

OmniStream 112 Dual-Channel Networked AV Encoder

AT-OMNI-112



The Atlona **OmniStream™ 112 (AT-OMNI-112)** is a networked AV encoder with two independent channels of encoding for two HDMI 2.0 sources up to 4K @ 60 Hz and HDR (High Dynamic Range), plus embedded audio and RS-232 or IR control pass-through. It is part of the OmniStream Series, designed for high performance, flexible distribution of AV over standard off-the-shelf Gigabit Ethernet switches in commercial audio visual applications. The OmniStream 112 is HDCP 2.2 compliant and ideal for the latest Ultra High-Definition and HDR sources. It features advanced high-quality VC-2 visually lossless video compression technology with user selectable video-quality optimization engines designed for computer-generated imaging, or motion video content. The Atlona OmniStream™ 112 achieves extremely low, sub-frame latency when paired with OmniStream Decoders. This dual-channel encoder is housed in a half-width rack with front-to-back air flow enclosure, and is ideal for high-density, compact installation in a centralized equipment location.

Package Contents

- 1 x AT-OMNI-112
- 1 x Push spring connector, 6-pin
- 1 x Wall/table mounting brackets
- 4 x Rubber feet
- 1 x Installation Guide



IMPORTANT: Visit <http://www.atlona.com/product/AT-OMNI-112> for the latest firmware updates and User Manual.

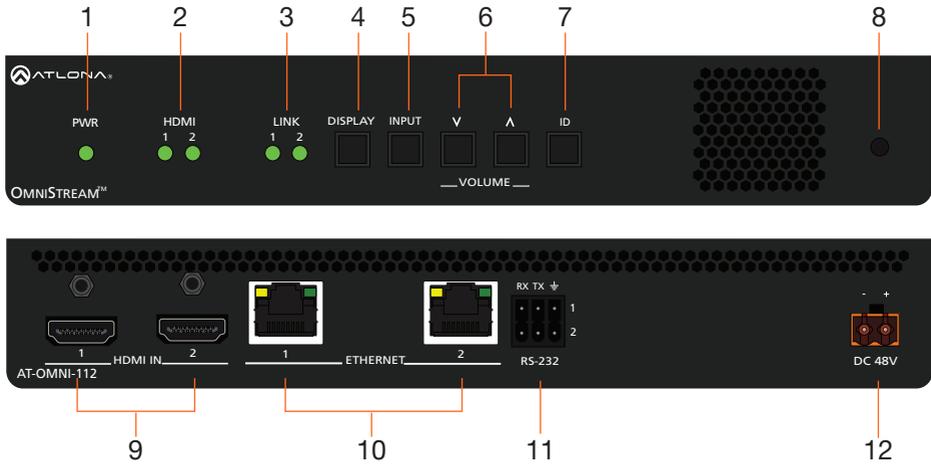


Operating Notes

- Atlona recommends using the Atlona Management System (AMS) which provides discovery, management, and configuration assistance. AMS is a free application that can be downloaded from the Atlona web site at <http://atlona.com/product/at-sw-ams/>.
- This product includes a built-in web interface, which can be used to manage and configure this device.
- OmniStream uses mDNS as the discovery mechanism. In order for mDNS to function properly, there must not be restrictions applied to the network. VPN can be used to connect to a computer that is running AMS, on the same network. However, VPN cannot be used when AMS is running on the local machine.



Panel Descriptions



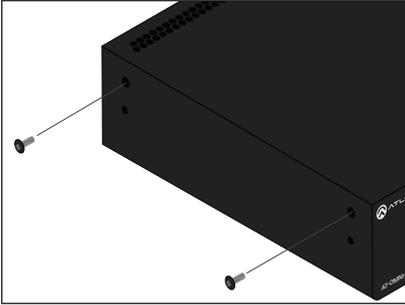
- | | |
|---|--|
| <p>1 PWR
This LED indicator is green when the unit is powered.</p> <p>2 HDMI 1 / HDMI 2
These LED indicators show the active input status.</p> <p>3 LINK 1 / LINK 2
These LED indicators will be green when the link integrity between the encoder and the switch is good.</p> <p>4 DISPLAY
Press this button to toggle the power state of the desired display.</p> <p>5 INPUT
Press this button to switch between HDMI 1 and HDMI 2 inputs.</p> <p>6 VOLUME
Press these buttons to adjust the output volume of the desired display.</p> <p>7 ID
Press this button to identify the unit within the AMS software.</p> | <p>8 REBOOT
Press this button, using a small, pointed object, to reboot the unit.</p> <p>9 HDMI 1 / HDMI 2
Connect HDMI cables from these ports to a UHD/HD source.</p> <p>10 ETHERNET 1 / ETHERNET 2
Connect Ethernet cables from these ports to the Local Area Network (LAN).</p> <p>11 RS-232 1 / RS-232 2
Use the included captive screw connector to connect up to two RS-232 devices to this port. Refer to RS-232 on page 6 for more information.</p> <p>12 DC 48V
Connect the optional 48V DC power supply to this power receptacle. This power supply is available, separately, and is required when connecting the encoder to non-PoE compatible switch.</p> |
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Mounting Instructions

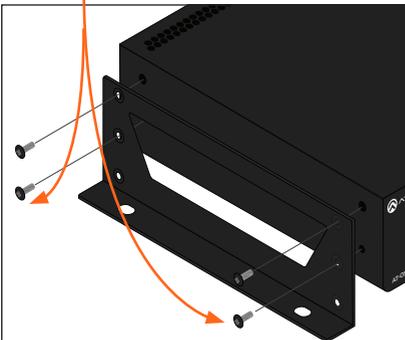
The AT-OMNI-112 encoder includes two mounting brackets and four mounting screws, which can be used to attach the unit to any flat surface.

1. Using a small Phillips screwdriver, remove the two screws from the left 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.

Included screws



4. To provide added stability to the mounting bracket, use two of the included screws and attach them to the two holes, directly below the enclosure screws, as shown above.

5. Repeat steps 1 through 4 to attach the second mounting bracket to the opposite side of the unit.
6. Mount the unit using the oval-shaped holes, on each mounting bracket. If using a drywall surface, a #6 drywall screw is recommended.

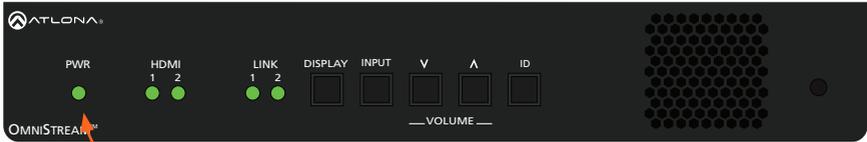


NOTE: Mounting brackets can also be inverted to mount the unit under a table or other flat surface.



Installation

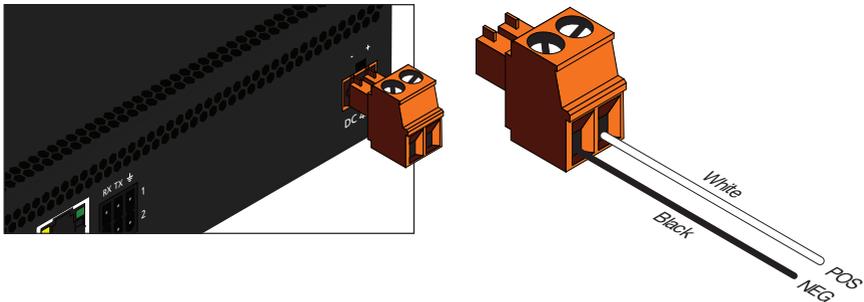
1. Connect an Ethernet cable from the **ETHERNET 1** and **ETHERNET 2** ports on the encoder to a PoE-capable switch on the Local Area Network (LAN). Note that if a PoE-capable switch is not available, the 48V DC power supply (sold separately) must be connected to the encoder.
2. Connect an HDMI cable from each UHD/HD source to the **HDMI 1** and **HDMI 2** ports on the encoder.
3. If using RS-232, connect the included 6-pin captive screw connector to the **RS-232** port on the encoder.
4. The **PWR** indicator, on the front panel, display the power status of the encoder. When the encoder is powered, using either PoE or the optional 48V DC power supply (not included), the LED initially turns red. After a few moments it will turn amber, and finally green.



PWR indicator

Power Supply (optional)

The AT-OMNI-112 is powered by PoE (Power over Ethernet), when connected to a PoE-capable switch. If a PoE-switch is not used, then the optional 48 V power supply (Atlona part no. AT-PS-48083-C) can be purchased, separately. Insert the positive and negative leads, from the power supply, into the terminals of the 2-pin captive screw connector block, as shown. The orange 2-pin captive screw connector block is included with the OmniStream power supply package.





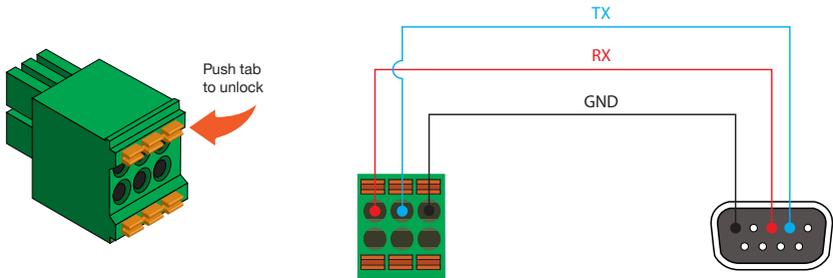
RS-232

The AT-OMNI-112 provides transport of RS-232 protocol over IP which allows communication between a control system and an RS-232 device. This step is optional.

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 into correct terminal on the included push spring connector, following the wiring diagram below. If using non-tinned stranded wire, press the orange tab, above the terminal, while inserting the exposed wire.

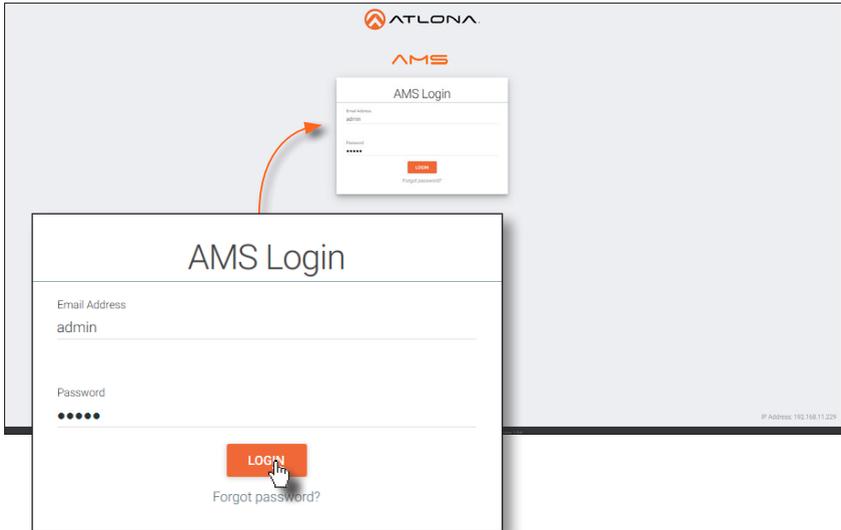


NOTE: Typical DB9 connectors use pin 2 for TX, pin 3 for RX, and pin 5 for ground. On some devices, the function of pins 2 and 3 are reversed.



Configuration

1. Launch a web browser and enter the IP address of AMS, in the address bar.
2. Enter the required login credentials.



3. Click the **Login** button.
4. The AMS Dashboard will be displayed.
5. Click the  icon, in the upper-left corner of the AMS Dashboard.
6. Click **Devices** from the fly-out menu.
7. Click the **Unassigned** option.

All available encoders will be displayed under the **Unassigned** category. When an encoder is unassigned, it means that it has not been assigned to a site, building, and/or room. Refer to the AMS User Manual for more information on these topics.

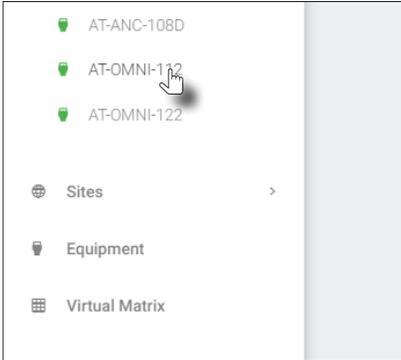
If a DHCP server is not found within 60 seconds, the encoder will be placed in Auto IP mode and assigned an IP address within the range of 169.254.xxx.xxx. If this occurs, configure the network interface of the computer that is running AMS, located on the same subnet (169.254.xxx.xxx, subnet mask 255.255.0.0). Refer to User Manual for more information.

If no OmniStream encoders are found, then verify the following:

- The computer that is running AMS must be on the same network as the OmniStream device.
- Remove any network restrictions that may be in place. In order for mDNS to function properly, there must not be restrictions applied to the network.

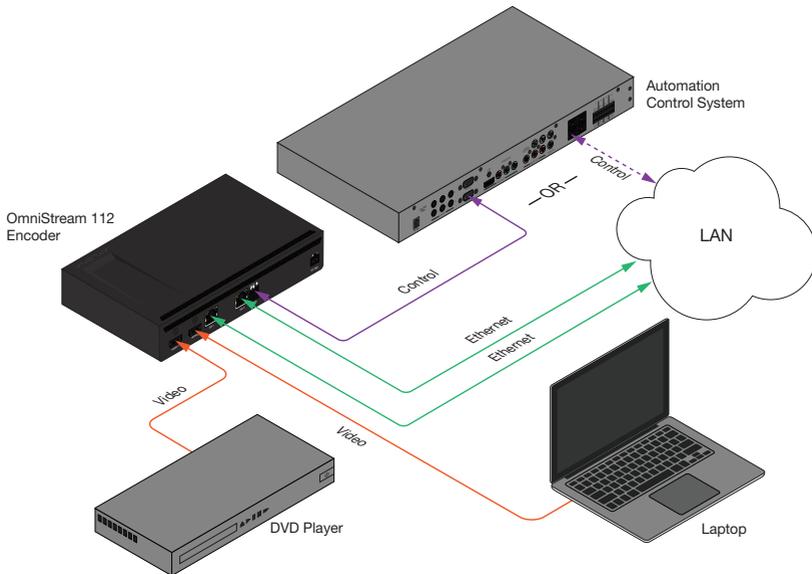


8. Click the desired encoder from the **Unassigned** device list.



Once the unit is selected, the AMS interface for the encoder will be displayed. Refer to the User Manual for more information on the AMS interface.

Connection Diagram





Troubleshooting

Problem	Solution
PWR indicator is off.	<ul style="list-style-type: none">• If using a PoE (Power-over-Ethernet) switch, make sure that the port on the switch that is connected to the encoder, has PoE enabled. When the encoder is powered using PoE, the PWR indicator will be green.• Check the Ethernet cable for possible damage or loose connections.• Connect the optional 48V DC power supply (available from atlona.com) to the encoder. When using an external power supply, the PWR indicator will be red.
LINK indicator is red.	<ul style="list-style-type: none">• Connect an Ethernet cable to the ETHERNET port(s).• Check the Ethernet cable for possible damage or loose connections.
OmniStream encoders are not displayed in AMS.	<ul style="list-style-type: none">• Verify that AMS and the encoder are on the same network.• If a DHCP server is not found within 60 seconds, the encoder will be placed in Auto IP mode and assigned an IP address within the range of 169.254.xxx.xxx. If so, then connect a laptop directly to the encoder and configure a static IP address for the encoder.• Check the Ethernet cable for possible damage or loose connections.• Make sure that mDNS is enabled on the network. Also, in order for mDNS to function properly, there must not be any restrictions applied to the network.



Notes



Notes

