4K/UHD

Five-Input Universal Switcher

with Wireless Presentation Link

Application Programming Interface

2.0.0

AT-UHD-SW-510W

Atlona Manuals

Switchers

Version Information

Version	Release Date	Notes
1	1/18	Initial release
2	1/18	Added Display:Control:IP:Get and Display:Control:IP:Set commands
3	3/18	Added Zone:SendCmd command
4	5/18	Updated for 1.1.0
5	7/18	Updated for 1.1.1
6	10/18	Version 2.0.0; no new commands

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Introduction

The AT-UHD-SW-510W supports three different methods for accessing the API: Telnet, REST, and JSON-RPC over WebSockets. Commands can also be sent over Telnet for RS-232 control.

1. **Telnet**
   Command Line Interface (CLI) API and uses a specified set of arguments, as shown below. When using Telnet, the parameters must be provided in the specified order.

   group:subgroup:command [value_1] [value_2] [value_n]

2. **REST interface**
   HTTP-based commands are executed with the GET command, and responses are returned as JSON results in JSON-RPC format:

   http://<ip>/API?method=[method]&[key_1]=[value_1]&[key_2]=[value_2] ... &[key_n]=[value_n]

3. **JSON-RPC over WebSockets**
   This method allows the streaming of commands and events in both directions.

Examples

Telnet session

```
Audio:Volume:Increase 2
{“result”:{“volume”:-1,”success”:true}}
#
```

REST

```
http://192.168.11.39/API?method=Audio:Volume:Increase&increment=2
{
        “result”: {
                “volume”: -1,
                “success”: true
        },
        “jsonrpc”: “2.0”
}
```

Note that in both cases, the command syntax is the same. Parameter syntax will vary between the two protocols.

Commands

Audio

Command	Description
Audio:Mute:Get	Displays the muting state of the audio output
Audio:Mute:Set	Sets the muting state for HDMI or analog audio output
Audio:Volume:Decrease	Decreases the audio output level by the specified amount
Audio:Volume:Get	Displays the current audio output level
Audio:Volume:Increase	Increases the audio output level by the specified amount
Audio:Volume:Set	Sets the overall audio output level

Display

Command	Description
Display:BYOD:Kick	Removes (“kicks”) the BYOD user from the AT-UHD-SW-510W
Display:Control:IP:Get	Displays the IP address and port of the remote IP device
Display:Control:IP:Set	Sets the IP address and port of the remote IP device
Display:Get	Gets the state of the output display
Display:Input:Get	Displays the active input
Display:Input:HDCP:State:Get	Displays the HDCP input status
Display:Input:HDCP:State:Set	Sets the HDCP state of the specified input
Display:Input:Set	Sets the active input
Display:Input:Status:All:Get	Displays the connection state of all inputs
Display:Input:Status:Get	Displays the connection state of the specified input
Display:Matrix:Get	Displays the input for the specified output
Display:Matrix:Mode:Get	Displays the Matrix Mode state
Display:Matrix:Mode:Set	Enables or disables Matrix Mode
Display:Matrix:Set	Routes the specified input to the desired output
Display:Set	Turns the connected display on or off

Instruments

Command	Description
Instruments:Temperature:Get	Displays the internal temperature of the AT-UHD-SW-510W

Misc

Command	Description
Misc:Model:Get	Displays the model of AT-UHD-SW-510W
Misc:Version:Get	Displays the fimware version of the specified system
Misc:Versions:Get	Displays the firmware version of all systems

Moderator

Command	Description
Moderator:Enable:Get	Returns the status for Moderator mode
Moderator:Enable:Set	Enable or disable Moderator mode
Moderator:Kick	Kicks the specified BYOD device from the AT-UHD-SW-510W
Moderator:Show	Sets the specified BYOD device ID for casting

OSD

Command	Description
OSD:State:Get	Returns the display state of the OSD
OSD:State:Set	Enable or disables the OSD

Platform

Command	Description
Platform:Reset	Resets the AT-UHD-SW-510W to factory-default settings
Platform:Restart	Reboots the AT-UHD-SW-510W
Platform:Shutdown	Shuts down (powers-off) the AT-UHD-SW-510W

Relay

Command	Description
Relay:State:Get	Displays the state of the relay
Relay:State:Set	Sets the relay state

Zone

Command	Description
Zone:PortParams	Displays the settings for the specified zone
Zone:PortSetup	Sets the RS-232 settings for the specified zone
Zone:SendCmd	Sends a command to the specified zone

Audio:Mute:Get

Displays the muting status.

Syntax
Audio:Mute:Get

This command does not require any parameters

Example
http://<ip>/API?method=Audio:Mute:Get

Returns

```
{
        “result”: {
                “muteanalog”: true,
                “mutehdmi”: true
        },
        “jsonrpc”: “2.0”
}
```

Audio:Mute:Set

Sets the muting for the HDMI or analog audio.

Syntax
Audio:Mute:Set

Parameter	Description	Range
hdmi	HDMI audio muting	true, false
analog	Analog audio muting	true, false

Example
http://<ip>/API?method=Audio:Mute:Set&hdmi=true

Returns

```
{
        “result”: {
                “success”: true
        },
        “jsonrpc”: “2.0”
}
```

Audio:Volume:Decrease

Decreases the output volume by a specified amount. Values are measured in decibels. The overall maximum and minimum audio output levels are 0 and -80, respectively.

Syntax
Audio:Volume:Decrease

Parameter	Description	Range
increment	Amount to decrease audio (in dB)	-80 ... 0

Example
http://<ip>/API?method=Audio:Volume:Decrease&increment=5

Returns

```
{
        “result”: {
                “volume”: -3,
                “success”: true
        },
        “jsonrpc”: “2.0”
}
```

Audio:Volume:Get

Displays the current audio output level in decibels.

Syntax
Audio:Volume:Get

This command does not require any parameters

Example
http://<ip>/API?method=Audio:Volume:Get

Returns

```
{
        “result”: {
                “volume”: -3
        },
        “jsonrpc”: “2.0”
}
```

Audio:Volume:Increase

Increases the output volume by a specified amount. Values are measured in decibels. The overall maximum and minimum audio output levels are 0 and -80, respectively.

Syntax
Audio:Volume:Increase incDB

Parameter	Description	Range
incDB	Amount to increase audio (in dB)	-80 ... 0

Example
http://<ip>/API?method=Audio:Volume:Increase&increment=2

Returns

```
{
        “result”: {
                “volume”: -1,
                “success”: true
        },
        “jsonrpc”: “2.0”
}
```

Audio:Volume:Set

Sets the overall audio output level, in decibels.

Syntax
Audio:Volume:Set setDB

Parameter	Description	Range
setDB	Output level (in dB)	-80 ... 0

Example
http://<ip>/API?method=Audio:Volume:Set&volume=-10

Returns

```
{
        “result”: {
                “success”: true
        },
        “jsonrpc”: “2.0”
}
```

Display:BYOD:Kick

Removes (“kicks”) the existing BYOD connection from the AT-UHD-SW-510.

Syntax
Display:BYOD:Kick

This command does not require any parameters

Example
http://<ip>/API?method=Display:BYOD:Kick

Returns

```
{
        “result”: {
                “success”: true
        },
        “jsonrpc”: “2.0”
}
```

Display:Control:IP:Get

Displays the IP address and port of the remote IP device, such as a display.

Syntax
Display:Control:IP:Get

This command does not require any parameters

Example
http://<ip>/API?method=Display:Control:IP:Get

Returns

```
{
        “result”: {
                “port”: 123,
                “ip”: “192.168.23.114”
        },
        “jsonrpc”: “2.0”
}
```

Display:Control:IP:Set

Sets the IP address and port of the remote IP device, such as a display. The IP address must be specified in dot-decimal notation.

Syntax
Display:Control:IP:Set ipAddr port

Parameter	Description	Range
ipAddr	IP address of device	1 ... 254 (per byte)
port	Port	0 ... 65535

Example
http://<ip>/API?method=Display:Control:IP:Set 192.168.23.114 123

Returns

```
{
        “result”: {
                “port”: 123,
                “ip”: “192.168.1.16”
        },
        “jsonrpc”: “2.0”
}
```

Display:Get

Gets the state of the output display.

Syntax
Display:Get

This command does not require any parameters

Example
http://<ip>/API?method=Display:Get

Returns

```
{
        “result”: {
                “state”: true
        },
        “jsonrpc”: “2.0”
}
```

Display:Input:Get

Displays the active input.

Syntax
Display:Input:Get

This command does not require any parameters

Example
http://<ip>/API?method=Display:Input:Get

Returns

```
{
        “result”: {
                “input”: 4,
                “type”: “airplay”
        },
        “jsonrpc”: “2.0”
}
```

Display:Input:HDCP:State:Get

Displays the HDCP status of the specified input.

Syntax
Display:Input:HDCP:State:Get

Parameter	Description	Range
input	Input	0 ... 4

Example
http://<ip>/API?method=Display:Input:HDCP:State:Get&input=1

Returns

```
{
        “result”: {
                “state”: true
        },
        “methodreturn”: “display:input:hdcp:state:get 1”
}
```

Display:Input:HDCP:State:Set

Sets the HDCP state on the specified input. When specifying the second argument, 0 = off, 1= on.

Syntax
Display:Input:HDCP:State:Set

Parameter	Description	Range
input	The specified input	0 ... 4
state	The HDCP state	0, 1

Example
http://<ip>/API?method=Display:Input:HDCP:State:Set&input=1&state=1

Returns

```
{
        “result”: {
                “success”: true
        },
        “jsonrpc”: “2.0”
}
```

Display:Input:Set

Sets the active input.

Syntax
Display:Input:Set input

Parameter	Description	Range
input	The specified input	0 ... 4

Example
http://<ip>/API?method=Display:Input:Set&input=2

Returns

```
{
        “result”: {
                “success”: true
        },
        “jsonrpc”: “2.0”
}
```

Display:Input:Status:All:Get

Displays the connection state for all inputs. The name of each JSON object, that is returned, is a string representation of the input number. Each objects contains a boolean field, indicating whether or not an input is connected to that input. If a connection is detected, then the value will be true. Input 4 represents the BYOD interface and includes two extra fields: "type" and "status", which represent any active BYOD streaming device that is active.

Syntax
Display:Input:Status:All:Get

This command does not require any parameters

Example
http://<ip>/API?method=Display:Input:Status:All:Get

Returns

```
{
        "result": {
                "0": {
                        "status": false
                },
                "1": {
                        "status": false
                },
                "2": {
                        "status": false
                },
                "3": {
                        "status": false
                },
                "4": {
                        "type": "airplay",
                        "status": true
                }
        },
        "jsonrpc": "2.0"
}
```

Display:Input:Status:Get

Displays the connection state for the specified input. The name of the JSON object, that is returned, is a string representation of the input number. Each objects contains a boolean field, indicating whether or not an input is connected to that input. If a connection is detected, then the value will be true. Input 4 represents the BYOD interface and will include two extra fields: "type" and "subtype", which represent any active BYOD streaming device that is active. If "type" is unknown, then there is no current active BYOD stream.

Syntax
Display:Input:Status:Get input

Parameter	Description	Range
input	The specified input	0 ... 4

Example
http://<ip>/API?method=Display:Input:Status:Get&input=4

Returns

```
{
        "result": {
                "input": 4,
                "subtype": "infrastructure",
                "type": "miracast",
                "status": true
        },
        "jsonrpc": "2.0"
}
```

Display:Matrix:Get

Displays the input for the specified output in Matrix Mode. Set output=0 to query the HDBaseT output or set output=1 to query the HDMI output.

Syntax
Display:Matrix:Get output

Parameter	Description	Range
output	The specified output	0, 1

Example
http://<ip>/API?method=Display:Matrix:Get&output=1

Returns

```
{
        "result": {
                "input": 4
        },
        "methodreturn": "Display:Matrix:Get 1",
        "jsonrpc": "2.0"
}
```

Display:Matrix:Mode:Get

Displays the state of the matrix mode. If true, then Matrix Mode is enabled. Use the Display:Matrix:Mode:Set command to enable or disable Matrix Mode.

Syntax
Display:Matrix:Mode:Get

This command does not require any parameters

Example
http://<ip>/API?method=Display:Matrix:Mode:Get

Returns

```
{
        "result": {
                "mode": true
        },
        "methodreturn": "Display:Matrix:Mode:Get",
        "jsonrpc": "2.0"
}
```

Display:Matrix:Mode:Set

Enables or disabled Matrix Mode. Set value=1 to enable Matrix Mode or set value=0 to disable Matrix Mode.

Syntax
Display:Matrix:Mode:Set

Parameter	Description	Range
value	State	0, 1

Example
http://<ip>/API?method=Display:Matrix:Mode:Set&value=1

Returns

```
{
        "result": {
                "success": true
        },
        "methodreturn": "Display:Matrix:Mode:Set 1"
}
```

Display:Matrix:Set

Routes the specified input to the desired output. The arguments for the input parameter correspond to the following ports: 0 = USB-C (1), 1 = DP IN (2), 2 = HDMI IN (3), 3 = HDMI IN (4), 4 = BYOD. Set output=0 to use the HDMI output or set output=1 to use the HDBaseT output.

Syntax
Display:Matrix:Set

Parameter	Description	Range
input	Input port	0 ... 4
output	Output port	0, 1

Example
http://<ip>/API?method=Display:Matrix:Set&input=2&output=1

Returns

```
{
        “result”: {
                “success”: true
        },
        “methodreturn”: “Display:Matrix:Set 2 1”,
        “jsonrpc”: “2.0”
}
```

Display:Set

Turns the connected display on or off.

Syntax
Display:Set state

Parameter	Description	Range
value	The state of the display	on, off

Example
http://<ip>/API?method=Display:Set&value=on

Returns

```
{
        “result”: {
                “success”: true
        },
        “jsonrpc”: “2.0”
}
```

Instruments:Temperature:Get

Displays the internal temperature of the AT-UHD-SW-510W. If the scale parameter is not specified, then the temperature will be displayed in Celsius.

Syntax
Instruments:Temperature:Get units

Parameter	Description	Range
scale	The unit of temperature measurement	celsius, fahrenheit, kelvins

Example
http://<ip>/API?method=Instruments:Temperature:Get&scale=fahrenheit

Returns

```
{
        “result”: {
                “temperature”: {
                        “scale”: “farenheit”,
                        “value”: 145
                }
        },
        “jsonrpc”: “2.0”
}
```

Misc:Model:Get

Displays the model of the AT-UHD-SW-510W.

Syntax
Misc:Model:Get

This command does not require any parameters

Example
http://<ip>/API?method=Misc:Model:Get

Returns

```
{
        “result”: {
                “model”: “AT-UHD-SW-510W”
        },
        “jsonrpc”: “2.0”
}
```

Misc:Version:Get

Displays the hardware version of the AT-UHD-SW-510W.

Syntax
Misc:Version:Get key1 key2

Parameter	Description	Range
key1	The master firmware version	master
key2	The MCU firmware version	mcu

Example
http://<ip>/API?method=Misc:Version:Get

Returns

```
{
        “result”: {
                “version”: “0.1.21-14”
        },
        “jsonrpc”: “2.0”
}
```

Misc:Versions:Get

Displays the firmware versions of all systems in the AT-UHD-SW-510W.

Syntax
Misc:Versions:Get

This command does not require any parameters

Example
http://<ip>/API?method=Misc:Versions:Get

Returns

```
{
        “result”: {
                “mcu”: “V0.5.00”,
                “master”: “0.1.24-1”
        },
        “jsonrpc”: “2.0”
}
```

Moderator:Enable:Get

Displays the current status of Moderator mode. If Moderator mode is disabled, then false is returned.

Syntax
Moderator:Enable:Get

This command does not require any parameters

Example
http://<ip>/API?method=Moderator:Enable:Get

Returns

```
{
        “result”: {
                “enable”: false
        },
        “methodreturn”: “Moderator:Enable:Get”,
        “jsonrpc”: “2.0”
}
```

Moderator:Enable:Set

Enable or disable Moderator mode.

Syntax
Moderator:Enable:Set

Parameter	Description	Range
state	Enable or disable	0, 1

Example
http://<ip>/API?method=Moderator:Enable:Set&value=1

Returns

```
{
        “jsonrpc”: “2.0”,
        “event”: {
                “moderator”: {
                        “streams”: [],
                        “activeindex”: -1,
                        “enabled”: true
                }
        }
}#
{
        “result”: {
                “success”: true
        },
        “methodreturn”: “Moderator:Enable:Set 1”
}
```

Moderator:Show

Sets the active BYOD device ID for casting.

Syntax
Moderator:Show

Parameter	Description	Range
value	Client ID	Integer

Example
http://<ip>/API?method=Moderator:Show&value=1

Returns

```
{
        “result”: {
                “success”: true
        },
        “methodreturn”: “Moderator:Show 1”
}
```

Moderator:Kick

Kicks the specified BYOD ID from the system.

Syntax
Moderator:Kick

Parameter	Description	Range
value	Client ID	Integer

Example
http://<ip>/API?method=Moderator:Kick&value=1

Returns

```
{
        “result”: {
                “success”: true
        },
        “methodreturn”: “Moderator:Kick 1”
}
```

OSD:State:Get

Displays the current state of the OSD.

Syntax
OSD:State:Get

This command does not require any parameters

Example
http://<ip>/API?method=OSD:State:Get

Returns

```
{
        “result”: {
                “state”: false
        },
        “methodreturn”: “OSD:State:Get”
}
```

OSD:State:Set

Enables or disables the OSD overlay.

Syntax
OSD:State:Set

This command does not require any parameters

Example
http://<ip>/API?method=OSD:State:Set&state=1

Returns

```
{
        “result”: {
                “success”: true
        },
        “methodreturn”: “OSD:State:Set 1”
}
```

Platform:Reset

Resets the AT-UHD-SW-510W to factory-default settings. Network settings are preserved, unless otherwise specified by the second parameter. This parameter is optional.

Syntax
Platform:Reset subsystem key2

Parameter	Description	Range
subsystem	Resets all systems	all
key2	Only resets the network subsystem	network

Example
http://<ip>/API?method=Platform:Reset&subsystem=all

Returns

{
"result": {
"success": true
},
"jsonrpc": "2.0"
}

Platform:Restart

Reboots the AT-UHD-SW-510W.

Syntax
Platform:Restart

This command does not require any parameters

Example
http://<ip>/API?method=Platform:Restart

Returns

{
"result": {
"success": true
},
"jsonrpc": "2.0"
}

Platform:Shutdown

Shuts down the power to the AT-UHD-SW-510W. This command should be performed before disconnecting the power from the unit.

Syntax
Platform:Shutdown

This command does not require any parameters

Example
http://<ip>/API?method=Platform:Shutdown

Returns

{
	“result”: {
		“success”: true
	},
	“jsonrpc”: “2.0”
}

Relay:State:Get

Displays the current state of the specified relay.

Syntax
Relay:State:Get

Parameter	Description	Range
relay	Relay number	0, 1

Example
http://<ip>/API?method=Relay:State:Get&relay=1

Returns

{
	“result”: {
		“state”: true
	},
	“methodreturn”: “Relay:State:Get 0”
}

Relay:State:Set

Sets the state of the specified relay. The relay can be normally-open (NO) or normally-closed (NC).

Syntax
Relay:State:Set

Parameter	Description	Range
relay	Relay number	0, 1
state	Relay state	0, 1

Example
http://<ip>/API?method=Relay:State:Set&relay=1&state=1

Returns

```
{
        “result”: {
                “success”: true
        },
        “methodreturn”: “Relay:State:Set 1 1”
}
```

Zone:PortParams

Returns the current RS-232 settings for the specified zone.

Syntax
Zone:PortParams zone

Parameter	Description	Range
zone	The zone to query	1, 2

Example
http://<ip>/API?method=Zone:PortParams&zone=1

Returns

```
{
        “result”: {
                “zone”: 1,
                “params”: “[9600,8,0,1]”
        },
        “methodreturn”: “Zone:PortParams 1”
}
```

Zone:PortSetup

Sets the RS-232 settings for the specified zone.

Syntax
Zone:PortSetup zone baudrate databits parity stopbit

Parameter	Description	Range
zone	The zone to assign settings to	1, 2
baudrate	Baud rate	9600 ... 115200
databits	Data bits	7, 8
parity	Parity bit	0, 1, 2
stopbit	Stop bit	1, 0

Example
http://<ip>/API?method=Zone:PortSetup&zone=1&baudrate=19200&databits=8&parity=0&stopbit=1

Returns

```
{
        “result”: {
                “success”: true
        },
        “methodreturn”: “Zone:PortSetup 1 19200 8 0 1”
}
```

Zone:SendCmd

Sends a command to the specified zone.

Syntax
Zone:SendCmd X Y

Parameter	Description	Range
zone	The zone to send to	Zone1, Zone 2
command	Command	command

Example
http://<ip>/API?method=Zone:SendCmd&zone=1&command=GetHostName

Returns

```
{
        “result”: {
                “success”: false
        },
        “methodreturn”: “Zone:SendCmd 1 GetHostName”
}
```