HDMI Display Controller

AT-DISP-CTRL

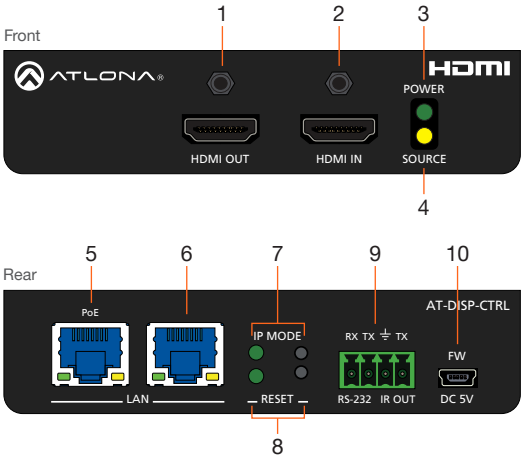
The Atlona **AT-DISP-CTRL** is a compact display controller, designed for small meeting spaces and huddle rooms. The DISP-CTRL detects connection of a source device with an active signal, and then automatically sends a control command to turn on a display. Similarly, when the device is disconnected, the DISP-CTRL delivers a command to turn off the display. The DISP-CTRL can be configured to deliver pre-stored or user-programmed display control commands through TCP/IP, RS-232, IR, or CEC. Additionally, this controller includes EDID and HDCP management features, and can be powered locally or through standard Power over Ethernet (PoE). The DISP-CTRL 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.

Package Contents

1 x AT-DISP-CTRL
2 x Mounting brackets
4 x Mounting screws
1 x 4-pin captive screw connector
1 x IR emitter
1 x 5V DC power supply
1 x Installation Guide

IMPORTANT: Visit http://www.atlona.com/product/AT-DISP-CTRL for the latest firmware updates and documentation.

Panel Descriptions



1 **HDMI OUT**
Connect an HDMI cable from this port to the display.

2 **HDMI IN**
Connect an HDMI cable from this port to the source device.

3 **POWER**
This LED indicator glows solid green when the unit is powered.

4 **SOURCE**
This LED indicator glows solid amber when a source is connected to the **HDMI IN** port.

5 **PoE LAN**
Connect an Ethernet cable from a PoE-capable network switch to the **PoE LAN** port. If a PoE switch is not available, connect a USB to mini-USB cable from a computer to the **FW** port to power the unit.

6 **LAN**
Connect an Ethernet cable from the LAN port to the display device, if control will be IP-based.

7 **IP MODE**
Press and release this button to set the IP mode or display the current IP address. Refer to IP Configuration (page 8) for more information.

8 **RESET**
Press and release this button to reset the unit to factory-default settings. Refer to Resetting to Factory-Defaults (page 9) for more information.

9 **RS-232 / IR OUT**
Connect a serial cable from the **RS-232** port, using the included 4-pin captive screw connector, to the display device. Connect an IR emitter from the **IR OUT** port, using the included 4-pin captive screw connector, and place the emitter next to the display.

10 **FW / DC 5V**
If not using PoE to power the unit, then the included power supply can be connected to this port. A USB to mini-USB cable can also be connected to this port to update the firmware. Refer to page 5 of this installation guide for more information on powering the unit.

RS-232 / IR Connector

The AT-DISP-CTRL provides both an **RS-232** and **IR** port, which can be used to send turn-on/turn-off commands to the display, when a source is connected to the AT-DISP-CTRL. Command configuration is handled through the web GUI. Refer to the User Manual for more information.

It is not necessary to connect both RS-232 and IR emitters to control the display. Either option can be used, depending upon the environment and the system setup.

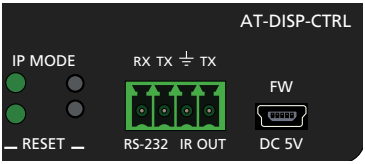
RS-232

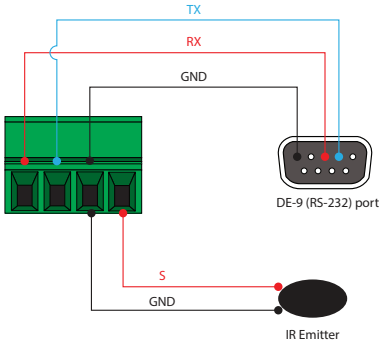
1. Use wire strippers to remove a portion of the cable jacket.
2. Remove at least 3/16" (5 mm) from the insulation of the RX, TX, and GND wires.
3. Insert the TX, RX, and GND wires from the DE-9 connector, into the correct terminal using the included 4-pin captive screw connector.

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.

IR

1. Use wire strippers to remove a portion of the cable jacket.
2. Remove at least 3/16" (5 mm) from the insulation of the GND and Signal (S) wires.
3. Insert the GND and Signal (S) wires from the IR emitter into the correct terminal using the included 4-pin captive screw connector.





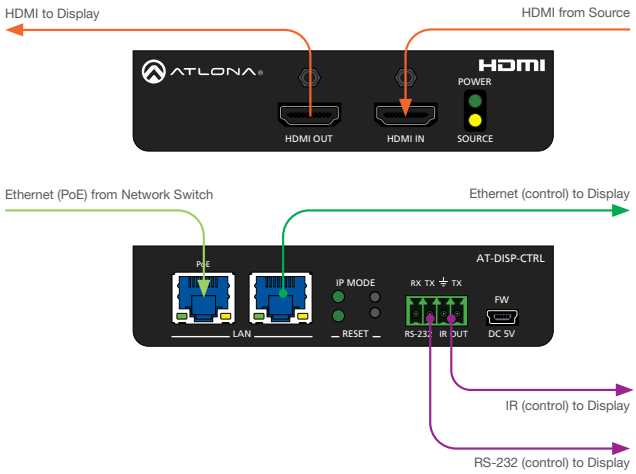
Installation

1. Connect an HDMI cable from the **HDMI OUT** port to the display device.
2. Connect an Ethernet cable, from the **PoE LAN** port, to a PoE-capable network switch.

NOTE: The AT-DISP-CTRL is powered over Ethernet (PoE) using a PoE-capable network switch. If a PoE-capable switch is not available, then connect the included power supply to the **FW** port.

By default, the AT-DISP-CTRL will use CEC* commands to send turn-on/turn-off messages to the display device. CEC is delivered over the HDMI cable that is connected to the display device. Commands can also be sent over RS-232, IR, or Ethernet (IP). If CEC control is not desired, using one of the following connection methods:

3. OPTIONAL: Connect an serial cable from the **RS-232** port to the display device. Refer to RS-232 / IR Connector (page 3) for wiring information.
4. OPTIONAL: Connect an IR emitter from the **IR OUT** port and place the emitter within range of the IR window on the display device. Refer to RS-232 / IR Connector (page 3) for wiring information.
5. OPTIONAL: Connect an Ethernet cable from the **LAN** port to the display device.
6. Connect an HDMI cable from the source device to the **HDMI IN** port on the AT-DISP-CTRL. Once the source device is connected and the AT-DISP-CTRL is configured properly, the AT-DISP-CTRL will turn on the connected display device.



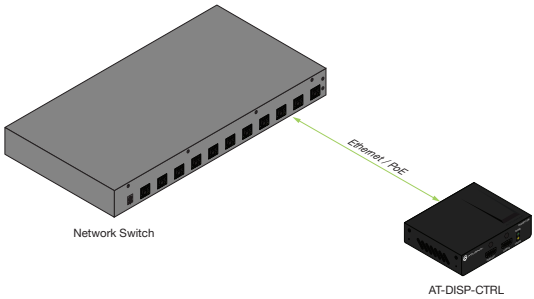
**Consumer Electronics Control (CEC): Atlona has confirmed proper CEC functionality with several current models of Samsung®, Panasonic®, and Sony® displays. However, it is not guaranteed that CEC will work with all displays. Many manufacturers do not support the CEC "off" command, and older displays use proprietary commands. Atlona only supports displays that use the CEC command structure defined in HDMI 1.2a. It is recommended that dealers request an evaluation product from Atlona, before designing a system using the CEC protocol. If this is not possible, then other control methods will need to be considered, in order to control displays using Atlona products.*

Powering the AT-DISP-CTRL

The AT-DISP-CTRL can be powered using any one of the following methods.

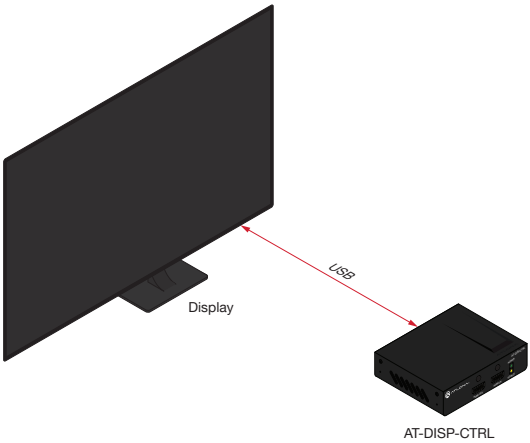
1. Power over Ethernet (PoE 802.3at)

Connect an Ethernet cable from the **PoE LAN** port to a PoE-enabled switch. Make sure the Ethernet cable is connected to a PoE port on the switch.



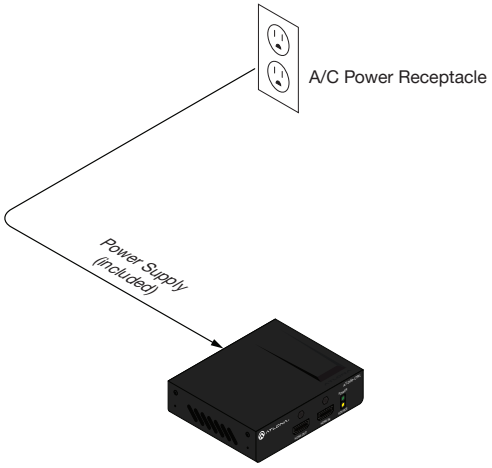
2. USB cable

Connect a USB to mini-USB cable (not included) from the **FW / 5V DC** port, on the rear of the unit, to an available USB port on a display. Note that a USB port on a computer may also be used, provided it can supply the necessary current required to power the AT-DISP-CTRL.



3. Power Adapter (included)

In the case where neither option 1 or 2 are availble, connect the included 5V / 1.2A DC power supply from the **FW / 5V DC** port on the AT-DISP-CTRL to an available A/C power receptacle.



AT-DISP-CTRL

Mounting Instructions

The AT-DISP-CTRL includes two mounting brackets and four mounting screws, which can be used to attach the unit 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.

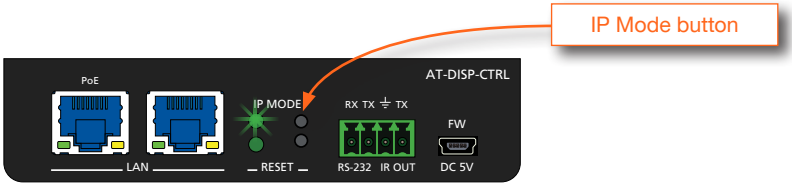
IP Configuration

The AT-DISP-CTRL is shipped with DHCP enabled. Once connected to a network, the DHCP server (if available), will automatically assign an IP address to the unit. If the AT-DISP-CTRL is unable to detect a DHCP server within 15 seconds, then the unit will use a self-assigned IP address within the range of **169.254.xxx.xxx**.

Use an IP scanner, along with the MAC address on the bottom of the unit, to identify the unit on the network. If a static IP address is desired, the unit can be switched to static IP mode. The default static IP address is **192.168.1.254**.

Switching the IP mode

1. Make sure the AT-DISP-CTRL is powered
2. Press and hold the **IP MODE** button, on the rear of the unit, for approximately five seconds.



3. Release the button once the LED indicator, next to the **IP MODE** button, begins to flash green. The number of flashes will indicate the currently selected IP mode.

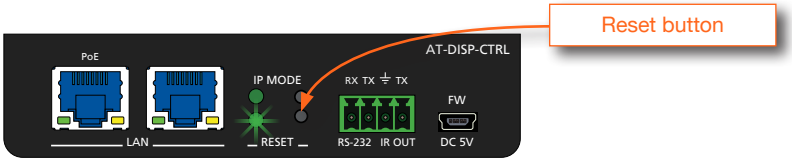
IP MODE LED flashes	Description
Two	Factory Static IP mode (IP address set to 192.168.1.254)
Four	DHCP mode

Displaying the IP Address

To display the IP address of the AT-DISP-CTRL, on the connected display, press and release the **IP MODE** button.

Resetting to Factory-Defaults

To reset the AT-DISP-CTRL to factory-default settings, press and hold the **RESET** button for approximately 5 seconds. Release the button when the **RESET** LED indicator begins to flash. The LED indicator will flash three times to indicate that the reset procedure has completed.



AMS 2.0

For easy configuration of Atlona devices, AMS 2.0 is available from https://atlona.com/ams for free. Two options can be used for installation: The free easy-to-install AMS software (AT-AMS-SW) download or the AMS server hardware (AT-AMS-HW).

Once AMS has been set up:

1. Open a browser on the same network as AMS 2.0 and go to the IP address of AMS 2.0. View the AMS 2.0 installation instructions on how to find the IP address of the software, if necessary.
2. Enter the login information on the AMS 2.0 web page, then click the **Login** button.
3. View the AT-DISP-CTRL manual for more information.

Web GUI

The AT-DISP-CTRL includes a built-in web GUI, which allows easy management and control of all features. Follow the instructions below to access the web GUI.

1. Set the IP mode of the AT-DISP-CTRL. Refer to IP Configuration (page 8) for more information.
2. Connect an Ethernet cable from the **LAN** port on the AT-DISP-CTRL to the Local Area Network (LAN).
3. Use an IP scanner to determine the IP address of the AT-DISP-CTRL.
4. Launch a web browser and enter the IP address of the unit.
5. The AT-DISP-CTRL **Login** page will be displayed.
6. Enter the following information on the **Login** page. Login credentials are case-sensitive.

   Login: **admin**
   Password: **Atlona**

7. Click the **Login** button.

Front Panel LED Indicators

The LED indicators on the front panel of the unit provide basic information on the current status of the AT-CTRL-DISP.

POWER	Description
Solid green	Unit is powered.
Off	Unit is not powered. • Check to make sure a USB to mini-USB cable is connected between the **DC 5V** / **FW** port and a computer. • If using Power over Ethernet (PoE), check the following: » Verify the AT-DISP-CTRL is connected to a PoE-capable network switch. » Check that the **PoE LAN** port is being used to connect to the network switch, not the **LAN** port. » 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.

SOURCE	Description
Solid amber	The source device is connected to the AT-DISP-CTRL.
Off	No source is connected to the AT-DISP-CTRL. • Make sure the source is powered and connected to the **HDMI IN** port on the AT-DISP-CTRL. • The HDMI cable may be compromised. Try a different HDMI cable.

Notes

English Declaration of Conformity

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

https://atlona.com/product/at-disp-ctrl/.

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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