

## User Manual

# 2x4 HDMI Distribution Amplifier/Switcher AT-HD-V214





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## INTRODUCTION

Congratulations on your purchase of the AT-HD-V214 Distribution Amplifier with digital audio. Your satisfaction is very important to us. Our series of HDMI Switchers and Splitters are designed to make the use of your HDTV equipment more comfortable, productive and affordable.

Atlona's AT-HD-V214 is a 2x4 HDMI Distributor Amplifier/Switcher features 2 HDMI inputs and pre-emphasized 4 HDMI outputs. This switcher supports full data rates as well as resolutions up to 1080p and PC resolution up to (1920 x 1200). Control is provided via Front panel buttons, IR remote control or RS-232. An RS-232 interface is provided for interfacing with a third party control system. Atlona's distribution amplifier is the perfect device for allowing users to connect any digital video source, such as: (DVD, Satellite, Cable Box, PC, Xbox, PS3 and more) to multiple displays. The AT-HD-V214 is basically a 1x4 hdmi splitter with a 2 x input switcher built-in. When user will switch between inputs, all the outputs will change accordingly, they all will either show input # 1 or input # 1

## PACKAGE CONTENTS

- Main unit AT-HD-V214
- User's Manual
- IR Remote Control
- 19 inch Rack Ears
- IR Extender receiver
- RS232 Cable and basic software to control the switch though the PC
- Power Supply 12VDC, (universal 100/230V)

## FEATURES

- Supports 2x HDMI digital inputs which can be switched to 4x HDMI monitors
- Support HDMI/DVI high definition resolutions up to 1080p
- Supporting signal speeds of up to 6.75 Gbps
- Supports wide range of PC resolutions from XGA to WUXGA (640 x 480 to 1920x1200)
- Compatible with all HDMI sources and displays, including commercial LED pannels
- Supported Digital Video TMDS formats in Deep Color 12bits
- Various User controls:
  - RS232
  - Manual controlled by Front Panel button
  - IR remote control



## SPECIFICATIONS

Type of Switcher	2 HDMI inputs to 4 HDMI outputs
Input Signals	Video (TMDS) 0.5~1.0Vpp, DDC 5Vpp
Signal Supports	HDMI and DVI (with hdmi to dvi adapter)
Supported Resolutions	1920x1200 or 1080p
Audio Supported	DTS-HD Master Audio, Dolby True -HD & Dolby Digital Plus
Video Supported	RGB/YCBCR: 24/30/36-bits YCBCR: 8/10/12/16/20/24-bits
Double data rate interface for RGB/YCBCR	12/15/18-bits
Controls	IR, buttons selection on the front panel & RS232
Data Rates	250Mbps to 6.75Gbps
IR Extender Distance	up to 1000ft, allows users to control the switch from as far as 1000ft away
Safety Approvals	CE, FCC and RoHs
Power Supply	DC12V (consumption 400mA Max) (Universal 50/60Hz, 100/230V)

## PANEL DESCRIPTION

### 1. Front Panel



- 1. POWER ON SWITCH.** The power switch turns the unit on and off. The LED will illuminate red to indicate that the switcher is ON and is receiving power
- 2. INPUT SOURCES STATUS DISPLAY.** 2 Input sources 1 to 2 LED illuminate blue to indicate that a video source is present on that input.
- 3. OUTPUT SOURCES STATUS DISPLAY.** Output Channel 1 though 4 show on LED display.
- 4. OUTPUT CHANNEL DISPLAY.** A separate output-1 and 2 source channel select displays are provided for each destination. Select sources are 1-HDMI or 2-HDMI
- 5. SOURCES SELECT BUTTONS.** A separate input 1 and 2 source select buttons are provided for each destination.
- 6. IR SENSOR.** The IR sensor receives IR commands from the supplied remote control.
- 7. 9 INCH Rack Ears.** 19 inch Rack Ears (pair)

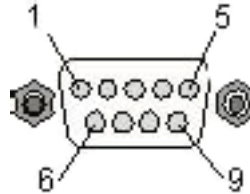
## 2. Rear Panel



1. **DC POWER INLET.** Power Input: 12VDC
2. **IR EXTENDER CONTROL.** Support one of IR Extender' extend distance maximum 300 Meters
3. **RS232 CONNECTION.** RS232 Remote: DB-9Pin Female connector. RS232 control via this DB-9Pin Female connector for serial RS-232 control.
4. **VIDEO INPUTS:** HDMI Input 1-2. HDMI digital video/audio connector (Female)
5. **VIDEO OUTPUTS:** HDMI Outputs 1-16. HDMI digital video/audio connector (Female)

## RS-232 SERIAL INTERFACE

### 1. RS-232 SERIAL INTERFACE CONNECT a PC or CONTROL SYSTEM



Pin	RS-232	Definition
1	-	Not used
2	TX	Transmitter
3	RX	Receiver
4	-	Not Used
5	GND	Ground
6	-	Not used
7	-	Not used
8	-	Not used
9	-	Not used

### 2. RS232

This Atlona switcher can be controlled via RS-232. The serial communication parameters are 9600 baud, 8 bit, No Parity and 1 stop bit - this is often referred to as 9600 8N1. When the unit recognizes a complete command it will perform the requested action - there is no delimiter character required. The unit does not send out a message when a value is changed from the front panel or by IR control. If the unit needs to be controlled via the front panel in addition to the RS232 control, you should regularly poll the unit status to ensure the control system accurately reflects the current settings.

### 3. PROTOCOL COMMANDS

To Switch Inputs to Outputs:

**SBI0X00Y** - Where X is Output Number (1-1) and Y is Number (1-2)

Unit will respond with:

**SBUD0X0Y** - Where X is Output Number (1-1) and Y is Input Number (1-2)

Example : Send Input 2 to Output 1

**SBUD0201** -SendSBI02001-Rcvd

## RS-232 PROTOCOL COMMANDS

**Note:** Turning the unit's Power (Off) over RS232 will distinguish the LED display leaving only the Power Switch LED on. While the unit is turned off by RS232 it will continue to accept and act upon switching commands. For example, if the unit is in the off mode (via RS232) and you send a command to switch an input to an output, that route will complete and the video and audio will now appear on that channel only. The front panel LED for that particular output will also show the input selected (for that single output channel only). The remaining LED's will remain off and video and audio outputs muted. The unit will still return status and change messages in response to commands sent while in Power (Off) state. A hard reset command (SBALLRST) will return the unit to normal operation and also unlock the front panel.

### Power Off mode.

**SBSYSMOF** - Put system into Standby (Soft Power Off)

**SBSYSMON** - Bring unit out of Standby (Soft Power On)

Unit will respond with:

**SBALOFAK** - Unit is in Standby

**SBALONAK** - Unit is no longer in Standby

Example: Put Unit in Standby (Soft Power)

**SBSYSMOF** - Send

**SBALOFAK** - Rcvd

### FRONT PANEL LOCK

Note: Hard resetting the unit will unlock the Front Panel controls.

**SBSYSMLK** - When front panel is locked, changes can only be made by RS232

**SBSYSMUK** - Front Panel Unlock

Unit will respond with:

**SBSYSLOK** - Front Panel has been Locked

**SBSYSULK** - Front Panel has been Unlocked

Example : Lock Front Panel Buttons

**SBSYSMLK** - SendSBSYSLOK - Rcvd

### UNIT RESET

**SBALLRST** - Reset every output to Input 1

Unit will respond with:

**SBRSTACK** - Unit has reset each Output to Input 1

Example: Reset all outputs to Input 1

**SBALLRST** - Send

**SBRSTACK** - Rcvd



## APPLICATIONS



## INSTALLATION

### CONTROL PORTS :

1. IR EXT - IR Extend with Distance 1000ft Maximum
2. RS-232 - RS-232 Serial port

### INPUT SIGNALS:

1. HDMI - HDMI input connector with fix screw
2. HDMI - HDMI input connector with fix screw

### OUTPUT SIGNALS:

1. HDMI - HDMI output connector with fix screw
2. HDMI - HDMI output connector with fix screw
3. HDMI - HDMI output connector with fix screw
4. HDMI - HDMI output connector with fix screw



## 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 AT-HD-V214. 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.

## WARRANTY

### Limited Warranty

Atlona Technologies warrants that (a) its products (the AT-HD-V214) will perform substantially in accordance with the accompanying written materials for a period of 3 years from the date of receipt and (b) that the product will be free from defects in materials and workmanship under normal use and service for a period of 3 years. In the event applicable law imposes any implied warranties, the implied warranty period is limited to 3 years from the date of receipt. Some jurisdictions do not allow such limitations on duration of an implied warranty, so the above limitation may not apply to customers that fall within those areas.

### Customer Remedies

Atlona Technologies' and its suppliers' entire liability and Customer's exclusive remedy shall be, at Atlona Technologies' decision, either return of the price paid for the product, repair, or replacement of the product that does not meet this Limited Warranty and which is returned to Atlona Technologies with a copy of the Customer's receipt. This Limited Warranty is void if failure of the product has resulted from accident, abuse, misapplication, or natural occurrence. In example but not limited to: power surges (electrical storms, local power outage), dropping the product (or items on the product), contact with fluids, and physical misconduct (i.e. kicking or punching). Any replacement product will be warranted for the remainder of the original warranty period.

### No other warranties

To the maximum extent permitted by applicable law, Atlona Technologies and its suppliers disclaim all other warranties, either expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, with regard to the product and any related written materials. This Limited Warranty gives customer specific legal rights. Customers may have other rights depending on the jurisdiction.

### No liability for damages

To the maximum extent permitted by applicable law, in no event shall Atlona Technologies or its suppliers be liable for any damages arising out of the use of or inability to use this product, even if Atlona Technologies has been advised of the possibility of such damages. Such damages include but are not limited to: special, incidental, consequential, or indirect damages for personal injury, loss of business profits, business interruption, loss of business information, or any other pecuniary loss. Atlona Technologies' and its suppliers' entire liability under any provision of this agreement shall be limited to the amount actually paid by you for the product. Some Jurisdictions do not allow the exclusion or limitation of liability for consequential or incidental damage. The above limitations may not apply to you in such jurisdictional cases.

## **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>