

# Atlona 4K HDMI Extenders

*AT-UHD-EX-70-2PS*

User Manual



Please check <http://www.atlona.com/AT-UHD-EX-70-2PS>  
for the most recent **firmware  
update** or **manual**

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## Introduction

With 4K and Dolby TrueHD/DTS-HD Master Audio the UHD-70-EX-2PS extenders provide the best quality experience for an affordable price. The Atlona 4K HDMI extenders provide up to 70 meters (230 feet) of stable audio and video with a simple plug and play connection.

## Package Contents

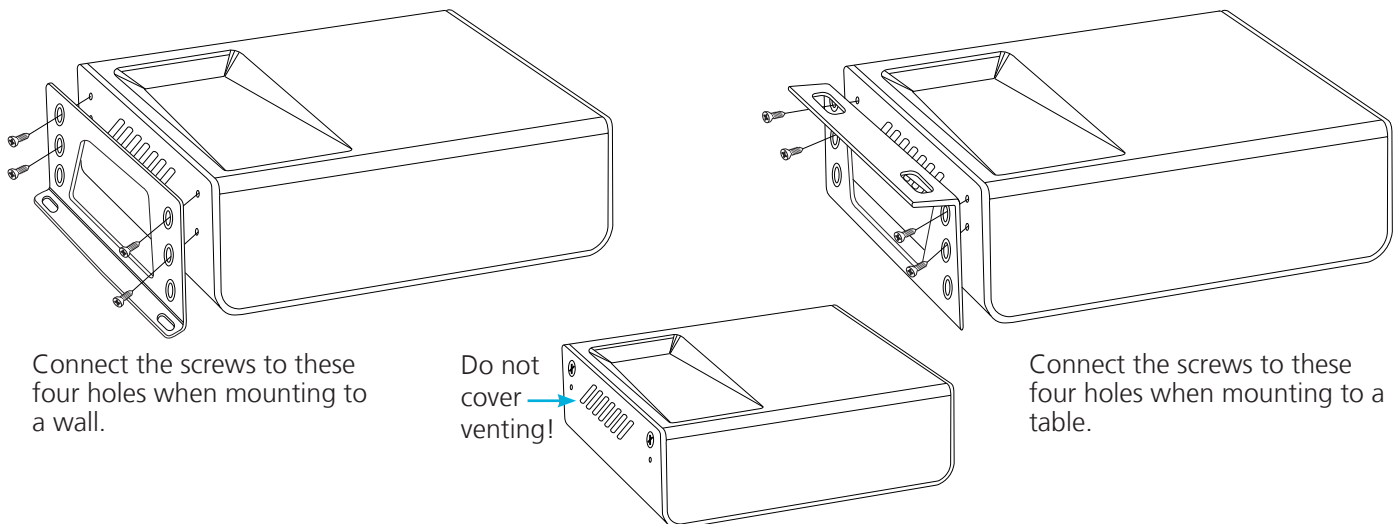
- 1 x AT-UHD-70-EX-2PS-TX
- 1 x AT-UHD-70-EX-2PS-RX
- 2 x 5V DC Power Supply
- 2 x Pair of wall/table mount ears
- 2 x Pair of screws for mount ears
- 1 x User Manual

## Features

- Extend A/V source signals up to 70 meters (230 feet)
- Passes 4K up to 60Hz at chroma sampling 4:2:0
- Dolby TrueHD or DTS-HD Master Audio pass through
- Supports 3D up to 36-bit deep color
- Link status LED for category cable and HDMI connections
- Supports HDCP 2.2
- 1/4 rack width, install up to 4 extenders on a rack shelf
- Slim 25mm (1") low-profile form factor for easy installation under tables and behind displays
- Mini-B USB for easy field updating

## 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



Connect the screws to these four holes when mounting to a wall.

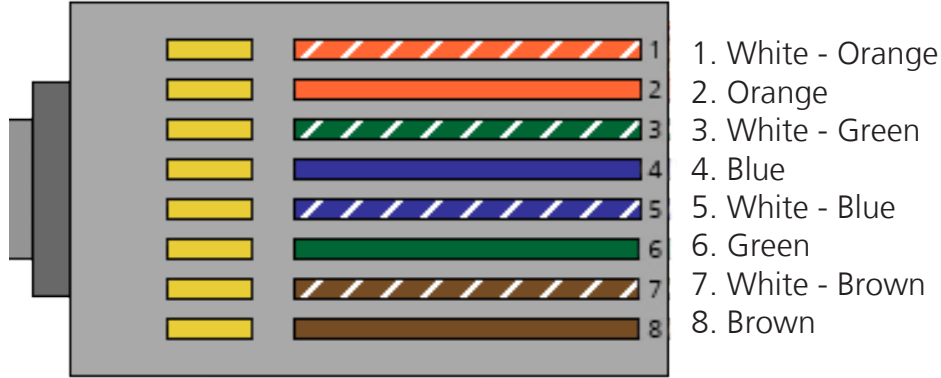
Do not cover venting!

Connect the screws to these four holes when mounting to a table.

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

## Category Cable

For the category cables used in these products' installation, 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
<b>Termination</b>		<b>Please use EIA/TIA-568-B termination</b>	

**Important!** 4K 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 7

## 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 and CAT 6 cables should use only CAT5e RJ45 connectors

CAT6a cables should use only CAT6a connectors

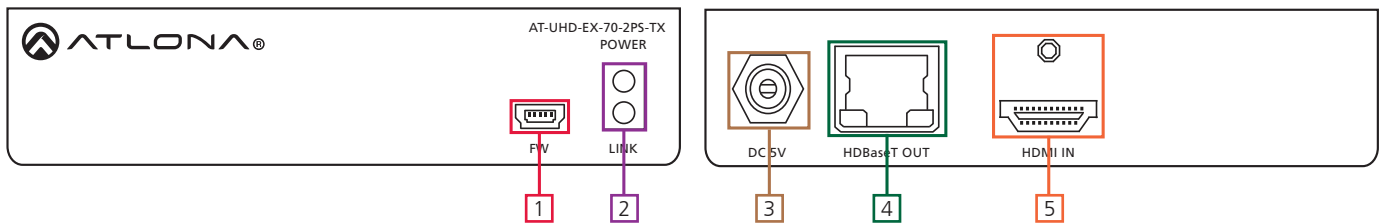
CAT7 cables should use only CAT7 connectors

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

**Important!** "EZ RJ45 connectors" are not recommended with HDBaseT extenders. Doing so may result in stray EMI/RFI signals to be picked up and interfere with audio and video transmissions.

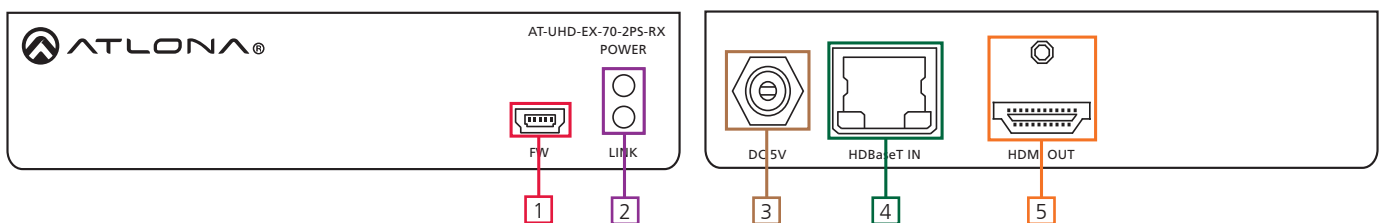
## Panel Description

### Transmitter



1. **Firmware Update Port:** Use a Mini-B USB to USB A cable to connect to a Windows computer for updating.
2. **Yellow Link LED:** Signal Indicator for the CAT5e/6/7 OUT port  
 Solid - Good signal from the CAT and HDMI ports  
 Blinking - HDMI is disconnected or not receiving signals  
 No Light - No signal is being received from the CAT port  
**Green Power LED:** Power indicator. If plugged in light will remain solid. If LED starts blinking power is intermittent or there is a problem with the cable. If the LED is off, no power is passing from the wall outlet to the transmitter (check your outlet or the power cable).
3. **Power Port:** Connect included locking power adapter here
4. **HDBaseT OUT Port:** Connect a category cable from here to an AT-UHD-EX-70-2PS-RX (included)
5. **HDMI IN Port:** Connect HDMI or DVI (with adapter) source here  
**Ex.** Blu-ray player, cable box, HDDA, H2H series, etc

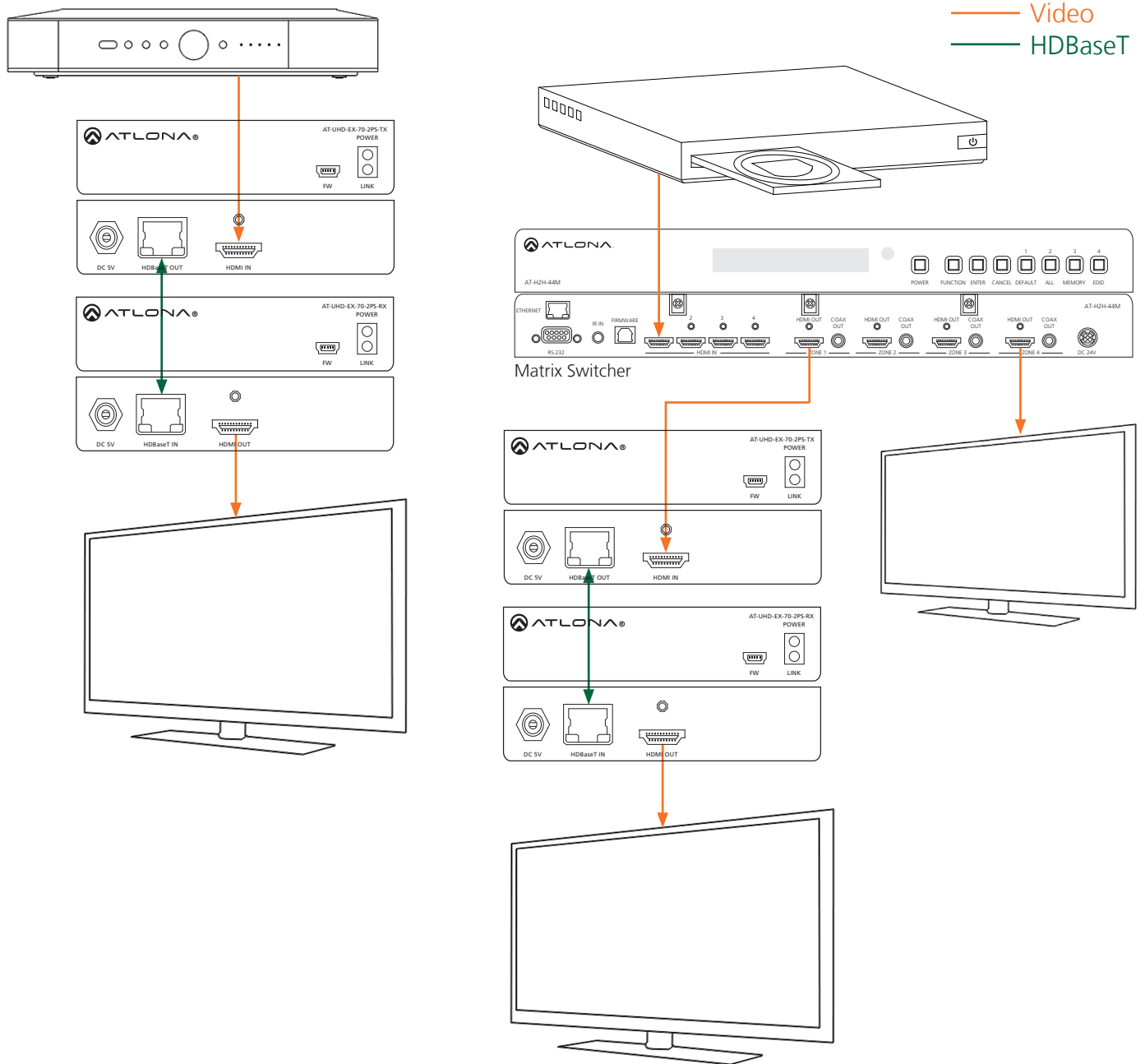
### Receiver



1. **Firmware Update Port:** Use a Mini-B USB to USB A cable to connect to a Windows computer for updating.
2. **Yellow Link LED:** Signal Indicator for the CAT5e/6/7 OUT port  
 Solid - Good signal from the CAT and HDMI ports  
 Blinking - HDMI is disconnected or not receiving signals  
 No Light - No signal is being received from the CAT port  
**Green Power LED:** Power indicator. If plugged in light will remain solid. If the LED starts blinking power is intermittent or there is a problem with the cable. If the LED is off, no power is passing from the wall outlet to the receiver (check your outlet or the power cable).
3. **Power Port:** Connect included locking power adapter here
4. **HDBaseT IN Port:** Connect a category cable from here to an AT-UHD-EX-70-2PS-TX (included)
5. **HDMI OUT Port:** Connect HDMI or DVI (with adapter) display here

## Connection and Installation

**Note:** When installing extenders, do not install in an enclosed area or cover the vents. Doing so may result in damage to the product and/or area surrounding it and void the warranty.



## Specifications

### Video Resolutions

Video 480i, 480p, 576i, 576p, 720p@50/59.94/60Hz, 1080i@50/59.94/60Hz, 1080p@23.98/24/25/29.97/30/50/59.94/60Hz, 2048x1080p 3840x2160@24/25/30/50/**60Hz** (UHD), 4096x2160@24/25/30/50/**60Hz**

VESA 640x480, 800x600, 1024x768, 1152x864, 1280x768, 1280x800, 1280x1024, 1360x768, 1366x768, 1400x1050, 1440x900, 1600x900, 1600x1200, 1680x1050, 1920x1200, 2048x1536, 2560x1600, 2560x2048

Colorspace YCbCr, RGB  
 Chroma Subsampling 4:4:4, 4:2:2, 4:2:0 (UHD only)  
 Color depth 8-bit, 10-bit, 12-bit

### Audio

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

### Distance

CAT5e/6 @ 4K	up to 35 meters	up to 115 feet
CAT6a/7 @ 4K	up to 40 meters	up to 130 feet
CAT5e/6 @ 1080p	up to 60 meters	up to 197 feet
CAT6a/7 @ 1080p	up to 70 meters	up to 230 feet
HDMI 4K	up to 5 meters	up to 15 feet
HDMI IN/OUT	up to 10 meters	up to 30 feet

### Signal

Bandwidth 10.2 Gbps  
 CEC Yes  
 HDCP Compliant

### 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 - TX 2W  
 Consumption - RX 4.3W  
 Supply Input: AC100~240V 50/60Hz  
 Output: DC 5V 1.2A

### Dimension

H x W x D	25 x 109 x 76 (mm)	0.98 x 4.29 x 2.99 (inch)
w/ears	27 x 129 x 76 (mm)	1.06 x 5.08 x 2.99 (inch)

### Weight

Device	0.25 kg	0.55 lbs
Shipping	0.8 kg	1.76 lbs

### Certification

Power Supply CE, FCC, cULus, C-Tick, RoHS, CCC

## 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.



## Atlona, Inc. (“Atlona”) Limited Product Warranty Policy

### 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:

- A) 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**
- B) 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**
- C) 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’s products is the purchaser’s exclusive remedy and Atlona’s 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’s products and is non-transferrable to any subsequent purchaser(s) or owner(s) of these products.

### Coverage Periods

Atlona’s 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**

- 3 years from proof of purchase date for all Refurbished (B-Stock) 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](http://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](http://www.atlona.com).

### Exclusions

This Limited Product Warranty excludes:

- Damage, deterioration or malfunction caused by any alteration, modification, improper use, neglect, improper packing 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.

### **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](http://www.atlona.com).

## **Atlona, Inc Product Registration**

Thank you for purchasing this Atlona product. - We hope you enjoy it and will take an extra few moments to register your new purchase.

Registration creates an ownership record if your product is lost or stolen and helps ensure you'll receive notification of performance issues and firmware updates.

At Atlona we respect and protect your privacy, assuring you that your registration information is completely secure. Atlona product registration is completely voluntary and failure to register will not diminish your limited warranty rights.

To register go to: <http://www.atlona.com/registration>