ATLONA
A division of HR

4K / HDR
Five-Input HDMI Switcher
with HDMI and HDBaseT Outputs

Application Programming Interface

AT-HDR-SW-52ED

Atlona Manuals
Switchers

Version Information

Version	Release Date	Notes
1	Jul 2023	Initial release

Commands

General

This document provides an alphabetical list of commands available for the AT-HDR-SW-52ED. Commands are *not* case-sensitive. If the command fails or is entered incorrectly, then `Command FAILED:(CommandName)` is returned. Commands can be sent using RS-232 or Telnet. There should be a 500 millisecond delay between each command sent to the unit. The default port for Telnet is 23.

IMPORTANT: Each command is terminated with a carriage-return (0x0d) and the feedback is terminated with a carriage-return and line-feed (0x0a).

Command	Description
AudioSrc	Sets the audio source for the optical port on the unit.
AutoSW	Enables or disables auto switching between input ports.
Blink	Enables or disables blinking of the **POWER** LED indicator on the front panel.
Broadcast	Enables or disables broadcast mode.
ButtonPower	Assigns the **POWER** button to the specified control protocol.
ButtonVol	Assigns the **VOLUME** buttons to the specified control protocol.
CliIPAddr	Specifies the IP address of the device to be controlled.
CliMode	Sets the IP login mode.
CliPass	Sets the login password for the device to be controlled.
CliPort	Specifies the port number of the device to be controlled.
CliUser	Sets the login username for the device to be controlled.
Cspara	Sets the baud rate, data bits, parity bit, and stop bits for the serial port
CtlType	Sets the control protocol used to communicate with the display device.
DispAutoPwr	Sets the state for auto display power control.
EDIDCopy	Saves the downstream EDID to the specified internal memory location on the unit.
HDCPSet	Set the HDCP reporting mode of the specified **HDMI** input port.
help	Displays the list of available commands.
help X	Display help for the specified command.
InputBroadcast	Sets the broadcast mode of the device.
InputStatus	Displays the status of the input as either a 0 or 1.
IPCFG	Displays the current network settings for the unit.
IPDHCP	Enables or disables DHCP mode on the unit.
IPLogin	Enables or disables login credentials when starting a Telnet session.
IPPort	Sets the Telnet listening port for the unit.
IPQuit	Closes the current Telnet session.
IPStatic	Sets the static IP address, subnet mask, and gateway for the unit.
IPTimeout	Sets the time interval of inactivity before the Telnet session is terminated.
IROff	Disables the IR receiver (window) on the unit.
IROn	Enables the IR receiver (window) on the unit.
Lock	Locks all the buttons on the front panel.
Mreset	Resets the unit to factory-default settings.
OutputStatus	Displays the status of the outputs as either a 0 or 1.
PWOFF	Execute this command to power-off the unit.
PWON	Execute this command to power-on the unit.
PWSTA	Displays the power state of the unit.

Commands

Command	Description
Reboot	Performs a soft reboot of the AT-HDR-SW-52ED.
RepCmdTime	Sets the number of times a command will be sent.
RepeatCmd	Enables / disables the RepCmdTime feature.
RHostName	Displays the hostname of the AT-HDR-SW-52ED.
RS232para	Sets the RS-232 setting of the HDBaseT output of the device.
RS232zone	Sends commands through the HDBaseT output.
ScalerMode	Enables or disables the scalers on the AT-HDR-SW-52ED.
SHostName	Sets the hostname of the AT-HDR-SW-52ED
Status	Displays which input is routed to which output.
System sta	Displays the status of the unit.
TrigCEC	Sends the specified command to the display using CEC.
TrigIP	Sends the specified command to the display over IP.
TrigRS	Sends the specified command to the display using RS-232.
Type	Displays the model of the unit.
Unlock	Unlocks the buttons on the front panel.
Version	Displays the current firmware version of the unit.
VOUT1	Increases / decreases the audio output volume.
VOUTMute	Mutes / unmutes the output volume for the specified output.
x1$	Enables or disables the **HDMI OUT** port.
x1AVx1	Routes the specified input to the specified output.
x2$	Enables or disables the **HDBaseT OUT** port.

AudioSrc

Sets the audio source for the optical port on the unit. HDMI audio is de-embedded and heard on the specified output. Specify the `sta` argument to display the current setting.

Syntax
AudioSrc X

Parameter	Description	Range
X	Value	local, remote, sta

Example
`AudioSrc local`

Feedback
`AUDIOSRC LOCAL`

AutoSW

Enables or disables auto switching between input ports. Specify the `sta` argument to display the current setting.

Syntax
AutoSW X

Parameter	Description	Range
X	Value	on, off, sta

Example
`AutoSW on`

Blink

Enables or disables blinking of the **POWER** LED indicator on the front panel. When set to `on`, the **POWER** LED indicator button will flash, alternating between blue and red, and can be used to physically identify the unit on a network. The **POWER** LED indicator will flash until the `Blink off` command is executed. `on` = enables blinking; `off` = disables blinking. Specify the `sta` argument to display the current setting. The default setting is `off`.

Syntax
Blink X

Parameter	Description	Range
X	Value	on, off, sta

Example
`Blink on`

Feedback
`Blink on`

Broadcast

Enables or disables broadcast mode. By default, broadcast mode is set to `on`. When set to `on`, any system changes will be broadcast to the web server and on the control system (if connected), via TCP/IP and RS-232. To separate control between the web server and Telnet/RS-232, set this feature to `Off`. Command queries such as IPCFG and Type will only return information to the requester. Specify the `sta` argument to display the current setting.

Syntax
Broadcast X

Parameter	Description	Range
X	Value	on, off, sta

Example
`Broadcast on`

Feedback
`Broadcast on`

ButtonPower

Assigns the **POWER** button to the specified control protocol. By default, the **POWER** button will toggle the state of the AT-HDR-SW-52ED between power on and standby. To assign the **POWER** button to control the power state of a sink device, set this value to the desired protocol. The default setting is `none`. Specify the `sta` argument to display the current setting.

Syntax
ButtonPower X

Parameter	Description	Range
X	Value	none, cec, rs-232, ip,sta

Example
`ButtonPower cec`

Feedback
`BUTTONPOWER CEC`

ButtonVol

Assigns the **VOLUME** buttons to the specified control protocol. By default, the **VOLUME** buttons control the output amplitude of the **L/R** audio port. To assign the **VOLUME** button to control the volume of a sink device, set this value to the desired protocol. The default setting is `aud`. Specify the `sta` argument to display the current setting.

Syntax
ButtonVol X

Parameter	Description	Range
X	Value	aud, cec, rs-232, ip, sta

Example
```
ButtonVol CEC
```

Feedback
```
BUTTONVOL CEC
```

CliIPAddr

Specifies the IP address of the device to be controlled. The IP address must be expressed using dot-decimal notation. Specify the `sta` argument to display the IP address of the connected device.

Syntax
CliIPAddr X

Parameter	Description	Range
X	Value	IP address

Example
```
CliIPAddr 192.168.10.20
```

Feedback
```
CLIIPADDR 192.168.10.20
```

CliMode

Sets the IP login mode. The default setting is `non-login`. Set this value to login to prompt for login credentials. Specify the `sta` argument to display the current setting.

Syntax
CliMode X

Parameter	Description	Range
X	Value	IP address

Example
```
CliMode login
```

Feedback
```
CLIMODE LOGIN
```

CliPass

Sets the login password for the device to be controlled.

Syntax
CliPass X

Parameter	Description	Range
X	Password	20 characters (max.)

Example
`CliPass Fl0ti11a`

Feedback
`CLIPASS Fl0ti11a`

CliPort

Specifies the port number of the device to be controlled. Specify the `sta` argument to display the current setting.

Syntax
CliPort X

Parameter	Description	Range
X	Port number	0 ... 65535, sta

Example
`CliPort 23`

Feedback
`CLIPORT 23`

CliUser

Sets the login username for the device to be controlled.

Syntax
CliUser X

Parameter	Description	Range
X	Username	20 characters (max.)

Example
`CliUser Bigboss`

Feedback
`CLIUSER Bigboss`

Cspara

Sets the baud rate, data bits, parity bit, and stop bits for the (console) **RS-232** port. Each argument must be separated by a comma; no spaces are permitted. Brackets must be specified when executing this command. Specify the `sta` argument to display the current settings.

Syntax
Cspara[W,X,Y,Z]

Parameter	Description	Range
W	Baud rate	2400, 4800, 9600, 19200, 38400, 57600, 115200
X	Data bits	7, 8
Y	Parity bit	0, 1, 2 (0 = None, 1 = Odd, 2 = Even)
Z	Stop bits	1, 2

Example

```
Cspara[9600,8,0,1]
Cspara sta
```

Feedback

```
CSPARA[9600,8,0,1]
CSPARA[9600,8,0,1]
```

CtlType

Sets the control protocol used to communicate with the display device. Specify the `sta` argument to display the current setting.

Syntax
CtlType X

Parameter	Description	Range
X	Value	cec, rs-232, ip, sta

Example

```
CtlType cec
```

Feedback

```
CTLTYPE CEC
```

DispAutoPwr

Sets the state for auto display power control. Set to `on` to allow the AT-HDR-SW-52ED to send the power-on command to the display when an A/V signal is detected. When the AV signal is no longer present, the AT-HDR-SW-52ED will send the power-off command to the display. If this feature is not desired, then set to `off`. The default setting is `on`. If the AT-HDR-SW-52ED is placed in Matrix Mode, then this value will automatically be set to `off`. Specify the `sta` argument to display the current setting.

Syntax
DispAutoPwr X

Parameter	Description	Range
X	Value	on, off, sta

Example
`DispAutoPwr off`

Feedback
`DISPAUTOPWR OFF`

EDIDCopy

Copies the downstream EDID from either the **HDMI OUT** or **HDBaseT OUT** port and stores the result in the specified memory location. If no device is detected on the output, then the message `Error copying EDID, please check the specified output for connection` will be returned.

Syntax
EDIDCopyX Y

Parameter	Description	Range
X	Output	1, 2 (1 = HDMI OUT, 2 = HDBaseT OUT)
Y	Memory location	1 ... 8

Example
`EDIDCopy1 3`

Feedback
`EDIDCOPY1 3`

HDCPSet

Set the HDCP reporting mode of the specified **HDMI** input port. Some computers will send HDCP content if an HDCP-compliant display is detected. Setting this value to off, will prevent the source from negotiating HDCP with any compliant sink devices. Setting this value to on will enable HDCP negotiation. Specify the sta argument to display the current setting.

Syntax
HDCPSetX Y

Parameter	Description	Range
X	HDMI input	1 ... 5
Y	Value	on, off, sta

Example

```
HDCPSet2 off
```

Feedback

```
HDCPSET2 OFF
```

help

Displays the list of available commands. To obtain help on a specific command, enter the help command followed by the name of the command.

Syntax
help

This command does not require any parameters

Example

```
help
```

Feedback

```
User Command List
-----------------
AudioSrc
AutoSW
Blink
...
...
```

help X

Displays help for the specified command.

Syntax
help X

Parameter	Description	Range
X	Command	Command

Example
```
help unlock
```

Feedback
```
Unlock. Unlocks all the buttons on the
front panel.
```

InputBroadcast

Sets the broadcast mode of the device. This option determines whether or not system changes are announced over TCP/IP and RS-232 connections to any listening devices.

Syntax
InputBroadcast X

Parameter	Description	Range
X	Value	on, off, sta

Example
```
InputBroadcast off
```

Feedback
```
INPUTBROADCAST OFF
```

InputStatus

Event-driven API command. Feedback indicates if a source device is present, based on both the HDMI 5V and TMDS lines. If a source is detected on the input, then a `1` will be returned. Inputs with no source connected will return a `0`.

Syntax
InputStatus X

This command does not require any parameters

If a PC is connected to an HDMI input, then the following is true:

a. The control system, using either RS-232 or Telnet, will receive `InputStatus 10000`.

b. Disconnection of the PC will return `InputStatus 00000`.

User polling can be performed by using the following: `InputStatus`.

Example
```
InputStatus
```

Feedback
```
INPUTSTATUS 10100  // inputs 1 and 3
                      have sources present
```

IPCFG

Displays the current network settings for the unit.

Syntax
IPCFG

This command does not require any parameters

Example
```
IPCFG
```

Feedback
```
IP ADDR: 10.20.20.38
NETMASK: 255.255.255.0
GATEWAY: 10.20.20.1
IP PORT: 23
```

IPDHCP

Enables or disables DHCP mode on the unit. Setting this value to `off` disables DHCP mode. The default setting is `on`. If this feature is disabled, then a static IP address must be specified for the unit. Refer to the IPStatic command for more information. Specify the `sta` argument to display the current setting.

Syntax
IPDHCP X

Parameter	Description	Range
X	Value	on, off, sta

Example
```
IPDHCP off
```

Feedback
```
IPDHCP OFF
```

IPLogin

Enables or disables the use of login credentials when starting a Telnet session on the unit. Setting this value to `on` will prompt for both the username and password. Uses the same credentials as the web server. If no login credentials are required, set this value to `off`. Specify the `sta` argument to display the current setting.

Syntax
IPLogin X

Parameter	Description	Range
X	Value	on, off, sta

Example
```
IPLogin off
```

Feedback
```
IPLOGIN OFF
```

IPPort

Sets the Telnet listening port for the unit. It should be noted that port numbers range from 0 to 65536. However, port numbers 0 through 1024 are reserved for privileged services and are designated as well-known ports. Consult an IT administrator on port use, if necessary. Specify the `sta` argument to display the current setting.

Syntax
IPPort X

Parameter	Description	Range
X	Port	0 ... 65535, sta

Example
`IPPort 23`

Feedback
`IPPORT 23`

IPQuit

Closes the current Telnet session. *This command will only function over a Telnet session*. If this command is entered within an RS-232 session, then `Command FAILED` will be returned.

Syntax
IPQuit

This command does not require any parameters

Example
`IPQuit`

Feedback
`Connection to host lost.`

IPStatic

Sets the static IP address, subnet mask, and gateway (router) address of the AT-HDR-SW-52ED. If the AT-HDR-SW-52ED is in DHCP mode, executing this command will automatically switch the unit to use the specified static IP address information. Each argument must be expressed in dot-decimal notation and separated by a space. The default static IP address is `192.168.1.254`.

Syntax
IPStatic X Y Z

Parameter	Description	Range
X	IP address	0 ... 255 (per octet)
Y	Subnet mask	0 ... 255 (per octet)
Z	Gateway (router)	0 ... 255 (per octet)

Example

```
IPStatic 192.168.1.112 255.255.255.0 192.168.1.1
```

Feedback

```
IPSTATIC 192.168.1.112 255.255.255.0 192.168.1.1
```

IPTimeout

Specifies the time interval of inactivity before the Telnet session is automatically closed. Set this value to `0` to specify no time out interval. Specify the `sta` argument to display the current setting.

Syntax
IPTimeout X

Parameter	Description	Range
X	Interval (in seconds)	0 ... 60000, sta

Example

```
IPTimeout 300
```

Feedback

```
IPTIMEOUT 300
```

IROff

Disables the IR receiver (window) on the unit. By default, the receiver is disabled.

Syntax
IROff

This command does not require any parameters

Example
`IROff`

Feedback
`IROFF`

IROn

Enables the IR receiver (window) on the unit. By default, the receiver is disabled.

Syntax
IROn

This command does not require any parameters

Example
`IROn`

Feedback
`IRON`

Lock

Locks all the buttons on the front panel. This feature is useful when the unit is installed in a rack environment or other remote location, to prevent unauthorized tampering or accidental pressing of the front-panel buttons. Also refer to the Unlock command.

Syntax
Lock

This command does not require any parameters

Example
`Lock`

Feedback
`LOCK`

Mreset

Resets the unit to factory-default settings.

Syntax
Mreset

This command does not require any parameters

Example
`Mreset`

Feedback
`MRESET`

OutputStatus

Event-driven API command. Feedback indicates if a sink device is present, based on the state of both the HDMI HPD and TMDS signals. If a sink is detected on an output, then a 1 will be returned. Outputs with no sink connected will return a 0.

For example, the AT-HDR-SW-52ED has one HDMI output and one HDBaseT output, for a total of two outputs. Therefore, if all outputs were connected to a sink device, then the OutputStatus command would be formatted as:
`OutputStatus 11`

Syntax
OutputStatus

This command does not require any parameters

Example

If the local HDMI display is disconnected from the AT-HDR-SW-52ED, and the HDBT port is used, then the following is true:

a. The control system, using either RS-232 or Telnet, will receive `OutputStatus 01`. The first digit in the output *always* indicates the HDMI output.

b. Reconnecting the display will return `OutputStatus 11`.

If all displays are powered-off using CEC, the following is true:

a. The control system, using either RS-232 or Telnet, will receive `OutputStatus 00`. Note that some displays may only mute video, while the HDMI HPD line is kept high.

PWOFF

Executing this command will power off the AT-HDR-SW-52ED. Execute the PWON command to power on the unit.

Syntax
PWOFF

This command does not require any parameters

Example
PWOFF

Feedback
PWOFF

PWON

Executing this command will power on the AT-HDR-SW-52ED. Execute the PWOFF command to power off the unit.

Syntax
PWON

This command does not require any parameters

Example
PWON

Feedback
PWON

PWSTA

Displays the current power state of the AT-HDR-SW-52ED.

Syntax
PWSTA

This command does not require any parameters

Example
PWSTA

Feedback
PWON

Reboot

Performs a soft reboot of the AT-HDR-SW-52ED.

Syntax
Reboot

This command does not require any parameters

Example
`Reboot`

Feedback
`REBOOT`

RepCmdTime

Sets the number of times a command will be sent. This may be required in systems where a command must be transmitted more than once, before an acknowledgement message is received. Specify the `sta` argument to display the current setting.

Syntax
RepCmdTime X

Parameter	Description	Range
X	Value	2 .. 4, sta

Example
`RepCmdTime 2`

Feedback
`REPCMDTIME 2`

RepeatCmd

Enables / disables the RepCmdTime feature. Specify the `sta` argument to display the current setting.

Syntax
RepeatCmd X

Parameter	Description	Range
X	Value	on, off, sta

Example
`RepeatCmd on`

Feedback
`REPEATCMD ON`

RHostName

Displays the hostname of the unit. Execute the SHostName command to set the hostname.

Syntax
RHostName

This command does not require any parameters

Example
`RHostName`

Feedback
`RHostName SW52ED-060798`

RS232para

Sets the RS-232 setting of the HDBaseT output of the device. Each argument must be separated by a comma; no spaces are permitted. Brackets must be specified when executing this command.

Syntax
RS232para[W,X,Y,Z]

Parameter	Description	Range
W	Baud rate	2400, 4800, 9600, 19200, 38400, 57600, 115200
X	Data bits	7, 8
Y	Parity bit	0, 1, 2 (0 = None, 1 = Odd, 2 = Even)
Z	Stop bits	1, 2

Example
`RS232para[9600,8,0,1]`

Feedback
`RS232PARA[9600,8,0,1]`

RS232zone

Sends commands through the HDBaseT output. Refer to the User Manual of the display device for a list of available commands. The command string argument must be enclosed within brackets. The command line must not contain any spaces.

Syntax
RS232zone[X]

Parameter	Description	Range
X	Command string	ASCII only

Example
`RS232zone[command]`

Feedback
`RS232ZONE[command]`

ScalerMode

Enables or disables the scaler on the AT-HDR-SW-52ED. Setting this value to `on` will downscale 4K content to 1080p when the output device detects a 1080p display on the output. When set to `off`, the output resolution / timing will be the same as the input source. The default setting is `off`. Specify the `sta` argument to display the current setting.

Syntax
ScalerModeX Y

Parameter	Description	Range
X	Output	1, 2 (1 = HDMI OUT, 2 = HDBaseT OUT)
Y	State	on, off, sta

Example
`ScalerMode1 on`

Feedback
`SCALERMODE1 ON`

SHostName

Sets the hostname of the unit. Names exceeding 15 characters in length will be truncated to characters 1 through 15. Execute the RHostName command to display the hostname.

Syntax
SHostName

Parameter	Description	Range
X	Hostname	15 characters (max.)

Example
`SHostName`

Feedback
`SHOSTNAME SW-52ED-ConfRm`

Status

Displays which input is routed to which output. Result is returned as `xYavxZ`, where `Y` is the input and `Z` is the output.

Syntax
Status

This command does not require any parameters

Example
`Status`

Feedback
`X1AVX1,X1AVX2`

System sta

Displays the status of the unit.

Syntax
System sta

This command does not require any parameters

Example

```
System sta
```

Feedback

```
Model: AT-HDR-SW-52ED
MAC Addr: b8-98-b0-06-07-98
Address Type: DHCP
IP Addr: 10.20.20.38
Netmask: 255.255.255.0
Gateway: 10.20.20.1
HTTP Port: 80
Telnet Port: 23
Firmware: 1.0.0
On/Up Time <dd HH:mm:ss>: 00 13:32:19
Hostname: SW52ED-060798
```

TrigCEC

Sends the specified command to the display using CEC. Note that CEC is an HDMI protocol. Therefore, HDBaseT outputs will trigger CEC commands from the connected receiver. Do not add a space between the command and the first argument.

Syntax
TrigCECX Y

Parameter	Description	Range
X	Output	1, 2
Y	Command	on, off, vol+, vol-, mute, input

Example

```
TrigCEC1 vol+
```

Feedback

```
TRIGCEC1 VOL+
```

TrigIP

Sends the specified command to the display over IP. Do not add a space between the command and the first argument.

Syntax
TrigIPX Y

Parameter	Description	Range
X	Output	1, 2
Y	Command	on, off, vol+, vol-, mute_on, mute_off

Example
`TrigIP1 vol+`

Feedback
`TRIGIP1 VOL+`

TrigRS

Sends the specified command to the display using RS-232. Do not add a space between the command and the first argument.

Syntax
TrigRSX Y

Parameter	Description	Range
X	Output	1, 2
Y	Command	on, off, vol+, vol-, mute_on, mute_off

Example
`TrigRS1 vol+`

Feedback
`TRIGRS1 VOL+`

Type

Displays the model information of the unit.

Syntax
Type

This command does not require any parameters

Example
`Type`

Feedback
`AT-HDR-SW-52ED`

Unlock

Unlocks the buttons on the front panel. Also refer to the Lock command.

Syntax
Unlock

This command does not require any parameters

Example
`Unlock`

Feedback
`Unlock`

Version

Displays the current firmware version of the unit.

Syntax
Version

This command does not require any parameters

Example
`Version`

Feedback
`V1.0.0`

VOUT1

Increases / decreases the audio output volume. In addition to specifying an integer value, the + and - arguments can be used to increase or decrease the volume level by 1. Specify the `sta` argument to display the current setting.

Syntax
VOUT1 X

Parameter	Description	Range
X	Value	-90 ... 10, +, -, sta

Example
`VOUT1 -10`

Feedback
`VOUT1 -10`

VOUTMute

Mutes / unmutes the output volume for the specified output. Do not include a space between the command and the first argument. Specify the `sta` argument to display the current setting.

Syntax
VOUTMuteX Y

Parameter	Description	Range
X	Output	1, 2, 3, 4 (1 = analog audio, 2 = S/PDIF, 3 = HDMI, 4 = HDBaseT)
Y	Value	on, off, sta

Example
`VOUTMute2 on`

Feedback
`VOUTMUTE2 ON`

x1$

Enables or disables the **HDMI OUT** port. Set this value to `off` to disable the port. Specify the `sta` argument to display the current setting.

Syntax
x1$ X

Parameter	Description	Range
X	Value	on, off, sta

Example
`x1$ off`

Feedback
`X1$ OFF`

x1AVx1

Routes the specified input to the specified output. If the system is in Matrix Mode, then 1 or 2 can be specified as output flags.

Syntax
xYAVxZ

Parameter	Description	Range
Y	HDMI input	1 ... 5
Z	Output	1, 2 (1 = HDMI OUT, 2 = HDBaseT OUT)

Example
`x1AVx2`

Feedback
`X1AVX2`

x2$

Enables or disables the **HDBaseT OUT** port. Set this value to `off` to disable the port. Specify the `sta` argument to display the current setting.

Syntax
x2$ X

Parameter	Description	Range
X	Value	on, off, sta

Example

```
x2$ off
```

Feedback

```
X2$ OFF
```