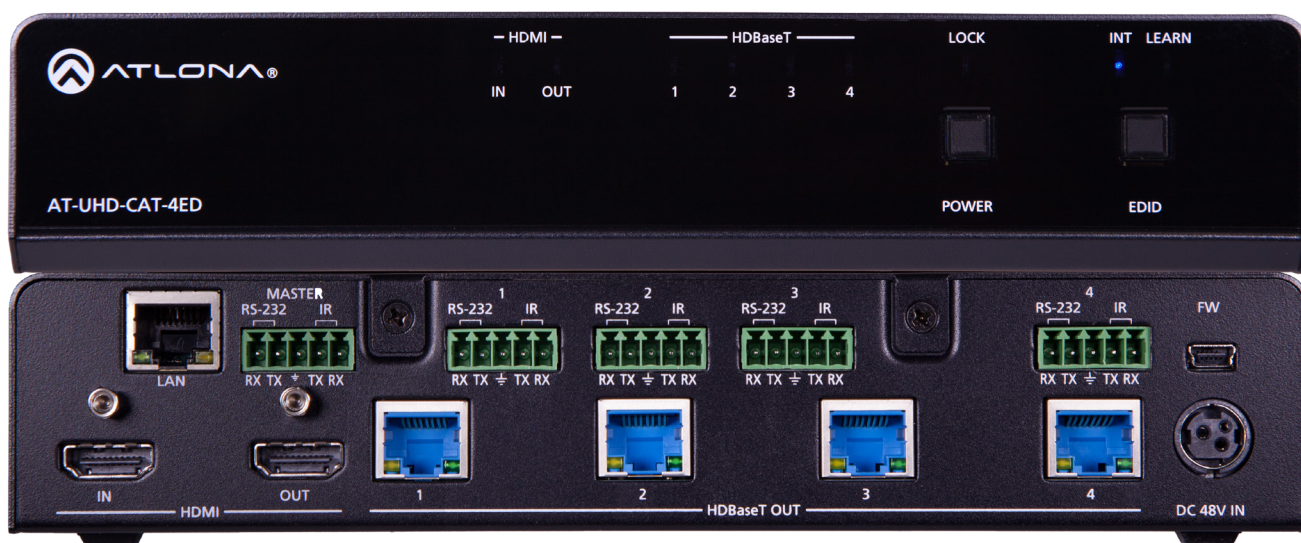


# 4K/UHD 4-Output HDMI to HDBaseT Extended Distance Distribution Amplifier

## *AT-UHD-CAT-4ED Installation Guide*



Please check <http://www.atlona.com/product/AT-UHD-CAT-4ED> for the most recent **firmware update** or **manual**.

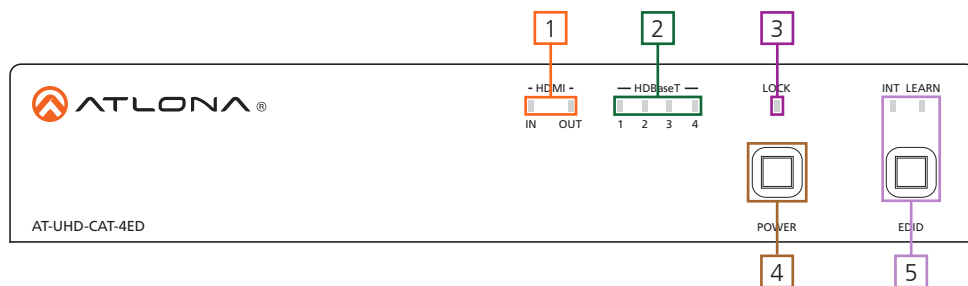
The Atlona AT-UHD-CAT-4ED is a 4K/UHD HDMI to HDBaseT™ distribution amplifier featuring pass-through HDMI input connections, four extended distance, Ethernet-enabled HDBaseT outputs and display control capability. Each output transmits AV and control signals up to 328 ft. (100 m). Features include 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, HDCP 2.2 compliance, EDID management, and PoE for powering remote receivers. A wide variety of consumer and commercial displays may be controlled by the AT-UHD-CAT-4ED using CEC. Designed for commercial distribution applications, the AT-UHD-CAT-4ED is control system-friendly and integrates with any TCP/IP, RS-232, or IR control system and features a 1U, half-rack width enclosure with external, international power supply.

### Package Content

- 1 x AT-UHD-CAT-4ED
- 5 x Female captive screw connectors 5 pin: RS-232 and IR
- 1 x Short rack ear
- 1 x Long rack ear
- 2 x Mounting plates
- 1 x Rubber feet
- 1 x 48V/3.125A DC power supply adaptor
- 1 x Installation Guide

## Panel Description

### Front Panel



1. HDMI LED - Illuminates when receiving/transmitting signals
2. HDBaseT LEDs - Illuminates when connected to a compatible PoE receiver
3. LOCK LED - Illuminates when buttons are locked
4. Power button - Switch the unit or a display on/off

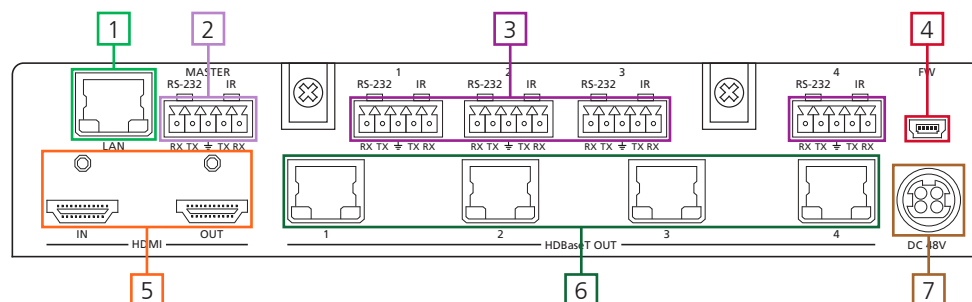
**Note:** Function is dependent on what is selected via RS-232 or webGUI. Default is unit on/off

5. EDID

LEDs - Lights up to indicate what EDID mode the unit is in

Button - Switches between internal and learned EDID modes

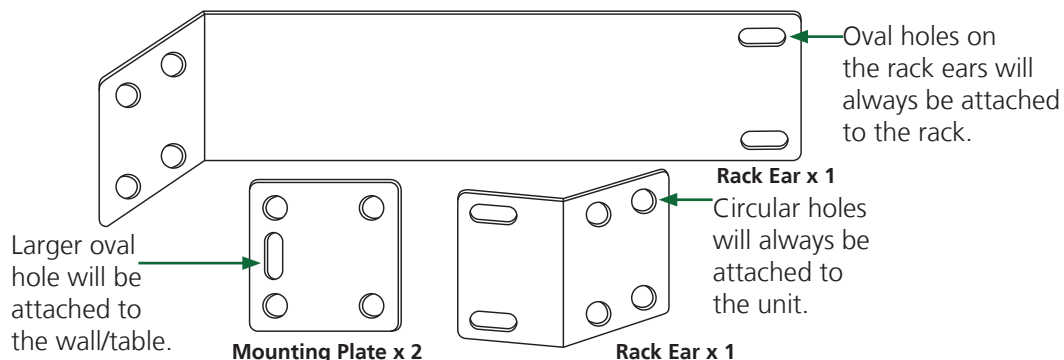
### Back Panel



1. LAN port - Connect to network router for control
2. Master control - Connect to PC or control system for unit control
3. RS-232 / IR control ports - Connect to PC or control system for zone control
4. FW port - Connect to a PC for firmware updating
5. HDMI ports - Connect HDMI source and display to these ports
6. HDBaseT OUT ports - Connect HDBaseT PoE receivers to this port (**e.g.** AT-UHD-EX-100CE-RX, etc)
7. DC 48V port - Connect included 48V power supply to this port

**Note:** Compatible PoE receivers do not need power

## Mounting



The UHD-CAT can be mounted in three ways: as a single unit in a rack, with a second unit in a rack, or against a wall/table using the mounting plates.

Single unit mounting will use the long rack ear and short rack ear to affix the unit to the rack.

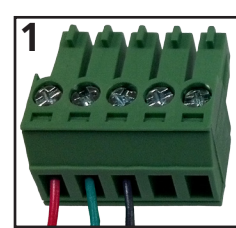
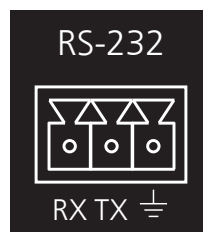
Two unit mounting will use two short rack ears (the second will be in the box with the second unit) and two mounting plates to affix the two units together inside the rack.

Wall/table mounting will use both mounting plates to affix the unit to a table or wall.

## RS-232

### Connection

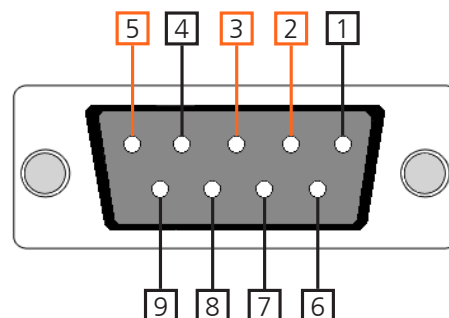
RS-232 pin out will be determined by the RS-232 cable and will connect as Rx (receiver), Tx (transmitter), and  $\perp$  (ground). (See picture 1)



Wire color will differ by cable manufacturer.

RS-232 is often connected through a DB 9-pin to captive screw connector. The pins will have functions associated with them, some will be unassigned.

**Note:** Typical DB9 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.

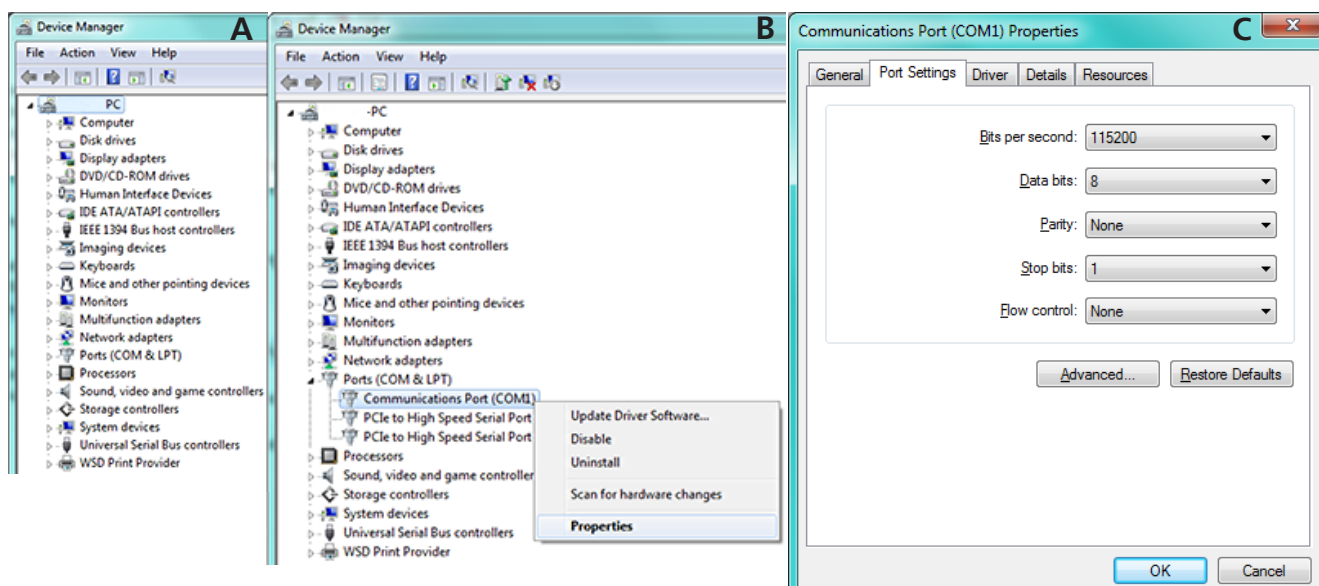


## Set Up

To set up the RS-232 hyperterminal (if not using 3rd party software) use the following steps:

1. Connect the CAT-4ED to a PC using a 3 pin to USB cable
2. Go to the Device Manager folder (see picture A)
3. Find the CAT-4ED COM port and right click with a mouse and select properties (see picture B)  
**Note:** If unsure which COM port is the CAT-4, unplug the cable and plug it back in. It will disappear and reappear on the COM port list.
4. Under the properties menu select the port settings tab and update the menu to the **CAT-4ED default settings of:** Bits Per Second: 115200, Data Bits: 8, Parity: None, Stop Bits: 1 and Flow Control: None. (see picture C)

Set up is done and any hyperterminal program may be used to control the CAT-4ED now.

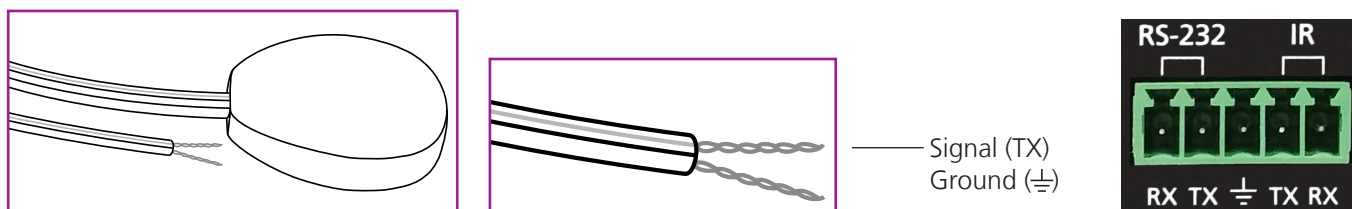


## IR

System IR is typically used to connect to control system processors. This input is used to control the UHD-CAT.

**Note:** The IR receiver is optional for the UHD-CAT. The compatible IR receiver (AT-IR-CS-RX) can be purchased through [atlona.com](http://atlona.com).

The wires of the emitter (TX) and receiver (RX) have been marked to differentiate the pin outs.



The included IR emitter has two wires: TX and ground. Signal (TX) will have a solid line and ground will be blank.

## TCP/IP

For convenience, the UHD-CAT comes with DHCP on. This enables the UHD-CAT to be connected to a network without the concern of conflicting IP addresses. If your network does not support DHCP, this feature may be turned off and the IP address set using RS-232 commands or the webGUI.

**Note:** Press and hold the Power button on the front panel to switch between static and DHCP IP address. Two button flashes means the unit is in static mode and four button flashes means the unit is DHCP. Static IP configuration will be: 192.168.1.254 - 255.255.255.0.

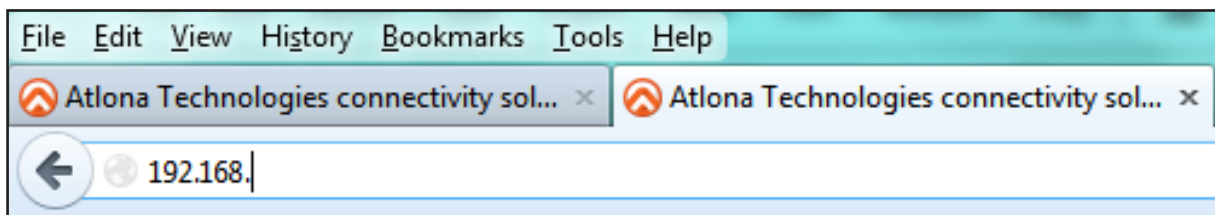
**Note:** If your system is controlled using IP, it is strongly recommended that you disable DHCP and select an unused IP address so that your system controller doesn't lose contact with the switcher.

## TCP/IP webGUI

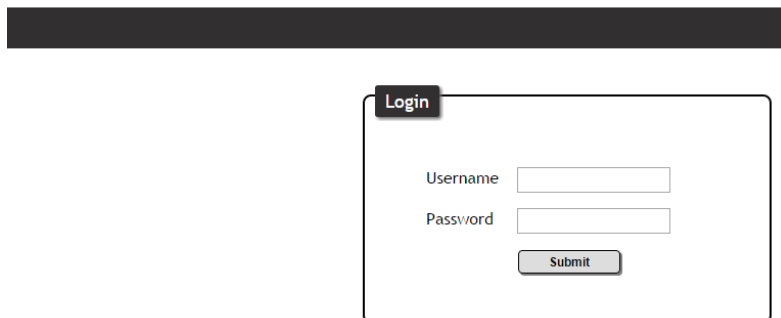
Atlona has created an easy to use webGUI for initial setup and later changes to the configuration of the UHD-CAT.

To begin, connect the LAN port of the UHD-CAT to your network. Type the IP address of the UHD-CAT into the web browser of a PC connected to the same network (as seen below).

**To find the switcher IP:** Use the RS-232 command "IPCFG".



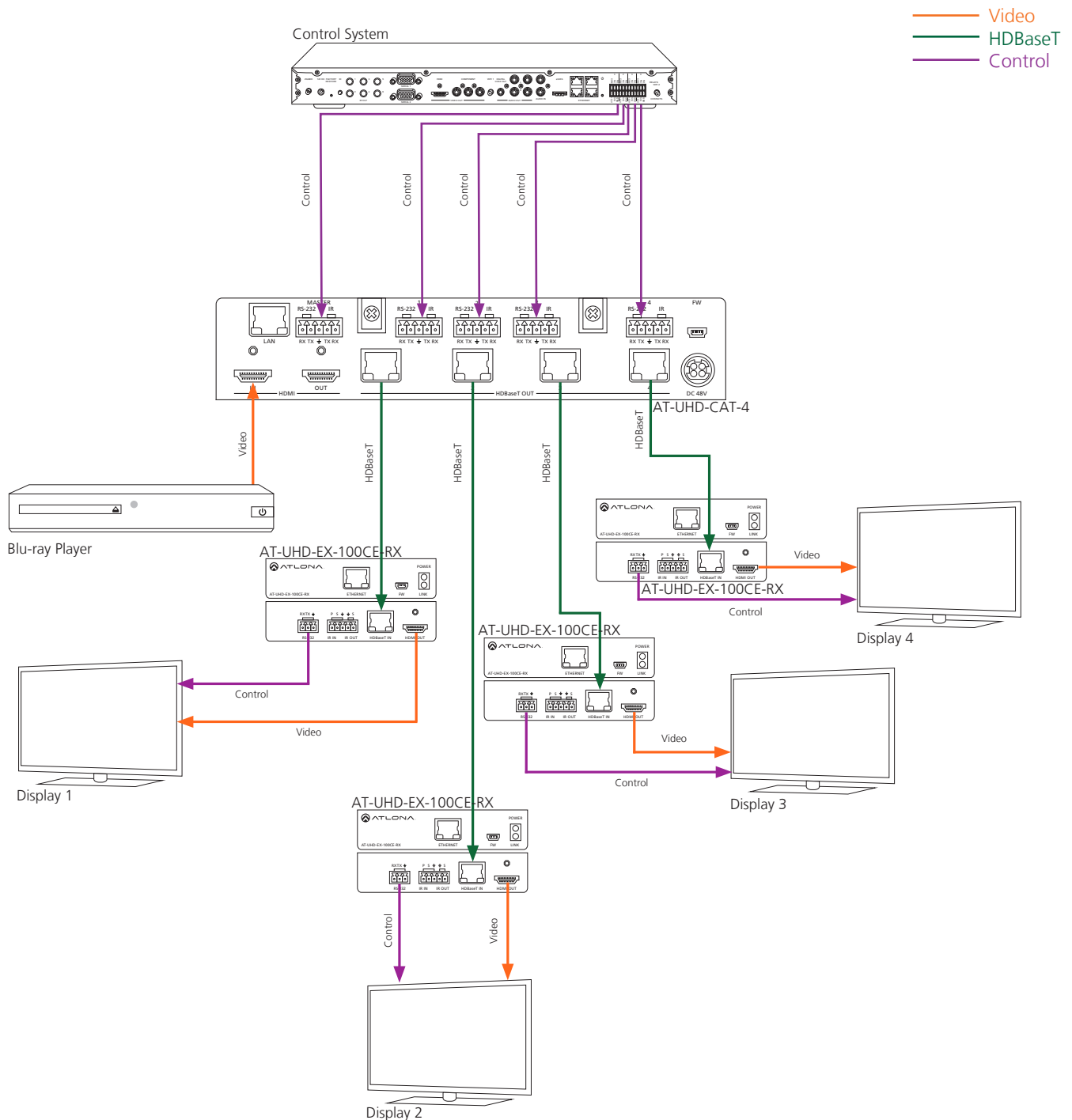
**Important:** If any stability issues are experienced, disable any anti-virus or firewall that may interfere with network communication to the switcher. Once set up is done and the switcher GUI is no longer being used, the firewall and anti-virus can be re-enabled.



A login screen will appear (this is the same log in for admin and general users). For the first log in (and future admin changes) the username is "root" and password is "Atlona".

**Note:** Only the admin password can be changed. The username will always remain "root".

## Connection Diagram



## Control Drivers

Visit the **Control Drivers** tab at <http://www.atlona.com/product/AT-UHD-CAT-4ED/> to download the control drivers for the CAT-4ED.

## CAT-4ED Updating

Visit the **Firmware Update** tab at <http://www.atlona.com/product/AT-UHD-CAT-4ED/> to download the current updates and instructions for the CAT-4ED Firmware.

**Note:** Atlona is constantly improving and updating features and stability. It is recommended that you check to make sure you are on the most current firmware before installation, especially when using a control system.

## Troubleshooting

1. What is the default static IP address of this unit?

192.168.1.254. By default, this unit comes with DHCP enabled. To use the default static IP address, press the Power button for 15 seconds. The default subnet mask is 255.255.255.0 and the default gateway address is 192.168.1.1.

2. How do I determine the current IP address of the unit?

Connect to the RS-232 port and send the IPCFG command.

3. What does the EDID button, on the front panel, do?

You can use the EDID button to switch between internal and learned EDID modes. Refer to the User Manual for more information.

4. How do I check the firmware version of this unit?

You can check the firmware through AMS or the webGUI, or by sending the following command via TCP/IP or RS-232: Version mcu.

5. How do I update the firmware?

Firmware and instructions can be found and downloaded from the firmware tab at <http://www.atlona.com/product/AT-UHD-CAT-4ED/>

6. The buttons on the front panel aren't working. What's wrong?

Make sure that the Lock feature is disabled. This can be done within AMS or the webGUI, or by sending the Unlock command, using TCP/IP or RS-232.

7. Can I use this unit with the AT-UHD-EX-70C-RX extenders?

Yes. However, the distance will be limited to 70 meters (230 feet), which is the maximum extension distance for the AT-UHD-EX-70C-RX.