



User Manual

HDMI 18Gbps Repeater

Model PT-R-HD21

Designed in Germany

Version V1.0

Preface

Read this user manual carefully before using this product.

Pictures shown in this manual are for reference only.

Different model layouts and specifications are subject to the physical product.

This manual is for operation instructions only, not for any maintenance usage.

In the constant effort to improve our product, we reserve the right to make changes in functions or parameters without prior notice or obligation.

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 the 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 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 manufacturer would void the user's authority to operate the equipment.



REACH | 1907/2006/EU**ROHS | 2011/65/EU**

PureLink hereby declares that this product **PureTools PT-R-HD21** complies with Directives 1907/2006/EU and 2011/65/EU.

EMC / LVD (Electro Magnetic Compatibility / Low Voltage Directive)

PureLink GmbH hereby declares that this product **PureTools PT-R-HD21** complies with Directives 2014/30/EU and 2014/35/EU. The full text of the EU Declaration of Conformity is available at the following Internet address:

http://www.purelink.de/ce/4251364737408_CE.pdf



SAFETY PRECAUTIONS

To ensure 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.

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1. Product Introduction

1.1 Introduction

The HDMI 18Gbps Repeater is the most advanced solution for HDMI signal extension/cascade. It can amplify and equalize signals to improve the quality of audio and video signal. It supports the transmission distance for input and output respectively up to 10m and 5m at the resolution of 4K2K@50/60Hz(YUV_444), 15m and 10m at 4K2K@60Hz (YUV_420), 20m and 20m at 1080p@60Hz. Capable of receiving and transmitting 18Gbps bandwidth rate with CDR (Clock Data Recovery) to ensure no data loss.

1.2 Features

- Compliant with HDMI 2.0b, HDCP 2.3 / 1.x and DVI 1.0
- Support 18Gbps video bandwidth
- Support resolution up to 4K2K@60Hz 4:4:4
- Built-in TMDS equalization and CDR (Clock Rate Recovery) for extending HDMI cable distance
- Support HDR, HDR10, HDR10+, Dolby Vision, ARC and CEC pass-through
- Signal amplification, jitter cleaning and signal conditioning of HDMI2.0 signal with cascade function
- Simple plug and play, no drive and installation setting are required
- Compact professional mountable housing with locking power connector

1.3 Package List

- 1 × HDMI Repeater
- 1 × USB to DC 5.5mm locking cable (Male, 1.5m)
- 1 × User Manual

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

2. Panel Description



No.	Name	Function Description
1	HDMI IN	HDMI input port, connect to HDMI source device such as DVD or PS3 with an HDMI cable.
2	HDMI OUT	HDMI output port, connect to HDMI display device such as TV or monitor with an HDMI cable.
3	PWR	Power LED, lights red when the repeater is powered on.
4	DC 5V	DC 5V Power input port.

3. Specification

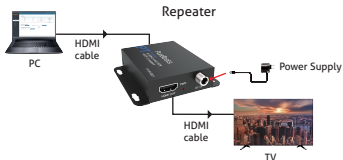
Technical	
HDMI Compliance	HDMI 2.0
HDCP Compliance	HDCP 2.3 / 1.x
Video Bandwidth	594MHz/18Gbps
Video Resolution	Up to 4K2K@60Hz YUV 4:4:4
Color Depth	8-bit, 10-bit, 12-bit (1080p@60Hz) 8-bit (4K2K@60Hz YUV4:4:4) 8-bit, 10-bit, 12-bit (4K2K@60Hz YCbCr 4:2:2/4:2:0)
Color Space	RGB, YCbCr 4:4:4, YUV 4:4:4, YCbCr 4:2:2/4:2:0
HDMI Audio Formats	PCM2.0/5.1/7.1CH, Dolby 5.1, DTS5.1, Dolby-TrueHD, DTS-HD
ESD Protection	Human body model — $\pm 8\text{kV}$ (Air-gap discharge) & $\pm 4\text{kV}$ (Contact discharge)

Connection	
Input	1x HDMI Type A [19-pin female]
Output	1x HDMI Type A [19-pin female]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	70mm[W] x 75mm[D] x 18mm[H]
Weight	125g
Power Supply	DC 5V/1A
Power Consumption	0.5 W
Operating Temperature	0 - 40°C
Storage Temperature	-20 - 60°C
Relative Humidity	20 - 90% RH (no condensation)

4. System Diagram

The following diagrams illustrate typical input and output connections that can be utilized with this repeater:

1. Connect a source such as a PC to the repeater's HDMI IN port by HDMI cable.
2. Connect a TV to the HDMI OUT port on the repeater.
3. Power on the repeater by connecting to a DC 5V power supply.



Usage Precaution

- Make sure 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.

7. After-Sales Service

If there appear some problems when running the product, please check and deal with the problems referring to this user manual. Any transport costs are borne by the users during the warranty.

- 1) Product Limited Warranty:** This workmanship for **three years** (The Proof of purchase in the form of a bill of sale or receipted invoice which is Proof of purchase in the form of a bill of sale or receipted invoice which is evidence that the unit is within the Warranty period must be presented to warranty service.
- 2) What the warranty does not cover (servicing available for a fee):**
 - 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
 - Any 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: For any questions or problems, contact your distributor or reseller and tell them the respective product name and version, the detailed failure situation as well as the formation of the cases.

Asking for Assistance

Technical Support:

Phone: +49 5971 800299

Fax: +49 5971 800299

Technical Support Hours:

8:30 AM to 5:00 PM Monday thru Thursday

8:30 AM to 4:00 PM Friday

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