

SP-1H1C70-KIT
HDMI over CAT Extender-Splitter
with IR (70m)



User Manual

VER 1.0

Thank you for purchasing this incredible product

For best performance and safety, please read these instructions carefully before connecting and operating 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, power surges, electrostatic discharge (ESD), lightning strikes or transients. The use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

Safety and performance Notice

Only use the power supply supplied with the unit, or a PhD Solutions supplied replacement. Do not disassemble any of the equipment. This will void the manufacturer's warranty.

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1. Introduction

This HDMI Extender-Splitter can extend 4K30 high-definition video and audio signals up to 131Ft /40m and 1080P up to 230ft / 70m over a single CAT cable. It supports resolutions of up to 4K2K@30Hz 4:4:4 and HDCP 1.4 An HDMI loop output port will split the HDMI Input to a local Display. The transmitter will power the receiver over the CAT cable via POC. It is equipped with one-way IR pass-through which allows for source control from the display end.

This extenders' HDMI loop output can be cascaded to the next extender. It also has an EDID copy function (you can choose local or remote EDID). Audio formats up to PCM7.1, Dolby True HD, DTS HD are supported.

2. Features

- ☆ HDMI 1.4, HDCP 1.4 and DVI 1.0 compliant
- ☆ Support video resolutions up to 4k2k@30Hz YUV 4:4:4
- ☆ The maximum transmission distance via a single CAT6/5E cable is as follows:
 - CAT6: 230ft/70m for 1080p, 131ft/40m for 4K30
 - CAT5E: 197ft/60m for 1080p, 115ft/35m for 4K30
- ☆ Support copying EDID from receiver display or loop out display
- ☆ Allow for cascading via additional HDMI loop out port
- ☆ Support one-way POC functionality (from transmitter to receiver)
- ☆ One-way IR signal transmission

3. Package Contents

- ① 1 × HDMI Transmitter
- ② 1 × HDMI Receiver
- ③ 1 × IR Emitter Cable (1.5 meters)
- ④ 1 × IR Receiver Cable (1.5 meters)
- ⑤ 1 × 12V/1A DC Power Adapter
- ⑥ 1 × User Manual

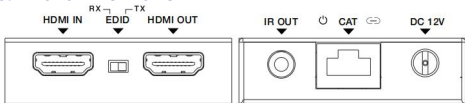
4. Specifications

Technical	
HDMI Compliance	HDMI 1.4
HDCP Compliance	HDCP 1.4
Video Bandwidth	10.2Gbps
Video Resolution	Up to 4K@30Hz
Audio Support	Up to 7.1CH HD audio
Input TMDS Signal	3.3 volts
Input DDC Signal	5.0 volts/P-P
ESD Protection	Human Body model: +/- 8 kV (air-gap discharge) +/- 4 kV (contact discharge)

Connection	
Transmitter	Input: 1 x HDMI Type A [19-pin female] Outputs: 1 x HDMI Type A [19-pin female] 1 x IR OUT [3.5mm Stereo Mini-jack] 1 x CAT OUT [RJ45, 8-pin female]
Receiver	Inputs: 1x IR IN [3.5mm Stereo Mini-jack] 1x CAT IN [RJ45, 8-pin female] Output: 1x HDMI Type A [19-pin female]
Mechanical	
Housing	Metal Enclosure
Color	Black
Dimensions	79.5mm[W] x 69mm[D] x 16.5mm[H]
Weight	Transmitter: 132g, Receiver: 130g
Power Supply	12V/1A DC
Power Consumption	Transmitter: 1.86W, Receiver: 0.87W
Operation Temperature	32 - 104°F / 0 - 40°C
Storage temperature	-4 - 140°F / -20 - 60°C
Relative Humidity	20 - 90% RH (no condensation)

5. Operation Controls and Functions

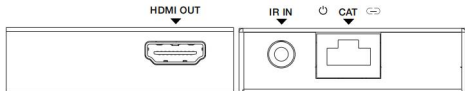
5.1 Transmitter Panel



No.	Name	Function Description
1	HDMI IN	HDMI signal input port. Connect to HDMI source device such as DVD or Set-top box.
2	EDID DIP switch	The switch is used for selecting EDID: Switch to the right position, the extender will copy HDMI loop out displays EDID information for the source to read; Switch to the left position, the extender will copy Receiver display EDID for the source to read.
3	HDMI OUT	HDMI signal loop out port. Connect to a HDMI display device such as an HDTV.
4	IR OUT	Connect to IR blaster cable, the IR signal is from the IR IN port of the receiver.
5	Power LED	When the transmitter is powered on, the LED will be on.
6	CAT	CAT output port. Connect to the CAT input port of the receiver with CAT5E/6 cable. Terminated 568B Configuration

7	Link LED	When the transmitter is connected to HDMI source, the LED will be on.
8	DC 12V	DC 12V power supply port.

5.2 Receiver Panel



No.	Name	Function Description
1	HDMI OUT	HDMI signal output port. Connect to HDMI display device such as HDTV.
2	IR IN	Connect to the supplied IR receiver cable, the IR signal will emit to the IR OUT port of the transmitter.
3	Power LED	When the receiver is powered on, the LED will be on.
4	CAT	CAT input port. Connect to the CAT output port of the transmitter with CAT5E/6 cable. Terminated 568B Configuration
5	Link LED	When the receiver is connected to HDMI source, the LED will be on.

5.3 IR Pinout

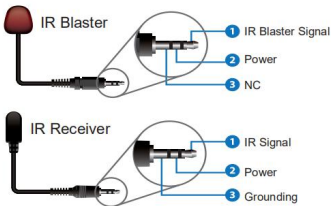
IR receiver and emitter pin's definition is as below:



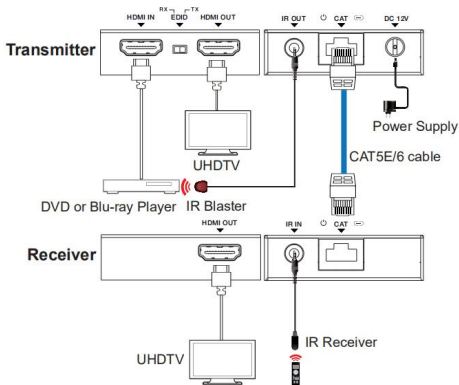
IR RECEIVER



IR BLASTER



6. Application Diagram



HDMI[™]
HIGH DEFINITION MULTIMEDIA INTERFACE

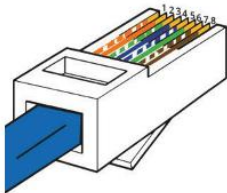
The terms HDMI and HDMI High-Definition Multimedia interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

7.CAT Cable Termination Diagram

The CAT cable should be terminated properly with the correct RG45 connectors according to TIA568B termination standard shown below

RJ45 Pin-Out T568B

- | | |
|----------------|---------------|
| 1.White Orange | 5.White Blue |
| 2.Orange | 6.Green |
| 3.White Green | 7.White Brown |
| 4.Blue | 8.Brown |



8. Phd Solutions Product Warrantee

IMPORTANT INFORMATION ABOUT YOUR RIGHTS AND OBLIGATIONS, AS WELL AS LIMITATIONS AND EXCLUSIONS THAT MAY APPLY TO YOU. YOUR RIGHTS AND THIS LIMITED WARRANTY

This Limited Warranty gives you specific legal rights. You may also have other legal rights that vary by state, province or jurisdiction. The disclaimers, exclusions, and limitations of liability under this Limited Warranty will not apply to the extent prohibited by applicable law. For a full description of your legal rights you should refer to the laws applicable in your jurisdiction and you may wish to contact a relevant consumer advisory service. Should you feel your product does not function adequately due to defects in materials or workmanship, PhD Solutions (hereby referred to as "the warrantor") will, for the length of the period indicated below:

- Repair the product with new or refurbished parts. or
- Replace it with a new or refurbished product.

1. WHAT THIS LIMITED WARRANTY COVERS; PERIOD OF COVERAGE PHD Solutions ("PHD Solutions"), 5th Floor, Barkly Wharf, Le Caudan Waterfront, Port Louis, Mauritius, warrants to the owner of the enclosed product that the product contained in this box ("Product") will be free from defects in materials and workmanship for a period of two years from the date of delivery following the original purchase (the "Warranty Period"), or if this product has been professionally installed, the warranty start date is from the date your installer purchased the item, not your system commissioning date. Please check with your installer for their

purchase date. If the Product fails to conform to this Limited Warranty during the Warranty Period, PHD Solutions will, at its sole discretion, either (a) repair or replace any defective Product or component; or (b) accept the return of the Product and refund the money actually paid by the original purchaser for the Product. Repair or replacement may be made with a new or refurbished product or components, at PHD Solutions' sole discretion.

If the Product or a component incorporated within it is no longer available, PHD Solutions may replace the Product with a similar product of similar function, at PHD Solutions' sole discretion. This is your sole and exclusive remedy for breach of this Limited Warranty. Any Product that has either been repaired or replaced under this Limited Warranty will be covered by the terms of this Limited Warranty for the longer of ninety (90) days from the date of delivery or the remaining Warranty Period. This Limited Warranty is transferable from the original purchaser to subsequent owners, but the Warranty Period will not be extended in duration or expanded in coverage for any such transfer.

2.WARRANTY CONDITIONS; HOW TO GET SERVICE IF YOU WANT TO CLAIM UNDER THIS LIMITED WARRANTY

Before being able to claim under this Limited Warranty, the owner of the Product must (a) notify PHD Solutions of the intention to claim during the Warranty Period and providing a description of the alleged failure, and (b) comply with PHD Solutions' return shipping instructions, and (c) ship the Product at owner's cost (except where prohibited by applicable law) to PHD Solutions for repair or replacement. PHD Solutions will have no warranty obligations with respect to a returned Product if it determines, in its reasonable discretion after examination of the returned Product that the Product is an Ineligible Product (defined below). PHD

Solutions will bear all costs of return shipping to owner, except with respect to any Ineligible Product, for which owner will bear all shipping costs.

3. WHAT THIS LIMITED WARRANTY DOES NOT COVER

This warranty does not cover the following (collectively "Ineligible Products"): Products marked as "sample" or sold "AS IS"; or Products that have been subject to: (a) modifications, alterations, tampering, or improper maintenance or repairs; (b) handling, storage, installation, testing, or use not in accordance with the Installation Guide or other instructions provided by PHD Solutions; (c) abuse or misuse of the Product; (d) breakdowns, fluctuations, or interruptions in electric power or the telecommunications network; or (e) Acts of God, including lightning, fire, flood, tornado, earthquake, or hurricane. This warranty does not cover consumable parts, including batteries, unless damage is due to defects in materials or workmanship of the Product, or software (even if packaged or sold with the product). PHD Solutions recommends that you use only authorized service providers for maintenance or repair. Unauthorized use of the Product or software can impair the Product's performance and may invalidate this Limited Warranty. PHD Solutions does not warrant that operation of the Product will be error-free or uninterrupted or that the Product will in every case process all data correctly.

4. DISCLAIMER OF WARRANTIES

Except as stated above in this limited warranty, and to the maximum extent permitted by applicable law, PHD Solutions disclaims all express, implied, and statutory warranties and conditions with respect to the product, including the

implied warranties of merchantability, fitness for a particular purpose. To the maximum extent permitted by applicable law, also limits the duration of any implied warranties or conditions to the duration of this limited warranty.

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Version 1.0 – December 2020



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