



UHD-140 Owner's Manual

1 x 4 4K HDMI Distribution Amplifier



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1-1 Package Contents

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

- 1) UHD-140 Unit
- 2) DC 5V 2A Power supply adapter
- 3) Owner's Manual

1-2 General Specification

PureLink UHD-140 1x4 4K HDMI distribution amplifier is designed to distribute a single HDMI/DVI digital signal into multiple monitor without any degradation of original signal quality or distortion of the image. In addition, a dedicated IC chipset makes UHD-140 capable of amplifying and distributing highest quality of video signal and UHD digital contents.

UHD-140 is compact, durable and low power consumption design makes it ideal solution for connection for high definition video and audio signal of digital display device, such as LCD, Plasma, LED, Projector, and etc.

In addition, UHD-140 offers quick and easy plug and play, installation for commercial or residential system.

Item	Description
Model	UHD-140
Input type	HDMI Single Link , 1port
Output type	HDMI Single Link , 4port
Graphic Resolution	VGA / SVGA / XGA / UXGA / WUXGA 480i/p , 720i/p , 1080i/p@60hz, 4k2k@30hz
Connector type	DC Power Jack HDMI 19 Pin Female Serial Female
Supported format	DDWG DVI 1.0 HDMI 1.4
HDCP Compliant	Yes
Power Consumption	DC +5V , 2A Max
Dimension (WxDxH)	6.6" x 3.96" x 1.58" (167 x 100.5 x 40 mm)
Weight	1 lb (0.46 kg)

1-3 Operation and Reliability Specification

1. Operating Environment

Temperature : 32F ~ 140F (0°C ~ 60°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 ~ -185F (-20°C ~ 85°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 standard

1-4 Main Features

1. High Quality Picture - No Signal Loss and Digital Noise Free

Our Distribution Amplifiers are built to deliver the highest quality picture preserving the native resolutions of the video sources without any signal loss. At the same time, the digital noises that may affect the picture quality will be eliminated. Due to the nature of the digital signals and passing through multiple stages of connection when using distribution amplifiers, it is important to eliminate the digital noises and boost the signal strength to preserve/enhance the video signal quality.

2. Signal Amplification for signal reliability and long length signal transmission

Our 5V power adapter supplies adequate power to amplify the video signals from the video source. This is necessary as the overall length from the video source to the displays is longer when using the distribution amplifiers (distance from the video source to the distribution amplifier + distance from the distribution amplifier to the display). In most cases, the overall distance that the HDMI signal will need to travel is over 10ft. Due to the nature of HDMI signals, amplification is necessary to warrant the video quality and reliability. (Without amplification, there may be occasional blackouts or blinking effects) With this amplification feature, your video display can be extended up to 2300ft using our fiber optical HDMI cables.

3. HDMI (High Definition Multimedia Interface) v 1.4

UHD-120 is consisting of HDMI input and output ports, and it is conforms to HDMI 1.4 standard.

4. HDCP (High-bandwidth Digital Content Protection) Compliant

Our HDMI distribution amplifiers are fully HDCP compliant. Many video sources such as DVD players and Satellite/Cable Receivers are HDCP encrypted. For these video sources to be displayed correctly, HDCP compliant devices (e.g., TV, HDMI Switch, distribution amplifier) are required.

1-5 Video Connection

Video Connection

1. Turn off the whole system before connecting.
 2. Connect your video source's HDMI output port to the UHD-140's HDMI input port using standard HDMI cables (not included).
 3. Connect your HDMI display's HDMI input port to UHD-140's HDMI output port.
 4. Plug the 5V power supply to UHD-140
 5. Plug the 5V wall mount power supply into the wall outlet.
 6. Turn on UHD-140
 7. Turn on your monitor
 8. Turn on your video source.
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EDID Management

PureLink UHD-140 provides Auto EDID management system; easy and fail safe way to handle EDID, via pre-loaded factory default 1080p 2ch and EDID emulation.

What's EDID?

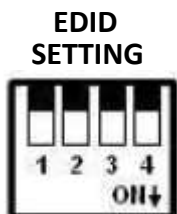
Extended Display Identification Data (EDID) is an information set that digital display provides to describe its capabilities to a Video source. Video source will know what kinds of displays are connected and it will determine which resolution to Output according to the EDID information received from the display.

The EDID normally includes manufacturer name and serial number, sets of capable resolution including native resolution, supported timing, pixel mapping data (for digital displays only) and etc.

In a digital connectivity environment; in order to support the maximum resolution of connected monitor, EDID handshake is a critical because improper EDID handshake between sources to the display will result in no image on the display.

EDID handshake may sound simple; however, with multiple peripheral devices within the chain, display's EDID information easily get lost or blocked while it is traveling to the source device.

UHD-140 provides Auto EDID management system to meet today's sophisticated digital connectivity integration environment. There is an EDID setting DIP switch on the front of the unit;

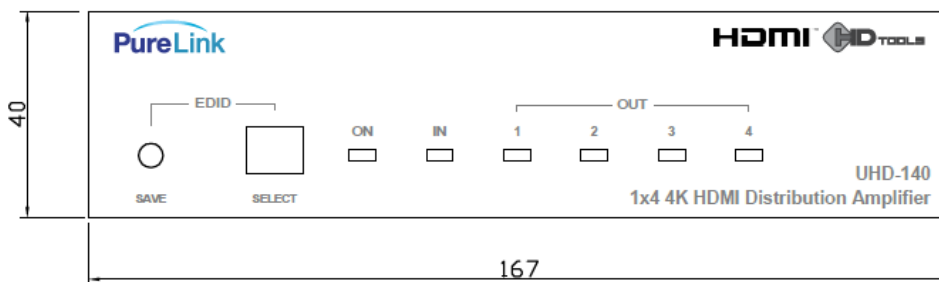
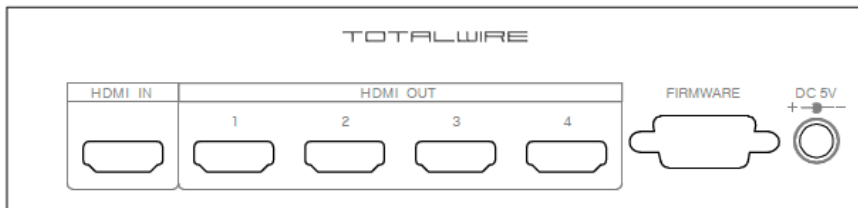


DIP Switch Position	EDID function
Dip switch 1,2,3,4 "up" position	Communicate EDID with factory default at 1080p 2ch
Dip switch 1 "down" position & 2,3,4"up" position and then SAVE button	Communicate EDID with output #1 connected display
Dip switch 2 "down" position & 1,3,4 "up" position and then SAVE button	Communicate EDID with output #2 connected display
Dip switch 3 "down" position & 1,2,4"up" position and then SAVE button	Communicate EDID with output #3 connected display
Dip switch 4 "down" position & 1,2,3 "up" position and then SAVE button	Communicate EDID with output #4 connected display
Dip switch "down" position combination and then SAVE button	Analyze EDID of "down" position outputs connected displays and create an unified EDID for the displays

* Example of "down" position combination
 If DIP switch 1,2,3 are down position, and then press "SAVE" button, the unit will analyze EDID of output 1,2,3's connected displays and create a new unified EDID to support all three monitors screen resolution.

1-6 UHD-140 Mechanical Specification

UHD-140 Dimension: 6.6" x 3.96" x 1.58" (167 x 100.5 x 40 mm)



*RS-232 Port is used to connect to PC for firmware upload

1-7 Technical Specification

Frequency bandwidth: 10.2 Gbps

Supporting Graphic Resolution: Supports all standard display resolutions up to UHD (4K2K @ 30Hz), 840p, 576i, 720p, 1080i, 1080p@60Hz

Inputs: Single HDMI Input

Output: Dual HDMI Output

Power supply: DC 5V, 2A Adapter included

Connector Pin Assignment

Part No.	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	

1-8 Warranty

2 (two) Year Warranty

Dtrovision warrants this PureLink UHD-140 to be free from defects in workmanship and materials, under normal use and service, for a period of two (2) year from the date of purchase from Dtrovision or its authorized resellers.

If a product does not work as warranted during the applicable warranty period, Dtrovision shall, at its option and expense, repair the defective product or part, deliver to customer an equivalent product or part to replace the defective item, or refund to customer the purchase price paid for the defective product.

All products that are replaced will become the property of Dtrovision.

Replacement products may be new or reconditioned.

Any replaced or repaired product or part has a ninety (90) day warranty or the remainder of the initial warranty period, whichever is longer.

Dtrovision shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to Dtrovision for repair under warranty or not.

Warranty Limitation and Exclusion

Dtrovision shall have no further obligation under the foregoing limited warranty if the product has been damaged due to abuse, misuse, neglect, accident, unusual physical or electrical stress, unauthorized modifications, tampering, alterations, or service other than by Dtrovision or its authorized agents, causes other than from ordinary use or failure to properly use the Product in the application for which said Product is intended.

1-9 Troubleshooting

Problem	Solution
Distribution Amplifier does not operate	Make sure the 5V power is plugged in the back of the unit. Check to see if the power LED light is on.
No picture(or signal) Or Poor picture	<ol style="list-style-type: none"> 1. In case your video source is HDCP enabled, make sure your video display (HDTV) is HDCP compliant. 2. If you are using copper based HDMI cable, overall length of the cables (length of the cable from video source to switch and length of the cable from switch to display) should not exceed 20ft. Exceeding 20ft. with copper based cables will result in no or poor picture quality. To extend beyond 20ft, please use fiber optical HDMI extension cables such as PureLink EZ series. 3. Use high quality HDMI cables. 4. If you are using computers, try other refresh rate settings. Most HDTV's have refresh rate of 48Hz and computer's video cards are usually set at higher refresh rate. Try lower refresh rates. 5. Make sure all HDMI connectors are tightly secured to all HDMI ports. Loosened screws on the HDMI connectors will result in no or poor picture. 6. Turn off all equipment (video source, switch and HDTV) and restart all equipment.
Incorrectly sized picture /resolution or No picture	Please remember that your video source will only transmit one resolution setting. To connect varying resolution displays (1920x1200 resolution display and 1024 x 768 resolution display) the resolution setting of your video source must be set to the lowest resolution setting (1024 x 768).

1.1 FCC/CE Statement

This device complies with part 15 of FCC Rules and EN 55022/55024/61000-3 for CE certification. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must not accept any interference received, including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 and 2 of FCC Rules and EN 55022/55024/61000-3 for CE certification. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction guide, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult a service representative for help.

Properly shielded and grounded cables and connectors must be used in order to comply with FCC/CE emission limits. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

1.2 UL Statement

This device has completed a UL Commercial Inspection and Testing Services for the multimode HDMI cable complied with VW-1 under UL 758. It is validated by the UL file number SV2038 and project number 04CA05353.