



4K/UHD HDMI Extender Kit with Control and Bidirectional Remote Power

AT-AVA-EX70C-BP-KIT



The Atlona AT-AVA-EX70C-BP-KIT is an Avance™ Series HDBaseT transmitter and receiver set that supports control pass-through and bidirectional remote power capabilities. The kit transmits 4K/UHD 60Hz 4:2:0 video up to 130 feet (40 meters) or 1080P 60Hz video up to 230 feet (70 meters). In addition to video with embedded multi-channel audio, RS-232 and IR control signals, and remote powering by either the transmitter or the receiver are supported on the single CAT6A/7 cable. Integrated HDBaseT link status testing allows quick verification of cable, termination, and link quality. HDMI clock stretching and EDID filtering are included to ensure the integrity of video transmission as well as compatibility with the widest array of sources and display devices. ARC is available on the HDMI connections to minimize cabling in audio return applications. Compact enclosures and included brackets allow the transmitter and receiver endpoints to be surface mounted in furniture or behind a display. The AT-AVA-EX70C-BP-KIT delivers a cost-effective solution for extension of video, audio, control, and bidirectional power at resolutions up to 4K/UHD.

Package Contents

- | | |
|-----------------------------------|-------------------------|
| 1 x AT-AVA-EX70C-BP-TX | 1 x IR emitter |
| 1 x AT-AVA-EX70C-BP-RX | 4 x Mounting brackets |
| 1 x 2-pin captive screw connector | 8 x Mounting screws |
| 2 x 3-pin captive screw connector | 1 x 48V DC power supply |
| 1 x 4-pin captive screw connector | 1 x IEC cable |
| 1 x 5-pin captive screw connector | 1 x Installation Guide |



IMPORTANT: Visit <https://atlona.com/product/AT-AVA-EX70C-BP-KIT> for the latest firmware updates and Installation Guide.



Panel Descriptions



1 TEST

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

2 FW

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

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 *Optional*

Connect the included power supply to either this port or the power port on the receiver.

5 RS-232

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

6 IR IN/OUT

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

Not used at this time.

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 DC 48V *Optional*

Connect the included power supply to either this port or the power port on the transmitter.

12 RS-232

Bidirectional control port, used for pass through of commands to or from the transmitter.

13 IR IN/OUT

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

14 HDBaseT IN

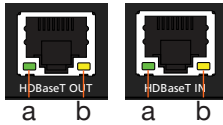
Connect an HDBaseT cable from this port to the **HDBaseT OUT** port on the transmitter.

15 HDMI OUT

Connect an HDMI cable from this port to an HDMI display.



HDBaseT LED Descriptions



a Green LED

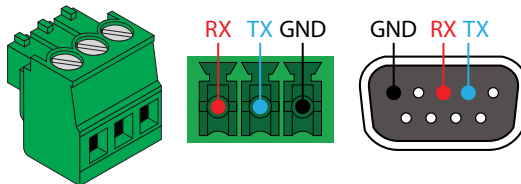
When a category cable is connected and receiving signal this LED will be illuminated. If no cable or signal is being received, the LED will be off.

b Yellow LED

This LED displays the status of the HDBaseT firmware. When the LED is blinking slowly, the firmware is good. If the LED is blinking rapidly or off, there is no firmware or the firmware has been corrupted.

RS-232

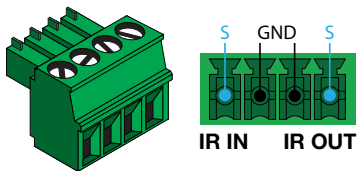
A 3-pin captive screw connector for RS-232 has been included.



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

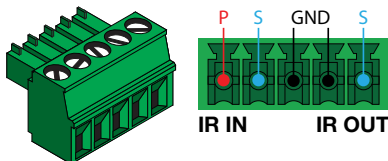
IR

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



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.



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-AVA-EX70C-BP-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.
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 a source to the **HDMI IN** port on the transmitter.
2. Connect a 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 or receiver.
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: It is recommended to use UTP6A (<https://atlon.com/product/utp6a/>) and STP6X (<https://atlon.com/product/stp6x/>) if a stranded/patch cable is needed. These cables have been tested and approved to work with these extenders for full functionality.

Cable*	Max. Distance @ 4K	Max. Distance @ 1080p
CAT5e/6	115 feet (35 meters)	200 feet (60 meters)
CAT6a/7	130 feet (40 meters)	230 feet (70 meters)

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

TEST

The transmitter 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, the LED will display the testing results.



Button:

- Blue Blinking: The test is running properly and the button will blink 10 times during the testing process.
- 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.
- Solid Green: The HDBaseT cable is good.
- Solid Yellow: One or two HDBaseT pairs are not working, reterminate the cable.
- Solid Red: Multiple pairs are not working. Reterminate the cable and if the LED turns yellow or red again, replace the cable.



Updating Firmware

1. Download the firmware .zip file from the firmware tab located at <https://atlona.com/product/AT-AVA-EX70C-BP-KIT>.
2. Unzip the .bin file to an easy to locate area of the local PC.
3. Connect the transmitter's FW micro USB port to a PC using a micro USB to USB A cable (purchased separately).
4. The PC should automatically detect the unit and display the autorun options. Select the view files in folder option. A new window will open.
5. If there are any files inside the folder, delete them, otherwise drag and drop the .bin file into the folder. While the firmware loads to the unit, the green power LED on the front panel will flash. This process can take up to 5 minutes to complete.
6. Once the green LED goes solid, disconnect the unit from the PC. The firmware update is finished.



NOTE: Only the transmitter will be used for updating firmware. The receiver will be updated once it has been connected to the transmitter if it is not connected at the time of the firmware update.

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.



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

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.



Atlona, Inc. (“Atlona”) Limited Product Warranty Cont.

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.

Limitation on Liability

The maximum liability of Atlona under this limited product warranty shall not exceed the original Atlona MSRP for its products. To the maximum extent permitted by law, Atlona is not responsible for the direct, special, incidental or consequential damages resulting from any breach of warranty or condition, or under any other legal theory. Some countries, districts or states do not allow the exclusion or limitation of relief, special, incidental, consequential or indirect damages, or the limitation of liability to specified amounts, so the above limitations or exclusions may not apply to you.

Exclusive Remedy

To the maximum extent permitted by law, this limited product warranty and the remedies set forth above are exclusive and in lieu of all other warranties, remedies and conditions, whether oral or written, express or implied. To the maximum extent permitted by law, Atlona specifically disclaims all implied warranties, including, without limitation, warranties of merchantability and fitness for a particular purpose. If Atlona cannot lawfully disclaim or exclude implied warranties under applicable law, then all implied warranties covering its products including warranties of merchantability and fitness for a particular purpose, shall provide to its products under applicable law. If any product to which this limited warranty applies is a “Consumer Product” under the Magnuson-Moss Warranty Act (15 U.S.C.A. §2301, ET SEQ.) or other applicable law, the foregoing disclaimer of implied warranties shall not apply, and all implied warranties on its products, including warranties of merchantability and fitness for the particular purpose, shall apply as provided under applicable law.

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.



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Installation Guide

AT-AVA-EX70C-BP-KIT

Notes



Notes



Notes



English Declaration of Conformity

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

<https://atlona.com/product/at-ava-ex70c-bp-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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