



Home » BLUSTREAM » BLUSTREAM SW42DA Multi Channel Dante Audio Breakout User Manual





SW42DA User Manual



SW42DA PRODUCT MANUAL

Thank you for purchasing this product.

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.



Surge Protection Device Recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc.

Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

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Introduction

Dolby Atmos dts x.



The Blustream SW42DA is a 4-Way HDMI switch that has been designed to breakout, convert, and downmix embedded Dolby Audio or DTS Audio within a HDMI switching environment.

The SW42DA will pass native video with the embedded multi-channel audio to compatible equipment on output 1, with a second HDMI output featuring optional video down-scaling from 4K 60Hz 4:4:4 or 4:2:0, video down to 1080p, with the native embedded audio, or down-mixed 2ch audio as required.

Audio capabilities include the selection and manipulation of formats across both multichannel and 2ch downmixed. The Dante output allows for 9.1ch breakout and embedding into a Dante digital signal, and/or 7.1ch breakout with a separate 2ch downmixed Dante output.

Optical S/PDIF breakout (2ch or 5.1ch as required), individual analogue multi-channel breakout, and 2ch downmixed balanced/unbalanced analogue audio can also be broken out as required directly from the unit.

The SW42DA provides an advanced, but cost effective solution for ensuring that 4K UHD video and multi-channel audio can be distributed around a Dante multi-room system where there are a mixture of 2ch and/or 7.1ch zones or 7.1.2ch / 5.1.4ch (9.1ch) audio, with multiple output resolution requirements. Perfect for cinema and media room set up's where local content would be shared within a multi-zone distributed system where either multichannel or down-mixed audio is required.

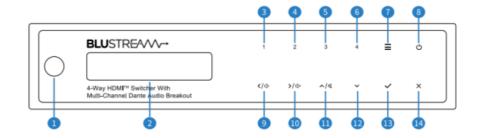
FEATURES:

- Features 4 x HDMI inputs which can be switched to the dual HDMI outputs
- Supports HDMI 2.0b 18Gbps specification including 4K 60Hz 4:4:4 UHD video
- Supports distribution of the latest HDR resolutions including HDR10/10+ and Dolby Vision
- HDMI output 1 replicates the HDMI input signal up to 4K 60Hz 4:4:4 ands 7.1.2ch
 Dolby Atmos and DTS-HD audio
- HDMI output 2 features 4K video down-scaler and 7.1.2ch to 2ch Dolby Atmos and DTS-HD audio downmix
- Supports all known HDMI audio formats including Dolby TrueHD, Dolby Atmos, Dolby Digital Plus and DTS-HD Master Audio transmission
- HDMI audio breakout of Dolby Atmos and DTS-HD to up to 8 channels of Dante audio
 (7.1ch) and independent 2 downmixed channels of Dante audio
- HDMI audio breakout of Dolby Atmos and DTS-HD to up to 10 channels of Dante audio (7.1.2ch / 5.1.4ch)*
- HDMI audio breakout to 7.1ch balanced and unbalanced analogue audio outputs
- HDMI Dolby Atmos and DTS-HD 7.1 down-mixing to 2ch balanced and unbalanced audio ouputs
- Supports ARC/eARC including breakout to 7.1ch and 2ch downmixed analogue and

Dante audio

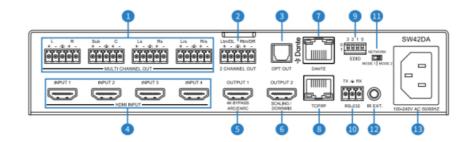
- Supports: 44.1, 48, 88.2 & 96kHz sample rates @ 24-bit
- Configurable Dante® device latency using Dante® Controller
- Supports AES67 RTP audio transport
- Control via front panel, TCP/IP, web-GUI, RS-232 and IR
- HDCP 2.3 compliant with advanced EDID management
- *Dante 2ch down-mix channels are re-allocated to additional 7.1.2/5.1.4 use
- Configurable Dante® device latency (2ch out supports 2, 3, 4, 5 or 10ms. 8ch out supports 4, 5 or 10ms – configurable using Dante® Controller)

Front Panel



- 1. IR Receiver Window
- 2. LCD Display Shows the status of input/output selection, EDID, etc...
- 3. Input 1 Button
- 4. Input 2 Button
- 5. Input 3 Button
- 6. Input 4 Button
- 7. Menu Button
- 8. Power Button Press and hold for 3 seconds to power ON / OFF the SW42DA
- 9. Left Button / Volume Down
- 10. Right Button / Volume Up
- 11. Up Button / Volume Mute
- 12. Down Button
- 13. Confirm Button
- 14. Cancel Button

Rear Panel



- 1. L/R Analogue Audio Outputs 8 x balanced/unbalanced phoenix connectors
- 2. L/R Analogue Audio Outputs 2 channel downmixed balanced/unbalanced phoenix connectors
- 3. Optical Audio Output Toslink (S/PDIF) conne ctor
- 4. HDMI Input 1-4
- HDMI Output 1 Bypass video output maintains native video resolution and audio format
- 6. HDMI Output 2 Scaled / down-mixed output
- 7. Dante® PoE+ Port RJ45 socket connects Dante® Network
- 8. TCP/IP Network Connection RJ45 connector
- 9. RS-232 Port 3-pin Phoenix connector
- 10. EDID DIP Switches Adjust the EDID setting for the source input
- 11. Network Mode Switch Mode 1 & Mode 2
- 12. IR Input 3.5mm stereo jack
- 13. IEC Power Connector

Please note: The 2ch downmixed outputs can be assigned as height speakers in 7.1.2ch and 5.1.4ch configurations

Please note: The optical audio ouput can operate in 2ch downmix mode or in bypass mode (supports 5.1ch)

Operation and Connections

Basic operation of the SW42DA can be achieved via the front panel: connect the HDMI source devices, the analogue audio outputs, the HDMI outputs, and power to the rear of the unit:

- Buttons 1-4 will switch between the HDMI inputs
- The Menu Button will scroll through a few functions of the SW42DA such as EDID,
 Network and Dante configuration

- The menu can be navigated using the arrow, confirm and cancel buttons

EDID for the HDMI source can be manually set using the DIP switches on the rear of the unit. Please refer to the EDID Management section of the manual for DIP switch settings.

The SW42DA features two RJ45 ports. Functionality of these port can be controlled by selecting the Network Mode on the rear of the unit, allowing the SW42DA to suit the needs of the installation:

- Mode 1: The PoE+ Dante® port allows connection to Dante®, TCP/IP and the web-GUI
- Mode 2: The PoE+ Dante® port allows connection to Dante®. The TCP/IP port allows access to TCP/IP and the web-GUI

The IR EXT port can be used to control the SW42DA via the included remote when the IR Receiver Window is obstructed, or via a 3rd party control processor.

For full configuration of the SW42DA, the in-built Web-GUI must be utilised

EDID Management

EDID (Extended Display Identification Data) is a data structure that is used between a display and a source. This data is used by the source to find out what audio and video resolutions are supported by the display, then from this information the source will determine what the best resolution is to output.

While the objective of EDID is to make connecting a digital display to a source a simple plug and play procedure, issues do arise when multiple displays or video matrix switching is introduced because of the increased number of variables.

The SW42DA will act as an 'end point' in the HDMI signal path. Using the EDID dipswitches predetermines the video resolution and audio format of the source, regardless of the video output resolution that the SW42DA scales to.

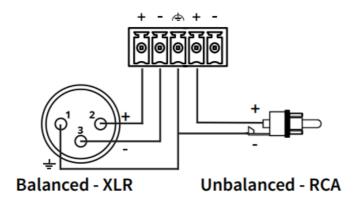
To change the EDID settings move the EDID dip-switches as required on the front panel of the unit. Please see below table for settings:

3	2	1	0	
				EDID Type

Combina	tion of DIP p	ositions		
0	0	0	0	1080p 60Hz 2.0ch
0	0	0	1	1080p 60Hz 5.1ch
0	0	1	0	1080p 60Hz 7.1ch
0	0	1	1	4K 60Hz 4:2:0 2.0ch
0	1	0	0	4K 60Hz 4:2:0 5.1ch
0	1	0	1	4K 60Hz 4:2:0 7.1ch
0	1	1	0	4K 60Hz 4:4:4 8bit 2.0ch
0	1	1	1	4K 60Hz 4:4:4 8bit 5.1ch
1	0	0	0	4K 60Hz 4:4:4 8bit 7.1ch
1	0	0	1	4K 60Hz 4:4:4 10bit 2.0ch
1	0	1	0	4K 60Hz 4:4:4 10bit 5.1ch
1	0	1	1	4K 60Hz 4:4:4 10bit 7.1ch
1	1	0	0	DVI 1920×1080 No Audio
1	1	0	1	DVI 1920×1200 No Audio
1	1	1	0	Copy from Output 1
1	1	1	1	Software Control

Channel Line Outputs

The 2 channel line output can be assigned as a 2ch downmixed audio signal, or reallocated as additional height speakers when decoding 7.1.2ch or 5.1.4ch signals. The analogue output can be wired with balanced or unabalanced audio devices with the pin out as adjacent.



Web-GUI - Log In and Initialisation

The following pages will take you through the operation of the unit's web-GUI. You must connect a TCP/IP RJ45 socket to your local network, or directly from your computer to the SW42DA, in order to access the product's web-GUI.

By default, the unit is set to DHCP; however, if a DHCP server (eg: network router) is not installed, the unit's IP address will revert to below details:

Default IP Address is: 192.168.0.200

Default Admin Username is: blustream

Default Admin Password is: @Bls1234

If the IP address of the SW42DA is not known, it can be found by:

- Using the front panel buttons to scroll to the IP address
- Using a 3rd party IP scanning tool
- Using RS-232 connection and sending 'STATUS' command; this will return all settings of the SW42DA
- Using the default hostname address: sw42da.local

When initially accessing the web-GUI of the SW42DA, the Guest Control page is shown as below. Permissions for the Guest can be set so as to restrict control of the unit for users who are not logged in.



Login Page:

The web-GUI supports multiple users along with multiple user permissions as follows:

Admin (Blustream)

The Admin account allows full access to all functions and configuration of the unit.

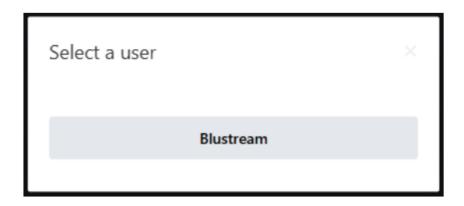
User Accounts

User accounts can be utilised, each with individual login details and can be assigned permissions to specific inputs and functions.

- Guest

The Guest user can access the control page without logging in.

Please note: The guest user should have permissions set to prevent unwanted access, as they do not require credentials for control of the unit.

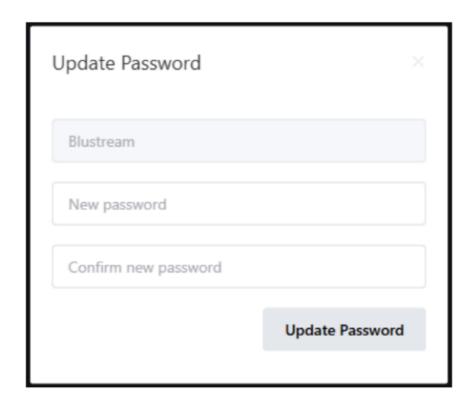


Please note: the first time the Administrator logs into the web-GUI of the SW42DA, the default password must be changed to a unique password. Please retain this password for future use. Forgetting the password will mean having to factory reset the unit, losing all prior network and configuration settings.

New password regulations requires passwords being set for products to be a minimum

of 8 characters and contain a minimum of: 1 x uppercase letter, 1 x lowercase latter, 1 x symbol and 1 x number.

Passwords can be changed as required within the web-GUI of the unit once logged in.



Web-GUI - Control

Once logged in as the Administrator, additional web-GUI pages become available from within the GUI: these can be navigated to by pressing the corresponding icon.

The Control page allows for source selection and the volume levels of the Line & Dante outputs to be set or muted.



Source Select:

The input source can be selected from one of the HDMI inputs by pressing the

corresponding button. This will set the source for both HDMI Output 1 & HDMI Output 2 (mirrored).

All levels sections across the web-GUI feature the same controls for each of their respective channels. Volume can be adjusted by using the corresponding slider for the desired channel. Fine-tuning of the volume can be achieved by using the decrement button 1 or the increment button 3, or by manually inputting the value 2. The output can be muted by pressing the mute button 4.



ARC:

The Audio Return Channel (ARC) on HDMI Ouput 1 can act as a source or an output. When set as a source, ARC will be assigned as input 5 on the SW42DA, resulting in ARC audio for all audio outputs, but no video signal on HDMI 1 & 2 outputs.



When set as an output, ARC can be enabled or disabled via a toggle.

When enabled, HDMI Output 1 will only output video. HDMI Output 2 will output the selected source audio and video. This allows you to use HDMI Output 2 for additional HDMI distribution purposes. ARC will be output to the analogue and Dante audio outputs.

When disabled, HDMI Output 1 & 2 won't be affected.

Please note: HDMI ARC is only supported on HDMI Output 1

Web-GUI - Input

The Input Page allows for source configuration and EDID management.

Clicking the 'Update' button to the right of each input allows for the name of the source to be entered. This name is updated across the web-GUI globally for simpler selection of inputs.



Name

Displays the name of the input

HDMI Cable

- Displays the connection status of the input port

EDID

- EDID selection can be made for each input source device to ensure the correct video and audio resolutions are requested from the SW42DA to the source. The drop down menu contains all of the EDID formats supported, the ability to copy the EDID from another output with a connected display, and also the ability to load up to 2 x user defined EDIDs Actions
- The Update button will open a sub menu to configure the following options:



Name

- The name of the input can be updated by entering a new name into the name field and

pressing the Update button

Load User EDID:

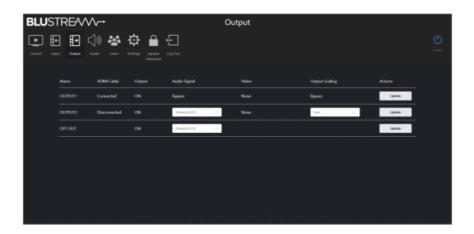
It is possible to upload custom EDID .bin files to the SW42DA if a specific EDID is not listed within the standard formats. A custom EDID file can be generated from a third party EDID generation tool, and uploaded using the Browse and Upload buttons. There are 2 x custom EDID slots available that can be directed at any of the 4 x inputs.

Once a file has been uploaded, it can be selected by using the corresponding USER EDID option.

Web-GUI - Output

The Output page allows for configuration of the HDMI and Optical outputs.

The outputs can be turned on or off, renamed, and can be set to downmix and scale.



Name

Displays the name of the Output

HDMI Cable

Displays the connection status of the output port

Output

Displays if the output is set to either ON or OFF

Audio Signal

Set the audio format to either Downmix 2CH (for displays that only support 2ch audio)
 or Bypass

Video

 The SW42DA can detect and display information about the output connection such as the resolution, refresh rate, colour depth and HDR

Output Scaling

- Set the scaler for the output to either Auto, Force 1080p or Bypass

Auto

Output will be automatically set to the best possible video format

Bypass

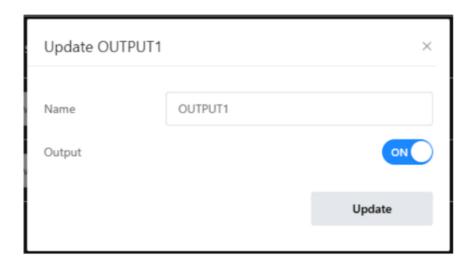
Output bypasses the scaler

Force 1080p

Output will be downscaled to 1080p format, with HDCP 1.x compliance

Actions

- The Update button will open a sub menu to configure the following options:



Name

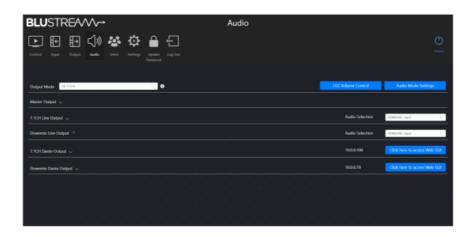
 The name of the output can be updated by entering a new name into the name field and pressing the Update button

Output

- The output can be turned on or off by using the toggle

Web-GUI - Audio

The Audio page allows for configuration and fine tuning of the analogue outputs and Dante® audio devices.



Output Mode:

In the drop down menu, the supported audio formats are displayed. Selecte the desired Output Mode and it will be applied.

A table on the following page provides the channel mapping for all 26 modes:

Please note: When the Output Mode supports Dolby ATMOS Enabled Speakers, the Analogue/Dante 2 Channel Out will not have the audio downmix function. Please select a mode without Dolby ATMOS Enabled Speakers if you need the audio downmix function.

Please note: After changing the Output Mode, the Dante module is rebooted. This takes about 40 seconds for the Dante Controller to update any changes.

		ILTI (2 CHANNE L OUT							
Output Mode	L	R	S u b	С	L	R	Lr s	Rr s	Ltm/	Rtm /DR
01: 2.0CH	L	R	_	_	_	_	_	_	DL	DR
02: 2.1CH + Top Middle(2.1.2CH	L	R	S u b	_	_	_	Lt m	Rt m	DL	DR
03: 2.1CH + Dolby ATMOS Enab led Speaker(2.1.2CH)	L	R	S u b	_	_	_	Le	R e	_	_

04: 3.1CH	L	R	S u b	С	_	_	_	_	DL	DR
05: 3.1CH + Top Middle(3.1.2CH	L	R	S u b	С	_	_	Lt m	Rt m	DL	DR
06: 3.1CH + Dolby ATMOS Enab led Speaker(3.1.2CH)	L	R	S u b	С	_	_	Le	R e	_	_
07: 4.1CH	L	R	S u b	_	L	R s	_	_	DL	DR
08: 4.1CH + Top Middle(4.1.2CH	L	R	S u b	_	L	R	Lt m	Rt m	DL	DR
09: 4.1CH + Dolby ATMOS Enab led Speaker(4.1.2CH)	L	R	S u b	_	L	R	Le	R e	_	_
10: 4.1CH + Top Rear + Top Fro nt(4.1.4CH)	L	R	S u b	_	L	R s	Ltr	Rt r	Ltf	Rtf
11: 4.1CH + Top Rear + Dolby A TMOS Enabled Speaker(4.1.4C	L	R	S u b	_	L	R s	Ltr	Rt r	Le	Re
12: 4.1CH + Dolby ATMOS Enab led Speaker + Top Front(4.1.4CH)	L	R	S u b	_	L	R s	Ls e	Rs e	Ltf	Rtf

13: 4.1CH + Front & Rear Dolby ATMOS Enabled Speaker(4.1.4CH)	L	R	S u b	_	L	R s	Ls e	Rs e	Le	Re
14: 5.1CH	L	R	S u b	С	L	R s	_	_	DL	DR
15: 5.1CH + Top Middle(5.1.2CH	L	R	S u b	С	L	R s	Lt m	Rt m	DL	DR
16: 5.1CH + Dolby ATMOS Enab led Speaker(5.1.2CH)	L	R	S u b	С	L	R s	Le	R e	_	_
17: 5.1CH + Top Rear + Top Fro nt(5.1.4CH)	L	R	S u b	С	L	R s	Ltr	Rt r	Ltf	Rtf
18: 5.1CH + Top Rear + Dolby A TMOS Enabled Speaker(5.1.4C	L	R	S u b	С	L	R s	Ltr	Rt r	Le	Re
19: 5.1CH + Dolby ATMOS Enab led Speaker + Top Front(5.1.4CH	L	R	S u b	С	L	R s	Ls e	Rs e	Ltf	Rtf
20: 5.1CH + Front & Rear Dolby ATMOS Enabled Speaker(5.1.4CH)	L	R	S u b	С	L	R s	Ls e	Rs e	Le	Re
21: 6.1CH	L	R	S u b	_	L	R s	Lr s	Rr s	DL	DR

22: 6.1CH + Top Middle(6.1.2CH	L	R	S u b	_	L	R s	Lr s	Rr s	Ltm	Rtm
23: 6.1CH + Dolby ATMOS Enab led Speaker(6.1.2CH)	L	R	S u b	_	L	R s	Lr s	Rr s	Le	Re
24: 7.1CH	L	R	S u b	С	L	R s	Lr s	Rr s	DL	DR
25: 7.1CH + Top Middle(7.1.2CH	L	R	S u b	С	L	R s	Lr s	Rr s	Ltm	Rtm
26: 7.1CH + Dolby ATMOS Enab led Speaker(7.1.2CH)	L	R	S u b	С	L	R	Lr s	Rr s	Le	Re

CEC Volume Control:

The SW42DA has the ability to adjust the volume of connected devices through the HDMI-CEC (Consumer Electronics Control) feature, essentially allowing you to control multiple devices with a single remote through a single HDMI connection.

Pressing the CEC Volume Control button will open a sub menu to configure the following options:





CEC Volume Control (continued)

CEC Volume Control

-ON/OFF

CEC Volume Control By

- Channel

Individual audio channels can be specifically selected for CEC control

- Group

The entire Line & Dante audio output group can be selected for CEC control

Audio Mode Settings:

Pressing the Audio Mode Settings button will open a sub menu to configure the following options:



Dynamic Range Co ntrol (DRC) – ON/ OFF/ AUTO	Dynamic Range Control is used to adjust the dynamic loudnes s range of the content on playback to fit the capabilities of play back systems and listener preference. Essentially, lowlevel signals are boosted, mid-level signals are left untouched, and high-level signals are compressed, thus reducing the overall dynamic range When set to auto, it will be up to the source to determine when to switch DBC on or off
Surround Decoder (Upmixer) - ON / OFF	Surround Decoder Upmixing produces an extended surround s ound optimized for your speaker system from audio content wit h less speaker channels
Speaker Virtualizer – ON /OFF	Speaker Virtualizer enables you to access a more immersive e ntertainment experience from traditional channel-based speake r layouts through digital signal processing including Dolby Atm os height virtualization and surround virtualization

Group and Channel Output Management:

The Line & Dante Outputs of the SW42DA are displayed here. The availability of each section and it's respective controls will change based on the selected Output mode. The screenshots in this manual are of the SW42DA operating in mode 24.

Master Output

The Master Output sets the volume for all outputs on the SW42DA. To set an output volume independently, set the desired output grouping toggle to OFF.

The Master Output volume can be adjusted by using the corresponding slider and/or volume controls.

A delay can be set between 0ms and 50ms by the delay slider. This can be used to rectify lip sync and other similar issues.



Multichannel Line Output & 2 Channel Line Output

The Multichannel Line Output & 2 Channel Line Output audio source can selected from the Audio Selection drop down box:

- HDMI / ARC Input
- Dante Input

The name of the output group and the number of configurable channels will change depending on the Output Mode selected

Please note: When the output mode supports Dolby ATMOS Enabled Speakers, the 2 Channel Line Output will not have the audio downmix function.

Group and Channel Output Management (continued)

- To set a speaker channel volume independently, set the desired speaker channel grouping toggle to OFF
- The channel's volume can be adjusted by using the corresponding slider and/or volume controls
- A delay can be set between 0ms and 50ms by the delay slider below the channel. This can be used to rectify lip sync and other similar issues

Multichannel Dante Output & 2 Channel Dante Output

The Multichannel Dante Output & 2 Channel Dante Output IP address is displayed here. The name of the output and the number of configurable channels will change depending on the Output Mode selected.

Please note: When the output mode supports Dolby ATMOS Enabled Speakers, the

Dante 2 Channel Output will not have the audio downmix function.

- To set a speaker channel volume independently, set the desired speaker channel grouping toggle to OFF.
- The channel's volume can be adjusted by using the corresponding slider and/or volume controls
- A delay can be set between 0ms and 50ms by the delay slider below the channel. This can be used to rectify lip sync and other similar issues

Dante Module Web-GUI:

Direct configuration of the SW42DA Dante modules can be achieved by pressing the Click here to access Web GUI button which will open an additional web browser window to access the Dante module's web-GUI.

Please note: the default IP of the Dante® modules may differ to the main IP address of the SW42DA. Please check the network settings of the SW42DA within the Settings page.

When initially accessing the web-GUI of the Dante Module, a login screen will be displayed. The default login credentials are:

Default Username is: blustream
Default Password is: @Bls1234

Web-GUI - Dante Module Settings

Once logged in, the Settings page will be displayed as shown below. Additional web-GUI pages become available from within the GUI which can be navigated to by pressing the corresponding icon.



IP Settings:

IP Mode

- Static / DHCP

IP Address

- Disabled when in DHCP mode

IP Subnet

- Disabled when in DHCP mode

TCP Port

- Enable / Disable (default: 8000)

Gateway

- Disabled when in DHCP mode

Telnet Port

- Enable / Disable (default: 23)

Domain name (mDNS)

– mDNS is a protocol used in network environments to resolve hostnames to IP addresses within local networks without the need for a dedicated DNS server. The SW42DA is able to be accessed via the hostname if the IP address is not known.

Press the Save button to apply any changes.

To revert to factory default network settings, press the Set Network Defaults button.

Web-GUI - Dante Module Update

The Update page allows for the firmware of the Dante module to be upgraded and for the module to be factory reset.



Firmware Update

- Browse your device for a firmware file to upload to the unit.

Factory Reset

- Erases all settings and reboots the unit.

Reboot

- Reboots the unit.

Web-GUI – Dante Module Information

The Information page displays the model name, serial number, web-GUI firmware version and MCU firmware version of the SW42DA. It also displays network configuration, temperature and uptime data.



Web-GUI – Users

The Users page allows for configuration of the Guest and User privileges. The SW42DA can be setup with different users, each with their own control privileges. This will enable the Administrator to manage the accessibility of features, including inputs and outputs, for each individual.



To create a new user, press the New User button to open a sub menu:

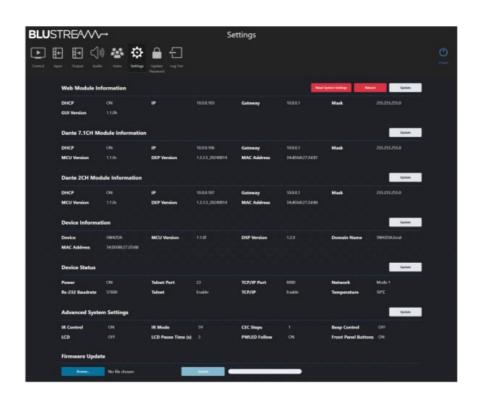


Enter a unique username and password, and configure the privileges for that user by toggling and checking/unchecking the desired options. Click the Create button at the bottom of the sub menu to finalise the new user creation.

The new user will appear in the user list. The privileges for that user can then be updated as needed by pressing the Update button. The user may be deleted by pressing the Delete button.

Web-GUI – Settings

The Settings page allows for the configuration of the system settings, such as the ability to reboot & factory reset the system, configure network settings, and update the firmware.



Reset System Settings:

- Returns all device settings to their default state.

Reboot:

- Reboots the SW42DA

Web Module Information:

The Web Module Information section displays the network configuration of the SW42DA, and the firmware version of the webGUI.

The Update button will open a sub menu to configure the network settings of the module, which can be set manually or automatically with DHCP. Press the Update button at the bottom of the sub menu to apply any changes.

Dante 7.1CH Module Information

The Dante 7.1CH Module Information section displays the network configuration of the Dante 7.1CH Module, the MCU & DEP firmware version and the MAC address of the Dante module. The Update button will open a sub menu to configure the network settings of the module, which can be set manually or automatically with DHCP. Press the Update button at the bottom of the sub menu to apply any changes.

Dante 2CH Module Information

The Dante 2CH Module Information section displays the network configuration of the Dante 2CH Module, the MCU & DEP firmware version and the MAC address of the Dante module. The Update button will open a sub menu to configure the network settings of the module, which can be set manually or automatically with DHCP. Press the Update button at the bottom of the sub menu to apply any changes.

Device Information:

The Device Information section displays the device name, MCU & DSP firmware version, the domain name of the unit, and the MAC address, and the firmware version of the web-GUI. The Update button will open a sub menu to configure the following items:



Domain Name:

Sets the domain name of the SW42DA that can be used to access the web-GUI without knowing the IP details of the unit.

Press the Update button at the bottom of the sub menu to apply any changes.

Device Status:

The Device Status sections controls the parameters of the RS-232 serial port as well as provides system information. The Update button will open a sub menu to configure the following items:



Baud rate:

- Selects the desired RS-232 communication baud rate; default is 57600
 Telnet Port:
- Sets the Telnet port; default is 23
- Telnet access can be enabled or disabled via the toggle

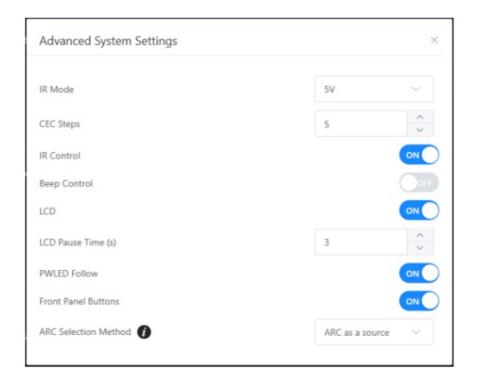
TCP/IP

- Set's the TCP/IP port; default is 8000
- TCP/IP access can be enabled or disabled via the Toggle

Advanced System Settings:

The Advanced System Settings section allows for configuration of the IR mode, CEC, the LCD and front panel buttons. The Update button will open a sub menu to configure

the following items:



Advanced System Settings (continued)

IR Mode

Set's the operating voltage of the IR ports

CEC Steps

- Sets the number of steps to increment or decrement by per CEC command
- IP Control
- Enable / Disable the IR functionality

Beep Control

Enable / Disable system unit beep sounds

LCD

- Enable / Disable the LCD to auto turn off when the unit is powered on LCD Pause Time (s)
- Set the amount of time for the LCD screen to automatically turn off

PWLED Follow

 Sets the power LED not follow LCD status (e.g. when the unit is powered on, the power LED is always on)

Front Panel Buttons

Enable / Disable the front panel buttons

ARC Selection Method

ARC Selection Method changes how ARC functions on the SW42DA

- 'ARC as a source' will assign ARC as input 5 on the SW42DA resulting in ARC audio for all audio outputs, but no video signal on HDMI 1 & 2 outputs.
- 'ARC toggle On/Off' will not effect the video signal of HDMI output 1 & 2 however when ARC ON is enabled HDMI output 1 will have no audio (just video) and HDMI output 2 will have original source audio and video on the output. This allows you to use HDMI output 2 for additional HDMI distribution purposes. ARC toggle On/Off will then play ARC on the Analague and Dante audio output

Firmware Update:

Browse your device for a firmware file to upload to the unit.

The web-GUI module and MCU can both be updated from here, so ensure the desired firmware is selected.

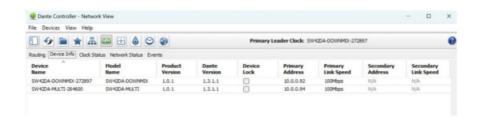
Once the required file has been selected press Update. The upgrade process will start and the progress will be shown on screen.

Once complete a message of 'Upgrade Successful' will be displayed.

Please note: Dante® firmware update must be completed within the 'Audio Page' of the SW42DA, or via Dante® Controller.

Dante® Audio

The SW42DA is seen as 2x Dante® audio products – both an 8ch (7.1) and 2ch Dante® device, each with their own settings that can be updated and managed / routed independently.

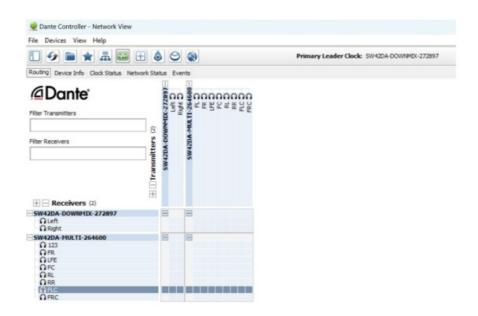


Dante® Controller

Dante® Controller software is required in order to configure the SW42DA as well as control your Dante® network. Audinate provide extensive training videos and documentation on their website. This can be found here: http://www.audinate.com/products/software/dante-controller

Upon connecting the SW42DA to a compatible network, the Dante® Controller software should automatically discover the device.

The SW42DA will appear in the Dante® Controller with the name "SW42DA-MULTI" and "SW42DA-DOWNMIX"



It is possible to route all audio channels independently, but these are intended for 7.1ch + 2ch downmix use, or (if configured) as 7.1.2ch or 5.1.4ch speaker configuration.

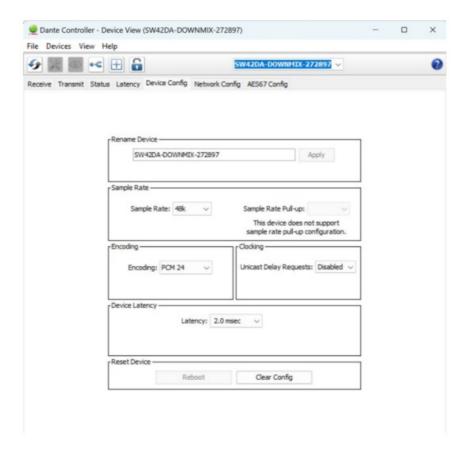
Dante® Controller

By default, the SW42DA is shipped with the network settings set to obtain an IP Address automatically on the Dante® port. This means that if a DHCP server is present on the network, the SW42DA will be provided with an IP Address. If no DHCP server is present, then the SW42DA will receive a default IP Address in the 169.254.xxx.xxx range. To change the IP Address of the SW42DA, enter the "Audio" page and access the web-GUI for the Dante® module that you wish to udpate.

Advanced Dante® Settings

It is possible to change various Dante® related settings of the SW42DA under the "Device Info" screen in the Dante® Controller software. To do so, select the "Device Config" menu.

Here it is possible to adjust the sample rate of the SW42DA. Please note: Dante® products can only transmit or receive audio from other Dante® products that are set up with the same sample rate. A mismatch in sample rate may stop audio from transmitting. Under the "Device Config" screen the latency of the SW42DA can be configured with 1, 2 or 5 milliseconds delay.



Certifications

FCC NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION – changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CANADA, INDUSTRY CANADA (IC) NOTICES

This Class B digital apparatus complies with Canadian ICES-003. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

CORRECT DISPOSAL OF THIS PRODUCT

This marking indicates that this product should not be disposed with other household wastes. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.

Specifications

Video Input Connectors: 4 x HDMI Type A, 19-pin, female

Video Output Connectors: 2 x HDMI Type A, 19-pin, female

Audio Output Connectors: 1 x Optical (Toslink), 5 x 5-Pin Phoenix (8ch + 2ch

balanced/unbalanced analogue audio), 1 x RJ45,

female (100Mbps Dante® network)

EDID Selection: 4-pin DIP switch

TCP/IP Control: 1 x RJ45, female

RS-232 Port: 1 x 3-pin Phoenix

IR Input Port: 1 x 3.5mm stereo jack

Product upgrade: 1 x Micro USB female

Dimensions (W x H x D): 220mm x 214mm x 45mm, without feet or connections

Shipping Weight: 2.6kg

Operating Temperature: 32°F to 104°F (0°C to 40°C)

Storage Temperature: – 4°F to 140°F (- 20°C to 60°C)

Power Supply: Internal 100-240V AC

Package Contents

- 1 x SW42DA
- 1 x Remote control
- 1 x IR receiver
- 1 x 19" Rack Mounting kit
- 4 x Mounting feet
- 1 x Quick Reference Card
- 1 x IEC Power Cable

Acknowledgements

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RS-232 Configuration and Telnet Commands

The SW42DA can be controlled via serial and TCP/IP.

The default RS-232 communication settings are:

Baud rate: 57600

Data bits: 8

Stop bits: 1

Danish da bara

Parity bit: none

The following pages list all available serial / IP commands.

Commonly Used Serial Commands

There are several commands that are commonly used for control and testing:

STATUS	Status will give feedback on the switcher such as outputs on, t
	ype of connection, etc.

PON	Power on
POFF	Power off
OUTON/OFF	Toggling the main output ON or OFF as required Example: OUTON (This would turn the main output on)
OUT FRyy	(yy is the input) Example: OUT FR04 (This would switch the main output to source input 4)

Common Mistakes

- Carriage return: Some programs do not require the carriage return where as other will not work unless sent directly after the string. In the case of some Terminal software the token <CR> is used to execute a carriage return. Depending on the program you are using this token maybe different. Some other examples that other control systems deploy include \r or 0D (in hex)
- Spaces: Blustream commands do not require space between commands unless specified. There may be some programs that require spacing in order to work.
- How the string should look is as follows: OUTON
- How the string may look if spaces are required: OUT{Space}ON
- Baud rate or other serial protocol settings not correct

COMMAND	ACTION
?	Print Help Information
HELP	Print Help Information
STATUS	Print System Status And Port Status
FWVER	Print All Soft Version
UPTIME	Print System Uptime

TEMP	Print System Temperature
PON	Power On, System Run On Normal State
POFF	Power Off, System Run On Power Save State
PWLED FOLLOW ON / OFF	ON: Set System Power Led Follow LCD Status OFF: Set System Power Led Not Follow LCD Status In Power On State
REBOOT	Set System And Network Reboot
IR ON/OFF	Set System IR Control On Or Off
IR 5V	Set System IR Is 5V Power Supply Infrared Receiver
IR 12V	Set System IR Is 12V Power Supply Infrared Receiver
KEY ON/OFF	Set System KEY Control On Or Off
BEEP ON/OFF	Set Onboard Beep On Or Off
LCD ON/OFF	Set LCD Always On Or Set LCD Off After No Operation 30 Seconds
LCD DSPT x	Set LCD Display Scroll And Pause Time To x(s) x=[010]: Pause Time
RSB x	Set RS232 Baud Rate To x bps x=[0:115200 1:57600
RESET	Reset System To Default Setting
RESET ALL	Reset System And Network To Default Setting (Should Type "Yes" To Confirm)
CEC ON/OFF	Set CEC Volume Control On Or Off

CEC VC BY xx	Set CEC Volume Control By xx xx=01: Group xx=02: Channel
VOL+xx	Increase System Volume xx=[01100]:Steps xx Can Be Empty(1 Step)
VO L-x x	Decrease System Volume xx=[01100]:Steps xx Can Be Empty(1 Step)
VOL xx	Set System Volume Value To xx xx=[00100]:Volume Value
DELAY xx	Set System Delay Time To xx(ms) xx=[0050]:Delay Time
MUTE ON/OFF	Set Mute On Or Off
MASTER xx ON/OFF	Set Master Output Including/Excluding xx xx=00: All Output Port xx=[01]: Multi Channel Line Out xx=[02]: 2 Channel Line Out xx=[03]: Multi Channel Dante Out xx=[04]: 2 Channel Dante Out
IN xx CEC VOL STEP S yy	Set CEC Vol Steps xx=[0001]:0:ALL yy=[0110]:CEC Steps

T	
OUT xx ON/OFF	Set Output:xx On Or Off xx=00: Select All Output Port xx=01: Select HDMI Output Port 1 xx=02: Select HDMI Output Port 2
	xx=03: Select Optical Output Port
	Set Output:xx Video Mode yy
OUT W SCALING W	xx=02: Select Output 2 Port
OUT xx SCALING yy	yy=[01]: Set Output 2 Port Video Mode Auto
	yy=[02]: Set Output 2 Port Video Mode Force 1080p
	yy=[03]: Set Output 2 Port Video Mode Bypass
	Set Output xx Audio To yy
	xx=02: Select Output 2 Port
OUT xx AUDIO yy	xx=03: Select Optical Output Port
	yy=[01]: Bypass
	yy=[02]: Downmix 2CH
	Set Output From Input:yy
	yy=[01]: Select Input 1 Port
OUT FR yy	yy=[02]: Select Input 2 Port
	yy=[03]: Select Input 3 Port
	yy=[04]: Select Input 4 Port
	yy=[05]: Select ARC Input
OUT xx ARC	Set Output:xx ARC On Or Off
ON/OFF	xx=01: Select Output 1 Port
	Select ARC Mode
ARC MODE xx	xx=01: Select ARC As a Source
	xx=02: Select ARC Toggle On/Off
OUT DRC ON/OFF/ AUTO	Set DSP Dynamic Range Control (DRC) Mode

OUT CUD ON/OFF	Cat DCD Course and Dagaday (Ulassivay) On Or Off				
OUT SUD ON/OFF	Set DSP Surround Decoder (Upmixer) On Or Off				
OUT SPV ON/OFF	Set DSP Speaker Virtualizer On Or Off				
	Set Audio Output Mode:yy				
	yy=01: 2.0CH				
	yy=02: 2.1CH + Top Middle(2.1.2CH)				
	yy=03: 2.1CH + Top Middle(2.1.2CH) Dolby ATMOS				
	Enabled Speaker				
	yy=04: 3.1CH				
	yy=05: 3.1CH + Top Middle(3.1.2CH)				
	yy=06: 3.1CH + Top Middle(3.1.2CH) Dolby ATMOS				
	Enabled Speaker				
	yy=07: 4.1CH				
	yy=08: 4.1CH + Top Middle(4.1.2CH)				
	yy=09: 4.1CH + Top Middle(4.1.2CH) Dolby ATMOS				
	Enabled Speaker				
	yy=10: 4.1CH + Top Rear + Top Front(4.1.4CH)				
	yy=11: 4.1CH + Top Rear + Top Front(4.1.4CH) Front				
	Dolby ATMOS Enabled Speaker				
	yy=12: 4.1CH + Top Rear + Top Front(4.1.4CH) Rear				
	Dolby ATMOS Enabled Speaker				
	yy=13: 4.1CH + Top Rear + Top Front(4.1.4CH) Front				
OUT MODE yy	& Rear Dolby ATMOS Enabled Speaker				
	y y =14: 5.1CH				
	yy=15: 5.1CH + Top Middle(5.1.2CH)				
	yy=16: 5.1CH + Top Middle(5.1.2CH) Dolby ATMOS				
	Enabled Speaker				
	yy=17: 5.1CH + Top Rear + Top Front(5.1.4CH)				
	yy=18: 5.1CH + Top Rear + Top Front(5.1.4CH) Front				
	Dolby ATMOS Enabled Speaker				
	yy=19: 5.1CH + Top Rear + Top Front(5.1.4CH) Rear				
	Dolby ATMOS Enabled Speaker				
	yy=20: 5.1CH + Top Rear + Top Front(5.1.4CH) Front				

& Rear Dolby ATMOS Enabled Speaker

yy=21: 6.1CH

yy=22: 6.1CH + Top Middle(6.1.2CH)

yy=23: 6.1CH + Top Middle(6.1.2CH) Dolby ATMOS

Enabled Speaker

y y=24: 7.1CH

yy=25: 7.1CH + Top Middle(7.1.2CH)

yy=26: 7.1CH + Top Middle(7.1.2CH) Dolby ATMOS

Enabled Speaker

	Increase Output:xx Volume				
	xx=00: Select All Output Port				
	xx=01: Multi Channel Line Out L				
	xx=02: Multi Channel Line Out R				
	xx=03: Multi Channel Line Out Sub				
	xx=04: Multi Channel Line Out C				
	xx=05: Multi Channel Line Out Ls				
	xx=06: Multi Channel Line Out Rs				
	xx=07: Multi Channel Line Out Lrs				
	xx=08: Multi Channel Line Out Rrs				
	xx=09: 2 Channel Line Out L				
	xx=10: 2 Channel Line Out R				
	xx=11: Multi Channel Dante Out L				
	xx=12: Multi Channel Dante Out R				
OUT xx VOL+yy	xx=13: Multi Channel Dante Out Sub				
	xx=14: Multi Channel Dante Out C				
	xx=15: Multi Channel Dante Out Ls				
	xx=16: Multi Channel Dante Out Rs				
	xx=17: Multi Channel Dante Out Lrs				
	xx=18: Multi Channel Dante Out Rrs				
	xx=19: 2 Channel Dante Out L				
	xx=20: 2 Channel Dante Out R				
	xx=21: Multi Channel Line Out Group				
	xx=22: 2 Channel Line Out Group				
	xx=23: Multi Channel Dante Out Group				
	xx=24: 2 Channel Dante Out Group				
	xx=25: Master Out				
	yy=[1100]:Steps				
	yy Can Be Empty (1 Step)				

OUT xx VOL-yy	Decrease Output:xx Volume xx=Same With Above yy=[01100]: Steps yy Can Be Empty (1 Step)
OUT xx VOL yy	Set Output:xx Volume Value To yy xx=Same With Above yy=[00100]: Volume Value
OUT xx MUTE ON/O	Set Output Mute On Or Off xx=Same With Above
OUT xx DELAY yy	Set Output:xx Delay Time To yy(ms) xx=00: Same With Above yy=[0050]: Delay Time
OUT xx CEC VC ON/	Set Output xx CEC Volume Control On Or Off xx=Same With Above
AUDIO xx FR yy	Set Line Output xx Audio From Input yy xx=01: Select Multi Channel Output Port xx=02: Select 2 Channel Output Port yy=[01]: HDMI/ARC Input yy=[02]: Dante Input

Set GROUP zz Volume Setting Including/Excluding Channel yy zz=01: Multi Channel Line Out Group zz=02: 2 Channel Line Out Group zz=03: Multi Channel Dante Out Group zz=04: 2 Channel Dante Out Group yy=[00]: Select All Channels In The Group (When zz=01: Multi Channel Line Out Group) yy=[01]: L yy=[02]: R yy=[03]: Sub yy=[04]: C yy=[05]: Ls yy=[06]: Rs **GROUP zz CHANNE** yy=[07]: Lrs L yy=[08]: Rrs yy ON/OFF (When zz=02: 2 Channel Line Out Group) yy=[01]: L yy=[02]: R (When zz=03: Multi Channel Dante Out Group) yy=[01]: Lyy=[02]: R yy=[03]: Sub yy=[04]: C yy = [05]: Ls yy=[06]: Rs yy=[07]: Lrs yy=[08]: Rrs (When zz=04: 2 Channel Dante Out Group) yy=[01]: Lyy=[02]: R

EDID xx CP yy	Set Input:xx EDID Copy From Output:yy
	xx=00: Select All Input Port
	xx=[0104]: Select One Input Port
	yy=[0102]: Select One Output Port
	Set Input:xx EDID To Default EDID:zz
	xx=00: Select All Input Port
	xx=[0104]: Select One Input Port
	zz=00: HDMI 1080p@60Hz
	zz=01: HDMI 1080p@60Hz
	zz=02: HDMI 1080p@60Hz
	zz=03: HDMI 1080i@60Hz
	zz=04: HDMI 1080i@60Hz
	zz=05: HDMI 1080i@60Hz
	zz=06: HDMI 1080p@60Hz/3D
	zz=07: HDMI 1080p@60Hz/3D
	zz=08: HDMI 1080p@60Hz/3D
	zz=09: HDMI 4K@30Hz 4:4:4
	zz=10: HDMI 4K@30Hz 4:4:4
	zz=11: HDMI 4K@30Hz 4:4:4
	zz=12: HDMI 4K@60Hz 4:2:0/4K@30Hz 4:4:4
	zz=13: HDMI 4K@60Hz 4:2:0/4K@30Hz 4:4:4
	zz=14: HDMI 4K@60Hz 4:2:0/4K@30Hz 4:4:4
	zz=15: HDMI 4K@60Hz 4:4:4
	zz=16: HDMI 4K@60Hz 4:4:4
EDID xx DF zz	zz=17: HDMI 4K@60Hz 4:4:4
	zz=18: HDMI 4K@60Hz 4:4:4
	zz=19: HDMI 4K@60Hz 4:4:4
	zz=20: HDMI 4K@60Hz 4:4:4
	zz=21: HDMI 4K@60Hz 4:4:4
	zz=22: HDMI 4K@60Hz 4:4:4
	zz=23: HDMI 4K@60Hz 4:4:4
	zz=24: HDMI 4K@60Hz 4:4:4
	zz=25: HDMI 4K@60Hz 4:4:4

	zz=26: HDMI 4K@60Hz 4:4:4			
	zz=27: HDMI 4K@60Hz 4:4:4			
	zz=28: HDMI 4K@60Hz 4:4:4			
	zz=29: HDMI 4K@60Hz 4:4:4			
	zz=30: DVI 1280×1024@60Hz			
	zz=31: DVI 1920×1080@60Hz			
	zz=32: DVI 1920×1200@60Hz			
	zz=33: HDMI 1920×1200@60Hz			
	zz=34: User EDID 1			
	zz=35: User EDID 2			
	zz=36: EDID Pass-through (Copy From Sink 1)			
NET DHCP ON/OFF	Set Auto IP(DHCP) On Or Off			
NET IP xxx.xxx.xxx x	Set IP Address			
NET GW xxx.xxx.xxx.	Set Gateway Address			
NET SM xxx.xxx.xxx.	Set Subnet Mask Address			
NET TCPPORT xxxx	Set TCP/IP Port			
NET TCPPORT xxxx	Set TCP/IP On Or Off			
NET TCPPORT ON/O	Set Telnet Port			
NET TN ON/OFF	Set Telnet On Or Off			
NET RB	Set Network Reboot And Apply New Config!!!			
NET DNS xxxx	Set DNS Domain Name To xxxx			

Contact: support@blustream.com.au | support@blustream-us.com |



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Documents / Resources



BLUSTREAM SW42DA Multi Channel Dante Audio Breakout [pdf] User M anual

SW42DA, SW42DA Multi Channel Dante Audio Breakout, SW42DA, Multi Channel Dante Audio Breakout, Channel Dante Audio Breakout, Dante Audio Breakout, Audio Breakout

References

- User Manual
- **■** BLUSTREAM
- Audio Breakout, BLUSTREAM, Channel Dante Audio Breakout, Dante Audio Breakout, Multi Channel Dante Audio Breakout, SW42DA, SW42DA Multi Channel Dante Audio Breakout

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