ATLONA
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OMEGA™

4K / UHD
Wallplate HDBaseT Transmitter
for HDMI and USB-C with USB Hub

Application Programming Interface
1.0.2

AT-OME-SW21-TX-WPC | Atlona API **Switchers**

Version Information

Version	Release Date	Notes
2	Mar 2025	Updated for firmware version 1.0.2. Added OutHdmi5vKeep command. Added UsbVbusControl command. Various other fixes.

Introduction

General

This document provides an alphabetical list of commands available for AT-OME-SW21-TX-WPC. Commands are case-sensitive. If the command fails or is entered incorrectly, then the feedback is “Command FAILED”. Commands can be sent using RS-232, Telnet, or TCP. There should be a 500 millisecond delay between each command sent to the unit. The default port for Telnet is 23. TCP ports are 9000 and 9001.

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

Ports

This product can communicate directly with local and remote RS-232 (over HDBaseT) ports using a direct TCP socket connection. The default port assignment is from left-to-right, viewed from the rear panel. Refer to the table below for the port assignment for this product. For ports connected to RS-232 interfaces, no additional payload is required to transmit data to the device. All data sent to the respective TCP port will be sent bit-for-bit to the RS-232 output. Note that if feedback is required from the RS-232 device, the TCP socket must be kept open. This product does not provide buffer or queuing registers. Therefore, any data from the RS-232 port that is received while the TCP socket connection is closed, will be lost.

Port	Description
9000	MCU (similar to Telnet)
9001	HDBaseT RS-232 port

Example:
With the device IP address of 192.168.1.100 and a PJLINK projector connected to the RS-232 of the HDBaseT output.

1. Open a TCP socket to 192.168.1.100:9001 and send the following command string:

   ```
   %1POWR 1\x0D
   ```

2. The projector will respond with the following, using the same socket connection:

   ```
   $1POWR=OK\x0D
   ```

Commands

Command	Description
AutoSW	Enables or disables auto switching between input ports.
CommaWait	Enables or disables a five second delay when using commas in the command line
DispBtn	Simulates pressing the DISPLAY button on the front panel.
Display	Powers-on or power-off the connected display.
HDCPSet	Set the HDCP reporting mode of the HDMI input port.
HDMIAud	Enables or disables audio output.
help	Displays a list of available commands.
InputStatus	Displays the status for each input.
IPCFG	Displays IP address configuration.
IPDHCP	Turns DHCP on / off.
IPStatic	Sets a static IP address.
Mreset	Sets the unit back to default settings.
OutHdmi5vKeep	Sets the state of the +5V pin on the **HDMI OUT** port.
RS232zone	Triggers the unit to send the RS-232 command to the display connected to the HDBaseT receiver's RS-232 port.
Status	Displays the routing state of the unit.
System	Displays system information.
Type	Displays the model of the unit.
USBHostLogic	Sets the USB mode for the AT-OME-SW21-TX-WPC.
UsbRoute	Sets the USB Host routing state.
UsbVbusControl	Sets the state of the USB hub ports.
Version	Displays the current firmware version of the unit.
xYAVx1	Switches the specified input to the specified output.

AutoSW

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

Syntax
AutoSW X

Parameter	Description	Range
X	State	on, off, sta

Example
AutoSW on

Feedback
AutoSW on

CommaWait

The comma is frequently used to separate multiple commands on the command line. However, the client may require time to execute a specific command, before the next command is executed. Enabling this command will assign a five second delay to any comma delimiters, found within the command line.

Syntax
CommaWait X

Parameter	Description	Range
X	State	on, off, sta

Example
CommaWait on

Feedback
CommaWait on

DispBtn

This command emulates pressing the **DISPLAY** button on the front panel. This command can perform different functions, depending on which value it is assigned.

Syntax
DispBtn X

Parameter	Description	Range
X	State	on, off, tog, sta

Example
DispBtn on

Feedback
DispBtn on

Display

This command powers-on or powers-off the connected display.

Syntax
`Display X`

Parameter	Description	Range
X	State	on, off, sta

Example
`Display on`

Feedback
`Display on`

HDCPSet

Set the HDCP reporting mode of the HDMI input port. Some computers will send HDCP content if an HDCP-compliant display is detected. `on` = reports to the source device that the display (sink) is HDCP-compliant; `off` = reports to the source device that the display (sink) is not HDCP-compliant (HDCP content will not be sent). Setting this value to `off` does not decrypt HDCP content. Specify the `sta` argument to return the current setting.

Syntax
`HDCPSetX Y`

Parameter	Description	Range
X	Input (1: HDMI, 2: USB-C)	1, 2
Y	State	on, off

Example
`HDCPSet1 off`

Feedback
`HDCPSet1 off`

HDMIAud

Enables or disables the audio output on the HDMI port. on = enables HDMI audio output; off = disables HDMI audio output. Use the sta argument to return the current HDMI audio output state

Syntax
`HDMIAud`

Parameter	Description	Range
X	State	on, off, sta

Example
`HDMIAud off`

Feedback
`HDMIAud 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 [X]

Parameter	Description	Range
X	Command name (optional)	Command

Example
```
help
```

Feedback
```
help
IPCFG
IPDHCP
IPStatic
Version
...
...
...
```

InputStatus

Displays the status of the inputs as either a 0 or 1. If a source is detected on the input, then a 1 will be displayed. Inputs with no source connected will display a 0.

Syntax
InputStatus

This command does not require any parameters

Example
```
InputStatus
```

Feedback
```
InputStatus 01
```

IPCFG

Displays the current network settings for the unit.

Syntax
IPCFG

This command does not require any parameters

Example
```
IPCFG
```

Feedback
```
IP Addr:          10.0.1.101
Netmask:       255.255.255.0
Gateway:       10.0.1.1
Telnet Port:    23
```

IPDHCP

Enables or disables DHCP mode on the unit. `on` = enables DHCP mode; `off` = disables DHCP mode; `sta` = displays the current setting. If this feature is disabled, then a static IP address must be specified for the unit. Refer to the IPStatic command for more information.

Syntax
`IPDHCP X`

Parameter	Description	Range
`X`	Value	`on, off, sta`

Example
`IPDHCP on`

Feedback
`IPDHCP on`

IPStatic

Sets the static IP address, subnet mask, and gateway (router) address of the unit. Before using this command, DHCP must be disabled on the unit. Refer to the IPDHCP command for more information. Each argument must be entered 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`

Mreset

Resets the unit to factory-default settings.

Syntax
`Mreset`

This command does not require any parameters

Example
`Mreset`

Feedback
`Mreset`

OutHdmi5vKeep

Sets the state of the +5V pin on the **HDMI OUT** port. Specify the `on` argument to force the +5V pin to the "on" state. Use the `off` argument to allow the +5V pin to toggle based on the presence of an input video signal. The `sta` argument will return the current setting.

Syntax
`OutHdmi5vKeep`

Parameter	Description	Range
`X`	State	`on, off, sta`

Example
`OutHdmi5vKeep sta`

Feedback
`OutHdmi5vKeep on`

RS232zone

Sends commands to the HDBaseT device. Refer to the User Manual of the display device for a list of available commands. Brackets must be used when specifying the command argument. The command line must not contain any spaces. Note that this command is deprecated and intended for legacy use. It is recommended to use the TCP socket functionality. Refer to Ports (page 3) for more information.

Syntax
`RS232zone[X]`

Parameter	Description	Range
`X`	Command	String

Example
`RS232zone[test]`

Feedback
`RS232zone[test]`

Status

Displays which input is routed to which output. Refer to the xYAVx1 command for more information.

Syntax
`Status`

This command does not require any parameters

Example
`Status`

Feedback
`x1AVx1`

System

Displays information about the AT-OME-SW21-TX-WPC. The `sta` argument must be specified.

Syntax
`System X`

Parameter	Description	Range
`X`	Constant	`sta`

Example

```
System sta
```

Feedback

```
Model: AT-OME-SW21-TX-WPC
MAC Addr: b8:98:b0:00:03:24
Address Type: DHCP
IP Addr: 10.20.100.196
Netmask: 255.255.255.0
Gateway: 10.20.100.2
Http Port: 80
Telnet Port: 23
Firmware: 1.0
On/Up Time <dd HH:mm:ss>: 0 1:29:15
Hostname: SW21-WPC-000324
```

Type

Displays the model information of the unit.

Syntax
`Type`

This command does not require any parameters

Example

```
Type
```

Feedback

```
AT-OME-SW21-TX-WPC
```

USBHostLogic

Sets the USB mode for the AT-OME-SW21-TX-WPC. Use the `sta` argument to display the current setting.

Syntax
`USBHostLogicX Y`

Parameter	Description	Range
`X`	USB Port	`1`
`Y`	Mode	`follow-video, follow-usb, manual, sta`

Example
`USBHostLogic1 follow-video`

Feedback
`USBHostLogic1 follow-video`

UsbRoute

Sets the routing state of the USB Host port. The second argument controls which port is used: `1` = route to USB port; `2` = route to USB-C port; `3` = route to remote USB port. Use the `sta` argument to display the current setting.

Syntax
`UsbRouteX Y`

Parameter	Description	Range
`X`	USB Port	`1`
`Y`	Routing	`1 ... 3`

Example
`UsbRoute1 2`

Feedback
`UsbHost1 2`

UsbVbusControl

Sets the state of the USB hub ports. Specify the `on` argument to keep the USB power on the hub ports always “on”, which can be useful in USB charging scenarios. Use the `off` argument to allow the USB hub ports to toggle on and off based on the presence of a USB host. The `sta` argument return the current setting.

Syntax
`UsbVbusControl X`

Parameter	Description	Range
`X`	State	`on, off, sta`

Example
`UsbRoute1 2`

Feedback
`UsbHost1 2`

Version

Displays the current firmware version of the unit.

Syntax
`Version X`

Parameter	Description	Range
`X`	Chip	`mcu, vstx, vsrx`

Example
`Version MCU`

Feedback
`1.0.22`

xYAVx1

Switches the specified input to the specified output. The first argument references the input: `1` = HDMI, `2` = USB-C. For example, to display the USB-C input on the output, use: `x2AVx1`.

Syntax
`xYAVx1`

Parameter	Description	Range
`Y`	Input	`1, 2`

Example
`x2AVx1`

Feedback
`x2AVx1`