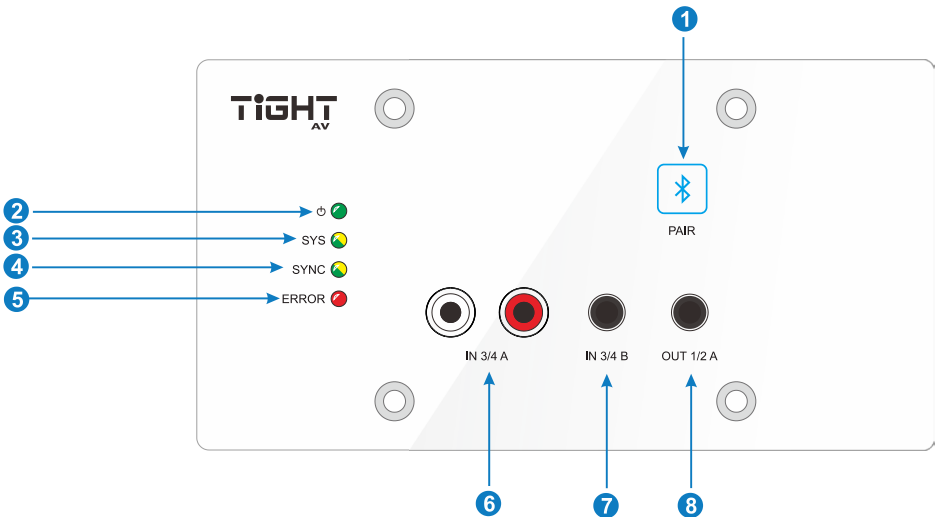
1. **PAIR:** 1 x Bluetooth pairing button with back-lit indication. Press the button to start pairing, the back-lit indication will begin flashing and enters pairing mode. Press and hold the button for 5s to release connection active Bluetooth connection, the back-lit indication will flash again indicating paring mode. If no other Bluetooth device connects within 60 seconds AU-BT413WP-DA enters idle mode.

2. **POWER LED:** Illuminates green when power is applied.

3. **SYS LED:** Illuminates yellow when system starts, and green when system is ready.

4. **SYNC LED:** Illuminates green when the clocks are synchronized between "Leader" and "Follower" devices, and yellow when the clocks are out of sync.

5. **ERROR LED:** Illuminates red when the unit has encountered an internal failure.

6. **IN 3/4 A:** RCA unbalanced audio input.

7. **IN 3/4 B:** 3.5mm TRS unbalanced audio input.

8. **OUT 1/2 A:** 3.5mm TRS unbalanced audio output.

3.2 Rear Panel
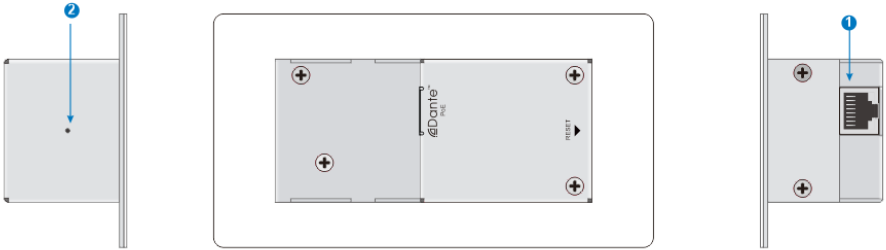
1. **Dante:** Dante® Ethernet interface connector.
2. **RESET:** Factory reset unit. Press and hold for about 3s the "SYS" and "SYNC" LEDs will turn off, wait until the device has rebooted itself. Factory reset also resets the IP settings for the device back to default.

4. System Connection

4.1 Usage Precaution

● Make sure all components and accessories included before installation.

● System should be installed in a clean environment with proper temperature and humidity.

● All the power switches, plugs, sockets, and power cords should be insulated and safe.

● All devices should be connected before system powers on.

4.2 System Diagram

The following diagram illustrates an example of input and output connections that can be utilized with using the AU-BT413WP-DA.
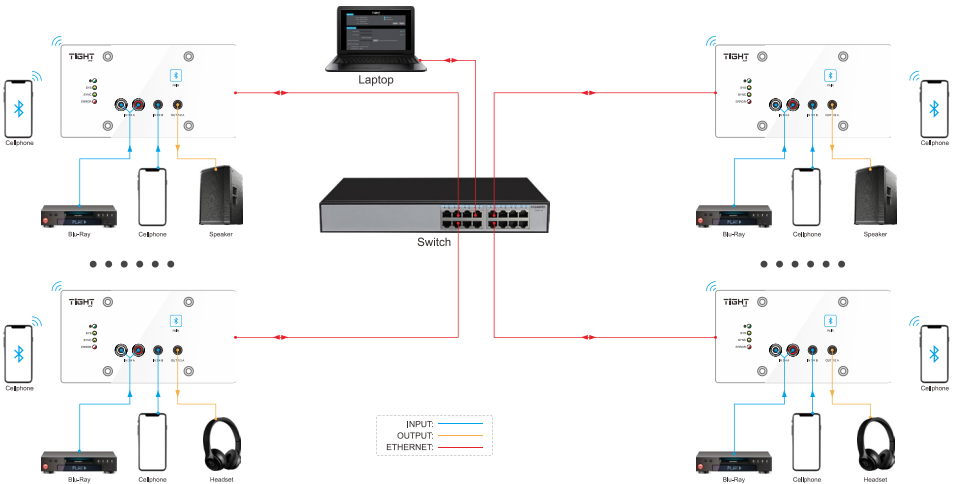
5. Operation of Dante Controller

Dante Controller is a free software application that enables to route audio and configure devices on a Dante network. With automatic device discovery, one-click signal routing and user-editable device and channel labels, setting up a Dante network couldn't be easier. See the overview for more detail on Dante audio networking.

Dante Controller is much more than just a configuration and routing matrix. Dante Controller provides essential device status information and powerful real-time network monitoring, including device-level latency and clock stability status, multicast bandwidth usage, and customized event logging, enabling to quickly identify and resolve any potential network issues. It can also quickly and easily backup, restore, move, and reuse Dante network configurations using Presets, and edit Dante routing configurations offline.

Dante Controller is available both for Windows and Mac OS X. It is open for registered *www.audinate.com* users to download directly from the website.

Dante Controller allows to:

● View all Dante-enabled audio devices and their channels on the network.

● View Dante-enabled device clock and network settings.

● Route audio between these devices and view the status of existing audio routes.

● Connect to Dante Domain Manager to control enrolled devices.

● Lock and unlock Dante devices.

● Change labels of Dante channels to friendly names.

● Customize latency (latency before playing out).

● Save routing presets.

● Apply previous saved presets.

● Edit presets offline and apply as configurations for new network deployments.

● View and set per-device configuration options, including:

    ✓ Change the device name.

    ✓ Change sample rate and clock settings.

    ✓ View detailed network information.

    ✓ Access the device web page to upgrade firmware and license information.

● Identify a device for example by flashing LEDs.

● View network status information, including:

    ✓ Multicast bandwidth across the network.

    ✓ Transmit and receive bandwidth for each device.

- View device performance information, including latency statistics and packet errors.
- View clock status information for each device, including frequency offset history and clock event logs.

**Overview of Dante Controller:**

The default setting only supports 2 transmit and 2 receive flows in unicast mode, if more than 2 transmitt streams are needed multicast must be configured.

Multicast Flow: Click any device to enter **Device View** page. Click on "Create a new multicast flow"-button as below.
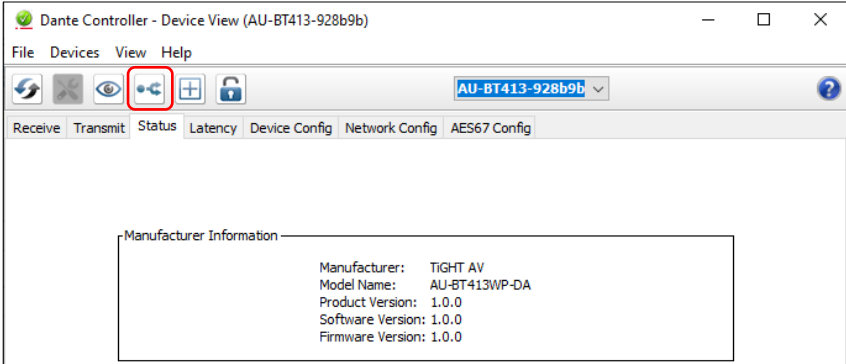
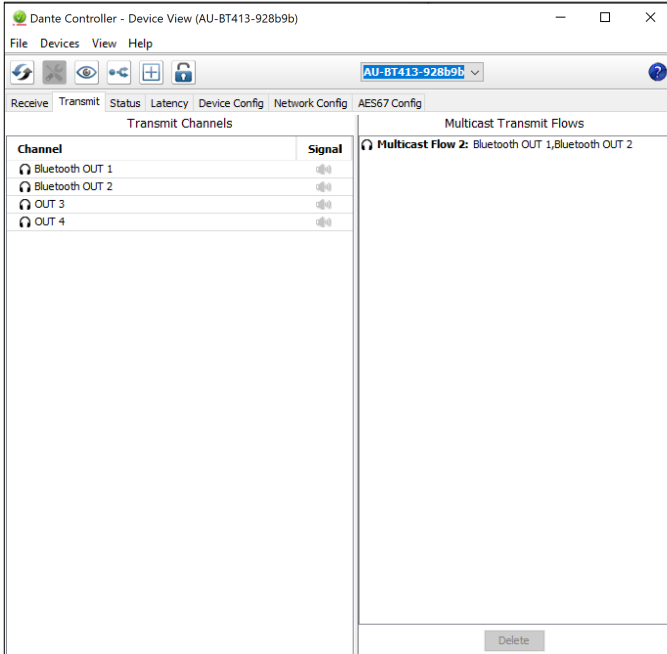Select the input channels that should be added to this multicast flow.
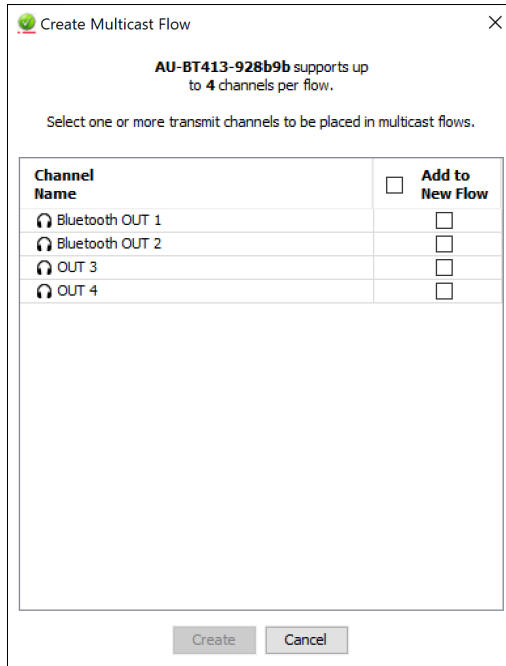
To delete a multicast flow, in "Device View" select "Transmit" tab and select the flow that should be deleted. Then press "Delete" to delete the multicast flow and disable multicast transmission.

Device Config: Select the "Device Config" tab to rename the device,set sample rate an/or set device latency etc.

Note: For more details about Dante Controller, please download the user guideline at the Audinate website: www.audinate.com.

6. Operation of WEB-UI

AU-BT413WP-DA can be controlled via web-based GUI. It allows users to interact and configurate AU-BT413WP-DA through graphical icons and visual indicators.

AU-BT413WP-DA uses DHCP as default mode and relies on a DHCP server to be present on network. If AU-BT413WP-DA connects to a computer directly or isn't assigned IP address by a DHCP server, the device then will assign itself an automatic IP address in the 169.254.xxx.xxx range.

To find the WEB-UI/Control IP address using Dante Controller

By opening "Device View" in Dante Controller and select the AU-BT413WP-DA device and then choose the "Status" tab, users can then triple click on the "Identify Device" button (the eye symbol).
The FW Version field in "Status" tab will now display the WEB-UI/Control IP-address.
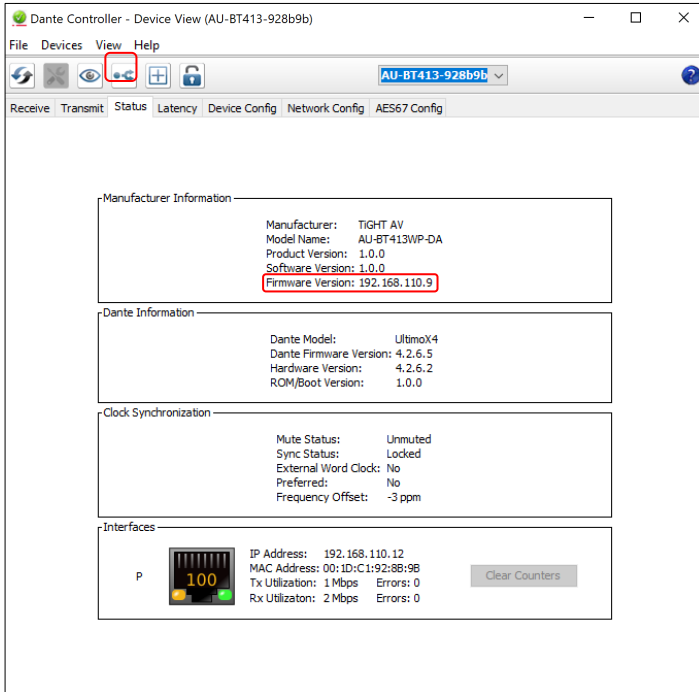
By opening a web browser and typing the WEB-UI IP address will display below log-in page.
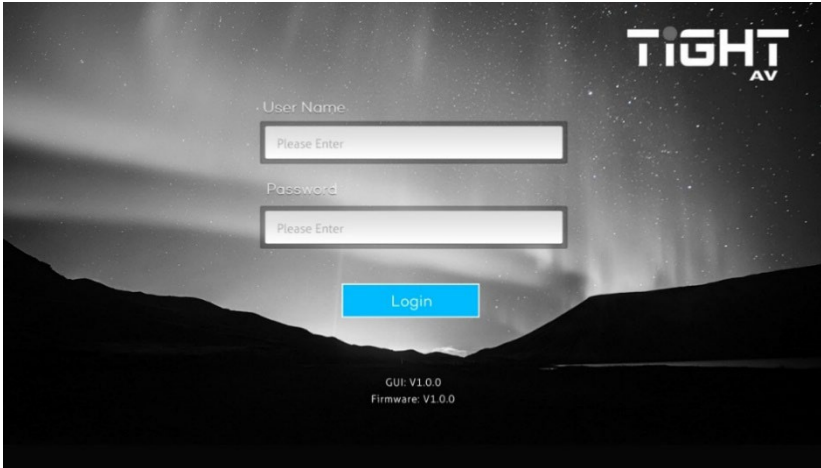
The default user name is "admin" and default password is also "admin". These credentials can be changed in settings and users are recommended to do so.

6.1 Dante Info

In this section, users can find information of the model name, Dante device name, Dante IP address and MAC address.

Dante Lock: Reports the device Dante Lock status from Dante Controller.

Parameter Lock: When activated the parameters of the device can't be adjusted, such as device input's gain or output's volume.

6.2 Bluetooth Config

Input Name: Reports the Dante transmitter channel name for corresponding analog input and rename the input. Customizable by clicking in the field. The new channel name will also show accordingly in Dante Controller.

Bluetooth Friendly Name: Customizable by clicking in the field.

Activate Pairing: Activate pairing mode on the device.

Close Connection: Close the active Bluetooth® connection (only active when the Bluetooth® status is "Connected"). After closing the active connection AU-BT413WP-DA enters paring mode again. If no other Bluetooth device connects within 60s AU-BT413WP-DA enters idle mode. By clicking a second time on "Close Connection" button the device enters idle mode directly.

Pairing List: Click to open the pairing list.

	Protect Enable - Mac Address	Device Name
1	☐ 44-33-4C-C9-35-12	AU-BT413WP-DA 1
2	☑ 44-33-4C-C9-35-13	AU-BT413WP-DA 2
3	☐ 44-33-4C-C9-35-14	AU-BT413WP-DA 3
4	☐ 44-33-4C-C9-35-16	AU-BT413WP-DA 4
5	☐ 44-33-4C-C9-35-17	AU-BT413WP-DA 5
6	☐ 44-33-4C-C9-35-18	AU-BT413WP-DA 6
7	☐ 44-33-4C-C9-35-19	AU-BT413WP-DA 1
8	☐ 44-33-4C-C9-35-20	AU-BT413WP-DA 8
9	☐ 44-33-4C-C9-35-21	AU-BT413WP-DA 9
10	☐ 44-33-4C-C9-35-22	AU-BT413WP-DA10

Edit Priority   Clear Pairing List

Allow the user to identify devices which have paired to the AU-BT413WP-DA. Maximum of 10 devices is saved, if no priority selection has been made the oldest entry is discarded to make room for a new entry.

Edit Priority: Click "Edit Priority" and check the device you want to connect automatically, then drag to arrange the priority, click the "Edit Priority" button again to save the setting. The devices with check mark will now connect automatically to AU-BT413WP-DA as soon as the paring mode is activated in the set priority order.

Clear Paring List: Clears the entire list of saved past paired Bluetooth devices. This can be done for integrity reason.

6.3 AVRCP Configuration

Controls the connected Bluetooth source device (AVRCP must be supported by the device).
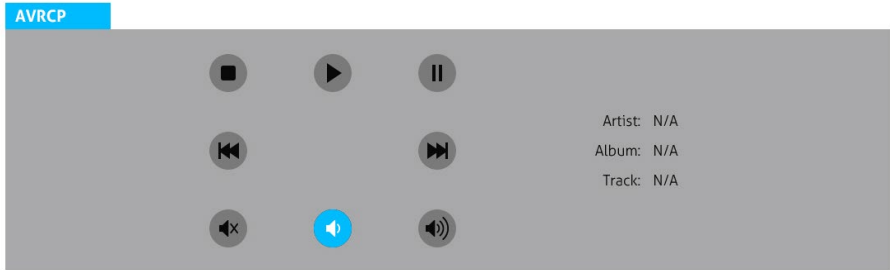
Supported AVRCP controls: Play, Pause, Stop, Next, Previous, Mute, Volume Up and Volume Down. If available Artist, Album and Track information is displayed.

6.4 Input Configuration
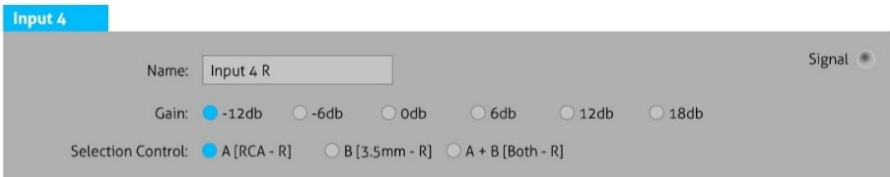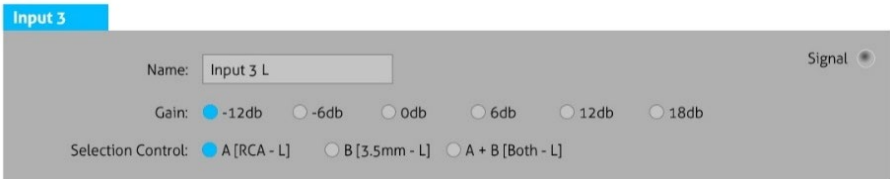
Name: Reports the Dante channel name for corresponding analog input. Customizable by clicking in the field. The new channel name will also show accordingly in Dante Controller.

Gain: Allows the user to adjust the input's gain from -12db to 18db

Selection Control: Select the analog input A, B or A+B (summing of both RCA and 3.5mm TRS inputs)

6.5 Output Configuration

Name: Reports the Dante output channel name for corresponding analog output. Customizable by clicking in the field. The new channel name will also show accordingly in Dante Controller.

Volume: Allows the user to adjust the output's volume form -60db to 0db.

Assigned RX Channel: Reports the received Dante channel name as set in Dante Controller.

6.6 Credential Configuration

In this section, the user can change the Web-UI login credentials.

6.7 Setting

In this section, the user can configure network settings, export device settings to keep record of installation settings or import settings to restore device to default. Firmware or Bluetooth update remotely by browsing and uploading file from your connected PC, or conduct a factory reset device by clicking "Reset" button (this also restores IP settings to DHCP mode which is the default IP mode).

7. API Commands

The AU-BT413WP-DA can be controlled over TCP/IP. Below is an example using PuTTY software.
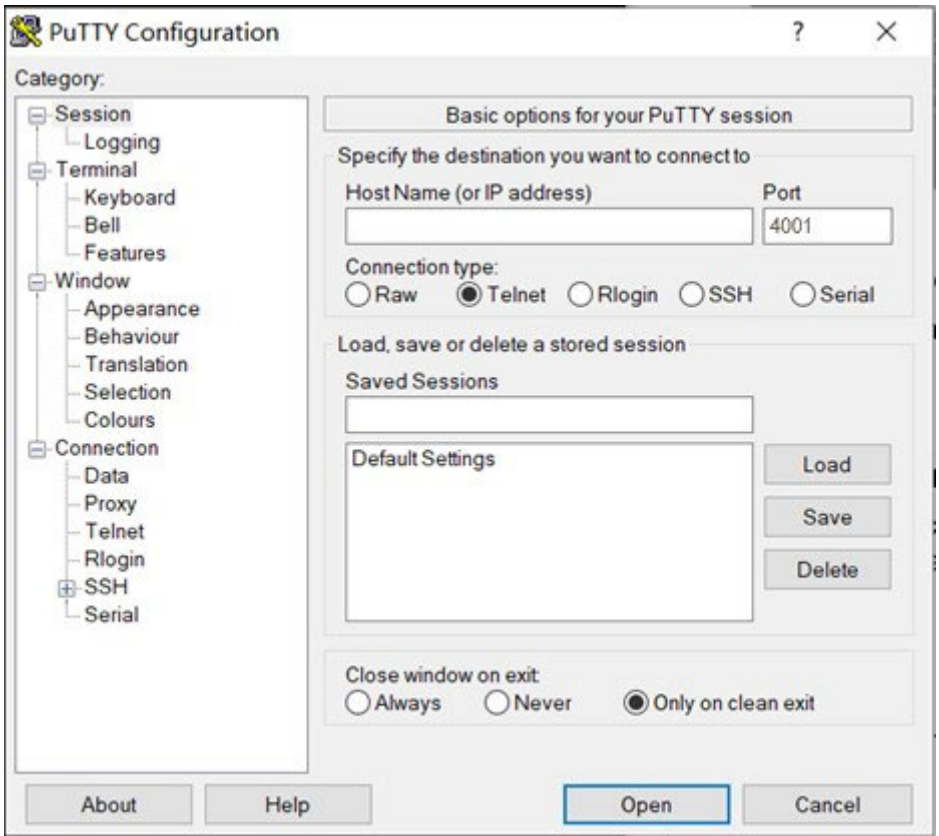
First, type in the control IP address of the device in "Host Name" and port 4001, chose Telnet connection type, then click the open, and a new window will pop up. Then send commands to control the device.

Command	Function	Feedback Example
livol,x:z	Set the gain of input x. x=3,4 means input 3 or input 4 z=0,1,2,3…8 6dB step	livol,4:2
		livol,4:2 ok
getlivol:x	Query gain of input. x=1,2 means input 1 or input 2	getlivol:4
		livol,3:3
lisel,x:z	Select which mode (rca/jack) is used for the line level input x. x=3,4 means input 3 or input 4 z=1,2,3 where 1 is rca only, 2 is jack only and 3 is mix between rca and jack	lisel,3:a
		lisel,3:1 ok
getlisel:x	Query which mode the input x is using. x=3,4 means input 3 or input 4	getlisel:3
		lisel,3:1
lovol,y:z	Set volume of output. y=1..3 means output 1...output 3 z = 0 - 100	lovol,2:80
		lovol,2:80 ok
getlovol:y	Query output volume on specified output y y=1..3 means output 1...output 3	getlovol:2
		lovol,2:80
mute:y	Mute the output port y. y=1..3 means output 1...output 3	mute:1
		mute:1 ok
unmute:y	Unmute the output port y. y=1..3 means output 1...output 3	unmute:1
		unmute:1 ok
getmute:y	Query status of mute on output port y. y=1..3 means output 1...output 3	getmute:1
		mute,1

parameterlockon	Lock the parameter.	parameterlockon
		parameterlockon ok
parameterlockoff	Unlock the parameter.	parameterlockoff
		parameterlockoff ok
identifyon	Turn on the function to be identified.	identifyon
		identifyon ok
identifyoff	Turn off the function to be identified.	identifyoff
		identifyoff ok
locate	Locate the unit. The LEDs on front panel will twinkle in 10s if the command is triggered.	locate
		locate ok
savepresetaudio:z	Save the current setting(input gain, output volume, mute status) to preset. z=1,2,... 10	savepresetaudio:1
		savepresetaudio:1 ok
loadpresetaudio:z	Use the saved preset z.	loadpresetaudio:1
		loadpresetaudio:1 ok
reboot	Reboot the device.	reboot
		reboot ok
reset	Factory reset the unit.	reset
		reset ok

		getaudiolevels
getaudiolevels	Query audio volume and mute status.	livol,3:3!
		livol,4:3!
		lovol,1:80!
		lovol,2:80!
		lovol,3:80!
		mute,1!
		unmute,2!
		unmute,3!
		lisel,3:1!
		lisel,4:2!
getdantelock	Query the lock status of the unit.	getdantelock
		dantelock:unlock
getsignals	Query the status of the audio. (Invalid signal/Signal clipping/Valid signal /No signal)	getsignals
		input1:valid signal!
		input2:valid signal!
		input3:no signal!
		input4:no signal!
		output1:valid signal!
		output2:valid signal!
		output3:no signal!
getchannellabel	Query the label of channel.	getchannellabel
		input1 tx1!
		input2 tx2!
		input3 tx3!
		input4 tx4!
		output1 rx1!
		output2 rx2!
		output3 rx3!
btname:name	set a new bluetooth friendly name, visible to other bluetooth devices when in pairing mode. No spaces in friendly name.	btname:AU-BT413WP-DA
		btname:AU-BT413WP-DA ok
getbtname	get bluetooth friendly name.	getbtname
		btname:AU-BT413WP-DA

getbtconnectedevice	get connect BT device name.	getbtconnectedevice
		connecteddevice:iphone
btbuttonlockon btbuttonlockoff	Lock/Unlock the front panel button.	btbuttonlockon btbuttonlockoff
		btbuttonlockon ok btbuttonlockoff ok
getbtbuttonlock	Query the lock status of the front panel button.	getbtbuttonlock
		btbuttonlockon
btplay	AVRCP Play command.	btplay
		btplay ok
btpause	AVRCP Pause command.	btpause
		btpause ok
btstop	AVRCP Stop command.	btstop
		btstop ok
btnext	AVRCP Next command.	btnext
		btnext ok
btprev	AVRCP Previous command.	btprev
		btprev ok
btvolup	AVRCP Volume Up command.	btvolup
		btvolup ok
btvoldn	AVRCP Volume Dn command.	btvoldn
		btvoldn ok
btmute	AVRCP mute command.	btmute
		btmute ok
getbtsong	Retrieve the track title for the current audio	getbtsong
		btsong:Still Counting
getbtartist	Retrieve the artist information for the current audio	getbtartist
		btartist:Volbeat
getbtalbum	Retrieve the album information for the current audio	getbtalbum
		btalbum:Guitar Gangsters & Cadillac Blood

btbridging:z	set bluetooth audio bridging. z=0,1,2 0 means Both Call Bridging and Media Audio Bridging enabled 1 means Only Media Audio Bridging enabled 2 means Only Call Bridging enabled	btbridging:0
		btbridging:0 ok
getbtbridging	Query the bridging of bluetooth. 0 means Both Call Bridging and Media Audio Bridging enabled 1 means Only Media Audio Bridging enabled 2 means Only Call Bridging enabled	getbtbridging
		btbridging:0
getbtstatus	Query the status of bluetooth. (Idle/Discoverable/Connected/Connected - AVRCP)	getbtstatus
		bluetoothstatus:idle
btactivatepairing	Activates pairing mode on the device similar to pressing the front panel button.	btactivatepairing
		btactivatepairing ok
btcloseconnection	Closes the active bluetooth connection when the bluetooth status is "Connected" or "Connected - AVRCP"	btcloseconnection
		btcloseconnection ok
btclearpairing	Clears the pairing list.	btclearpairing
		btclearpairing ok

getstatus	Query system status and port status.	getstatus
		au-bt413wp-da!
		au-bt413wp-da-c93512!
		mac:44-33-4c-c9-35-12!
		dante version:4.2.2!
		firmware 1.0.0!
		livol,3:3!
		livol,4:3!
		lovol,1:80!
		lovol,2:80!
		lovol,3:80!
		mute,1!
		unmute,2!
		unmute,3!
		lisel,3:1!
		lisel,4:2!
		input1 tx1!
		input2 tx2!
		input3 tx3!
		input4 tx4!
		output1 rx1!
		output2 rx2!
		output3 rx3!
		dantelock:unlock!
		parameterlockon!
		btbuttonlockon!
		btbridging:0!
		bluetoothstatus:idle!

8. Customer Service

The return of a product to our Customer Service implies the full agreement of the terms and conditions hereinafter. There terms and conditions may be changed without prior notice.

1) **Warranty**

   We provide limited warranty for the product within **five years** counting from date of purchase (The purchase invoice shall prevail).

2) **Scope**

   These terms and conditions of Customer Service apply to the customer service provided for the products or any other items sold by authorized distributor only.

3) **Warranty Exclusion**

   - Warranty expiration.
   - Factory applied serial number has been altered or removed from the product.
   - Damage, deterioration or malfunction caused by:
     - ✓ Normal wear and tear.
     - ✓ Use of supplies or parts not meeting our specifications.
     - ✓ No certificate or invoice as the proof of warranty.
     - ✓ The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
     - ✓ Damage caused by force majeure.
     - ✓ Servicing not authorized by distributor.
     - ✓ Any other causes which don't relate to a product defect.
   - Shipping fees, installation or labor charges for installation or setup of the product.
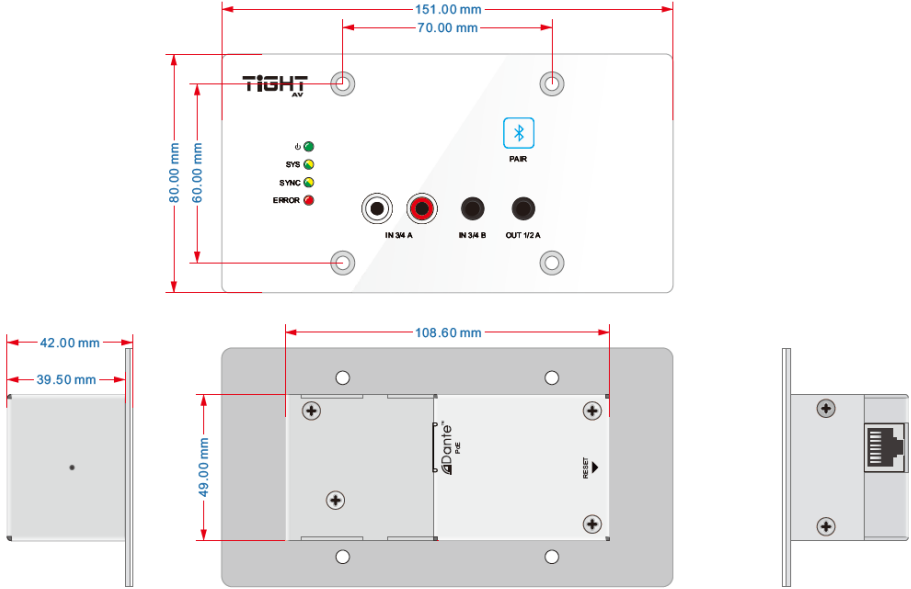
4) **Documentation:**

   Customer Service will accept defective product(s) in the scope of warranty coverage at the sole condition that the defeat has been clearly defined, and upon reception of the documents or copy of invoice, indicating the date of purchase, the type of product, the serial number, and the name of distributor.

Remarks: Please contact your local distributor for further assistance or solutions.

9. Drawings and Dimensions

AU-BT413WP-WH

AU-BT413WP-BL