

OMEGA™
4K/UHD Scaler
for HDBaseT and HDMI with USB

Application Programming Interface

Version Information

Version	Release Date	Notes
1	Feb 2020	Release
2	July 2020	Added TCP Proxy information and reboot command
3	Jan 2021	Added RS-232 information
4	June 2025	Added HDMI 5V and USBVBus commands

Introduction

General

This document provides an alphabetical list of commands available for AT-OME-SR21. 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, SSH, or TCP. There should be a 500 millisecond delay between each command sent to the unit. The default port for Telnet is 23 and 22 for SSH. TCP ports are 9000, 9001, and 9002.



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 input
9002	Local RS-232 port 1

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
```

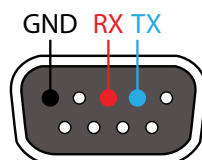
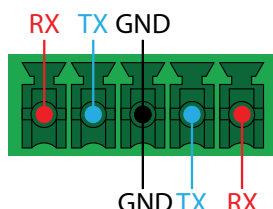
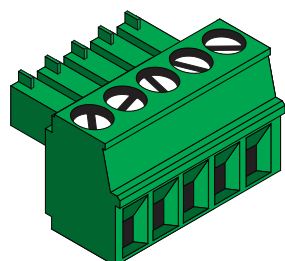
2. The projector will respond with the following, using the same socket connection:

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

RS-232

A 5-pin captive screw connector has been included for RS-232.

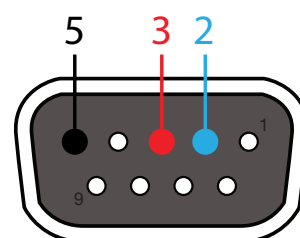
NOTE: Port 1 will control the display and port 2 is for unit control.



Pin out will be determined by the RS-232 cable and connect as RX (receive), TX (transmit) and $\perp$ (Ground). Ground will be shared between port 1 and port 2.

RS-232 is often connected through a DB 9-pin to captive screw connector. The pins will have functions associated with them, some will be unassigned.

NOTE: Typical DB9 connectors use pin 2 for TX, pin 3 for RX, and pin 5 for ground. On some devices functions of pins 2 and 3 are reversed.



Baud parameters must be met for control signals to pass. The parameters can be updated through the built in webGUI. The defaults for the RS-232 ports are:

Port 1 (display control) - 9600, 8-bit, None, 1

Port 2 (unit control) - 115200, 8-bit, None, 1

Display Button Command w/ Link LED

When using the DispBtn command through RS-232, telnet, or TCP, the LINK LED will display the current status of the display.



Command: DispBtn on will turn the LINK LED on to indicate the on command has been triggered and sent to the display. The LED will illuminate yellow.

Command: DispBtn off will turn the LINK LED off to indicate the off command has been triggered and sent to the display. The LED will not be illuminated.

Commands

The following tables provide an alphabetical list of commands available on the AT-OME-SR21.

Command	Description
Blink	Enable/Disable blinking of the front panel POWER LED
CommaWait	Enable/Disable a comma adding a 5 second delay between commands
DispBtn	Sets the command triggered through display control (set in the webGUI)
HDMIAUD	Enable/disable the HDMI audio output
InputStatus	Displays the status for each input
IPCFG	Displays IP address configuration
IPDHCP	Turns DHCP on / off
IPStatic	Sets a static IP address
Lock	Locks the buttons on the front panel
LRAUD	Turns on/off analog audio output
Mreset	Sets the unit back to default settings
OutHdmi5vKeep	Sets the +5V pin on the HDMI OUT port to the desired setting
Reboot	Restarts the unit
RelayAct	Opens and closes the relay ports
RS232zone	Use to trigger the SR21's RS-232 port to send the specified command to the display
Status	Displays the routing state of the unit
Type	Displays the model of the unit
Unlock	Unlocks the buttons on the front panel
USBHostLogic	Sets the USB mode of the unit
USBHostRoute	Sets the routing state of the USB host
UsbVbusControl	Toggle the setting for the USB Vbus
Version	Displays the current firmware version of the unit
VOUT	Adjusts the analog audio volume level
VOUTMute	Mutes/Unmutes audio output volume
x?AVx&	Switch a specific input to a specific output

Blink

Enable/Disable blinking of the front panel POWER LED.

Syntax
Blink X

Parameter	Description	Range
X	Value	on, off, sta

Example

Blink on

Feedback

Blink on

CommaWait

Enable/Disable a comma adding a 5 second delay between commands. Default is on.

Syntax
CommaWait X

Parameter	Description	Range
X	Value	on, off, sta

Example

CommaWait on

Feedback

CommaWait on

DispBtn

Sets the command triggered through display control (set in the webGUI).

Syntax
DispBtn X

Parameter	Description	Range
X	Command	on, off, vol+, vol-, mute

Example

DispBtn on

Feedback

DispBtn on

HDMIAUD

Enable/disable the HDMI audio output. Default is on.

Parameter	Description	Range
X	Setting	on, off, sta

Example

HDMIAUD sta

Feedback

HDMIAUD on

InputStatus

Displays the status for each input.

Syntax

```
InputStatusX
```

Parameter	Description	Range
X	Value	Input number: 1 or 2, parameter is optional.

Examples

InputStatus
InputStatus2

Feedback

InputStatus 01
InputStatus2 1



NOTE: The feedback will display channel status: 0 is no signal detected and 1 is signal detected.

IPCFG

Displays the current network settings for the unit.

Syntax

```
IPCFG
```

Example

IPCFG

Feedback

IP Addr 192.168.11.196
Netmask 255.255.255.0
Gateway 192.168.11.254
IP Port 23

IPDHCP

Turns DHCP on / off. Default is on.

Syntax

```
IPDHCP X
```

Parameter	Description	Range
X	Value	on, off, sta

Example

IPDHCP on

Feedback

IPDHCP on

IPStatic

Sets a static IP address.

Syntax
IPStatic X Y Z

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

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

Lock

Locks the front panel of the unit so no buttons are active.

Syntax
Lock

Example

Lock

Feedback

Lock

LRAUD

Turns on/off analog audio output. Default is on.

Syntax
LRAUD X

Parameter	Description	Range
X	Value	on, off, sta

Example

LRAUD sta

Feedback

LRAUD on

Mreset

Sets the unit back to the default settings.

Syntax
MReset

Example

Mreset

Feedback

Mreset

OutHdmi5vKeep

This option sets the +5V pin on the **HDMI OUT** port to the desired setting. This feature allows a display to go to sleep when there is no signal present. It's also used for VTC codecs that need to see a change in HDMI +5V in order to change modes. If faster switching times are desired, then this should be set to on. Use the sta argument to fetch the current setting.

Syntax
OutHdmi5vKeep X

Parameter	Description	Range
X	Value	on, off, sta

Example

OutHdmi5vKeep on

Feedback

OutHdmi5vKeep on

Reboot

Restarts the unit..

Syntax
Reboot

Example

Reboot

Feedback

Reboot

RelayAct

Opens and closes the relay ports.

Syntax
RelayActX Y

Parameter	Description	Range
X	Port number	1 or 2
Y	Value	open, close, sta

Example

RelayAct1 sta
RelayAct2 open

Feedback

RelayAct1 close
RelayAct2 open

RS232zone

Use to trigger the SR21's RS-232 port 1 to send the specified command to the display.

Syntax
RS232zone[X]

Parameter	Description	Range
X	Command	String

Example

RS232zone[VOL23]

Feedback

RS232zone[VOL23]

Status

Displays the current route status.

Syntax
Status

Example

Status

Feedback

x3Vx1

Type

Brings up the model information.

Syntax
Type

Example

Type

Feedback

AT-OME-SR21

Unlock

Unlocks the front panel of the unit, enabling the buttons again.

Syntax
Unlock

Example

Unlock

Feedback

Unlock

USBHostLogic

Sets the USB mode for the AT-OME-SR21. Use the sta argument to display the current setting.

Syntax
USBHostLogic X

Parameter	Description	Range
X	Mode	follow usb, follow video, manual, sta

Example

USBHostLogic follow video

Feedback

USBHostLogic follow video

USBHostRoute

Sets the routing state of the USB host. Local for the USB port on the unit and remote for the USB port connected over HDBaseT. Use the sta argument to display the current setting.

Syntax
USBHostRoute X

Parameter	Description	Range
X	Port	local, remote

Example

USBHostRoute local

Feedback

USBHostRoute local

UsbVbusControl

This feature provides the ability to toggle the USB Vbus. This allows the USB hub port to always provide power or follow the presence of the connected USB host. Use the sta argument to display the current setting.

Syntax
UsbVbusControl X

Parameter	Description	Range
X	State	on, off, sta

Example

UsbVbusControl on

Feedback

UsbVbusControl on

Version

Brings up the current firmware version.

Syntax
Version

Example

Version

Feedback

1.0.00

VOUT

Adjusts the analog audio volume level.

Syntax
VOUT X

Parameter	Description	Range
X	Parameter	+ / - : Increase or decrease volume by increments of 1 # : Input a value between -80 and 0 sta : displays the current status of the volume

Example

VOUT sta
 VOUT +
 VOUT -50
 VOUT -

Feedback

VOUT -30
 VOUT -29
 VOUT -50
 VOUT -51

VOUTMute

Mutes/unmutes all the output audio channels. Default is unmuted (off).

Syntax

VOUTMuteX Y

Parameter	Description	Range
X	Channel	1 - 2
Y	Value	on, off, sta

Example

VOUTMute1 sta

Feedback

VOUTMute1 on

x?AVx&

Switch audio and video input to output.

Syntax

x?AVx1

Parameter	Description	Range
?	Input	1 - 2

Example

x2AVx1

Feedback

x2AVx1

