

## ▶ HEX100ARC-RX/-TX User 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.

**Safety And Performance Notice**

The transmission distances of HDMI over UTP cables are measured using TE CONNECTIVITY 1427071-6

EIA/TIA-568-B termination (T568B) of cables is recommended for optimal performance.

To minimize interference of the unshielded twisted pairs in the CAT5e/6 cable do not run the HDBaseT / Cat5e/6/6a cabling with or in close parallel proximity to mains power cables.

Do not substitute or use any other power supply other than the enclosed unit, or a Bluestream approved replacement.

Do not disassemble either the Transmitter or Receiver units for any reason. Doing so will void the manufacturer's warranty.

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# Introduction

**The Bluestream HEX100ARC** is a HDMI extender solution enabling a single CAT5e/6 cable to distribute HDMI, bi-directional IR, RS232 and Ethernet up to 100 metres by utilizing full HDBaseT technology. Not only can the HEX100ARC send HDMI, IR, RS232 and Ethernet over a single CAT5e/6 cable but it also has the ability to send audio back from a display over the same CAT5e/6 cable via an ARC (Audio Return Channel) or from a TOSLINK (optical) output on a display. The HEX100ARC Tx audio outputs are via HDMI (ARC), TOSLINK (optical) or analogue audio extracted from the PCM digital audio feed.

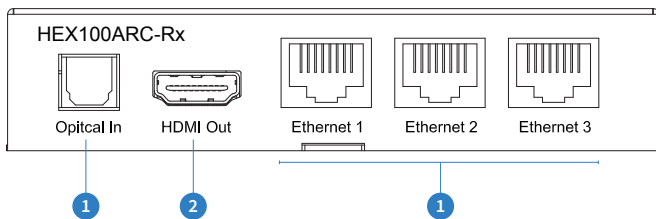
## FEATURES:

- Audio Return Channel (ARC) support.
- Audio extractor for ARC at transmitter side via TOSLINK and analogue audio
- Ethernet pass through with 3-way Ethernet switcher
- HDMI v1.4 and HDCP compliant, support 1080p@60Hz, 3D and 4K.
- Support 1080P@60Hz or VESA: 1920x1200@60Hz up to 100m, 4K up to 60m.
- Transmission distance for ARC up to 90m
- Dolby TrueHD and DTS-HD master audio pass through HDMI output
- Bi-Directional IR and RS232
- POH (Power over HDBT) supported, only one power supply needed at either transmitter or receiver side.

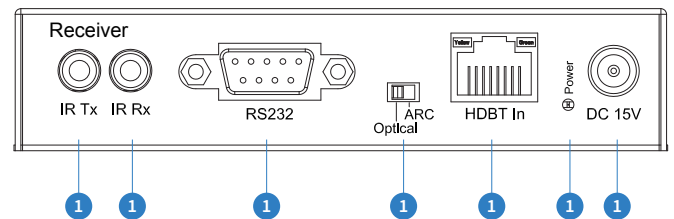
**Note:** The POH function is designed for powering compatible transmitter or receiver units of Bluestream only. Do not connect any part of this equipment to Power over Ethernet devices. Damage may result.



## Panel Description HEXARC100-RX

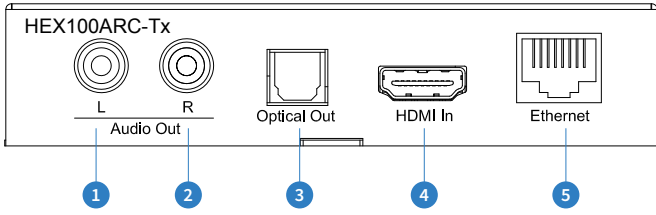


- 1 Optical audio in –TOSLINK audio in, connects to the optical out of the display device
- 2 HDMI Out –Connect to HDMI input on display device
- 3 100BaseT Ethernet ports

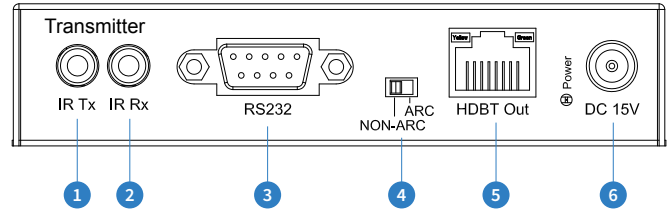


- 1 IR Tx port - connect to IR emitter. Used to control display device from control processor or IR sensor located at the source end.
- 2 IR Rx port - connect to IR sensor. Used to control IR controlled source devices at HEX100ARC-Tx end
- 3 RS232 port – Bi-directional RS232 with HEX100ARC-Tx RS232 port
- 4 Audio return position switcher - switch between ARC and TOSLINK (optical) modes
- 5 HDBT in - RJ45 connector, connect to HDBaseT port of HEX100ARC Tx
- 6 Power LED indicator
- 7 Power port – can be powered from transmitter by using the power over cable (POH) feature

# Panel Description HEXARC100-TX



- 1 Left channel of L/R – RCA output, extracted from PCM only ARC stream
- 2 Right channel of L/R – RCA output, extracted from PCM only ARC stream
- 3 Optical audio out (TOSLINK) – Bit stream audio out
- 4 HDMI In – Connect to HDMI source device.
- 5 Ethernet port – Connect to LAN (Network Switch).

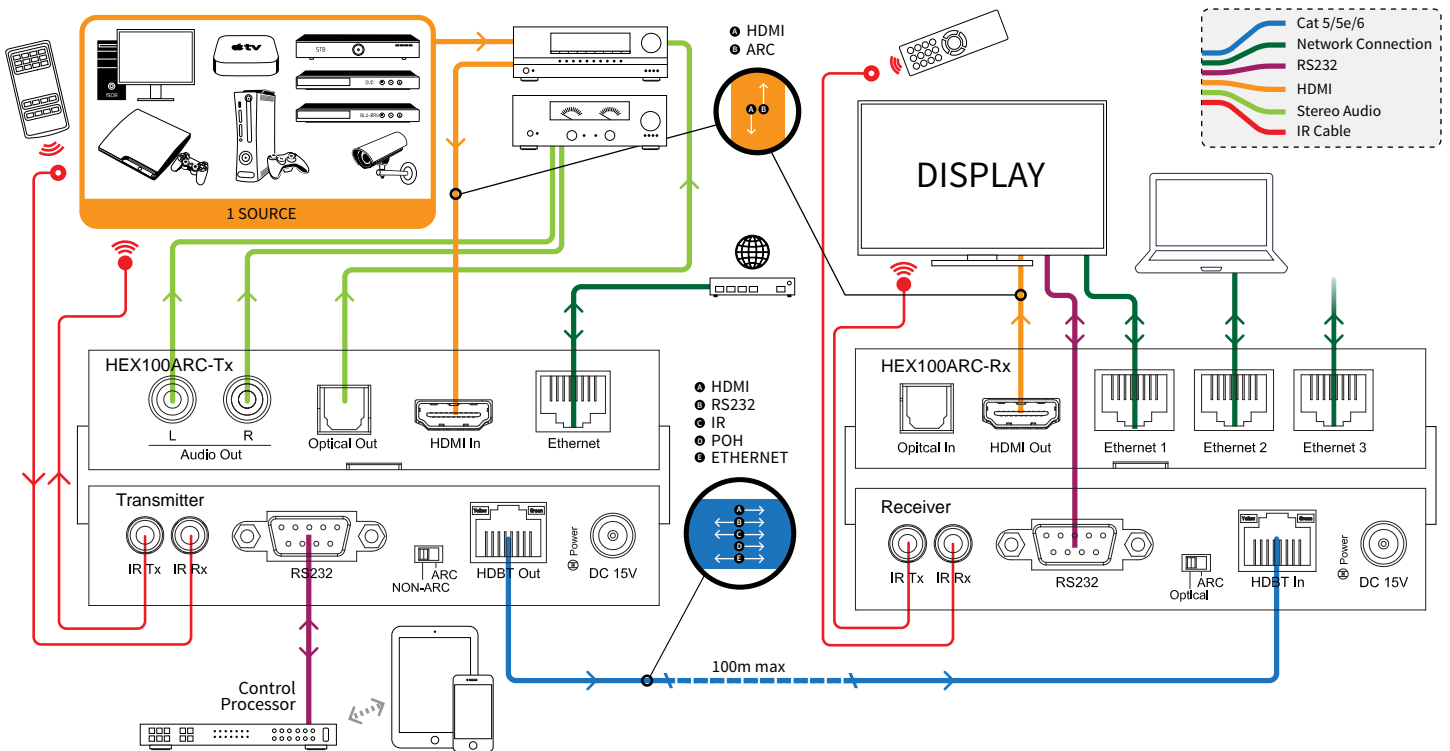


- 1 IR Rx port – transmits IR to HEX100ARC Rx (Tx IR port). Connect IR sensor or control processor to send IR commands to a display
- 2 RS232 port – Bi-directional RS232 to and from the HEX100ARC-Rx
- 3 HDBT out – RJ45 connector, connect to HDBaseT in on HEX100ARC-Rx
- 4 Power port – Use included 15V/2A DC adaptor to power the unit.
- 5 IR Tx port – connect an IR emitter. Used to control source devices from display end
- 6 Audio return position switcher – switch between ARC and NON-ARC modes.
- 7 Power LED indicator

## CONNECTION DIAGRAM

### TV AND AVR SUPPORT ARC

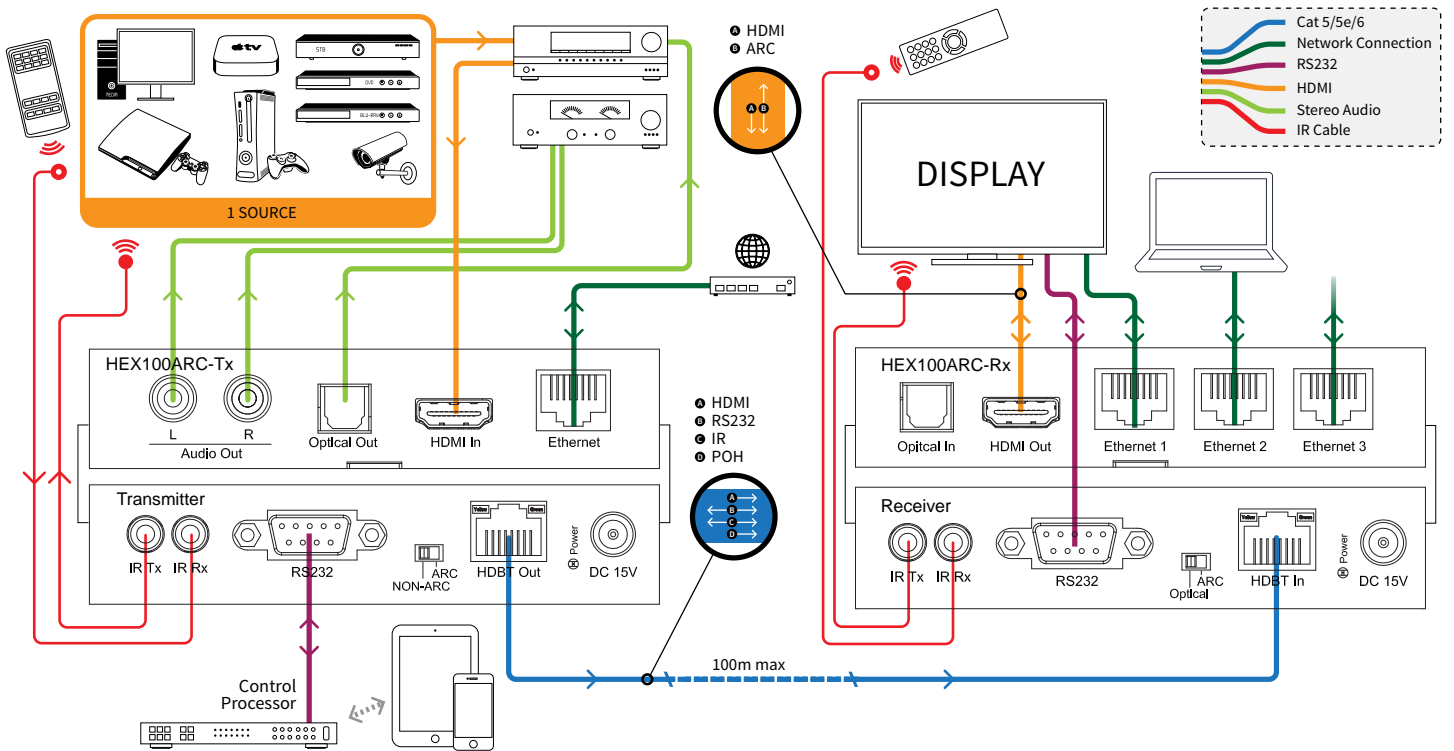
HEX100ARC	POSITION SWITCHER MODE SELECTION
Transmitter	ARC
Receiver	ARC



CONNECTION DIAGRAM

TV WITH ARC, AVR WITHOUT ARC

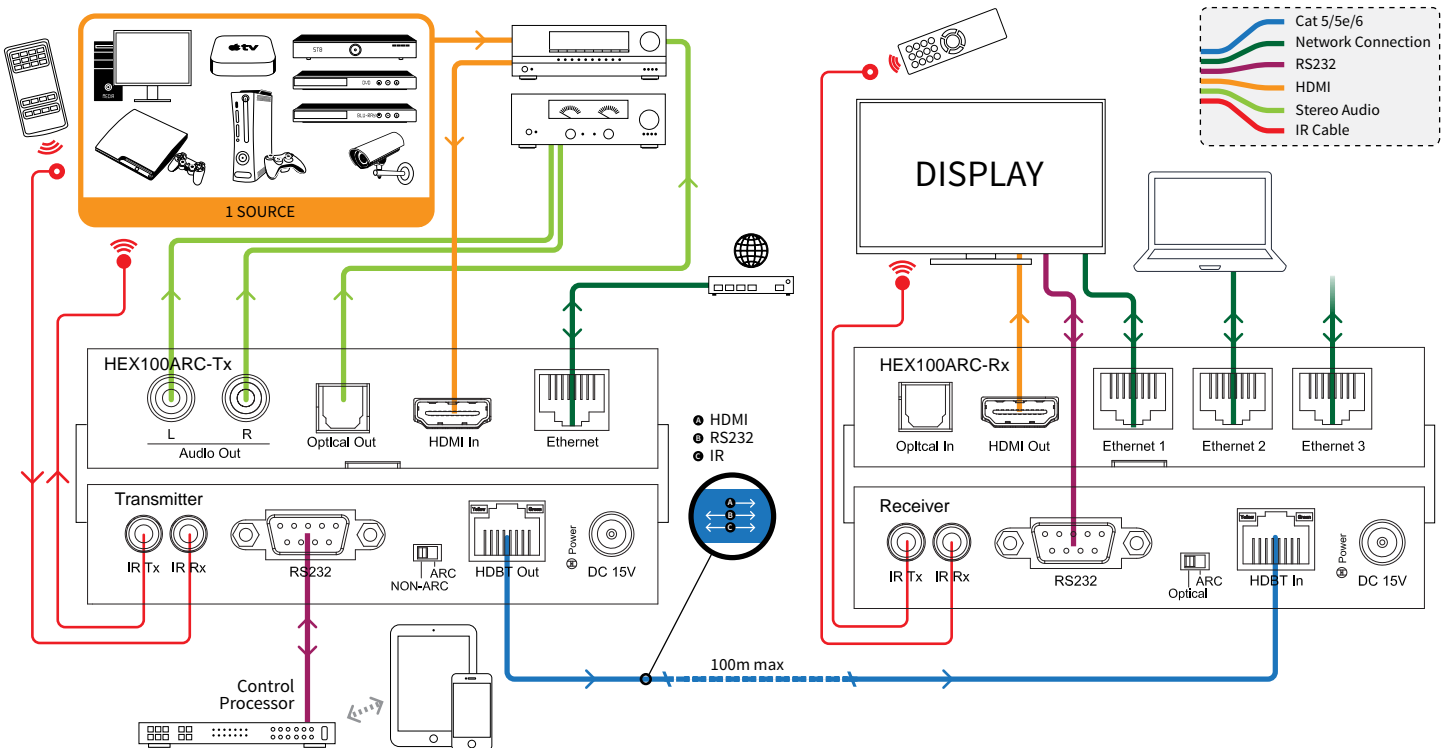
HEX100ARC	POSITION SWITCHER MODE SELECTION
Transmitter	NON-ARC
Receiver	ARC



CONNECTION DIAGRAM

TV WITHOUT ARC, AVR WITHOUT ARC

HEX100ARC	POSITION SWITCHER MODE SELECTION
Transmitter	NON-ARC
Receiver	Optical



## Specifications

### HEX100ARC-Tx

**Video Input Connectors:** 1x HDMI Type A, female

**Video Output Connectors:** 1x RJ-45 connector,

**Audio Output Connectors:** 2x RCA(L/R), 1x Toslink

**Ethernet port:** 1x RJ-45 connector,

**RS-232 serial port:** 1x DB-9 female

**IR Input ports:** 1x 3.5mm stereo jack

**IR Output ports:** 1x 3.5mm mono jack

**Rack-Mountable:** 2x mounting bracket

**Dimensions (W x D x H):** 114mm x 135mm x 24mm, without feet

**Shipping Weight:** 0.4kg

**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:** 15V/2A DC, screw connector

### HEX100ARC-Rx

**Bandwidth:** 10.2 Gbps

**Video Input Connectors:** 1x RJ-45 connector,

**Video Output Connectors:** 1x HDMI Type A, female

**Audio Input Connectors:** 1x Toslink

**Ethernet port:** 3x RJ-45 connector,

**RS-232 serial port:** 1x DB-9 female

**IR Input ports:** 1x 3.5mm stereo jack

**IR Output ports:** 1x 3.5mm mono jack

**Rack-Mountable:** 2x mounting bracket

**Dimensions (W x D x H):** 114mm x 135mm x 24mm, without feet

**Shipping Weight:** 0.4kg

**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:** 15V/2A DC, screw connector

**NOTE:** Specifications are subject to change without notice. Weight and dimensions are approximate.

## Package Contents:

- 1 x HEX100ARC-kit
- 1 x 15V/2A DC power supply
- 1 x IR sensor
- 1 x IR emitter
- 1 x mounting kit
- 1 x manual

## Maintenance

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner or benzene to clean this unit.

**BLUESTREAM** 

[www.bluestreamav.com](http://www.bluestreamav.com)