



4K / HDR 5x2 HDMI Matrix Switcher

Application Programming Interface

AT-HDR-SW-52

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-52. 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
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.
Cspara	Sets the baud rate, data bits, parity bit, and stop bits for the serial port
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.
Reboot	Performs a soft reboot of the AT-HDR-SW-52.
RHostName	Displays the hostname of the AT-HDR-SW-52.
ScalerMode	Enables or disables the scalers on the AT-HDR-SW-52.
SHostName	Sets the hostname of the AT-HDR-SW-52
Status	Displays which input is routed to which output.
System sta	Displays the status of the unit.
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.

Commands

Command	Description
VOUTMute	Mutes / unmutes the output volume for the specified output.
x1\$	Enables or disables the HDMI OUT 1 port.
x1AVx1	Routes the specified input to the specified output.
x2\$	Enables or disables the HDMI OUT 2 port.

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
```

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]
```

EDIDCopy

Copies the downstream EDID from either **HDMI 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 1, 2 = HDMI OUT 2)
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
-----
AutoSW
Blink
Broadcast
...
...
```

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:

- The control system, using either RS-232 or Telnet, will receive `InputStatus 10000`.
- 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-52. If the AT-HDR-SW-52 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	Feedback
IROff	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	Feedback
IROn	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	Feedback
Lock	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-52 has two HDMI 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 display is disconnected from **HDMI OUT 1**, and the **HDMI OUT 2** 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`.

PWOFF

Executing this command will power off the AT-HDR-SW-52. 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-52. 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-52.

Syntax
PWSTA

This command does not require any parameters

Example

PWSTA

Feedback

PWON

Reboot

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

Syntax

```
Reboot
```

This command does not require any parameters

Example

```
Reboot
```

Feedback

```
REBOOT
```

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 SW52-060798
```

ScalerMode

Enables or disables the scaler on the AT-HDR-SW-52. 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 1, 2 = HDMI OUT 2)
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-52-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-52
MAC Addr: b8-98-b0-07-44-31
Address Type: DHCP
IP Addr: 10.20.20.39
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>: 06 23:53:46
Hostname: SW52-074431
```

Type

Displays the model information of the unit.

Syntax
Type

This command does not require any parameters

Example

```
Type
```

Feedback

```
AT-HDR-SW-52
```

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 OUT 1, 4 = HDMI OUT 2)
Y	Value	on, off, sta

Example

```
VOUtmute2 on
```

Feedback

```
VOUtmute2 ON
```

x1\$

Enables or disables the **HDMI OUT 1** port. Set this value to *on* to mute the port. Specify the *sta* argument to display the current setting.

Syntax

```
x1$ X
```

Parameter	Description	Range
X	Value	on, off, sta

Example

```
x1$ on
```

Feedback

```
X1$ ON
```

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 1, 2 = HDMI OUT 2)

Example

```
x1AVx2
```

Feedback

```
X1AVX2
```

x2\$

Enables or disables the **HDMI OUT 2** port. Set this value to `on` to mute the port. Specify the `sta` argument to display the current setting.

Syntax

```
x2$ X
```

Parameter	Description	Range
X	Value	on, off, sta

Example

```
x2$ on
```

Feedback

```
X2$ ON
```

