4K HDR HDMI Over HDBaseT TX/RX Kit
AT-HDR-EX-70C-KIT

The Atlona **AT-HDR-EX-70C-KIT** is an HDBaseT transmitter/receiver kit for high dynamic range (HDR) formats. The kit is HDCP 2.2 compliant and supports 4K/UHD video @ 60 Hz with 4:4:4 chroma sampling, as well as HDMI data rates up to 18 Gbps. The HDR-EX-70C-KIT provides transmission of HDMI, as well as bidirectional IR and RS-232 control signals up to 230 feet (70 meters) for 1080p video, and up to 130 feet (40 meters) for 4K HDR over CAT6a/7 cable. This extender kit features visually lossless compression with no latency to enable HDR and 4K/60 4:4:4 video signal extension over HDBaseT. For additional integration convenience, the transmitter remotely powers the receiver through Power over Ethernet (PoE). The HDR-EX-70C-KIT delivers a cost-effective solution for HDMI and control signal extension, and includes surface mounting hardware for discrete installation.

Package Contents

1 x AT-HDR-EX-70C-TX
1 x AT-HDR-EX-70C-RX
4 x Mounting brackets
8 x Mounting screws
1 x 48V DC power supply
1 x IR emitter
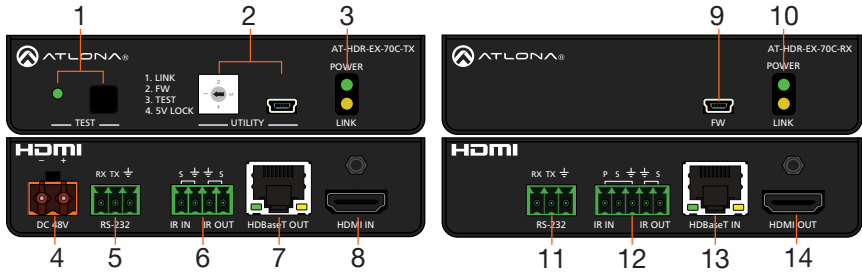
1 x 2-pin captive screw connector
2 x 3-pin captive screw connector
1 x 4-pin captive screw connector
1 x 5-pin captive screw connector
1 x Installation Guide

IMPORTANT: Visit http://www.atlona.com/product/AT-HDR-EX-70C-KIT for the latest firmware updates and Installation Guide.

Panel Descriptions

1   TEST
Quick and easy test for cables. Use the button to start the test and the LED to determine pass or fail.

2   UTILITY
Connect a mini-USB to USB-A cable from this port to a computer for updating and testing. Rotate the dial to set the unit into different modes.

3   POWER and LINK LEDs
The power LED will illuminate green when receiving power. The link LED will glow yellow when signal is being sent/received between the transmitter and the receiver.

4   DC 48V
Connect the included power supply to this port.

5   RS-232
Bidirectional control port, used for pass through of commands to or from the receiver.

6   IR
Connect a 3rd party controller to the IR IN port or an IR emitter to the IR OUT port.

7   HDBaseT OUT
Connect an HDBaseT cable from this port to the **HDBaseT IN** port on the receiver.

8   HDMI IN
Connect an HDMI cable from a source to this port. e.g. HDR BluRay Player

9   FW
Connect a mini-USB to USB-A type cable from this port to a computer, to update the firmware.

10   POWER and LINK LEDs
The power LED will illuminate green when receiving power. The link LED will glow yellow when signal is being sent/received between the transmitter and the receiver.

11   RS-232
Bidirectional control port, used for pass through of commands to or from the receiver.

12   IR
Connect an IR receiver to the IR IN port or an IR emitter to the IR OUT port.

13   HDBaseT IN
Connect an HDBaseT cable from this port to the **HDBaseT OUT** port on the transmitter.
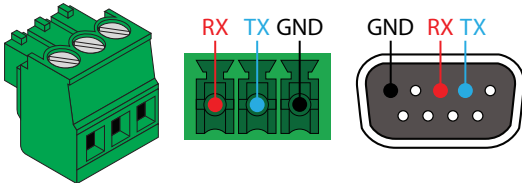
14   HDMI OUT
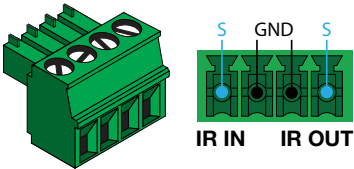Connect an HDMI cable from this port to an HDMI display.

RS-232

A 3-pin captive screw connector for RS-232 has been included.

RX TX GND   GND RX TX

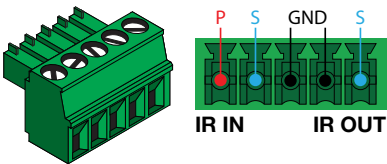Pin out will be determined by the RS-232 cable and connect as RX (receive), TX (transmit) and ⏚ (Ground).

IR

Two captive screw connectors for IR have been included. A 4-pin connector for the transmitter and a 3-pin connector for the receiver.

S GND S

IR IN   **IR OUT**

IR IN is connected by a ground and signal wire. Use with 3rd party control systems. For easy termination, Atlona recommends using the 2 meter IR cable AT-LC-CS-IR-2M (purchasable through atlona.com).

IR OUT is connected by a ground and signal wire. Use the included IR emitter with this port.

P S GND S

IR IN   **IR OUT**

IR IN is connected by a power, ground, and signal wire. Use a 12V IR receiver with it (**e.g.** AT-IR-CS-RX purchasable through atlona.com).

IR OUT is connected by a ground and signal wire. Use the included IR emitter with this port.

Mounting Instructions

The AT-HDR-EX-70C-KIT includes two mounting brackets and four mounting screws each, which can be used to attach the units to any flat surface.

1. Position one of the mounting brackets, as shown below, aligning the holes on the side of the enclosure with one set of holes on the mounting bracket.

2. Use the enclosure screws to secure the mounting bracket to the enclosure.

3. Repeat the above steps to attach the second mounting bracket to the opposite side of the unit.

Included screws

4. Mount the unit using the oval-shaped holes, on each mounting bracket. If using a drywall surface, a #6 drywall screw is recommended.

NOTE: Mounting brackets can also be inverted to mount the unit under a table or other flat surface.

Installation

1. Connect an HDR source to the **HDMI IN** port on the transmitter.

2. Connect an HDR display to the **HDMI OUT** port on the receiver.

3. Connect an HDBaseT cable, from the **HDBaseT OUT** port on the transmitter, to the **HDBaseT IN** port on the receiver.

4. *Optional* Connect a 3rd party controller to the transmitter using either the 3-pin RS-232 or the 2-pin IR IN ports.

5. *Optional* Connect an IR receiver to the IR IN port of the receiver.

6. *Optional* Connect an IR emitter to the IR OUT port of the transmitter or receiver.

7. Connect the included 48V power supply into the transmitter.

8. Connect power supply to an AC outlet.

Cable Recommendation Guidelines

Refer to the tables below for recommended cabling when using Altona products with HDBaseT. The green bars indicate the signal quality when using each type of cable. Higher-quality signals are represented by more bars.

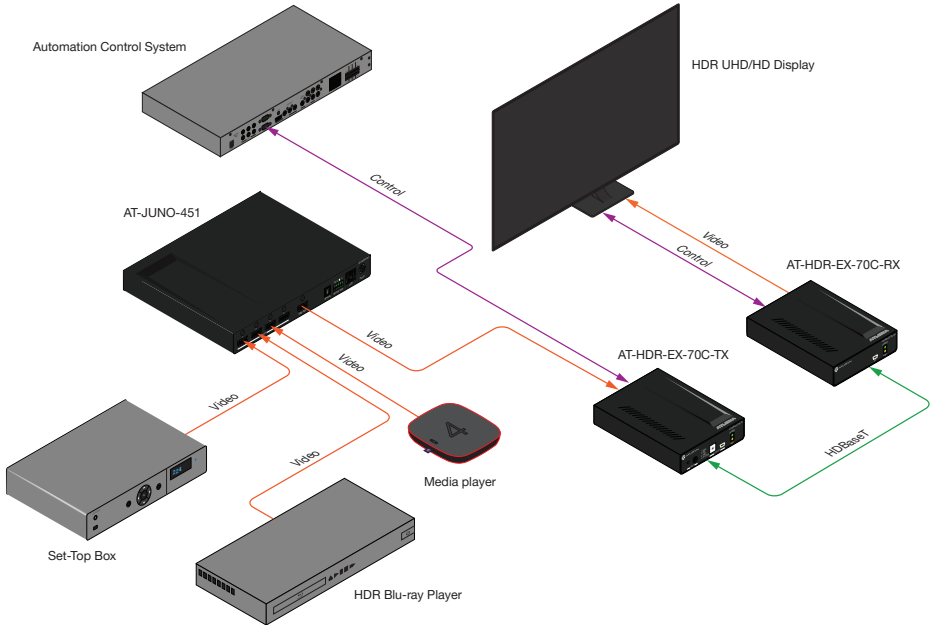| Core	Shielding	CAT5e	CAT6	CAT6a	CAT7
Solid	UTP (unshielded)	■	■■■	■■■■	N/A
	STP (shielded)	■■	■■■■	■■■■■	■■■■■
Performance Rating (MHz)		350	500	600	800

IMPORTANT: Stranded or patch cables are not recommended due to performance issues.

Cable*	Max. Distance @ 4K	Max. Distance @ 1080p
CAT5e / CAT6	115 feet (35 meters)	200 feet (60 meters)
CAT6a / CAT7	130 feet (40 meters)	230 feet (70 meters)

*Atlona recommends TIA/EIA 568-B termination for optimal performance.

Connection Diagram

Automation Control System

HDR UHD/HD Display

AT-JUNO-451

AT-HDR-EX-70C-RX

Control

Video

Control

Video

Video

AT-HDR-EX-70C-TX

Video

HDBaseT

Video

Media player

Set-Top Box

Video

HDR Blu-ray Player

TEST

The HDR-EX-70C-TX has the ability to test the HDBaseT cable quality through the front panel. Press the test button on the front panel of the transmitter to start the test.

Button:

- Blue Blinking: The test is running properly.
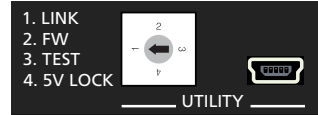- Red Light: There is no signal for the test to check.

LED:

- No Light: There is no HDBaseT cable plugged in.
- Blinking: There is no HDBaseT signal coming through.
- Green: The HDBaseT cable is good.
- Yellow: One or two HDBaseT pairs are not working, re-terminate the cable.
- Red: Multiple pairs are not working. Re-terminate the cable and if the LED turns yellow or red again, replace the cable.

UTILITY

The utility port and dial are used for updating firmware and 5V lock. Use the Dial to switch between modes.

Mode 1: Link

This is the default position of the dial and puts the unit into normal operation.

Mode 2: FW

This mode sets the transmitter into firmware updating mode. View Firmware Updating instructions on the next page for manual updating.

Mode 3: TEST

Not used. Refer to the TEST button procedure, on page 5.

Mode 4: 5V Lock

This mode sets the +5V and the HPD signal of the transmitter and receiver to high. This allows the source and display to have a consistent connection, even if there are issues with the source and display signals.

Updating Firmware

1. Download the firmware .zip file from the firmware tab located at http://www.atlona.com/AT-HDR-EX-70C-KIT.

2. Extract the firmware, from the archive file, to the Windows desktop or other folder.

3. Make sure the included 48 V DC power supply is connected to the transmitter and that an Ethernet cable is connected between the **HDBaseT OUT** and **HDBaseT IN** ports on the transmitter and receiver, respectively.

   Transmitter only:

   a. Set the **UTILITY** dial to **2**.

   b. Disconnect the 48 V DC power supply from the transmitter.

   c. Connect a mini-USB to USB-A cable from the **UTILITY** port, on the transmitter, to the computer with the firmware file.

   d. Reconnect the power supply to the transmitter. The USB Drive folder should be displayed after a few seconds. If the folder is not displayed select the USB drive from Windows Explorer.

   e. Go to step 4.

   Receiver only:

   a. Disconnect the Ethernet cable from the **HDBaseT IN** port on the receiver.

   b. Connect a mini-USB to USB-A cable from the **FW** port on the receiver, to the computer with the firmware file.

   c. Reconnect the Ethernet cable to the **HDBaseT IN** port on the receiver. The USB Drive folder should be displayed after a few seconds. If the folder is not displayed select the USB drive from Windows Explorer.

   d. Go to step 4.

4. Delete all files from the USB Drive folder, if any are present.

5. Drag and drop the firmware file to the drive. While the firmware loads to the unit, the green power LED on the front panel will flash.

6. Once the LED is solid green, disconnect the unit from the computer.

   Transmitter only:

   f. Set the **UTILITY** dial to **1** to resume normal operation.

7. The firmware update process is complete.

Atlona, Inc. ("Atlona") Limited Product Warranty

Coverage

Atlona warrants its products will substantially perform to their published specifications and will be free from defects in materials and workmanship under normal use, conditions and service.

Under its Limited Product Warranty, Atlona, at its sole discretion, will either:

- repair or facilitate the repair of defective products within a reasonable period of time, restore products to their proper operating condition and return defective products free of any charge for necessary parts, labor and shipping.

OR

- replace and return, free of charge, any defective products with direct replacement or with similar products deemed by Atlona to perform substantially the same function as the original products.

OR

- refund the pro-rated value based on the remaining term of the warranty period, not to exceed MSRP, in cases where products are beyond repair and/or no direct or substantially similar replacement products exist.

Repair, replacement or refund of Atlona products is the purchaser's exclusive remedy and Atlona liability does not extend to any other damages, incidental, consequential or otherwise.

This Limited Product Warranty extends to the original end-user purchaser of Atlona products and is non-transferrable to any subsequent purchaser(s) or owner(s) of these products.

Coverage Periods

Atlona Limited Product Warranty Period begins on the date of purchase by the end-purchaser. The date contained on the end-purchaser's sales or delivery receipt is the proof purchase date.

Limited Product Warranty Terms – New Products

- 10 years from proof of purchase date for hardware/electronics products purchased on or after June 1, 2013.

- 3 years from proof of purchase date for hardware/electronics products purchased before June 1, 2013.

- Lifetime Limited Product Warranty for all cable products.

Limited Product Warranty Terms – Refurbished (B-Stock) Products and Discontinued Products

- 3 years from proof of purchase date for all Refurbished (B-Stock) and Discontinued hardware and electronic products purchased on or after June 1, 2013.

Remedy

Atlona recommends that end-purchasers contact their authorized Atlona dealer or reseller from whom they purchased their products. Atlona can also be contacted directly. Visit www.atlona. com for Atlona's contact information and hours of operation. Atlona requires that a dated sales or delivery receipt from an authorized dealer, reseller or end-purchaser is provided before Atlona extends its warranty services. Additionally, a return merchandise authorization (RMA) and/or case number, is required to be obtained from Atlona in advance of returns.

Atlona requires that products returned are properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization or case number will be refused. Atlona, at its sole discretion, reserves the right to reject any products received without advanced authorization. Authorizations can be requested by calling 1-877-536-3976 (US toll free) or 1-408- 962-0515 (US/international) or via Atlona's website at www.atlona.com.

Exclusions

This Limited Product Warranty excludes:
- Damage, deterioration or malfunction caused by any alteration, modification, improper use, neglect, improper packaging or shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature.

- Damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Atlona to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product.

- Equipment enclosures, cables, power supplies, batteries, LCD displays, and any accessories used in conjunction with the product(s).

- Products purchased from unauthorized distributors, dealers, resellers, auction websites and similar unauthorized channels of distribution.

Disclaimers

This Limited Product Warranty does not imply that the electronic components contained within Atlona's products will not become obsolete nor does it imply Atlona products or their electronic components will remain compatible with any other current product, technology or any future products or technologies in which Atlona's products may be used in conjunction with. Atlona, at its sole discretion, reserves the right not to extend its warranty offering in instances arising outside its normal course of business including, but not limited to, damage inflicted to its products from acts of god.

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Other Conditions

Atlona's Limited Product Warranty offering gives legal rights, and other rights may apply and vary from country to country or state to state. This limited warranty is void if (i) the label bearing the serial number of products have been removed or defaced, (ii) products are not purchased from an authorized Atlona dealer or reseller. A comprehensive list of Atlona's authorized distributors, dealers and resellers can be found at www.atlona.com.

Notes

Version 5

English Declaration of Conformity

The English version can be found under the resources tab at:

https://atlona.com/product/at-hdr-ex-70c-kit/

Chinese Declaration of Conformity 中国RoHS合格声明

由SKU列出於:

https://atlona.com/about-us/china-rohs/

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