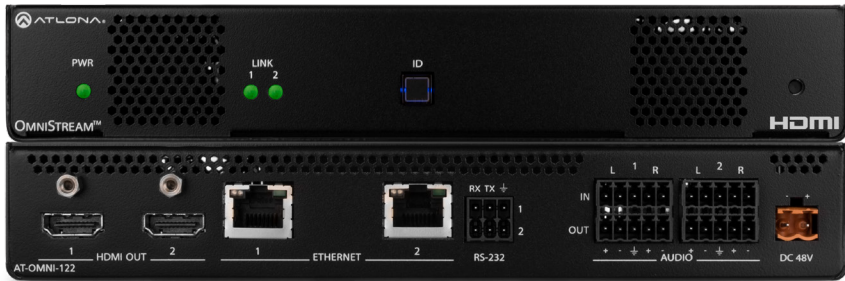**ATLONA.**
a **PANDUIT** company

OmniStream 122 Dual-Channel Networked AV Decoder
AT-OMNI-122

The Atlona **OmniStream™ 122** (**AT-OMNI-122**) is a networked AV decoder with two independent decoding channels and two independent HDMI 2.0 outputs supported resolutions up to 4K @ 60Hz and HDR (High Dynamic Range), plus audio embedding / de-embedding, 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. It features advanced high-quality VC-2 visually lossless video decoding technology with user selectable video-quality optimization engines designed for computer-generated imaging, or motion video content. The Atlona OmniStream™ 122 achieves extremely low, sub-frame latency when paired with OmniStream Encoders. This dual-channel decoder 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-122
1 x Push spring connector, 6-pin
1 x Captive screw connector, 3-pin
2 x Captive screw connectors, 5-pin
4 x Push spring connectors, 5-pin
1 x Wall/table mounting brackets
4 x Rubber feet
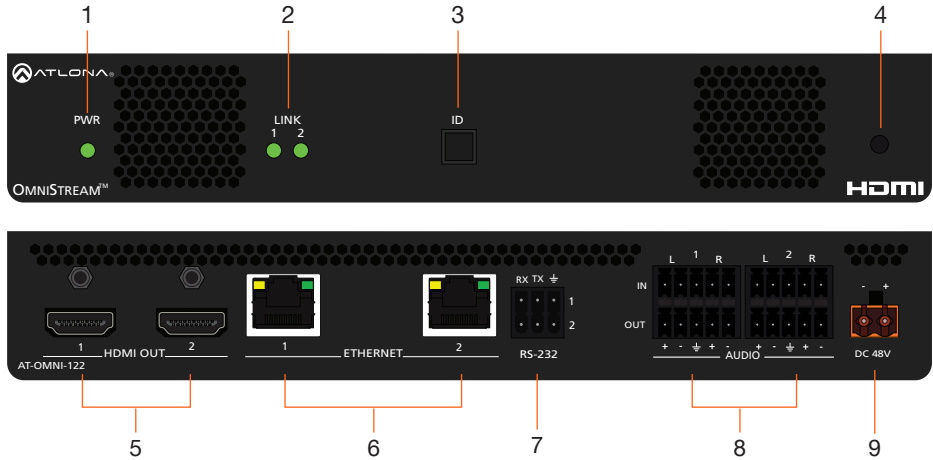1 x Installation Guide

Operating Notes

- Atlona recommends using the Velocity with Integrated AMS which provides discovery, management, and configuration assistance. Velocity with Integrated AMS is a free application that can be downloaded from the Atlona web site at http://atlona.com/product/at-ams-sw/.

- OmniStream uses mDNS as the discovery mechanism. In order for mDNS to function properly, there must not be restrictions applied to the network. Although VPN can be used to connect to a computer that is running Velocity, on the same network, it cannot be used when Velocity is running on the local machine.

⚠️ **IMPORTANT**: Visit http://www.atlona.com/product/AT-OMNI-122 for the latest firmware updates and User Manual.

Panel Descriptions

1 PWR
This LED indicator is green when the unit is powered and booted.

2 LINK 1 / LINK 2
These LED indicators are green when the link integrity between the decoder and the network switch is good.

3 ID
This button provides two functions:
(1) Press and release this button to send a broadcast network notification to any devices that may be listening (AMS).
(2) Press and hold this button for 30 seconds to perform a factory-reset of the unit. Refer to the OmniStream Decoder User Manual for more information.

4 REBOOT
Use a pointed object to press this recessed button and reboot the unit.

5 HDMI OUT
Connect HDMI cables from these ports to a UHD/HD display.

6 ETHERNET 1 / ETHERNET 2
Connect Ethernet cables from these ports to the Local Area Network (LAN).

7 RS-232 1 / RS-232 2
Use the included Euroblock push-spring connector to connect up to two RS-232 devices to this port.

8 AUDIO IN / OUT
Connect the included push-spring connectors to the **AUDIO IN** ports to embed audio on the **HDMI OUT** ports. To de-embed the HDMI audio, connect the push-spring connectors to the **AUDIO OUT** ports. Refer to **Audio** on page 6 for more information.

9 DC 48V
Connect the optional 48V DC power supply to this power receptacle. This power supply is available, separately, and is required for embedding and de-embedding of analog audio.

Mounting Instructions

The AT-OMNI-122 decoder 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.
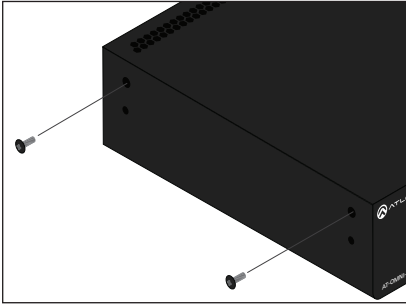

2. Position one of the mounting brackets, as shown below, aligning the holes on the side of the enclosure with one set of holes on the mounting bracket.

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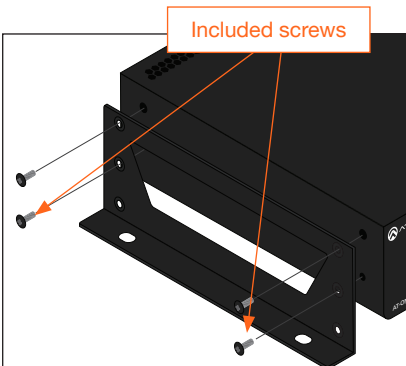
Included screws

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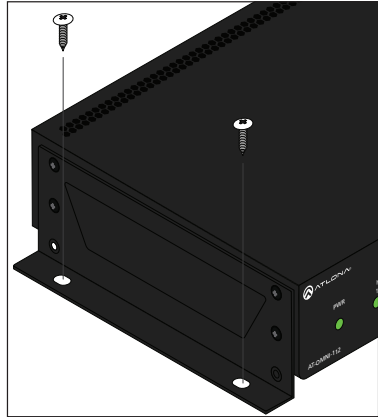
NOTE: Mounting brackets can also be inverted to mount the unit under a table or other flat surface.

Installation

1. Connect an Ethernet cable from the **ETHERNET 1** and **ETHERNET 2** ports on the decoder 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 decoder.

2. Connect HDMI cables from each UHD/HD display to the **HDMI OUT** ports on the decoder.

3. If using RS-232, connect the 6-pin Euroblock push-spring connector to the **RS-232** port on the decoder.

4. The **PWR** indicator, on the front panel, display the power status of the decoder. When the decoder 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-122 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.

IMPORTANT: The external power supply must be connected to the decoder when embedding and de-embedding audio using the **AUDIO IN** and/or **AUDIO OUT** ports.
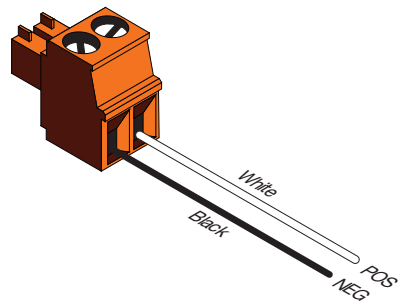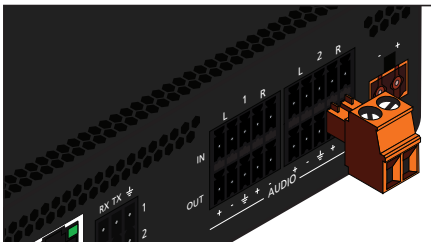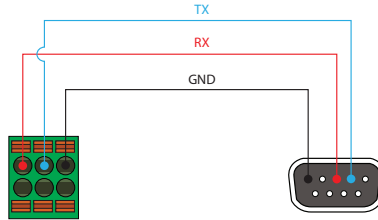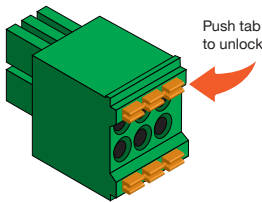
RS-232

The AT-OMNI-121 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. 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.
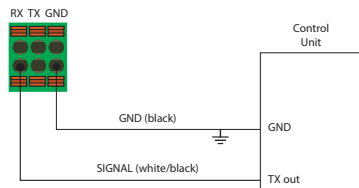
Push tab to unlock

TX
RX
GND

IR

The same port that provides RS-232 connections also supports bidirectional IR pass-through, allowing a device to be controlled from either the headend or the decoder endpoint. This step is optional. IR control is only supported on RS-232 2 port (bottom set of connectors).

IR emitter configuration

RX TX GND

GND (black)

IR emitter

SIGNAL (white/black)
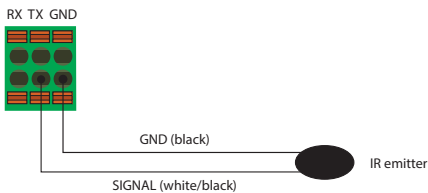
IR extender configuration

RX TX GND

Control Unit

GND (black)

GND

SIGNAL (white/black)

TX out

Audio

The AT-OMNI-122 provides the ability to embed 2-channel analog audio on the **HDMI OUT** port or de-embed HDMI audio on the **AUDIO OUT** port. De-embedded HDMI audio is downmixed to 2-channel PCM. This step is optional.
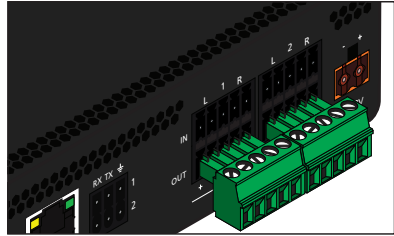
⚠️ **IMPORTANT**: Audio embedding and de-embedding, using the analog audio outputs, requires the optional OmniStream power supply (AT-PS-48083-C).

• If **AUDIO IN** *or* **AUDIO OUT** will be used, then connect the included 5-pin captive screw connectors, as shown in the following examples:
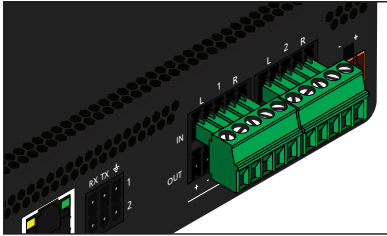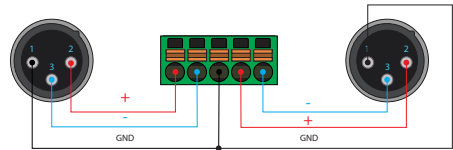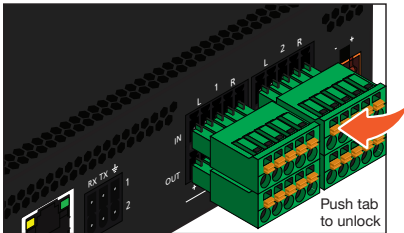

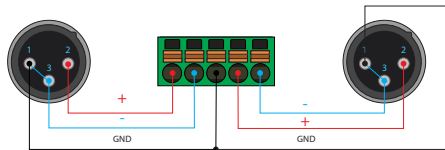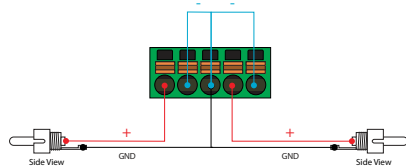2-channel analog audio input (top)

2-channel analog audio output (bottom)

• If both **AUDIO IN** *and* **AUDIO OUT** ports will be used, then connect the included 5-pin push spring connectors, as shown below.

Push tab to unlock

Balanced XLR audio

Unbalanced XLR audio


Unbalanced RCA audio

If using non-tinned stranded wire, press the orange tab, above the terminal, while inserting the exposed wire

ℹ️ **NOTE:** Unbalanced XLR audio requires Pin 1 and Pin 3 to be connected. The same wiring applies to both captive screw and push-spring connectors.

Accessing devices using Velocity with Integrated AMS

1. Launch a web browser and enter the IP address of Velocity, in the address bar.

2. Enter the required login credentials.
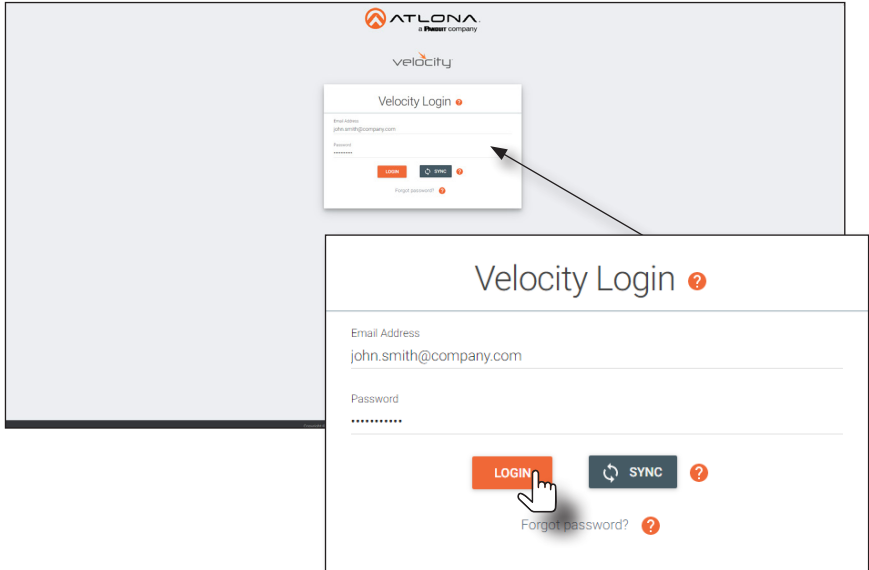
3. Click the **Login** button.

4. The Velocity with Integrated AMS Dashboard will be displayed.

5. Click the ☰ icon, in the upper-left corner.

6. Click **Management** > **AMS Device Manager** from the fly-out menu.

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

    If a DHCP server is not found within 60 seconds, the decoder 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 decoders are found, then verify the following:

    •   The computer that is running Velocity 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.

7. Click the desired decoder from the **Unassigned** device list or from under the **Device List** column.

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

Accessing devices using the built-in Web Server

1. Identify the desired decoder by locating the MAC address on the bottom of the unit.

   In the following example, the label indicates the MAC address for each physical interface. The Ethernet cable can be connected either interface.

MAC addresses

Serial #: 0730302519070401548

Model #: AT-OMNI-122

Rev #: K

MAC Address 1:
B8:98:B0:01:F7:EB

MAC Address 2:
B8:98:34:09:C5:F0
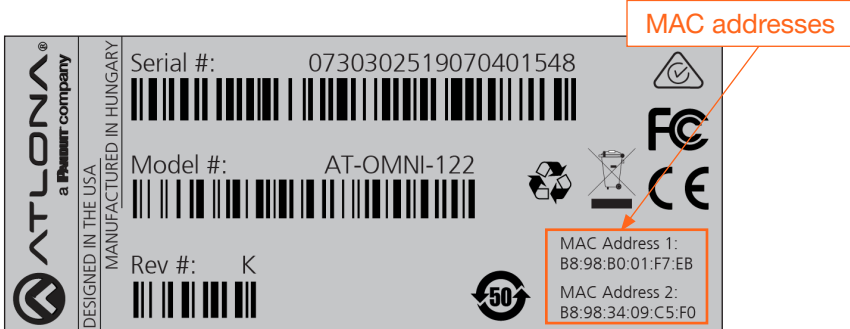
2. Connect a PC to the same network where the OmniStream encoders/decoders are connected.

3. Locate the IP address, matching it with the MAC address of the device, using an IP scanner or ARP.

4. Launch the desired web browser and enter the IP address of the decoder in the address bar.

5. Enter the username and password. Note that the password field will always be masked. The default credentials are:

   Username: `admin`
   Password: `Atlona`
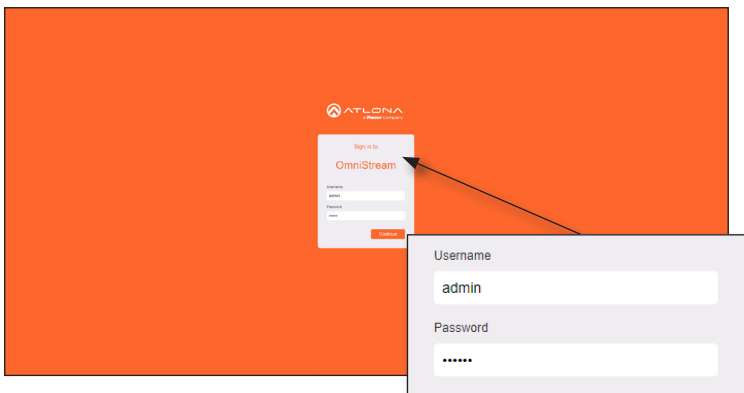
NOTE: Atlona recommends changing both the username and password for security purposes. Refer to the OmniStream User Manual for more information.

6. The **System Information** screen will be displayed. Refer to the User Manual for more information on the web server interface.
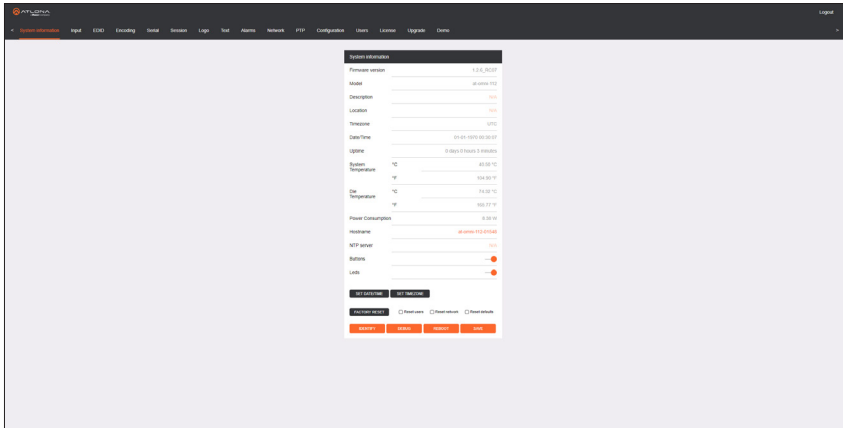
7. The login process is complete.

Troubleshooting

Problem	Solution
PWR indicator is off.	• If using a PoE (Power-over-Ethernet) switch, make sure that the port on the switch that is connected to the decoder, has PoE enabled. When the decoder 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 decoder. When using an external power supply, the **PWR** indicator will be green.
LINK indicator is red.	• Connect an Ethernet cable to the **ETHERNET** port(s). • Check the Ethernet cable for possible damage or loose connections.
OmniStream decoders are not displayed in Velocity with AMS Integration.	• Verify that AMS and the decoder are on the same network. • If a DHCP server is not found within 60 seconds, the decoder will be placed in Auto IP mode and assigned an IP address within the range of 169.254.xxx.xxx. To access the decoder, configure a static IP on the PC within the same IP range, then connect the PC directly to the decoder and configure a static IP address for the decoder. This static IP address must be within the same IP range that is used by the Velocity with AMS Integration software. Otherwise, the decoder will not show up. • 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.
Analog audio embedding/ de-embedding is not working.	• Connect the optional 48V power supply (AT-PS-48083-C) to the decoder. Contact Atlona to purchase this power supply.

Version 3

English Declaration of Conformity

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

https://atlona.com/product/at-omni-122/.

Chinese Declaration of Conformity 中国RoHS合格声明

由SKU列出於:

https://atlona.com/about-us/china-rohs/.

HDMI
HIGH-DEFINITION MULTIMEDIA INTERFACE

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