OMEGA™

3×1 AV Switcher and Receiver with Scaler - Dual HDBaseT Plus HDMI Inputs

Application Programming Interface
1.0

Version Information

Version	Release Date	Notes
2	Nov 2022	Added TCP proxy info. Added Reboot command.

Introduction

General

This document provides an alphabetical list of commands available for AT-OME-RX31. 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. TCP ports are 9000 through 9003.

> ⚠️ **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 1
9002	HDBaseT RS-232 port 2
9003	Local 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 192.168.1.100:9003 and send the following command string:
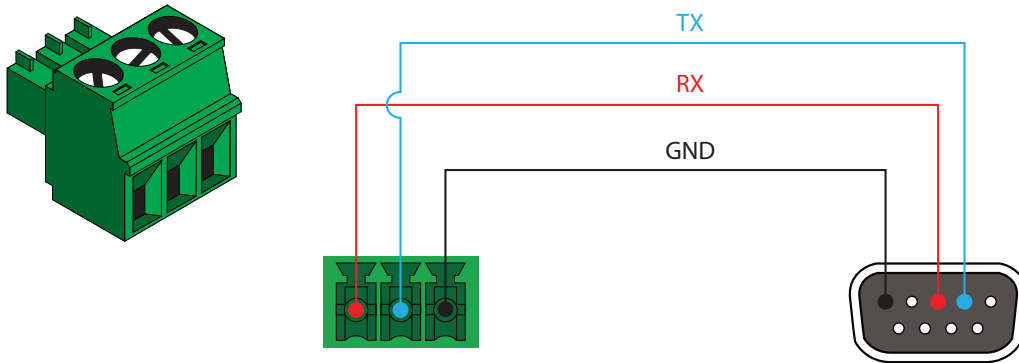
    `%1POWR 1\x0D`

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

    `$1POWR=OK\x0D`

RS-232

A 3-pin captive screw connector has been included for RS-232.

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.

Pin out will be determined by the RS-232 cable and connect as RX (receive), TX (transmit) and GND (ground).

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: 9600, 8-bit, None, 1.

Commands

Command	Description
Blink	Enables or disables blinking of the **POWER** button on the front panel
DispBtn	Simulates pressing the DISPLAY button on the front panel
HDMIAUD	Enables or disables audio on the HDMI output of the receiver
help	Displays a list of available help commands
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	Enables or disables the analog audio output
Mreset	Sets the unit back to default settings
Reboot	Reboots the unit
RelayAct	Sets the initial state of the relay
RHostName	Displays the hostname of the unit
RS232zone	Triggers the unit to send the RS-232 command to the display over HDBaseT
SHostName	Sets the hostname of the unit
Status	Displays the routing state 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
VOUT	Increases or decreases the audio output level
VOUTMute	Mutes the output volume for the specified output
x?AVx1	Switches the specified input to the specified output

Blink

Enables or disables blinking of the **POWER** LED indicator on the front panel. When set to on, the **POWER** indicator will flash green, and can be used to physically identify the unit on a network. The **POWER** indicator will flash until the Blink off command is executed or the unit is rebooted. on = enables blinking; off = disables blinking; sta = displays 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

DispBtn

This command executes the listed arguments on the connected display. The commands for on/off/tog may send RS232/CEC/IP, if configured. Configuration is performed under the Display Control page of the built-in web server. However, if nothing is configured, then the on/off/tog commands will only perfom an A/V mute on the video. Refer to the User Manual for more information on the Display Control page.

Syntax
DispBtn X

Parameter	Description	Range
X	State	on, off, tog, mute, vol+, vol-, sta

Example
DispBtn on

Feedback
DispBtn on

HDMIAUD

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

Syntax
HDMIAUD X

Parameter	Description	Range
X	Value	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
Blink
DispBtn
HDMIAUD
help
...
...

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. If no argument is specified, then the status of all inputs will be displayed.

Syntax
InputStatusX

Parameter	Description	Range
X	Input	1 ... 3

Examples
InputStatus1
InputStatus

Feedback
InputStatus 1
InputStatus 010

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
IP 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 byte)
Y	Subnet mask	0 ... 255 (per byte)
Z	Gateway (router)	0 ... 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 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

LRAUD

Enables or disables the analog audio output.

Syntax
LRAUD

Parameter	Description	Range
X	State	on, off, sta

Example
LRAUD on

Feedback
LRAUD on

Mreset

Resets the unit to factory-default settings.

Syntax
Mreset

This command does not require any parameters

Example
Mreset

Feedback
Mreset

Reboot

Reboots the unit. Configuration and IP settings are preserved. To perform a factory-reset, use the Mreset command.

Syntax
Reboot

This command does not require any parameters

Example
Reboot

Feedback
Reboot

RelayAct

Sets the initial state of the relay: normally-open (NO) or normally-closed (NC). The first argument specifies the relay number. The second argument sets the state. open = opens the relay, close = closes the relay; sta = displays the current setting.

Syntax
RelayActX Y

Parameter	Description	Range
X	Relay	1, 2
Y	State	open, close, sta

Example
RelayAct1 open

Feedback
RelayAct1 open

RHostName

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

Syntax
RHostName

This command does not require any parameters

Example
RHostName

Feedback
OMERX31-CONF

RS232zone

Sends commands over the local RS-232 display port. 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 is for legacy use.

Syntax
RS232zone[X]

Parameter	Description	Range
X	Command	String

Example
RS232zone[VOL23]

Feedback
RS232zone[VOL23]

SHostName

Sets the hostname of the unit. This value can be changed to easily identify the unit on a network or within the Atlona Management System (AMS). If using a custom hostname, it must conform to the hostname standards defined here: https://tools.ietf.org/html/rfc1123

Syntax
SHostName

Parameter	Description	Range
X	Hostname	String

Example
SHostName RX31-Conf1

Feedback
SHostName RX31-Conf1

Status

Displays which input is routed to which output. Refer to the x?AVx1 command for more information.

Syntax
Status

This command does not require any parameters

Example
Status

Feedback
x2AVx1

Type

Displays the model information of the unit.

Syntax
Type

This command does not require any parameters

Example
Type

Feedback
AT-OME-RX31

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
1.0.00

VOUT

Increases or decreases the audio output level. The + and - arguments can be used to increase or decrease the output level by 1 dB, respectively. Values must be specified as intergers. Use the sta argument to display the current setting.

Syntax
VOUT

Parameter	Description	Range
X	Level	-80 ... 0, +, -, sta

Example
VOUT -6

Feedback
VOUT -6

VOUTMute

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

Syntax
VOUTMute Y

Parameter	Description	Range
Y	State	on, off, sta

Example
VOUTMute off

Feedback
VOUTMute off

x?AVx1

Switches the input to the specified output. The first argument references the input: 1 = HDBaseT 1, 2 = HDBaseT 2, 3 = HDMI OUT.

Syntax
x?AVx1

Parameter	Description	Range
?	Input	1 ... 3

Example
x2AVx1

Feedback
x2AVx1
InputStatus 01