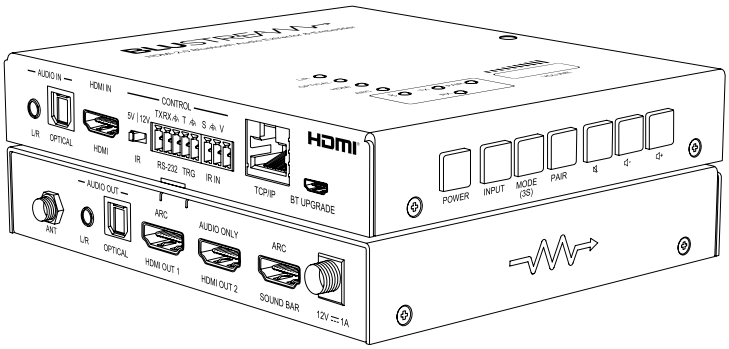
BLUARC

Quick Reference Guide



Introduction

The Blustream BLUARC is a multi-format audio switching device designed to embed or de-embed, and route audio between different audio source and sink devices where HDMI video is being distributed.

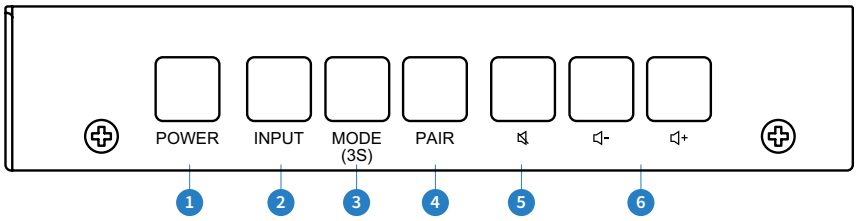
This multi-input audio switch supports HDMI embedded audio, external L/R analogue audio, optical digital audio, Bluetooth audio and HDMI ARC audio inputs, distributed to different audio devices via Bluetooth, HDMI output, HDMI audio only, HDMI ARC (i.e soundbar), optical digital audio, and L/R analogue audio outputs.

The multiple audio routing options make the BLUARC suitable for both residential and commercial applications where Bluetooth connectivity is required.

FEATURES:

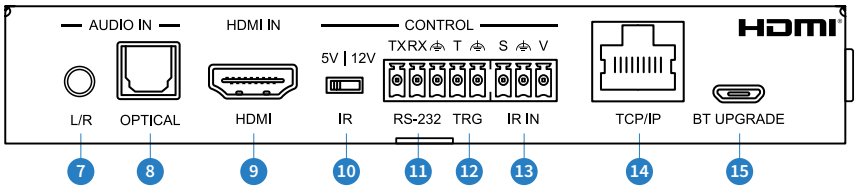
- Supports HDMI2.0b 18Gbps 4K UHD 60Hz 4:4:4 pass-through including HDR
- Supports all industry standard video resolutions including VGA-WUXGA and 480i-4K
- Supports pass-through of all known HDMI audio formats including Dolby Atmos, Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio transmission
- HDMI audio breakout to Bluetooth audio (2ch PCM), HDMI output, HDMI audio only output, HDMI soundbar output, analogue L/R audio (2ch PCM) and optical digital outputs concurrently (up to LPCM/Dolby/DTS 5.1ch)
- HDMI ARC (Audio Return Channel) to Bluetooth audio (2ch PCM), HDMI audio only output, HDMI soundbar output, analogue L/R audio (2ch PCM) and optical digital outputs concurrently (up to LPCM/Dolby/DTS 5.1ch)
- Analogue L/R and optical digital audio embedding
- Analogue L/R and optical digital audio de-embedding
- Bluetooth 5.0 output and L/R output support volume adjustment
- Bluetooth 5.0 specification supporting SBC/MP3/AAC/APT-X /APTX-LL/APTX-HD, 44.1K-48KHz 16/24Bit 2ch only
- Control via front panel, IR, RS-232, TCP/IP, Web-GUI, GPIO, & CEC
- Supplied with Blustream 5V IR receiver
- 3rd party drivers available for all major control brands
- HDCP2.3 compliant with advanced EDID management

Front Panel



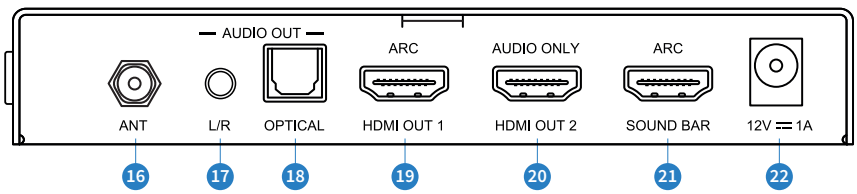
1. Power Button - Press to toggle device on/off
2. Input Button - Press to toggle between inputs
3. Mode Button - Press and hold for 3 seconds to toggle between Bluetooth RX or TX mode
4. Bluetooth Pair Button - Press to make device discoverable for Bluetooth pairing, press and hold for 3 seconds to disconnect all connected devices
5. Mute Button - Press to toggle audio mute on/off
6. Volume Up / Down Button - Press to raise or lower the audio output volume

Left Panel



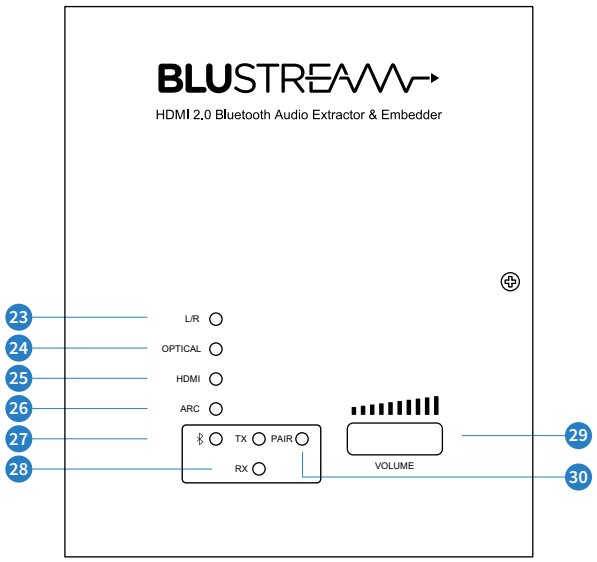
7. Analogue Audio Input - 3.5mm stereo jack for analogue audio input
8. Optical Audio Input - Toslink (S/PDIF) for optical audio input
9. HDMI Input - Connect to HDMI source device
10. IR Voltage Selection Switch - Select IR voltage level between 5V or 12V input for IR IN connection
11. RS-232 Port - 3-pin Phoenix connector
12. Trigger Port - 2-pin Phoenix connector
13. IR In Port - 3-pin Phoenix connector
14. TCP/IP Network Connection - RJ45 connector for TCP/IP and web-GUI control of the device
15. BT Upgrade Port - Micro USB for Bluetooth firmware updates

Right Panel



16. Antenna Connection - SMA connector to connect to supplied antenna
17. Analogue Audio Output - 3.5mm stereo jack for analogue audio output
18. Optical Audio Output - Toslink (S/PDIF) for optical audio output
19. HDMI Output 1 (ARC) - Connect to HDMI input of display featuring ARC
20. HDMI Output 2 (Audio Only) - Connect to HDMI input of sink for audio only (no video)
21. HDMI Soundbar Output (ARC) - Connect to HDMI input of compatible ARC soundbar
22. DC Power Port - DC jack to connect to supplied 12V / 1A power supply

Top Panel



23. Analogue L/R Audio LED - Illuminates when analogue L/R audio input is selected
24. Optical Audio LED - Illuminates when optical audio input is selected
25. HDMI LED - Illuminates when HDMI input is selected
26. ARC LED - Illuminates when ARC audio input is selected
27. Bluetooth LED - Illuminates when Bluetooth audio is selected
28. Bluetooth TX / RX LED - Illuminates corresponding LED when BLUARC is in Bluetooth TX or Bluetooth RX mode
29. Volume LED - Illuminates to identify the current volume level
30. Bluetooth Pair LED - Illuminates when a Bluetooth connection is active

Bluetooth

The BLUARC supports an audio signal to either be transmitted or received via Bluetooth. The Bluetooth can be configured to Auto (TX / RX auto switch), Transmit (TX) only, or Receive (RX) only.

Auto (default) – This mode will automatically switch Bluetooth to TX mode or RX mode depending on which input source is selected. If Bluetooth is selected as the input source, Bluetooth will work in RX mode. If any other input source is selected, Bluetooth will work in TX mode. Note this mode is only selectable via the web GUI or API.

TX Only – This will force Bluetooth TX mode regardless of which input source is selected (Bluetooth input is not available in this mode). Bluetooth will transmit from the BLUARC to allow connection to Bluetooth compatible headphones / speakers / receiver devices.

RX Only – This will force Bluetooth RX mode regardless of which input source selected. The BLUARC will only allow for Bluetooth source devices (such as a Phone or a PC) to be received in this mode.

To manually switch between Transmit (TX) mode and Receive (RX) mode, press and hold the Mode button on the front panel for 3 seconds. Please note that it will take ~3 seconds for Bluetooth to restart after switching modes.

Transmit (TX) Function:

TX mode allows for up to 2x simultaneous connections with Bluetooth headphones / speakers / receiver devices. To pair the BLUARC with your Bluetooth receiver device, press the Pair button on the front panel and the BLUARC will enter pairing mode with the “PAIR” LED flashing. Enter your Bluetooth receiving device into pairing mode and ensure it is in range of the BLUARC. Once connected, the “PAIR” LED will stop flashing and become solid.

Receive (RX) Function:

RX mode supports only one connection from a Bluetooth source device. To connect a Bluetooth enabled source to the BLUARC, press the Pair button on the front panel (if in manual pairing mode), go to the Bluetooth settings of the source audio device, and enable Bluetooth connectivity. The BLUARC will appear in the list of available devices.

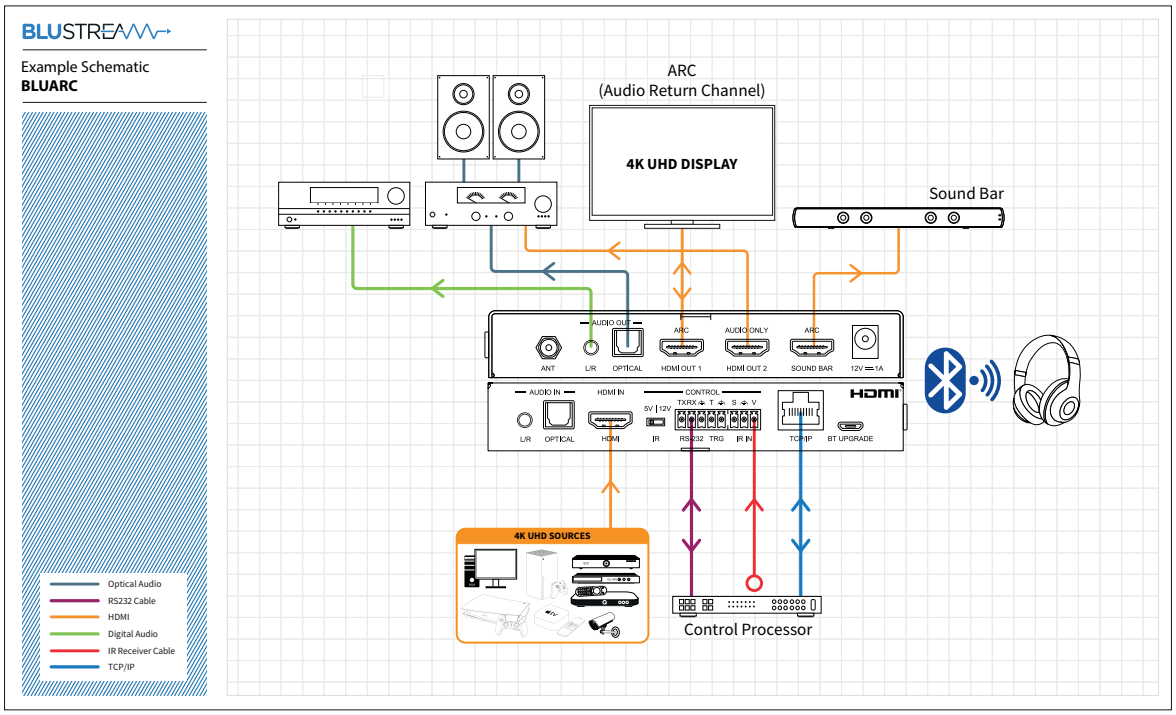
Web-GUI Control

The BLUARC features an in-built web GUI which can be used for control and configuration of the device. By default the BLUARC is set to DHCP however if a DHCP server (eg: network router) is not installed, the units IP address will revert to the below details:

Default **Username** is: blustream Default **Password** is: 1234 Default **IP Address** is: 192.168.0.200

For further information please see the BLUARC User Manual - available to download from the Blustream website.

Schematic



Specifications

Video Input Connectors: 1 x HDMI Type A, 19-pin, female
Video Output Connectors: 3 x HDMI Type A, 19-pin, female
Audio Input Connectors: 1 x Optical (S/PDIF), 1 x analogue L/R (3.5mm stereo jack)
Audio Output Connectors: 1 x Optical (S/PDIF), 1 x analogue L/R (3.5mm stereo jack)
Network Connectors: 1 x Ethernet connection (RJ45)
Bluetooth Antennae: 1 x SMA connector
RS-232 & I/O Connectors: 1 x 5-Pin Phoenix connector
IR Input Connectors: 1 x 3-Pin Phoenix connector
Firmware Upgrade: 1 x Micro-USB UART port
Dimensions (W x D x H): 125mm x 147mm x 25mm
Shipping Weight: 0.6kg
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: 12V/1A DC, screw connector

Package Contents

- 1 x BLUARC
- 1 x IR receiver
- 1 x 3-pin Phoenix connector
- 1 x 5-pin Phoenix connector
- 1 x IR Remote Control
- 1 x Mounting kit
- 1 x Quick reference guide
- 1 x 12V/1A DC power supply

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.