VIVO◆LINK™
PROFESSIONAL AV SOLUTIONS

VLHDMIMAT4X444-R
18G HDMI Receiver with Audio Breakout

Version: VLHDMIMAT4X444-R_2019V1.3

Statement

Thanks for choosing this product, please read this user manual carefully before using this product. The functions described in this version are updated till September, 2019. In the constant effort to improve our product, we reserve the right to make functions or parameters changes without notice or obligation.

Safety Precaution

- Do not dismantle the housing or modify the module to avoid electrical shock or burn.
- Using supplies not meeting the products' specifications may cause damage, deterioration or malfunction.
- Do not expose the unit to rain, moisture or install this product near water.
- Install the device in a place with fine ventilation.
- Do not twist or pull by force ends of the optical cable. It can cause malfunction.
- Do not use liquid or aerosol cleaners to clean this unit.
- Always unplug the power to the device before cleaning.
- Unplug the power when not used for a long period of time.
- Refer all servicing to qualified service personnel.

After-sales Service

We provide limited warranty for the product within three years.

Packing List

- 1x VLHDMIMAT4X444-R Receiver
- 2x Mounting Ears with 4 Screws
- 4x Plastic Cushions
- 1x 3-pin Terminal Block
- 1x User Manual

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

Product Introduction

Thanks for choosing the VLHDMIMAT4X444-R HDMI 2.0 receiver which is designed to receive 4K video from transmitter at distance up to 131 feet (40 meters) and 1080P video at distances up to 230 feet (70 meters) over a single CATx cable. It supports audio de-embedded and ARC. It also supports bidirectional IR and RS232 pass-through to control source or display device remotely. PoC feature allows the transmitter and the receiver can be powered from each other and only one power adapter is needed in system. Moreover, the receiver supports convenient firmware upgrade through Micro-USB port.

Features

- Supports HDMI 2.0 and the HDMI video resolution up to 4K@60Hz 4:4:4 HDR.
- Extends 4K signals to distances up to 131 feet (40 meters) and 1080P signals to distances up to 230 feet (70 meters) over a single CATx cable.
- Supports video resolution up-scaling, the 1080P input can be automatically upgraded to 4K output.
- SPDIF out on receiver for source audio de-embedding.
- 18Gbps high bandwidth.
- Bidirectional IR, RS232 and 24V PoC.
- Supports ARC.
- Supports CEC pass-through.
- Provides LEDs to indicate the current operating status.
- Firmware upgrade by Micro-USB port.

Panel Description
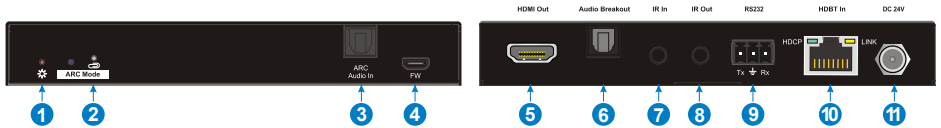
1. **Power LED:** The LED illuminates red when power is applied.

2. **ARC Mode:** Press the button with paper clip or other sharp tool to enable the ARC mode, and then the left LED illuminates blue. Press it again to exit the ARC mode and the LED is off.

3. **ARC Audio In:** Toslink connector to connect ARC audio source device (e.g.TV).

4. **FW:** Micro-USB port for firmware upgrade.

5. **HDMI Out:** Type-A female HDMI output port to connect HDMI display (e.g.TV).

6. **Audio Breakout:** If the ARC mode is OFF, the Toslink connector is connected to speaker or amplifier for HDMI source audio de-embedding. Note that if the ARC mode is ON, this port has no audio output.

7. **IR In:** 3.5mm jack to connect the IR receiver for IR pass-through.

8. **IR Out:** 3.5mm jack to connect the IR emitter for IR pass-through.

9. **RS232:** 3-pin terminal block to connect the RS232 control device (e.g. PC) or a third-party device to be controlled.

10. **HDBT In:** RJ45 port to connect the HDBT output port of transmitter by CATx Ethernet cable. The LINK LED illuminates orange when there is a valid HDBaseT link between the transmitter and the receiver. The HDCP LED illuminates green when the video contains HDCP content.

11. **DC 24V:** DC connector for the power adapter connection.

ARC Mode

The front panel of receiver provides a buttons to enable or disable ARC mode, as below figure shows:


Press the button with paper clip or other sharp tool to enable the ARC mode, and then the left LED illuminates blue. Press it again to exit the ARC mode and the LED is off.

| ARC Mode	Display (e.g.TV)	Audio Transmission Path
ON	ARC is supported	The TV audio is transmitted from the TV back to the receiver via HDMI cable, and then it will be output by the **ARC Audio Out** port of transmitter.
	ARC is not supported	Connect the TV to the **ARC Audio In** port of receiver with an audio cable. The TV audio is transmitted from the TV back to the receiver via the audio cable, and then it will be output by the **ARC Audio Out** port of transmitter. *Note that if the ARC mode is ON, the* **Audio Breakout** *port of receiver has no audio output.*
OFF	/	The TV audio can't be back to the **ARC Audio Out** port of transmitter. The **Audio Breakout** port of receiver is connected to speaker or amplifier for HDMI source audio de-embedding.

System Connection

The following diagram illustrates the typical input and output connections of the extender:

1) The ARC mode of receiver is **ON**, and the display device (e.g. HDTV) supports ARC. The TV audio is transmitted from the TV back to the receiver via HDMI cable, and then it will be output by the **ARC Audio Out** port of transmitter.
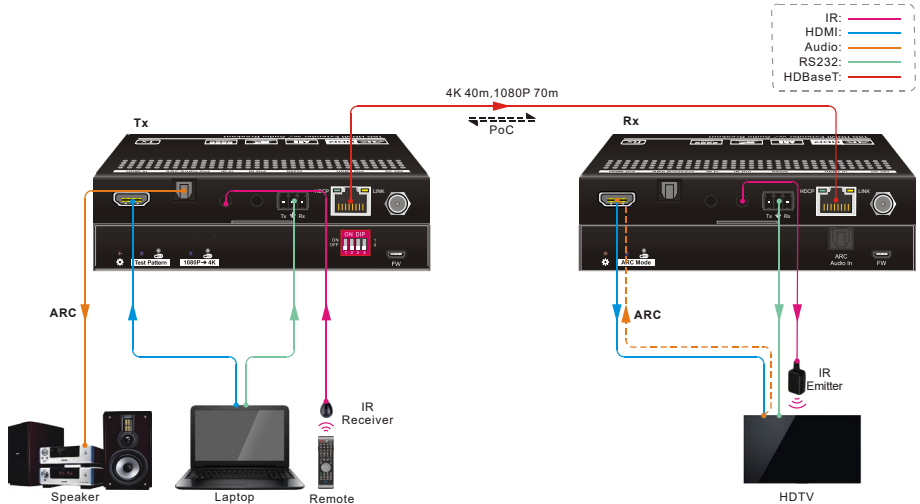

Note: The STP cable is recommended to be used to ensure optimal machine performance in ARC mode.

2) The ARC mode of receiver is **ON**, but the display device (e.g. HDTV) doesn't support ARC. The TV audio is transmitted from the TV back to the receiver via the audio cable, and then it will be output by the **ARC Audio Out** port of transmitter.
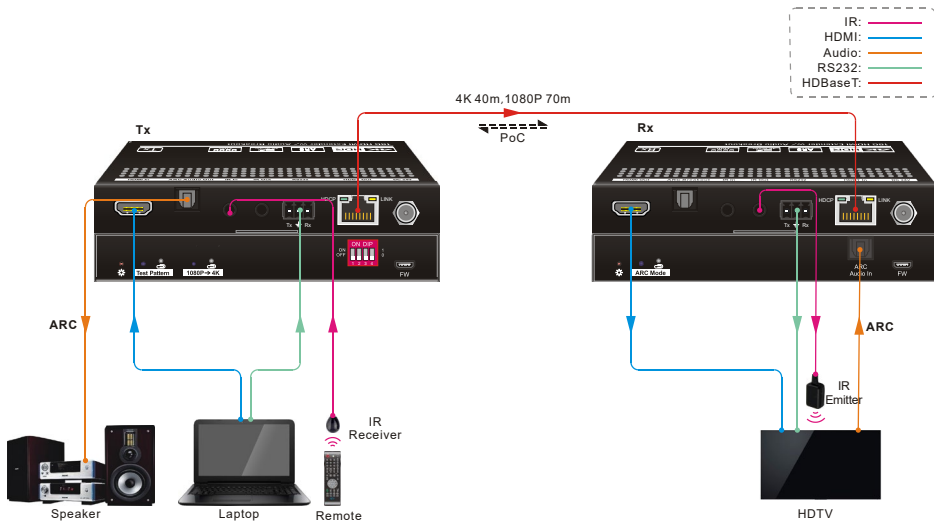
Note: The STP cable is recommended to be used to ensure optimal machine performance in ARC mode.

3) The ARC mode of receiver is **OFF**. The TV audio can't be back to the **ARC Audio Out** port of transmitter. The **Audio Breakout** port of receiver is connected to speaker or amplifier for HDMI source audio de-embedding.
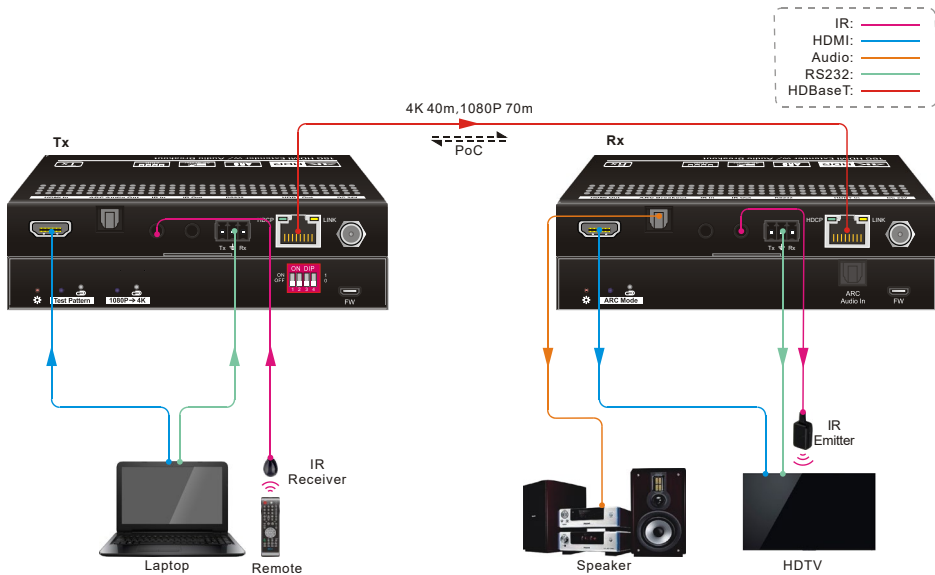
Technical Specification

Video	
Input	(1) HDBT
Input Connector	(1) RJ45
Input Resolution	Up to 4Kx2K@60Hz 4:2:0
Output	(1) HDMI
Output Connector	(1) Type-A female HDMI
Output Resolution	Up to 4Kx2K@60Hz 4:4:4 8bit HDR10
Audio	
Input	(1) ARC Audio In
Input Connector	(1) Toslink Connector
Output	(1) Audio Breakout
Output Connector	(1) Toslink connector
Audio Format	Supports PCM, Dolby Digital, Dolby True-HD, DTS and DTS-HD.
Frequency Response	20Hz – 20KHz, ±3dB
Max Output Level	2.0Vrms ± 0.5dB. 2V = 16dB headroom above -10dBV (316mV) nominal consumer line level signal
THD+N	< 0.05% (-80dB), 20Hz – 20KHz bandwidth, 1KHz sine at 0dBFS level (or max level)
SNR	> 85dB, 20Hz-20 kHz bandwidth
Crosstalk Isolation	> 70dB, 10KHz sine at 0dBFS level (or max level before clipping)
L-R Level Deviation	< 0.3dB, 1KHz sine at 0dBFS level (or max level before clipping)
Frequency Response Deviation	< ± 0.5dB 20Hz - 20KHz
Output Load Capability	1KΩ and higher (Supports 10x paralleled 10KΩ loads)
Stereo Channel Separation	>70dB@1KHz
Control	
Control Part	(1) ARC Mode button, (1) FW, (1) IR In, (1) IR Out, (1) RS232
Control Connector	(1) Micro-USB port, (2) 3.5mm jacks, (1) 3-pin terminal block
General	
Bandwidth	18Gbps
HDMI Standard	2.0
HDCP Version	2.2, 1.4 compliant
CEC	Pass-through
Bidirectional PoC	Supported
HDMI 2.0 Cable Length	4K@60Hz 4:4:4 ≤ 5m, 4K@60Hz 4:2:0 ≤ 15m, 1080P ≤ 20m

Transmission Standard	HDBaseT
Transmission Distance	1080P@60Hz ≤ 230 feet (70 meters), 4K@60Hz ≤ 131 feet (40 meters)
Operation Temperature	-5~ +55℃
Storage Temperature	-25 ~ +70℃
Relative Humidity	10%-90%
Power Supply	Input:100V~240V AC; Output:24V DC 1.25A
Power Consumption	12W (Max)
Dimension (W*H*D)	140mm x 19.5mm x 84mm
Net Weight	290g

Note: Please adopt high-qualified HDMI cable fully compliant with HDMI 2.0 for reliable transmission and connection.