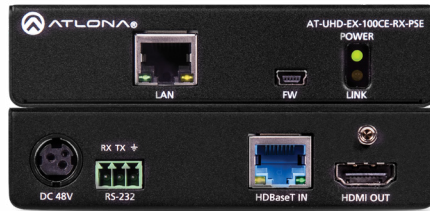# 4K/UHD Power Sourcing over 100 M
HDBaseT Receiver with Ethernet, Control, and PoE
AT-UHD-EX-100CE-RX-PSE

The Atlona **AT-UHD-EX-100CE-RX-PSE** is a 4K/UHD HDMI over 100M HDBaseT receiver for AV signals up to 330 feet (100 meters) over category cable with Ethernet pass-through, RS-232, CEC, and Power over Ethernet. It receives video signals up to 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, plus embedded multi-channel audio. The AT-UHD-EX-100CE-RX-PSE is HDCP 2.2 compliant and supports EDID communication. It is ideal for use with the AT-UHD-EX-100CE-TX-PD HDBaseT transmitter, or an HDVS-200 Series HDBaseT switcher for extending 4K signals to a display. This receiver features a quarter rack width metal enclosure, with rear panel I/O ports for uncluttered wire management. The AT-UHD-EX-100CE-RX-PSE is externally powered by the included power supply, and provides Power over Ethernet for the AT-UHD-EX-100CE-TX-PD, an HDVS-200 HDBaseT switcher, or other PoE-compatible HDBaseT transmitter.
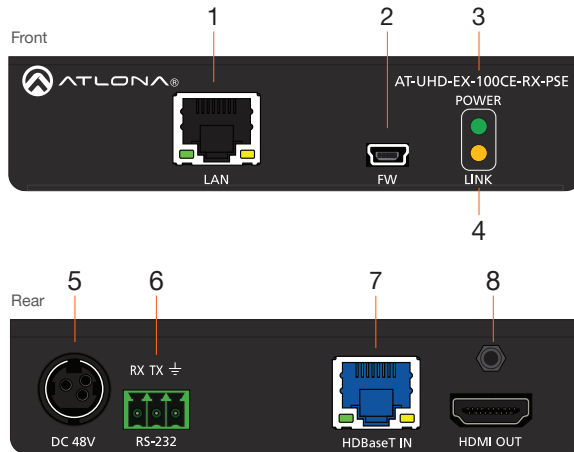
Package Contents

1 x AT-UHD-EX-100CE-RX-PSE
1 x 3-pin captive screw connector
2 x Wall/table mount ears
4 x Screws for wall/mount ears
1 x 48V DC power supply
1 x Installation Guide

⚠️ **IMPORTANT**: Visit http://www.atlona.com/product/AT-UHD-EX-100CE-RX-PSE for the latest firmware updates and Installation Guide.

Panel Descriptions

Front

Rear

1   LAN
Connect an Ethernet cable from this port, to a display (sink) device for IP pass-through control.

2   FW
Connect a mini-USB cable from this port to update the firmware. Refer to Updating the Firmware (page 7) for more information.

3   POWER
This LED indicator glows solid green when the unit is powered. Refer to LED Indicators (page 6) for more information.

4   LINK
This LED indicator glows solid amber when a solid link is established between the transmitter and receiver. Refer to LED Indicators (page 6) for more information.

5   DC 48V
Connect the included 48V DC power supply to this power receptacle.

6   RS-232
Connect the included 3-pin captive screw block to this receptacle. Refer to RS-232 (page 3) for more information.

7   HDBaseT IN
Connect a category cable from this port to the **HDBaseT OUT** port on the transmitter.

8   HDMI OUT
Connect an HDMI cable from this port to a UHD/HD display.

RS-232

The AT-UHD-EX-100CE-RX-PSE provides pass-through transport of RS-232 over HDBaseT, which allows communication between a control system and an RS-232. This step is optional.

1. Use wire strippers to remove a portion of the cable jacket on the RS-232 cable.

2. Remove at least 3/16" (5 mm) from the insulation of the RX, TX, and GND wires for the RS-232 connection.

3. Insert the TX, RX, and GND wires into correct terminal using one of the included 3-pin captive screw connectors.

4. Tighten the captive screws to secure the wires in place. Do not over-tighten or use high-torque devices to prevent damage to the connector block.

> **NOTE:** Typical DE-9 connectors use pin 2 for TX, pin 3 for RX, and pin 5 for ground. On some devices functions of pins 2 and 3 are reversed.

AT-UHD-EX-100CE-RX-PSE

RS-232 (DCE) Device
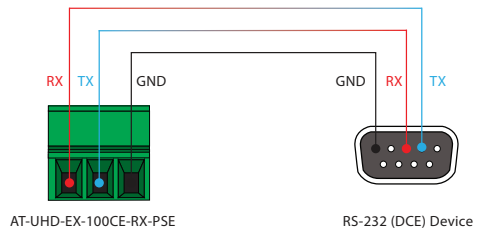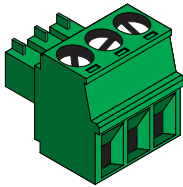
Mounting Instructions

The AT-UHD-EX-100CE-RX-PSE includes two mounting brackets and two mounting screws, which can be used to attach the units to any flat surface.

1. Remove the two top screws from each side of the enclosure.

2. 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.

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

4. 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 UHD/HD display to the **HDMI OUT** port.

2. Connect a category cable, from the **HDBaseT IN** port on the receiver, to the **HDBaseT OUT** port on the transmitter.

3. OPTIONAL: Connect an Ethernet cable from the **LAN** port, on the receiver, to the display (sink) device. This cable provides IP pass-through control from a control system to the display (sink) device connected to the receiver.

4. OPTIONAL: Connect the RS-232 device to the **RS-232** port on the receiver. Refer to RS-232 (page 3) for more information.

5. Connect the included 48 V DC power supply to the **DC 48V** power receptacle.

6. Connect the power supply to an available 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)	▮▮	▮▮▮▮	▮▮▮▮▮	▮▮▮▮▮

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

Cable*	Max. Distance @ 4K	Max. Distance @ 1080p
CAT5e / CAT6	230 feet (70 meters)	330 feet (100 meters)
CAT6a / CAT7	330 feet (100 meters)	330 feet (100 meters)

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

LED Indicators

The **POWER** and **LINK** LED indicator on the transmitter and receiver unit provides basic information on the current status of the AT-UHD-EX-100CE-RX-PSE.

POWER		Description
Solid green	●	Unit is powered.
Off	○	Unit is not powered. • Verify that the locking connector is securely fastened to the power receptacle. • Make sure that the power supply is connected to an active AC outlet.

LINK		Description
Solid amber	●	The link integrity between the transmitter and the receiver is good.
Blinking amber	☀	Poor signal integrity between the transmitter and the receiver. • Make sure that the Ethernet connection between the **HDBaseT IN** port on the transmitter and the **HDBaseT OUT** port on the receiver is secure. • The Ethernet cable may be compromised. Try using a different Ethernet cable. Make sure that the cable is solid core. Stranded or patch cables are not recommended.
Off	○	The link integrity between the transmitter and the receiver is compromised. • Check the Ethernet cable between the **HDBaseT IN** port on the transmitter and the **HDBaseT OUT** port on the receiver.

Updating the Firmware

Requirements:

- New firmware - Downloaded from atlona.com
- USB to mini-USB cable
- Computer running Microsoft Windows.

1. Connect a USB to mini-USB cable from the FW port on the unit to an available USB port on the computer.

> **NOTE:** The AT-UHD-EX Series can be powered over USB during the firmware update procedure. Therefore, connection of an external power supply (or HDBaseT) is not required.

2. Unzip the contents of the firmware .zip file to a location on the computer and locate the UpdateVS100RX_[version].bat file.

3. Double-click the batch file to execute it.

4. After the update procedure is complete, the software will go through the verification process and then display the following message:

Verification succeeded!!! :-)

> **IMPORTANT:** Do not disconnect the USB cable during the update process.

Version 1