techlogix TL-TP70-HD2ARC 70m Extender User Manual

Contents

techlogix TL-TP70-HD2ARC 70m Extender

Preface
Read this user manual carefully before using this product. Pictures shown in this manual is for reference only, different model and specifications are subject to real product.
This manual is only for operation instruction only, not for any maintenance usage.

Trademarks
Product model and logo are trademarks. Any other trademarks mentioned in this manual are acknowledged as the properties of the trademark owner. No part of this publication may be copied or reproduced without prior written consent.

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 A 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 ensure the best from the product, please read all instrucons 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 precauons 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 meeng the products' specificaons may cause damage, deterioraon or malfuncon.
- 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 venlaon 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 opcal cable. It can cause malfuncon.
- 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 le unused for a long period of me.
- Informaon on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.

Introducon

Introducon to TL-TP70-HDARC

The TL-TP70-HDARC is an ultra thin design extender set consisng of a transmitter and a receiver. The set transmits a 1080p signal to the receiver up to 70m via a shielded Cat5e/Cat6 cable; 4k up to 40m. Bi-direconal RS232 and IR communicaon is included to allow control of an RS232 or IR source or display. PoE power allows you to connect the power supply at either the transmier or the receiver to power both units. The set also supports ARC, which enables audio up streaming from display to an audio system using either HDMI or the coax digital output.

Features

- HDMI 2.0 compliant, supports resoluons up to 4Kx2K
- Maximum transmission distance is 70m for 1080p and 40m for 4Kx2K over a single shielded CAT5e/CAT6 cable
- High Bandwidth: 18Gps.
- Compliant with HDCP 2.2
- Supports bi-direconal PoC
- Supports ARC on HDMI or coax digital output
- Bi-direconal IR control
- Bi-direconal RS232 control

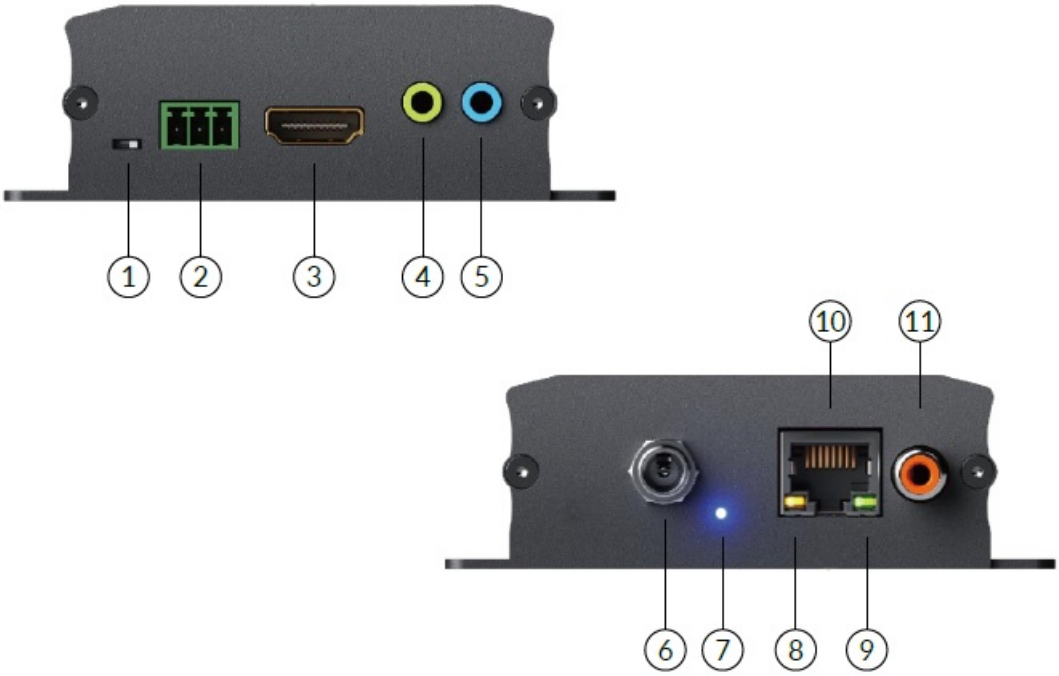
Package List

- 1 x TL-TP70-HD2ARC (including TX and RX)
- 4 x Screws
- 1 x Power Adapter (DC 24V 1A) with power cable
- 1x IR Emier (5V)
- 1 x IR Receiver (5V, with carrier)
- 2 x Removable 3-pin terminal blocks

Please confirm if the product and the accessories are all included. If not, please contact your dealer.

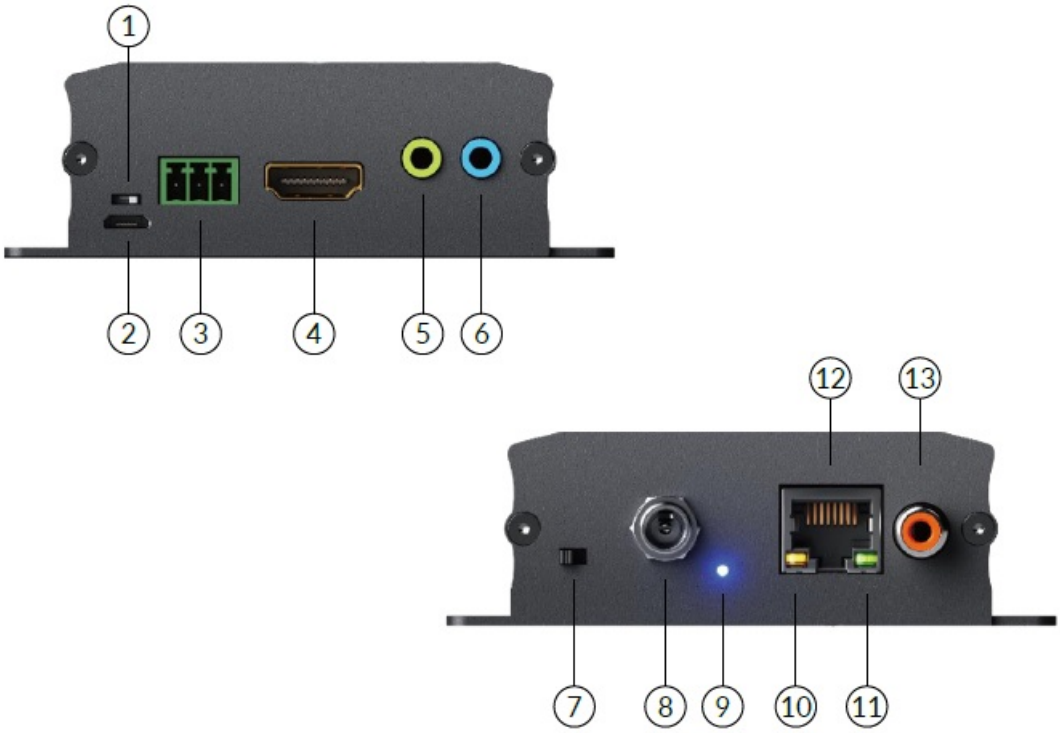
Panel Descripon

Transmitter



1. Firmware Update Switch
2. RS232 port (TX – RX – GND)
3. HDMI In
4. IR Receiver Port
5. IR Emier Port
6. DC Power In
7. Signal Status LED
8. Power LED
9. Link LED
10. Twisted Pair Out
11. Coaxial ARC Port

Receiver



1. Firmware Update Switch
2. Firmware Update Port
3. RS232 port (TX – RX – GND)
4. HDMI In
5. IR Receiver Port
6. IR Emier Port
7. AV On/Off Switch
8. DC Power In
9. Signal Status LED
10. Power LED
11. Link LED
12. Twisted Pair Out
13. Coaxial ARC Port

System Connection Procedures

- Step 1. Connect an HDMI source (such as a Blu-ray player) to the HDMI IN port of the transpire with an HDMI cable.
- Step 2. Connect the TP OUT port of the transpire to TP IN port of the receiver via a shielded CAT5e/CAT6 cable.
- Step 3. Connect an HDMI display (such as an HDTV) to the HDMI OUT port of the receiver with an HDMI cable.
- Step 4. When using the bi-directional IR control, do the following.
    - Connect the included IR receiver to the IR IN port at either the transmitter or the receiver.
    - Connect the included IR Emiter to the IR OUT port at the other end.

- Step 5. Connect the included DC 24V power adaptor to the power port of the Transmitter or the receiver.

Specifications

I/O Connections – Transmitter		
RS232	3-pin removable screw terminal	
HDMI In	HDMI type A connector	
IR In	3.5mm stereo jack	
IR Out	3.5mm mono jack	
DC 24V	Barrel connector with locking scre w	
TP Out	8P8C (RJ45-style) connector	
ARC Out	Coaxial RCA connector	
I/O Connections – Receiver		
Firmware Update	Micro USB type B	
RS232	3-pin removable screw terminal	
HDMI In	HDMI type A connector	
IR In	3.5mm stereo jack	
IR Out	3.5mm mono jack	
DC 24V	Barrel connector with locking scre w	
TP Out	8P8C (RJ45-style) connector	
ARC Out	Coaxial RCA connector	
Switches and Indicators – Transmitter		
Firmware Update	2-position tactile sliding switch	

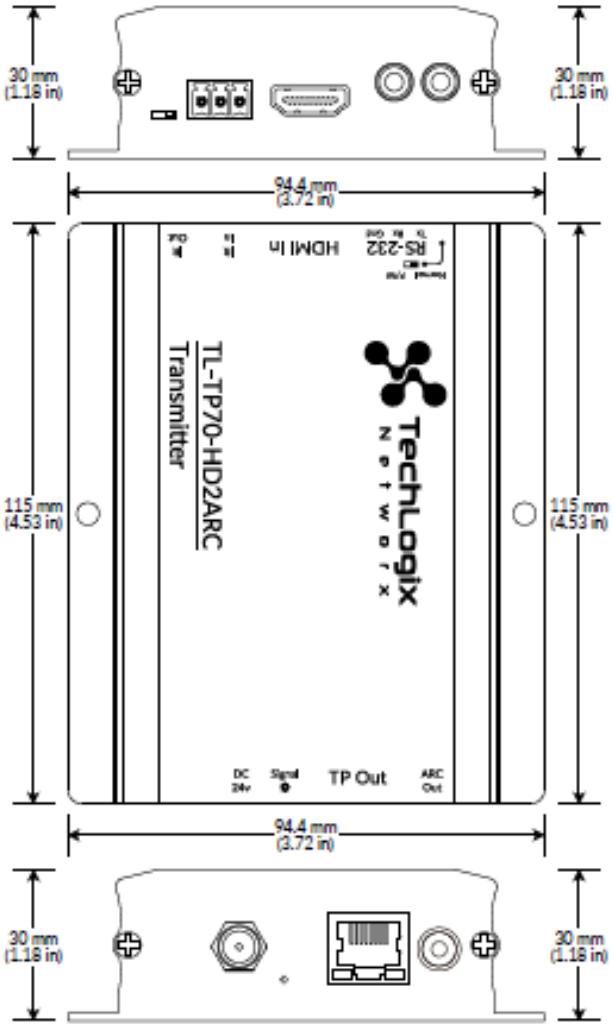
Power LED	Amber LED on 8P8C connector	
Link LED	Green LED on 8P8C connector	
Signal	Blue LED	
Switches and Indicators – Receiver		
Firmware Update	2-position tactile sliding switch	
Power LED	Amber LED on 8P8C connector	
Link LED	Green LED on 8P8C connector	
Signal	Blue LED	
AV Mute	2-position tactile sliding switch	
Supported Video, Audio, and Control		
Maximum Distances	1080p/720p: 70m (230 t.) 4K@30/10G: 40m (130 t.) 4K@60/18G: 40m 130 t.)	
Maximum Video Compatibility	4K@60Hz 4:4:4 HDR supported	
Video Compliance	HDMI 2.0, HDCP 2.2, and CEC (C onsumer Electronics Control)	
HDCP Compatibility	HDCP 2.2 Conversion – output ve rsion matches sink (display) version	
Embedded Audio (HDMI)	Up to PCM 8 channel, Dolby Digit al TrueHD, and DTS-HD Master Audio	

Input DDC Signal	5.0 volts p-p (TTL)
Input Video Signal	0 to 1.2 volts p-p
IR Carrier Frequency Range	20-60kHz at 5 volts
RS232 Supported Data Rate	Full-duplex up to 115200 baud

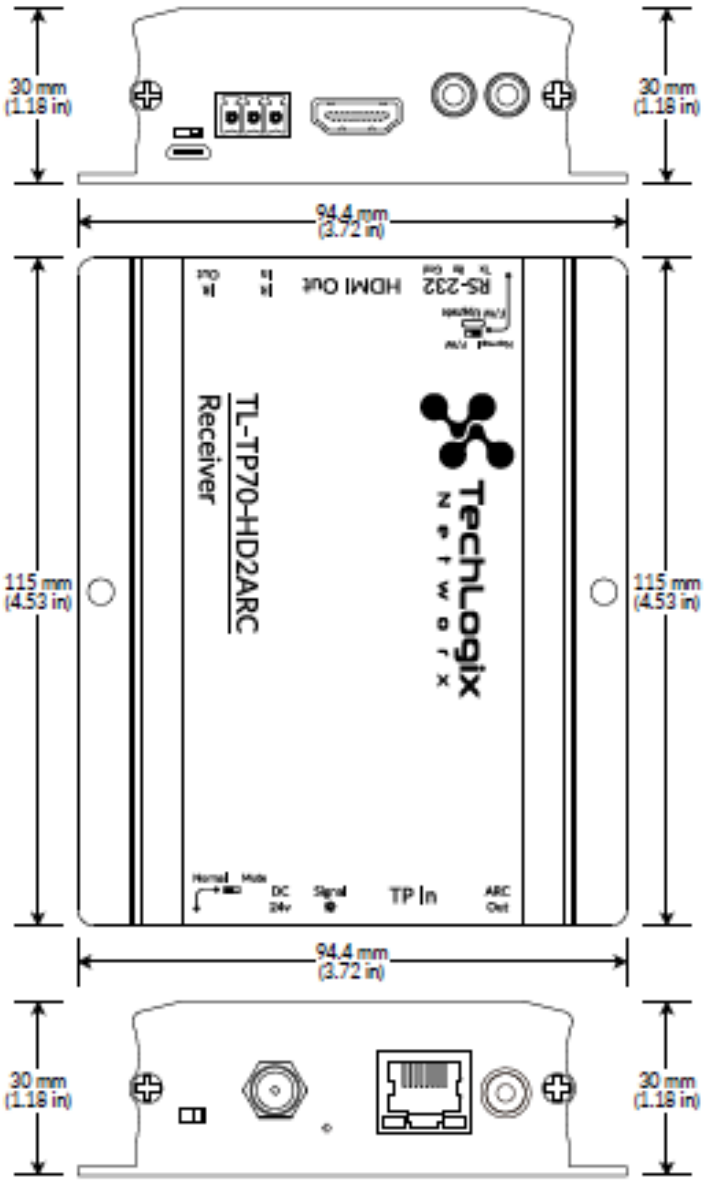
Twisted Pair Signal Characteristics	
Maximum Distance 1080p (4K)	70m (230 t.), (40m [130 t□.])
Cable Requirements	Solid core shielded Category 5e, Category 6 or greater with TIA/EIA-568B crimp pattern
Bandwidth	Up to 18 Gbps
Compression Signal Characteristics	
Compression ratio	Up to 2:1 (adaptive for signals above 10.2gbps)
Compression type	Color Space Conversion (VLC)
Chassis and Environmental	
Enclosure	Painted aluminum
Dimensions	115mm x 94.4mm x 30mm
Operating Temperature (Environment)	0° to +40° C
Operating Humidity (Environment)	20% to 90% (non-condensing)
Storage Temperature (Environment)	-20° to +60° C

	Storage Humidity (Environment)	20% to 90% (non-condensing)
	Power, ESD, Regulatory	
	Maximum Power Consumption	15W (max)
	Power Supply	24V DC, 1 A
	ESD Protection	Human body model — ±15kV (air-gap discharge) & ±8kV (contact discharge)
	Regulatory	CE, FCC
	Other	
	Standard Warranty	3 Year
	Diagnostic Indicators	Signal LED
	Network Indicators	Link Speed and Activity
	Included Items	Power Supply, IR Transmitter, IR Receiver, 3-pin Terminal Block Connector (2 ea)

Panel Drawing



Transmitter



Receiver

Troubleshoong & Maintenance

- No image on display:
- Ensure that the display device has been set to the correct input.
- Ensure that the HDMI cables used for both the source/transmitter and the receiver/display are properly connected and are working. Test the HDMI cables directly from a source to display and ensure their operation.
- Ensure that the Cat5e/Cat6 cable has not been damaged and that it has been terminated correctly with T568B on both ends. A temporary length of Cat5e/Cat6 can be used for testing to ensure that the devices are all compatible and working properly.
- Ensure proper grounding of the power supply.
- Known issues with HDMI 1.2 source devices:
  Older combability (HDMI 1.2) may result in transmission issues. Please contact Technical Support of your local distributor for a solion to these issues.
- Color loss or poor picture quality:

- Ensure that the HDMI cables used for both the source and transmitter and the receiver and display are properly connected and are of good quality. Test the HDMI cables directly from a source to display and ensure their picture quality.
- Ensure proper grounding of the power supply.
- If the becomes stronger or picture quality becomes worse when connecting the video connectors, this may be due to improper grounding.
- Check the grounding and make sure all the components are properly grounded to a common ground. Improper grounding may cause damage to the receiver.

If your problem persists following the above troubleshooting steps, seek further help from authorized dealer or our technical support.

After-sales Service

If some problems occur when using the device, please check the troubleshooting section referenced in this user manual.

1. Product Limited Warranty: We warrant that our products will be free from defects in materials and workmanship for three years. Please see warranty page posted on **www.tlnetworx.com** for more info.
2. What the warranty does not cover:
    - Warranty expiration.
    - Factory applied serial number has been altered or removed from the product.
    - Damage, deteriorator or malunion caused by:
    - Normal wear and tear
    - Use of supplies or parts not meeting our specifications
    - No carucate 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.
    - Non-authorized service
    - Other causes which does not relate to a product defect
    - Delivery, installation or labor charges for installation or setup of the product
3. Technical Support: Email or call our sales department, please prepare the following information about your cases.
    - Product version and name.
    - Detailed failure situations.
    - Date and place of purchase.

Remarks: For any questions or problems, please try to get help from your local distributor.

Documents / Resources

	techlogix TL-TP70-HD2ARC 70m Extender [pdf] User Manual TL-TP70-HD2ARC 70m Extender, TL-TP70-HD2ARC, 70m Extender, Extender

References

- TechLogix Networx - Homepage

Manuals+,