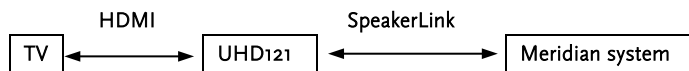


UHD121 HDMI CONTROLLER USER GUIDE

The Meridian UHD121 allows simple integration between Meridian loudspeakers and a TV with an eARC- or ARC-enabled HDMI port.

Typical connection path:



Sound from the TV is fed to the Meridian system, and the TV and Meridian speakers communicate with each other, switching on together and sharing volume control commands – all from the TV remote control.

The UHD121 is supplied ready for use in many applications; in most cases no additional configuration is required.



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1. CONNECTIONS

SPEAKERLINK
SIDE



HDMI
SIDE



Socket	Connects to
Power	12V 5W power supply (when required*)
Maintenance	USB for control, configuration and updates
Master	The input of the Master loudspeaker
Slave	The input of a Slave loudspeaker**

Socket	Connects to
HDMI Input	HDMI source product output
HDMI Output	TV: eARC or ARC HDMI socket

* Refer to section 2. POWERING THE UHD121 for details

** When loudspeakers are 'star wired', rather than 'daisy-chained'.

2. POWERING THE UHD121

Most Meridian products suitable for connection to the UHD121 can supply power via their Master SpeakerLink connection, enabling the product to be used without a PSU. In cases where the product is not capable of powering the UHD121 it can be powered from a PSU (available separately).

The following products have SpeakerLink inputs, but are NOT CAPABLE of powering the UHD121 via SpeakerLink:

- 210 Streamer
- M6 loudspeakers with serial numbers starting with '4' or lower
- AC12 Comms Interface

Note: Distributor 1 and Distributor 3 can power the UHD121 as long as the Distributor is not used in conjunction with any of the products listed above.

3. STATUS INDICATOR LED

The status of the UHD121 is indicated by the LED indicator located between its HDMI sockets:

Status	Colour
Standby	Solid blue
On	Solid white
Configuration mode	Cyan
Booting	Flashing blue
Firmware updating	Flashing white
Firmware updated successfully	Brief flash green
Firmware update failed	Brief flash red

4. DOES THE UHD121 REQUIRE CONFIGURATION?

The UHD121 has been designed to work ‘out-of-the box’ in the majority of Meridian systems. Further configuration is needed only in certain scenarios, including:

- When a particular default volume level is required on power-up. The desired level can be chosen within the UHD121’s configuration settings. Note: When taken in and out of Standby, the UHD121 reverts to the previously used volume level, rather than this chosen power-up setting.
- When automatic system wake-up on power-up or after a power outage is required.
- When installing the UHD121 in a system featuring another Meridian ‘Controller’ product. In such systems, it may be necessary to configure both the UHD121 and the other Meridian Controller product so that the chosen input and source assignment is correctly matched across the two Meridian products.

Configuration is carried out using the **Meridian Control** app running on a Windows PC or a MacOS device connected to the USB Maintenance connection. Refer to page 10 of this guide for further information.

5. CONTROL OPTIONS

The UHD121 passes appropriate control signals from the TV to the Meridian system, and from the Meridian system to the TV. In many situations, no other control signals are involved.

In systems featuring other Meridian products, other control options may be available. If any of the other Meridian products features front-panel controls or IR reception, these methods may be available to control the system. The UHD121 can also be controlled via its USB ‘Maintenance’ connection. This supports control from the Meridian Control app running on a PC or Mac, or control from a third-party control system.

The methods available depend on the capabilities of the products in the system.

Control method	Supported by UHD121 itself?	Can other connected products provide this control method?
Meridian System Remote (infra-red)	No	Yes, by a Meridian product equipped with an infra-red receiver eye.
Third party remote control (infra-red)	No	Yes, TV remote control via CEC over HDMI.
Meridian Control app on PC or MacOS	Yes, via USB connection	Yes, by any network-connected Meridian product
Meridian Control app on phone or tablet	No	Yes, by any Meridian product with network or Bluetooth support.
Hardware controls on the front of a product	No	Yes, by any Meridian product equipped with appropriate controls
Third-party control system	Yes, via USB connection	Yes, by Meridian products supporting RS232 control

6.APPLICATION EXAMPLES

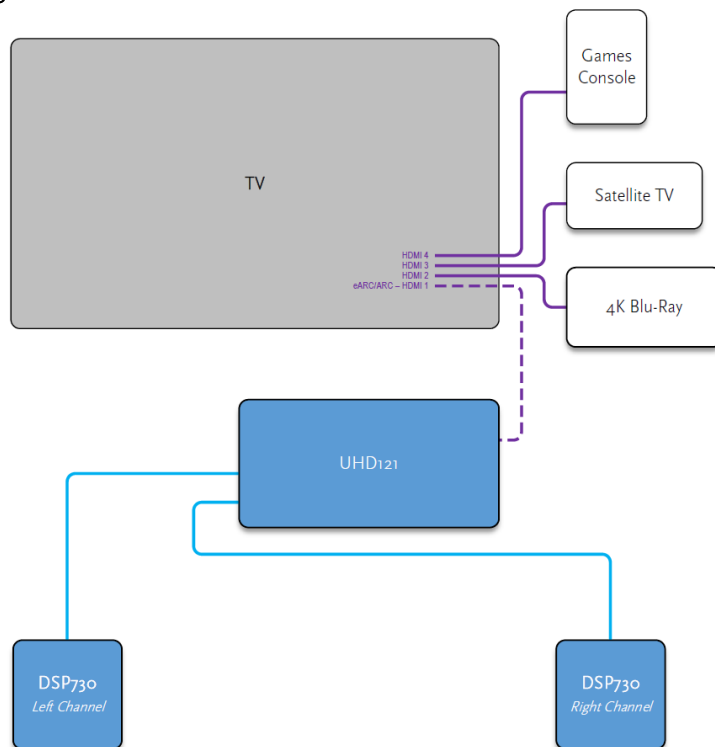
Please note: some models of TV are not factory-set to pass audio to their eARC- or ARC-enabled HDMI connection by default. Hence, it may be necessary to refer to the user-guide for the TV for details on how this is done. Similarly, it may be necessary to refer to the TV's user-guide for details of how to allow device control to be shared using the eARC- or ARC-enabled HDMI connection.

6.1 UHD121 connected directly to Meridian loudspeakers

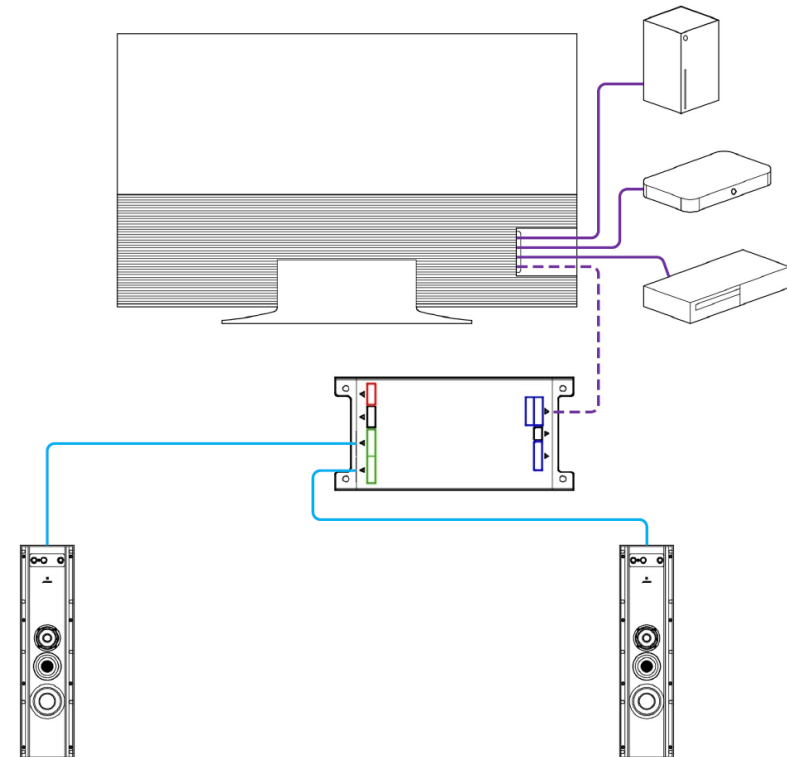
The UHD121 can be connected between the eARC- or ARC-enabled HDMI port of a TV and a pair of SpeakerLink-equipped Meridian loudspeakers. The TV will control switching of any media sources connected to its other HDMI ports and route their audio to the UHD121. The UHD121 passes the audio of the selected source to the Master and Slave loudspeakers. Here, the loudspeakers are connected in a 'home-run' (aka 'star-wired') arrangement, but they can also be 'daisy-chained' if that suits the circumstances of the installation.

It's possible to use the UHD121 in this type of installation using its factory default settings without any additional configuration. However, various settings can be customised to suit the specific requirements for an installation. Configuration is carried out using the **Meridian Control** app - refer to page 10 of this guide for further details.

Block diagram



Pictorial version



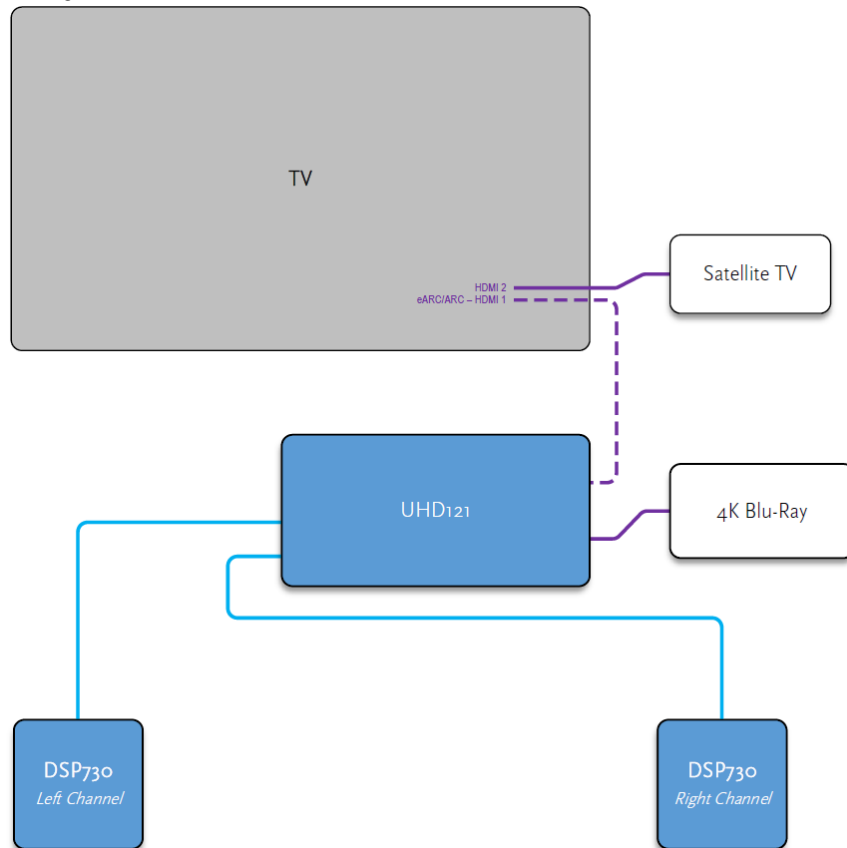
6.2 UHD121 connected directly to Meridian loudspeakers with an additional HDMI source

The UHD121 has its own HDMI input, allowing an additional HDMI source product to be connected to the system. When this source is selected, its audio is fed to the UHD121's SpeakerLink outputs while the source's video signal is passed onto the TV. This type of installation may require the UHD121 to be configured via the **Meridian Control** app – refer to page 10 for further details.

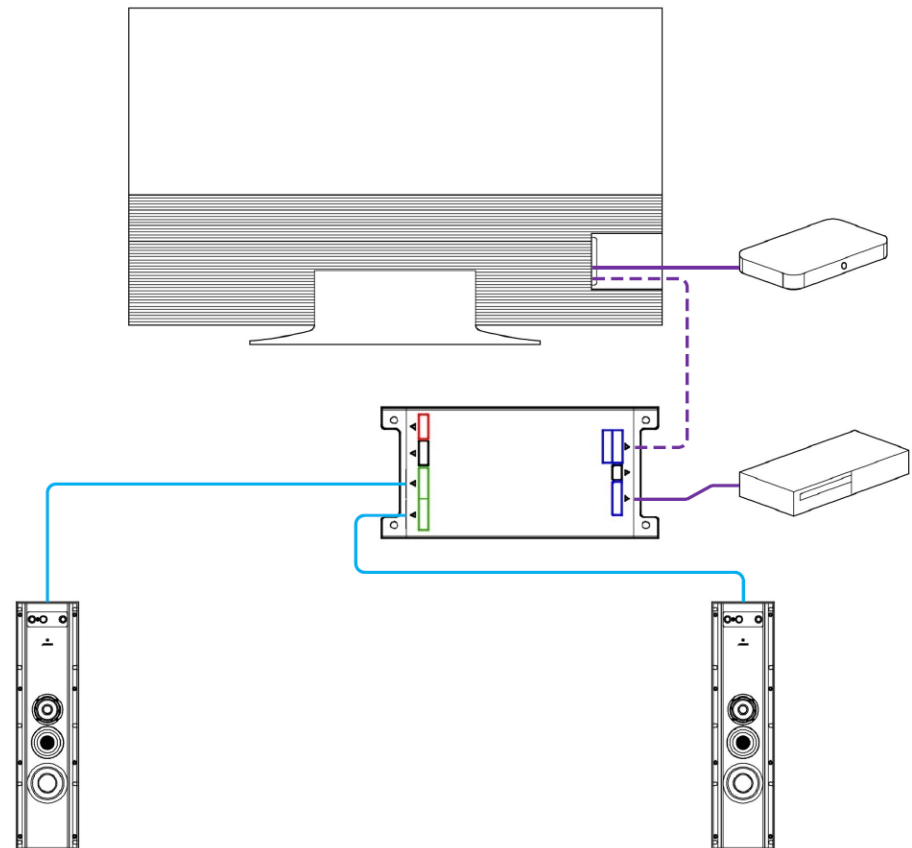
This HDMI input provides the following:

- It adds an HDMI input to the system, compensating for the HDMI socket on the TV which is now occupied by the UHD121.
- It enables a way to avoid potential undesired audio latency (delay) which the TV may apply to an HDMI source.
- It provides a method for listening to higher resolution audio if the TV supports only ARC, rather than eARC.
- It removes the risk that the additional signal path through the TV may have a negative impact on sound quality.

Block diagram



Pictorial version

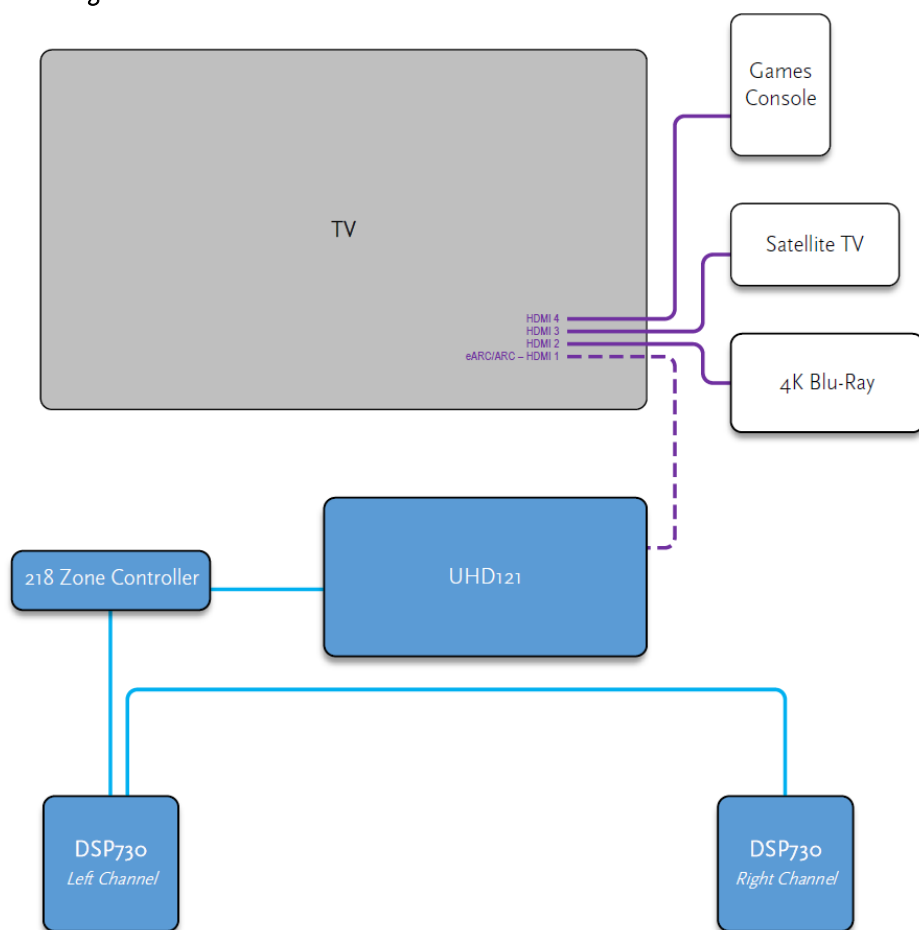


6.3 UHD121 connected to Meridian Controller product

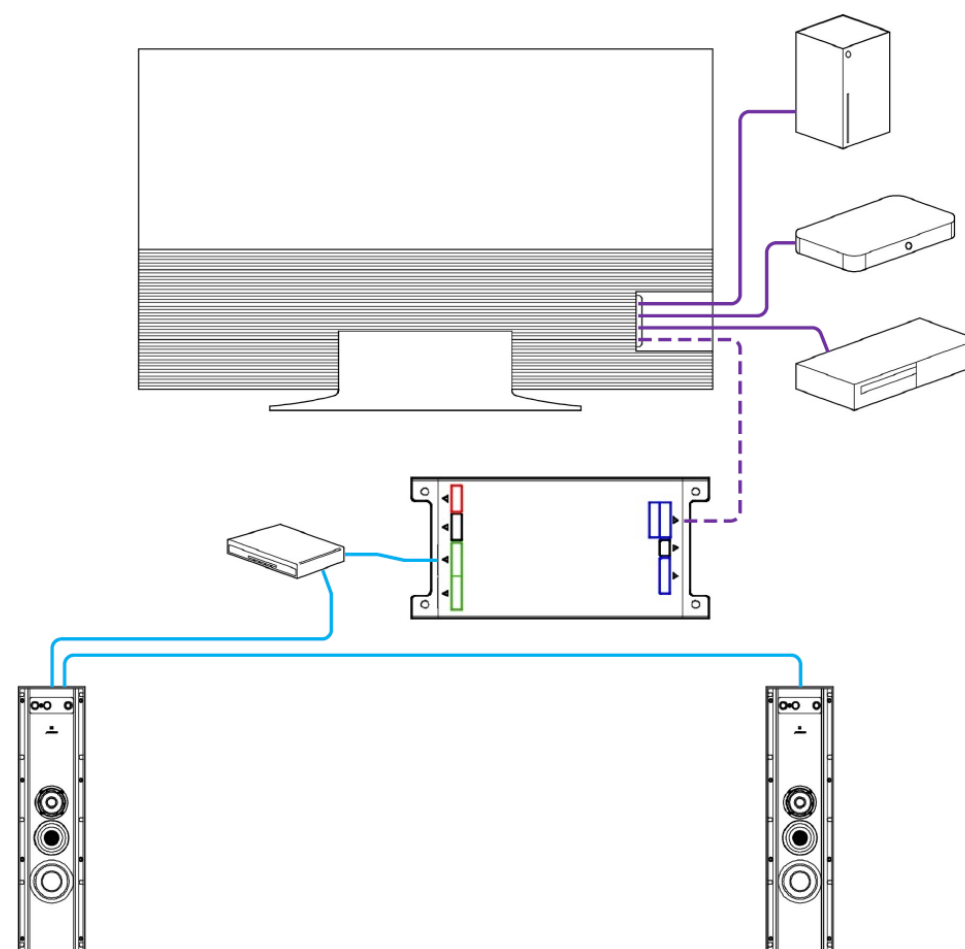
The UHD121 can be used as an interface between a TV and any SpeakerLink-equipped Meridian Controller product. With such an arrangement, the option exists to use the TV to control the Meridian system's volume and standby state. However, it should be noted that sources which are not connected to the TV or UHD121 will not be selectable from the TV controls. This includes any streaming sources internal to the Controller as well as sources plugged directly into the Controller product. In addition, it may be necessary to configure both the UHD121 and the Controller product so that the chosen input and source assignment is correctly matched across those two products. Refer to page 10 for further details on using the **Meridian Control** app, and refer to the user guide for the other Controller product.

Here, a system featuring a Meridian 218 Zone Controller is shown:

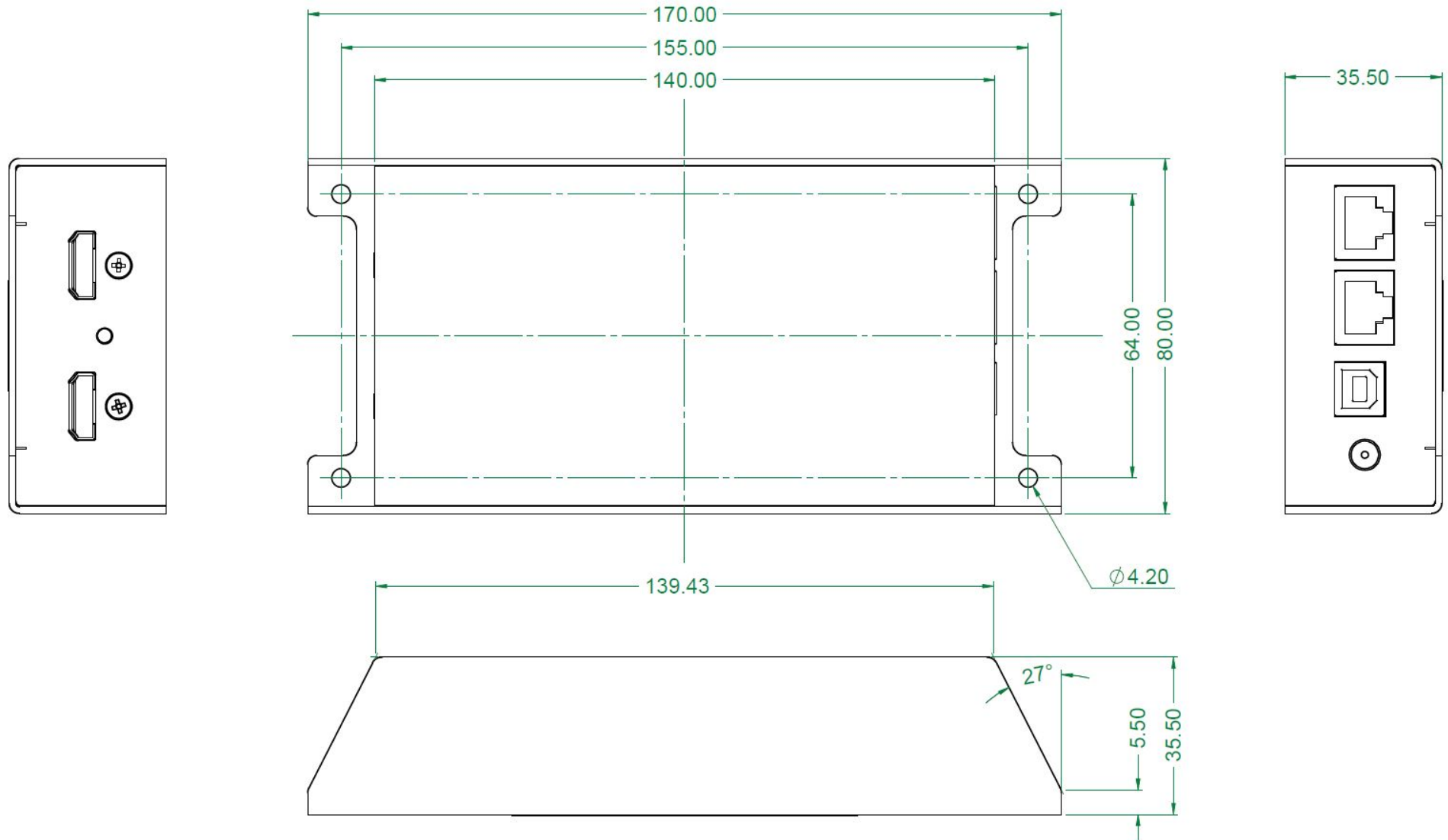
Block diagram



Pictorial version



7. DIMENSIONAL DRAWING



8. THE MERIDIAN CONTROL APP

8.1 Introduction and getting connected

The Meridian Control app can be used on Windows PCs or MacOS devices:

- The Windows PC version is available from the Microsoft Store.
- The MacOS version is available from the Apple App Store.

Search either of the app stores for “**Meridian Control**”.

The app communicates with the UHD121 via the product’s USB (Type B) socket, so the computer should be connected to the UHD121 using the appropriate type of USB cable.

Whenever the app is run, it automatically searches for any Meridian products connected to the network, and displays them within the app. As the UHD121 is a USB device and therefore does not connect to a network, it will not appear in the app at this point.

If no other Meridian products are found on the network:

The app displays **Waiting for Devices**. To connect the app to the UHD121, click on **Add Device**. Click on the option for **USB Serial Device**.

If any other Meridian products are found on the network:

The app displays the products as available for control from the app. To connect the app to the UHD121, click on the burger menu icon in the top left corner of the app, and select **Device Manager**. Click on the option for **USB Serial Device**.

Follow the instructions provided by the app, selecting the appropriate port from the down-down menu and clicking on the **Connect** button. Please note: it may be necessary to experiment with the various available ports until you find the one which is assigned to the product. One tip is to temporarily disconnect the UHD121 and view which ports are available. Then, reconnect the 121, refresh the list, and the new port which appears will be the one used by the UHD121.

Once a connection is made, a panel for controlling the UHD121 will appear on the app, within the top level of the **Control** section of the app. This panel features basic controls for the product; On/Off, volume adjustment and source selection. Clicking towards the top of the panel takes you through to the full set of control options. These are explained in section **8.2 Controlling the system using the app** on page 11 of this guide.

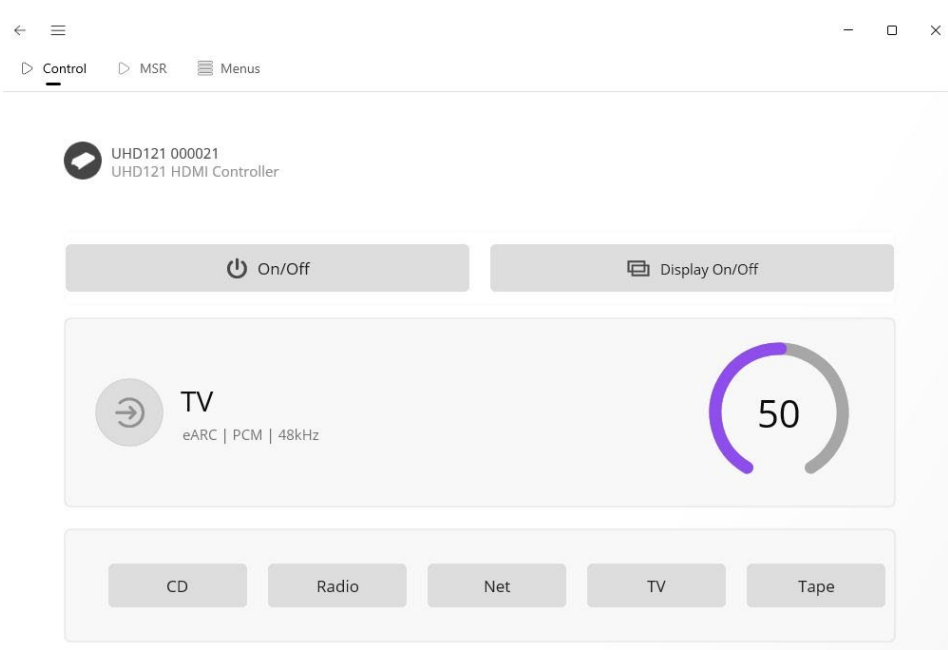
In addition to **Control**, the app includes sections for **Configuration, Device Manager, Settings** and **About**; each covered elsewhere in this guide. The burger menu in the top corner of the app provides access to all sections. If the burger menu options appear greyed out (unavailable), use the back arrow in the top left corner to move up a level within the app and the burger menu will revert to being available.

8.2 Controlling the system using the app

Three differing interfaces are available, **Control**, **MSR** and **Menus**, selectable from the top of the screen when in this section of the app. From within each of these interfaces, the back arrow in the top left corner takes you back to the top level of the **Control** section.

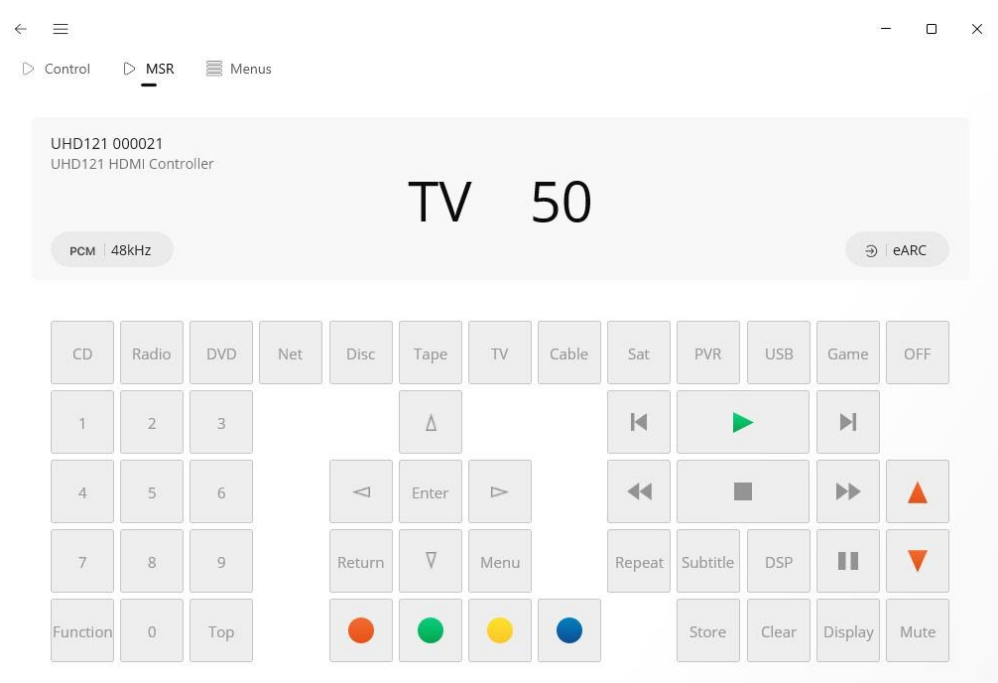
The Control interface

This offers simple controls for switching the Meridian system on and off, adjusting the volume and selecting the source to be listened to.



The MSR interface

This emulates the layout of keys on a Meridian system remote control, and displays the currently selected source and volume control level. The 'Function' key acts like a 'Shift' key on a computer keyboard, providing alternative control from a number of keys.



The Menus interface

This features all the audio adjustments available for the system. Some settings take effect only when the UHD121 is connected to a relevant HDMI source (see note below*).

ControlMSR**Menus**

UHD121 Listening Roo ProtocolVersion:
UHD121 HDMI Controller

StoreClear

TREBLE

Tilts the frequency of the response over the entire frequency range to make the sound brighter or dimmer.

+0.0dB

BASS

Adjusts the bass response in the room.

+0.0dB

IMAGE FOCUS

Image focus corrects for off-centre listening, ensuring that the original soundstage is maintained.

<0>

Values	Default
-10dB to +10dB	+0.0dB
-5dB to +5dB	+0.0dB
Left 10 to Right 10	<0>



PHASE

Changes the absolute phase of the signal, to compensate for signals which are out of phase, giving an unnatural-sounding bass.

-ve

+ve



IMAGE FOCUS PLUS

Meridian Image Focus Plus combines the gains and delays used in Image Focus to correct for off-centre listening with additional correction in the vertical plane within each speaker

-1



FFA

FFA is a combination of digital filters and delays to correct the group-delay of a loudspeaker. It ensures that all frequencies reach the listeners ear at the same time.

Off

On



FREE-Q

Meridian Free-Q is used to compensate for acoustic problems associated with specific loudspeaker placement conditions.

Free

Wall

Shelf

Corner

Values	Default
+ or -	+
-2 to +3	-1
On/Off	On
Free/Wall/Shelf/Corner	Free



EXTENSION LIMIT

Limit the extreme low-frequency extension of the loudspeakers.

Off

On



RESONANCE CONTROL

Meridian Resonance Control uses the dimensions of the room in order to compensate for the primary modal resonances that are especially exacerbated by loudspeakers with downward firing speakers.

Off

Min

Med

Max



SUB MODE

Changes the distribution of bass between the main speakers and the subwoofer to suit Music or Movie material.

Movie

Music



SUB FILTER

Adjusts the subwoofer crossover frequency. The options are Off (subwoofer off), Sub1 (80Hz crossover), Sub2 (120Hz crossover), or Wide (subwoofer plays the full range of audio frequencies).

Off

Sub 1

Sub 2

Wide

Values	Default
Off/On	Off
Off/Min/Med/Max	Off
Movie/Music	Music
Off/Sub 1/Sub 2/Wide	Off

+0dB

On

Max

8

***Functionality of some Menu settings**

Some settings require specific connection conditions to be met in order to have an effect on the Meridian equipment connected to the UHD121.

The following settings are passed from the UHD121 to the connected Meridian equipment regardless of what is connected to the HDMI sockets on the UHD121:

TREBLE
BASS
IMAGE FOCUS
PHASE
IMAGE FOCUS PLUS
BRIGHTNESS

However, other settings are passed from the UHD121 to the connected Meridian equipment only if at least one of the following is true:

- There is an active eARC source (such as a TV with eARC enabled) connected to the eARC socket on the UHD121. Note: an ARC connection does not satisfy this requirement; it must be eARC.
- There is an active HDMI source product connected to the second HDMI socket on the UHD121.

If neither of the above applies, the following settings will appear to change within the app, but the adjustments will not be passed on to the connected Meridian equipment, so no changes to the sound will take place:

FFA
FREE-Q
EXTENSION LIMIT
RESONANCE CONTROL
SUB MODE
SUB FILTER
SUB GAIN
PERFECT BALANCE
IMAGE ELEVATION

8.3 Configuration of the UHD121 using the app

The burger menu in the top corner of the app provides access to **Configuration**. If the burger menu options appear greyed out (unavailable), use the back arrow in the top left corner to move up a level within the app and the burger menu will revert to being selectable.

Selecting Configuration puts the UHD121 into configuration mode. While in this mode, no audio is passed to the SpeakerLink outputs.

It is worth noting that exiting configuration mode causes the unit to reboot while the settings are stored. This occurs even if no settings have been adjusted. The reboot disconnects the USB connection between the app and the UHD121, so to continue using the app it is necessary to reconnect as described in section **8.1 Introduction and getting connected** on page 10 of this guide.

Configuration settings are grouped into eight ‘accordion’ sections as shown here. Explanations of the settings are provided below.



IDENTIFICATION

Setting	Description
Device Name	The UHD121's name as it appears within the Control app. It can be changed to suit the installation, e.g. "Living Room Speakers".
Serial Number (read-only)	The Meridian serial number of the UHD121.
AFS Version (read-only)	AFS firmware version.

AUDIO OUTPUT

Setting	Description
Allow Dolby Digital Pass-Through	Enable Dolby Digital pass-through to allow audio to a compatible decoder for enhanced surround-sound playback.
Allow AAC Pass-Through	Enable AAC pass-through to allow audio to be sent directly to a compatible external decoder for enhanced surround-sound playback.
Allow DTS Pass-Through	Enable DTS pass-through to allow audio to be sent directly to a compatible external decoder for enhanced surround-sound playback.
Maximum Output Sample Rate	Specifies the maximum audio sample rate this device can output. Options are 48kHz, 96kHz and 192kHz. The default setting is 96kHz, which all Meridian speakers produced since 1999 are capable of receiving. Only models introduced since 2022 are capable of receiving up to 192kHz.

AUDIO MENUS

Setting	Description
Enable SpeakerLink	Enable SpeakerLink control of loudspeakers.
Room Height	Used for RESONANCE CONTROL calculations in loudspeakers with downward firing drive units to compensate for reflections with the room.

SOURCES

This menu allows settings specific to each of the sources within the system to be reviewed or edited.

Meridian products within a system 'talk' to each other using the Meridian 'comms' protocol. Meridian comms allows for up to twelve sources to exist across the system. When a source is selected, all of the Meridian products are informed of which of these 'logical sources' is now active.

When the SOURCES accordion is opened, it reveals an option to 'Configure Sources'. Select this to reveal the following options for each of the twelve logical sources:

Setting	Description
Legend	Allows the source to be given a custom name. This name may be shown on Meridian products within the system which have displays.
Audio Input	Assign the source to the eARC/ARC socket or the standard HDMI socket, or choose the option for 'Last Valid'*.
Type of Source	Selects the type of control commands required for Meridian sources. For all non-Meridian sources, 'NC' should be used.
Product Address	For Meridian sources only. Allows multiple sources of the same type to be independently controller, e.g. two Meridian CD players.

*'Last Valid' causes the unit to continue using whichever input socket is already in use without making any change.

Why Source Configuration may be required

Any Meridian product which features more than one input connection can be configured to have any of the logical sources assigned to any of the input sockets present. The default settings for which logical source is assigned to which physical input are chosen to suit common use-cases, but flexibility exists to customise the assignments to better-suit the particular circumstances of the installation.

The UHD121 is equipped with two HDMI connections; the eARC/ARC-enabled connection and a second HDMI input. The second input can be used to connect an HDMI-equipped source to the system. Reasons for using this input are given in the system application shown in section 6.2 on page 7 of this guide.

By default, the UHD121 is configured with the Meridian **TV** logical source assigned to the eARC-/ARC-enabled socket so that, when the TV is switched on, the Meridian system wakes up with its TV source selected. By default, the second HDMI input is associated with the **DVD** source. If one of the other logical sources is more appropriate than **DVD**, it can be changed accordingly.

STARTUP

Setting	Description
Start Volume	Select the volume level for when the product comes out of Standby. If set to 'Last Valid', the product will revert to the volume level used previously.
Start Source	Select the source the product will use when it is brought out of Standby without receiving a specified source command from elsewhere.
Auto-start after power-up	Automatically bring the product out of Standby whenever it is powered up. The Start Volume and Start Source will be as selected above.

ADVANCED COMMS

Setting	Description
System Address	Advanced setting for some systems with more than one zone connected via Meridian Comms. Note: Systems or zones connected to each other through an Ethernet network do not need to be set to different System Addresses, and the default setting of 1A should be used.
Product Address	Advanced setting allowing multiple Meridian sources of the same type which are connected via Meridian Comms to be controlled independently,

RESTORE SETTINGS

Setting	Description
Factory Restore	All settings will be reset to their factory defaults. Note: selecting this will cause your product to disconnect and reboot.

8.4 Device Manager

Setting	Description
USB Serial Device	Open or manage a serial connection between the Meridian Control app and your device. Here, you can select the port to be used on your device from a list of available ports.
Add Network Device	The Meridian Control app searches your network to automatically locate IP-controllable Meridian devices. If searching fails and you know the IP address of your device, you can enter it here.
Discovered Network Devices	Select a device to change its properties from the list of devices found by the app.
Reset Discovery	Force the app to carry out a new search of your network in order to locate IP-controllable Meridian devices.

8.5 Settings

Setting	Description
DISCOVERY	Enable Network Discovery. Allow discovery of IP-controllable devices.
MEASUREMENT UNITS	Set the units used for specifying Room Height for RESONANCE CONTROL. Select between metric or imperial units.
SUPPORT	Send diagnostic logs from your device by uploading them to the support server, or download to share locally.

9. SPECIFICATION

CONNECTIVITY	• 2 x Meridian SpeakerLink: Master and Slave, RJ45	
	• 1 x USB- B for configuration and maintenance	
	• 1 x HDMI: CEC enabled, eARC and ARC compatible	
	• 1 x HDMI input socket for additional source product	
VIDEO CAPABILITIES	• 1 x 12V, 5W PSU input*	
	• HDMI 1.4 & 2.0b, HDCP 2.3	• 12-bit deep colour
	• HDR (including HDR10+)	• Supports up to 4096 x 2160 @ 60Hz
AUDIO INPUT CAPABILITIES	• HDMI from TV via ARC : 2-channel at up to 48kHz@16bit LPCM	
	• HDMI from TV via eARC : 2-channel at up to 192kHz@24bit LPCM	
	• HDMI input : 2-channel at up to 192kHz@24bit LPCM	
SPEAKERLINK CAPABILITIES	• 2-channel at up to 192kHz@24bit LPCM or MHR	• Encoded Dolby Digital and DTS passthrough (no decoding)
CONTROL OPTIONS	• CEC over HDMI	• Meridian Control app from Windows PC or MacOS via USB
	• Meridian SpeakerLink	• Third-party control systems using the Meridian Automation Interface
POWER OPTIONS	• Via Master SpeakerLink socket from connected Meridian product*	• External PSU (available separately), 12V, 5W
PRODUCT DIMENSIONS	• HEIGHT: 35.5mm [1.4in]	• WIDTH: 80mm [3.2in]
	• DEPTH: 170mm [6.7in]	
PACKED DIMENSIONS	• HEIGHT: 110.0mm [4.3in]	• WIDTH: 270mm [10.6in]
	• DEPTH: 270mm [10.6in]	
WEIGHT	• UNPACKED: 0.52kg [1.1lbs]	• PACKED: 1.0kg [2.2lbs]

* See POWERING THE UHD121 above for details.



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