

# PureLink

## UHDS-41R Owner's Manual 4 x 1 HDMI 2.0 Ultra HD/4K HDR Switch



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# Package Contents

Please make sure all of the following items are included in the package:

- 1) 1 x UHDS-41R
- 2) 1 x 5V/1A Power Adapter
- 3) 1 x 38KHz IR Rx cable
- 4) 1 x Optical Converter Header (for SPDIF audio output)
- 5) 1 x IR remote
- 6) 1 x Owner's manual

| Manual version | Release date |
|----------------|--------------|
| 1.2            | 12/19/2024   |

## General Specification

PureLink's UHDS-41R HDMI switch allows up to four (4) HDMI 2.0 digital video sources (with audio) to share one video display (with audio).

Our unique switch allows easy switching between different digital video sources (with audio) with auto switching by input signal detection, remote control unit, with a manual toggle button in front and/or via RS232 port.

It is perfect for home theater systems and commercial applications as well. No more hassles of manually plugging in different HDMI connectors to view different video sources (e.g., Blu ray, Satellite receiver, Computer, TiVo, etc)

|                                |  |
|--------------------------------|--|
| Model                          | UHDS-41R   |
| Input Signal                   | HDMI single link, 4 ports  |
| Output Signal                  | HDMI single link   |
| Bandwidth                      | 18 Gbps  |
| Supporting Display Resolutions | Resolution up to Ultra HD 4K<br>4096 x 2160 @50/60Hz (RGB 4:4:4 YCbCr 4:4:4, 4:2:2, 4:2:0) |

|                                    |  |
|------------------------------------|--|
| Connector Type                     | 4 x HDMI inputs<br>1 x HDMI output<br>1 x IR<br>1 x RS232<br>1 x Analog audio out<br>1 x DC power jack |
| HDCP Support                       | HDCP 2.2   |
| ESD Protection<br>Human Body Model | ± 8kV (air-gap discharge)<br>± 4kV (contact discharge)   |
| Conformations                      | HDMI version 2.0<br>DVI version 1.0  |
| Power Rating                       | DC +5V , 1A  |
| Power Consumption                  | Max 2.5W   |
| Dimension (WxDxH)                  | 3.3" x 3.3" x 0.5" / 180 x 85 x 11.6 (mm)  |
| Weight                             | 0.6 Lbs(0.3Kg)   |

## Operation and Reliability Specification

### 1. Operating Environment

Temperature : 32F ~ 104F (0°C~ 40°C)

Humidity : 10% ~ 80%

Altitude : 3,000m Max.

### 2. Transit Environment

Temperature : -13F ~ 140F (-25°C~ 60°C)

Humidity : 5% ~ 95%

Altitude : 15,000m Max.

### 3. Storage Environment

Temperature : -4F ~ -140F (-20°C~ 60°C)

Humidity : 5% ~ 95%

Altitude : 3,000m Max.

#### 4. Reliability

- MTBF: 90% at over 50,000 hours aging test
- In compliance with LCD Monitor reliability test standards

## Main Features

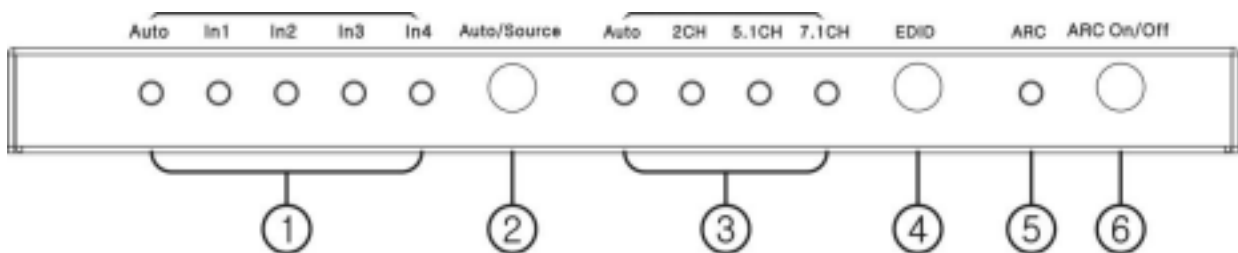
1. Ultra HD/4K resolution supports up to 4K60Hz (4:4:4 pixel format)
2. HDMI 2.0 & HDCP v2.2 support
3. High Dynamic Range (HDR) 10 bits support
4. BT2020 color representation
5. Auto-switching
  - Automatic input switching by signal detection
6. ARC – Audio Return Channel
  - Allows ARC-enabled TVs to transmit audio back to an AV receiver
7. Easy control methods
  - Manual toggle button
  - IR remote
  - RS232C
  - Auto switching by input signal detection
8. Full 3D compatibility (up to 1080p)
9. Supports Dolby TrueHD, Dolby Digital Plus and DTS-HD Master audio, LPCM
10. Auto EDID management
11. DVI and Displayport support via HDMI ports with adapters (sold separately)
12. Compact and Robust Module Design

# Installation and Connection Instructions

1. Connect your video source's HDMI output port to the HDMI switch's HDMI input port using standard HDMI cables (not included). Make sure all your HDMI sources and the display is turned off before connecting the cables.
2. Connect your HDMI display's HDMI input port to HDMI switch's HDMI output port. Make sure your HDMI display is turned off before connecting the cables.
3. Plug the 5V power supply into the switch's power input port.
4. Plug the 5V wall mount power supply into the wall outlet.
5. Turn on your display.
6. Turn on your video sources.
7. Use your remote control unit to switch channels. Or use the select button on the front panel of the switch to change channels.

## UHDS-41R Specification

### Front Panel



① Input switching status LED indicator

② Input Select button

- Press and hold for two (2) seconds to select between auto switching mode and manual switching mode

When it's on manual switching mode, press to switch inputs

③ EDID mode status

- Auto: communicate EDID from the display that is connected on the output 2

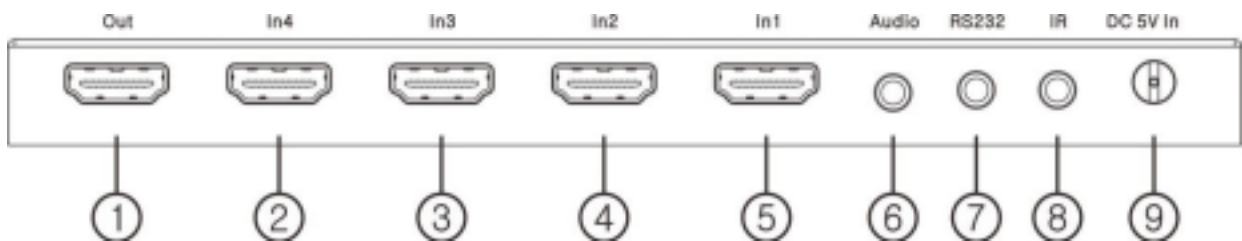
CH : Video EDID from the display connected the output + 2 Ch audio 5.1 CH:  
Video EDID from the display connected the output + 5.1 Ch audio 7.1 CH:  
Video EDID from the display connected the output + 7.1 Ch audio ④ EDID  
select button

- Press to select between EDID mode

⑤ ARC status LED

⑥ ARC function on/off button

## Rear Panel



① HDMI output

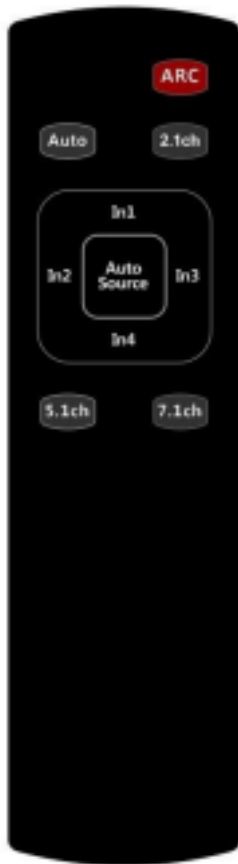
②③④⑤ HDMI inputs

⑥ Audio output (De-embedding)

⑦ RS232 port

⑧ IR extension port

⑨ DC 5V input port



## IR Remote

Auto/2.1ch/5.1ch/7.1ch: Press these buttons to select EDID mode

Auto Source: Press to select between auto switching mode and manual switching mode

In1/In2/In3/In4: Press to select input

## RS232

Communication Setting Baud rate: 19200

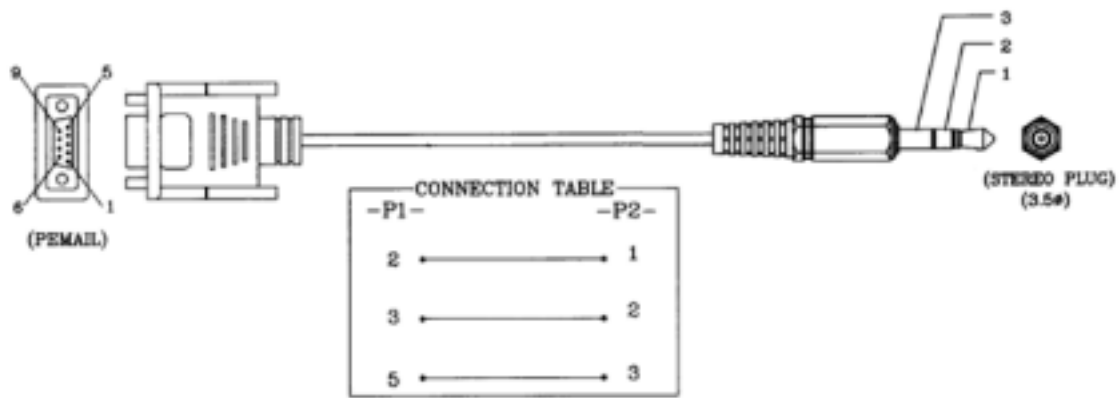
Data bits: 8

Parity : None

Stop bits : 1

Flow control : None

ARC: Press to enable/disable ARC function



**Command protocols**

| Command Protocols       |         |          |
|-------------------------|---------|----------|
|                         | Command | Feedback |
| Input switching command |         |          |
| Input 1                 | IN1!    | OK       |
| Input 2                 | IN2!    | OK       |
| Input 3                 | IN3!    | OK       |
| Input 4                 | IN4!    | OK       |
|                         |         |          |
| Input Auto switching    |         |          |
| On                      | ONAUTO! | OK       |

|                   |          |    |
|-------------------|----------|----|
| Off               | OFFAUTO! | OK |
|                   |          |    |
| Audio EDID switch |          |    |
| Audio auto        | A1!      | OK |
| Stereo Audio 2.0  | A2!      | OK |
| Dolby/DTS 5.1     | A3!      | OK |
| HD Audio 7.1      | A4!      | OK |
|                   |          |    |
| ARC               |          |    |
| On                | ONARC!   | OK |
| Off               | OFFARC!  | OK |

### HDMI Connector Pin Assignments

| HDMI port  | Pin No. | Description        | Remarks |
|------------|---------|--------------------|---------|
| HDMI 19pin | 1       | TMDS DATA 2P       |         |
|            | 2       | TMDS DATA 2 Shield |         |
|            | 3       | TMDS DATA 2M       |         |
|            | 4       | TMDS DATA 1P       |         |
|            | 5       | TMDS DATA 1 Shield |         |
|            | 6       | TMDS DATA 1M       |         |
|            | 7       | TMDS DATA 0P       |         |

|  |    |                    |  |
|--|----|--------------------|--|
|  | 8  | TMDS DATA 0 Shield |  |
|  | 9  | TMDS DATA 0M       |  |
|  | 10 | TMDS Clock P       |  |
|  | 11 | TMDS Clock Shield  |  |
|  | 12 | TMDS Clock M       |  |
|  | 13 | CEC                |  |
|  | 14 | RESERVED           |  |
|  | 15 | DDC Clock          |  |
|  | 16 | DDC DATA           |  |
|  | 17 | GND                |  |
|  | 18 | +5v                |  |
|  | 19 | Hot Plug Detect    |  |

## **Warranty**

### **PureLink Five (5) Year Limited Warranty for PureStream™ Branded Products Only**

Dtrovision, LLC. (hereinafter “PureLink”) warrants its HDTools and PureStream™ branded products (hereinafter “Product”) purchased directly from PureLink or Dealer shall be free from defects in workmanship and materials, under normal use and service, for a period of five (5) years on parts and five (5) years on labor. Any repaired or replaced equipment related to Product shall be covered only under the remaining portion of the warranty. This warranty has no relationship to and exists independently of any warranty offered by Dealer. This warranty is a limited warranty and gives you specific legal rights. You may also have other rights which vary from state to state.

## **TERMS & CONDITIONS**

PureLink shall repair or replace the Product if it develops a material fault during the period of warranty, on condition that i) the Product has only been subject to normal use in a domestic or commercial environment in a manner consistent with its specification and functionality, ii) the Product has been cared for reasonably and only subjected to reasonable wear and tear, iii) the defect has not been caused by willful or negligent abuse or neglect, or any accident or improper installation procedure, iv) the serial number of the Product has not been altered or removed. This warranty only applies to the original purchaser, and shall be the exclusive remedy to the original purchaser. PureLink shall not be liable for any damages whatsoever caused by Product or the failure of Product to perform, including incidental or consequential damages. PureLink shall not be liable for any claim made by a third party or made by the purchaser for a third party. Except as expressly set forth in this warranty, PureLink makes no other warranties, expressed or implied, including any implied warranties of merchantability and fitness for a particular purpose. PureLink expressly disclaims all warranties not satisfied in this limited warranty. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supersedes all previous warranties.

## **WARRANTY RETURNS/REPAIRS/EXCHANGES**

No merchandise may be returned without prior authorization from PureLink, and a Return Materials Authorization (RMA) number. Failure to comply with these conditions will result in rejection of the returned merchandise. Any warranty service on Products must be arranged through Dealer. Authorized returns must be shipped freight prepaid and fully insured to PureLink, Ramsey, NJ USA, with the RMA number clearly marked on the outside of all shipping boxes and containers. PureLink reserves the right at its sole discretion to refuse any shipments arriving freight collect or without an RMA number. Any authorized returned merchandise must be accompanied by a note describing the reason for return, along with contact information including name, phone number, return mailing and shipping addresses, e-mail address, and RMA number. On any products returned and accepted with an RMA number, return freight charges following repair of items under warranty shall be paid by PureLink, shipping by the standard ground carrier of its choice.

## **ADVANCE WARRANTY REPLACEMENTS**

PureLink's advance replacement service offers a Replacement Unit upon request - free of charge for eligible products purchased less than one (1) year of the warranty claim. Products purchased more than one (1) year prior to the warranty claim do not qualify for advance replacement services. Advance replacement requests must be validated by a member of PureLink's Technical Support Team. Replacement units may be new or refurbished and are subject to availability. PureLink is responsible for shipping the Replacement Unit to your designated location by standard ground service. All other shipping methods will be the responsibility of the Dealer. Original Unit Return – the Original Unit must be returned within thirty (30) calendar days of the return authorization date. Failure to return the Original Unit within this period will be subject to a minimum 15% re-stocking fee. Dealer is solely responsible for the shipping of the Original Unit to PureLink.

## **TO MAKE A WARRANTY CLAIM**

To make a warranty claim, promptly notify PureLink within the warranty periods described above by calling PureLink's Technical Support Department at 1-201-488-3232. PureLink, in its sole discretion, will determine what action, if any, is required under this warranty. Most problems can be corrected over the phone through close cooperation between Customer and a PureLink technician. To better enable PureLink to address a warranty claim, please have the Product's serial and model numbers. If PureLink, in its sole discretion, determines that an on-site visit or other remedial action is necessary, PureLink may send a representative to Customer's site.

## **CUSTOMER SERVICE**

Technical support inquiries can be submitted electronically through the PureLink website at [www.purelinkav.com](http://www.purelinkav.com). For immediate assistance please contact PureLink's Customer Care Team at +1 (201) 488-3232.