

4K/UHD HDMI Over 100M HDBaseT TX/RX with Ethernet, Control, and PoE

AT-UHD-EX-100CE-TX-PD



Table of Contents

1. Introduction	.....	3
2. Package Contents	.....	3
3. Features	.....	3
4. Before You Start	.....	3
5. Category Cable	.....	4
6. Panel Descriptions	.....	5
7. Captive Screw Connectors	.....	5
8. Connection Diagram	.....	6-7
9. Specifications	.....	8
10. Safety Information	.....	9

Introduction

The Atlona AT-UHD-EX-100CE-TX-PD is an HDBaseT™ transmitter for HDMI transmission up to 328 feet (100 meters) over category cable with Ethernet pass through, plus RS-232 control. It transmits video signals up to 4K/UHD @ 60Hz with 4:2:0 color subsampling, plus embedded multi-channel audio. The AT-UHD-EX-100CE-TX-PD is HDCP 2.2 compliant and supports EDID communication. The transmitter features a quarter rack width metal enclosure for easy rack mounting with rear panel I/O ports for uncluttered wire management. This device is externally powered via Power over Ethernet, and is ideal for use with Atlona switchers with PoE-equipped HDBaseT inputs, including the AT-UHD-CLSO-612ED, AT-UHD-CLSO-824, and AT-UHD-SW-5000ED.

Package Contents

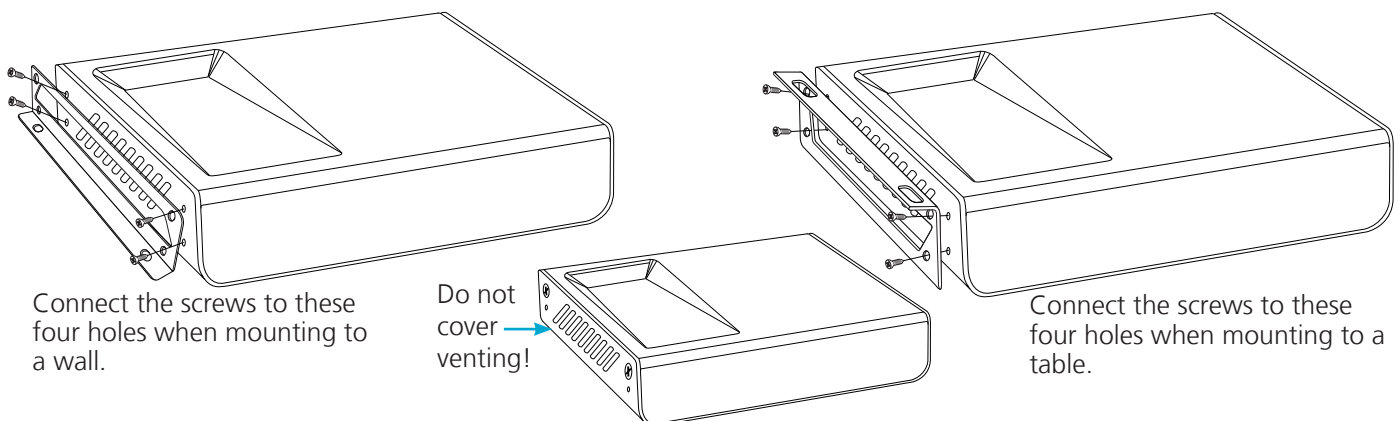
- 1 x AT-UHD-EX-100CE-TX-PD
- 1 x Female captive screw connector (3 pin: RS-232)
- 1 x Pair of wall/table mount ears
- 1 x Pair of screws for wall/mount ears
- 1 x User manual

Features

- Extends IR, RS-232, Ethernet, and audio/visual content up to 328ft over a single category cable
- Supports resolutions up to 4K (UHD) 60Hz @ chroma sub-sampling 4:2:0 8-bit
- Bi-directional Ethernet pass through
- PoE (Power over Ethernet), is powered by compatible receivers
e.g. AT-UHD-EX-100CE-RX -PD or UHD-CLSO PoE switchers
- Multichannel audio pass through up to Dolby TrueHD, DTS-HD Master Audio, and Dolby Atmos
- Full 3D pass through
- HDCP 2.2 compliant
- Field updatable firmware

Before You Start

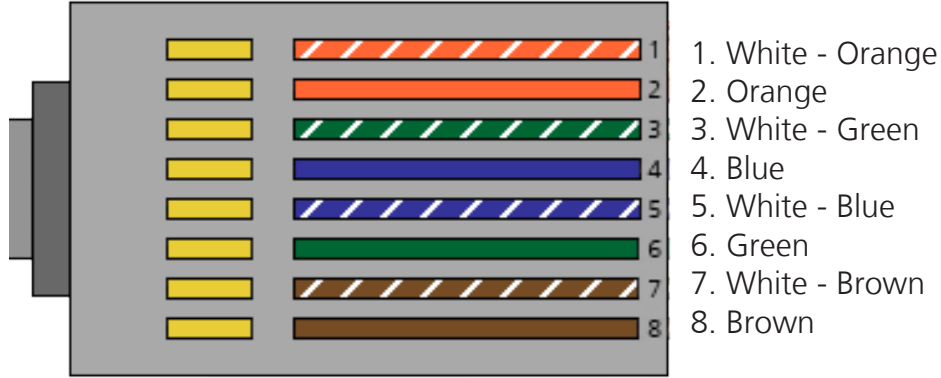
- When installing the extenders **DO NOT:**
Cover the vents
Install into a sealed wall
Install into an area without adequate air ventilation



*Remove the side screws from the case and use for bracket installation

Category Cable

For the category cables used in the installation of these products, please be sure to use a 568B termination as pictured below:



Use the table below to verify the best category cable for the installation.

Performance Rating		Type of LAN cable	
Wiring	Shielding	CAT5e/6	CAT6a/7
Solid	Shielded (STP/FTP)	***	****
	Unshielded (UTP)	**	N/A
Stranded - Patch cable (Not recommended)	Unshielded (UTP)	*	N/A
	Shielded (STP/FTP)	*	N/A
Termination		Please use EIA/TIA-568-B termination	

Important! 4K (UHD) signals are sensitive to cable quality and installation technique. It is recommended to use CAT6a/7 solid core cables for best results.

Note: For cable distances see the specifications on page 8

Connector

Connector type and size is very important to ensure extenders work correctly. Please use the matching cable type with the correct RJ45 connector.

CAT5e cables should use only CAT5e RJ45 connectors

CAT6 cables should use only CAT6 connectors

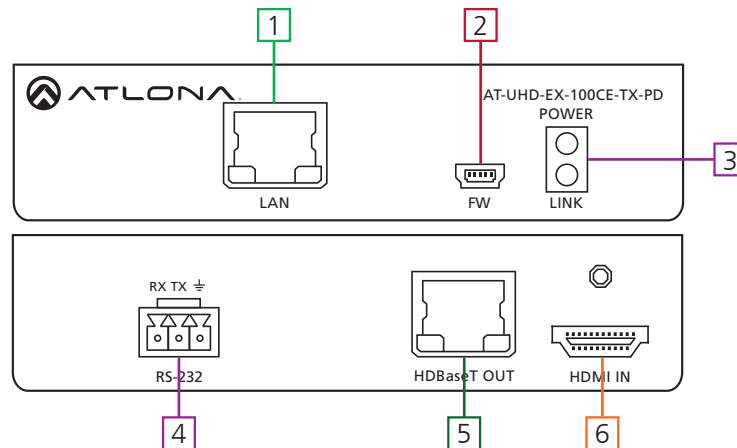
CAT6a cables should use only CAT6a connectors

CAT7 cables should use only CAT7 connectors

Using the wrong size connectors may result in interference causing loss of signal.

Important! "EZ RJ45 connectors" are not recommended with HDBaseT extenders. Doing so may result in interference with audio and video transmission.

Panel Description



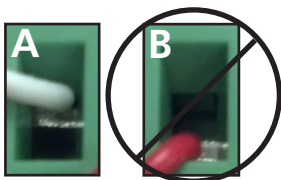
1. **LAN** - Connect to a router to send Ethernet signals
2. **FW** - Use a Mini-B USB to USB A cable to connect to a Windows computers for updating
3. **Yellow Link LED:** Signal indicator for the HDBaseT OUT port
 Solid - Good signal from the HDBaseT port
 Blinking - Category cable is disconnected or not receiving signals
 No Light - No signal is being received from the HDBaseT port
- Green Power LED:** Power indicator
 Solid - Plugged in and receiving power
 Blinking - Power is intermittent or there is a problem with the cable
 No Light - No power is passing from the wall outlet to the transmitter (check the cable or outlet)
4. **RS-232** - Bidirectional RS-232, send signal to or from a control system, PC, source, or display
5. **HDBaseT OUT** - Connect a category cable from here to a compatible receiver
 e.g. AT-UHD-EX-100CE-RX-PSE
6. **HDMI IN** - Connect HDMI or DVI (with adapter) source here
 e.g. Blu-ray player, cable box, HDDA series, H2H series, etc

Captive Screw

Captive screw connectors are an added feature on the UHD extender. The captive screw connectors allow you to cut cables down to a suitable length, reduce cable clutter, while providing a more reliable connection.

Connecting

When connecting the cables to the female captive screw connector it is important that the wires be terminated correctly. The female captive screw connector has a contact plate at the top and must have the wires touching it for signal to pass. When wired correctly (see picture A) the signal will pass, incorrectly (see picture B) no signal will pass.



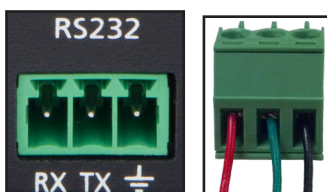
The captive screw connectors have a contact bar that is adjusted to compress the wire against the top contact plate. Use the screws at the top of the connector to compress the wire against the contact plate.



Clockwise
Turn the screws clockwise to raise the contact bar to the upper contact plate and hold the wires in place.



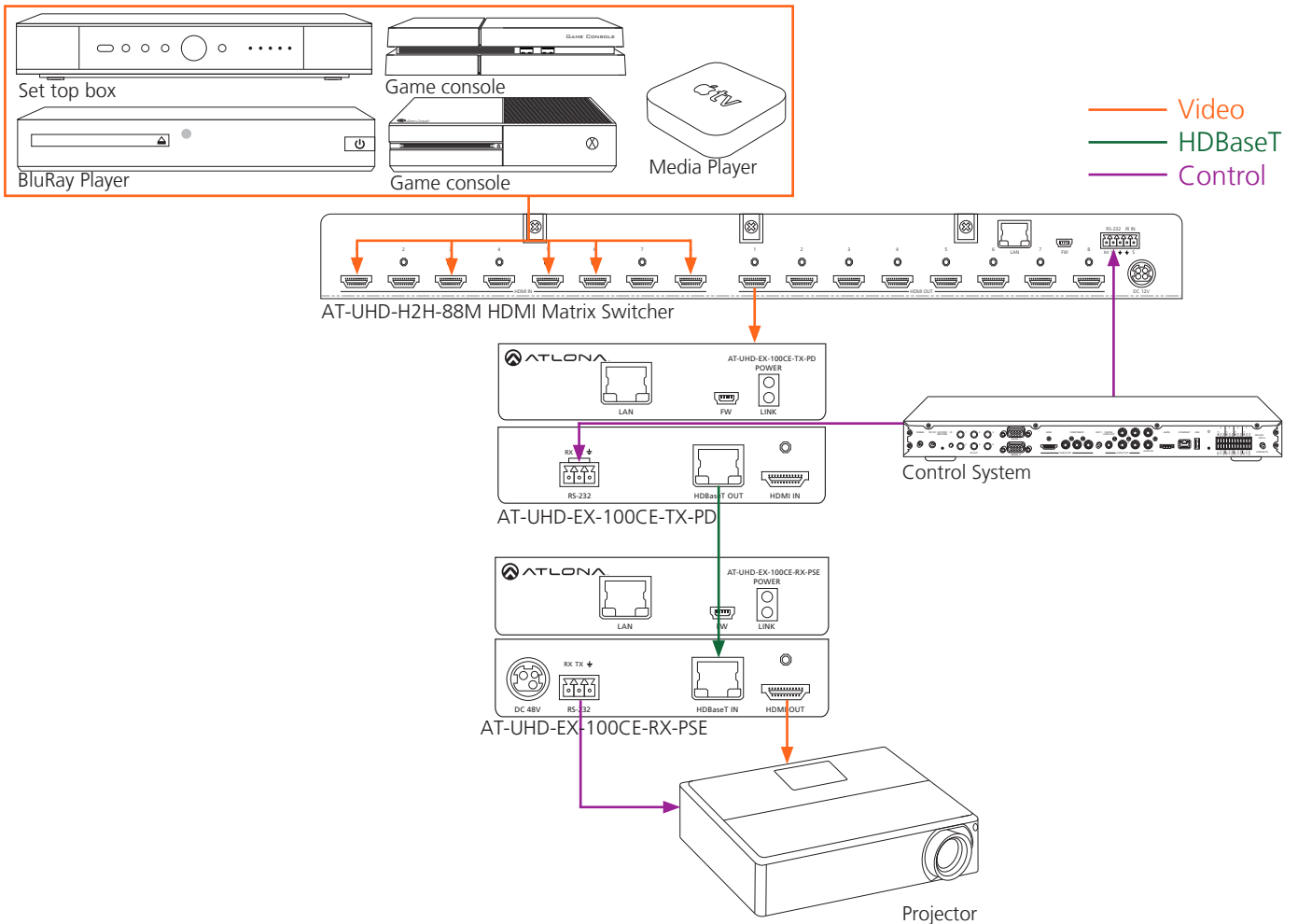
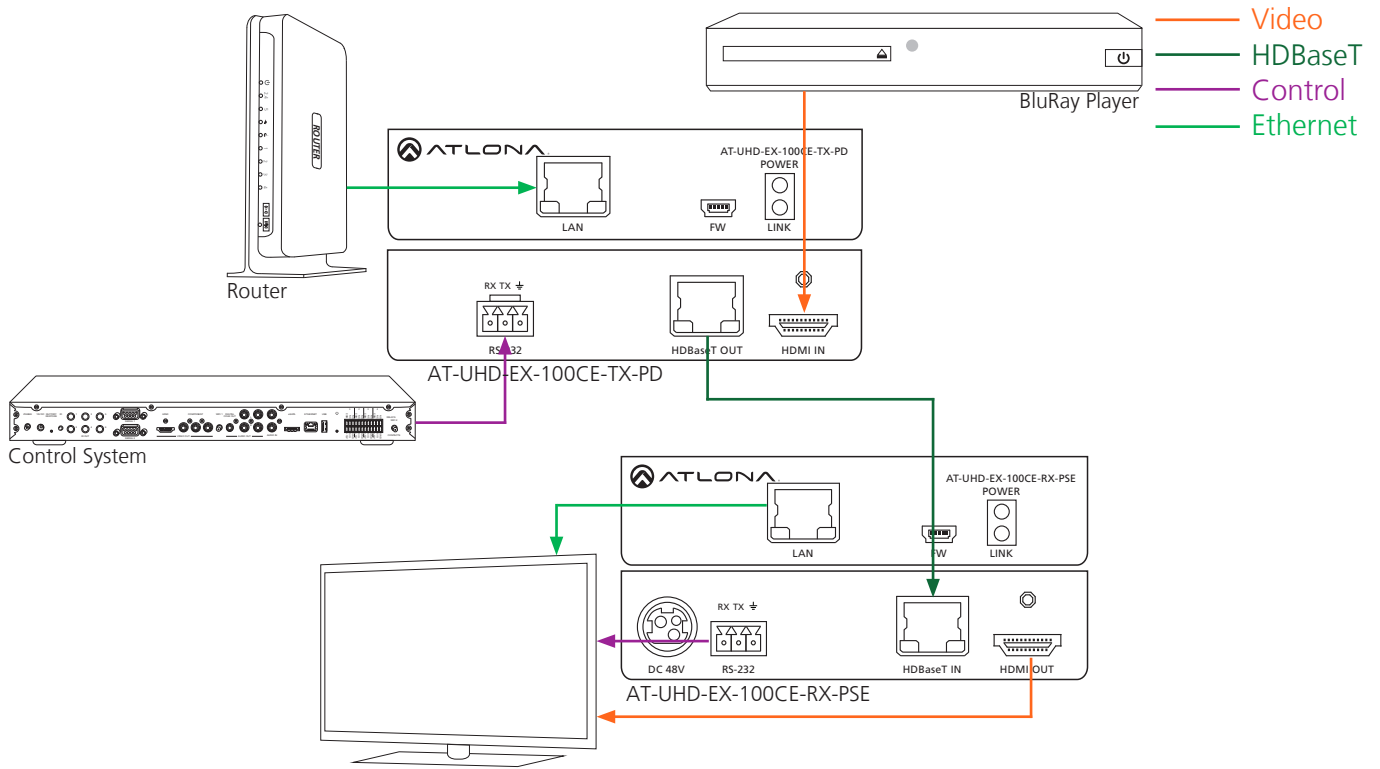
Counter Clockwise
Turn the screws counter clockwise to lower the contact bar to release the wires.



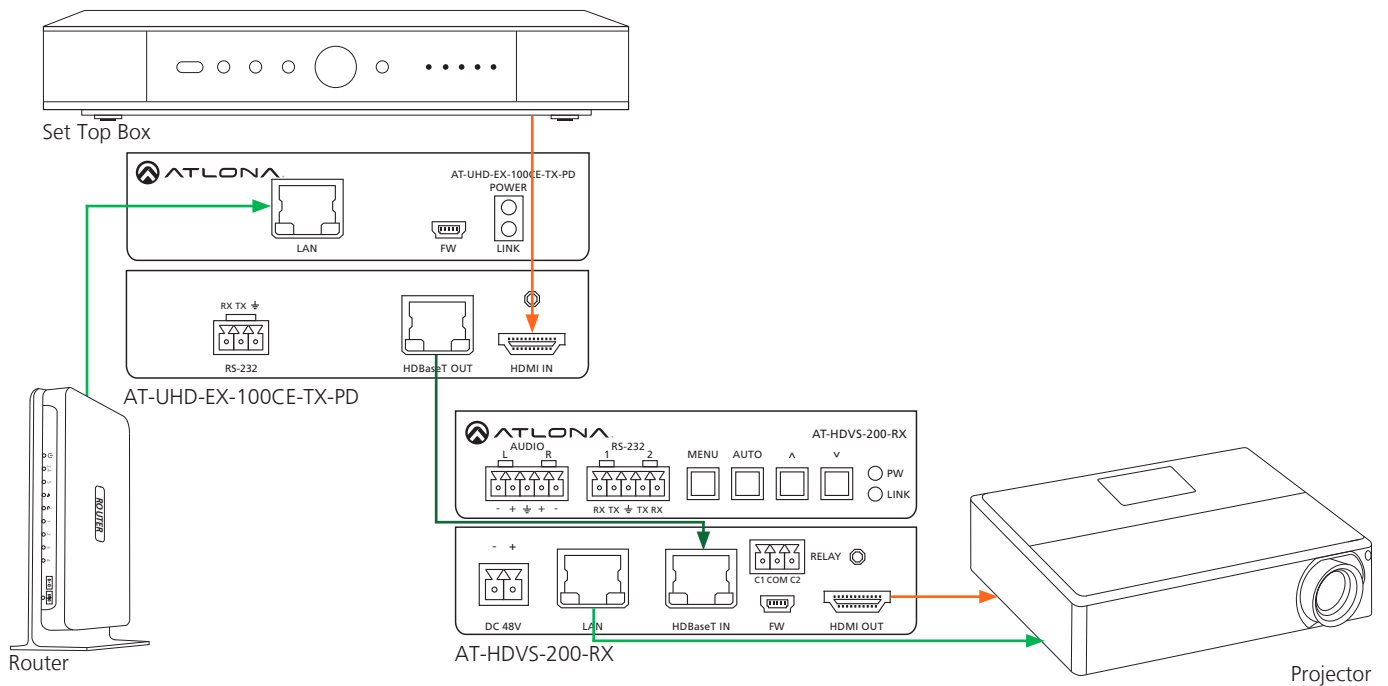
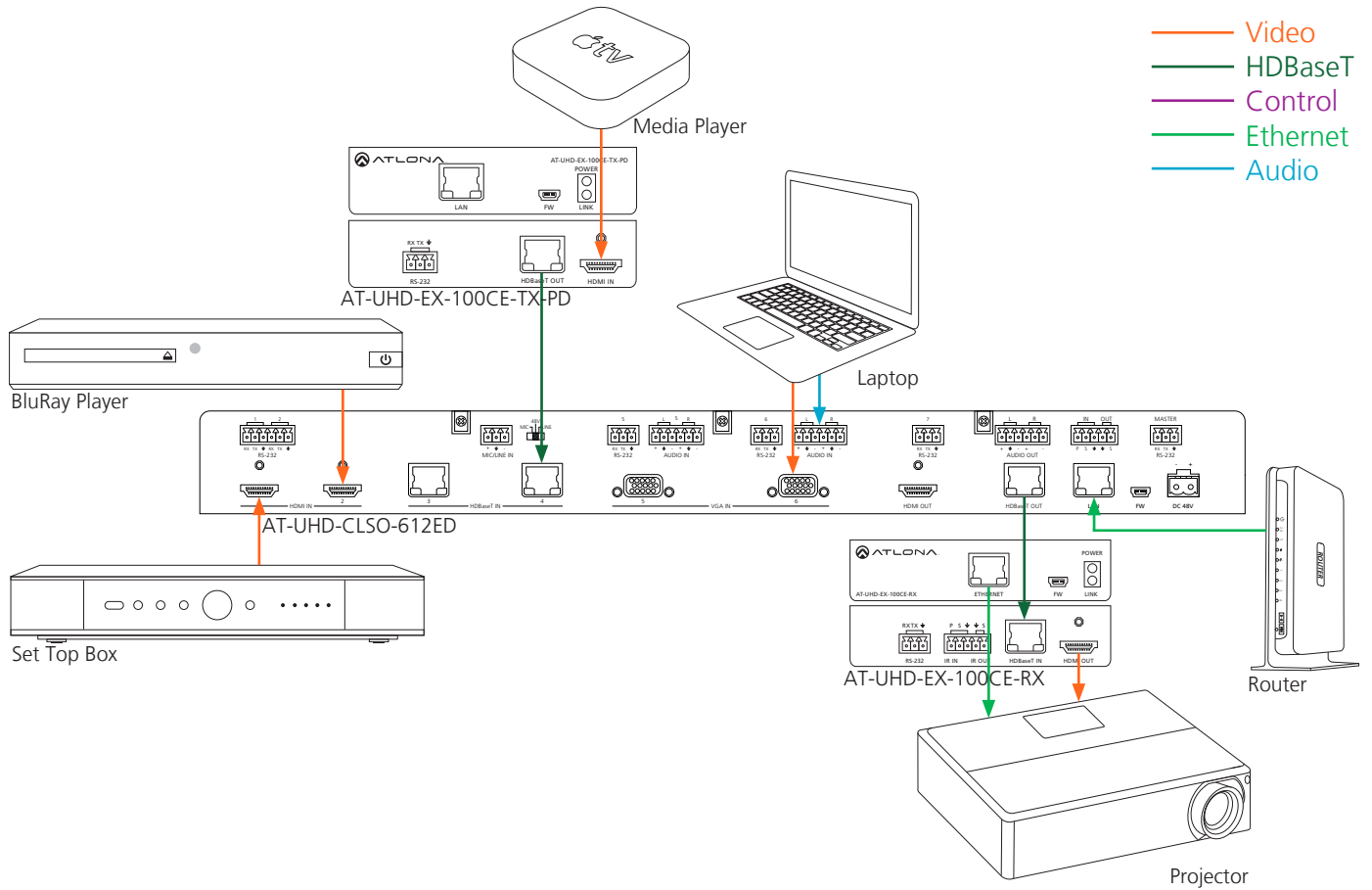
RS-232 pin out will be determined by the RS-232 cable and will connect as Rx (receiver), Tx (transmitter), and \perp (ground). (See picture)

Pin out color will differ per RS-232 cable.

Connection Diagram



Connection Diagram (cont.)



Specifications

Video Resolutions

Video	4096x2160@24/25/30/50*/60Hz*, 3840x2160@24/25/30/50*/60Hz* (UHD), 2048x1080p, 1080p@23.98/24/25/29.97/30/50/59.94/60Hz, 1080i@50/59.94/60Hz, 720p@50/59.94/60Hz, 576p, 576i, 480p, 480i	
VESA	2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768, 800x600, 640x480	
Colorspace	YUV, RGB	
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0	
Color depth	8-bit, 10-bit, 12-bit	

Audio

Format - pass through	PCM 2Ch, LPCM 5.1, LPCM 7.1, Dolby Digital, DTS 5.1, Dolby Digital Plus, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos	
Sample Rate	32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz	
Bit rate	up to 24-bit	

Distance

CAT5e/6 @ 4K	up to 70M	up to 230 ft
CAT6a/7 @ 4K	up to 100M	up to 328 ft
CAT5e/6 @ 1080p	up to 100M	up to 328 ft
HDMI IN/OUT @ 4K	up to 5M	up to 15 ft
HDMI IN/OUT @ 1080p	up to 10M	up to 30 ft

Signal

Bandwidth	10.2 Gbps	
CEC	Yes	
HDCP	supports up to 2.2	

Temperature

Operating	0°C to 50°C	32°F to 122°F
Storage	-20°C to 60°C	-4°F to 140°F
Humidity	20 to 90% non-condensing	

Power

Consumption - Kit	15.2W	
Supply	Input: AC100~240V 50/60Hz Output: DC48V 0.83A	

Dimension

H x W x D	25 x 109 x 127 (mm)	0.98 x 4.29 x 5.00 (inch)
w/ears	27 x 119 x 127 (mm)	1.06 x 4.69 x 5.00 (inch)

Weight

Device	0.39 kg	0.86 lbs
--------	---------	----------

Certification

Power Supply	CE, FCC, cULus, RoHS, CCC, RCM	
Product	CE, FCC	

**4096x2160@50/60Hz & 3840x2160@50/60Hz supported @ chroma subsampling 4:2:0 8-bit only

Safety Information

Safeguards



To reduce the risk of electric shock, do not expose this product to rain or moisture



Do not modify the wall plug. Doing so will void the warranty and safety features.



If the wall plug does not fit into your local power socket, hire an electrician to replace your obsolete socket.



This equipment should be installed near the socket outlet and the device should be easily accessible in the case it requires disconnection.

Precautions

FCC regulations state that any unauthorized changes or modifications to this equipment, not expressly approved by the manufacturer, could void the user's authority to operate this equipment.

Operate this product using only the included external power supply. Use of other power supplies could impair performance, damage the product, or cause fires.

In the event of an electrostatic discharge this device may automatically turn off. If this occurs, unplug the device and plug it back in.

Protect and route power cords so they will not be stepped on or pinched by anything placed on or against them. Be especially careful of plug-ins or cord exit points from this product.

Avoid excessive humidity, sudden temperature changes or temperature extremes.

Keep this product away from wet locations such as bathtubs, sinks, laundries, wet basements, fish tanks, and swimming pools.

Use only accessories recommended by Atlona to avoid fire, shock, or other hazards.

Unplug the product before cleaning. Use a damp cloth for cleaning and not cleaning fluid or aerosols. Such products could enter the unit and cause damage, fire, or electric shock. Some substances may also mar the finish of the product.

Never open, remove unit panels, or make any adjustments not described in this manual. Attempting to do so could expose you to dangerous electrical shock or other hazards. It may also cause damage to your product. Opening the product will void the warranty.

Do not attempt to service the unit. Disconnect the product and contact your authorized Atlona reseller or contact Atlona directly.

Warranty



To view the product warranty, use the following link or QR code:

<https://atlona.com/warranty/>.