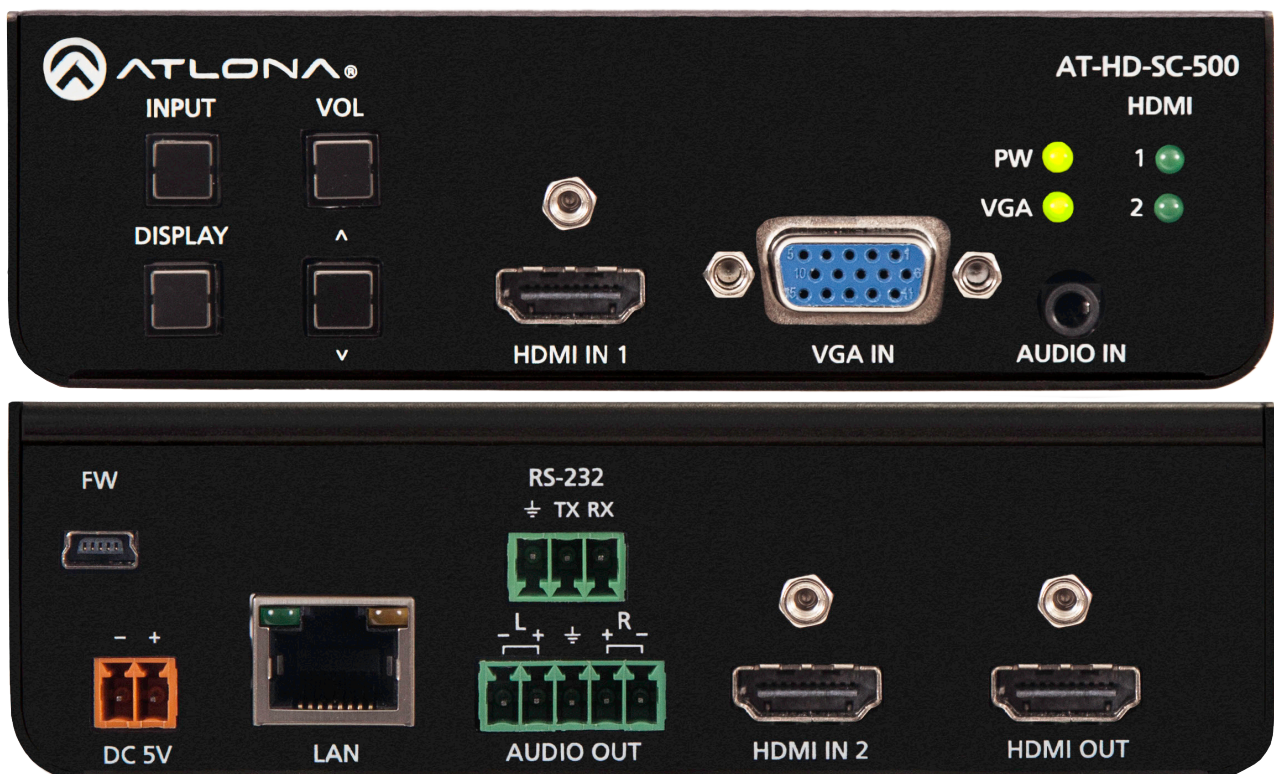


Dual HDMI and VGA Switcher w/Scaler and Display Control

AT-HD-SC-500



Please check <http://www.atlona.com/AT-HD-SC-500>
for the most recent **firmware
update or manual.**

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Revision B -

Firmware Version 1.1.0

Added HDMI audio control

- Select the audio source to be embedded on the HDMI port

Introduction

The dual HDMI and VGA switcher w/scaler provides a multisystem solution. Use the HD-SC-500 as: a standalone 3 in 1 out switcher for small systems, an analog to digital video converter for systems with no VGA ports, and a scaler for systems with displays that require specific resolutions. Supports scaling of video up to 1920x1200/1080p, VGA conversion and audio embedding and de-embedding, the HD-SC-500 has a function in almost any system.

Package Contents

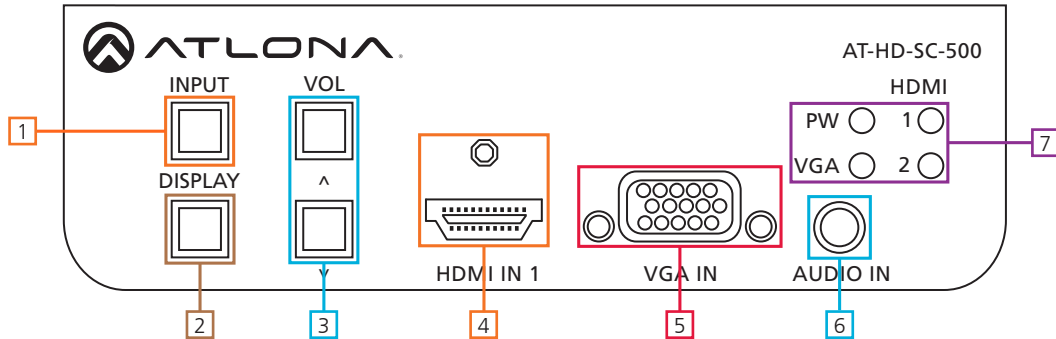
- 1 x AT-HD-SC-500
- 3 x Captive screw female connector (5 pin: audio, 3 pin: RS-232, 2 pin: power)
- 1 x Wall/table mount ears
- 1 x 5V Captive Screw Power Supply (AT-PW5V3.6A-CAPT)
- 1 x User manual

Features

- Scales incoming signals up to 1920x1200
- 3 input, 1 output switcher
- Auto-switching (activated through RS-232 or webGUI)
- HDMI inputs support DVI and DisplayPort signals (with adaptors)
- Audio input for embedding audio onto video signals
- Control of brightness, contrast, saturation, hue, and sharpness
- Volume control
- Adjust treble and bass of audio output to ensure the best speaker performance
- Balanced, analog audio output for de-embedding audio to amplifiers or audio systems
- Control via RS-232, TCP/IP, webGUI, and OSD
- Ability to switch HDCP reporting between compliant and non-compliant
- Firmware upgradable for easy field service through USB or webGUI

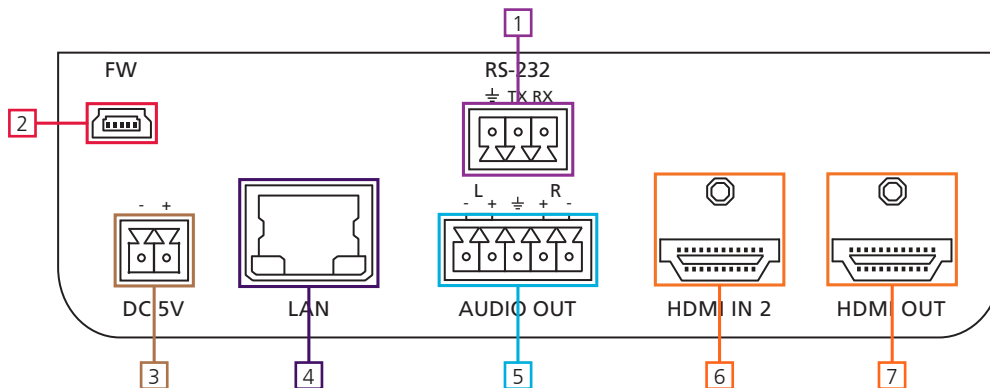
Panel Description

Front Panel



1. INPUT button - Press to switch between HDMI 1, HDMI 2, and VGA inputs
2. DISPLAY button - Press and hold for 5 seconds to bring up the OSD or select items
3. VOLUME - Adjusts the output volume, also used to navigate the OSD menu
4. HDMI IN 1 - Connect HDMI source here (DVI or DisplayPort compatible with adaptor)
5. VGA IN - Connect analog (VGA or RGB) video source here
6. AUDIO IN - Connect audio source here to be embedded with the input video
7. Status LEDs -
 - PW LED: Illuminates when receiving power
 - VGA, HDMI 1 & 2 LED: Illuminates to indicate the currently selected source

Back Panel

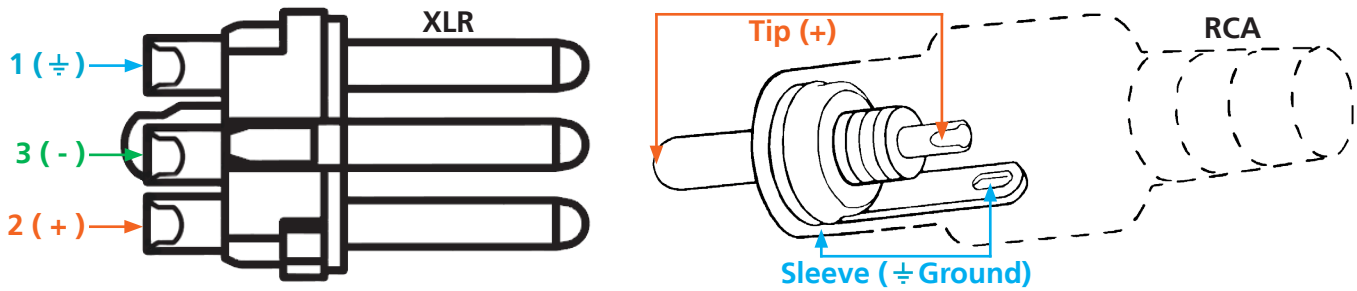


1. RS-232 - Connect control system or PC here to control the HD-SC-500
2. Firmware - Connect to a PC with a USB cable for firmware updating
3. DC 5V - Connect included power supply here
4. LAN - TCP/IP (Ethernet) port, connect to router, computer, or control device
5. AUDIO OUT - Audio output to audio amplifiers (**e.g.** AT-PA100-G2) or audio systems
6. HDMI IN 2 - Connect HDMI source here (DVI or DisplayPort compatible with adaptors)
7. HDMI OUT - Connect to display or extender (**e.g.** AT-UHD-EX-100CE-KIT)

Analog Audio

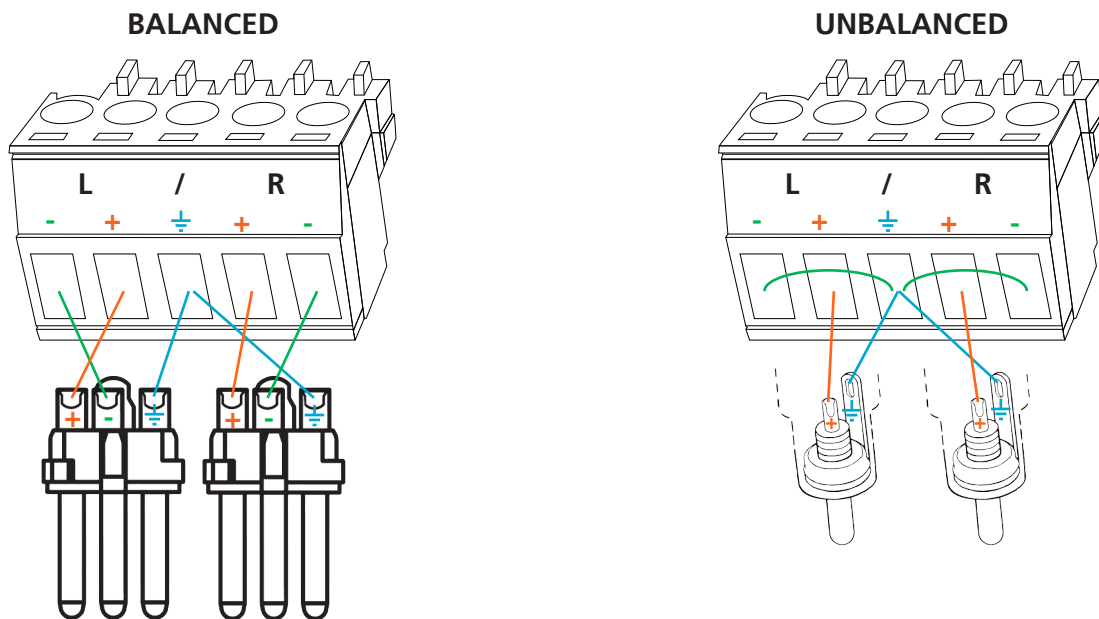
A captive screw analog audio connector is provided to ensure a more reliable and secure connection. The captive screw connector supports balanced and unbalanced audio output.

Balanced audio connections use two signal wires and a ground to minimize interference to audio signals. Unbalanced audio connections use one signal wire and a ground and are used if other system components don't support balanced signals.



Note: Pin outs may vary, please refer to the audio device's manual to ensure a correct connection.

Important! When terminating cables, please ensure exposed adjacent wires do not touch. This may result in a short that can damage connected devices.



Important! With unbalanced connections a jumper is needed between ground and negative to reduce noise

Network Connections

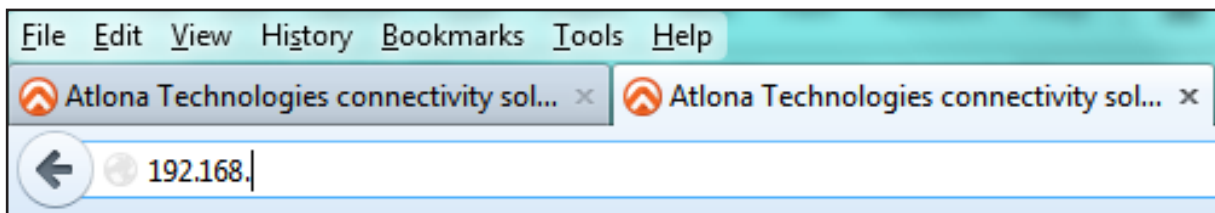
For convenience, the HD-SC-500 comes with DHCP on. This enables the switcher to be connected to a network without knowing available IP addresses. If your network does not allow dynamic IP addresses or if you are using the switcher with a TCP/IP control system, this feature may be turned off and the IP address set using RS-232 commands or the webGUI.

WebGUI

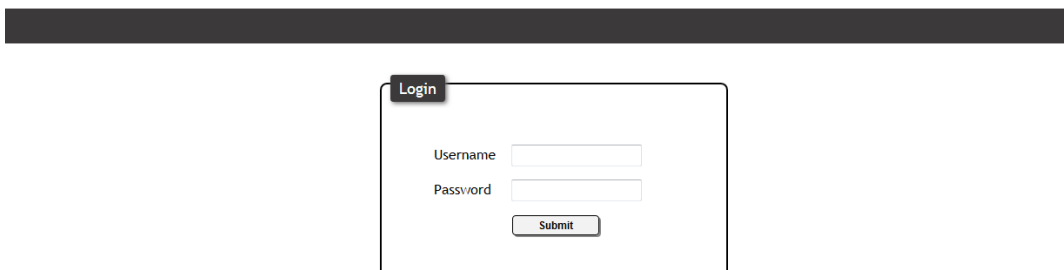
Atlona has created an easy to use webGUI for initial setup and later changes to the configuration of the HD-SC-500.

To begin, plug a LAN cable into the LAN port of the HD-SC-500 and the network switch, then type the IP address of the unit into a web browser of a PC connected to the same network (as seen below).

To find the switcher IP: Select "Information" within the OSD menu or use RS-232 command "IPCFG".

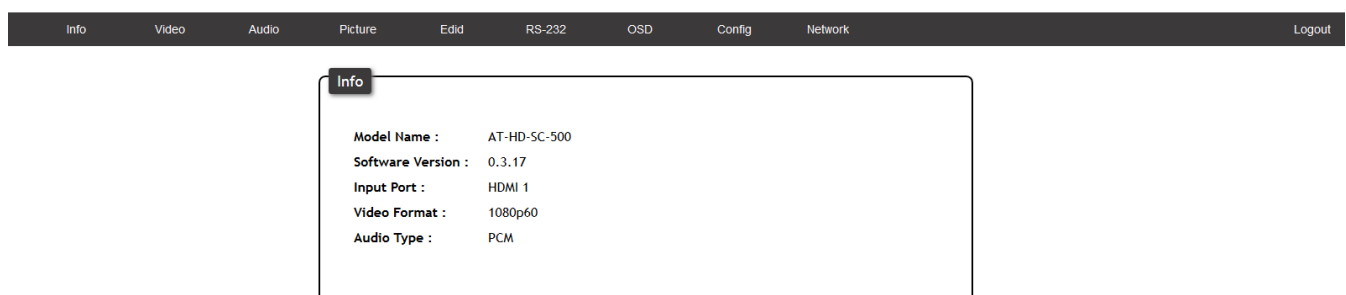


Important: If any stability issues are experienced, disable any anti-virus or firewall that may interfere with network communication to the switcher. Once set up is done and the switcher webGUI is no longer being used, the firewall and anti-virus can be re-enabled.



A login screen will appear (this is the same log in for admin and general users). For the first log in (and future admin changes) the username is "root" and password is "Atlona".

Note: Only the admin password can be changed (see page 11). The username will always remain "root".



The Info screen displays general system information.

Info
Video
Audio
Picture
Edit
RS-232
OSD
Config
Network
Logout

Input
Input Selection HDMI 1
VGA Adjust Adjust
Auto Switch mode ON

Output
Output Resolution 1920x1080p60
Color Space RGB
Aspect Full
Overscan
Enable OFF
H Size 0 % +
V Size 0 % +
Mirror-V OFF
ASP Background Grey

The Video Page enables the input and output video settings to be adjusted to ensure quality and compatibility.

Input

Input Selection - Choose between HDMI 1, HDMI 2, and VGA inputs

VGA Adjust - Centers the VGA video on the display

Auto-Switch mode - Toggle the 5V auto-switching on and off

Output

Output Resolution - Select the output resolution for the HDMI output (see resolution list below)

Color Space - Switch between RGB and YUV

Aspect - Adjusts the height and width of the image to fit the display (see aspect list below)

Overscan

Enable - Toggle on/off to enable horizontal and vertical sizing

H Size - Adjusts the width of the video

V Size - Adjusts the height of the video

Mirror-V - Flips the video upside down and backwards

ASP Background - Changes the horizontal/vertical bars on the picture between black and grey

Output Resolution -

| | | | | |
|-----------------------|-----------------------|------------------------|------------------------|------------------------|
| 0 800x600p60 | 6 1600x900p60 | 12 1280x720p30 | 18 1920x1080i60 | 24 1920x1080p50 |
| 1 1024x768p60 | 7 1600x1200p60 | 13 1280x720p50 | 19 1920x1080p23 | 25 1920x1080p59 |
| 2 1280x800p60 | 8 1680x1050p60 | 14 1280x720p59 | 20 1920x1080p24 | 26 1920x1080p60 |
| 3 1280x1024p60 | 9 1920x1200pRB | 15 1280x720p60 | 21 1920x1080p25 | 27 Native |
| 4 1366x768p60 | 10 1280x720p25 | 16 1920x1080i50 | 22 1920x1080p29 | |
| 5 1400x1050p60 | 11 1280x720p29 | 17 1920x1080i59 | 23 1920x1080p30 | |

Aspect Ratio -

Full - The image will fill the display

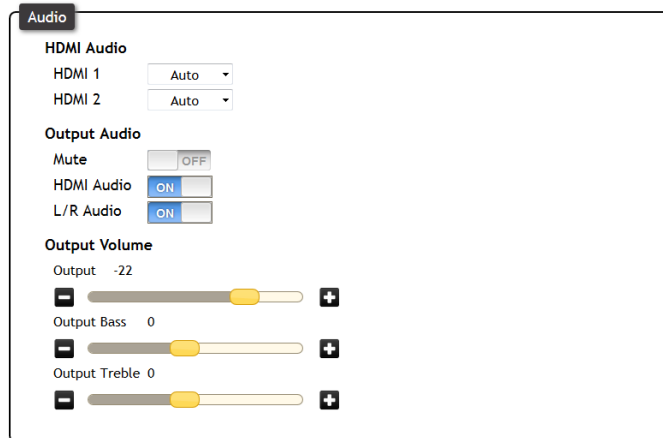
16:9 - The image will fit to a 16:9 display

16:10 - The image will fit to a 16:10 display

4:3 - The image will fit to a 4:3 display

Keep Ratio - The image will keep the aspect ratio of the signal sent by the source

Note: Incorrect aspect ratio will display with horizontal or vertical bars to fill the excess space



The Audio Page enables adjustments of audio source, volume, bass, and treble, providing a simple solution for audio control.

HDMI Audio (1 and 2) - Select the audio source for the individual HDMI inputs

Auto - Will detect if receiving DVI signals and take audio from analog audio input

Digital - Will use audio from the HDMI input port

Analog - Will use audio from the analog audio input port

Output Audio

Mute - Toggle the output audio of both the HDMI and analog audio output

HDMI Audio - Toggle the HDMI audio on and off

L/R Audio - Toggle the analog audio on and off

Output Volume - Master volume for both HDMI and analog audio out

Output - Adjust the output volume

Output Bass - Adjust the bass of the output

Output Treble - Adjust the treble of the output

Picture

Brightness 64 +

Contrast 64 +

Saturation 64 +

Hue 64 +

Sharpness 32 +

Reset Pictures

The Picture Page provides output adjustment for brightness, contrast, saturation, hue, and sharpness.

Note: Calibrate the display before using these settings to adjust the picture

Reset Pictures - Resets the picture settings of the unit

Edid

HDMI Prefer Timing 1920x1080 ▾

VGA Prefer Timing 1920x1080 ▾

HDMI1 HDCP compliant ▾

HDMI2 HDCP compliant ▾

The EDID Page enables the preferred input timing to be selected and HDCP compliance reporting to be set.

HDMI Prefer Timing - Select the best resolution to ensure compatibility with the input & output

VGA Prefer Timing - Select the best resolution to ensure compatibility with the input & output

HDMI 1 HDCP - Switch the HDCP reporting between compliant or non-compliant

HDMI 2 HDCP - Switch the HDCP reporting between compliant or non-compliant

The HD-SC-500 has two HDCP reporting modes: compliant and non-compliant.

Note: HD-SC-500 does not alter the signal in any way

Note: HD-SC-500 will not pass HDCP compliant content to a non-HDCP 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

Preferred Timings -

0 800x600

5 1920x1080

1 1024x768

6 1920x1200

2 1280x720

sta

3 1280x800

4 1366x768

RS-232

RS-232 Parameter Setting

Console

| | |
|-----------|--------|
| Baud rate | 115200 |
| Data bit | 8 |
| Parity | None |
| Stop bit | 1 |

Save

RS-232

RS-232 Parameter Setting

Console

Adjust the RS-232 parameters of the HD-SC-500 to make it compatible with control systems.

Save

Once the RS-232 parameters are changed, press the save button to make it live on the unit.

OSD

| | |
|---------------|----------|
| Position | Left-Top |
| Transparency | 12 |
| Info. Timer | 10 |
| Menu Timer | 20 |
| Info. Display | Auto |
| Background | Grey |

The OSD Page adjusts the position, color, and settings of the OSD menu.

Position - Adjusts where the OSD menu appears on the display

Transparency - Makes the OSD menu lighter or darker for easier viewing

Info. Timer - Changes the amount of time the source information appears on the display

Menu Timer - Changes how long the menu appears on the display

Info. Display - Toggle the resolution and source information on and off

Background - Change the background color for the OSD menu for better visibility

| Info | Video | Audio | Picture | Edid | RS-232 | OSD | Config | Network | Logout | | | | | | | | | | | | | | | | |
|--|--------------------------|------------------------------------|---------------------------------------|------|--------|-----|--------|---------|--------|----------|----------|------|-----|----------------------|--------------------------|------------------------------------|---------------------------------------|----------------------|--------------------------|------------------------------------|---------------------------------------|----------------------|--------------------------|------------------------------------|---------------------------------------|
| <div>Configuration</div> <div>Web & Telnet Login Settings</div> <div> Old Username: <input type="text" value="root"/> Old Password: <input type="password"/> New Username: <input type="text" value="root"/> <input type="button" value="Save"/> New Password: <input type="password"/> Confirm New Password: <input type="password"/> </div> <div>All User Login Settings</div> <table border="1"> <thead> <tr> <th>Username</th> <th>Password</th> <th>Edit</th> <th>Del</th> </tr> </thead> <tbody> <tr> <td><input type="text"/></td> <td><input type="password"/></td> <td><input type="button" value="Add"/></td> <td><input type="button" value="Remove"/></td> </tr> <tr> <td><input type="text"/></td> <td><input type="password"/></td> <td><input type="button" value="Add"/></td> <td><input type="button" value="Remove"/></td> </tr> <tr> <td><input type="text"/></td> <td><input type="password"/></td> <td><input type="button" value="Add"/></td> <td><input type="button" value="Remove"/></td> </tr> </tbody> </table> | | | | | | | | | | Username | Password | Edit | Del | <input type="text"/> | <input type="password"/> | <input type="button" value="Add"/> | <input type="button" value="Remove"/> | <input type="text"/> | <input type="password"/> | <input type="button" value="Add"/> | <input type="button" value="Remove"/> | <input type="text"/> | <input type="password"/> | <input type="button" value="Add"/> | <input type="button" value="Remove"/> |
| Username | Password | Edit | Del | | | | | | | | | | | | | | | | | | | | | | |
| <input type="text"/> | <input type="password"/> | <input type="button" value="Add"/> | <input type="button" value="Remove"/> | | | | | | | | | | | | | | | | | | | | | | |
| <input type="text"/> | <input type="password"/> | <input type="button" value="Add"/> | <input type="button" value="Remove"/> | | | | | | | | | | | | | | | | | | | | | | |
| <input type="text"/> | <input type="password"/> | <input type="button" value="Add"/> | <input type="button" value="Remove"/> | | | | | | | | | | | | | | | | | | | | | | |

The Configuration Page allows non-admin users to be added or the admin password to be changed.

Only 3 non-admin users can be added. Type in the username and password to the fields and press add. Users will not have the ability to access this page.

Admin username and password (default username="root" and password="Atlona") can also be changed. Be sure to write this information down as admin is the only profile allowed to add/remove users.

| Info | Video | Audio | Picture | Edid | RS-232 | OSD | Config | Network | Logout |
|--|-------|-------|---------|------|--------|-----|--------|---------|--------|
| <div>NetWork</div> <div>NetWork</div> <div> IP Mode: <input type="button" value="DHCP"/> IP: <input type="text" value="192.168.0.38"/> Netmask: <input type="text" value="255.255.255.0"/> <input type="button" value="Save"/> Gateway: <input type="text" value="192.168.0.1"/> Telnet Port: <input type="text" value="23"/> </div> <div>Telnet Login Mode</div> <div> <input type="button" value="OFF"/> Telnet Timeout <input type="text" value="120"/> Broadcast <input type="button" value="ON"/> </div> <div>Reset to Default</div> <div> <input type="button" value="Factory Default"/> Firmware Update <input type="button" value="Browse"/> No file selected <input type="button" value="Update"/> </div> | | | | | | | | | |

Network

Network

IP Mode - Static or DHCP

Static - IP, netmask, gateway, and telnet port can be set to any settings compatible with your network. The Netmask and Gateway must match your existing network settings

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.

DHCP - Dynamic Host Configuration Protocol will select an IP address on the network that is not already in use

Telnet Login Mode - Turn on/off - requires a password to adjust settings

Telnet Timeout - Set the auto log-off time between 1 and 3600 seconds

Broadcast - Turn on and off the feedback through all control ports

Reset to Default - Reset the device to factory settings

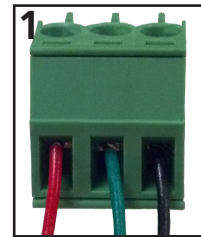
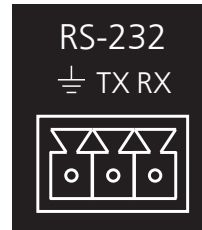
Firmware Update - Use this feature to find and load the file to the unit.

Note: Firmware can be found, downloaded, and saved from <http://www.atlona.com/AT-HD-SC-500> page under the firmware tab

RS-232

Connection

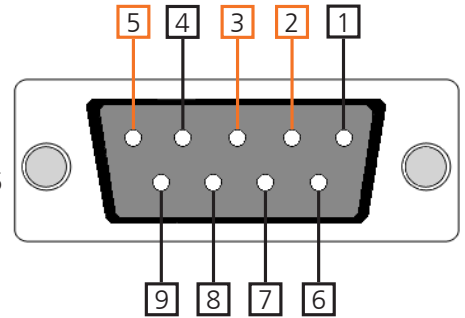
RS-232 pin out is determined by the RS-232 cable and connects as Rx (receiver), Tx (transmitter), and \perp (ground). (See picture 1)



Wire color differs by cable manufacturer.

RS-232 is often connected through a DB 9-pin to captive screw connector. The pins have functions associated with them, some will be unassigned.

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



Set Up

To set up the RS-232 terminal (if not using 3rd party software) use the following steps:

1. Connect the HD-SC-500 to a PC using a DB9 to DB9 and DB9 to USB cable

Note: A gender changer and/or null modem may be needed between some connections

- a. Remove the DB9 connector, strip and connect the wires to the included captive screw connector (as explained above), then connect the captive screw connector to the matrix

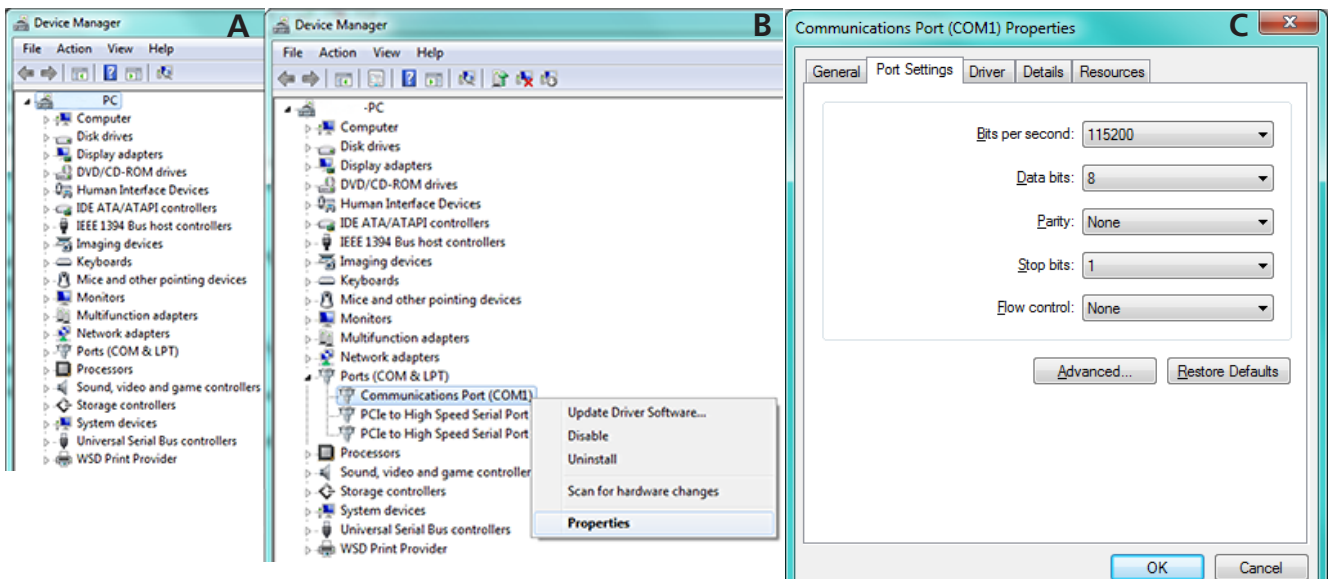
2. Go to the Device Manager folder (see picture A)

3. Find the HD-SC-500 COM port and right click with a mouse and select properties (see picture B)

Note: If unsure which COM port is the HD-SC-500, unplug the cable and plug it back in. It will disappear and reappear on the COM port list.

4. Under the properties menu select the port settings tab and update the menu to the **HD-SC-500 default settings of:** Bits Per Second: 115200, Data Bits: 8, Parity: None, Stop Bits: 1 and Flow Control: None. (see picture C)

Set up is done and any terminal program may be used to control the HD-SC-500 now.



| Command | Feedback | Description |
|---------------------------------|---------------------------------|--|
| Type | Type | Displays the model number of the unit |
| Version | Version | Displays the bootcode and firmware version |
| Mreset | Mreset | Reset the unit to factory settings and restarts the switcher |
| Lock | Lock | Deactivates the front panel buttons |
| Unlock | Unlock | Reactivates the front panel buttons |
| Input X e.g. Input HDMI 1 | Input X e.g. Input HDMI 1 | Select the input device. X= HDMI 1, HDMI 2, VGA, or sta e.g. Set the input to HDMI 1 |
| OSD X e.g. OSD 4 | OSD X e.g. OSD 4 | Adjusts the position of the OSD menu on the screen e.g. positions the OSD menu on the center of the screen |
| QOSD | QOSD | Exits the OSD menu |
| Up | Up | Scrolls up in the OSD menu |
| Down | Down | Scrolls down in the OSD menu |
| Select | Select | Selects options within the OSD menu |
| OSDBGND X e.g. OSDBGND 3 | OSDBGND X e.g. OSDBGND 3 | Sets the OSD menu background color x=0-3, sta e.g. Set the OSD background color to Yellow |
| OSDAlpha X e.g. OSDAlpha 2 | OSDAlpha X e.g. OSDAlpha 2 | Sets the OSD menu transparency x=0-15, sta e.g. Sets the OSD menu transparency to 2 |
| INFOOSD X e.g. INFOOSD on | INFOOSD X e.g. INFOOSD on | Turns info menu on/off x=on, off, auto, sta e.g. Turns the info menu on |
| MENUTMR X e.g. MENUTMR 25 | MENUTMR X e.g. MENUTMR 25 | Set the OSD menu timeout x=5-100, sta e.g. Set the menu timeout to 25 seconds |
| INFOTMR X e.g. INFOTMR 15 | INFOTMR X e.g. INFOTMR 15 | Sets the timer for how long the info menu displays x=5-100, sta e.g. Sets the info menu to display for 15 seconds |
| AutoSW X e.g. AutoSW on | AutoSW X e.g. AutoSW on | Enable/Disable auto switching or display auto switching status e.g. Turns auto switching on |
| BRT XX e.g. BRT 30 | BRT XX e.g. BRT 30 | Set output brightness value e.g. Set output brightness to 30 |
| CTRST XX e.g. CTRST 20 | CTRST XX e.g. CTRST 20 | Set output contrast value e.g. Set output contrast to 20 |
| SATRT XX e.g. SATRT 65 | SATRT XX e.g. SATRT 65 | Set output saturation value e.g. Set output contrast to 65 |
| HUE XX e.g. HUE 38 | HUE XX e.g. HUE 38 | Set output hue value e.g. Set output hue to 38 |
| Sharp XX e.g. Sharp 11 | Sharp XX e.g. Sharp 11 | Set output sharpness value e.g. Set output sharpness to 11 |
| VGAAuto | VGAAuto | Adjusts VGA picture to the center of the display - Only valid when VGA is selected |
| MirrorV X e.g. MirrorV on | MirrorV X e.g. MirrorV on | Turns the output video upside down and backwards x=on, off, sta |
| HDCPSet1 X e.g. HDCPSet1 on | HDCPSet1 X e.g. HDCPSet1 on | Set HDCP reporting for HDMI IN 1 x=on, off, sta e.g. Set HDCP reporting for HDMI IN to compliant |
| HDCPSet2 X e.g. HDCPSet2 off | HDCPSet2 X e.g. HDCPSet2 off | Set HDCP reporting for HDMI IN 1 x=on, off, sta e.g. Set HDCP reporting for HDMI IN to non-compliant |

OSD Position -

0 Upper Left 1 Top Right 2 Bottom Right 3 Bottom Left 4 Center

OSD background color -

0 Grey 1 Cyan 2 Magenta 3 Yellow

HDCP reporting -

on compliant **off** non-compliant

| Command | Feedback | Description |
|-----------------------------------|-----------------------------------|--|
| PTIMGVGA X e.g. PTIMGVGA 2 | PTIMGVGA X e.g. PTIMGVGA 2 | Set the preferred input timing for the VGA port x=0-6, sta e.g. Set the input timing for the VGA port to 1280x720 |
| PTIMGHDMI X e.g. PTIMGHDMI 4 | PTIMGHDMI X e.g. PTIMGHDMI 4 | Set the preferred input timing for the HDMI ports x=0-6, sta e.g. Set the preferred input timing for the HDMI ports to 1366x768 |
| VidOutRes X e.g. VidOutRes 22 | VidOutRes X e.g. VidOutRes 22 | Set the output resolution x=0-27, sta e.g. Set the output resolution to 1920x1080p29 |
| Aspect X e.g. Aspect 2 | Aspect X e.g. Aspect 2 | Set the output aspect ratio x=0-4 e.g. Set the output aspect ratio to 16:10 |
| ASPBGRND X e.g. ASPBGRND 1 | ASPBGRND X e.g. ASPBGRND 1 | Set the background color of the aspect ratio e.g. Set the aspect ratio background to black |
| Zoom X e.g. Zoom on | Zoom X e.g. Zoom on | Enable/disable overscan (zoom) x=on, off, sta e.g. Enables overscan |
| HZoom X e.g. HZoom 10 | HZoom X e.g. HZoom 10 | Adjusts the horizontal overscan x=0-50, sta e.g. Adjust the width of the signal to 10 |
| VZoom X e.g. VZoom 12 | VZoom X e.g. VZoom 12 | Adjusts the vertical overscan x=0-50, sta e.g. Adjust the height of the signal to 12 |
| SetCS X e.g. SetCS 1 | SetCS X e.g. SetCS 1 | Sets the color space x=0, 1, sta e.g. Sets the color space to YUV |
| PicReset | PicReset | Resets all picture settings to default |
| AudioSrcX Y e.g. AudioSrc1 ana | AudioSrcX Y e.g. AudioSrc1 ana | Set audio source for HDMI inputs X=1,2 Y=auto, dig, ana e.g. Set HDMI input 1 to receive audio from the analog input |
| HDMIAUD X e.g. HDMIAUD off | HDMIAUD X e.g. HDMIAUD off | Turns audio on/off for the HDMI output x=on, off, sta e.g. Turns the audio off for the HDMI output |
| LRAUD X e.g. LRAUD on | LRAUD X e.g. LRAUD on | Turns the audio on/off for the analog audio output e.g. Turns the analog audio output on |
| VOUT1 + e.g. VOUT1 + | VOUT1 XX e.g. VOUT1 -5 | Increase the volume output by 1 e.g. Increases the volume output by 1 |
| VOUT1 - e.g. VOUT1 - | VOUT1 XX e.g. VOUT1 -20 | Decrease the volume output by 1 e.g. Decreases the volume output by 1 |
| VOUT1 X e.g. VOUT1 -10 | VOUT1 X e.g. VOUT1 -10 | Set the volume to a specific level from -80 to 0 e.g. Set the volume to -10 |
| VOUTMute1 X e.g. VOUTMute1 on | VOUTMute1 X e.g. VOUTMute1 on | Mute/unmute all audio output x=on, off, sta e.g. Mute all audio output |
| Bass X e.g. Bass + | Bass X e.g. Bass 5 | Adjusts the bass of the audio output x= +, -, sta, -12 to 15 e.g. Increases the bass by 1 |
| Treble X e.g. Treble -5 | Treble X e.g. Treble -5 | Adjusts the treble of the audio output x= +, -, sta, -12 to 15 e.g. Sets the treble to -5 |

Output Resolutions -

| | | | | |
|-----------------------|-----------------------|------------------------|------------------------|------------------------|
| 0 800x600p60 | 6 1600x900p60 | 12 1280x720p30 | 18 1920x1080i60 | 24 1920x1080p50 |
| 1 1024x768p60 | 7 1600x1200p60 | 13 1280x720p50 | 19 1920x1080p23 | 25 1920x1080p59 |
| 2 1280x800p60 | 8 1680x1050p60 | 14 1280x720p59 | 20 1920x1080p24 | 26 1920x1080p60 |
| 3 1280x1024p60 | 9 1920x1200pRB | 15 1280x720p60 | 21 1920x1080p25 | 27 Native |
| 4 1366x768p60 | 10 1280x720p25 | 16 1920x1080i50 | 22 1920x1080p29 | sta |
| 5 1400x1050p60 | 11 1280x720p29 | 17 1920x1080i59 | 23 1920x1080p30 | |

Preferred Timings -

| | | | | |
|--------------------|--------------------|-------------------|-------------------|-------------------|
| 0 800x600 | 1 1024x768 | 2 1280x720 | 3 1280x800 | 4 1366x768 |
| 5 1920x1080 | 6 1920x1200 | sta | | |

Aspect Ratio -

| | | | | |
|---------------|---------------|----------------|--------------|---------------------|
| 0 Full | 1 16:9 | 2 16:10 | 3 4:3 | 4 Keep Ratio |
|---------------|---------------|----------------|--------------|---------------------|

Color Space -

| | | | | |
|--------------|--------------|------------|---------------|----------------|
| 0 RGB | 1 YUV | sta | 0 Grey | 1 Black |
|--------------|--------------|------------|---------------|----------------|

Aspect Background -

| | |
|--------------|---------------------|
| 3 4:3 | 4 Keep Ratio |
|--------------|---------------------|

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.x.x | Displays IP address configuration |
| IPTimeout XX e.g. IPTimeout 120 | IPTimeout XX e.g. IPTimeout 120 | Determines amount of seconds of inactivity before TCP/IP disconnects |
| IPQuit | IPQuit | Logs out of TCP/IP |
| IPAddUser | TCP/IP username & password list: - user password - user password - user password | Will display a list of users |
| IPAddUser X Y | TCP/IP user was added | Add a user for TCP/IP control. X=User Y=Password e.g. IPAddUser Atlona 1234 (User=Atlona 1234=Password) |
| IPDelUser X | TCP/IP user was deleted | Delete a user from TCP/IP X=User (Ex. IPDelUser Atlona) |
| IPDHCP sta | IPDHCP sta e.g. IPDHCP on | Displays the status of DHCP |
| IPDHCP on | IPDHCP on | Turns DHCP on |
| IPDHCP off | IPDHCP off | Turns DHCP off |
| 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 (ex. IPPort 230) |
| IPLogin sta | IPLogin sta e.g. IPLogin on | Displays IPLogin status e.g. IPLogin is on |
| IPLogin on | IPLogin on | Enables IPLogin |
| IPLogin off | IPLogin off | Disables IPLogin |
| Broadcast sta | Broadcast sta | Displays broadcast mode status |
| Broadcast on | Broadcast on | Enables broadcast mode |
| Broadcast off | Broadcast off | Disables broadcast mode |
| UartPara W,X,Y,Z e.g. UartPara 115200,8,0,1 | UartPara W,X,Y,Z e.g. UartPara 115200,8,0,1 | Set UART parameters W=baud rate X=data length Y=parity Z=stop-bit e.g. Set the parameters to 115200, 8, 0, 1 |
| UartPara sta | UartPara W,X,Y,Z | Displays UART parameters |

Each command is terminated with a carriage return.

Feedback is terminated with a carriage return and line feed.

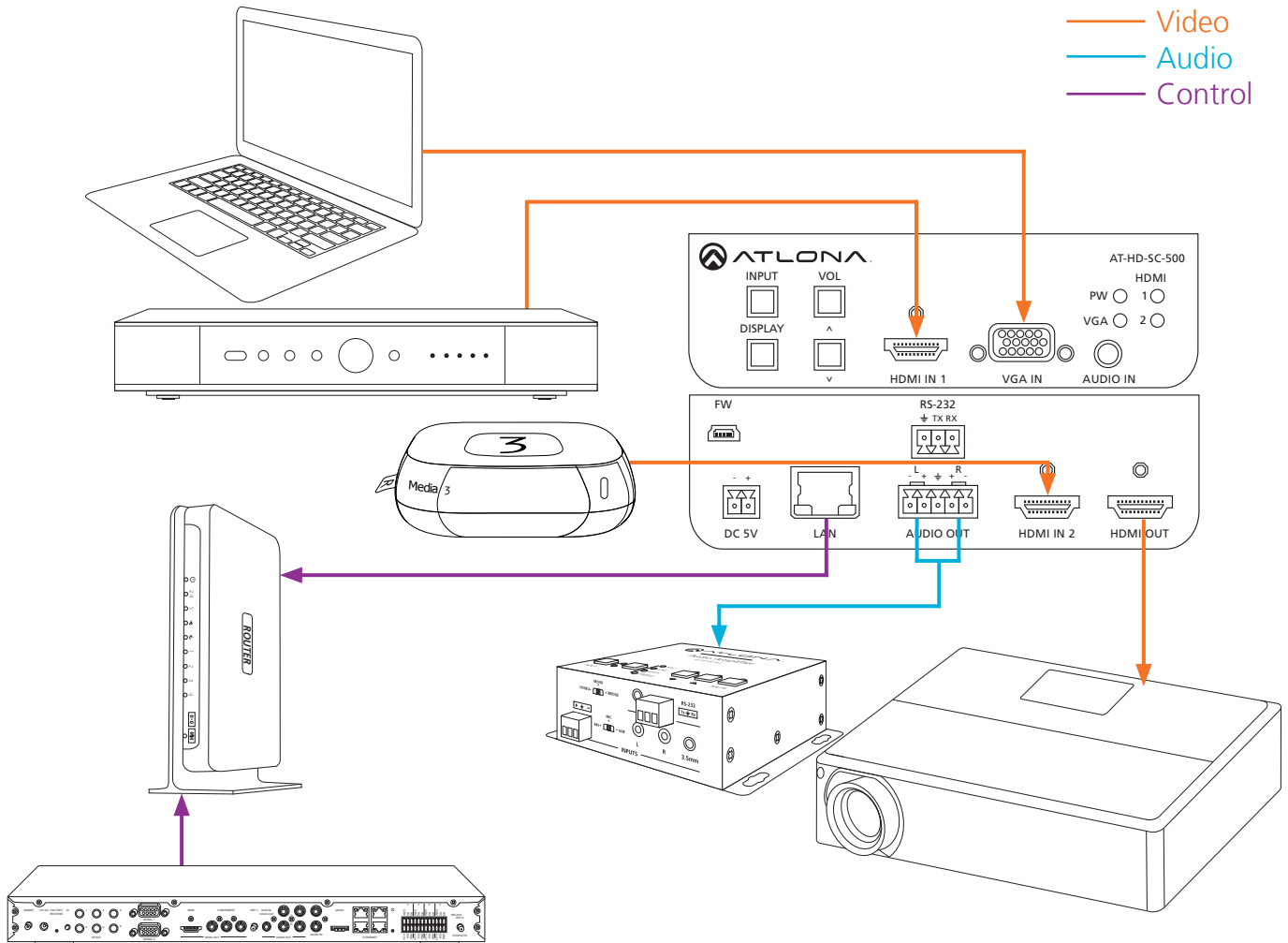
Note: If the command fails or is incorrect the feedback should be "Command FAILED"

OSD Menu

| | | | | |
|-------------------|--------------------------|--------------------------|--------------------------|---------|
| Input Selection | HDMI1 | | | |
| | HDMI2 | | | |
| | VGA | | | |
| | Menu Back | | | |
| Input Resolution | HDMI | 800x600 | | |
| | | 1024x768 | | |
| | | 1280x720 | | |
| | | 1280x800 | | |
| | | 1366x768 | | |
| | | 1920x1080 | | |
| | | 1920x1200 | | |
| | VGA | 800x600 | | |
| | | 1024x768 | | |
| | | 1280x720 | | |
| | | 1280x800 | | |
| | | 1366x768 | | |
| | | 1920x1080 | | |
| | | 1920x1200 | | |
| | Menu Back | | | |
| Output Resolution | Output Resolution 1 of 3 | Output Resolution 2 of 3 | Output Resolution 3 of 3 | |
| | 800x600 | 720p30 | 1080p50 | |
| | 1024x768 | 720p50 | 1080p59.94 | |
| | 1280x800 | 720p59.94 | 1080p60 | |
| | 1280x1024 | 720p60 | NATIVE | |
| | 1366x768 | 1080i50 | Menu Back | |
| | 1400x1050 | 1080i59.94 | | |
| | 1600x900 | 1080i60 | | |
| | 1600x1200 | 1080p23.98 | | |
| | 1680x1050 | 1080p24 | | |
| | 1920x1200 | 1080p25 | | |
| | 720p25 | 1080p29.97 | | |
| | 720p29.97 | 1080p30 | | |
| | | | | |
| VGA Adjust | | | | |
| Picture Adjust | Brightness | 0 to 100 | | |
| | Contrast | 0 to 100 | | |
| | Saturation | 0 to 100 | | |
| | Hue | 0 to 100 | | |
| | Sharpness | 0 to 100 | | |
| | Picture Reset | | | |
| | Color Space | RGB | | |
| | | YUV | | |
| | Menu Back | | | |
| Aspect | Full | | | |
| | 16:9 TV | | | |
| | 16:10 TV | | | |
| | 4:3 TV | | | |
| | Keep Ratio | | | |
| | Menu Back | | | |
| Overscan | Enable | No | | |
| | | Yes | H Size % | 0 to 50 |
| | | | V Size % | 0 to 50 |

| | | |
|--------------|---------------------------|---------------|
| Audio | Audio On Off | On |
| | | Off |
| | HDMI Audio | On |
| | | Off |
| | L R Audio | On |
| | | Off |
| | Treble | -12 to 15 |
| | Bass | -12 to 15 |
| | HDMI1 EBD. Aud | Auto |
| | | Digital |
| | | Analog |
| | HDMI2 EBD. Aud | Auto |
| | | Digital |
| | Analog | |
| Menu Back | | |
| OSD | Position | Left-Top |
| | | Right-Top |
| | | Right-Bottom |
| | | Left-Bottom |
| | | Center |
| | Transparency | 0 to 15 |
| | Info. Timer | 5 to 100 |
| | Menu Timer | 5 to 100 |
| | Info. Display | Auto |
| | | On |
| | | Off |
| | Background | Grey |
| | | Cyan |
| | | Magenta |
| | Yellow | |
| Menu Back | | |
| Others | In Auto Switch | On |
| | | Off |
| | HDMI1 HDCP | Compliant |
| | | Non-Compliant |
| | HDMI2 HDCP | Compliant |
| | | Non-Compliant |
| | Mirror-V | On |
| | | Off |
| | ASP Background | Grey |
| | | Black |
| Menu Back | | |
| Information | Source HDMI | |
| | Name XXXX | |
| | Product XXXX | |
| | Sink HDMI XXX | |
| | Model XXXX XX | |
| | Native1 XXXXXXXXX | |
| | Native2 XXXXXXXXX | |
| | IP Address xxx.xxx.x.xx | |
| | F W Version VX.X.XX | |
| | Menu Back | |
| System Reset | | |
| Menu Exit | | |

Connection and Installation



Specifications

Video Resolutions

| | |
|-------------------------|---|
| IN | 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 1920x1200, 1680x1050, 1600x1200, 1600x900, 1440x900, 1400x1050, 1366x768, 1360x768, 1280x1024, 1280x800, 1280x768, 1152x864, 1024x768, 800x600, 640x480 |
| Preferred IN Resolution | 800x600, 1024x768, 1280x720, 1280x800, 1366x768, 1920x1080, 1920x1200 |
| OUT | 1080p@23.98/24/25/29.97/30/50/59.94/60Hz, 1080i@50/59.94/60, 720p@25/29.97/30/50/59.94/60 800x600, 1024x768, 1280x800, 1280x1024, 1366x768, 1400x1050, 1600x900, 1600x1200, 1680x1050, 1920x1200 |
| Color Space | YUV, RGB |
| Chroma Subsampling | 4:4:4, 4:2:2 |
| Color depth | 8-bit, 10-bit, 12-bit |

Audio

| | |
|-------------|--|
| Analog IN | 3.5mm stereo jack, -10 dBu nominal input |
| Analog OUT | Balanced, +4 dBu nominal analog output. Max output +18 dBu (only from 2Ch PCM sources) |
| 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 |
| Sample Rate | 32kHz, 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz |
| Bit rate | up to 24-bit |

Distance

| | | |
|--------------|-----------------|---------------|
| HDMI @ 1080p | up to 10 meters | up to 30 feet |
|--------------|-----------------|---------------|

Signal

| | |
|-----------|--------------------------------------|
| Bandwidth | 6.75 Gbps |
| CEC | |
| HDCP | Switchable - Compliant/Non-compliant |

Temperature

| | | |
|-----------|--------------------------|---------------|
| Operating | 0°C to 50°C | 32°F to 122°F |
| Storage | -20°C to 60°C | -4°F to 140°F |
| Humidity | 20 to 90% non-condensing | |

Power

| | |
|-------------|--|
| Consumption | 10.4W |
| Supply | Input: AC100-240V ~ 50/60Hz 0.5A Output: DC 5V/3.6A |

Dimension

| | | |
|-----------|---------------------|-----------------------|
| H x W x D | 38 x 127 x 102 (mm) | 1.5 x 5 x 4.02 (inch) |
|-----------|---------------------|-----------------------|

Weight

| | | |
|--------|---------|----------|
| Device | 0.27 kg | 0.60 lbs |
|--------|---------|----------|

Certification

| | |
|--------------|-------------------------|
| Product | CE, FCC |
| Power Supply | CE, FCC, RoHS, RCM, TUV |

Safety Information

Safeguards



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



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



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



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, Inc 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>