ATLONA
a PANDUIT company

4K/UHD
6x6 HDMI to HDBaseT
Matrix Switcher

AT-UHD-PRO3-66M | Atlona Manuals
Switchers

Version Information

Version	Release Date	Notes
1	Nov 2018	New format
2	Feb 2020	Added missing factory reset procedure
3	Jun 2020	Added missing IR remote documentation
4	Jul 2020	Removed IR remote control unit - no longer included

Welcome to Atlona!

Thank you for purchasing this Atlona product. We hope you enjoy it and will take a extra few moments to register your new purchase.

Registration only takes a few minutes and protects this product against theft or loss. In addition, you will receive notifications of product updates and firmware. Atlona product registration is voluntary and failure to register will not affect the product warranty.

To register your product, go to http://www.atlona.com/registration

Sales, Marketing, and Customer Support

Main Office

Atlona Incorporated
70 Daggett Drive
San Jose, CA 95134
United States

Office: +1.877.536.3976 (US Toll-free)
Office: +1.408.962.0515 (US/International)

Sales and Customer Service Hours
Monday - Friday: 6:00 a.m. - 4:30 p.m. (PST)

http://www.atlona.com/

International Headquarters

Atlona International AG
Ringstrasse 15a
8600 Dübendorf
Switzerland

Office: +41 43 508 4321

Sales and Customer Service Hours
Monday - Friday: 09:00 - 17:00 (UTC +1)

Operating Notes

IMPORTANT: Visit http://www.atlona.com/product/AT-UHD-PRO3-66M for the latest firmware updates and User Manual.

IMPORTANT: This product will no longer include a handheld remote control beginning January, 2021. IR control codes for this product can be found in the Resources Tab in the document titled “IR Codes” or by clicking this link

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Atlona warrants its products will substantially perform to their published specifications and will be free from defects in materials and workmanship under normal use, conditions and service.

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Safety and Certification

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCT THE RISK OF ELECTRIC SHOCK
DO NOT OPEN ENCLOSURE OR EXPOSE TO RAIN OR MOISTURE.
NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the product.

The information bubble is intended to alert the user to helpful or optional operational instructions in the literature accompanying the product.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this product near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install or place this product near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of a polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the product.
11. Only use attachments/accessories specified by Atlona.
12. To reduce the risk of electric shock and/or damage to this product, never handle or touch this unit or power cord if your hands are wet or damp. Do not expose this product to rain or moisture.
13. Unplug this product during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the product has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the product, the product has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Unit is intended for installation in a restricted access location accessible by authorized personnel only.
16. Unit is intended for installation in a location where children are not present.
17. CAUTION: After plug disconnection, do not touch power plug pins or appliance inlet pins due to the presence of charged capacitors, which may cause electric shock.
18. Unit shall be connected only to earthed socket outlet.
    - Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord.
    - Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan.
    - Apparatet må tilkoples jordet stikkontakt.
    - Apparaten skall anslutas till jordat uttag.

FCC Compliance

FCC Compliance and Advisory Statement: This hardware device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: 1) this device may not cause harmful interference, and 2) this device must accept any interference received including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed or used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: 1) reorient or relocate the receiving antenna; 2) increase the separation between the equipment and the receiver; 3) connect the equipment to an outlet on a circuit different from that to which the receiver is connected; 4) consult the dealer or an experienced radio/TV technician for help. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Where shielded interface cables have been provided with the product or specified additional components or accessories elsewhere defined to be used with the installation of the product, they must be used in order to ensure compliance with FCC regulations.

Copyright, Trademark, and Registration

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Introduction

The Atlona **AT-UHD-PRO3-66M** is a dual-distance 6×6 HDMI to HDBaseT matrix switcher for 4K/UHD @ 60 Hz video signals with Power over Ethernet for receivers and analog audio breakout. The matrix provides flexible HDBaseT routing with both extended distance, 330 foot (100 meter) and long distance, 230 foot (70 meter) transmission over category cable with bidirectional extension of both RS- 232 and IR Control. Two HDMI outputs are provided as mirrored outputs designed for routing HDMI-based audio to an AVR or as additional matrix outputs. The matrix switcher is HDCP 2.2 compliant and supports EDID communication. The matrix is control system-friendly and integrates with any TCP/IP, RS-232, or IR based control signals. Designed for multi-zone residential or commercial distribution applications, the PRO3-66M features a 2U, rack-mountable enclosure with internal, international power supply.

Features

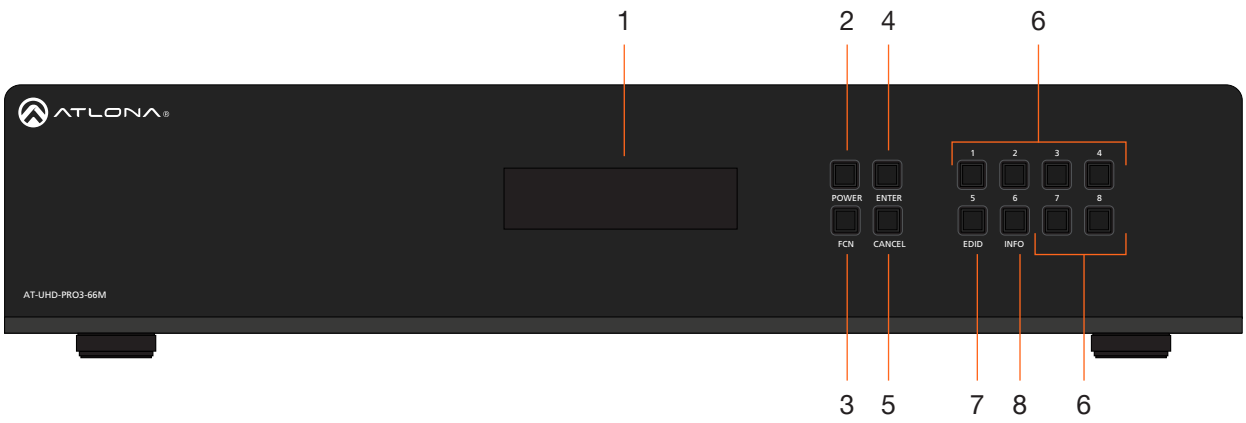
- Six HDBaseT outputs with dual-distance transmission of A/V, control and power signals over a single category cable
- Two HDMI outputs with independently selectable mirror and matrix modes
- 4K/UHD capability with HDCP 2.2 copy protection
- Power over Ethernet for remote-powered receivers
- Audio de-embedding with volume, mute, and five-band EQ
- TCP/IP, RS-232, and IR control
- Easy, GUI-based configuration using integrated web server
- EDID management
- Multi-channel audio compliant
- Support for 192 kHz/24-bit digital audio
- Independent volume control, mute and five-band EQ for each de-embedded audio output
- Integrated HDBaseT link status monitoring
- Quiet, active cooling
- Rack mountable 2U, full rack width enclosure with internal, international power supply
- Includes user manual, rack mount brackets, and detachable power cable
- Award-winning 10 year limited product warranty

Package Contents

1 x AT-UHD-PRO3-66M
14 x 4-pin captive screw connectors
1 x 5-pin captive screw connector
1 x IEC power cable
2 x 19” mounting brackets
1 x Installation Guide

Panel Description

Front



1 Front Panel Display
This 16-character, two-row display provides the status of the matrix during various operations.

2 POWER
Press this button to power-on or place the matrix in standby mode. The button is backlit to indicate the current state: When the matrix is powered, the button will be solid blue. In standby mode, the button will be red. Refer to Powering the Matrix (page 17) for more information.

3 FCN
Press this button to select the desired function. Refer to Displaying the System Settings (page 20) for more information.

4 ENTER
Press this button to confirm operations or view the current status for inputs. Refer to Routing Inputs to Outputs (page 10) for more information.

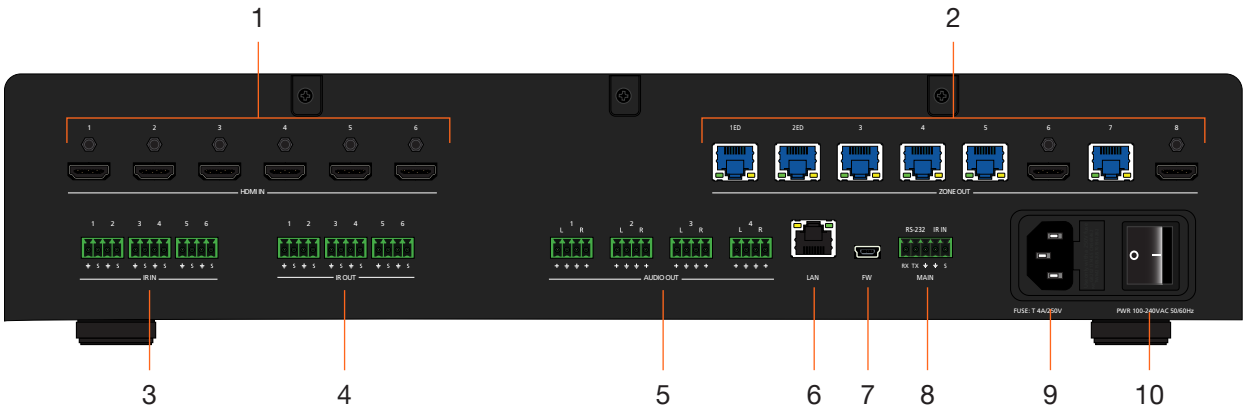
5 CANCEL
Press this button to abort the current operation, return to the previous menu, or go to the home screen. Refer to Routing Inputs to Outputs (page 10) for more information.

6 Routing / Function Buttons
Press these buttons to manage routing operations and other functions.

7 EDID
Press this button, in conjunction with the **FNC** button, to save and load EDID data. Refer to EDID Management (page 37) for more information.

8 INFO
Press this button to display the current firmware version, IP address, and MAC address of the matrix. Refer to Displaying the System Settings (page 20) for more information.

Rear



1 HDMI IN
Connect up to six HD/UHD source devices to these ports using HDMI cables.

2 ZONE OUT
Connect up to six PoE-compatible receivers to the HDBaseT ports using Ethernet cable.

NOTE: By default, **ZONE OUT 6** and **ZONE OUT 8** are used for mirroring: **ZONE OUT 6** follows **ZONE OUT 5** and **ZONE OUT 8** follows **ZONE OUT 7**. These two HDMI output ports can also be configured to receive any one of six HDMI input signals, allowing the unit to function as a 6 x 8 matrix switcher. Refer to Output Mirroring (page 26) for more information.

3 IR IN
Connect a control system to these ports. Refer to IR Control (page 51) for more information.

4 IR OUT
Connect IR emitters to these ports, in order to control source devices. Refer to IR Control (page 51) for more information.

5 AUDIO OUT
Connect these ports to the analog inputs of a DSP, audio amplifier, or other output device, using the included 5-pin captive screw blocks. Refer to Audio Connectors (page 12) for wiring information.

6 LAN
Connect an Ethernet cable from this port to the Local Area Network (LAN).

7 FW
Connect a USB to mini-USB cable from this port to the USB port on a computer, when performing a firmware upgrade. Refer to Updating the Firmware (page 67) for more information.

8 MAIN (RS-232 / IR IN)
Connect a control system to this port using the included 5-pin captive screw block. Control can be performed using either RS-232 or electrical IR. Refer to RS-232 Control (page 46) and IR Control (page 51) for more information.

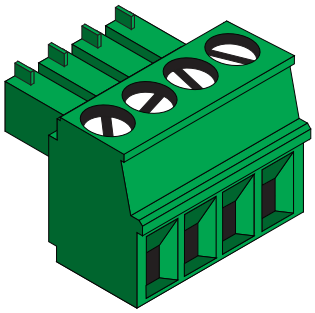
9 PWR 100-240VAC 50/60Hz
Connect the included power cable from this receptacle to an available AC power outlet.

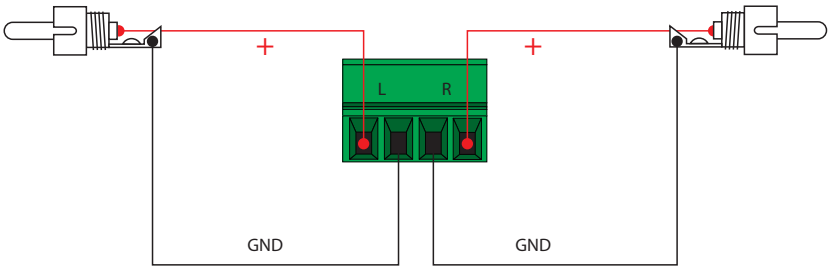
10 ON/OFF
Press this button to power-on or power-off the matrix.

Installation

Audio Connectors

The **AUDIO IN** and **AUDIO OUT** ports on the AT-UHD-PRO3-66M provide analog inputs and outputs, respectively, for audio. Use the included 4-pin captive screw blocks to connect unbalanced analog sources/outputs.



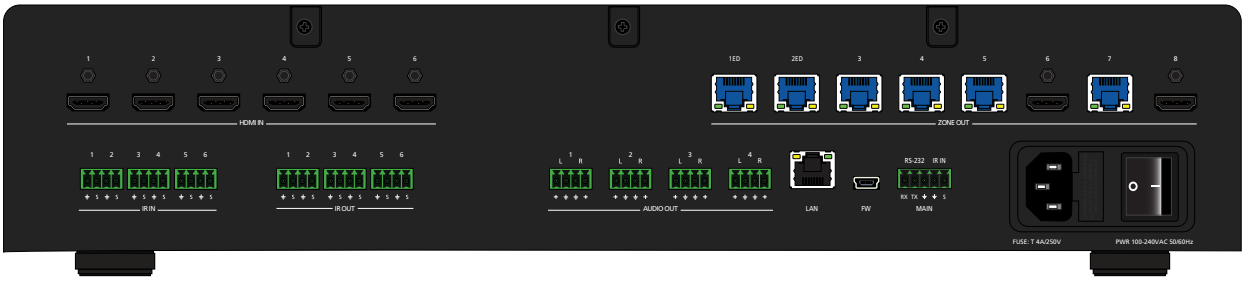


Connection Instructions

1. Connect up to six HD/UHD sources to the **HDMI IN** (**1** - **6**) ports.
2. Connect up to six PoE-compatible receivers (e.g. AT-UHD-EX-100CE-RX) to the **ZONE OUT** (**1ED, 2ED, 3 - 5**, **7**) ports using Ethernet cables.

> **NOTE:** Ports **1ED** and **2ED** are used for “extended distance” connections and are capable of extending up to 330 feet (100 meters). Ports **2** through **5** and **7** are limited to a maximum distance of 230 feet (70 meters).

3. Connect up to two HD/UHD displays to **ZONE OUT 6** and **ZONE OUT 8** ports using HDMI cables. These ports can be used for receiving an input source or can be used for mirroring. Refer to Output Mirroring (page 26) for more information.
4. Connect an Ethernet cable from the **LAN** port to a Local Area Network (LAN). This step is required in order to access the Web GUI and/or use the matrix for IP control.
5. Connect the included power cable from the **PWR 100-240VAC 50/60Hz** power receptacle to an available AC power outlet.



OPTIONAL

6. Connect a control system to the matrix using the **MAIN RS-232 IR IN** port. Both RS-232 and electrical IR are supported. Refer to RS-232 Control (page 46) and IR Control (page 51) for more information.
7. Connect up to six audio output devices (e.g. AT-GAIN-60) to the **AUDIO OUT** (**1** - **4**) ports using the included 4-pin captive screw blocks. Refer to Audio Connectors (page 13) for wiring instructions.
8. Connect a third-party control system to the **IR IN** (**1** - **6**) ports. IR will be transmitted over the **HDBaseT OUT** port to control displays or other sink devices which are connected to the receiver endpoint. Refer to and IR Control (page 51) for more information.
9. Connect up to six IR emitters to the **IR OUT** (**1 - 6**) ports, allowing IR control of source devices at the headend. Refer to and IR Control (page 51) for more information.

Setting the IP Mode

The AT-UHD-PRO3-66M 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 no DHCP server is found or available, then the matrix will be set to the following IP settings:

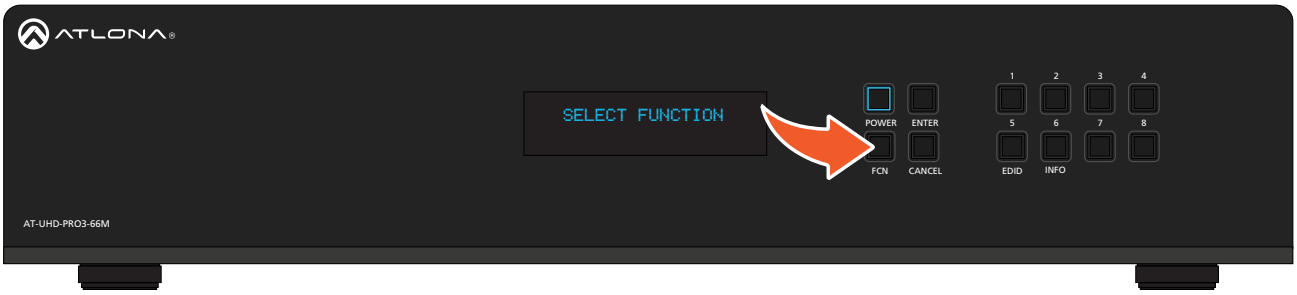
Default IP settings

Description	Setting
IP address	192.168.0.150
Netmask	255.255.255.0
Gateway	192.168.0.1

The front-panel display can be used to identify the IP address of the matrix. The AT-UHD-PRO3-66M can also be set to a static IP address, if necessary.

Using the Front Panel

1. Make sure the home screen is displayed. If the home screen is not displayed, press the **CANCEL** button to return to the home screen.
2. Press and release the **FNC** button to display the **SELECT FUNCTION** screen.



3. Press button **4** to display the IP mode screen.

```
1. IP DHCP
2. IP STATIC
```

4. Press button **2** to select IP Static mode. The matrix will display a prompt to confirm the selection.

```
IP STATIC ADDRESSING
ENTER TO CONFIRM
```

5. Press the **ENTER** button to confirm the selection. The matrix will reboot and will indicate that the IP change is taking place.

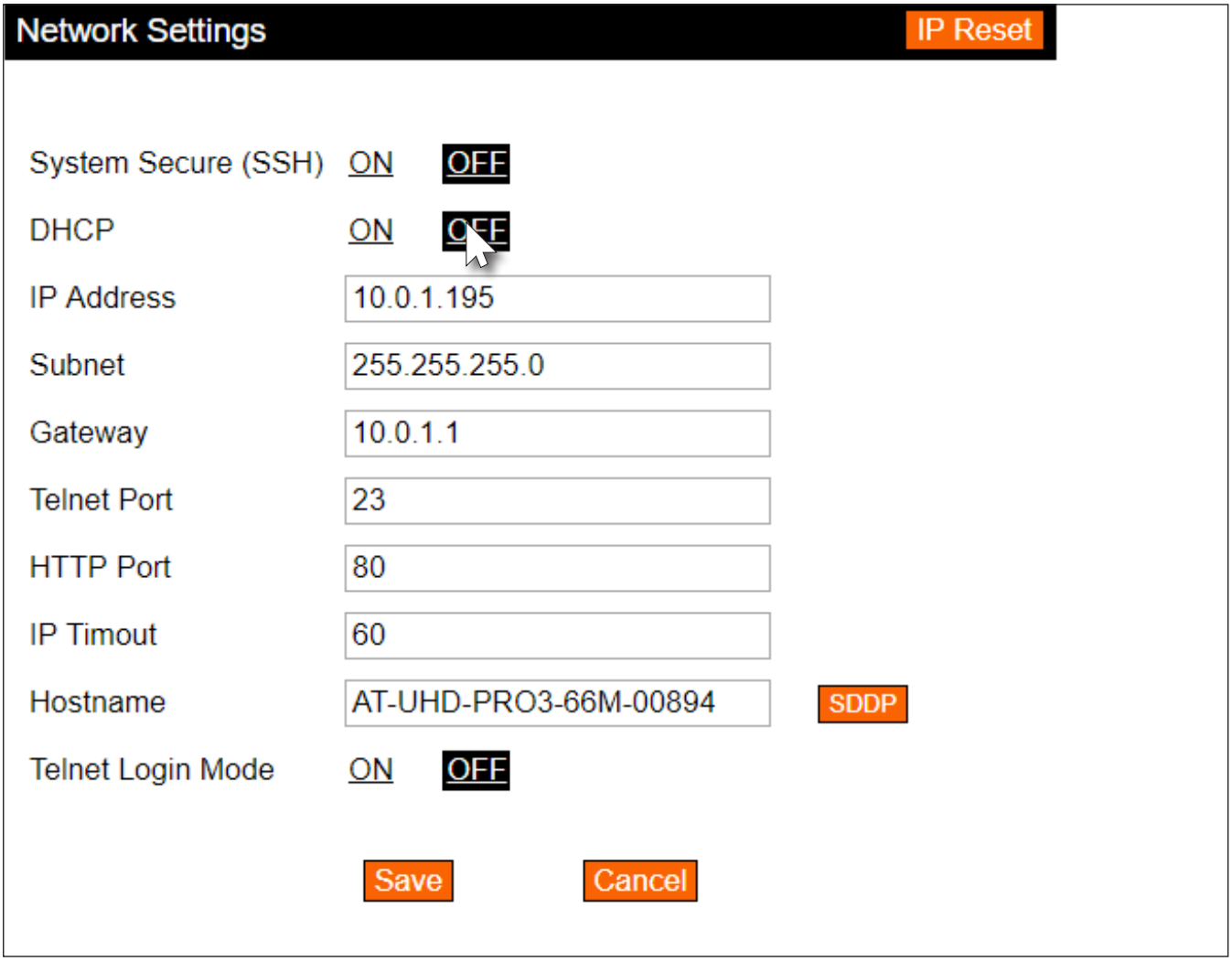
```
IP CHANGE TO STATIC
REBOOTING SYSTEM...
```

Once the matrix completes the reboot process, it will display the home screen. When the matrix is set to static IP mode, the default IP address of 192.168.1.254 is used.

To place the matrix in DHCP mode, repeat the above steps and press button **2** when the IP mode screen is displayed.

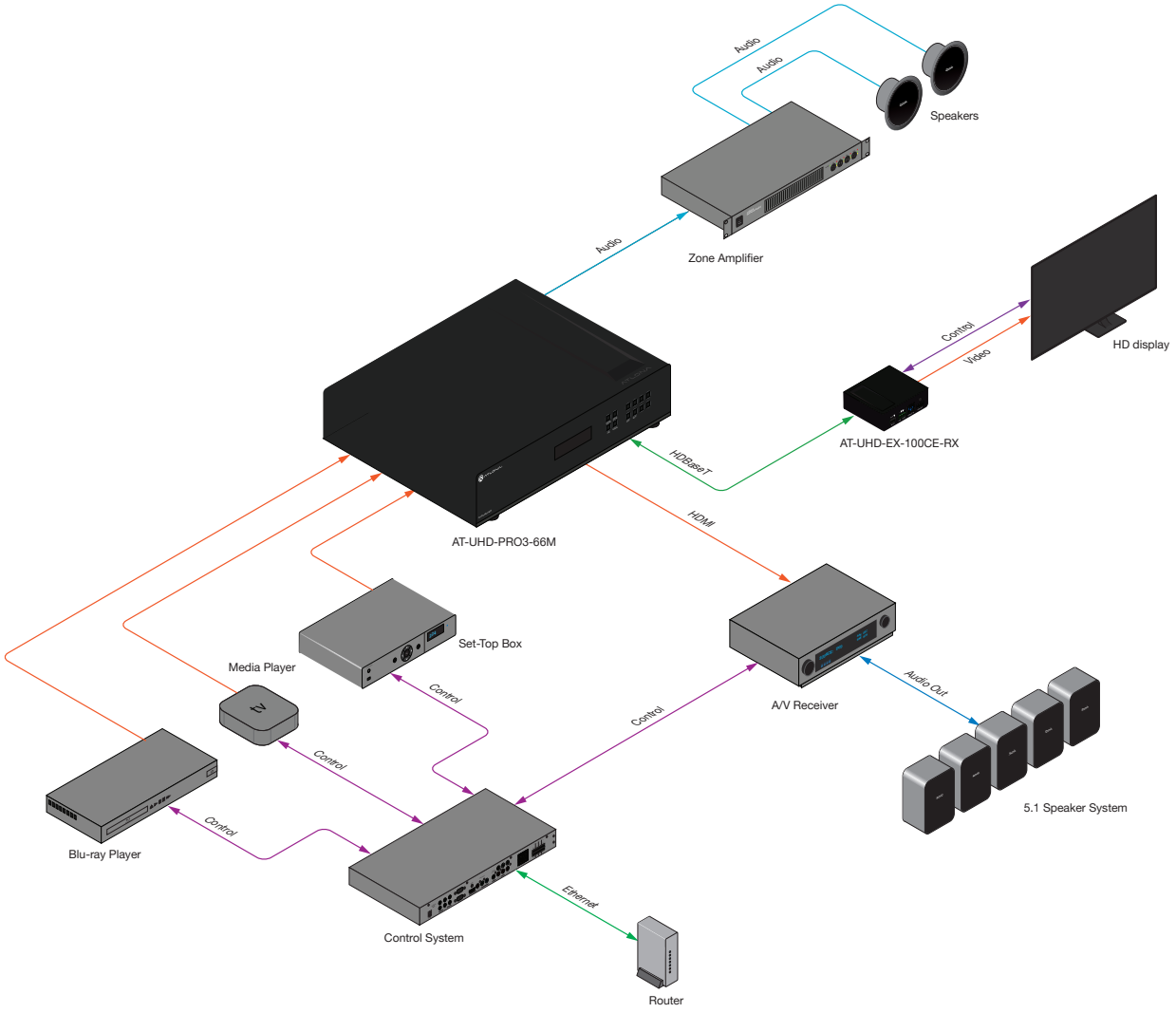
Using the web GUI

1. Login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information.
2. Click **Network**, under the **Settings** section in the menu bar on the left side of the screen.
   - Click **ON**, next to **DHCP**, to set the matrix to DHCP mode. If set to DHCP mode, the IP Address, Subnet, and Gateway fields will automatically be assigned by the DHCP server (if one exists). If no DHCP server can be found, the matrix will be assigned the static IP address of 192.168.0.150 with a subnet mask of 255.255.255.0.
   - Click **OFF** to set the matrix to static IP mode. When set to static IP mode, enter the required information in the **IP Address**, **Subnet**, and **Gateway** fields, as shown in the illustration below.



3. Click the **Save** button to commit changes.

Connection Diagram

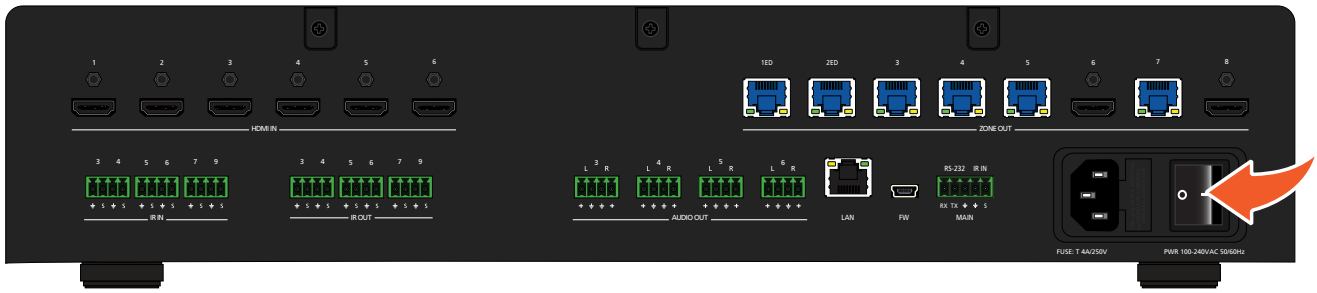


Basic Operation

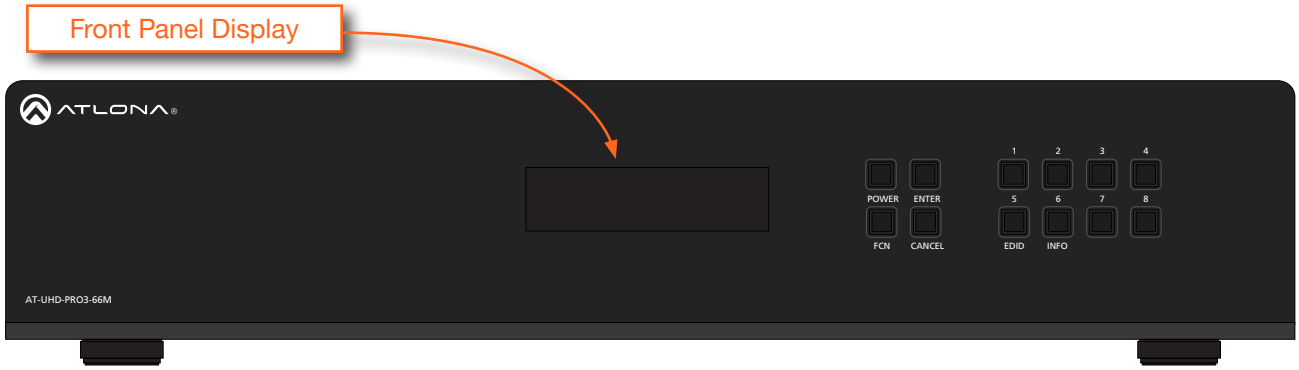
Powering the Matrix

The master power button is located on the rear panel of the matrix. This rocker switch allows power to be applied to the matrix.

1. Press the **ON/OFF** button so that it is in the **ON** position. To power-off the matrix, push the button to the **OFF** position. During the power-on procedure, the backlight on the POWER button will flash blue/red. Once complete, the **POWER** button will be backlit with a solid blue light.



NOTE: If the matrix does not power, check to make sure that the power cable, on the rear of the unit, is connected to an active AC wall outlet. Also verify that the **ON/OFF** switch is in the **ON** position.



2. The front panel display will indicate that the matrix is initializing. After a few moments the home screen will be displayed.

Initialization Screen

Home Screen

3. The matrix is now ready for operation.

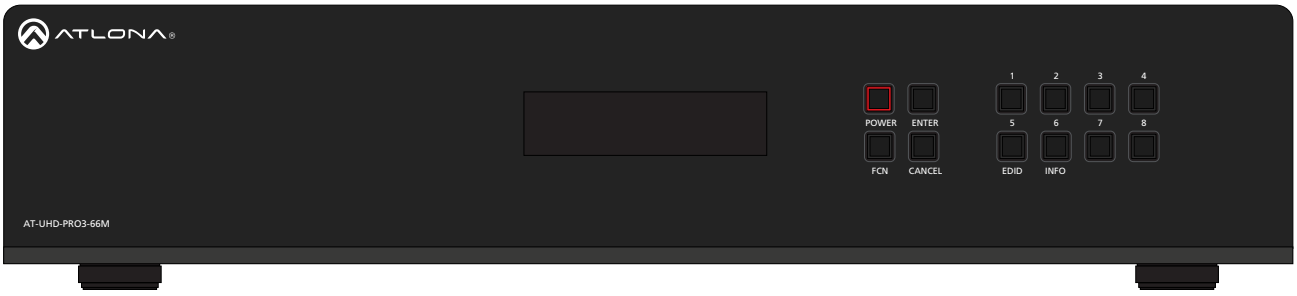
Standby Mode

The **POWER** button on the front panel of the matrix, allows the matrix to be powered-on or placed in standby mode.

1. Locate the **POWER** button on the front panel. When the matrix is in normal operating mode, the **POWER** button will be backlit by a solid blue light. In this mode, operations using the front panel buttons, web GUI, or through API commands can be performed.
2. Press the **POWER** button, on the front panel to place the matrix in standby mode.

The matrix will power-down and be placed in a low-power state and the **POWER** button will be backlit by a solid red light.

When the matrix is in standby mode, operations using the front-panel buttons are suspended. However, access to the matrix, through the web GUI or API commands is still available.



3. Press the **POWER** button again, to power-on the matrix and return to normal operating mode.

NOTE: Firmware version 16.1.18 supports a front-panel display time-out feature. If there is no front-panel activity after 30 seconds, the front-panel display will turn off. The time-out feature only hides the text in the front panel display. Initiating a routing command, for example, or other operation will turn on ("wake up") the front-panel display and the matrix will wait for the next command to be entered.

Viewing Matrix Settings

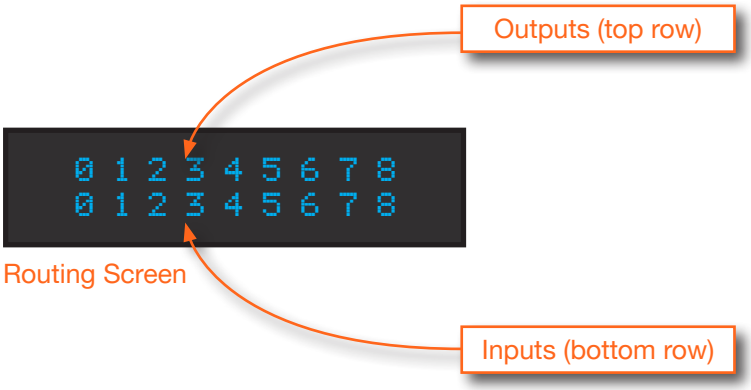
The front panel display provides the current status of the matrix and its settings. The buttons on the front panel can be used to display the current routing settings as well as network settings.

Viewing the current routing state

1. Make sure the home screen is displayed. If the home screen is not displayed, press the **CANCEL** button to return to the home screen.
2. Press the **ENTER** button to display the routing screen. The first six inputs and outputs will be displayed, indicating the current routing state.

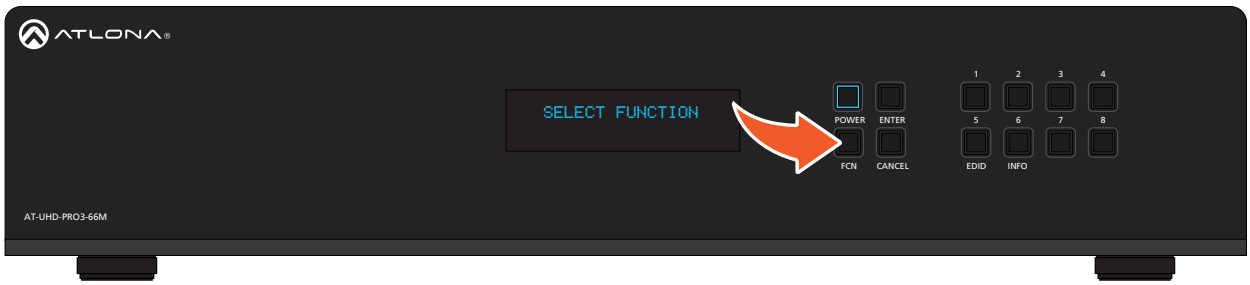
3. Press the **ENTER** button again to return to the home screen.

   By default, the AT-UHD-PRO3-66M is set to a “one-to-one” routing state, meaning that each input is routed to its associated output: 1-to-1, 2-to-2, etc., as shown below. This matrix features a total of six HDMI inputs and eight outputs (six HDBaseT outputs and two HDMI outputs).



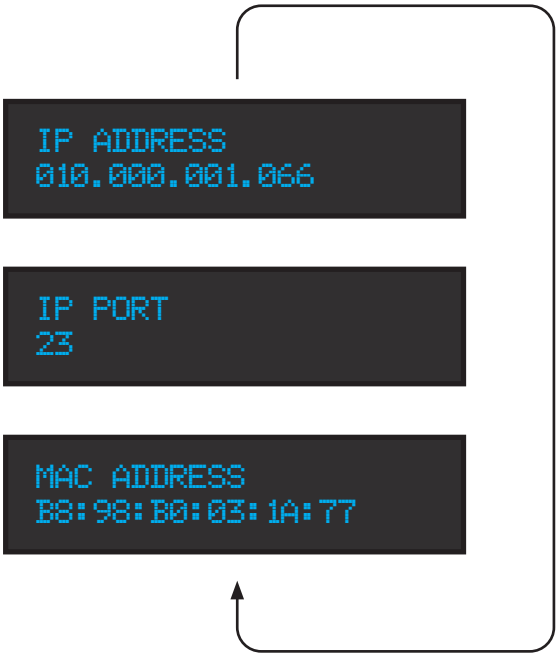
Displaying the System Settings

1. Make sure the home screen is displayed. If the home screen is not displayed, press the **CANCEL** button to return to the home screen.
2. Press and release the **FNC** button to display the **SELECT FUNCTION** screen.



3. Press and release the **INFO** button to display the firmware version.

4. Consecutively press the **INFO** button to cycle through each of the following screens:



5. Press the **CANCEL** button to return to the home screen. If the **CANCEL** button is not pressed within 10 seconds, the matrix will automatically return to the home screen.

Resetting to Factory Defaults

The following procedure will reset the AT-UHD-PRO3-66M to factory-default settings.

1. Make sure the home screen is displayed. If the home screen is not displayed, press the **CANCEL** button to return to the home screen.
2. Simultaneously press and hold the **EDID** and **INFO** button for five seconds.

3. Release both buttons.

   Note that during the factory-reset process, the AT-UHD-PRO3-66M will not show any signs of resetting. Wait an additional five seconds before after resetting the unit, before resuming normal operation.

Routing Inputs to Outputs

When the AT-UHD-PRO3-66M is shipped from the factory, the matrix is set to “one-to-one” routing mode. This means that input 1 is routed to output 1, input 2 is routed to output 2, and so on. The following section describes how to change the routing state. When changing the routing state, the input is specified first, then the output.

The AT-UHD-PRO3-66M can route individual inputs to outputs or can route a single input to all outputs, simultaneously.

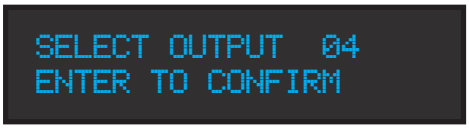
Single Input-to-Output Routing

Using the Front Panel

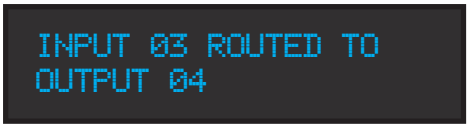
1. Make sure the home screen is displayed. If the home screen is not displayed, press the **CANCEL** button to return to the home screen.
2. Press and release the desired input from the bank of numerical buttons on the front panel. In this example, **HDMI IN 3** will be selected by pressing button **3**.

3. Press the **ENTER** button to confirm the selected input. If a different input is desired, press the **CANCEL** button to return to the home screen, then press the button of the desired input.

4. Press the button for the desired output. If a different output is desired, press the **CANCEL** button to return to the home screen, then press the button of the desired output. In this example, **HDBaseT OUT 4** will be selected by pressing button **4**.



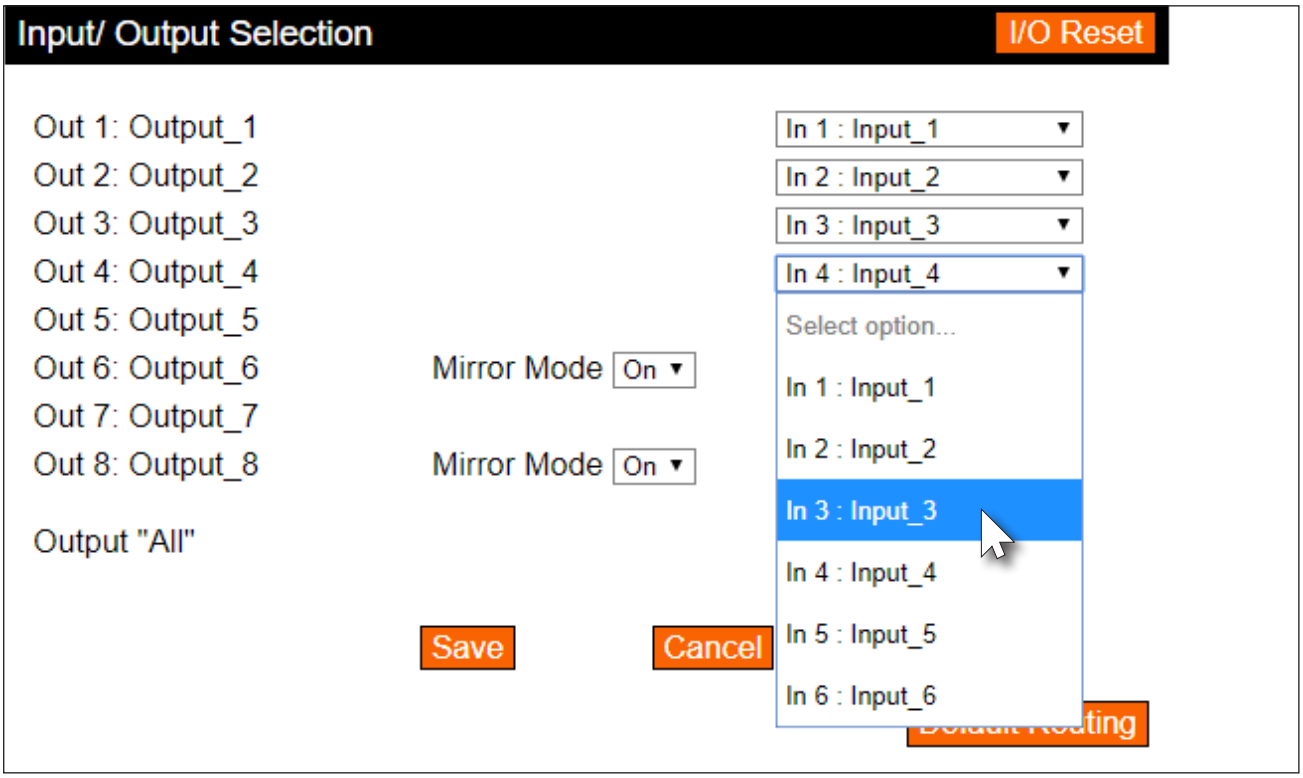
5. Press the **ENTER** button to complete the routing process. The front panel display will confirm the current routing selection.



Using the web GUI

As in the previous example, **HDMI IN 3** will be routed to **ZONE OUT 4**.

1. Login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information.
2. Click **I/O**, under the **Configuration** section, in the menu bar on the left side of the screen.
3. In the row labeled **Out 4: Output_4**, click the drop-down list to the far right, and select **In 3 : Input_3**.



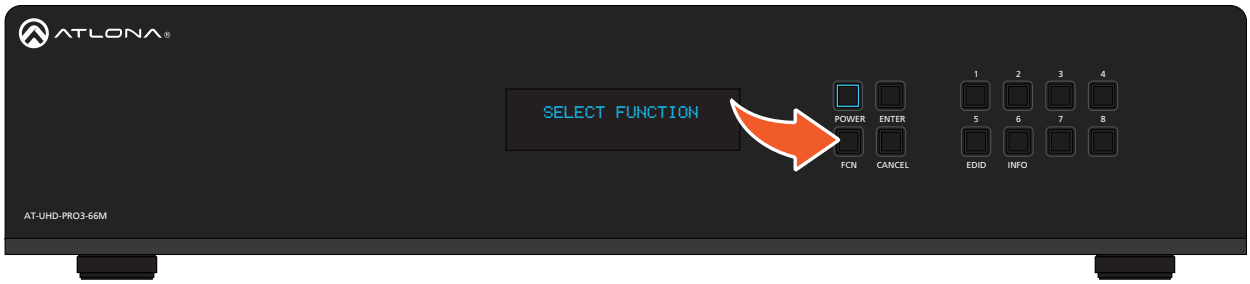
5. Click the **Save** button to commit changes. **HDMI IN 3** is now routed to **ZONE OUT 4**.

Routing a Single Input to All Outputs

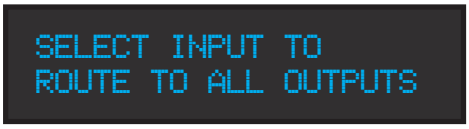
Using the Front Panel

This procedure will route a single input to all eight outputs.

1. Make sure the home screen is displayed. If the home screen is not displayed, press the **CANCEL** button to return to the home screen.
2. Press and release the **FNC** button to display the Select Function screen.



3. Press button **1** to execute the Route To All Outputs function.

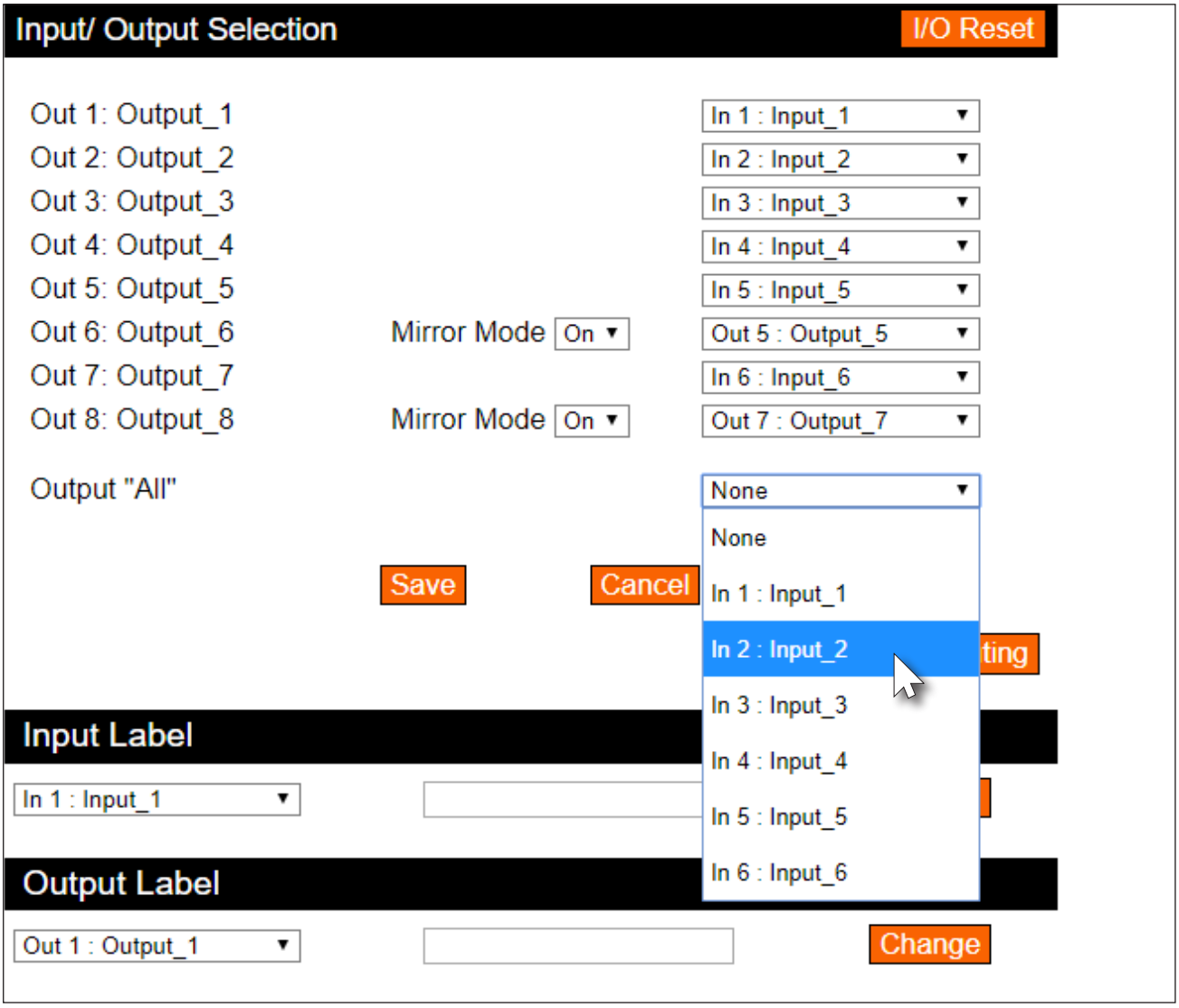


4. Press the button for the desired input. In this example, **HDMI IN 2** is selected by pressing button **2**. The front panel display will confirm the current routing selection.

Using the web GUI

As in the previous example, **HDMI IN 2** will be routed to all outputs.

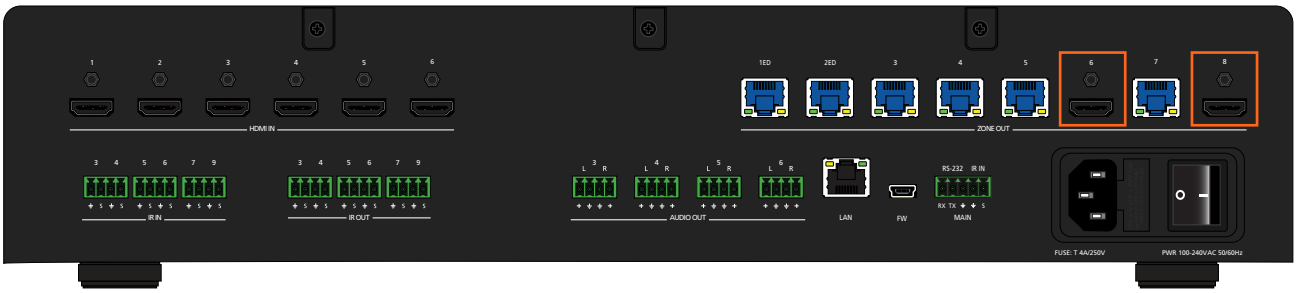
1. Login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information.
2. Click **I/O**, under the **Configuration** section, in the menu bar on the left side of the screen.
3. Under the **Input/Output Selection** section, click the **Output "All"** drop-down list and select the input to be routed. In this example, **HDMI IN 2** will be selected.



4. Click the **Save** button to commit changes. **HDMI IN 2** is now routed to all outputs.

Output Mirroring

In addition to the HDBaseT outputs, the AT-UHD-PRO3-66M also provides two HDMI output ports (highlighted in the image below).

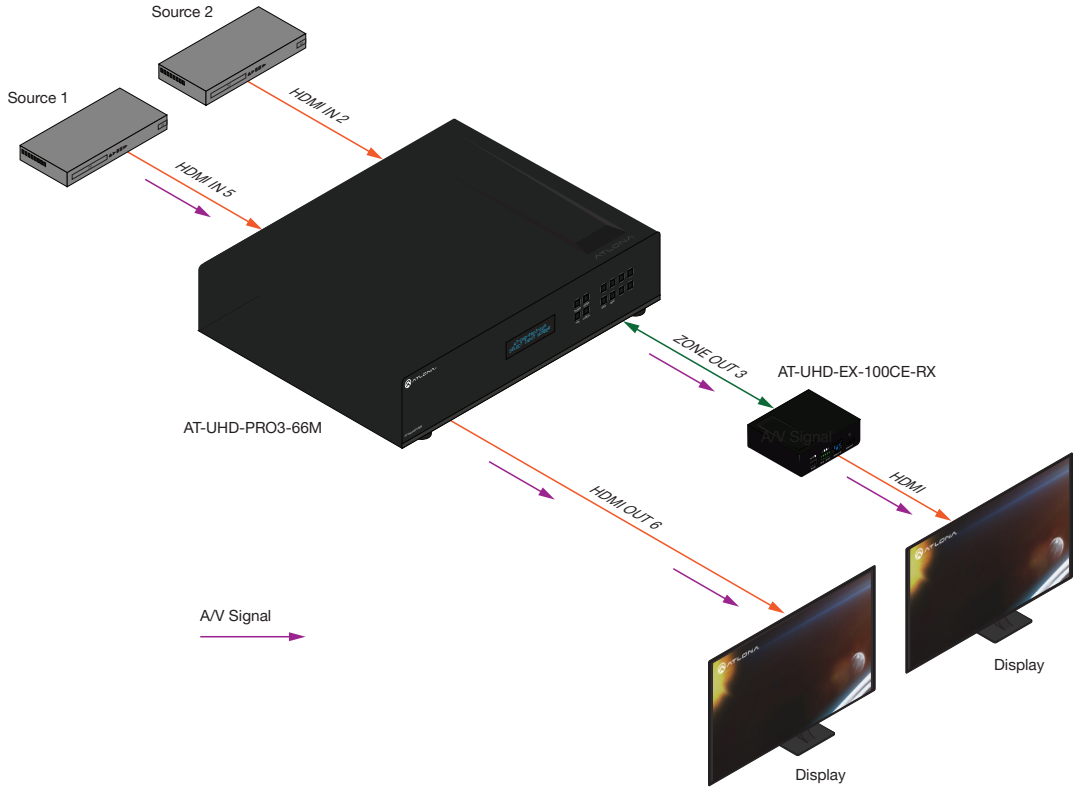


These two HDMI ports are used to mirror (duplicate) an HDBaseT output signal and to either or both HDMI output ports. By default, mirroring is enabled on these two ports. However, mirroring can be disabled. When mirroring is disabled, any of the six HDMI inputs can be routed to these HDMI outputs, transforming this product into an 6 x 8 matrix switcher. The default mirror settings are listed below

HDMI Port	Signal that is mirrored (default)
ZONE OUT 6	ZONE OUT 5
ZONE OUT 8	ZONE OUT 7

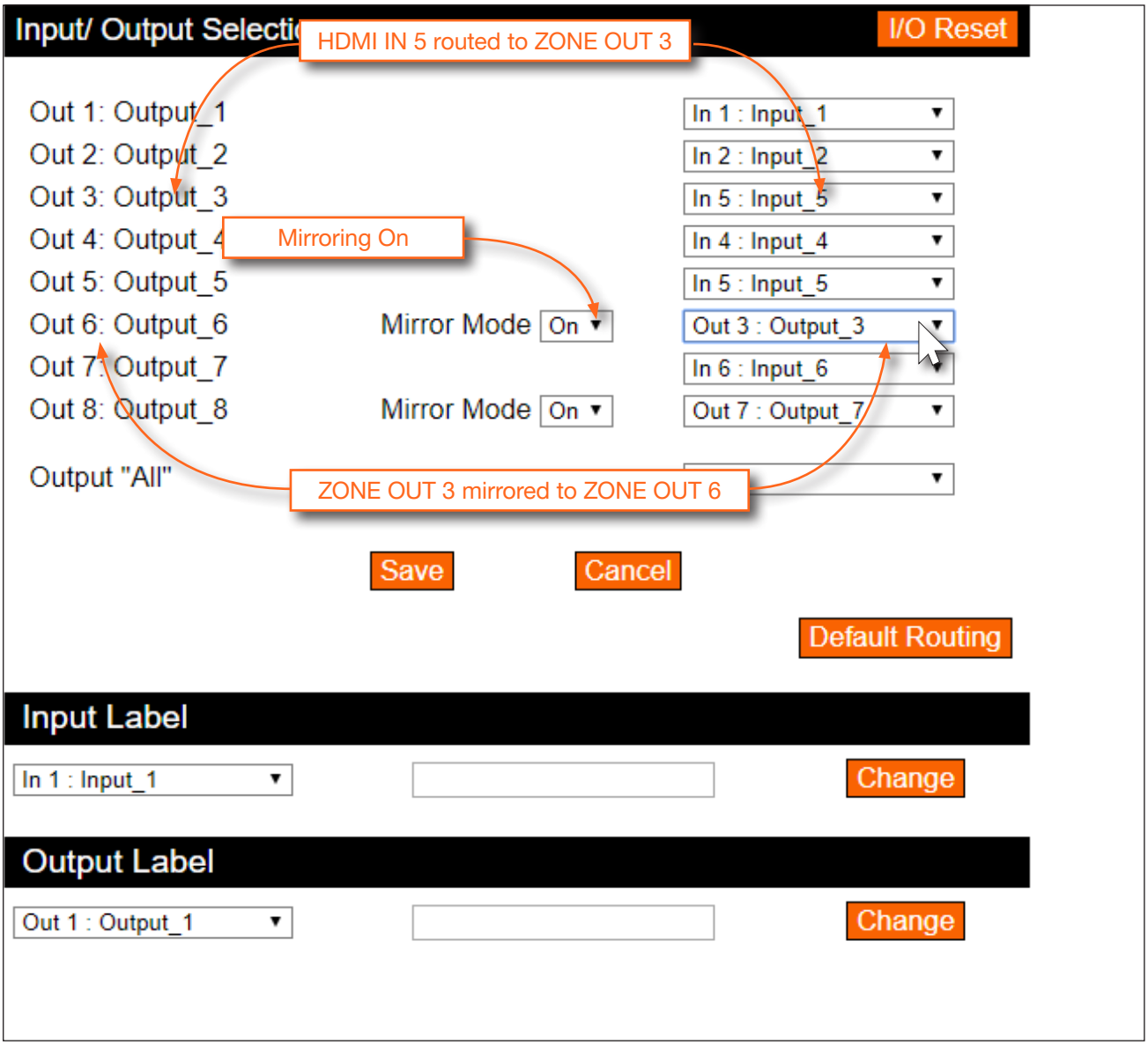
Changing the Mirrored Port

Mirroring is enabled, by default. The diagram below, illustrates the signal flow of mirroring **ZONE OUT 3** to **ZONE OUT 6**. The instructions on the following page provide the steps to reproduce this configuration. Two sources have been connected to the matrix: One to **HDMI IN 5** and the other to **HDMI IN 2**. **HDMI IN 5** will be used in this example.



NOTE: Name descriptors in the web GUI are different than those of the port names on the enclosure (e.g. **Out 5: Output_5** = **ZONE OUT 5**), and are used interchangably in this document. Therefore, it is recommended to refer to ports by the their number, until they are changed. Refer to Input and Output Management (page 34) for more information on this topic.

1. Login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information.
2. Click **I/O**, under the **Configuration** section, in the menu bar on the left side of the screen.
3. Click the drop-down list, across from **Out 3: Output_3**, and select **In 5 : Input_5**. This step routes the source that is connected to **HDMI IN 5** to **ZONE OUT 3**.
4. Click the **Mirror Mode** drop-down list and select **On** (if not already selected). **On** is the default setting.
5. Click the drop-down list, across from **Out 6: Output_6**, and select **Out 3 : Output_3**. This instructs the matrix to mirror the source signal on **ZONE OUT 3** to **ZONE OUT 6**.
6. Click the **Save** button to commit changes.

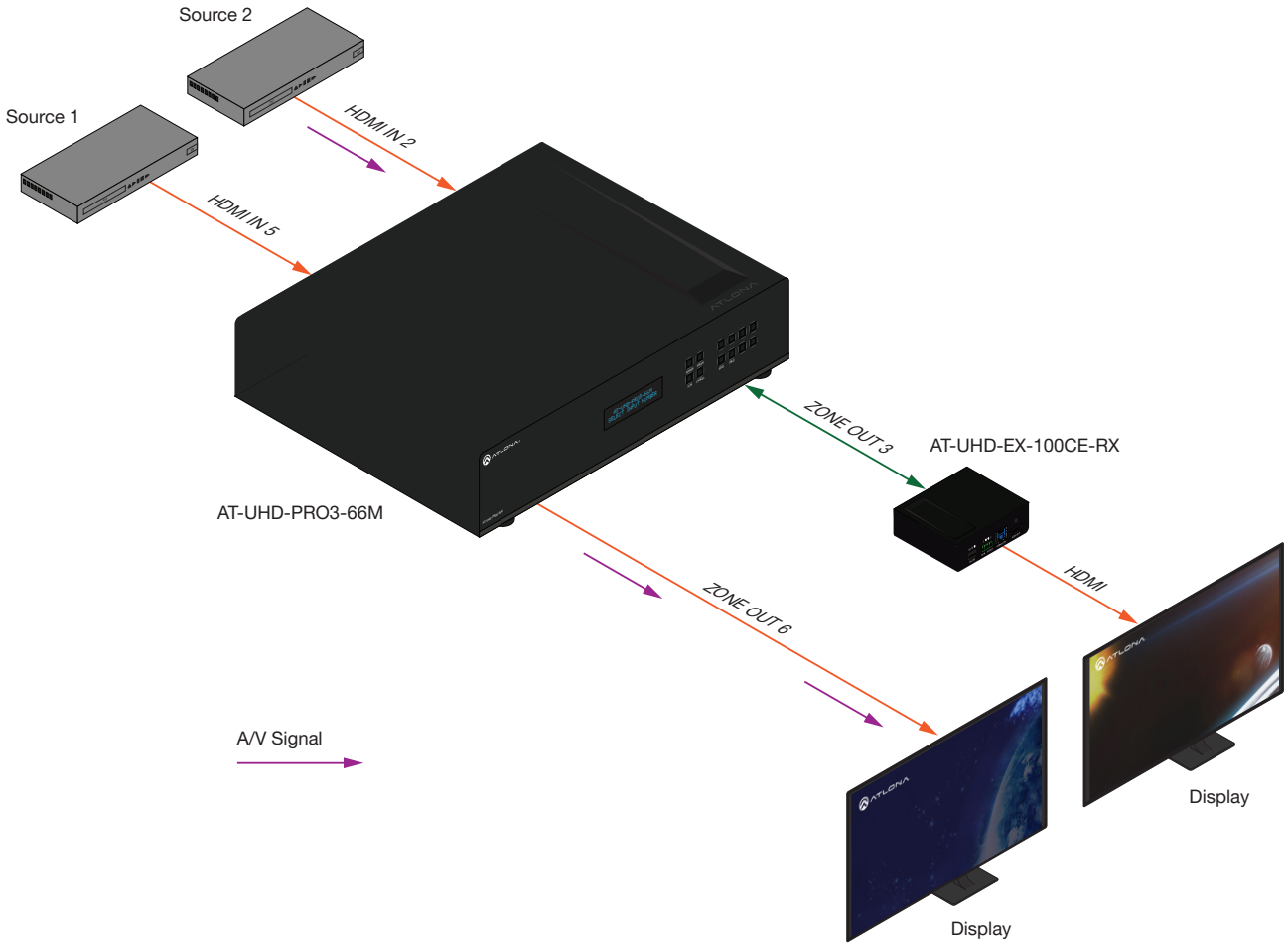


Disabling Mirroring

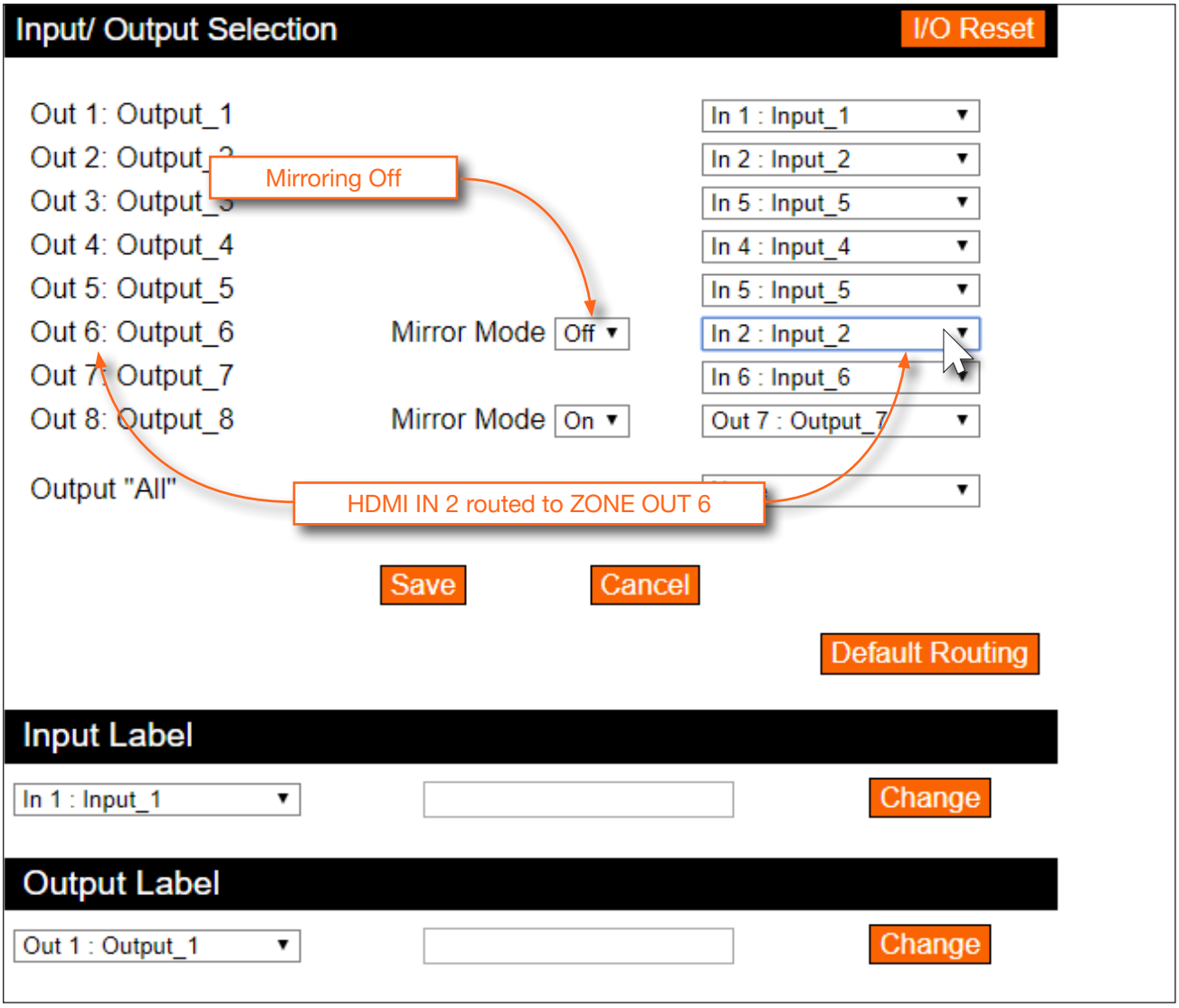
When mirroring is disabled, an input can then be routed to that HDMI output. The diagram below now shows **HDMI IN 2** routed to **ZONE OUT 6**. Note that the output on **ZONE OUT 3** is from the source connected to **HDMI IN 5**, which was used when mirroring was enabled.

The instructions on the next page provide the necessary steps to routing **HDMI IN 2** to the **ZONE OUT 6** HDMI output.

Diagram showing HDMI IN 2 routed to ZONE OUT 6 (mirroring diabled)



1. Login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information.
2. Click **I/O**, under the **Configuration** section, in the menu bar on the left side of the screen.
3. Click the **Mirror Mode** drop-down list and select **Off**.
4. Click the drop-down list, to the right of **Out 6: Output_6**, and select **In 2 : Input_2**. This instructs the matrix to route **HDMI IN 2** to **ZONE OUT 6**.
5. Click the **Save** button to commit changes.

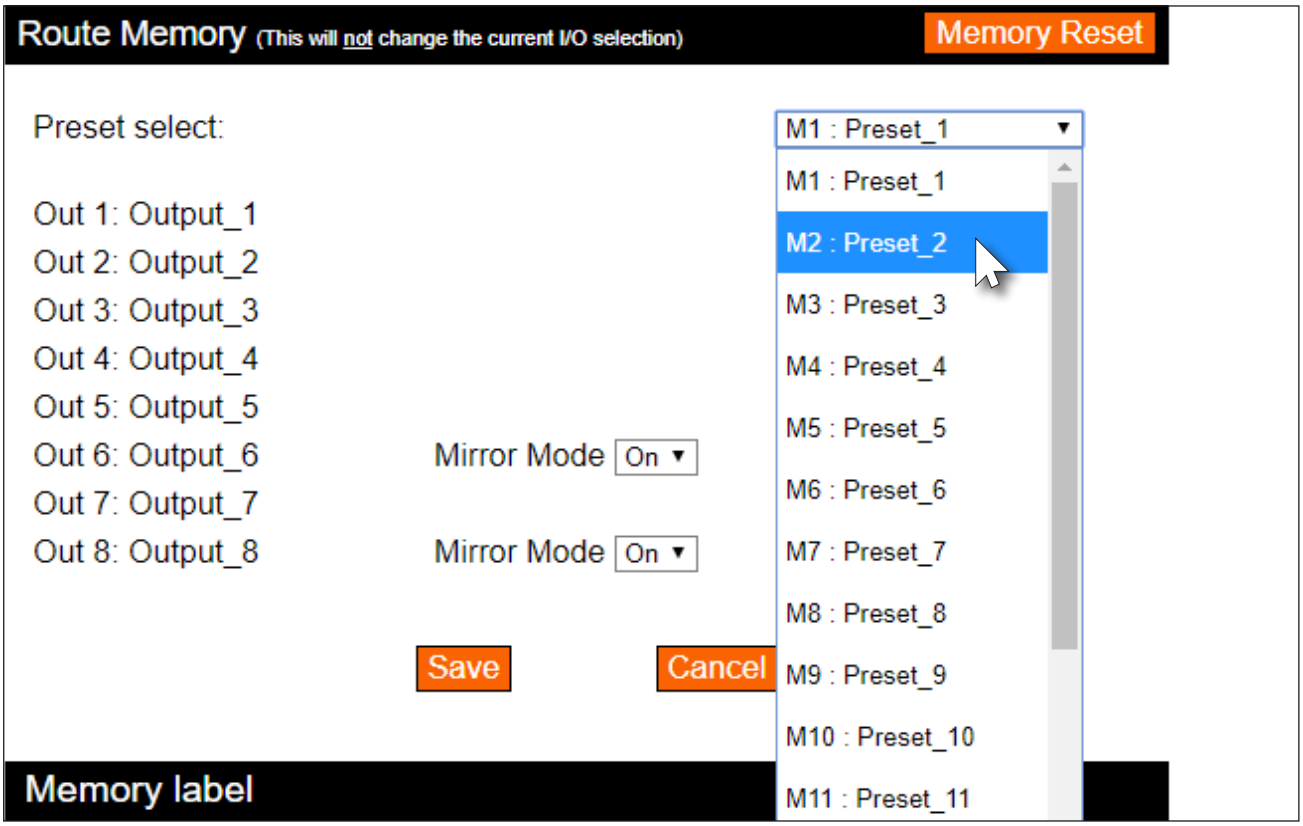


Creating and Editing Routing Presets

Using presets provides a quick and efficient way of switching between multiple routing configurations. The AT-UHD-PRO3-66M provides 50 memory locations that can be used to store each preset. The following section covers creating, editing, and using routing presents.

Creating a Routing Preset

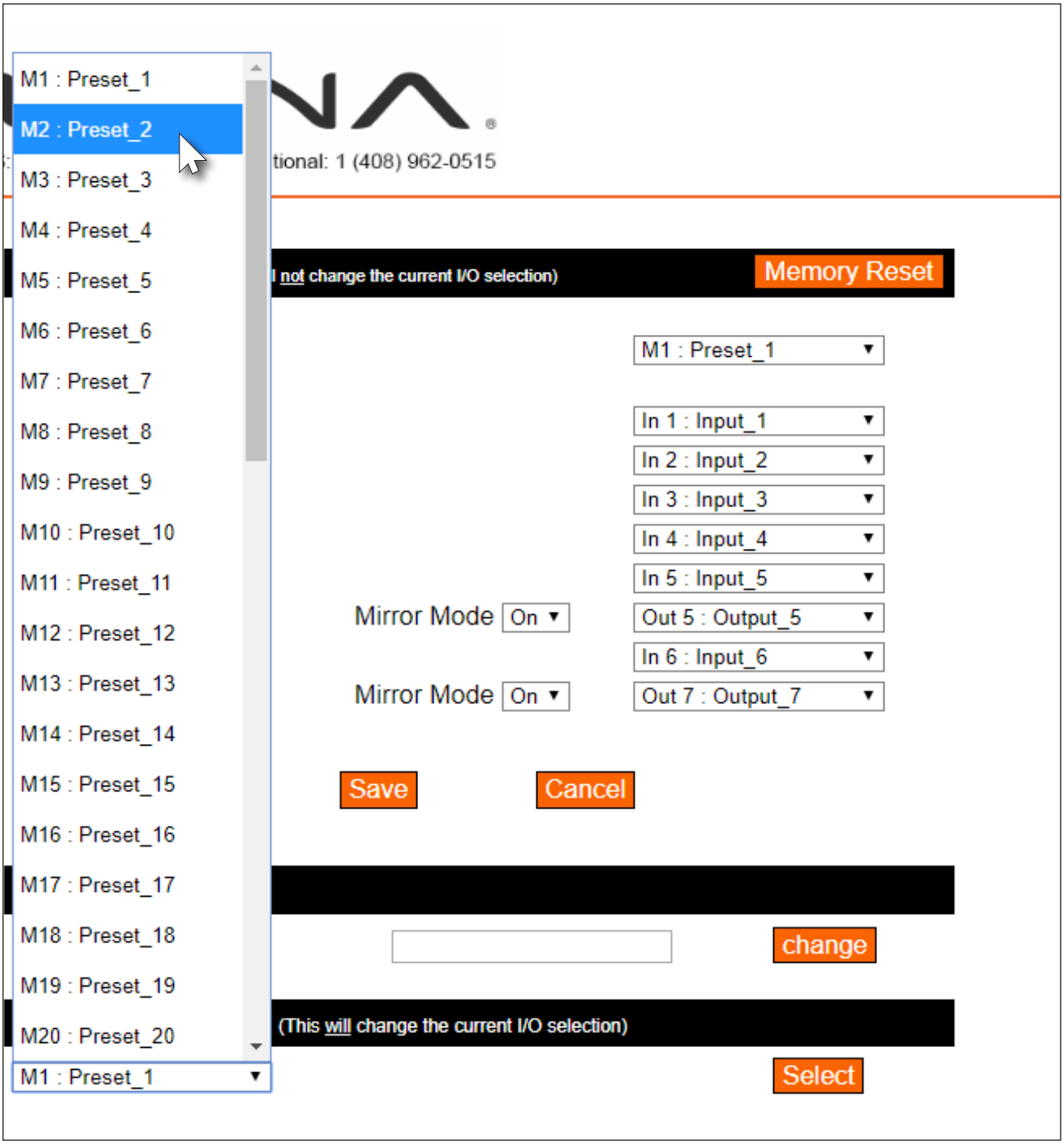
1. Login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information.
2. Click **Route Memory**, under the **Configuration** section, in the menu bar on the left side of the screen.
3. Create the desired routing state(s). Video and audio routing is similar to the **I/O** screen. Refer to Routing Inputs to Outputs (page 22).
4. Click the drop-down list, next to each output, to set the desired routing state. In this example below, **Preset_2** will be used to store the current routing state. The **Mirror Mode** drop-down lists can also be changed as desired, and will be stored as part of the routing preset.



5. Click the **Save** button to commit changes.

Recalling a Preset

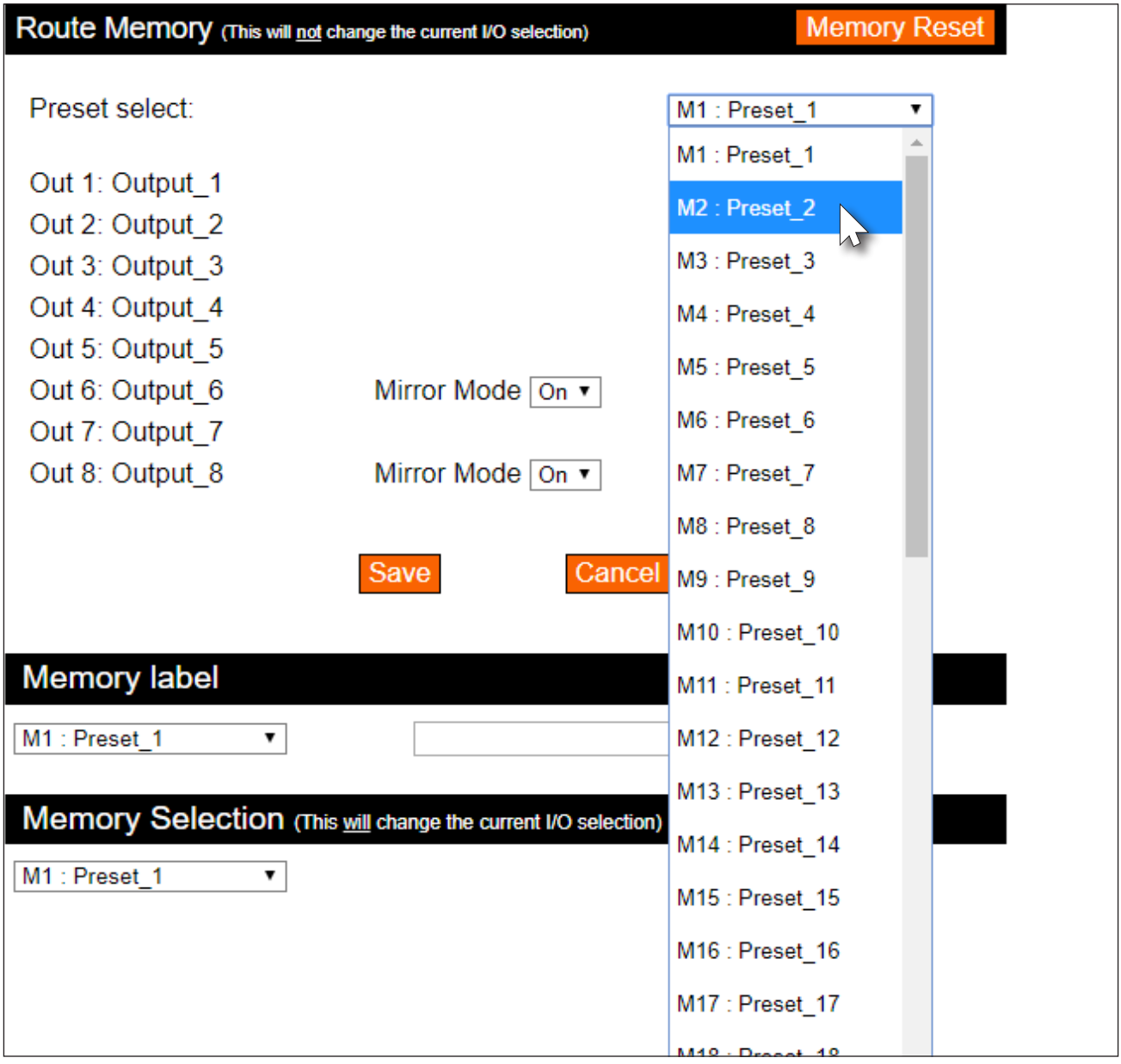
1. Login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information.
2. Click **Route Memory**, under the **Configuration** section, in the menu bar on the left side of the screen.
3. Click the drop-down list under **Memory Selection** and select the desired preset. In this example, **M2 : Preset_2** is being selected.



4. Click the **Select** button to invoke the selected routing state.

Editing Presets

1. Login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information.
2. Click **Route Memory**, under the **Configuration** section, in the menu bar on the left side of the screen.
3. Select the desired preset from the **Preset Select** drop-down list.

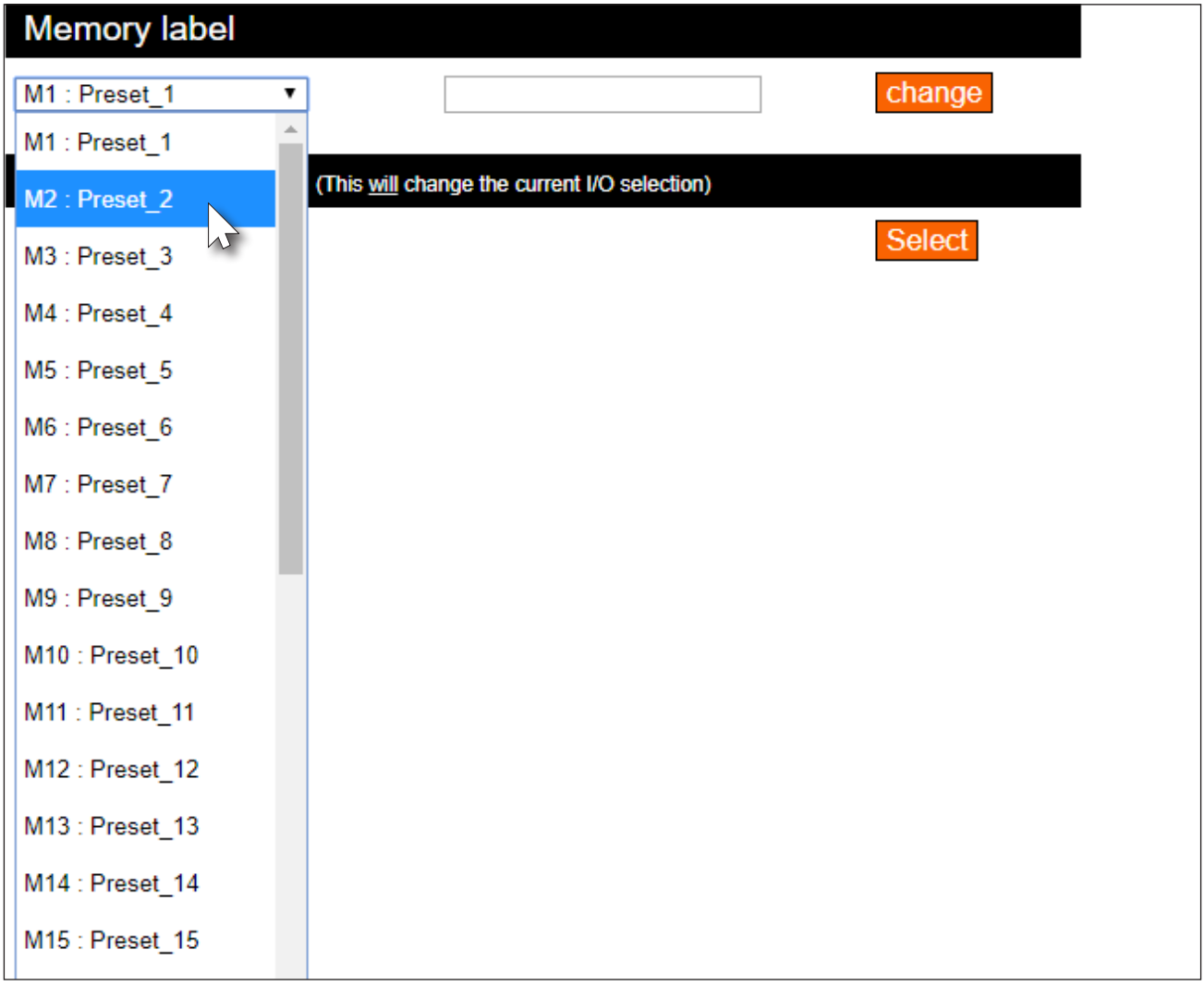


4. Click the drop-down list, next to each output, to set the new routing state. For more information on how to modify routing states, refer to Routing Inputs to Outputs (page 22) and Audio Routing (page 31).
5. Click the **Save** button to commit changes.

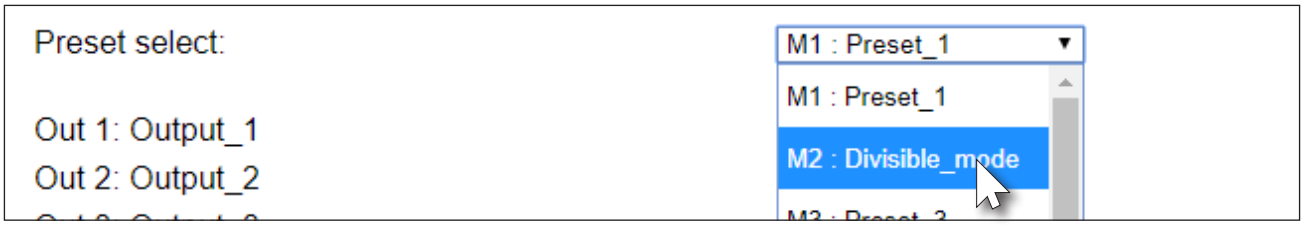
Renaming Presets

By default, each of the 50 memory locations used for routing presets are **M1 : Preset_1**, **M2 : Preset_2**, and so on. When dealing with multiple presets, it is helpful to use more descriptive names for easy identification.

1. Login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information.
2. Click **Route Memory**, under the **Configuration** section, in the menu bar on the left side of the screen.
3. Select the desired preset from the **Memory label** drop-down list.



4. Enter the name of the preset in the **Memory label** text field, as shown in the example below.
5. Click the **change** button to commit the change. All instances for the new input name will now be displayed, throughout the web GUI, as shown:

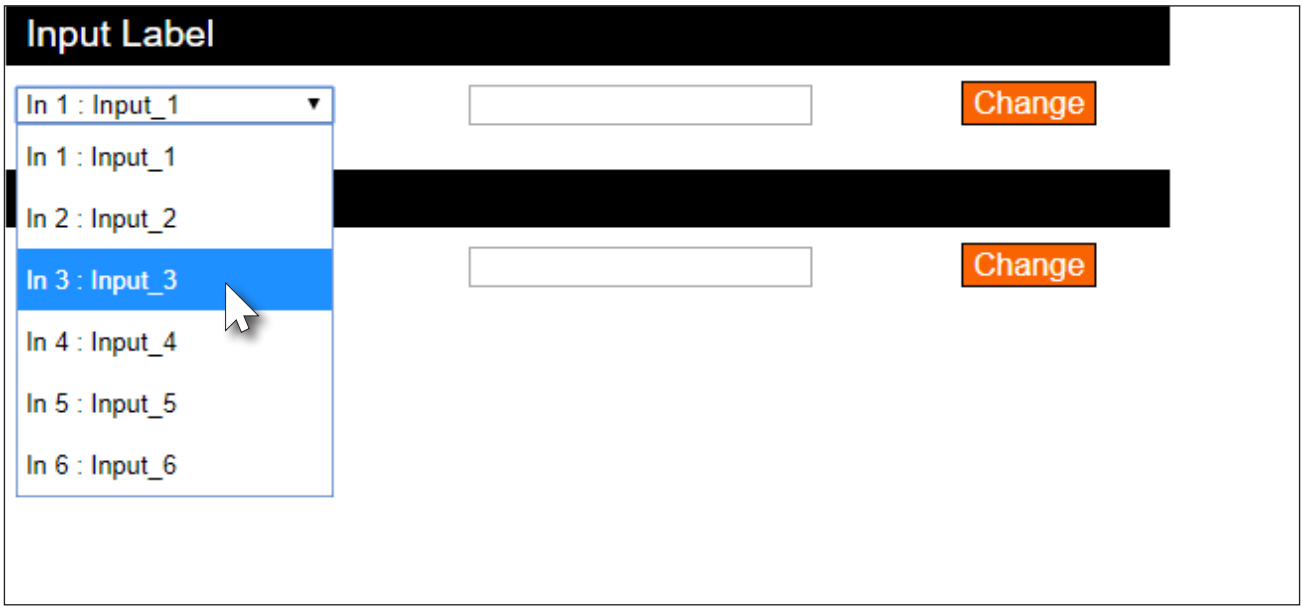


Input and Output Management

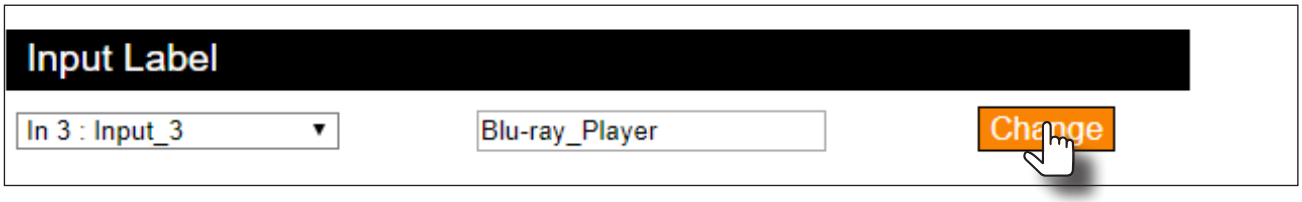
When dealing with multiple sources and multiple output devices, within the web GUI, it can be useful to assign descriptive names to each input and output.

Renaming Inputs

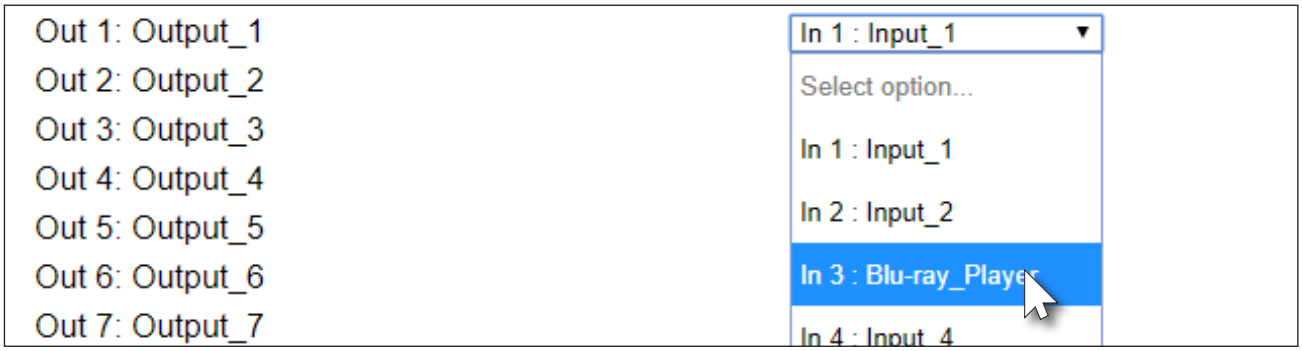
1. Login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information.
2. Click **I/O**, under the **Configuration** section, in the menu bar on the left side of the screen.
3. Click the **Input Label** drop-down list and select the input to be renamed.



4. Enter the desired name of the input in the **Input Label** field. When entering the name of the input, spaces and special characters are not permitted. In this example, **In 3 : Input_3** is being renamed as **Blu-ray_Player**.
5. Click the **Change** button to save the change.



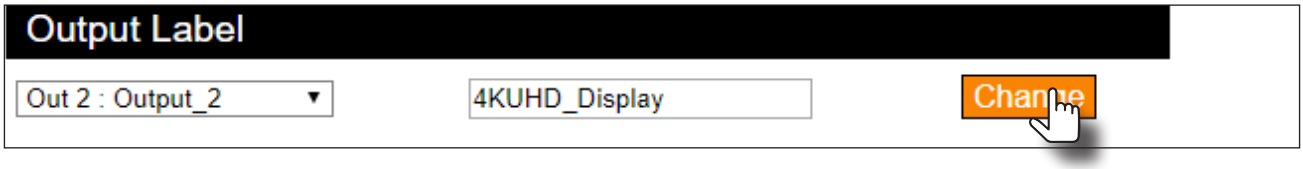
All instances for the new input name will now be displayed, throughout the web GUI, as shown:



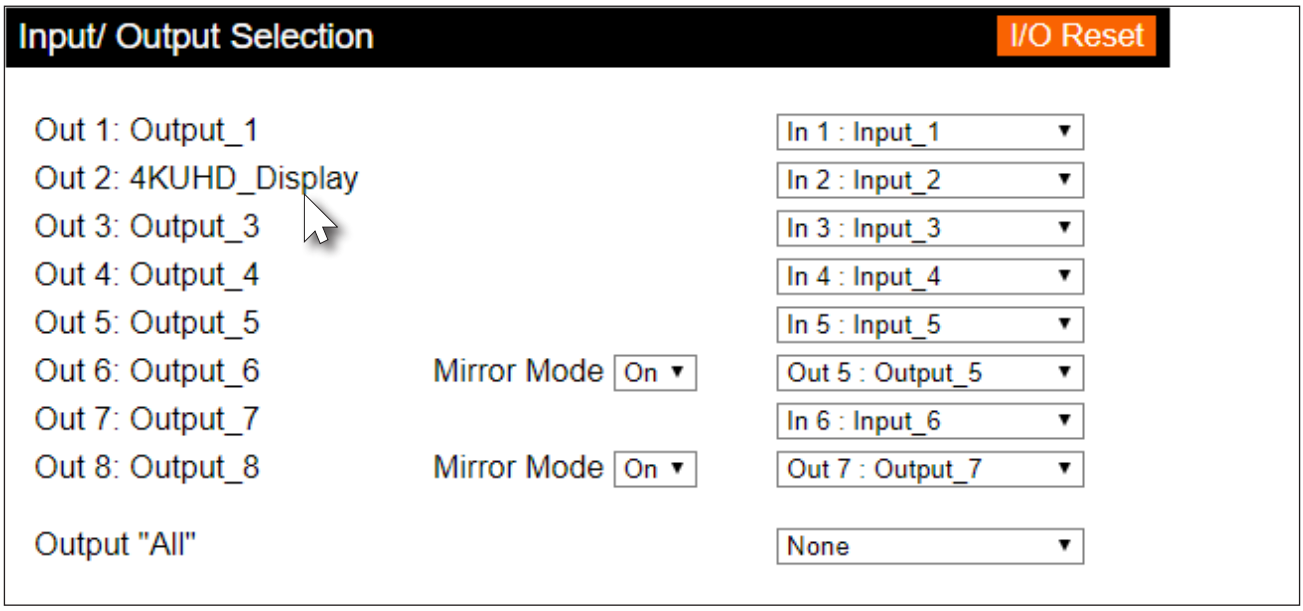
Renaming Outputs

1. Login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information.
2. Click **I/O**, under the **Configuration** section, in the menu bar on the left side of the screen.
3. Click the **Output Label** drop-down list and select the output to be renamed.

4. Enter the desired name of the input in the **Output Label** field. When entering the name of the output, spaces and special characters are not permitted. In this example, **Out 2 : Output_2** is being renamed as **4KUHD_Display**.
5. Click the **Change** button to save the change.



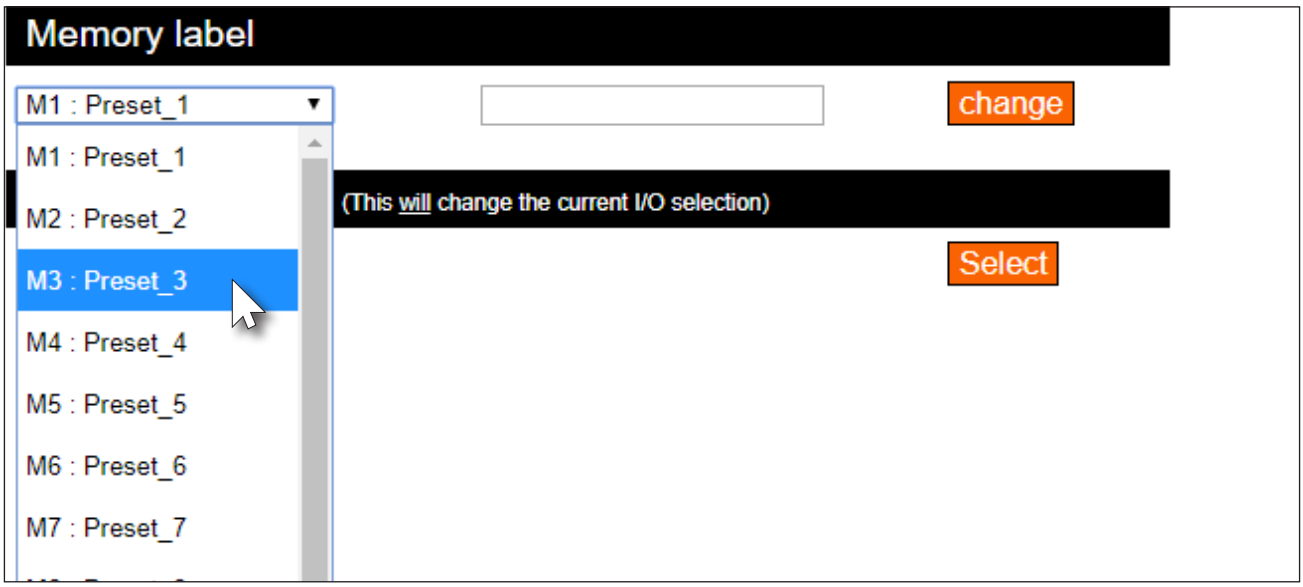
The new name will now be displayed when an output is selected, as shown. Note that if an output is selectable (**Output_6** and **Output_8** drop-down lists), then it will also appear in the drop-down list.



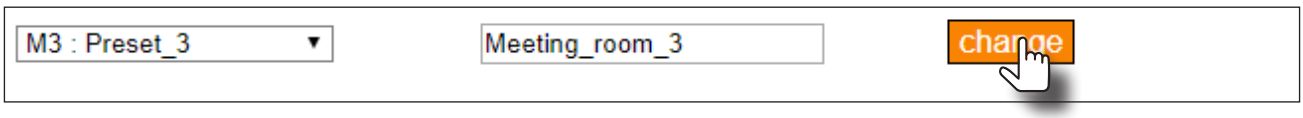
Renaming Memory Presets

The AT-UHD-PRO3-66M provides 50 presets for storing routing presets. Each preset can also be renamed with more descriptive names, for easy identification and recall at any time.

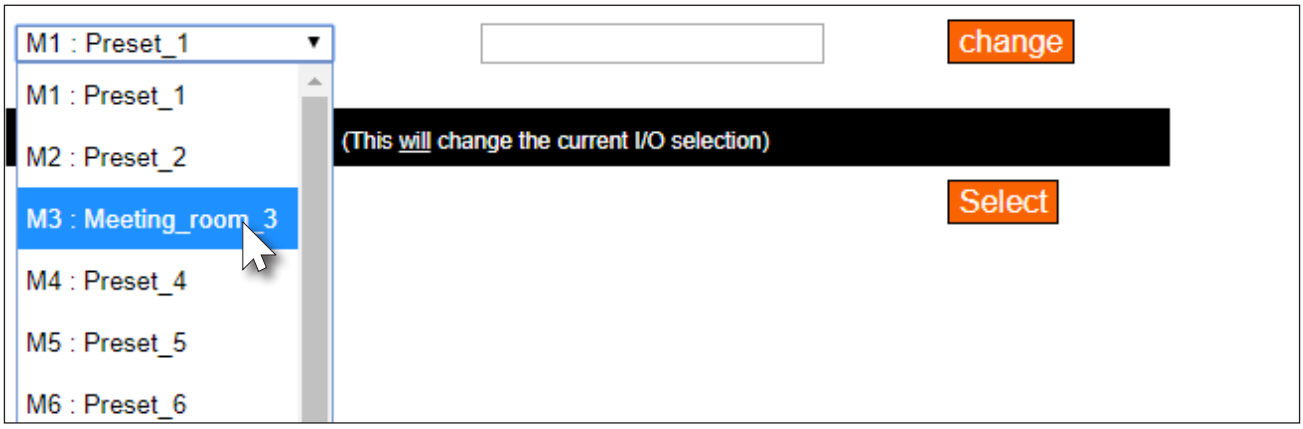
1. Login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information.
2. Click **Route Memory**, under the **Configuration** section, in the menu bar on the left side of the screen.
3. Click the **Memory label** drop-down list and select the memory location to be renamed.



4. Enter the desired name of the input in the **Memory label** field. When entering the name of the preset , spaces and special characters are not permitted. In this example, **M3 : Preset_3** is being renamed as **Meeting_room3**.
5. Click the **Change** button to save the change.



The new name will now be displayed when the preset is selected from the drop-down list.



EDID Management

EDID is an acronym for Extended Display Identification Data. Before a source can send a picture and/or audio to a display (or other sink device), the source requests information from the display on what video and audio formats it can support. Once the source has this information, it will send the supported picture and audio resolution that is supported by the display. By default, the AT-UHD-PRO3-66M loads a “default” EDID on all inputs. This particular EDID provides the source with the highest common resolution and audio information that is supported by all connected displays.

For example, if the matrix is connected to a single 1080p display and two 4K/UHD displays, the 1080p resolution will be used, allowing all three displays to display a picture. However, there may be instances where a specific EDID is desired. The AT-UHD-PRO3-66M allows EDID data to be stored, loaded, and copied.

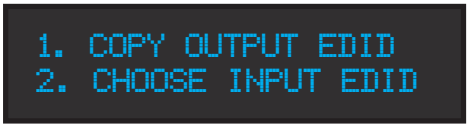
Loading EDID Presets

Using the Front Panel

The AT-UHD-PRO3-66M provides 14 pre-programmed internal EDID selections. These EDID presets can be loaded to any one of the six inputs (HDMI or HDBaseT). Custom EDID data can also be copied to any input. Refer to Copying a Downstream EDID (page 40) for more information.

1. Make sure the home screen is displayed. If the home screen is not displayed, press the **CANCEL** button to return to the home screen.
2. Press the **FNC** button to display the **SELECT FUNCTION** screen.

3. Press the **EDID** button to display the EDID screen.



4. Press button **2** to select Choose Input EDID.
5. Enter the input to where the EDID will be copied. Valid entries are 1 through 8.

   Once the input is entered, the matrix will confirm the entry. If another input is desired, enter it using the front panel buttons. Information on the current EDID will also be displayed on this screen.

6. Press the **ENTER** button to confirm the entry.
7. Press button **3** to select the **INT** (internal) option.

8. Select the desired EDID by pressing button 1 or 2. Press button **1** to move forward through the list of EDID selections. Press button **2** to move backward through the list. Refer to the table below for a list of available EDID selections.

The following table lists the available EDID selections.

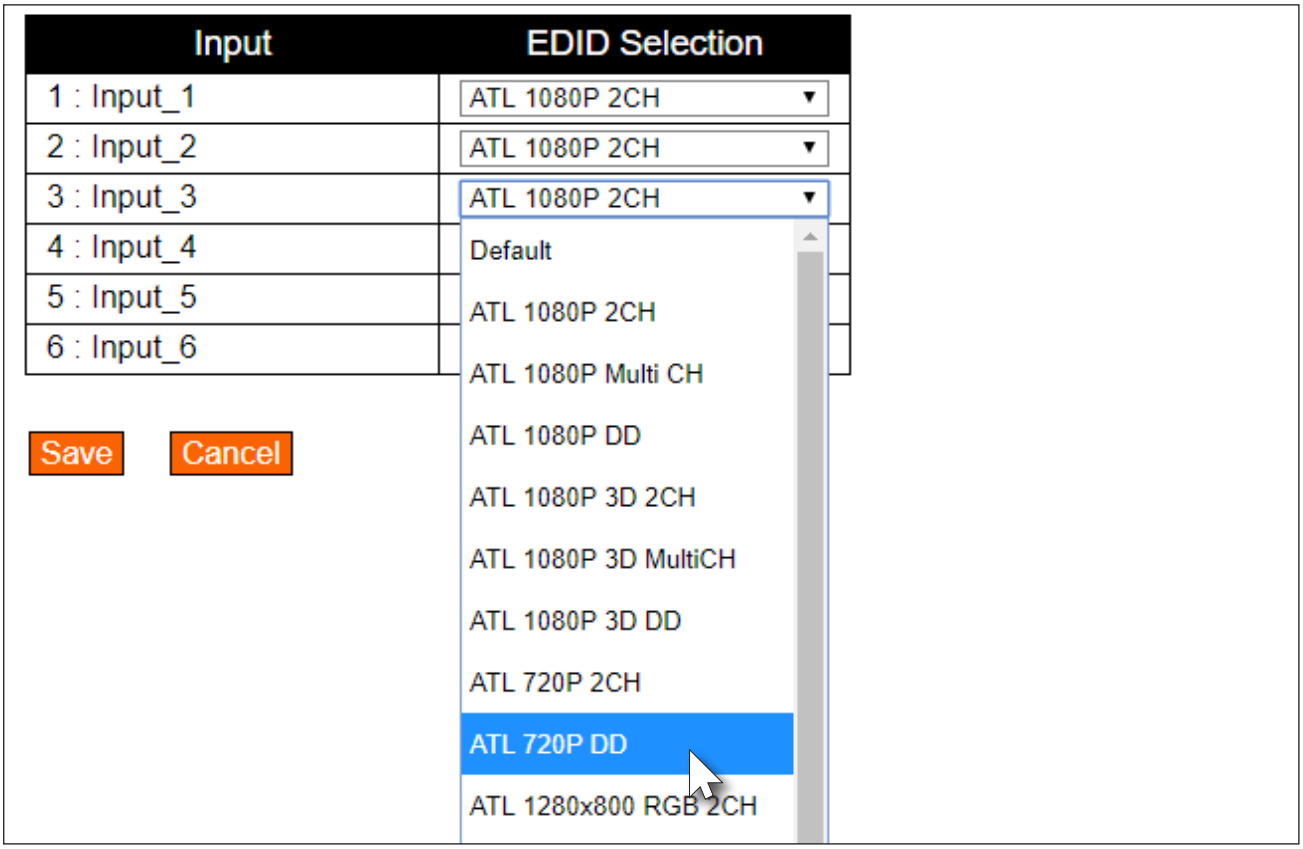
EDID	Front Panel Display	EDID	Front Panel Display
EDID 01	ATL 1080P 2CH	EDID 09	ATL 1280x800 RGB CH
EDID 02	ATL 1080P Multi CH	EDID 10	ATL 1366x768 RGB CH
EDID 03	ATL 1080P DD	EDID 11	ATL 1080P DVI
EDID 04	ATL 1080P 3D 2CH	EDID 12	ATL 1280x800 RGB DVI
EDID 05	ATL 1080P 3D MultiCH	EDID 13	ATL 4K30 2CH
EDID 06	ATL 1080P 3D DD	EDID 14	ATL 4K30 MultiCH
EDID 07	ATL 720P 2CH	EDID 15	ATL 4K60 2CH
EDID 08	ATL 720P DD	EDID 16	ATL 4K60 MultiCH

9. Press the **ENTER** button to copy the selected EDID to the input.

Using the web GUI

1. Login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information.
2. Click **EDID**, under the **Configuration** section in the menu bar on the left side of the screen.
3. Click the EDID Selection drop-down list, next to the desired input, to select the EDID. In this example, the **ATL 720P DD** EDID is being selected for **HDMI IN 3**.

   Note that if a custom EDID was stored in memory, from a downstream sink device, it will also be displayed in the drop-down list. Refer to Copying a Downstream EDID (page 40) for more information.



4. Click the **Save** button to commit changes. The source device, routed to this input, will now use this EDID instead of the downstream EDID (of the sink device).

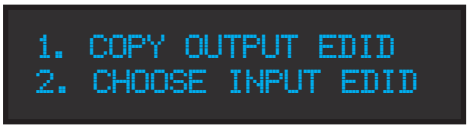
Copying a Downstream EDID

In some instances, it may be desirable to use the EDID of a connected display, and store it for later use. The AT-UHD-PRO3-66M provide ten memory locations that can be used to store custom EDID data. Once the EDID is stored in memory, it can be copied to any input. These memory locations are non-volatile, meaning that even if the matrix is powered-off, the EDID data will be retained in these memory locations.

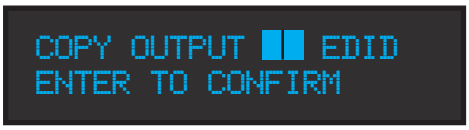
Using the Front Panel

1. Make sure a display/sink device is connected to the output where the EDID will be captured. For example, to capture the EDID on **HDMI OUT 1**, a display/sink device must be connected to that port.
2. Start from the home screen. If the home screen is not displayed, press the **CANCEL** button to return to the home screen. Press the **FNC** button to display the **SELECT FUNCTION** screen.

3. Press the **EDID** button to display the EDID screen.



4. Press button **1** to select Copy Output EDID.
5. Enter the output from which the EDID will be copied. Valid entries are 1 through 4.



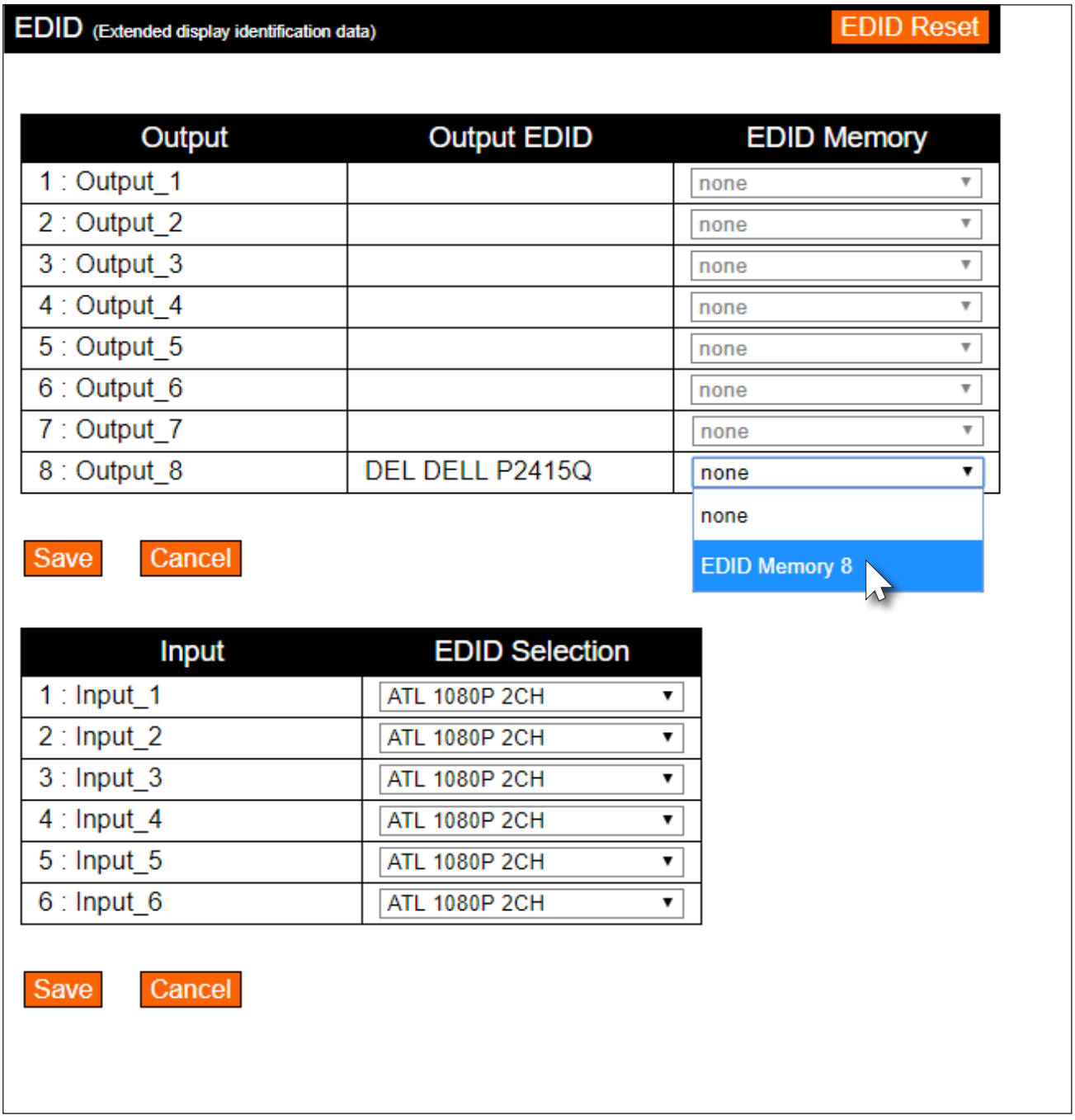
Once the output is entered, the matrix will confirm the entry. If copying the EDID fails, then a "failure message" will be displayed.

EDID copied successfully.

EDID copy failed.

Using the web GUI

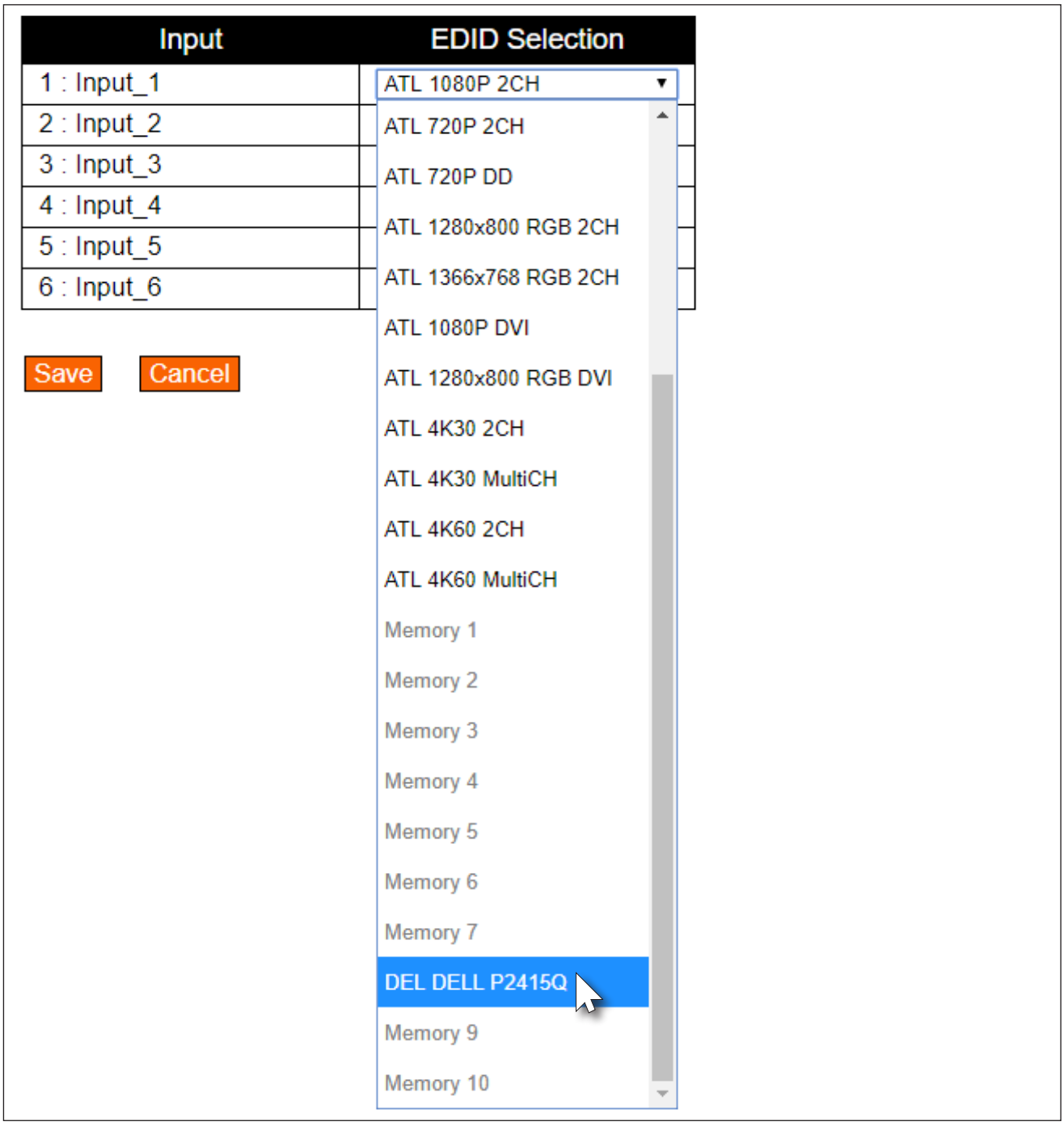
1. Verify that a display or other sink device is connected to the output from which the EDID will be read. In this example, a display is connected to **HDMI OUT 1**.
2. Login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information.
3. Click **EDID**, under the **Configuration** section in the menu bar on the left side of the screen.
4. Click the **EDID Memory** drop-down list for the output, where the sink is connected, and select the memory location. Each of the 8 outputs has an associated memory location: **Output_1** = **EDID Memory 1**, **Output_2** = **EDID Memory 2**, and so on.



5. Click the **Save** button to commit changes. If the EDID is recorded successfully, then a message will be displayed indicating that the EDID was saved to the selected memory location.

   The stored EDID can now be copied to any of the available inputs, as shown in the illustration, below. Refer to EDID Management (page 37) for more information. When selecting an EDID to be copied to an input, always click the **Save** button to commit changes.

   To clear all stored EDID data from the AT-UHD-PRO3-66M, click the **EDID Reset** button, shown in the illustration on the previous page.



Managing Users

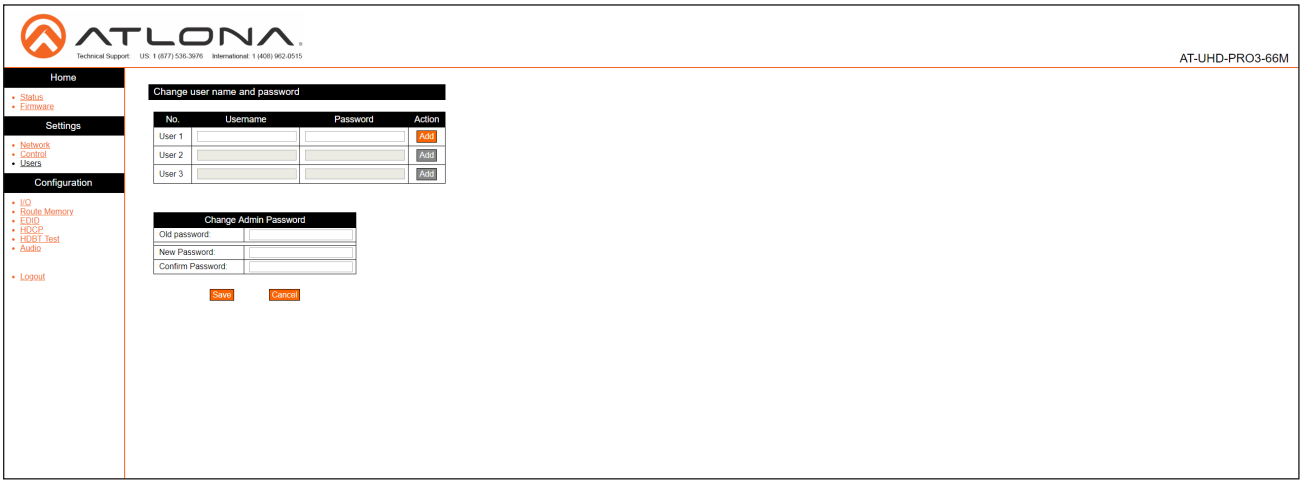
The AT-UHD-PRO3-66M allows the **Admin** user to create, edit, and remove additional TCP/IP users. All users have the same level of access to control the AT-UHD-PRO3-66M. However, only the **Admin** user is allowed to manage other users. Up to three additional users can be created.

NOTE: Usernames and passwords are restricted to alphanumeric characters, only.

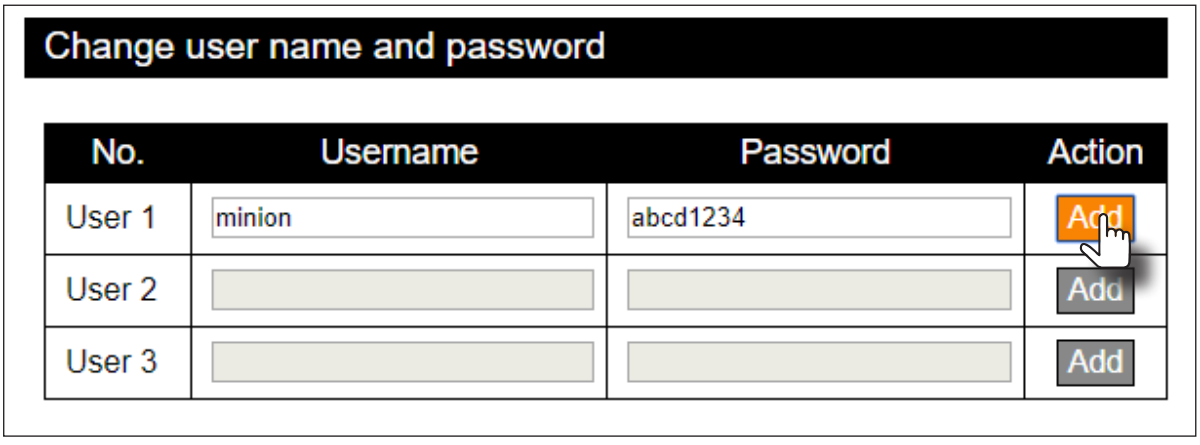
Adding Users

1. Open the desired web browser and enter the IP address of the AT-UHD-PRO3-66M.
2. Log in as the **Admin** user with the required credentials. The factory-default username and password for the admin user are listed below:

   Username: root
   Password: Atlona
3. Click the **Users** tab.

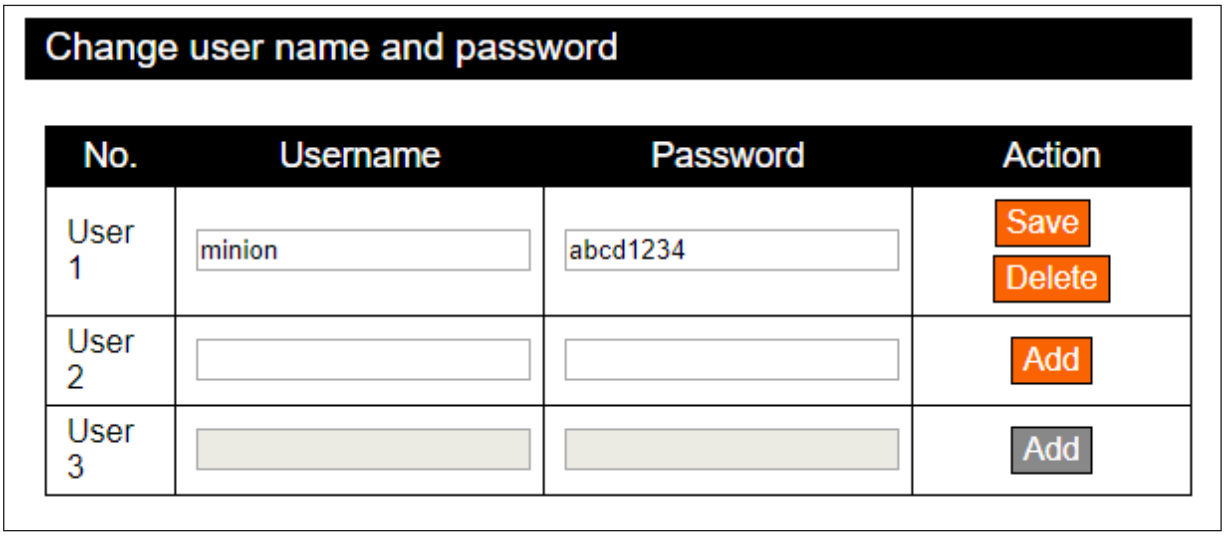


4. Enter the desired username and password for the desired user field: User 1, User 2, or User 3.



5. Click the **Add** button, under the **Action** column, next to the user field.

6. Once created, the new user and the associated password will appear under the **All User Login Settings** section. To login with the new username, click **Logout** in the upper-right corner of the screen, then enter the login credentials for the user on the **Login** page.



Editing / Deleting Users

The username and password of a user can be changed using this method.

1. Open the desired web browser and enter the IP address of the AT-UHD-PRO3-66M.
2. Log in as the **Admin** user with the required credentials. The factory-default username and password for the admin user are listed below:

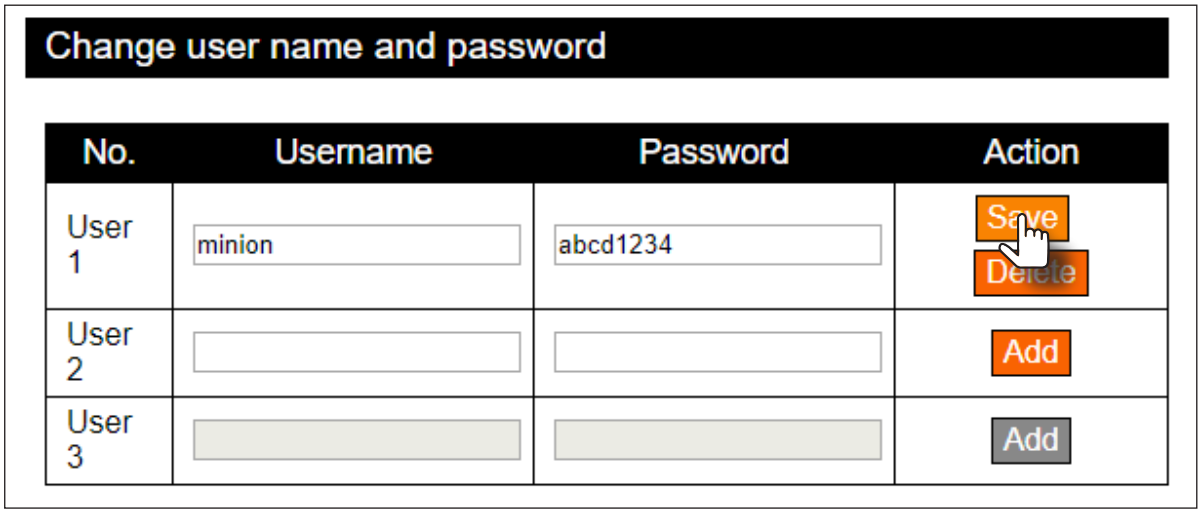
   Username: root
   Password: Atlona

3. Click the **Users** tab.

Editing Users

a. Click in the **Username** or **Password** field for the desired user and update the current information.

b. Click the **Save** button to commit changes.



Deleting Users

a. Click the **Delete** button next to the user to be deleted. Note that no prompt will be provided to confirm the deletion of the desired user.

Advanced Operation

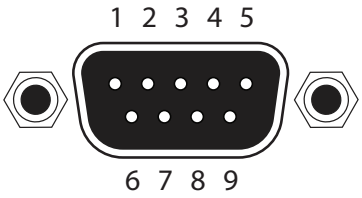
RS-232 Control

The AT-UHD-PRO3-66M provides RS-232 control between an automation system and an RS-232 device using a captive screw connector block. The AT-UHD-PRO3-66M provides two modes of RS-232 control: Pass-through mode and control mode.

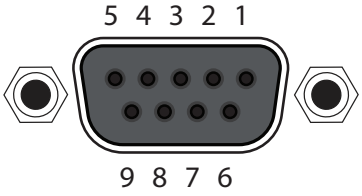
RS-232 is serial data protocol that allows Data Terminal Equipment (DTE) devices, such a computer or control system, to communicate with Data Communication Equipment (DCE) devices, such as the AT-UHD-PRO3-66M, amplifier, or display. Although IP control is available, RS-232 still plays an integral part of many control systems.

Although the 25-pin D-type connector (DB-25) was defined as the RS-232 standard, it is now commonly implemented in a nine-pin (DE-9) connector package and is numbered, as shown below.

DE-9 (male)



DE-9 (female)



DTE Pin Descriptions

Pin	Signal	Description
1	DCD	Data Carrier Detect
2	RxD	Receive Data
3	TxD	Transmit Data
4	DTR	Data Terminal Ready
5	GND	Ground (Signal)
6	DSR	Data Set Ready
7	RTS	Request to Send
8	CTS	Clear to Send
9	RI	Ring Indicator

DCE Pin Descriptions

Pin	Signal	Description
1	DCD	Data Carrier Detect
2	TxD	Transmit Data
3	RxD	Receive Data
4	DSR	Data Set Ready
5	GND	Ground (Signal)
6	DTR	Data Terminal Ready
7	CTS	Clear to Send
8	RTS	Ready to Send
9	RI	Ring Indicator

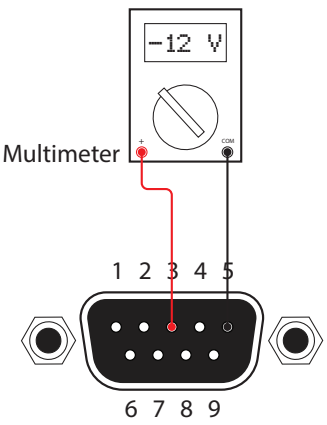
Determining the Port Type

Most DTE devices provide a male connector, while DCE devices have a female connector. However, this is not always the case. If the port type is unknown, then a multimeter can be used to determine whether the port is DTE or DCE:

1. Turn on the multimeter and set it to measure DC voltage.
2. Connect the positive and negative leads to pins 3 and 5, respectively.
3. Check the voltage reading:

   If the voltage is between -3 V DC and -15 V DC, then the device is DTE. Otherwise, it is DCE.

   Voltage levels between -3 V and -15 V DC represent a logic “1”.
   Voltage levels between +3 V and +15 V DC represent a logic “0”.



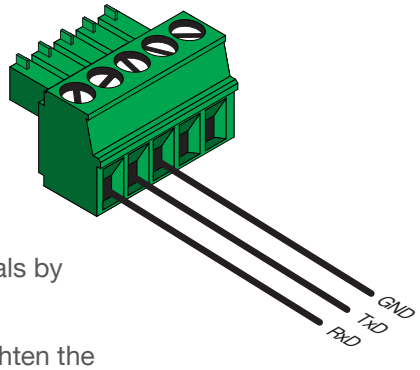
Cable Assembly

When connecting a DTE device to a DCE device, a *straight-through* cable should be used. A straight-through cable is wired in such a way that the pins on one side of the cable are connected to the corresponding pins on the opposite side of the cable, as shown in the table below. However, the AT-UHD-PRO3-66M will use only TxD, RxD, and GND signals when communicating with a control system or computer.

Straight-Through Cable

Pin	Signal		Signal	Pin
1	DCD	⟷	DCD	1
2	RxD	⟷	TxD	2
3	TxD	⟷	RxD	3
4	DTR	⟷	DSR	4
5	GND	⟷	GND	5
6	DSR	⟷	DTR	6
7	RTS	⟷	CTS	7
8	CTS	⟷	RTS	8
9	RI	⟷	RI	9

1. Identify the DE-9 connector that will be attached to the control system or computer (DCE) equipment.
2. Remove the DE-9 connector at the opposite end of the cable with wire cutters.
3. Remove at least 1” of the cable insulation to expose each of the nine wires.
4. Locate a multimeter and set it to the “continuity” function.
5. Attach one of the leads from the multimeter to pin 2 on the DE-9 connector.
6. Take the other lead and probe each of the wires on the opposite end of the cable. When the wire connected to that pin is detected, the multimeter will emit an audible tone. Once this occurs, identify the current wire, and move it to the side.
7. Repeat step 6 for pin 3 and pin 5 on the DE-9 connector.
8. Group the remaining wires and pull them aside. Electrical tape can be use to secure the wires to the outside of the RS-232 cable.
9. Remove at least 3/16” (5 mm) of insulation from the TxD, RxD, and GND wires.

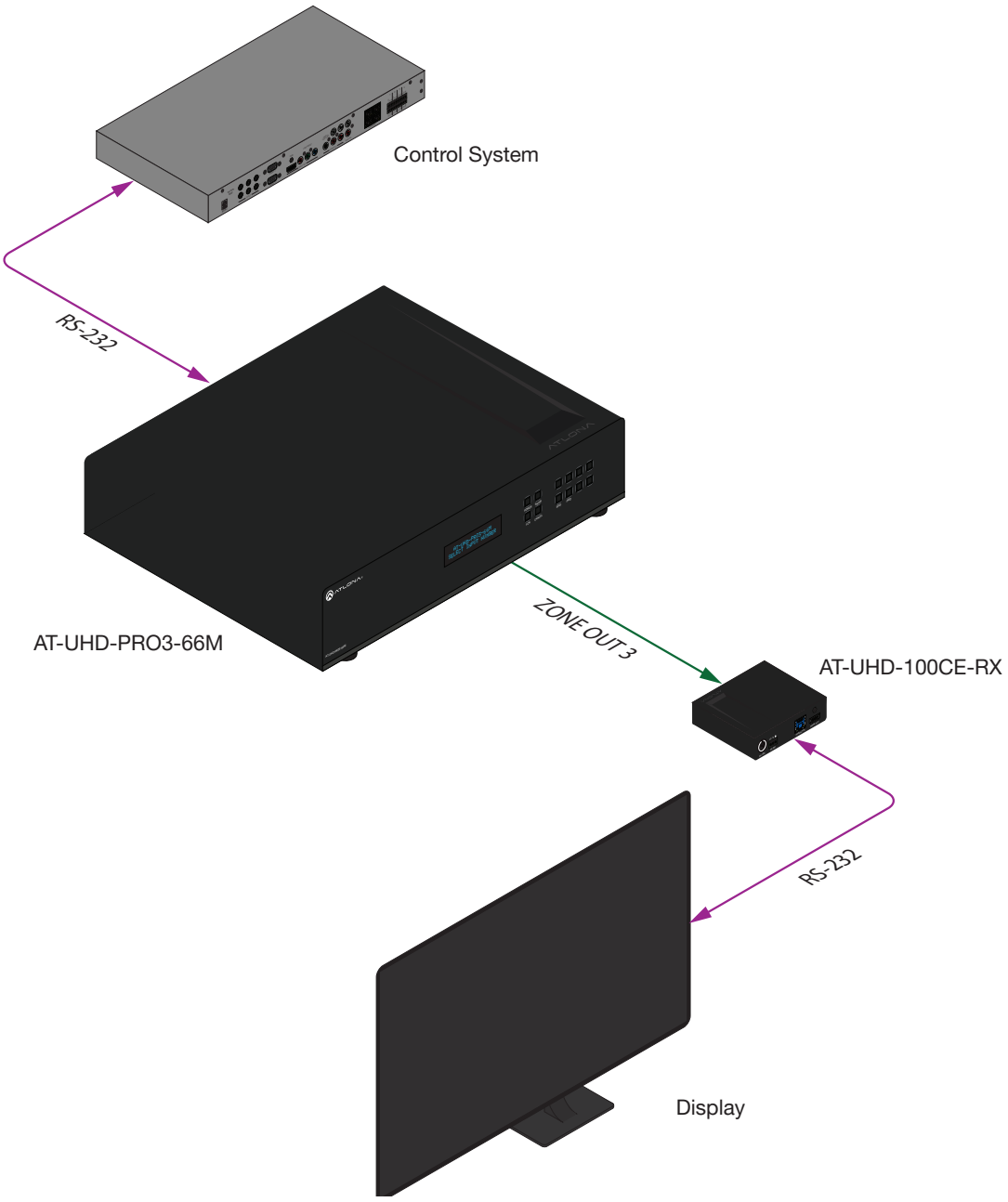


10. Locate the included 3-pin captive screw block and open each of the terminals by turning the screws counter-clockwise, using a small regular screwdriver.
11. Insert the TxD, RxD, and GND wires into correct terminal, as shown, and tighten the screws to secure each wire. Do no overtighten.
12. Connect the captive screw connector to the **RS-232** port on the AT-UHD-PRO3-66M.

Pass-through mode

In pass-through mode, RS-232 commands are sent to the AT-UHD-PRO3-66M and then transmitted over HDBaseT to the receiver unit (e.g. AT-UHD-100CE-RX), and then to the display (sink) device.

1. Connect the RS-232 cable between the control system and the AT-UHD-PRO3-66M. Refer to Cable Assembly (page 47) for instructions on preparing the cable.
2. Connect an Ethernet cable from the desired **HDBaseT OUT** port to a receiver. In this example, the HDBaseT cable is connected from **HDBaseT OUT 3** to an AT-UHD-100CE-RX receiver.
3. Connect an RS-232 cable between the display (sink) and the receiver.

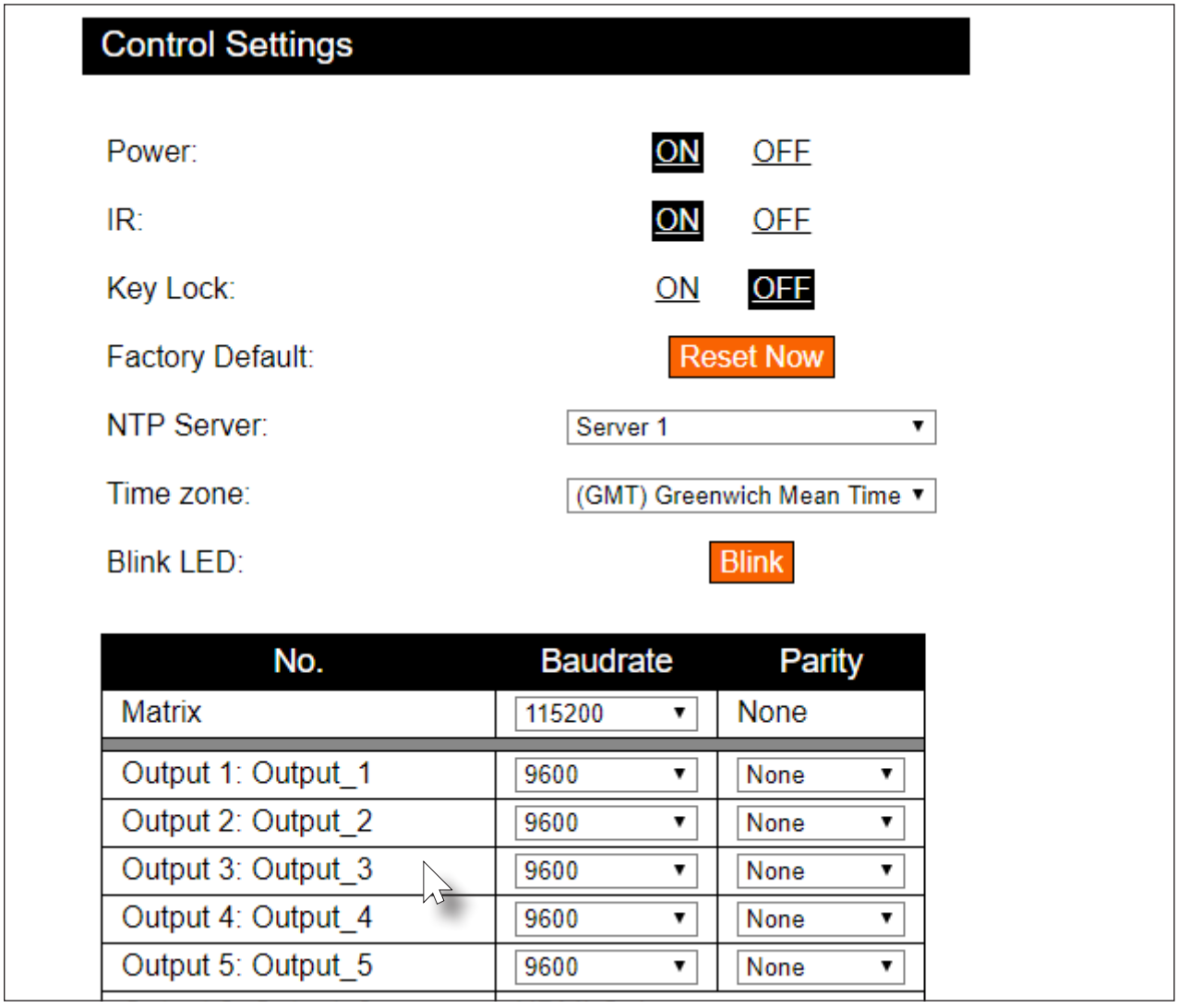


4. Launch a web browser and login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information. The factory-default username and password are listed below:

   Username: **root**
   Password: **Atlona**

5. Click **Control** in the side menu bar.

6. Select the proper baud rate, data bit, parity, and stop bit settings for the HDBaseT OUT port. These settings must correspond with the RS-232 settings of the receiver unit (e.g. AT-UHD-100CE-RX). Referring to the example diagram on the previous page, **ZONE OUT 3** will need to be configured.



7. Click the **Save** button to commit changes.

8. Use the following command to send a command to the display (sink) device, where display_command is the command data to send:

   RS232Zone4[display_command$0d]

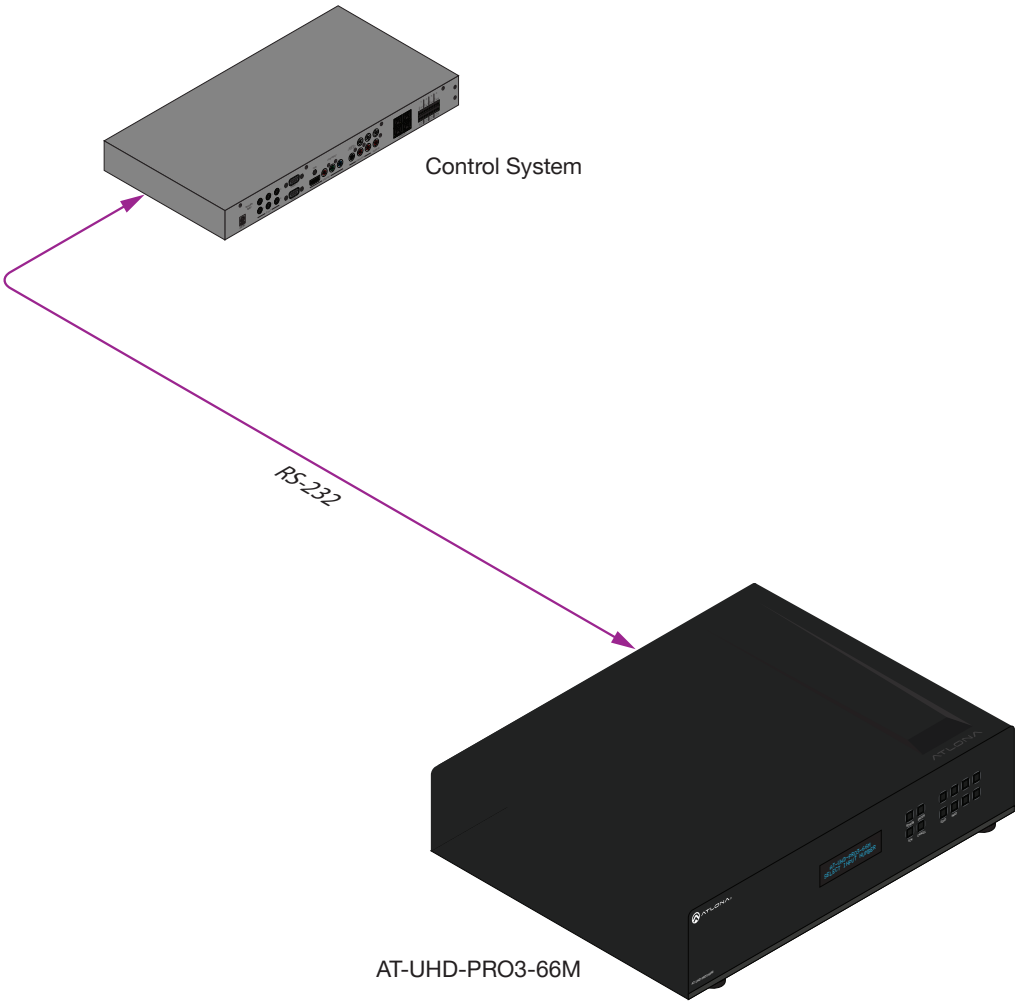
   $0d (carriage return) should only be added to end of the string if the sink device is expecting this character.

Control mode

In control mode, RS-232 commands are sent from a computer or control system (DTE) to the AT-UHD-PRO3-66M (DCE). This method allows direct control of the matrix for routing, IP configuration, powering-on / powering-off and other functions.

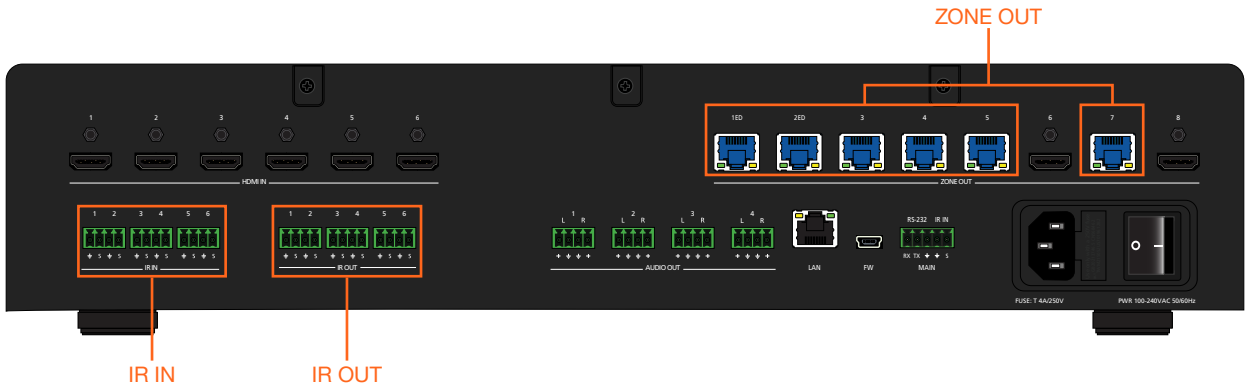
NOTE: The **RS-232** port on the AT-UHD-PRO3-66M runs at a default baud rate of 115200. The control unit must be set to the same baud rate, in order to communicate with the AT-UHD-PRO3-66M.

1. Connect the RS-232 cable between the control system and the AT-UHD-PRO3-66M. Refer to Cable Assembly (page 47) for instructions on preparing the cable.
2. Set the baud rate of the computer/control system to 115200. If the control system is not set to this baud rate, then the AT-UHD-PRO3-66M will not respond to RS-232 commands.
3. Refer to the *Applications Programming Interface* for a listing of available commands.



IR Control

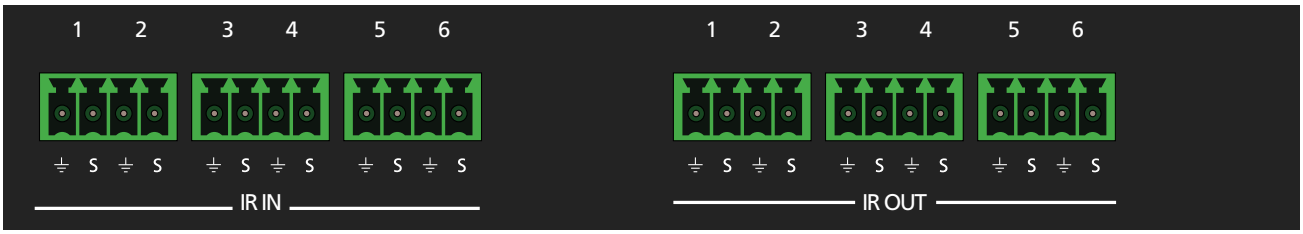
The AT-UHD-PRO3-66M feature six **IR IN** ports and six **IR OUT** ports. Devices at either the headend or connected to the receiver unit can be controlled using IR.



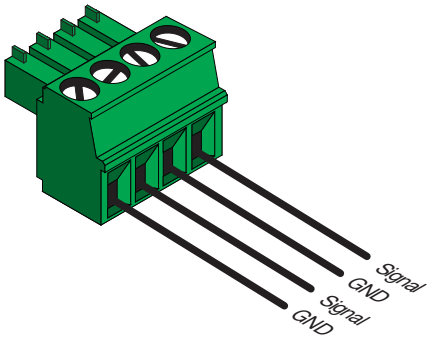
Cable Assembly

The following shows how to control displays (or other sink devices) which are connected to an HDBaseT receiver. Each IR IN port provides IR control for two individual HDBaseT receivers (outputs).

1. Remove at least 3/16” (5 mm) of insulation from both the GND and Signal leads.
2. Locate the included 4-pin captive screw block and open each of the terminals by turning the screws counter-clockwise, using a small regular screwdriver.



3. Insert the GND and Signal leads into correct terminal, as shown, and tighten the screws to secure each wire. Do no overtighten.
4. Connect the captive screw connector to the **IR IN** ports on the AT-UHD-PRO3-66M.

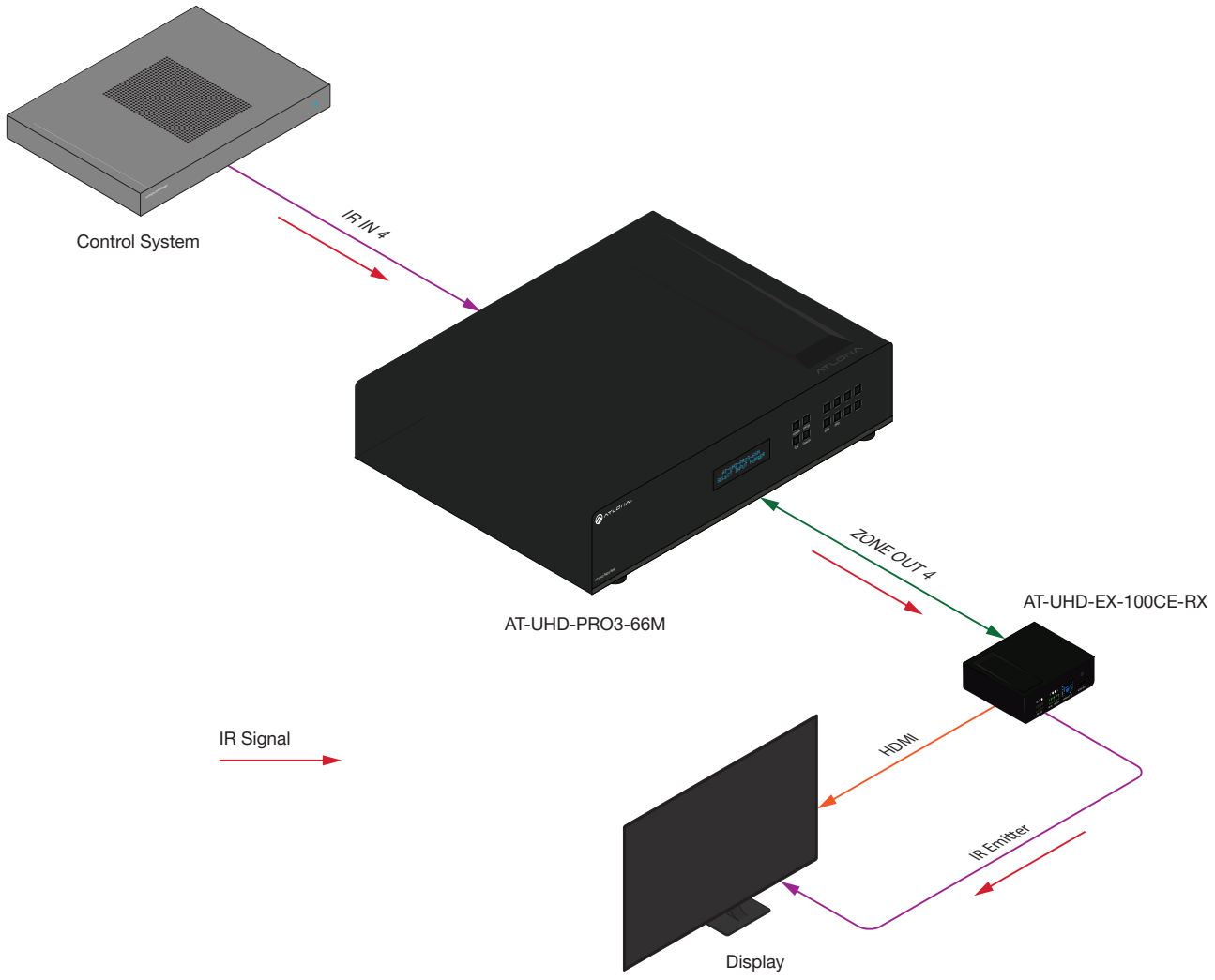


Controlling Display Devices

The following shows how to control displays (or other sink devices) which are connected to an HDBaseT receiver. When a control device is connected to an **IR IN** port, the IR signal is transmitted over Ethernet cable, from the associated **ZONE OUT** port, to the HDBaseT receiver. **IR IN** ports are “hard wired” to each **ZONE OUT** port. For example, **IR IN 1** is wired to **ZONE OUT 1ED**, **IR IN 2** is wired to **ZONE OUT 2ED**, and so on. **IR IN** ports *cannot* be routed independently.

IMPORTANT: IR IN ports cannot be routed independently. Each **IR IN** port is associated with a **ZONE OUT** port: **IR IN 1** > **ZONE OUT 1ED**, **IR IN 2** > **ZONE OUT 2ED**, and so on.

1. Connect the IR output of the control system to the **IR IN** ports on the AT-UHD-PRO3-66M, using the included 4-pin captive screw connector blocks. Refer to Cable Assembly (page 51) for more infomation.
2. Connect an Ethernet cable from the desired **ZONE OUT** port on the AT-UHD-PRO3-66M to an HDBaseT receiver. Note that the **IR IN** port and the **ZONE OUT** port numbers must match. For example, in order to send IR commands over the **ZONE OUT 4** port, the IR port of the control system must be connected to **IR IN 4** on the AT-UHD-PRO3-66M. This example is illustrated, below.

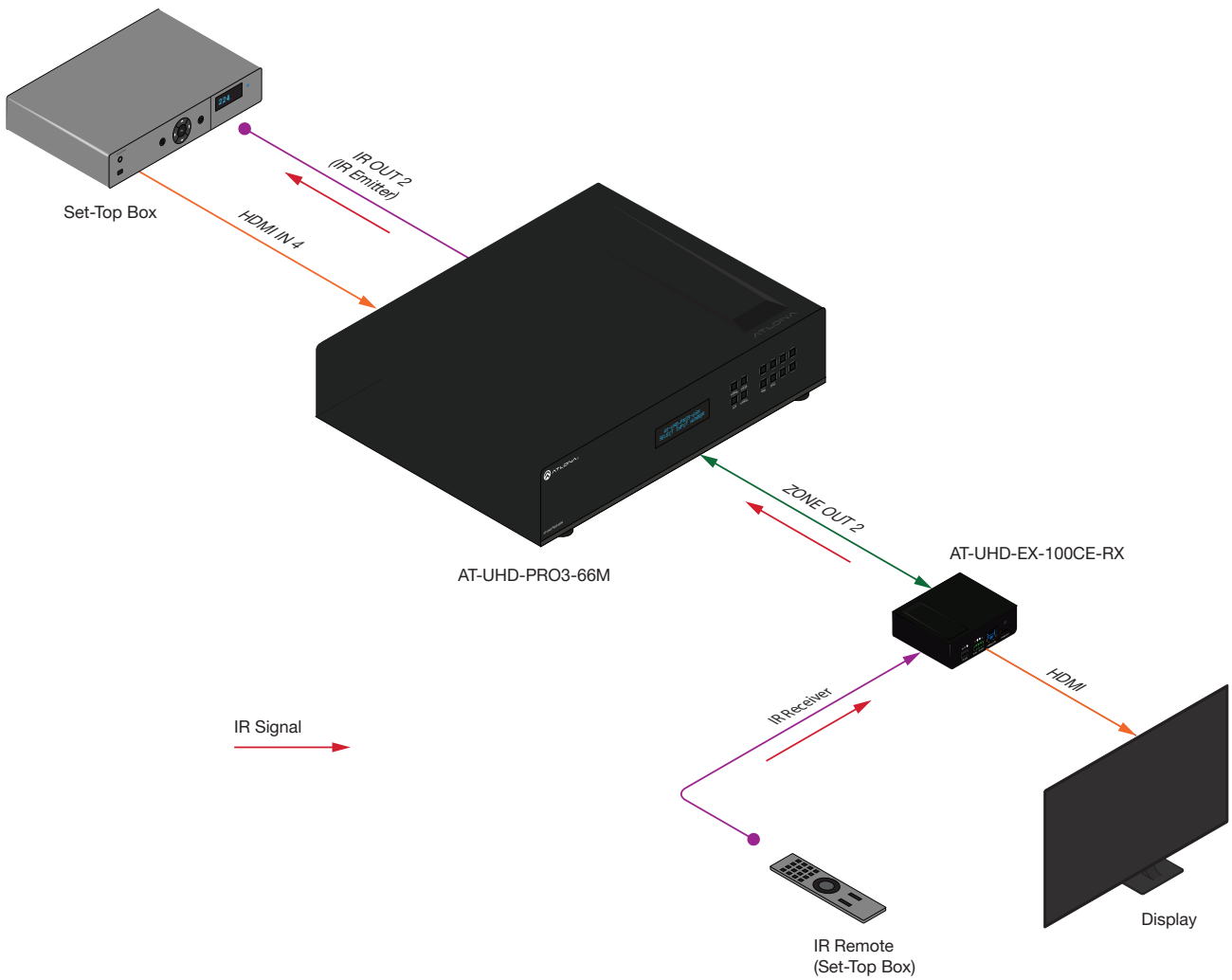


Controlling Headend Devices

Source devices (at the headend) can be controlled from the viewing location. IR control depends upon the current routing state: only the currently viewed source can be controlled using IR.

1. Connect the IR receiver (AT-IR-CS-RX) to the HDBaseT receiver, at the viewing location. Although a control system can be used, a basic IR receiver is commonly used.
2. Connect an IR emitter to the desired **IR OUT** port on the AT-UHD-PRO3-66M. Make sure the source device is within range of the IR emitter.

   In the example below, the **HDMI IN 4** has been routed to **ZONE OUT 2**. The IR remote control for the Set Top Box (STB) is connected to the HDBaseT receiver (AT-UHD-EX-100CE-RX) on **ZONE OUT 2**. As long as the STB is routed to **ZONE OUT 2**, the STB can be controlled from the viewing location. If a different source is routed to **ZONE OUT 2**, then the STB can no longer be controlled from the viewing location, using IR.



The Web GUI

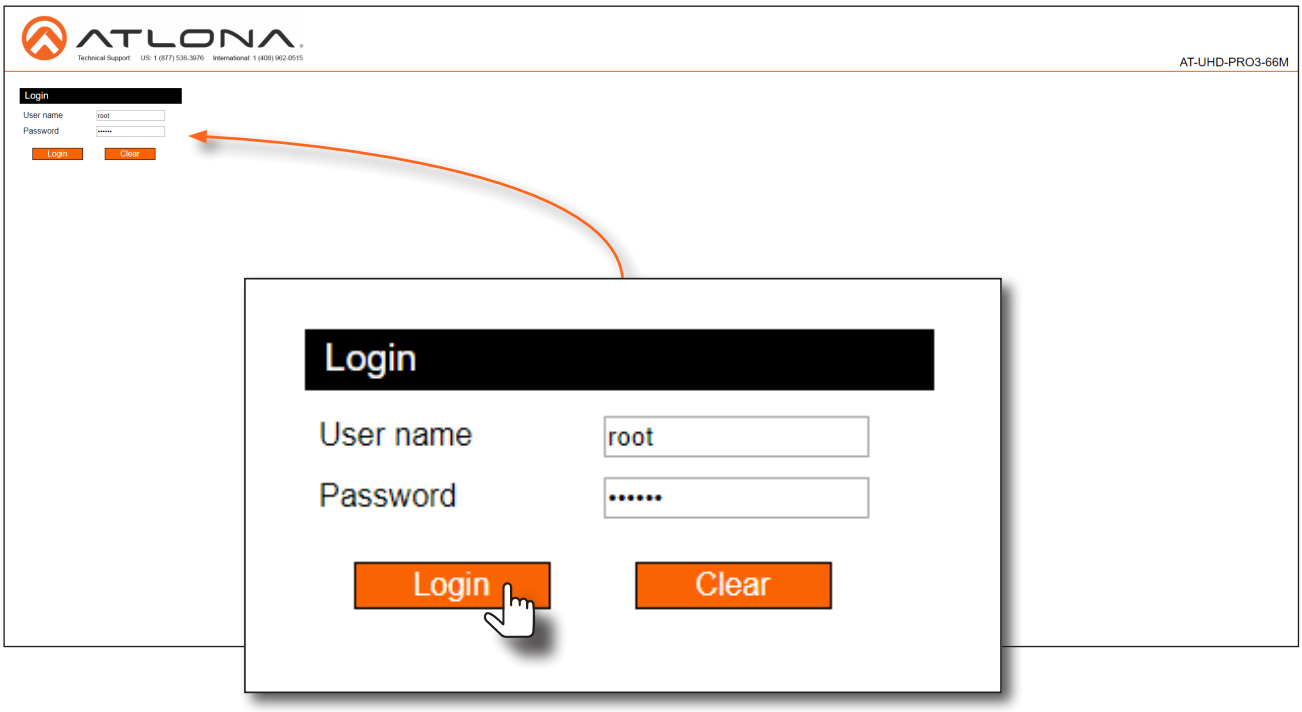
Introduction to the Web GUI

The AT-UHD-PRO3-66M includes a built-in web GUI. Atlona recommends that the web GUI be used to set up the matrix, as it provides intuitive management of all features. Follow the instructions below to access the webGUI.

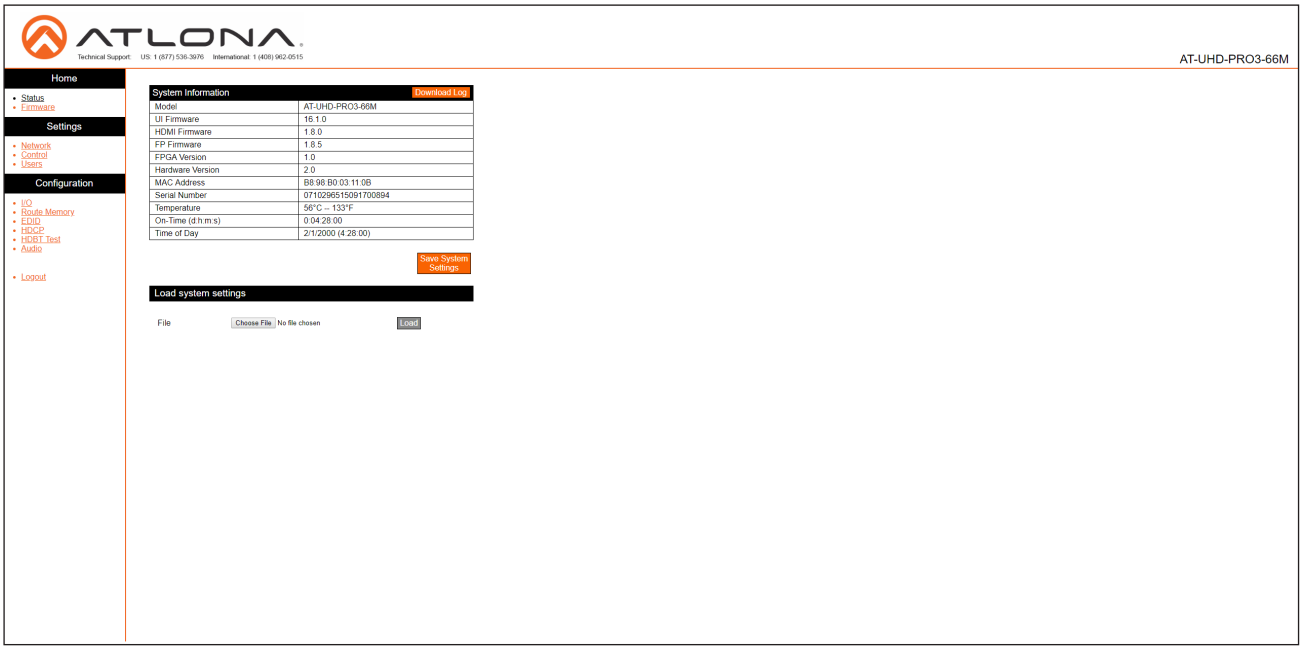
1. Make sure that an Ethernet cable is connected between the **LAN** port on the AT-UHD-PRO3-66M and the network.
2. Launch a web browser and enter the IP address of the unit. If the default static IP address is being used, enter 192.168.1.254.

   If the IP address of the AT-UHD-PRO3-66M is not known, press and release the **FNC** button on the front panel, then repeatedly press the **INFO** button until the IP address is displayed, as illustrated in the example below. Refer to Displaying the System Settings (page 20) for more information, if necessary.

3. Enter root, using lower-case characters, in the **User name** field.
4. Type Atlona in the **Password** field. This is the default password. The password field is case-sensitive. When the password is entered, it will be masked.
5. Click the **Login** button or press the ENTER key on the keyboard.

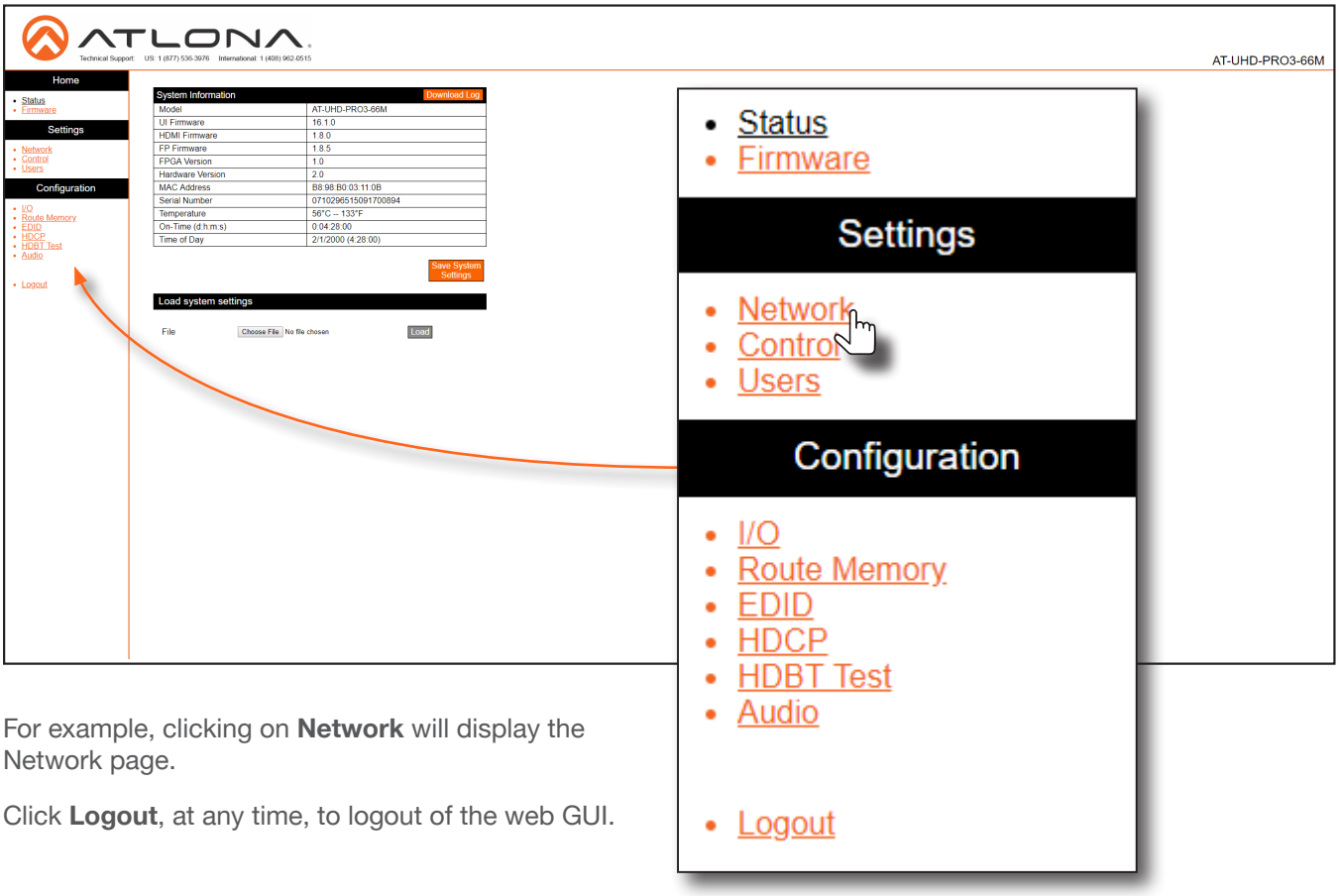


6. The **Status** page will be displayed.



Menu Bar

The window on the left side of the screen is the is the menu bar and lists all available menus. Click on the desired menu item to open that page.

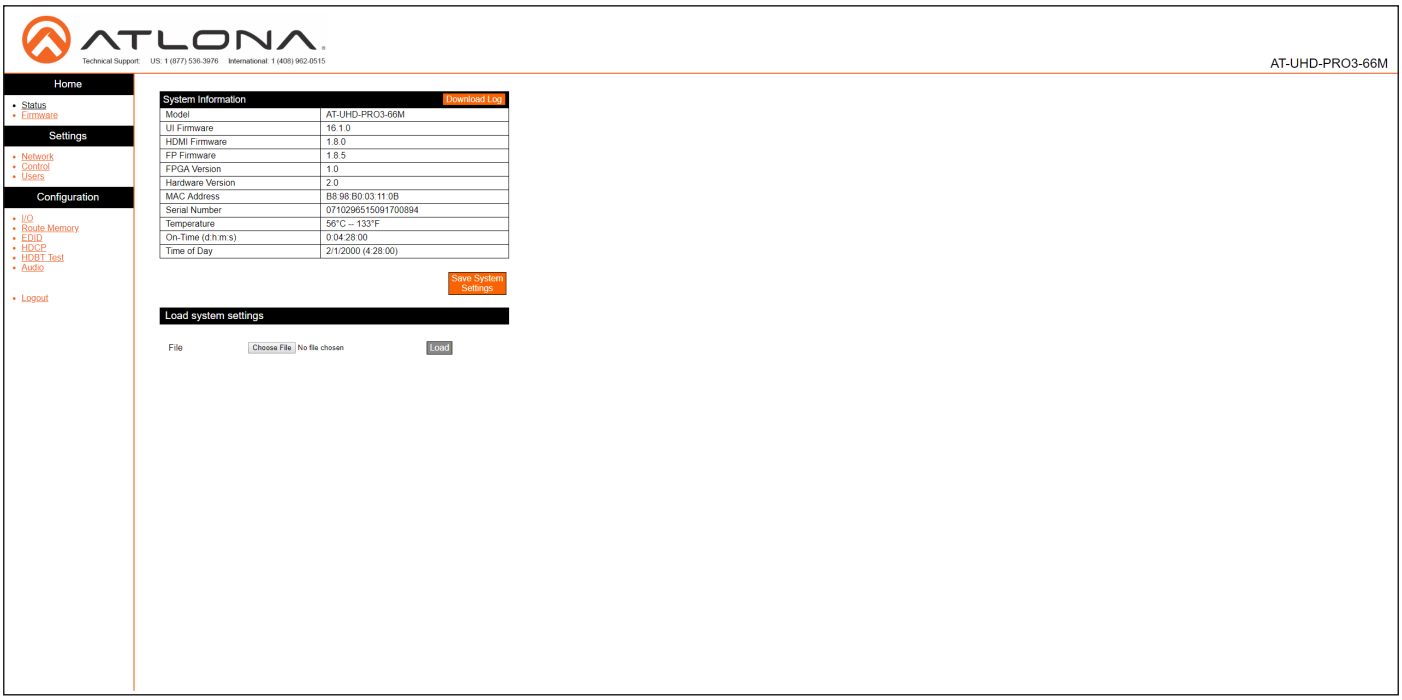


For example, clicking on **Network** will display the Network page.

Click **Logout**, at any time, to logout of the web GUI.

Status page

After logging in, the **Status** page will be displayed. The **Status** page provides basic information about the matrix, including the model name, software version, MAC address, and operating temperature.



Model
The model (SKU) of this product.

UI Firmware
The firmware version of the user interface (web GUI).

HDMI Firmware
The firmware version for the HDMI driver. Note that this number is not the version of HDMI.

FP Firmware
Version of firmware used to operate the front panel display.

FPGA Version
The FPGA firmware version.

Hardware Version
The hardware version.

MAC Address
The MAC address of the unit.

Serial Number
The serial number of the unit. The serial number is a 19-digit number that is appended to the model of the matrix, in order to create the hostname identifier.

Temperature
The current operation temperature of the matrix.

On-Time (d:h:m:s)
The time elapsed since the matrix was powered or rebooted.

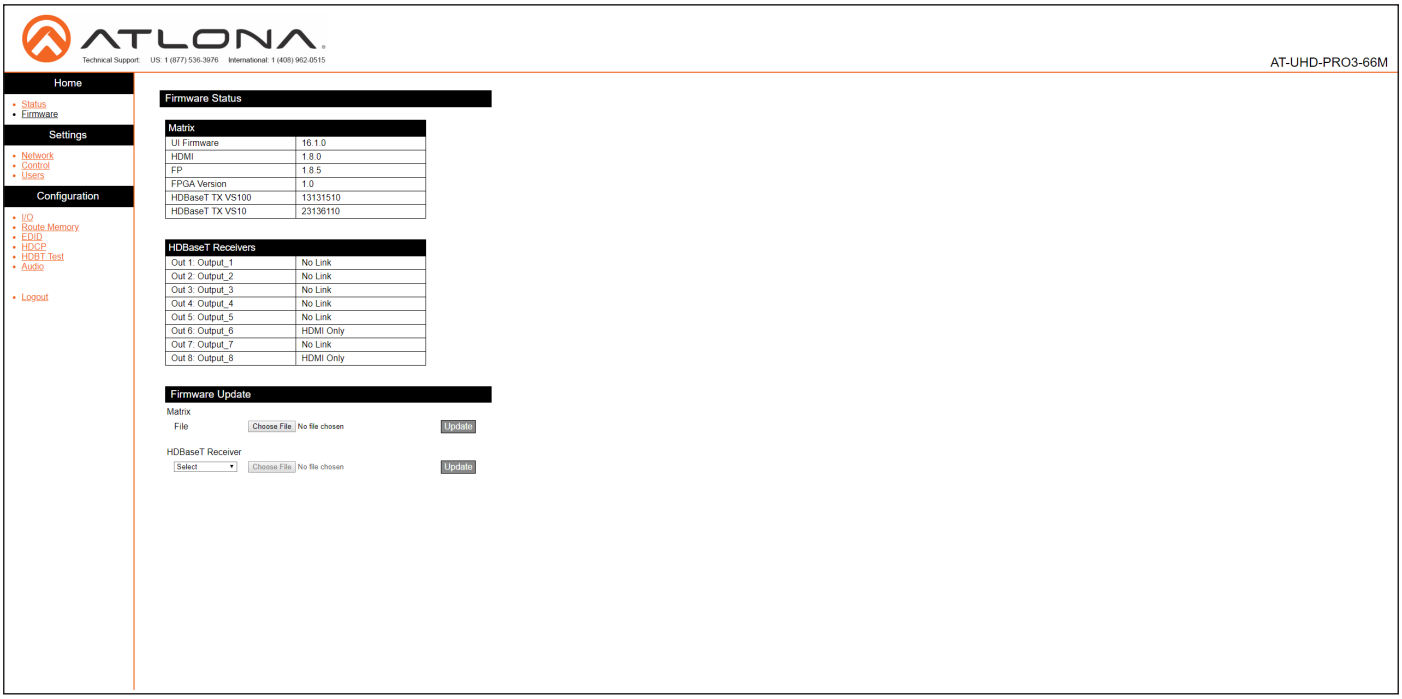
Time of Day
The current time and date.

Save System Settings
Click this button to save the current system configuration to a local file.

Choose File
Click this button to select the configuration file to be loaded. Click the **Load** button to upload the file to the system.

Firmware page

This page provides information on the current firmware for the matrix and all connected UHD-EX-based HDBaseT receivers/transmitters. In addition, both matrix and transmitter/receiver (if connected) firmware can be updated here. Refer to Updating the Firmware (page 67) for more information on firmware update procedures.



UI Firmware
The firmware version of the user interface (web GUI).

HDMI Firmware
The firmware version for the HDMI driver. Note that this number is not the version of HDMI.

FP Firmware
Version of firmware used to operate the front panel display.

FPGA Version
The FPGA firmware version.

HDBaseT TX VS100
Version of firmware used by the VS100 HDBaseT transmitter chip.

HDBaseT TX VS10
Version of firmware used by the VS10 HDBaseT transmitter chip.

Out 1 : Output_1 - Out 8 : Output_8
Version of firmware used by the HDBaseT receiver (if connected). If no receiver is connected, then **No Link** will be displayed in these fields.

Choose File (Matrix)
Click this button to select the firmware file for the matrix. Click the **Update** button to being the firmware update process.

Choose File (HDBaseT Remote)
Click this button to select the firmware file for the HDBaseT remote device (if connected). Click the **Update** button to being the firmware update process.

Network page

System Secure (SSH)
Secure Socket Shell. Click ON to enable this feature. The default setting is OFF. Enabling this feature will disable the Telnet daemon and web server.

DHCP
Click ON to set the matrix to DHCP mode. If a DHCP server is not found within 15 seconds, then the unit will default to the static IP address of 192.168.0.150. Refer to Setting the IP Mode (page 14) for more information on setting the IP mode. When **Mode** is set to DHCP, the **IP Address**, **Subnet**, and **Gateway** fields will automatically be populated. Click **OFF** to set the matrix to static IP mode.

IP Address
Enter the IP address of the AT-UHD-PRO3-66M in this field. This field will only be available if **DHCP** is set to **OFF**. The default IP address is 192.168.0.150.

Subnet
Enter the subnet mask in this field. This field will only be available if **DHCP** is set to **OFF**.

Gateway
Enter the gateway (router) address in this field. This field will only be available if **DHCP** is set to **OFF**.

Telnet Port
Enter the Telnet listening port in this field.

HTTP Port
Enter the HTTP listening port in this field.

IP Timeout
Enter the timeout interval, in seconds, before the Telnet connection is automatically terminated after no activity. Range: 1 to 3600 (seconds).

Hostname
Enter the hostname of the matrix in this field. This name is used to identify the matrix on a network.

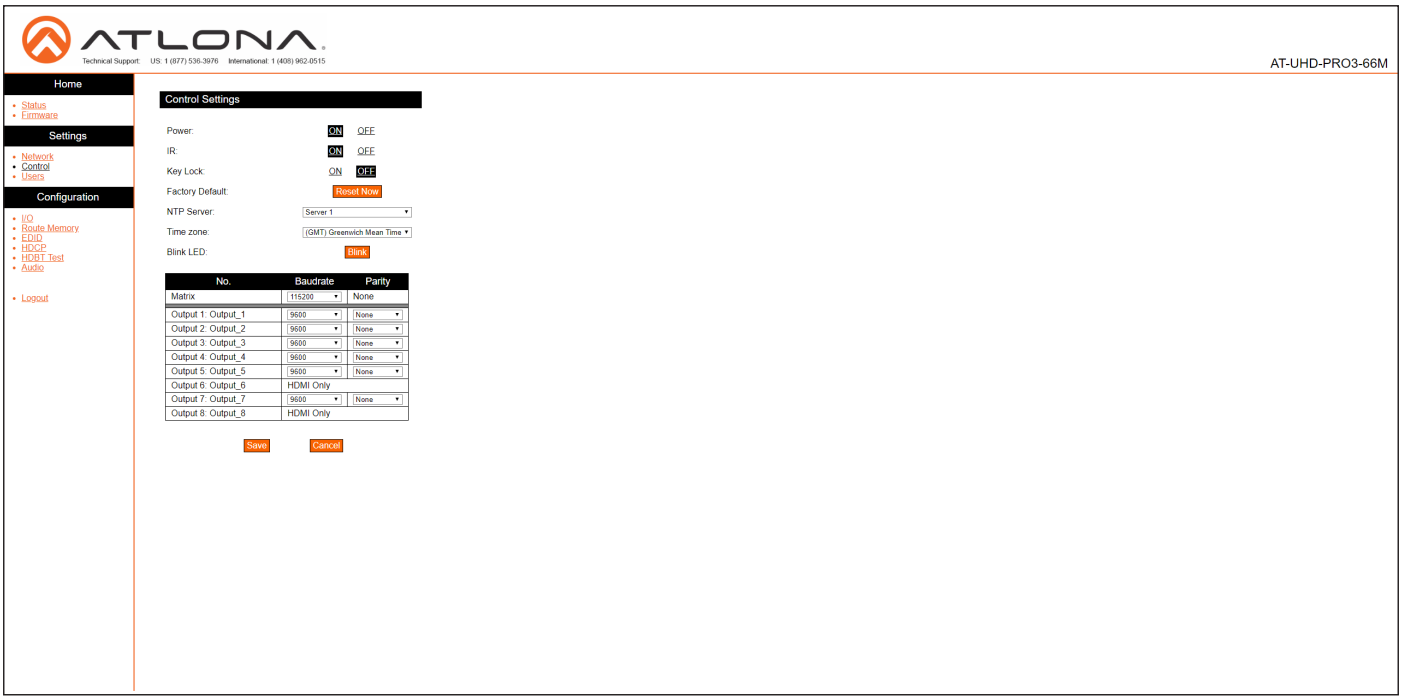
SDDP
Simple Device Discovery Protocol. SDDP is a discovery ("IP scan") protocol authored by Control4® to provide easy integration of the AT-UHD-PRO3-66M with Control4® devices on a network. SDDP functions similar to the UPnP (Universal Plug and Play) protocol. Click this button to invoke SDDP.

Telnet Login Mode
Click **ON** to prompt for login credentials at the start of a Telnet session. Use the same credentials as the web GUI. If set to **OFF**, then no authentication is offered.

Save
Click this button to commit all changes.

Cancel
Click to abort changes.

Control page



Power
Click **ON** to power-on the matrix. Click **OFF** to place the matrix in standby mode. Refer to Standby Mode (page 18) for more information on standby mode.

IR
Enables or disables the IR ports on the matrix.

Key Lock
Click **ON** to lock the button on the front panel. Click **OFF** to unlock the front-panel buttons. When the front-panel buttons are locked, the **POWER** button will flash blue.

Factory Default
Click the **Reset Now** button to set the matrix to factory-default settings.

NTP Server
Click this drop-down list to specify the desired NTP server. Two NTP servers are available: **Server 1** or **Server 2**.

Time Zone
Click this drop-down list to select the desired time zone. The default setting is Greenwich Mean Time (GMT).

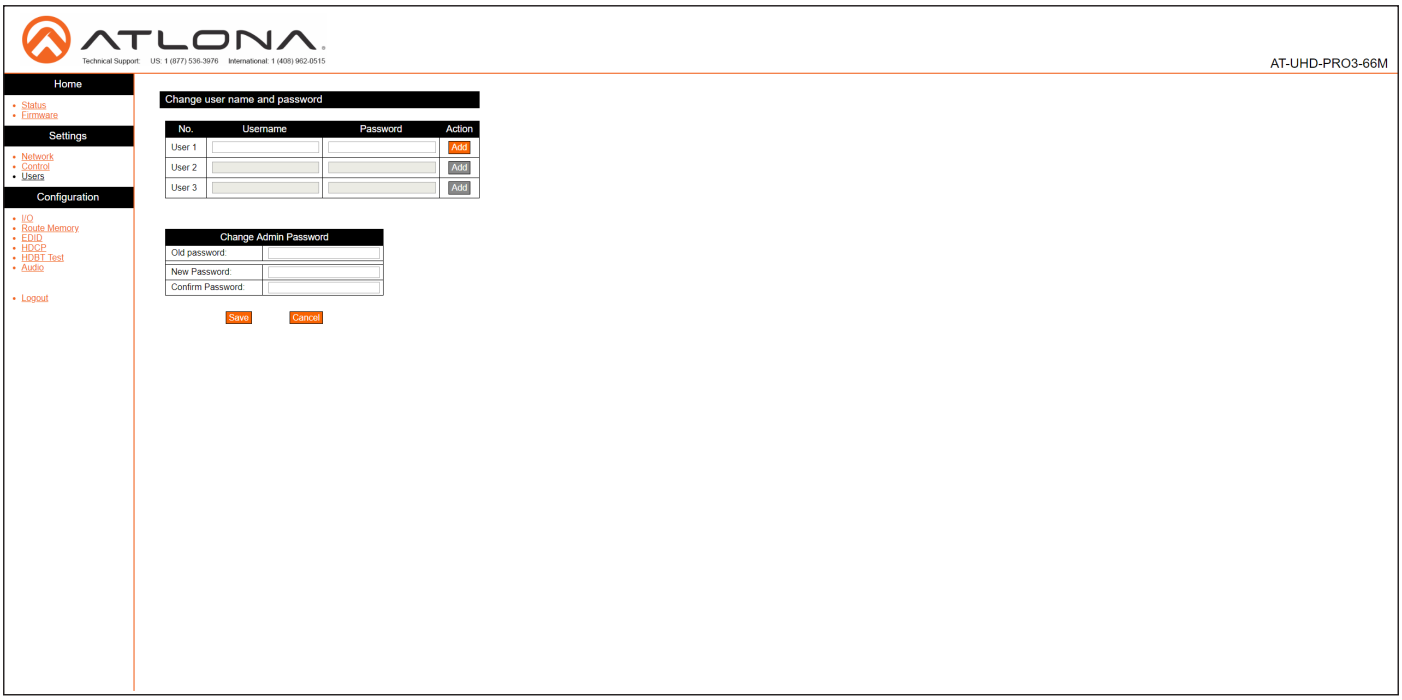
Blink LED
Click the **Blink** button to flash the **POWER** button on the front panel. When clicked, the **Blink** button will read **Blinking** and the **POWER** button will flash blue. This process will continue until the **Blinking** button is clicked.

RS-232
Click these drop-down lists to select the required baud rate and parity bit for the device that is being controlled.

Save
Click this button to commit all changes.

Cancel
Click to abort changes.

Users page



Username
Enter the username in this field. Only alphanumeric characters are are accepted in this field.

Password
Enter the password for the user in this field. Only alphanumeric characters are are accepted in this field.

Add
Click this button to add a TCP/IP user. The **Username** and **Password** fields must be completed before a new user can be added.

Old Password
Enter the current password for the “root” username in this field. The default password is “Atlona”.

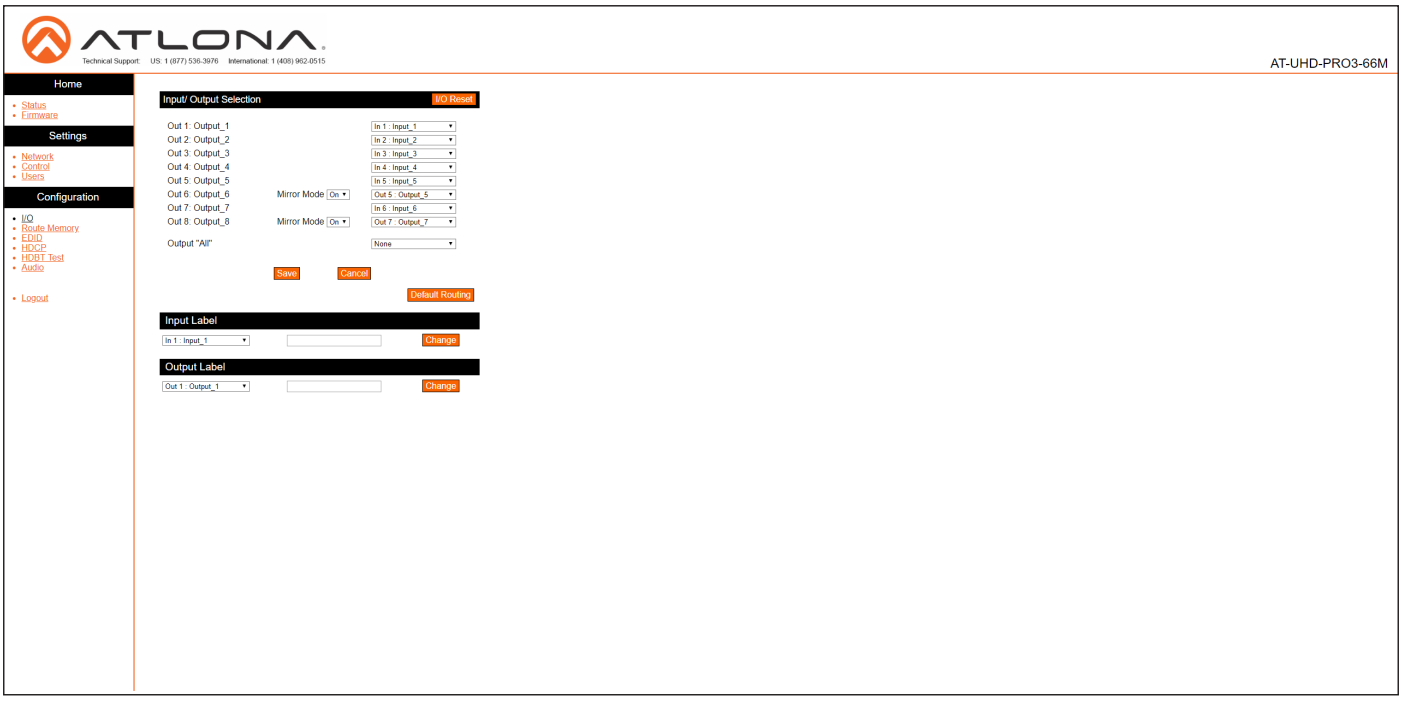
New Password
Enter the new password for the “root” username in this field.

Confirm New Password
Verify the new password by retyping it in this field.

Save
Click this button to commit all changes.

Cancel
Click to abort changes.

I/O page



I/O Reset
Click this button to reset all input/output routing to factory-default settings.

Out 1: Output_1 - Out 8: Output_8
Click the drop-down lists, to the right, to select the desired input for routing. Refer to Routing Inputs to Outputs (page 22) for more information.

Output "All"
Click this drop-down list to select the desired input to be routed to all outputs. Refer to Routing a Single Input to All Outputs (page 24) for more information.

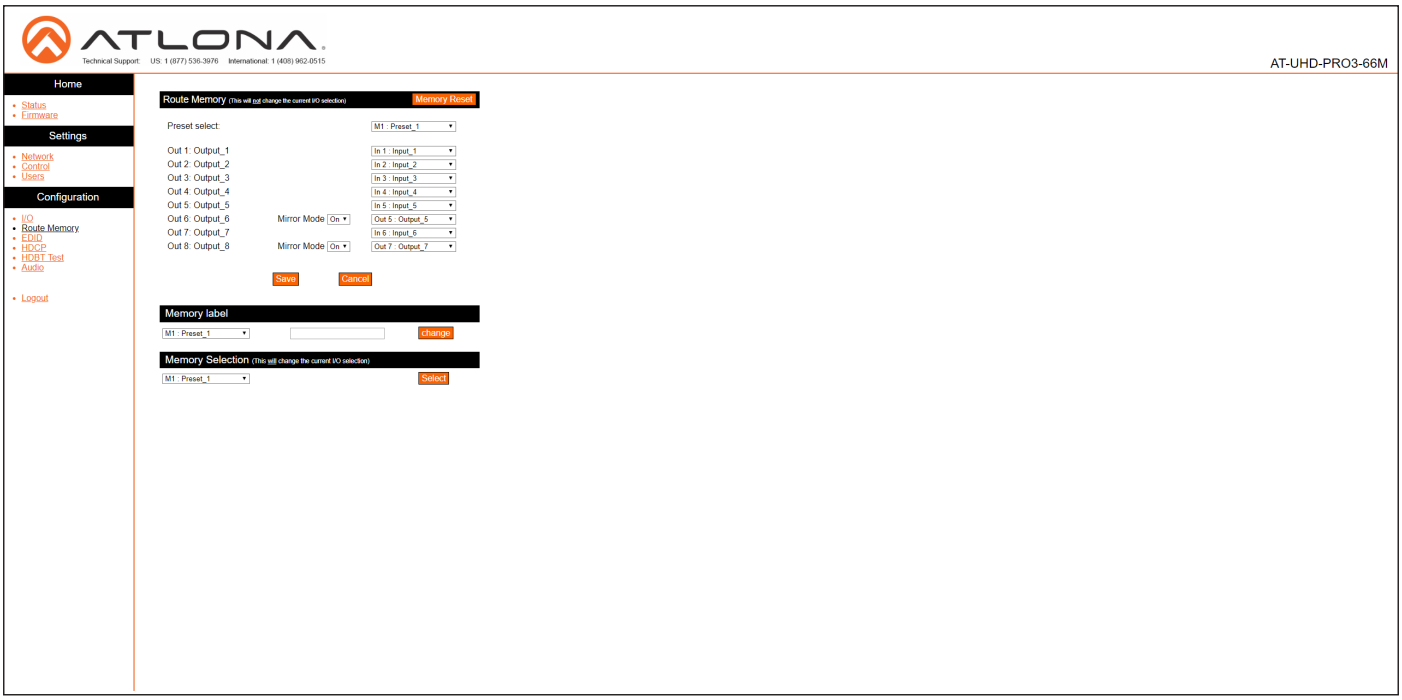
Save
Click this button to commit all changes.

Cancel
Click to abort changes.

Input Label
Click this drop-down list to select the desired input to be labeled. Enter the name of the input in the field to the right of the drop-down list. Click **Change** to commit the input label name. Refer to Renaming Inputs (page 34) for more information.

Output Label
Click this drop-down list to select the desired output to be labeled. Enter the name of the output in the field to the right of the drop-down list. Click **Change** to commit the name of the output. Refer to Renaming Outputs (page 35) for more information.

Route Memory page



Memory Reset
Click this button to reset preset memory to factory-default settings. Note that performing this function will erase all memory presets.

Output 1 - Output 8
Click the drop-down lists, to the right of the output name, to select the desired input for routing. Refer to Routing Inputs to Outputs (page 22) for more information. **Output 6** and **Output 8** are used for mirroring. Click the **Mirror Mode** drop-down list to enable or disable mirroring on the specified output. If **Mirror Mode** is enabled, then only outputs will be available. If disabled, then inputs will be available.

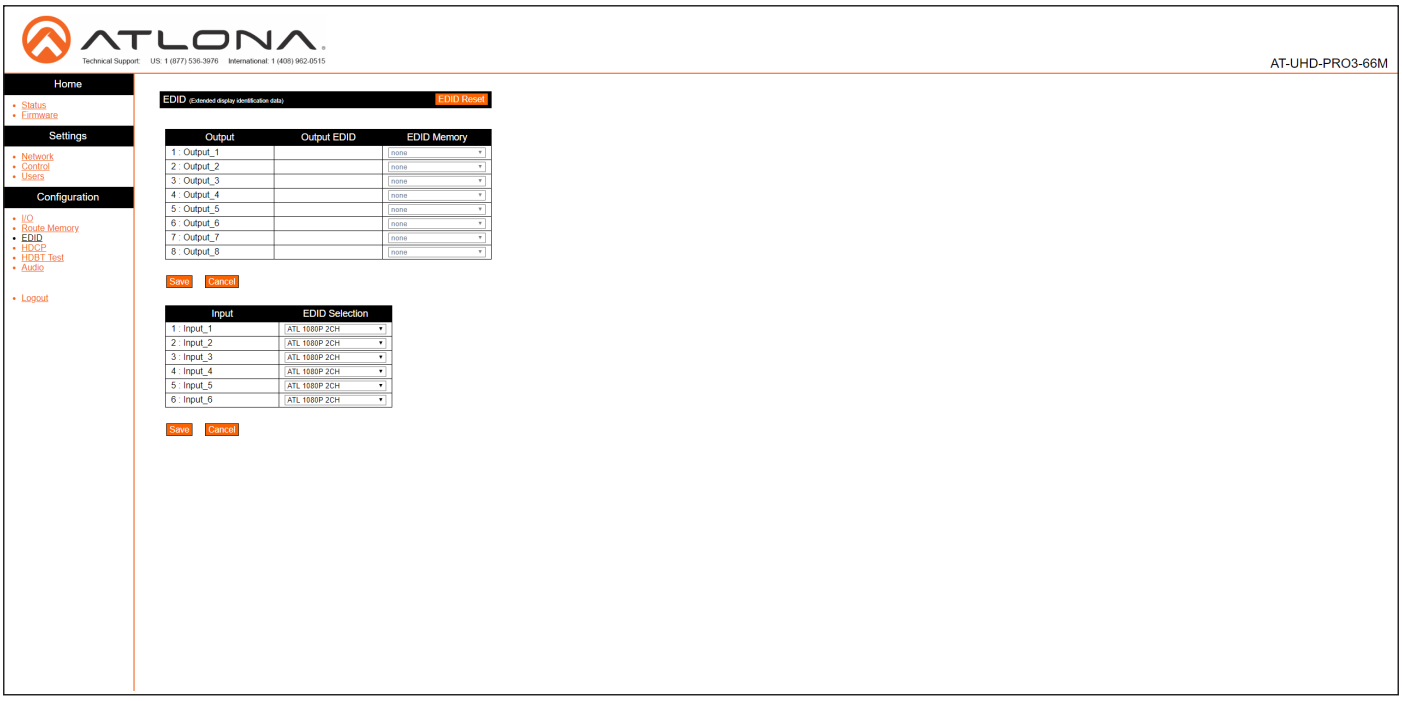
Save
Click this button to commit all changes.

Cancel
Click to abort changes.

Memory Label
Click this drop-down list to select the desired memory location to be labeled. Enter the name of the memory location in the field to the right of the drop-down list. Click **Change** to commit the label to the memory location. Refer to Renaming Memory Presets (page 36) for more information.

Memory Selection
Click this drop-down list to select the desired memory preset. Click **Select** to recall the memory preset. Refer to Creating and Editing Routing Presets (page 30) for more information.

EDID page



EDID Reset
Click this button to reset all EDID settings to the factory-default settings. Note that this will erase any stored EDID data in memory.

Output 1 - Output 8
Click the **EDID Memory** drop-down list to select the memory location where the EDID, displayed under the Output EDID column, will be stored. Note that each drop-down lists is available, only if a sink device is connected to the output.

Save
Click this button to commit all changes for outputs.

Cancel
Click to abort changes.

Input 1 - Input 6
Click the EDID Selection drop-down lists to assign the desired EDID to an input. Stored EDID data will also be displayed in these drop-down list if EDID data was captured. Refer to EDID Management (page 37) for more information.

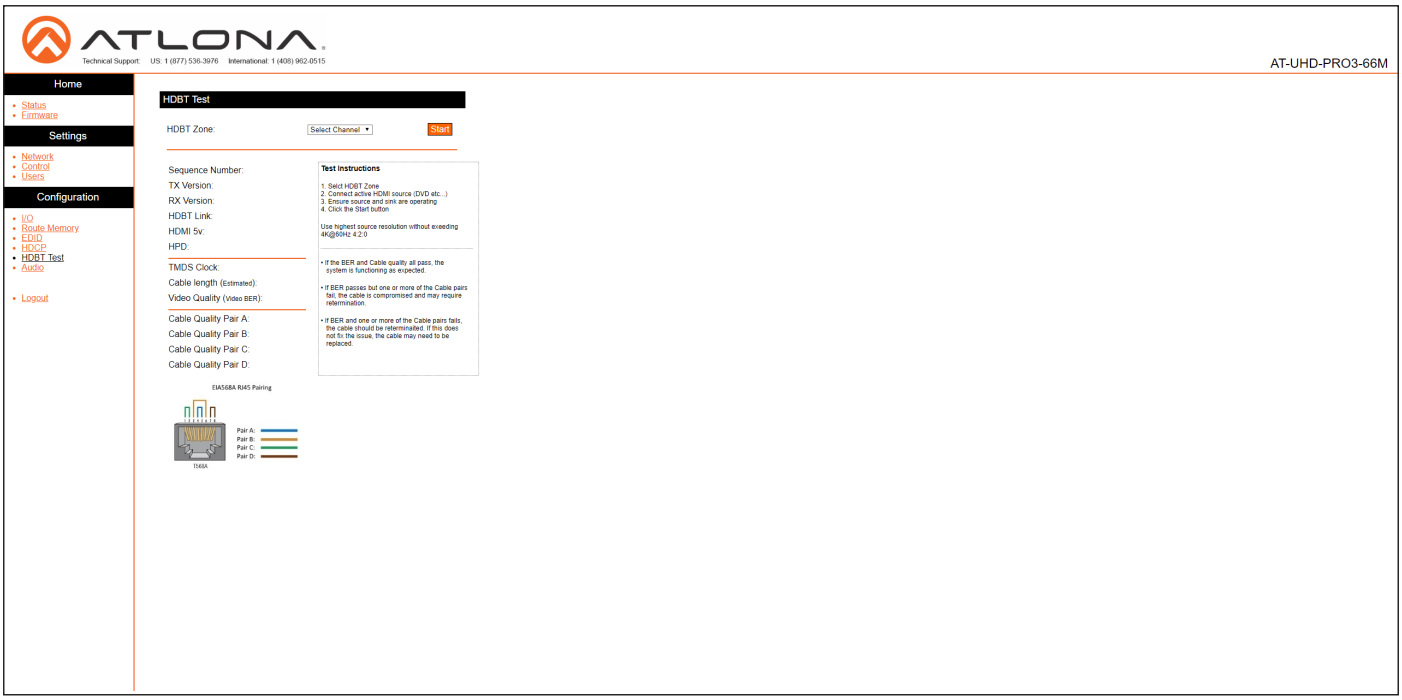
Save
Click this button to commit all changes for inputs.

Cancel
Click to abort changes.

HDCP page

Output 1 - Output 8
Displays the connection status of each output.

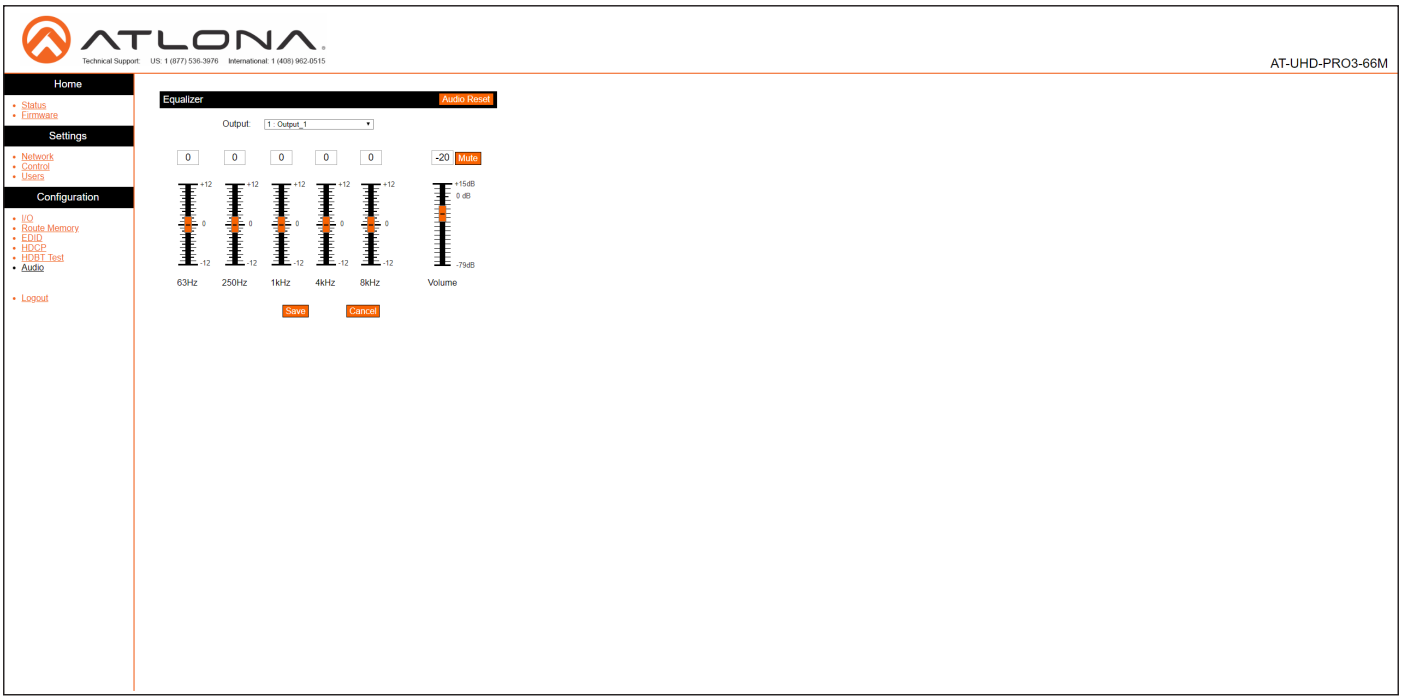
HDBT Test page



HDBT Zone

Click this drop-down list to select the output channel (**ZONE OUT**) to test. Refer to HDBaseT Testing (page 70) for more information.

Audio page



Audio Reset
Click this button to reset all audio settings to factory-defaults.

Output
Each output can be assigned different equalizer settings. Click the drop-down list to select the desired output. Once the output is selected, adjust each equalizer band as needed. Click the **Save** button to commit changes or click the **Cancel** button to abort changes.

Mute
Click this button to mute the current audio output.

Volume Sliders
Click and drag the volume sliders to set the audio level for each output. Click the **Mute** button to mute audio for the specified output. When the audio for an output is muted, the Mute button will read **Unmute**. Click the **Unmute** button to disabling the muting. Click the **Save** button to commit changes. Click the **Cancel** button to abort changes. Audio range for output volume is -79 dB to +15 dB. The default value is -10 dB.

Save
Click this button to commit all changes.

Cancel
Click to abort changes.

Appendix

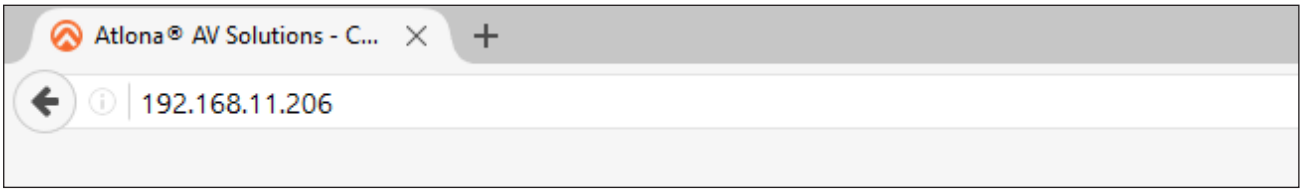
Updating the Firmware

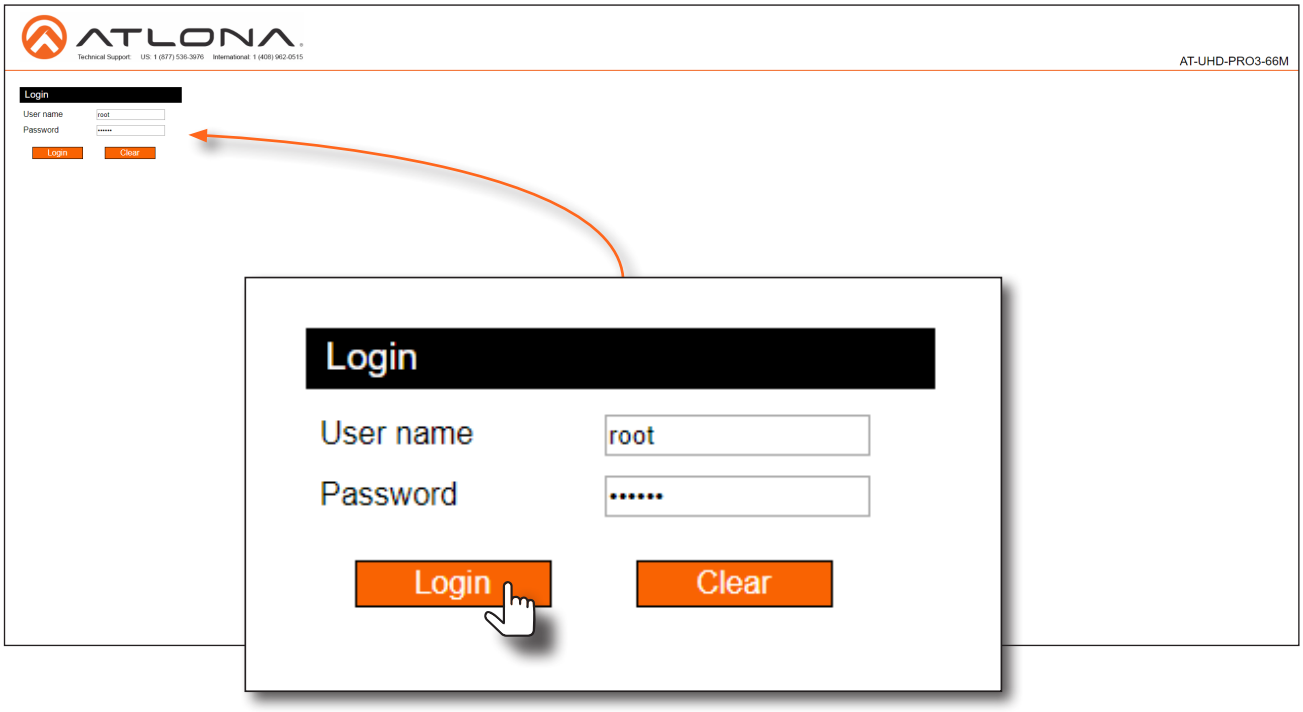
The AT-UHD-PRO3-66M is updated through the web GUI.

Required items:

- New firmware - Downloaded from atlona.com
- IP address of the AT-UHD-PRO3-66M
- Computer on the same network as the AT-UHD-PRO3-66M
- Username and password to access the web GUI

1. Verify that an Ethernet cable is connected between the AT-UHD-PRO3-66M and the network. The computer used to access the web GUI must be on the same network as the AT-UHD-PRO3-66M.
2. Type the IP address of the AT-UHD-PRO3-66M into a web browser, as shown in the example below.



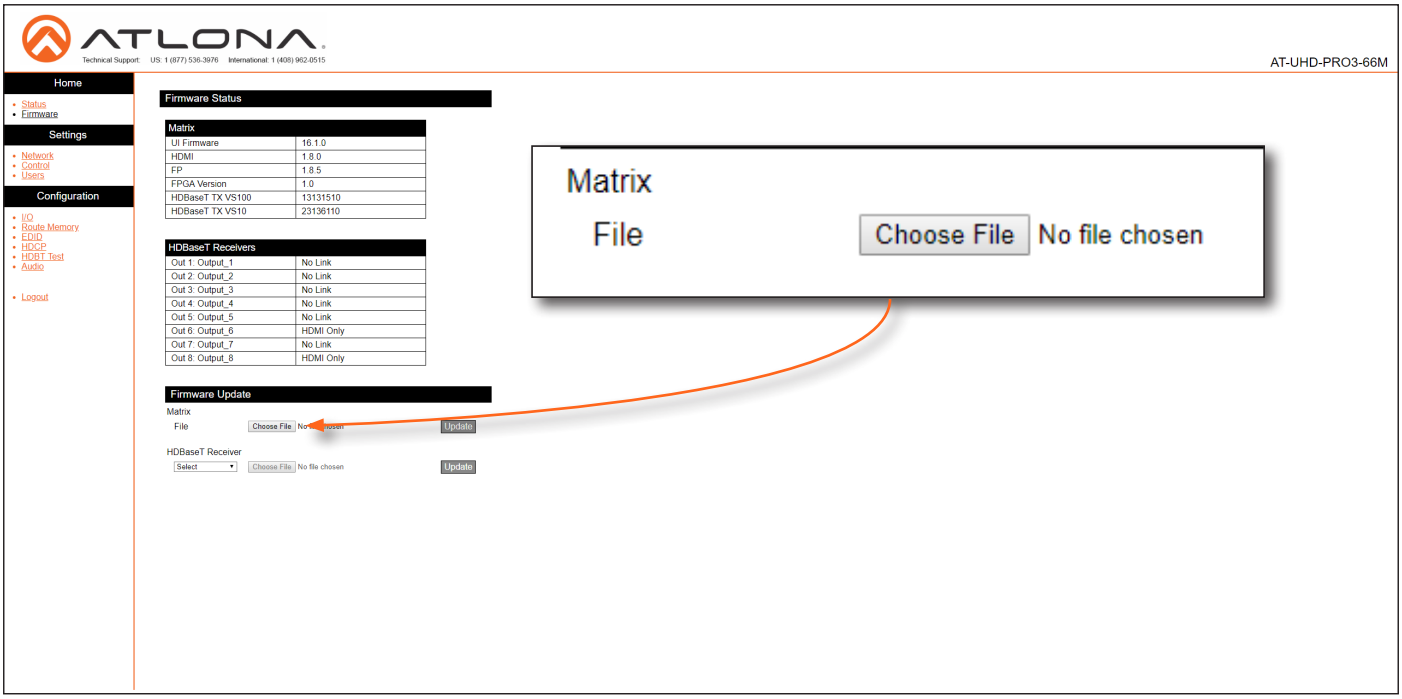


3. The login screen will be displayed. Login using the username and password. The default login credentials are:

   Username: root
   Password: Atlona

4. Click **Status** on the left side of the screen.

7. Click **Firmware**, on the left side of the screen.



8. Click the **Choose File** button, to select the firmware file.
9. Click the **Update** button. A progress bar will be displayed during the update process.
10. Once the update has been completed, re-login to the web GUI.

Cable Termination

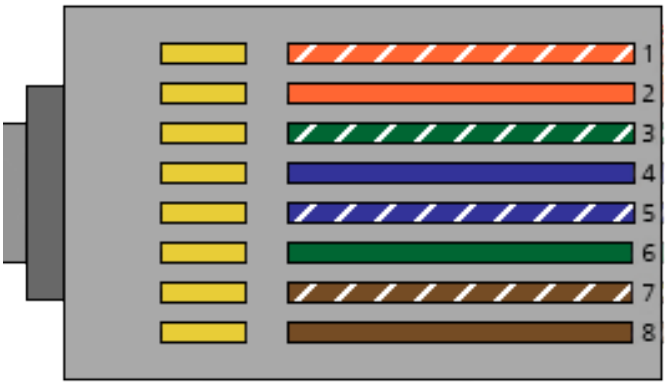
Atlona recommends EIA/TIA-568-B termination. Connector type and size is very important to ensure extenders work correctly. Always use the matching cable type with the correct RJ45 connector.

- CAT5e cables should use only CAT5e RJ45 connectors
- CAT6 cables should use only CAT6 connectors
- CAT6a cables should use only CAT6a connectors
- CAT7 cables should use only CAT7 connectors

Using the wrong size connectors may result in interference causing loss of signal.

WARNING: EZ RJ45 connectors are not recommended with HDBaseT extenders. Doing so may result in interference with audio and video transmission.

EIA/TIA 568-B Termination



1. White - Orange
2. Orange
3. White - Green
4. Blue
5. White - Blue
6. Green
7. White - Brown
8. Brown

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.

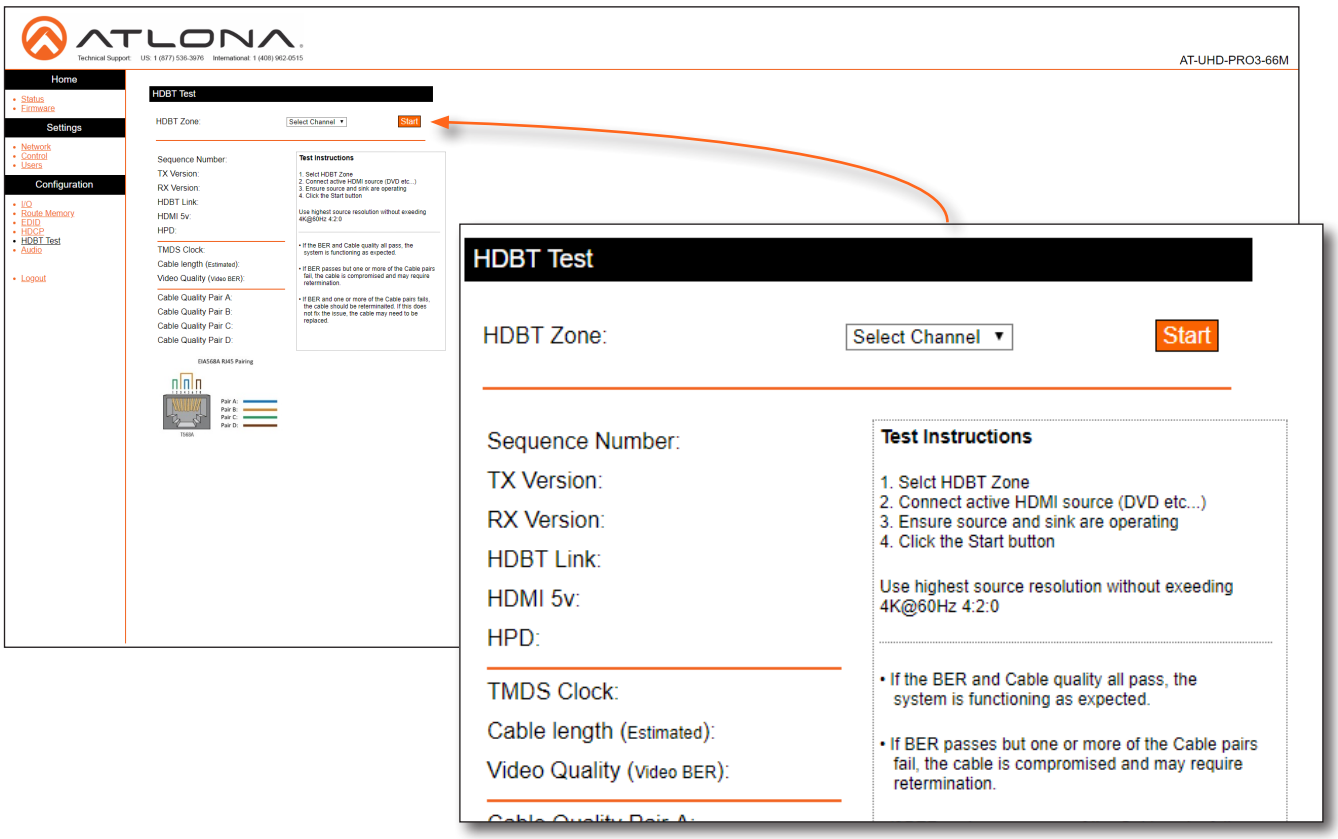
Core	Cable Type	CAT5e	CAT6	CAT6a	CAT7
Solid	Unshielded Twisted Pair (UTP)	■■	■■	N/A	N/A
	Shielded Twisted Pair (STP)	■■■	■■■	■■■■	■■■■

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

HDBaseT Testing

The web GUI of the AT-UHD-PRO3-66M provides a tool for testing the signal integrity of HDBaseT cables. This tool is useful for troubleshooting and identifying defective or damaged Ethernet cables which are connected from the **ZONE OUT** ports to a receiver.

1. Login to the web GUI. Refer to Introduction to the Web GUI (page 54) for more information, if necessary.
2. Click **HDBT Test**, under the **Configuration** section in the menu bar on the left side of the screen.



3. Click the **HDBT Zone** drop-down list and select the desired zone to test. Before testing a zone, make sure that an Ethernet cable is connected between the **ZONE OUT** port and a compatible receiver.

NOTE: The drop-down list provides the option to select any output channel, from **Out 1: Output_1** to **Out 8: Output_8**. However, **Out 6: Output_6** and **Out 8: Output_8** are HDMI outputs, and are not valid selections. If either of these channels are selected, the **Start** button will be disabled.

4. Click the **Start** button to begin testing the selected channel.
   - If the HDBaseT link integrity is good, then all tests will display as “Pass”.
   - If any part of the HDBaseT cable fails, then a numerical value, in decibels, will be displayed next to the associated pair, under the **Signal Quality** section. These values can be reported to Atlona Technical Support Engineers to help resolve possible issues.

Default Settings

The following tables list the factory-default settings, as defined in the web GUI, for the AT-UHD-PRO3-66M.

Web GUI Page	Setting	Default Value
Login	Username Password	root Atlona
Network	System Secure (SSH) DHCP Telnet Port HTTP Port IP Timeout Hostname Telnet Login Mode	OFF ON 23 80 300 AT-UHD-PRO3-66M-xxxxx OFF
Control	Power IR Key Lock NTP Server Time zone Baudrate (Matrix) Parity (Matrix) Baudrate Parity	ON ON OFF Server 1 (GMT) Greenwich Mean Time 115200 None 9600 (all HDBaseT zones) None (all HDBaseT zones)
I/O	Out 1: Output_1 Out 2: Output_2 Out 3: Output_3 Out 4: Output_4 Out 5: Output_5 Out 6: Output_6 Out 7: Output_7 Out 8: Output_8	In 1 : Input_1 In 2 : Input_2 In 3 : Input_3 In 4 : Input_4 In 5 : Input_5 Out 5 : Output_5 In 6 : Input_6 Out 7 : Output_7
EDID	1 : Input_1 2 : Input_2 3 : Input_3 4 : Input_4 5 : Input_5 6 : Input_6 7 : Input_7 8 : Input_8	ATL 1080P 2CH ATL 1080P 2CH ATL 1080P 2CH ATL 1080P 2CH ATL 1080P 2CH ATL 1080P 2CH ATL 1080P 2CH ATL 1080P 2CH
Audio	Output 1 - Output 4 **Master Volume** Output_1 Output_2 Output_3 Output_4	 -20 dB -20 dB -20 dB -20 dB

Mounting Instructions

The AT-UHD-PRO3-66M can be mounted in a standard 19-inch rack or placed on top of a desk or table.

Rack Installation

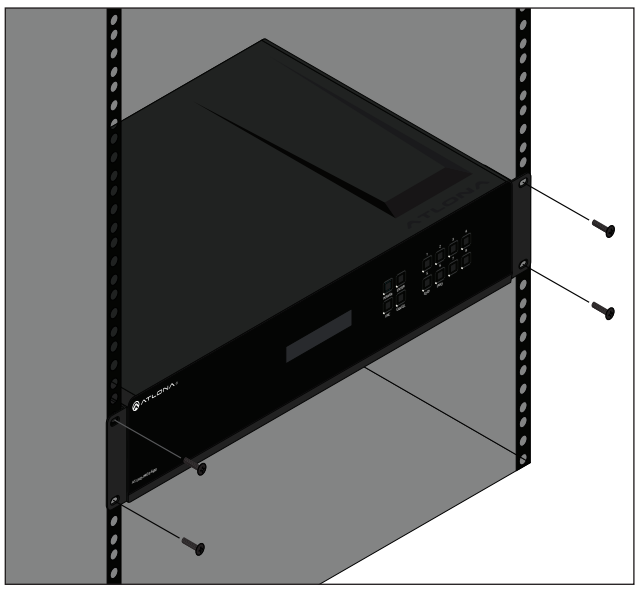
IMPORTANT: To prevent possible fire hazards due to overheating, do not block the ventilation holes on either side of the enclosure, which would prevent proper airflow through the unit. In addition, do not exceed the maximum weight capacity for the rack. Install heavier equipment in the bottom portion of the rack for maximum stability.

IMPORTANT: Unit is intended for installation in a restricted access location accessible by authorized personnel only.

IMPORTANT: Unit is intended for installation in a location where children are not present.

1. Remove the two screws from either side of the enclosure.
2. Attach the included rack ears to each side of the AT-UHD-PRO3-66M using the enclosure screws.

3. Install the matrix into a rack, as shown using the included rack screws.



Surface Mounting

The AT-UHD-PRO3-66M can be placed on top of any flat surface. To prevent damage to the surfaces or unnecessary movement of the matrix, four feet have been included.

1. Turn the unit upside down.
2. Install each foot using the included feet screws, the rubber grips of the feet should be facing up during installation.
3. Turn the unit right-side up and place it in the desired location.

Specifications

Video		
Signal Type	Input - HDMI Output - HDBaseT, HDMI	
HDCP	HDCP 2.2	
Pixel Clock	300MHz	
UHD/HD/SD	4096x2160@60[1]/50[1]/30/25/24Hz 3840×2160@60[1]/50[1]/30/25/24Hz 1080p@60/59.9/50/30/29.97/25/24/23.98Hz 1080i@30/29.97/25Hz	720p@60/59.94/50Hz 576p@50Hz 576i@25Hz 480p@60/59.96Hz 480i@30Hz
VESA	2560×1600 2048×1536 1920×1200 1680×1050 1600×1200 1440×900 1400×1050 1280×1024	1280×800 1366×768 1360×768 1152×864 1024×768 800×600 640×480
Color Space	YUV, RGB	
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0	
Color Depth	8-bit, 10-bit, 12-bit	

Audio			
HDMI / HDBaseT Pass-Through Formats	PCM 2.0 LPCM 5.1 LPCM 7.1	Dolby® Digital Dolby Digital Plus™ Dolby TrueHD	DTS® Digital Surround™ DTS-HD Master Audio™
Bit Depth	Up to 24 bits		
Analog Audio			
Format	Stereo 2-Channel		
Sample Rate	32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz		

Ethernet	
Port	1 x RJ45
Standards and Protocols	HTTPS, Telnet, mDNS
Speeds	10/100 Mbps
Addressing	DHCP, Static – selectable through rear panel, IP & RS-232 commands, and built-in web server

RS-232	
Port	1 x 5-pin captive screw; TX, RX, GND
Use	Device control and configuration
Baud Rates	2400, 4800, 9600, 19200, 38400, 57600, 115200
Data flow	Bidirectional pass-through from control system over HDBaseT

IR	
Port	6 x 4-pin captive screw, 1 x 5-pin captive screw; S, GND
Use	Local input/output and zone control
Frequency Range	30 kHz to 60 kHz

Appendix

CEC	
Port	HDMI, Type A, 19-pin female
Triggering	Through IP, RS-232, and built-in web server

Resolution / Distance	4K/UHD - Feet / Meters		1080p - Feet / Meters	
HDMI IN/OUT	15	5	30	10
CAT5e/6 (Port 1-2)	230	70	100	330
CAT5e/6 (Port 3-5, 7)	115	35	60	197
CAT6a/7 (Port 1-2)	330	100	330	100
CAT6a/7 (Port 3-5, 7)	230	70	230	70

Buttons and Indicators	
Buttons:	
Menu and Number	12 - momentary, tact-type
Indicators:	
Power	1 - LED, blue

Connectors	
HDMI IN	6 - Type A, 19-pin female
HDBaseT OUT	6 - RJ45, female
HDMI OUT	2 - Type A, 19-pin female
FW	1 - Micro-A USB
RS-232	1 - 3-pin captive screw (bidirectional)
IR IN	7 - 2-pin captive screw (bidirectional)
IR OUT	6 - 2-pin captive screw (bidirectional)
AUDIO OUT	4 - 4-pin captive screw, balanced / unbalanced 2-channel
RS-232	1 - 3-pin captive screw (bidirectional)
LAN	1 - RJ45, 100Base-T
PWR	1 - Internal 100-240 VAC 50/60Hz, IEC female connector

Temperature	Fahrenheit	Celsius
Operating	32 to 104	0 to 40
Storage	-4 to 140	-20 to 60
Humidity (RH)	20% to 60%, non-condensing	

Power	
Consumption	Idle: 75W Full load: 110W
Supply	AC100 - 240 VAC, 50/60 Hz

Dimensions	Inches	Millimeters
H x W x D w/feet	3.90 x 17.31 x 11.88	99 x 439 x 301
H x W x D w/rack ears	3.49 x 19.00 x 11.88	88 x 482 x 301
Rack Unit	2U	

Weight	Pounds	Kilograms
Device	11.40	5.18

Certification	
Device	CE, FCC, RoHS, RCM, TUV

(1) 4K/UHD @ 50/60Hz only supports 4:2:0 over HDBaseT.