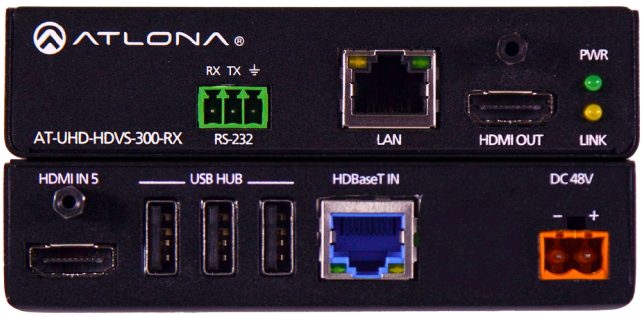
ATLONA
Connecting Technology

Soft Codec Conferencing System

AT-UHD-HDVS-300-KIT



User Manual

Toll free: 1-877-536-3976
Local: 1-408-962-0515

Table of Contents

Introduction

The AT-UHD-HDVS-300-KIT provides AV switching, USB and HDMI extension, plus system control for meeting spaces using PC-based conferencing codecs such as Microsoft Skype®, Cisco WebEx® and Citrix GoToMeeting®. The transmitter and receiver kit offers five video inputs shared between both devices for HDMI, DisplayPort, and analog video signals. To simplify conference room device management, the kit provides two USB type B connectors for host computers. Two built-in USB hubs, one on the transmitter and one on the receiver, allow for numerous Human Interface Devices (HID) as well as USB cameras and microphones. The AT-UHD-HDVS-300-KIT is compatible with Ultra High Definition sources and displays up to 4K/UHD @ 60 Hz with 4:2:0 color subsampling. All audio, video, data, control, USB, and Ethernet transmission between the two devices is carried over a single, Ethernet-enabled HDBaseT™ link up to 328 feet (100 meters).

Package Content

AT-UHD-HDVS-300-TX

- 1 x Unit
- 1 x Female captive screw connector
  3 pin: RS-232
- 2 x Mounting plates
- 4 x Rubber feet

Package

- 1 x User Guide

AT-UHD-HDVS-300-RX

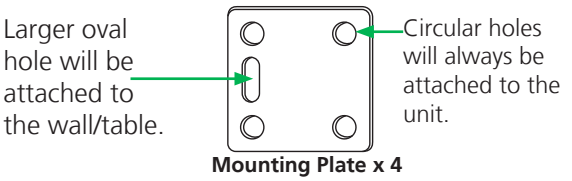
- 1 x Unit
- 2 x Table/wall mounting brackets
- 1 x Female captive screw connector
  2 pin: power 3 pin: RS-232
- 1 x 48V DC power supply

Features

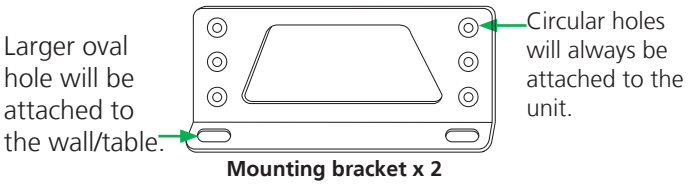
- 5 input multi- format switcher
- Automatic display control using TCP/IP/RS-232 commands, or CEC
- Bidirectional USB 2.0 extension
  - Five USB A ports with two USB B host ports
- Auto switching with video detection technology (activated through AMS or webGUI)
- Supports 4K @ 60Hz 4:2:0 or 4K @ 30Hz RGB with 8 bit color
- Supports Dolby® TrueHD and DTS-HD Master Audio™ when using an HDMI for audio input and output
- Extended distance HDBaseT port w/PoE to power the 300-TX up to 100 meters (328 feet) away
- HDCP management
- EDID management
- Easy to use webGUI through Ethernet connection

Mounting

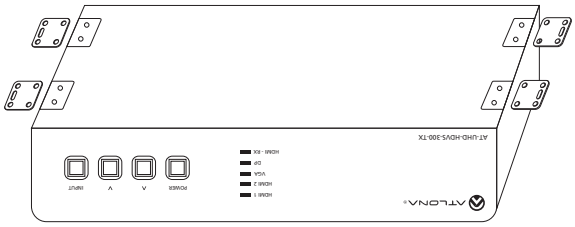
The UHD-HDVS-300-KIT comes with mounting brackets and mounting plates. The transmitter uses the mounting plates to be affixed to a table/desk/etc and the receiver will use the mounting brackets.



Mounting Plate x 4

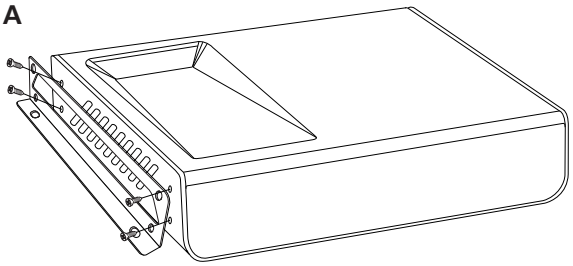


Mounting bracket x 2

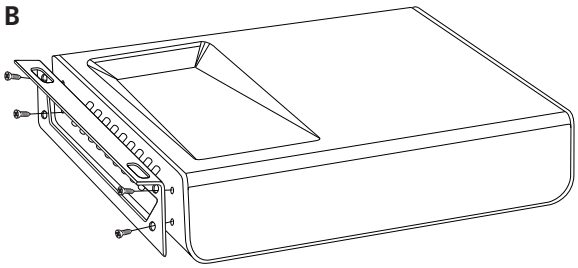


To affix the mounting plates to the unit, use the 8 screws included in the kit to connect them to the bottom of the UHD-HDVS-300-TX. Once the plates are attached, turn the unit over and mount the unit to any surface using the oval holes in all four plates.

A



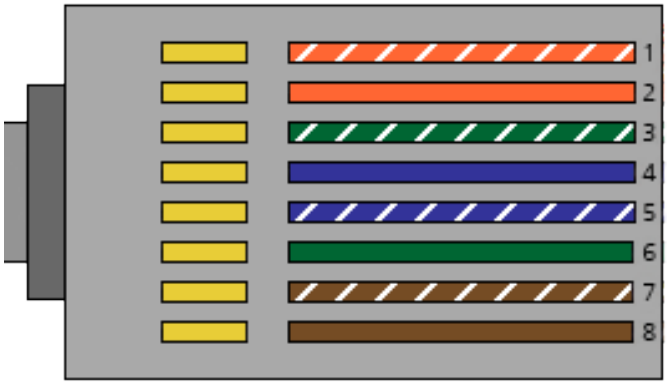
B



To affix the mounting brackets to the unit, use the four included screws as well as the four side case screws. The bracket can be affixed with the oval holes pointing to the bottom (for against the wall - picture A) or the oval holes facing the top (for under tables - picture B).

Category Cable

For the category cables used in the installation of these products, please be sure to use a 568B termination as pictured below:



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

Use the table below to verify the best category cable for the installation.

Performance Rating		Type of LAN cable	
Wiring	**Shielding**	**CAT5e/6**	**CAT6a/7**
Solid	Shielded (STP/FTP)	***	****
	Unshielded (UTP)	**	N/A
Stranded - Patch cable (Not recommended)	Unshielded (UTP)	*	N/A
	Shielded (STP/FTP)	*	N/A
Termination		**Please use EIA/TIA-568-B termination**	

Important! The minimum extension length for cable runs is 15 feet (5 meters).

Important! 4K (UHD) signals are sensitive to cable quality and installation technique. It is recommended to use CAT6a/7 solid core cables for best results.

Note: For cable distances see the specifications on page 23

Connector

Connector type and size is very important to ensure signal passes correctly. Please use the matching cable type with the correct RJ45 connector.

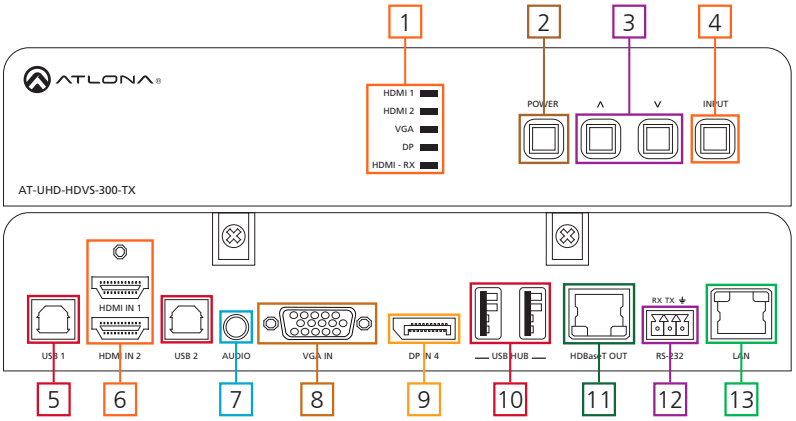
CAT5e cables should use only CAT5e RJ45 connectors
CAT6 cables should use only CAT6 connectors
CAT6a cables should use only CAT6a connectors
CAT7 cables should use only CAT7 connectors

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

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

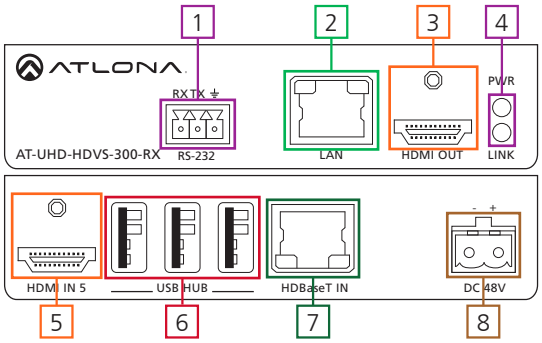
Panel Descriptions

Front Panel



1. Input LEDs - LED will illuminate to display the currently selected input
2. Power button - Turns video output on/off or the connected display when programmed
3. ^ v buttons - Controls the volume of the display connected to the HDBaseT output
4. Input button - Use to switch between inputs
5. USB hosts - Connect to a computer using a USB B to USB A cable
6. HDMI IN - Connect HDMI sources to these ports
7. Audio IN - Connect analog audio here
8. VGA IN - Connect VGA source to this port
9. DP IN - Connect DisplayPort source to this port
10. USB Hub - Connect USB source signal devices (**e.g.** mouse, keyboard, etc)
11. HDBaseT OUT - Connect to an HDBaseT PoE receiver (**e.g.** AT-UHD-HDVS-300-KIT)
12. RS-232 port - Connect to a control system or source for pass through RS-232 control
13. LAN port***** - Connect network switch, router, or source to this port for pass through Ethernet, TCP/IP, or AMS control

Back Panel



1. RS-232 port - Connect to a control system or display for pass through RS-232 control
2. LAN port***** - Connect network switch, router, or source to this port for pass through Ethernet, TCP/IP, or AMS control
3. HDMI OUT - Connect to a display
4. LEDs: PWR - Illuminates when the power supply is connected and sending power
   Link - Illuminates when receiving signal over HDBaseT
5. HDMI IN - Connect local HDMI source
6. USB Hub - Connect USB source devices here (**e.g.** webcam, smartboard, etc)
7. HDBaseT IN - Connect to a compatible HDBaseT transmitter (**e.g.** AT-UHD-HDVS-300-TX)
8. DC 48V - Connect included 48V power supply

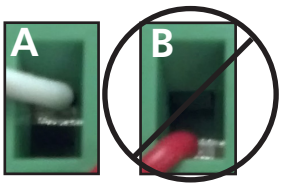
***Important!** Do not connect the Transmitter and Receiver LAN ports to the same network/switch. One connection should go to a device for control and the second connection to a network switch/router.

Captive Screw

The captive screw connectors allow you to cut cables to a suitable length, reducing cable clutter while providing a more reliable connection.

Connecting

When connecting the cables to the female captive screw connector it is important that the wires be terminated correctly. The female captive screw connector has a contact plate at the top and must have the wires touching it for signal to pass. When wired correctly (see picture A) the signal will pass, incorrectly (see picture B) no signal will pass.



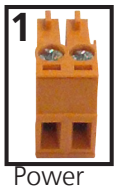
The captive screw connectors have a contact bar that is adjusted to compress the wire against the top contact plate. Use the screws at the top of the connector to compress the wire against the contact plate.

Clockwise

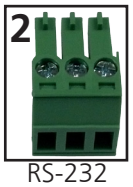
Turn the screws clockwise to raise the contact bar to the upper contact plate and hold the wires in place.

Counter Clockwise

Turn the screws counter clockwise to lower the contact bar to release the wires.



Power

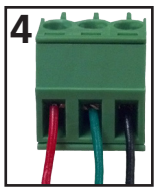


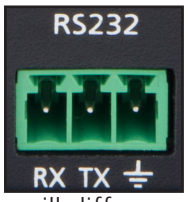
RS-232

Female captive screw connectors are included: Power (see picture 1), RS-232 (see picture 2).

Black: - **White**: +

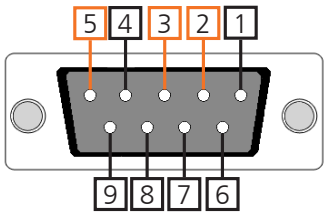
The power cable (picture 3) will have exposed wires. Each wire is encased in a different colored cover.





Pin out color will differ per RS-232 cable.

RS-232 pin out will be determined by the RS-232 cable and will connect as Rx (receiver), Tx (transmitter), and ⏚ (ground). (See picture 4)



Typical pin out:
2 - TX - Transmitter
3 - RX - Receiver
5 - GND - Ground

Ethernet

For convenience, the UHD-HDVS-300 comes with DHCP on. This enables the switcher to be connected to a network without knowing available IP addresses. If your network does not allow dynamic IP addresses or if you are using the switcher with a TCP/IP control system, this feature may be turned off and the IP address set using front panel.

Note: Press and hold the input button on the front panel to switch between static and DHCP IP address. Two button flashes means the unit is in static mode and four button flashes means the unit is DHCP. Static IP configuration will be: 192.168.1.254 - 255.255.0.0

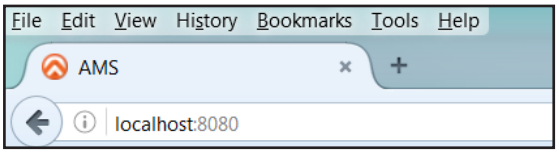
AMS & webGUI

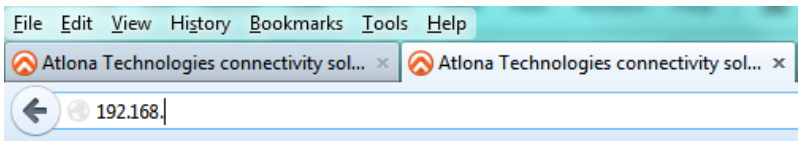
Atlona provides two simple solutions for setup and control: a built in webGUI and the free software AMS.

To download AMS, go to http://atlona.com/product/at-sw-ams/

To get to the log in screen of AMS: type localhost:8080 into the web browser on the computer AMS is running on. It will go straight to the log in for AMS.

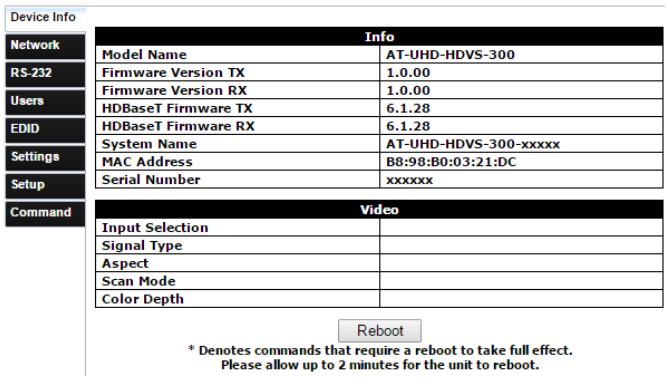
GUI IP Address: may be found using an IP scanner software (e.g. Advanced IP Scanner)
Atlona does not assume responsibility for damage caused by other programs installed into a computer, verify programs before installing

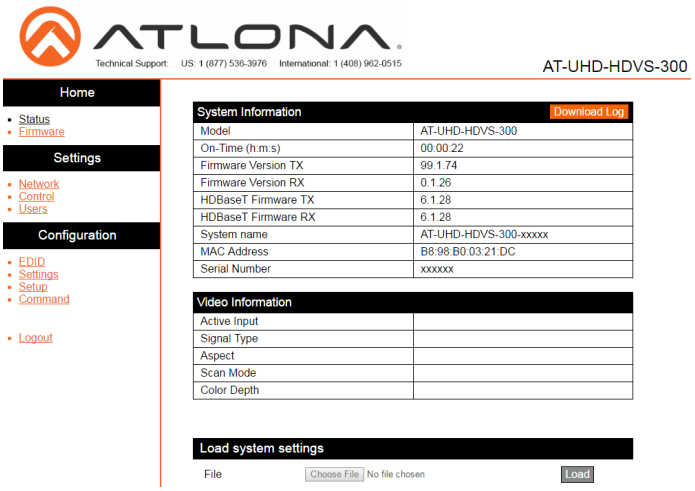




A login screen will appear (this is the same log in for admin and general users). For the first login to AMS, the username is "admin" and password is "admin123". The login for the webGUI will be username "root" and password "Atlona".

AMS





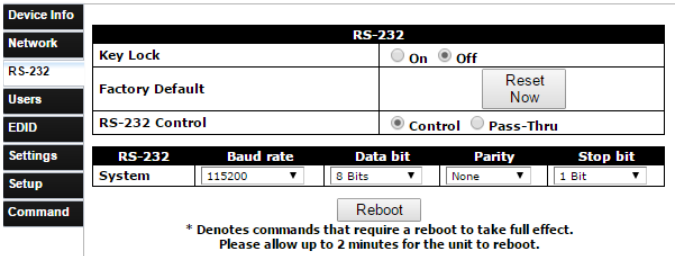
AMS

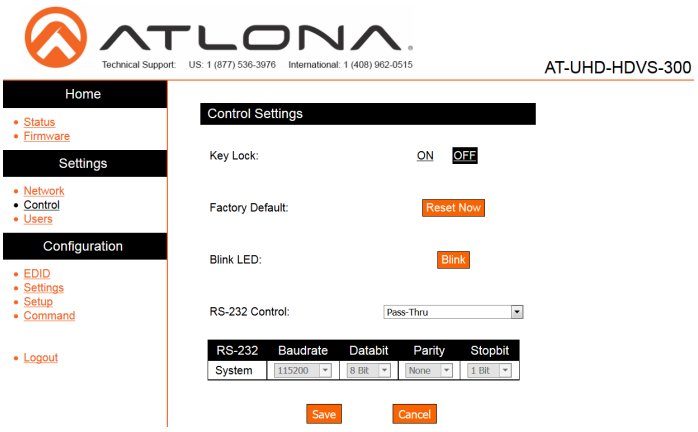
Once the installation and discovery are finished (see AMS manual for instructions), the device will be found within the Domain View. Select the HDVS-300 from the devices to control and view the device GUI. (Device is highlighted in the picture above)

WebGUI

Once login is complete, the webGUI will display the HDVS status information

AMS





RS-232/Control Settings

Key Lock - Enables (On) or disables (Off) front panel button control

RS-232 Control -

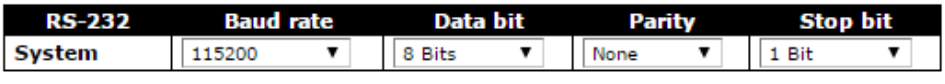
Control: RS-232 commands are sent from the HDVS-300 to the display

Pass through: RS-232 commands are sent from a control system to the display

RS-232 parameters

Set the baud rate, databit, parity, and stop bit of the system

Note: When RS-232 is set to control, the system fields will become editable



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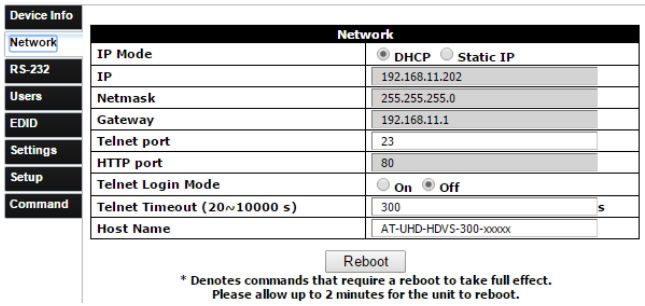
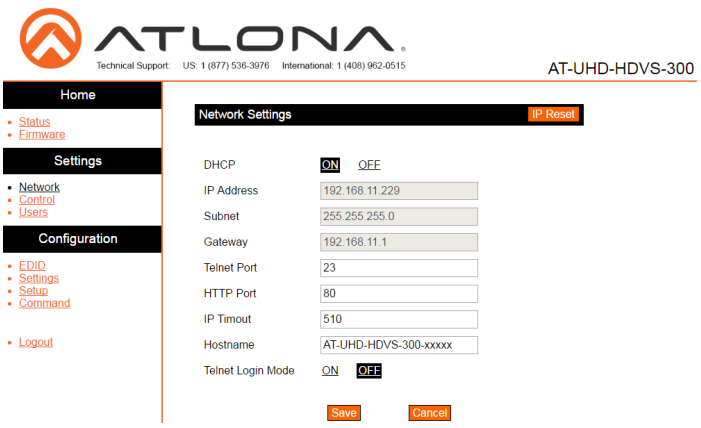




The Network Settings tab/page will allow the IP information to be changed.

IP Mode

DHCP: Automatically receives an IP from a compatible network switch

Note: When DHCP is on, the IP address cannot be configured. Turn DHCP off to enable IP configuration.

Static: Manually set an IP address for the HDVS-300

IP, Netmask, Gateway, Telnet Port, HTTP Port are set when in static mode

Note: For a stable connection when using a control system, it is best to set up a static IP. As you select an IP address, make certain no other devices on your network are using that IP address. (fields become editable when set to static - see pictures below)

Telnet Login Mode

Login Mode has been added to provide a secure telnet login. Once Login Mode has been turned on a username and password will be required on all IP connections to the switcher.

On: Requires a username and password to control through TCP/IP

Off: No login credentials are needed when using TCP/IP to control

Note: Login mode should be in off position when the UHD-HDVS-300 is used with control systems that do not support passwords. If your control system supports password protection, you can turn login mode on. The webGUI always requires a password.

Note: The username and password used in IP Login Mode will be the same login information as the webGUI.

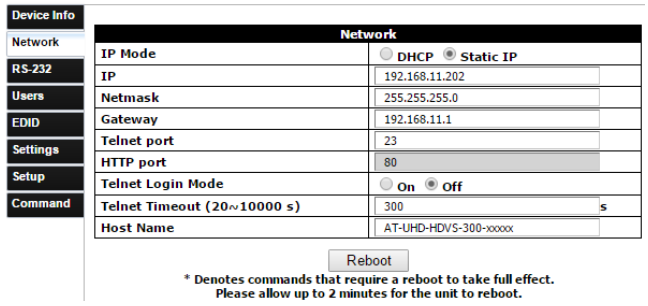
Telnet Timeout

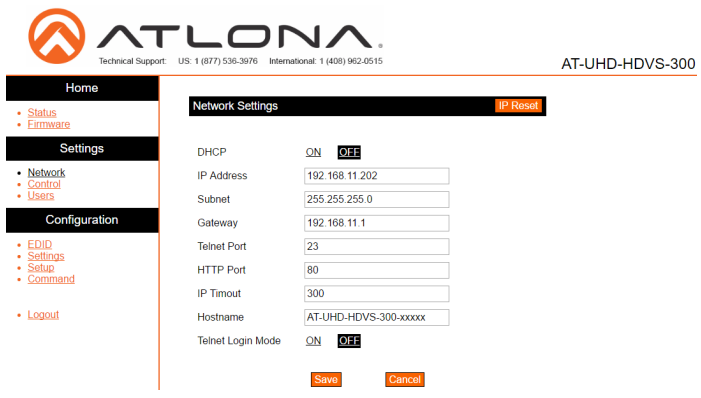
Set the disconnect time for TCP/IP connections after receiving no commands

Host Name

Name of the unit as it will show to other devices

AMS





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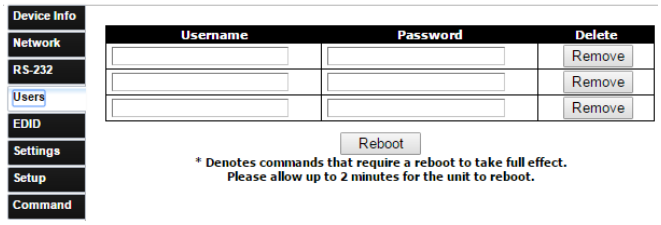
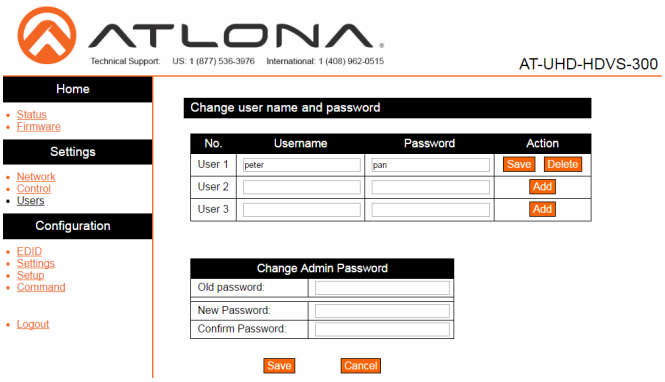
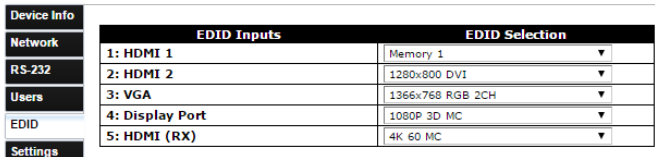
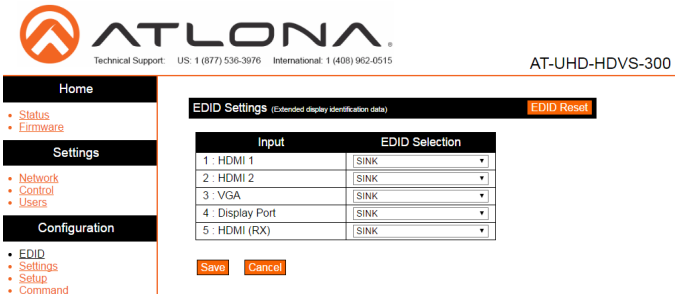




The Users tab/page will allow users and passwords to be added/changed.

AMS





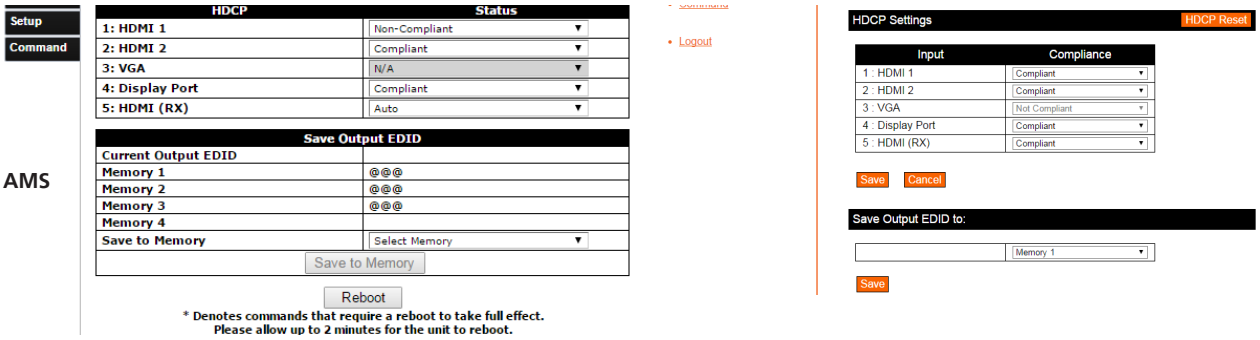
The EDID Configuration tab enables the correct EDID configuration and HDCP compliance reporting to be set.

Note: To ensure compatibility, it is best to set the EDID to match the native resolution of the connected display and the audio format of the connected sound system

Internal EDIDs -

Sink	Display's EDID	**In1**	4K 60 MC	**In2**	4K 60 2CH
In3	4K 30 MC	**In4**	4K 30 2CH	**In5**	1920x1200 RGB 2CH
In6	1080P DD	**In7**	1080P MC	**In8**	1080P 2CH
In9	1080P 3D DD	**In10**	1080P 3D MC	**In11**	1080P 3D 2CH
In12	1080P DVI	**In13**	1280x800 RGB 2CH	**In14**	1280x800 DVI
In15	1366x768 RGB 2CH	**In16**	1024x768 RGB 2CH	**In17**	720P DD
In18	720P 2CH	**In19**	800x600 RGB 2CH		

Note: Sync passes the display's EDID to the source



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HDCP

The HDVS-300 has three HDCP reporting modes: auto, compliant, and non-compliant.

Note: HDVS-300 does not alter the signal in any way

Note: HDVS-300 will not pass HDCP compliant content to a non-HDCP device or display

Compliant -

Reports to the source it is connected to an HDCP compliant device

Note: Will pass all HDCP compliant and non-compliant source signals to an HDCP compliant display

Non-Compliant -

Reports to the source it is connected to an HDCP non-compliant device

Note: Some Apple products (and other PCs) will encrypt non-HDCP content, stopping non-HDCP compliant displays from receiving even personal files such as: PowerPoint, Excel, or Word files. Use this mode to pass non-HDCP content (**e.g.** to codecs or video streaming devices)

Note: Blu-Ray content, Apple TV, and other HDCP compliant source signals will not pass when set to non-compliant

Auto -

Reports the source's HDCP settings

Save Output EDID (webGUI only)

Saves any connected display's EDID to one of the four EDID memories of the HDVS-300

- Select the memory number to save the current output's EDID to and press the save button at the bottom of the page.

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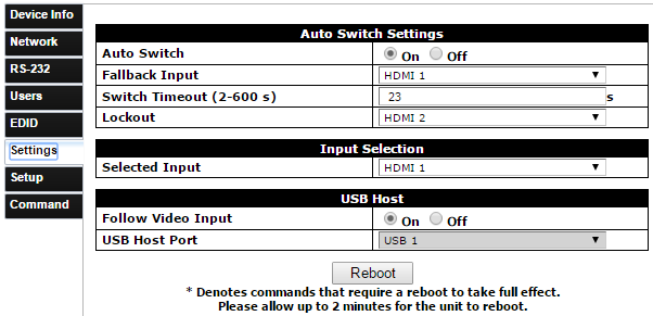
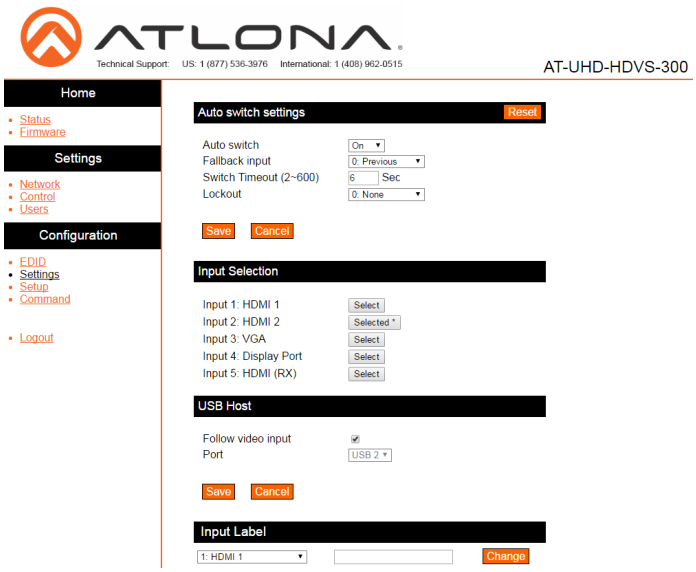




Auto Switch Settings

Auto Switch: Toggles auto switching on/off

Fallback Input: Select what input to switch to when the current signal is no longer received

Note: Previous falls back in order of which source was most recently plugged in/powered on/sending signal

Switch Timeout (2-600 s): Set the amount of time with no signal before falling back an input

Lockout: Auto switching will not change off the selected port once it falls back to/or is selected

Input Selection

Displays current input and allows the input to be selected manually

USB Host

Select which USB host to receive signal from

Note: Follow input will select the corresponding USB host

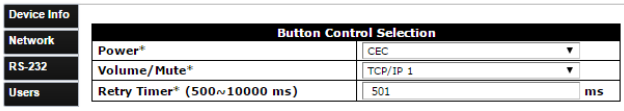
e.g. USB Host 1 will follow HDMI 1 (Input 1)

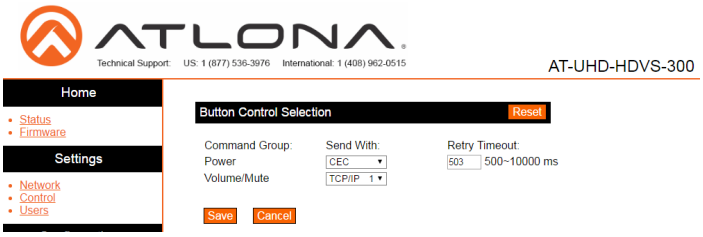
USB Host 2 will follow HDMI 2, VGA, and DisplayPort (Input 2, 3, and 4)

Input Label (webGUI only)

Label the inputs to help make routing and switching simpler. Select which source is to be labeled, type the name in the box, and press the change button.

AMS





The Control tab/page includes settings which enable display controls by the switcher. It provides a way to program button functions, and determine the type of control commands (TCP/IP or RS-232) sent out.

Button Control Selection

Power - Set which device the power button controls

RS-232: Power button will send power on/off command over Ethernet to the specified IP address on the network

TCP/IP 1 & 2: Power button will send power on/off command over Ethernet to the specified IP address on the network

CEC: Power button will send power on/off CEC command to the display using the RX HDMI output port

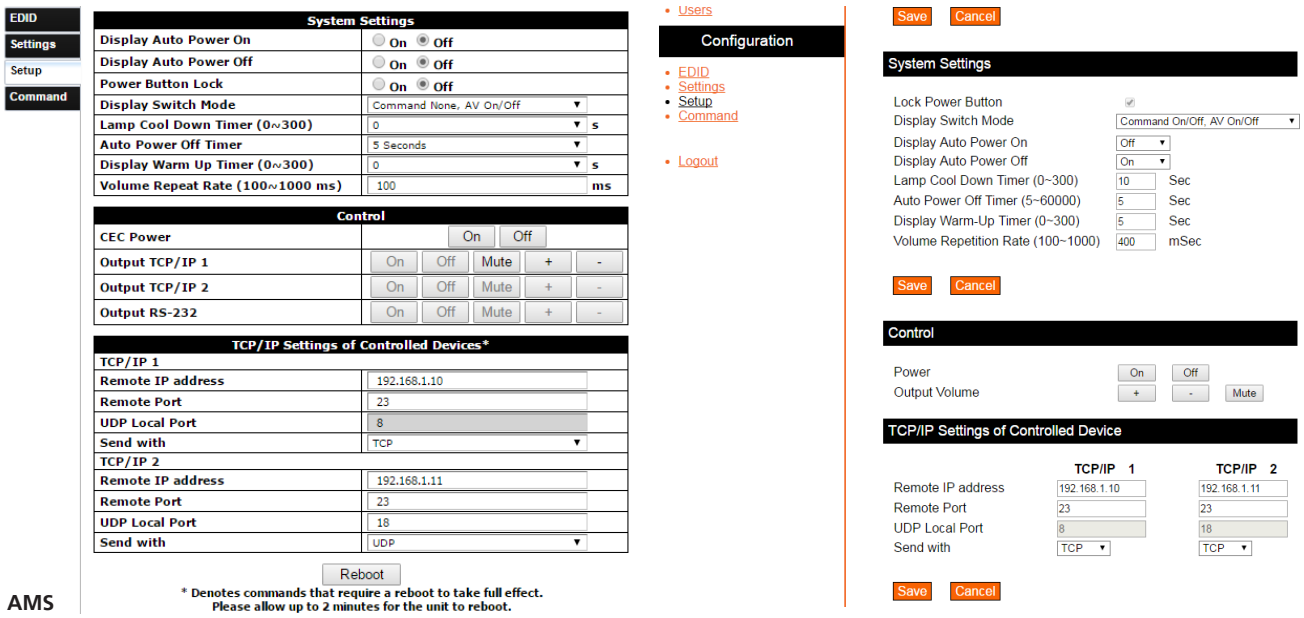
Volume/Mute

RS-232: Volume/Mute buttons will send the commands over HDBaseT using RS-232 to compatible receivers and displays

TCP/IP 1 & 2: Volume/Mute buttons will send the commands over Ethernet to the specified IP address on the network

Retry Timer

500-10000ms: Sets the time period between the command failing and the command being resent



System Settings

Display Auto Power On - When enabled, the unit will send a programmed command to the display to turn on after detecting an A/V signal

Display Auto Power Off - When enabled, the unit will send a command to the display to turn off after not detecting an A/V signal

Lock Power Button - Locks only the front panel power button

Display Switch Mode

Command None, AV On/Off: Display is always on, source audio/video switches on/off
Command On/Off, AV On/Off: Display switches on/off, source audio/video switches on/off
Command On/Off, AV No Change: Display switches on/off, source audio/video is always on

Lamp Cool Down Timer (0-300) - Used with a projector whose lamp cannot be turned on for up to 5 minutes after being shut off. Match settings with lamp delay on projector

Note: LED will blink red for the lamp cool down time period then go solid

Auto Power off timer (5 sec - 16 hours) - Sets the period of time between the loss of A/V signal and when the "Display Off" command is sent

Display Warm Up Timer (0-300) - Sets the period of time after the display is turned on, that the power button will be locked

Note: LED will blink green for the warm up timer period and then stay solid

Note: When timers are set to 0 seconds, they will disable the timers' functions

Volume Repeat Rate (100-1000 ms) -

Set the time between the volume command being sent - Sets volume ramp up/down rate

Control

Power -

On/Off - Sends selected control type command to turn the display on/off

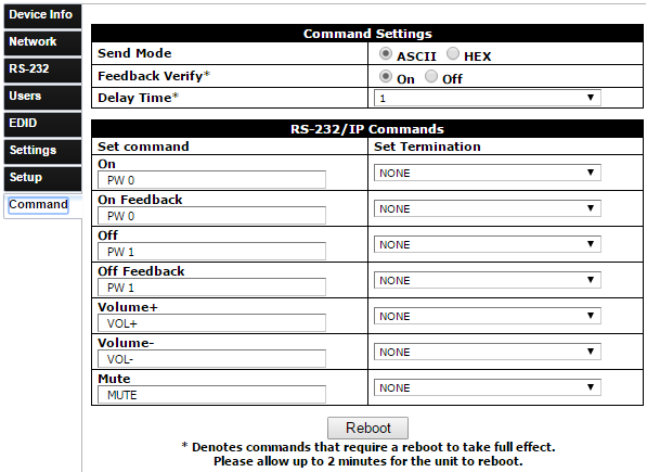
Note: CEC power command may not work with every display type

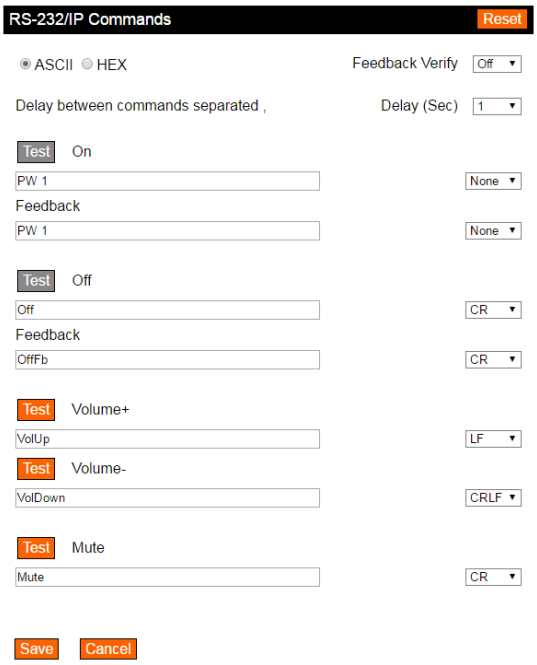
Output Volume - Sends selected control type command to adjust volume

TCP/IP Settings of Controlled Device

TCP/IP 1 and 2 - Configures the IP settings to control external devices by TCP/IP or UDP

AMS





Command Settings

ASCII/Hex - Set which type of commands are sent to the display

Note: See page 17 for webGUI hex field

Feedback Verify -

On: If receiving no feedback, the product will send the command up to 4 times

Off: The command will only be sent once, whether feedback is received or not

Delay Time - Sets the time (seconds) between each command being sent. "," denotes command separation/delay **e.g.** PWON, PWRO

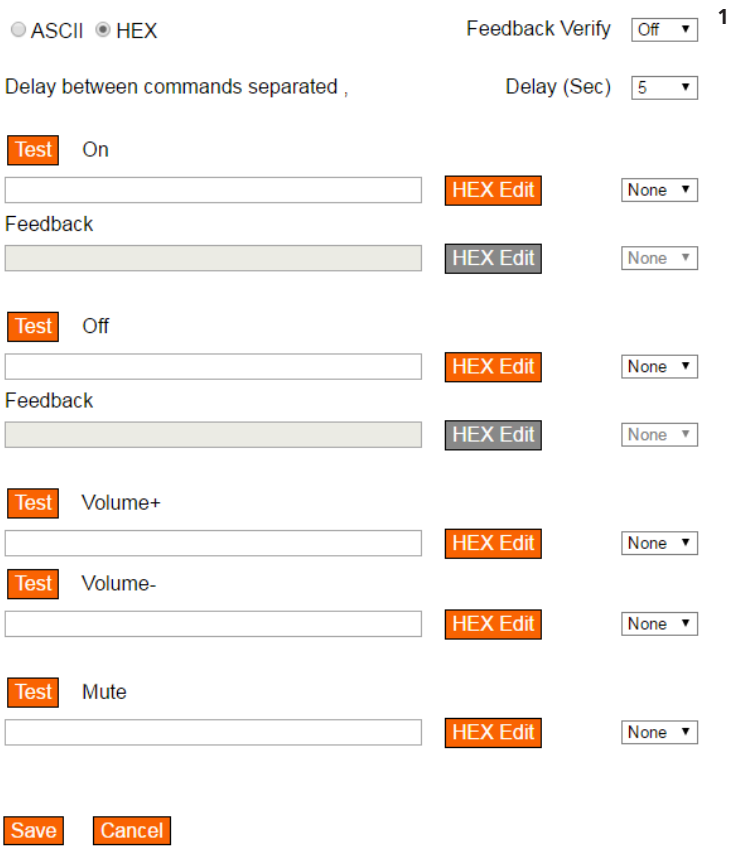
RS-232/IP Commands

On/Off/Volume+/Volume-/Mute - Enter the specific commands and feedback that will be sent/ received when using any of the control options

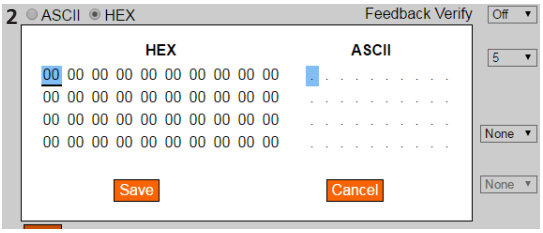
Note: Individual commands will be found in the display's manual

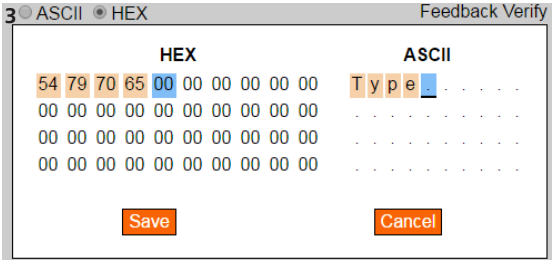
End of line symbols - None, CR, LF, CR-LF, Space, STX, ETX, Null - Select the appropriate symbol from the drop down list. Carriage return, line feed, and carriage return with line feed are the most commonly used symbols.

Note: Be sure to check the display's manual for the correct symbol



1





When Hex is selected within the webGUI, it displays a new button (see picture 1) for an easier way to enter code. Press the HEX Edit button to bring up the entry fields (see picture 2).

The entry field defaults to HEX, but if only the ASCII is known, select the blue field on the ASCII side of the pop up. Enter the codes on one side and it will translate to the other side's fields (see picture 3).

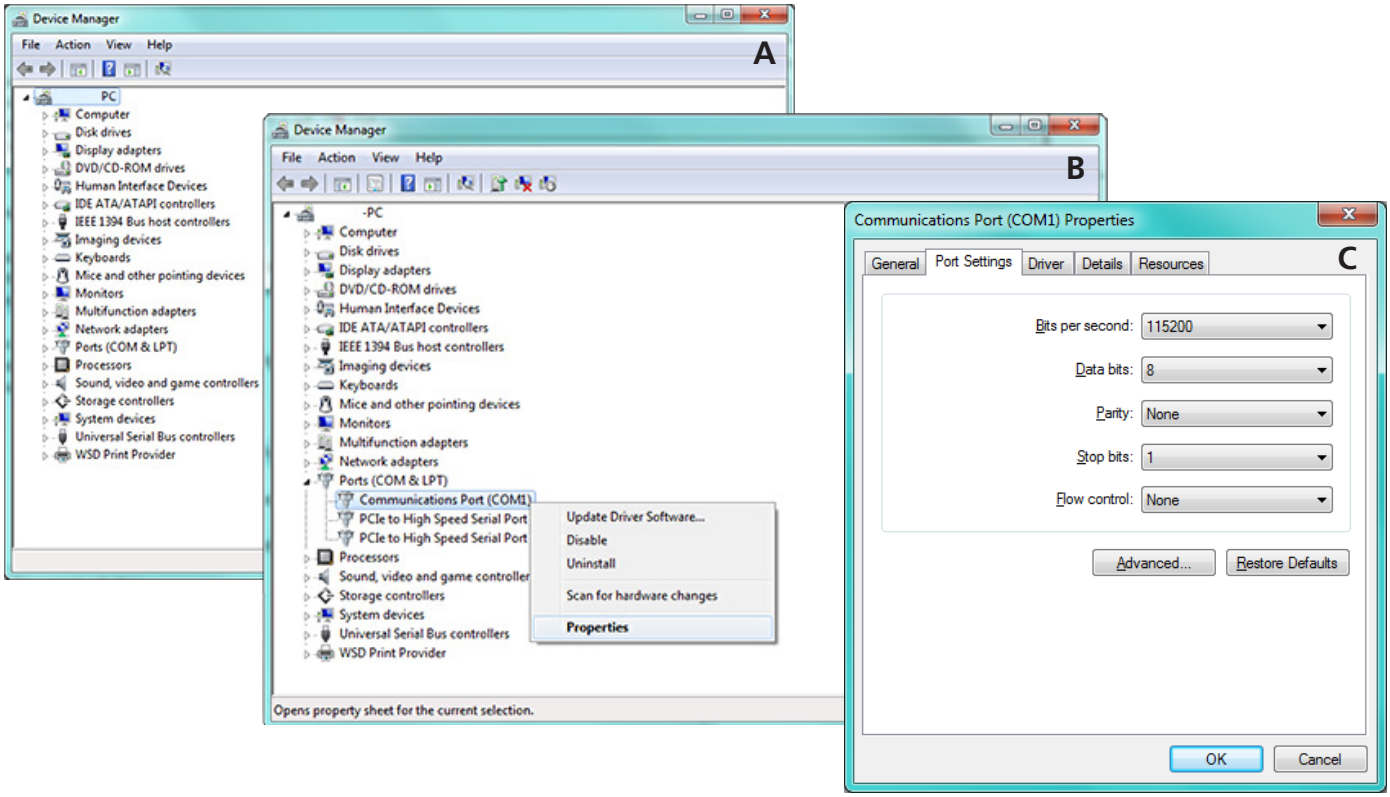
Once the Save button is pressed, the HEX will enter into the command field automatically spaced correctly. (see picture 4).

RS-232 & TCP/IP

Terminal

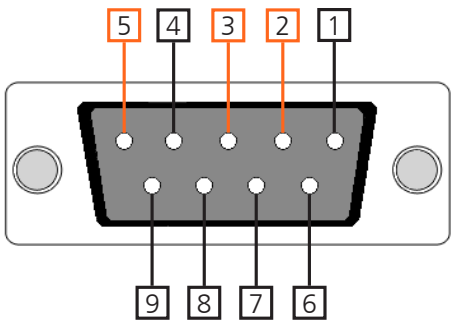
To set up the RS-232 terminal the first thing needed is to find the RS-232 communications port under the computer's device manager. Once there, right click the port and select "Properties". Under the properties menu select the port settings tab and set the menu to the switcher default:

Bits per second: 115200, Data bits: 8, Parity: None, Stop bits: 1 and Flow control: None.



Connection

RS-232 is connected through a 9-pin female D connector. Three pins will have specific functions associated with them, some are unassigned.



No.	Pin	Function
1	----	Not used
2	Tx	Transmit
3	Rx	Receive
4	----	Not used
5	Gnd	Ground
6	----	Not used
7	----	Not used
8	----	Not used
9	----	Not used

Commands *(TCP/IP only)*

The command codes are case sensitive, do not change capitalization, spacing, or lettering.

Command	Feedback	Description
Version	Version x.x.xx	Displays the software version
Type	AT-UHD-HDVS-300	Displays the model information
Mreset	Mreset	Reset device to manufacture default
Lock	Lock	Locks the front panel buttons
Unlock	Unlock	Unlocks the front panel buttons
x1AVx1 **e.g.** x4AVx1	x1AVx1 **e.g.** x4AVx1	Switch inputs **e.g.** Switch output 1 to input 4
Statusx1	x2AVx1	Displays what input is connected to the what output
x1$ X	x1$ on	Turns on/off output channel (X= on, off, sta) **e.g.** x2$ off - Turns output 2 off
AutoSW X	AutoSW on	Turns auto switching on/off (X= on, off, sta)
EDIDOut1 saveX **e.g.** EDIDOut1 save2	EDIDOut1 saveX **e.g.** EDIDOut1 save2	Save the EDID of output 1 to memory X (X = 1-4) **e.g.** Save EDID of output 1 to memory 2
EDIDMSetX default	EDIDMSetX default	Set the EDID of the input to the default EDID
EDIDMSetX saveY	EDIDMSetX saveY	Set the EDID of an input to the previously saved EDID memory **e.g.** EDIDMset3 save1 - sets input 3 to EDID memory 1
EDIDMSetX intY	EDIDMSetX intY	Sets the EDID of an input to one of the internal EDIDs **e.g.** EDIDMSet2 int3 - Sets input 3 to internal EDID 3
HDCPSetX Y **e.g.** HDCPSet1 on	HDCPSetX Y **e.g.** HDCPSet1 on	Set HDCP reporting mode of the HDMI input (X= 1-5)(Y= on, off, sta) **e.g.** Input 3 to report HDCP non-compliant = HDCPSet3 off
ASwPrePort X **e.g.** ASwPrePort 0	ASwPrePort X **e.g.** ASwPrePort 0	Sets what port the unit falls back to after receiving no signal (X= 0-5) **e.g.** Set fallback port to previous - Previous falls back in order of which source was most recently plugged in/powered on/sending signal
ASwOutTime X **e.g.** ASwOutTime 15	ASwOutTime X **e.g.** ASwOutTime 15	Set the amount of time with no signal before falling back an input (X = 4-600) **e.g.** Unit will automatically switch inputs after 15 seconds
LockOut X **e.g.** LockOut 0	LockOut X **e.g.** LockOut 0	Auto switching will not change off the selected port once it falls back to/or is selected (X = 0-5) **e.g.** No input is selected for lock out
InputBroadcast X	InputBroadcast X	Turns input broadcast on and off (X= on, off, sta)
InputStatus	InputStatus XXXXX **e.g.** Input 01001	Displays which inputs are connected (0 = not connected 1 = connected) **e.g.** Inputs 2 and 5 have sources connected
InputStatusX **e.g.** InputStatus2	InputStatusX Y **e.g.** InputStatus2 1	Displays the status of the selected port (X = 1-5) (Y = 0, 1) **e.g.** Input 2 is connected
fw_upgrade	fw_upgrade	Sets the unit into firware mode

Each command or feedback is terminated with a carriage return.
Note: If the command fails or is incorrect the feedback is "Command FAILED"

Y - Internal EDIDs -

0	Display's EDID	**1**	4K 60 MC	**2**	4K 60 2CH
3	4K 30 MC	**4**	4K 30 2CH	**5**	1920x1200 RGB 2CH
6	1080P DD	**7**	1080P MC	**8**	1080P 2CH
9	1080P 3D DD	**10**	1080P 3D MC	**11**	1080P 3D 2CH
12	1080P DVI	**13**	1280x800 RGB 2CH	**14**	1280x800 DVI
15	1366x768 RGB 2CH	**16**	1024x768 RGB 2CH	**17**	720P DD
18	720P 2CH	**19**	800x600 RGB 2CH		

Command	Feedback	Description
SetCmd X Y [Z] **e.g.** SetCmd on[PWR ON]	SetCmd X Y [Z] **e.g.** SetCmd on[PWR ON]	Sets the RS-232 or IP command for the selected button or function (X = on, off, vol+, vol-, and mute) (Y = None, CR, LF, CRLF, space, null) (Z = command) **e.g.** Set the on command to send the command PWR ON
CmdTO X **e.g.** CmdTO 500	CmdTO X **e.g.** CmdTO 500	Sets time period between the command failing and the command being resent **e.g.** the command will resend after 500ms
CmdDelay X **e.g.** CmdDelay 3	CmdDelay X **e.g.** CmdDelay 3	Sets time delay between multiple commands separated with ";" **e.g.** Command will delay 3 seconds (X= 1-10)
SetFedCmd X Y [Z] **e.g.** SetFedCmd on CR [PWON]	SetFedCmd X Y [Z] **e.g.** SetFedCmd on CR [PWON]	Sets the feedback for the commands (X = on, off, vol+, vol-, and mute) (Y = None, CR, LF, CRLF, space, null) (Z = command) **e.g.** Sets feedback on with a carriage return on command PWON
FedVer X **e.g.** FedVer on	FedVer X **e.g.** FedVer on	Verifies the device is receiving commands (X= on, off, sta) **e.g.** Sends command up to 4 times until feedback verifies command was received with feedback
AutoPwOn X **e.g.** AutoPwOn on	AutoPwOn X **e.g.** AutoPwOn on	When enabled, unit will send a power on command to the display when receiving signal from the source (X = on, off, sta)
AutoPwOff X **e.g.** AutoPwOff on	AutoPwOff X **e.g.** AutoPwOff on	When enabled, unit will send a power off command to the display after receiving no signal for a period of time (X = on, off, sta)
AutoPwOffT X **e.g.** AutoPwOffT 100	AutoPwOffT X **e.g.** AutoPwOffT 100	Sets time period before the auto power off timer is triggered (X = 5-60000)
DispWarmUpT X **e.g.** DispWarmUpT 150	DispWarmUpT X **e.g.** DispWarmUpT 150	Sets the time period after the display is turned on that commands cannot be sent (X = 0-300)
LampCoolT X **e.g.** LampCoolT 50	LampCoolT X **e.g.** LampCoolT 50	Match to the projector's lamp delay to keep commands from being sent while the projector is turning off (X = 0-300)
DispSwMode X **e.g.** DispSwMode 2	DispSwMode X **e.g.** DispSwMode 2	Set the display switching mode (X = 0, 1, 2) **e.g.** Display switches on/off, source switches on/off
LockPwBtn X **e.g.** LockPwBtn 1	LockPwBtn X **e.g.** LockPwBtn 1	Locks/unlocks the front panel power button (X = 0, 1) **e.g.** Locks the front panel power button
ButtonPower X **e.g.** ButtonPower IP2	ButtonPower X **e.g.** ButtonPower IP2	Sets control type for the power button (X= IP1, IP2, RS232, CEC) **e.g.** Sets power button to send the power command to IP2
ButtonVol1 X **e.g.** ButtonVol RS232	ButtonVol1 X **e.g.** ButtonVol RS232	Set the volume button control type (X = IP1, IP2, RS232) **e.g.** The volume button sends control commands over RS-232
VolRepeat X **e.g.** VolRepeat 500	VolRepeat X **e.g.** VolRepeat 500	Set the volume ramp up time when pressing the front panel volume buttons (X = 100-1000)
SetExtIP X Y **e.g.** SetExtIP 1 192.168.11.2	SetExtIP X Y **e.g.** SetExtIP 1 192.168.11.2	Set the external IP for TCP/IP control (X = 1, 2) (Y = IP) **e.g.** Set the external IP for TCP/IP 1 to 192.168.11.2
SetExtPort X Y **e.g.** SetExtPort 2 23	SetExtPort X Y **e.g.** SetExtPort 2 23	Set the port for TCP/IP control (X = 1, 2) (Y = TCP/IP Port) **e.g.** Set the port for TCP/IP 2 to 23
SetLocPort X Y **e.g.** SetLocPort 2 8	SetLocPort X Y **e.g.** SetLocPort 2 8	Set the port for TCP/IP control (X = 1, 2) (Y = UDP Port) **e.g.** Set the port for TCP/IP 2 to 8
SetTcpSendMod X Y **e.g.** SetTcpSendMod 2 1	SetTcpSendMod X Y **e.g.** SetTcpSendMod 2 1	Set the TCP/IP control to TCP/IP or UPD (X = 1, 2) (Y = 0, 1) **e.g.** Set TCP/IP 2 to UDP
RS232Ctrl X **e.g.** RS232Ctrl int	RS232Ctrl X **e.g.** RS232Ctrl int	Set the RS-232 commands to send command from the unit (int) or a control system (ext) **e.g.** RS-232 will control the unit
TrigCEC1 X **e.g.** TrigCEC on	TrigCEC1 X **e.g.** TrigCEC on	Triggers the stored CEC command to turn the display on and off (X = on, off)
TrigRS1 X **e.g.** TrigRS vol+	TrigRS1 X **e.g.** TrigRS vol+	Triggers the RS-232 command from RS-232 or IP (X = on, off, vol+, vol-, and mute)
TrigIP1 X **e.g.** TrigIP vol-	TrigIP1 X **e.g.** TrigIP vol-	Triggers the IP command from RS-232 or IP (X = on, off, vol+, vol-, and mute)

X - Display Mode -

0 Cmd None, AvOnOff - Display is always on, source audio/video switches on/off
1 CmdOnOff, AvOnOff - Display switches on/off, source audio/video switches on/off
2 CmdOnOff, AV no change - Display switches on/off, source audio/video is always on

IP Commands

Command	Feedback	Description
IPCFG	IP Addr : x.x.x.x Netmask : x.x.x.x Gateway : x.x.x.x IP Port : x	Displays IP address configuration
IPQuit	IPQuit	Logs out of TCP/IP Connection
IPAddUser X Y **e.g.** IPAddUser Atlona 1234	TCP/IP user was added	Adds a user for TCP/IP control X= user and Y= Password
IPChangePass W X Y Z **e.g.** IPChangePass ab ce dC dC	IPChangePass W X Y Z **e.g.** IPChangePass ab ce dC dC	Change the IP password and username (W = old username) (X = old password) (Y = new password) (Z = new password confirmation)
IPDelUser X	TCP/IP user was deleted	Delete a user from TCP/IP X= username
IPDHCP X	IPDHCP X	Turns DHCP on or off X= on, off, sta
IPStatic X Y Z **e.g.** IPStatic 192.168.1.1 255.255.255.0 192.168.1.200	IPStatic X Y Z **e.g.** IPStatic 192.168.1.1 255.255.255.0 192.168.1.200	Sets static IP address IPStatic Address(X) Netmask(Y) Gateway(Z)
IPPort X	IPPort X	Set the TCP/IP Port
IPLogin X **e.g.** IPLogin off	IPLogin X **e.g.** IPLogin off	Enables IP Login X= on, off, sta
Broadcast X **e.g.** Broadcast on	Broadcast X **e.g.** Broadcast on	Sets broadcast mode on or off X= on, off, sta
IPTimeout XX **e.g.** IPTimeout 300	IPTimeout XX **e.g.** IPTimeout300	Determines amount of seconds of inactivity before TCP/IP disconnects

Each command or feedback is terminated with a carriage return.
Note: If the command fails or is incorrect the feedback is "Command FAILED"

Zone Output Parameter and Command

RS232para1[baudrate,data-length,parity,stop-bit]

Example: To change the output baud rate to 19200 use RS232para1[19200,8,0,1]

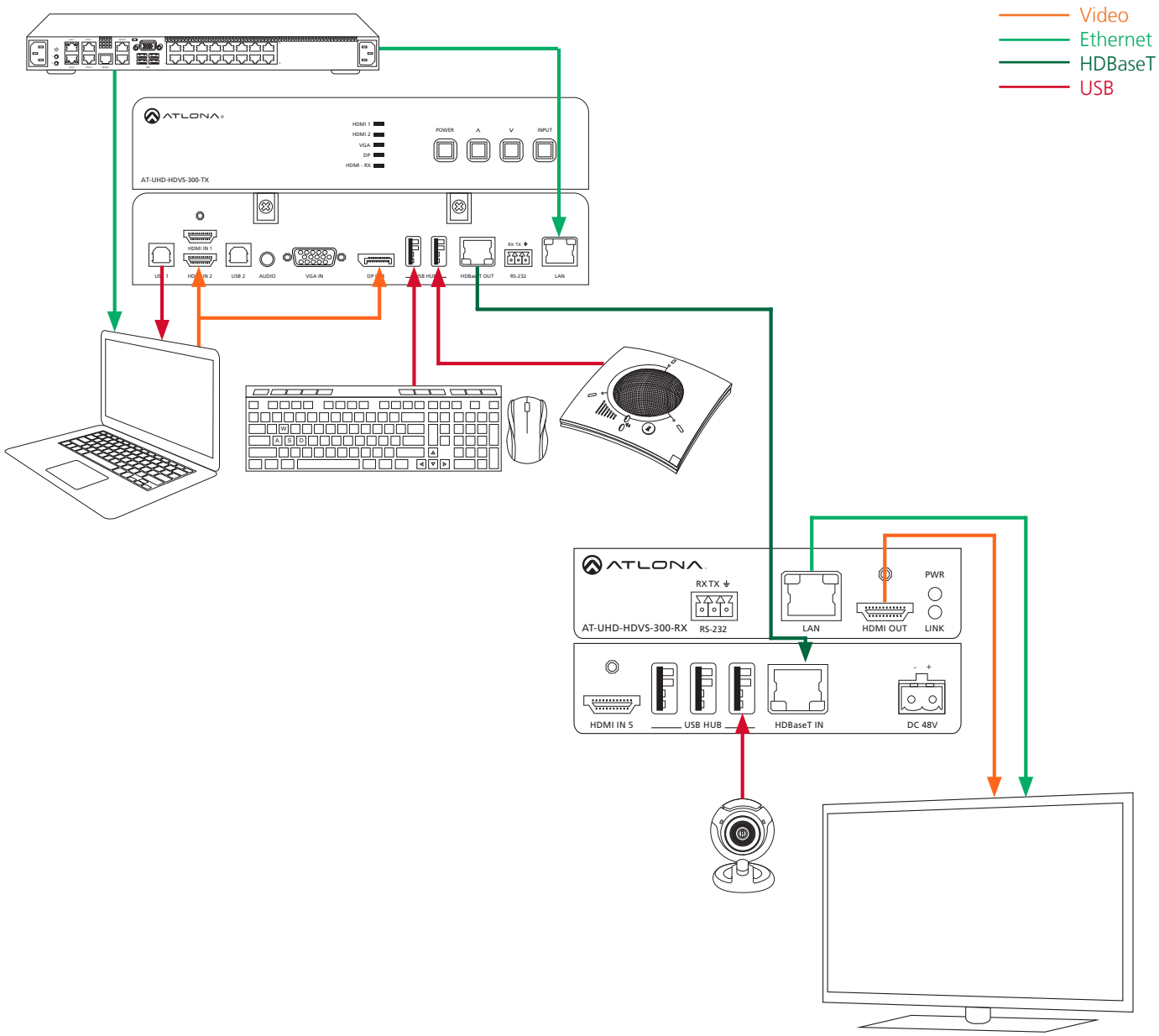
Note: Use this command if the connected display uses a different baud rate

RS232zone1[command]

Once the zone output have been set up for the best communication, commands can be sent to control the display. The commands will come from the user manual of the display or projector. The commands and any carriage returns/line feeds in the commands will need to be placed in the bracket.

Example: To turn the display or projector on if the command is PWRON carriage return, use the command:
RS232zone1[PWRON carriage return]

Connection Diagram



Specifications

Video Resolutions

Video	4096x2160@24/25/30/50*/60Hz*, 3840x2160@24/25/30/50*/60Hz* (UHD), 2048x1080p, 1080p@23.98/24/25/29.97/30/50/59.94/60Hz, 1080i@50/59.94/60Hz, 720p@50/59.94/60Hz, 576p, 576i, 480p, 480i
VESA	2560x2048, 2560x1600, 2048x1536, 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x768, 1024x768, 800x600, 640x480
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	PCM 2Ch, LPCM 5.1, LPCM 7.1, Dolby Digital, DTS 5.1, Dolby Digital Plus, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
Sample Rate	32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
Bit Rate	up to 24-bit

Distance

CAT5e/6 @ 4K	up to 70m	up to 230 ft
CAT6a/7 @ 4K	up to 100m	up to 328 ft
CAT5e/6 @ 1080p	up to 100m	up to 328 ft
HDMI IN/OUT @ 4K	up to 5m	up to 15 ft
HDMI IN/OUT @ 1080p	up to 10m	up to 30 ft

Signal

Bandwidth	10.2 Gbps
CEC	Compliant
HDCP	Switchable - Compliant/Non-compliant

Temperature

Operating	0°C to 40°C	32°F to 104°F
Storage	-20°C to 60°C	-4°F to 140°F
Humidity	20 to 90% non-condensing	

Power

Consumption	23 W
Idle Consumption	15 W
Supply	Input: AC100-240V ~ 50/60Hz Output: DC 48V

Dimension

H x W x D (TX)	47 x 220 x 260 (mm)	1.85 x 8.66 x 10.24 (inch)
H x W x D (RX)	26 x 109 x 127 (mm)	1.02 x 4.29 x 5 (inch)

Weight

Device (TX)	1.2 kg	2.65 lbs
Device (RX)	0.28 kg	0.62 lbs

Certification

Unit	CE, FCC
Power Supply	CE, FCC, Level VI, RoHS, cULus, RCM, CCC

*4096x2160@50/60Hz & 3840x2160@50/60Hz supported @ chroma subsampling 4:2:0 8-bit only

Safety Information

Safeguards

To reduce the risk of electric shock, do not expose this product to rain or moisture

If the wall plug does not fit into your local power socket, hire an electrician to replace your obsolete socket.

Do not modify the wall plug. Doing so will void the warranty and safety features.

This equipment should be installed near the socket outlet and the device should be easily accessible in the case it requires disconnection.

Precautions

FCC regulations state that any unauthorized changes or modifications to this equipment, not expressly approved by the manufacturer, could void the user's authority to operate this equipment.

Operate this product using only the included external power supply. Use of other power supplies could impair performance, damage the product, or cause fires.

In the event of an electrostatic discharge this device may automatically turn off. If this occurs, unplug the device and plug it back in.

Protect and route power cords so they will not be stepped on or pinched by anything placed on or against them. Be especially careful of plug-ins or cord exit points from this product.

Avoid excessive humidity, sudden temperature changes or temperature extremes.

Keep this product away from wet locations such as bathtubs, sinks, laundries, wet basements, fish tanks, and swimming pools.

Use only accessories recommended by Atlona to avoid fire, shock, or other hazards.

Unplug the product before cleaning. Use a damp cloth for cleaning and not cleaning fluid or aerosols. Such products could enter the unit and cause damage, fire, or electric shock. Some substances may also mar the finish of the product.

Never open, remove unit panels, or make any adjustments not described in this manual. Attempting to do so could expose you to dangerous electrical shock or other hazards. It may also cause damage to your product. Opening the product will void the warranty.

Do not attempt to service the unit. Disconnect the product and contact your authorized Atlona reseller or contact Atlona directly.

Atlona, Inc. (“Atlona”) Limited Product Warranty Policy

Coverage

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.

Under its Limited Product Warranty, Atlona, at its sole discretion, will either:

A) repair or facilitate the repair of defective products within a reasonable period of time, restore products to their proper operating condition and return defective products free of any charge for necessary parts, labor and shipping

OR

B) replace and return, free of charge, any defective products with direct replacement or with similar products deemed by Atlona to perform substantially the same function as the original products

OR

C) refund the pro-rated value based on the remaining term of the warranty period, not to exceed MSRP, in cases where products are beyond repair and/or no direct or substantially similar replacement products exist.

Repair, replacement or refund of Atlona’s products is the purchaser’s exclusive remedy and Atlona’s liability does not extend to any other damages, incidental, consequential or otherwise.

This Limited Product Warranty extends to the original end-user purchaser of Atlona’s products and is non-transferrable to any subsequent purchaser(s) or owner(s) of these products.

Coverage Periods

Atlona’s Limited Product Warranty Period begins on the date of purchase by the end-purchaser. The date contained on the end-purchaser’s sales or delivery receipt is the proof purchase date.

Limited Product Warranty Terms – New Products

- 10 years from proof of purchase date for hardware/electronics products purchased on or after June 1, 2013
- 3 years from proof of purchase date for hardware/electronics products purchased before June 1, 2013
- Lifetime Limited Product Warranty for all cable products

Limited Product Warranty Terms – Refurbished (B-Stock) Products

- 3 years from proof of purchase date for all Refurbished (B-Stock) hardware and electronic products purchased on or after June 1, 2013

Remedy

Atlona recommends that end-purchasers contact their authorized Atlona dealer or reseller from whom they purchased their products. Atlona can also be contacted directly. Visit www.atlona.com for Atlona’s contact information and hours of operation. Atlona requires that a dated sales or delivery receipt from an authorized dealer, reseller or end-purchaser is provided before Atlona extends its warranty services. Additionally, a return merchandise authorization (RMA) and/or case number, is required to be obtained from Atlona in advance of returns.

Atlona requires that products returned are properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization or case number will be refused. Atlona, at its sole discretion, reserves the right to reject any products received without advanced authorization. Authorizations can be requested by calling 1-877-536-3976 (US toll free) or 1-408- 962-0515 (US/international) or via Atlona’s website at www.atlona.com.

Exclusions

This Limited Product Warranty excludes:

- Damage, deterioration or malfunction caused by any alteration, modification, improper use, neglect, improper packing or shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature.
- Damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Atlona to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product.
- Equipment enclosures, cables, power supplies, batteries, LCD displays, and any accessories used in conjunction with the product(s).
- Products purchased from unauthorized distributors, dealers, resellers, auction websites and similar unauthorized channels of distribution.

Disclaimers

This Limited Product Warranty does not imply that the electronic components contained within Atlona's products will not become obsolete nor does it imply Atlona products or their electronic components will remain compatible with any other current product, technology or any future products or technologies in which Atlona's products may be used in conjunction with. Atlona, at its sole discretion, reserves the right not to extend its warranty offering in instances arising outside its normal course of business including, but not limited to, damage inflicted to its products from acts of god.

Limitation on Liability

The maximum liability of Atlona under this limited product warranty shall not exceed the original Atlona MSRP for its products. To the maximum extent permitted by law, Atlona is not responsible for the direct, special, incidental or consequential damages resulting from any breach of warranty or condition, or under any other legal theory. Some countries, districts or states do not allow the exclusion or limitation of relief, special, incidental, consequential or indirect damages, or the limitation of liability to specified amounts, so the above limitations or exclusions may not apply to you.

Exclusive Remedy

To the maximum extent permitted by law, this limited product warranty and the remedies set forth above are exclusive and in lieu of all other warranties, remedies and conditions, whether oral or written, express or implied. To the maximum extent permitted by law, Atlona specifically disclaims all implied warranties, including, without limitation, warranties of merchantability and fitness for a particular purpose. If Atlona cannot lawfully disclaim or exclude implied warranties under applicable law, then all implied warranties covering its products including warranties of merchantability and fitness for a particular purpose, shall provide to its products under applicable law. If any product to which this limited warranty applies is a "Consumer Product" under the Magnuson-Moss Warranty Act (15 U.S.C.A. §2301, ET SEQ.) or other applicable law, the foregoing disclaimer of implied warranties shall not apply, and all implied warranties on its products, including warranties of merchantability and fitness for the particular purpose, shall apply as provided under applicable law.

Other Conditions

Atlona's Limited Product Warranty offering gives legal rights, and other rights may apply and vary from country to country or state to state. This limited warranty is void if (i) the label bearing the serial number of products have been removed or defaced, (ii) products are not purchased from an authorized Atlona dealer or reseller. A comprehensive list of Atlona's authorized distributors, dealers and resellers can be found at www.atlona.com.

Atlona Product Registration

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

Registration creates an ownership record if your product is lost or stolen and helps ensure you'll receive notification of performance issues and firmware updates.

At Atlona, we respect and protect your privacy, assuring you that your registration information is completely secure. Atlona product registration is completely voluntary and failure to register will not diminish your limited warranty rights.

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