User Manual

VLHDMIEXTFIB

HDMI2.0 Fiber Optical Extender

Version: VLHDMIEXTFIB_2017V1.0

Preface

Read this user manual carefully before using the product. Pictures are shown in this manual for reference only, different models and specifications are subject to real product.

This manual is only for operation instruction, please contact the local distributor for maintenance assistance. The functions described in this version were updated till December 18, 2017. In the constant effort to improve the product, we reserve the right to make functions or parameters changes without notice or obligation. Please refer to the dealers for the latest details.

Trademarks

FCC Statement

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. It 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 commercial installation.

Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference.

Any changes or modifications not expressly approved by the manufacture would void the user's authority to operate the equipment.

SAFETY PRECAUTIONS

To insure the best from the product, please read all instructions carefully before using the device. Save this manual for further reference.

- Unpack the equipment carefully and save the original box and packing material for possible future shipment
- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- Do not dismantle the housing or modify the module. It may result in electrical shock or burn.
- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.
- Refer all servicing to qualified service personnel.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Do not put any heavy items on the extension cable in case of extrusion.
- Do not remove the housing of the device as opening or removing housing may expose you to dangerous voltage or other hazards.
- Install the device in a place with fine ventilation to avoid damage caused by overheat.
- Keep the module away from liquids.
- Spillage into the housing may result in fire, electrical shock, or equipment damage. If an object or liquid falls or spills on to the housing, unplug the module immediately.
- 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 cord when left unused for a long period of time.
- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.

Contents

1. Introduction

The extender set consists of a Transmitter and Receiver. It is designed to extend HDMI signal (Max 4Kx2K 60Hz 4:4:4) up to 984ft (300m) from Transmitter to Receiver via two single mode or OM3/OM4 multi-mode fiber cables.

The extender set also allows for bi-directional IR and RS232 control signal across the fiber cable, and supports ARC.

2. Features

- Supports HDMI2.0, HDCP2.2 compliant.
- Supports 4K@60 Dolby Vision.
- Supports HDR.
- Bi-directional IR and RS232 pass-though.
- Supports ARC.
- Transmission distance: up to 984ft (300m).

3. Package List

- Transmitter x 1
- Receiver x 1
- Power Adapter (12VDC 1A) x 2
- RS232 Cable (3-Pin phoenix connector to DB 9) x 1
- Mounting Ears x 4
- Mounting Screws x 16
- Plastic Cushions x 8
- User Manual x 1

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

4. Panel Description

4.1 Transmitter

No.	Name	Description
①	Power LED	Turns red when DC power present.
②	Link status LED	Turns green when the Transmitter and Receiver link successful.
③	Work status LED	Turns green when the signal data is transmitted between Transmitter and Receiver.
④	ARC switcher	▪ ARC (Default): The audio signal can be back to HDMI input and audio output port on Transmitter from the HDTV display connected to Receiver. ▪ AUDIO: The audio signal is transmitted from audio input port on Receiver to audio output port on Transmitter. For more details, please refer to the ***5.system connection***.
⑤	FW	USB port, used for firmware update.
⑥	OPTICAL OUT	Connect to the OPTICAL IN port on Receiver via two OM3/OM4 multi-mode fiber cables (A-B; B-A).
⑦	HDMI IN	Connect with HDMI source.
⑧	AUDIO OUT	Connect with audio broadcast device.
⑨	IR IN	Work with far-end IR OUT port on Receiver, connect with IR Receiver (with carrier) to collect IR signal to control far-end display.
⑩	IR OUT	Work with far-end IR IN port on Receiver, connect with IR Emitter to send IR signal to control source device.
⑪	RS232	Makes up bi-directional RS232 pass-through control with the RS232 port on Receiver. If one is connected with control device (e.g. PC), and the other should be connected with the third-party that need to be controlled.
⑫	DC 12V	Connected with 12VDC power adaptor.

4.2 Receiver

No.	Name	Description
①	Power LED	Turns red when DC power present.
②	Link status LED	Turns green when the Transmitter and Receiver link successful.
③	Work status LED	Turns green when the signal data is transmitted between Transmitter and Receiver.
④	ARC switcher	▪ ARC (Default): The audio signal can be back to HDMI input and audio output port on Transmitter from the HDTV display connected to Receiver. ▪ AUDIO: The audio signal is transmitted from audio input port on Receiver to audio output port on Transmitter. For more details, please refer to the ***5.system connection***.
⑤	FW	USB port, used for firmware update.
⑥	OPTICAL IN	Connect to the OPTICAL OUT port on Transmitter via two OM3/OM4 multi-mode fiber cables (A-B; B-A).
⑦	HDMI OUT	Connect with HDMI display.
⑧	AUDIO IN	Connect with audio source device.
⑨	IR IN	Work with far-end IR OUT port on Transmitter, connect with IR Receiver (with carrier) to collect IR signal to control far-end source device.
⑩	IR OUT	Work with far-end IR IN port on Transmitter, connect with IR Emitter to send IR signal to control display device.
⑪	RS232	Makes up bi-directional RS232 pass-through control with the RS232 port on Receiver. If one is connected with control device (e.g. PC), and the other should be connected with the third-party that need to be controlled.
⑫	DC 12V	Connected with 12VDC power adaptor.

5. System Connection

Usage Precautions:

- Verify all components and accessories included before installation.
- System should be installed in a clean environment with proper temperature and humidity.
- All of the power switches, plugs, sockets, and power cords should be insulated and safe.
- All devices should be connected before power on.

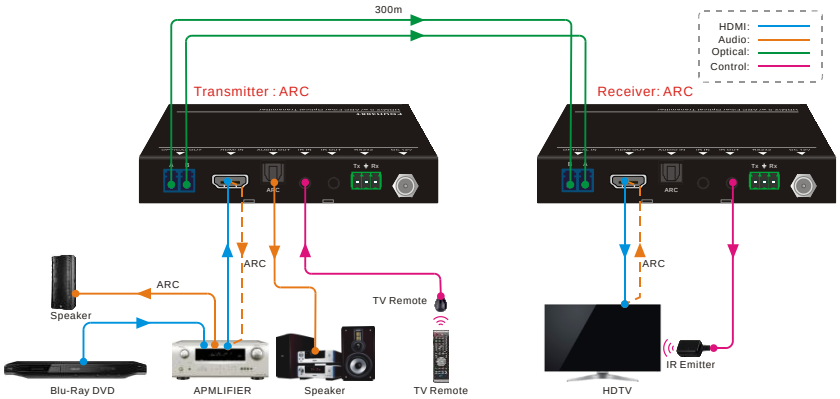
There are three connection ways can be chosen via ARC mode switcher.

Mode	Switch Status		Description
	Transmitter	Receiver	
①	ARC	ARC	The audio signal is transmitted from the HDTV display back to **HDMI IN** and **AUDIO OUT** ports.
②	ARC	AUDIO	The audio signal is transmitted from the **AUDIO IN** to **HDMI IN** port.
③	AUDIO	ARC	The audio signal is transmitted from the HDTV display back to the **AUDIO OUT** port.
④	AUDIO	AUDIO	The audio signal is transmitted from the **AUDIO IN** to the **AUDIO OUT** port.

Note: *When the switch status is set as mode 1,2 or 3, the amplifier, display must support ARC.*

① Transmitter: ARC; Receiver: ARC

The audio signal is transmitted from the HDTV display back to **HDMI IN** and **AUDIO OUT** ports.



Connection procedure:

Step1. Connect the **OPTICAL OUT** port of the Transmitter to the **OPTICAL IN** port of the Receiver with two OM3/OM4 multi-mode fiber cables.

Step2. Connect an amplifier to the **HDMI IN** port of Transmitter, and then connect HDMI source device (e.g. Blue-ray DVD) and Speaker to the amplifier.

Step3. Connect a broadcast device (e.g. Speaker) to the **AUDIO OUT** port of Transmitter with toslink audio cable.

Step4. Connect a display device (e.g. HDTV) to the **HDMI OUT** port of Receiver with HDMI cable.

Step5. Bi-directional IR control:

Both Transmitter and Receiver have **IR IN** and **IR OUT** port. When one model use for IR signal receiver, the IR signal must be sent out by the other model.

For example: When **IR IN** port of Transmitter connects with an IR Receiver, the IR Emitter must be connected to the **IR OUT** port of Receiver.

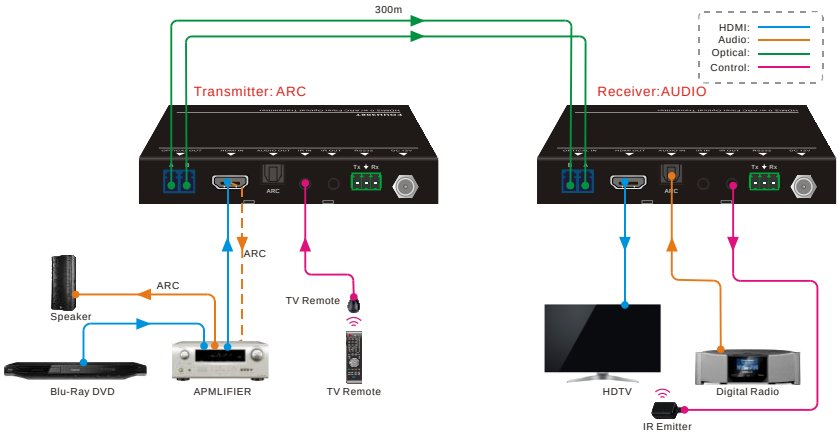
Step6. Bi-directional RS232 control:

Both Transmitter and Receiver have **RS232** port. When one model use for control device, the other must be used for the third-party device needed to be controlled.

For example: When **RS232** port of Transmitter connects with a control PC, the third-party device must be connected to the **RS232** port of Receiver.

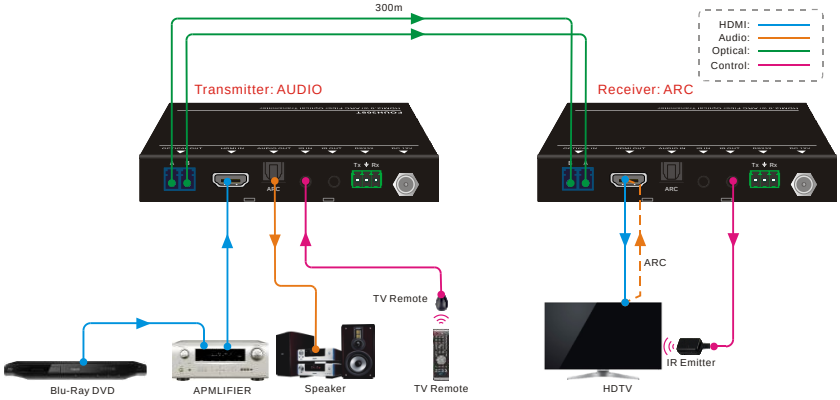
② Transmitter: ARC; Receiver: AUDIO

The audio signal is transmitted from the **AUDIO IN** to **HDMI IN** port.



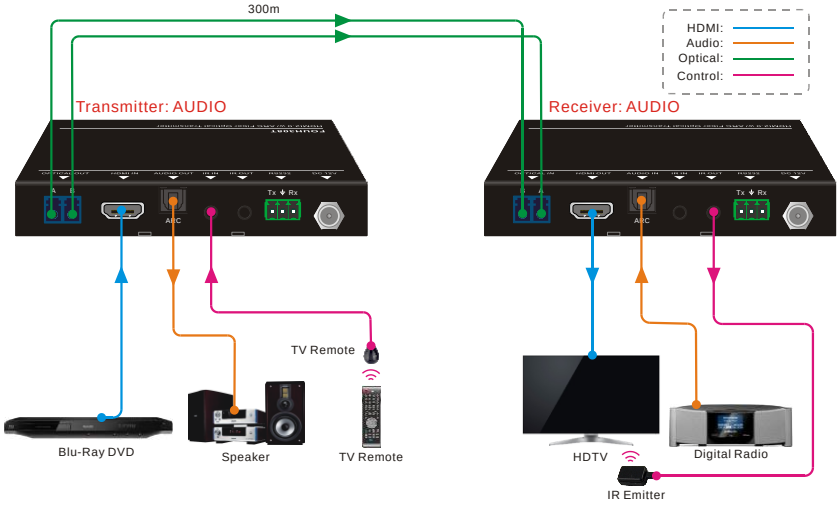
③ Transmitter: AUDIO; Receiver: ARC

The audio signal is transmitted from the HDTV display back to the **AUDIO OUT** port.

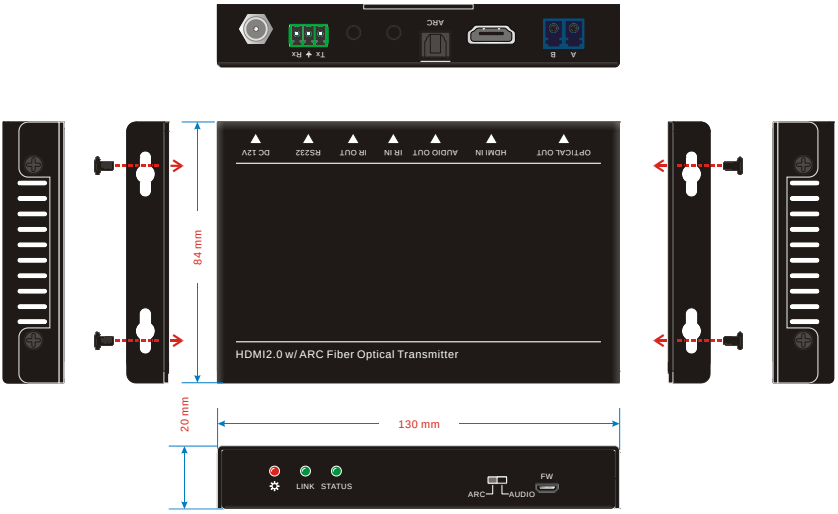


④ Transmitter: AUDIO; Receiver: AUDIO

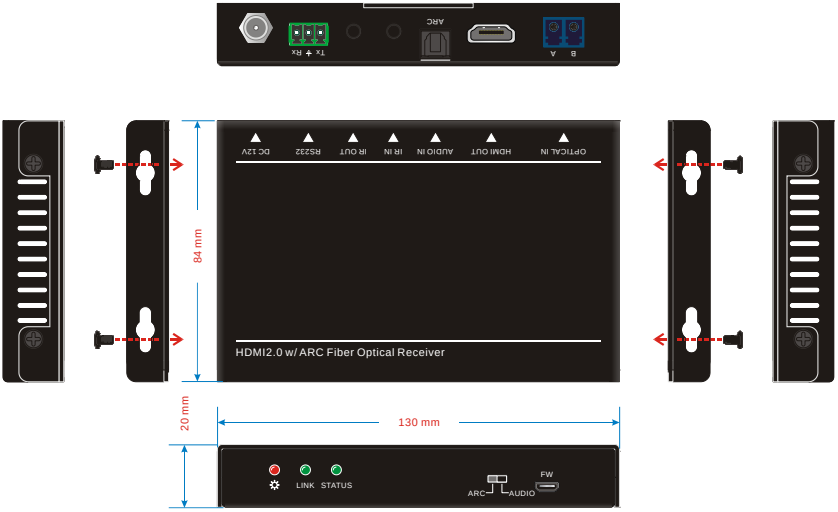
The audio signal is transmitted from the **AUDIO IN** to the **AUDIO OUT** port.



6. Panel Drawing



6-1 Transmitter



6-2 Receiver

7. Specification

Transmitter	
Input	(1) HDMI IN
Input Connector	(1) Type A Female HDMI
Output	(2) OPTICAL OUT; (1) AUDIO OUT
Output Connector	(2) LC Connector; (1) Toslink Connector
Control	(1) IR IN; (1) IR OUT; (1) RS232
Control Connector	(2) 3.5mm Mini Jacks; (1) 3-Pin phoenix connector
Receiver	
Input	(2) OPTICAL IN; (1) AUDIO IN
Input Connector	(2) LC Connector; (1) Toslink Connector
Output	(1) HDMI OUT
Output Connector	(1) Type A Female HDMI
Control	(1) IR IN; (1) IR OUT; (1) RS232
Control Connector	(2) 3.5mm Mini Jacks; (1) 3-Pin phoenix connector
General	
Resolution	Up to 4Kx2K 60Hz 4:4:4 HDR.
Audio Format	PCM, Dolby Digital, DTS, DTS-HD.
Standard	HDMI2.0 & HDCP2.2 complaint.
Transmission Distance	≤300m via single mode or OM3/OM4 multi-mode fiber cables.
Operation Temperature	0 ~ +40℃
Storage Temperature	-10 ~ +55℃
Relative Humidity	10% ~ 90%
Power Supply	Input: AC 100~240V, 50/60Hz; Output: 12VDC 1A.
Power Consumption	9W (max)
Dimension (W*H*D)	130mm x 20mm x 84mm
Net Weight	175g

8. Troubleshooting & Maintenance

Problems	Potential Causes	Solutions
Color losing or vague/ double image in HDMI display	Poor quality of the optical fiber cable	Change for qualified OM3 cable.
Power led is off, operations don't work	Not been powered	Power up the unit
	Poor contact	Make sure power adapter is in well contact
No output on the display	Source/ Display is off	Turn on the source/ display
	Poor contact	Check the DVI ports one by one to make sure they're in well contact.
	The display doesn't support the resolution	Connect the display to the transmitter and capture its EDID data before using.

If your problem still remaining after following the above troubleshooting steps, please find further assistance.

9. Customer Service

The return of a product to our Customer Service implies the full agreement of the terms and conditions hereinafter. There terms and conditions may be changed without prior notice.

1) **Warranty**
   The limited warranty period of the product is fixed 3 (three) years.

2) **Scope**
   These terms and conditions of Customer Service apply to the customer service provided for the products or any other items sold by authorized distributor only.

3) **Warranty Exclusions:**
   - Warranty expiration.
   - Factory applied serial number has been altered or removed from the product.
   - Damage, deterioration or malfunction caused by:
     - ✓ Normal wear and tear.
     - ✓ Use of supplies or parts not meeting our specifications.
     - ✓ No certificate or invoice as the proof of warranty.
     - ✓ The product model showed on the warranty card does not match with the model of the product for repairing or had been altered.
     - ✓ Damage caused by force majeure.
     - ✓ Servicing not authorized by distributor.
     - ✓ Any other causes which does not relate to a product defect.
   - Shipping fees, installation or labor charges for installation or setup of the product.

4) **Documentation:**
   Customer Service will accept defective product(s) in the scope of warranty coverage at the sole condition that the defeat has been clearly defined, and upon reception of the documents or copy of invoice, indicating the date of purchase, the type of product, the serial number, and the name of distributor.

Remarks: For further assistance or solutions, please contact your local distributor, or email EET at: *obsupport@eet.dk*

VIVOLINK™
PROFESSIONAL AV SOLUTIONS