

# OMEGA<sup>™</sup>

## Display Controller

---

Application Programming Interface  
1.0.16

## Version Information

---

Version	Release Date	Notes
1	Nov 2019	Initial release
2	Jan 2020	Firmware 1.0.16 - No changes

# Introduction

---

## General

This document provides an alphabetical list of commands available for the AT-DISP-CTRL. 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 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 RS-232 ports using a direct TCP socket connection. 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	Local RS-232 port

### Example:

With the device IP address of 192.168.1.100 and a PJLINK projector connected to the RS-232 port.

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
APwrOffTime	Sets the power-off time interval
Blink	Enables or disables blinking of the POWER button on the front panel
Broadcast	Enables or disables broadcast mode
CliIPAddr	Sets the IP address of the Telnet client
CliMode	Sets the login mode of the Telnet client
CliPass	Set the password for the Telnet client
CliPort	Sets the listening port of the Telnet client
CliUser	Sets the username for the Telnet client
CSpara	Sets the baud rate, data bits, parity bit, and stop bits for the serial port
CtlType	Sets the control protocol used to communicate with the display device
DispAutoPwr	Enables or disables automatic powering of the display
EDIDMSet	Assigns the specified EDID preset to the HDMI OUT port
EDIDOut	Saves the downstream EDID to the specified memory location
HDCPSet	Sets the HDCP reporting mode for the specified input
help	Displays the available list of commands
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
IPStatic	Sets the static IP address, subnet mask, and gateway for the unit
IPTimeout	Specifies the time interval of inactivity before the Telnet session is closed
Mreset	Resets the unit to factory-default settings
ProjSWMode	Sets the time interval before the “display on” command is sent
ProjWarmUpT	Sets the display warm-up interval, in seconds
RepCmdTime	Sets the number of times a command is sent
RepeatCmd	Enables or disabled the RepCmdTime feature
RHostName	Displays the hostname of the unit
SetCmd	Assigns an RS-232 or IP command to the specified button on the front panel
SHostName	Sets the hostname of the unit
System	Displays information about the unit
TrigCEC	Triggers the specified command over CEC
TrigIP	Triggers the specified command over IP
TrigRS	Triggers the specified command over RS-232
Type	Displays the model of the transmitter
Version	Displays the current firmware version of the unit

### APwrOffTime

Set the time interval, in seconds, before the command to power-off the display is sent, once an A/V signal is no longer detected. Use the sta argument to display the current setting.

#### Syntax

```
APwrOffTime X
```

Parameter	Description	Range
X	Time interval (seconds)	15 ... 3600, sta

#### Example

```
APwrOffTime 120
```

#### Feedback

```
APwrOffTime 120
```

### Blink

Enables or disables blinking of the **POWER** LED indicator on the front panel. When set to on, the **POWER** indicator will flash blue, 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	State	on, off, sta

#### Example

```
Blink on
```

#### Feedback

```
Blink on
```

### Broadcast

Enables or disables broadcast mode. When set to on, any state change to the AT-DISP-CTRL will be reflected through RS-232, Telnet, and TCP port 9000. State changes can be caused by modification of the webUI, physical connection/disconnection of source/sink and additional Telnet/TCP clients making changes. on = broadcast enabled; off = broadcast disabled; sta = displays the current setting. The default setting is on.

#### Syntax

```
Broadcast X
```

Parameter	Description	Range
X	State	on, off, sta

#### Example

```
Broadcast on
```

#### Feedback

```
Broadcast on
```

### CliIPAddr

Sets the IP address of the controlled device. The IP address must be specified in dot-decimal notation. Use the sta argument to display the IP address of the connected device.

#### Syntax

```
CliIPAddr X
```

Parameter	Description	Range
X	IP address	0 ... 255 (per byte), sta

#### Example

```
CliIPAddr 192.168.1.61
```

#### Feedback

```
CliIPAddr 192.168.1.61
```

### CliMode

Sets the login mode of the controlled device. login = requires login credentials, non-login = no login credentials required. Use the sta argument to display the current setting.

#### Syntax

```
CliMode X
```

Parameter	Description	Range
X	Mode	login, non-login, sta

#### Example

```
CliMode login
```

#### Feedback

```
CliMode login
```

### CliPass

Sets the password for the controlled device. Execute the CliPass command without arguments to display the current password. The default password is Atlona.

#### Syntax

```
CliPass X
```

Parameter	Description	Range
X	Password	20 characters (max.)

#### Example

```
CliPass R3ind33r
```

#### Feedback

```
CliPass R3ind33r
```

### CliPort

Sets the listening port for the controlled device. Use the sta argument to display the current listening port. The default port is 23.

#### Syntax

```
CliPort X
```

Parameter	Description	Range
X	Port	1 ... 65535, sta

#### Example

```
CliPort 50
```

#### Feedback

```
CliPort 50
```

### CliUser

Sets the username for the controlled device. Execute the CliUser command without arguments to display the current username.

#### Syntax

```
CliUser X
```

Parameter	Description	Range
X	Username	20 characters (max.)

#### Example

```
CliUser BigBoss
```

#### Feedback

```
CliUser BigBoss
```

## CSpa

Sets the baud rate, data bits, parity bit, and stop bits for the console serial port. Each argument must be separated by a comma; no spaces are permitted. Brackets must be used when executing this command. Use the `sta` argument, with no brackets and a space between the argument and the command, to display the current serial port settings.

### Syntax

```
CSpa[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 (None), 1 (Odd), 2 (Even)
Z	Stop bits	1, 2

### Example

```
CSpa[115200,8,0,1]
CSpa sta
```

### Feedback

```
CSpa[115200,8,0,1]
CSpa [115200,8,0,1]
```

## CtlType

Sets the control protocol used to communicate with the display device. Use the `sta` argument to display the current setting.

### Syntax

```
CtlType X
```

Parameter	Description	Range
X	Protocol	rs-232, ip, cec, ir, sta

### Example

```
CtlType ip
```

### Feedback

```
CtlType ip
```



## DispAutoPwr

Enables or disables automatic powering-on or powering-off of the display, when connected to the AT-DISP-CTRL. Use the sta argument to display the current setting.

### Syntax

```
DispAutoPwr X
```

Parameter	Description	Range
X	State	on, off, sta

### Example

```
DispAutoPwr on
```

### Feedback

```
DispAutoPwr on
```

## EDIDMSet

Assigns the specified EDID to the HDMI input. The EDID can be either one of 10 internal EDID presets or a custom EDID that can be stored in one of the two memory locations. A brief description of each EDID preset is listed in the table below. default is the default EDID; int1 through int10 are EDID presets; save1 and save2 are memory locations where custom EDID data can be stored.

### Syntax

```
EDIDMSet X
```

Parameter	Description	Range
X	EDID preset	default, save, int, sta

### Example

```
EDIDMSet int2
```

### Feedback

```
EDIDMSet int2
```

EDID	Description
default	Default EDID
int1	ATL 1080p 3D 2CH
int2	ATL 1080p 3D DD
int3	ATL 1080p 3D MCH
int4	ATL 1080p 2CH
int5	ATL 4K60 420 2CH
int6	ATL 4K60 420 MCH
int7	ATL 4K60 420 HDR 2CH
int8	ATL 4K60 420 HDR MCH
int9	ATL 4K60 444 2CH
int10	ATL 4K60 444 MCH
save1	Memory location 1 for storing an EDID
save2	Memory location 2 for storing an EDID

### EDIDOut

Copies the display/sink EDID to the specified memory location.

#### Syntax

```
EDIDOut X
```

Parameter	Description	Range
X	Memory location	mem1, mem2

#### Example

```
EDIDOut mem1
```

#### Feedback

```
EDIDOut mem1
```

### 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. Use the `sta` argument to display the current setting.

#### Syntax

```
HDCPSet X
```

Parameter	Description	Range
X	State	on, off, sta

#### Example

```
HDCPSet on
```

#### Feedback

```
HDCPSet on
```

## 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

```
APwrOffTime
AutoPwrMode
Blink
Broadcast
CliIPAddr
CliMode
...
...
```

## IPCFG

Displays the current network settings for the AT-DISP-CTRL.

### Syntax

```
IPCFG
```

**This command does not require any parameters**

### Example

```
IPCFG
```

### Feedback

```
IP Addr 192.168.11.176
Netmask 255.255.255.0
Gateway 192.168.11.1
IP Port 23
```

### IPDHCP

Enables or disables DHCP mode on the AT-DISP-CTRL. on = DHCP mode ON; off = DHCP mode OFF; sta = displays the current setting. If this feature is disabled, then a static IP address must be specified. The default setting is on.

#### Syntax

```
IPDHCP X
```

Parameter	Description	Range
X	State	on, off, sta

#### Example

```
IPDHCP on
```

#### Feedback

```
IPDHCP on
```

### IPLogin

Enables or disables the use of login credentials when starting a Telnet or TCP port 9000 session on the AT-DISP-CTRL. If this feature is set to on, then the AT-DISP-CTRL will prompt for both the username and password. Use the same credentials as the web server. on = login credentials required; off = no login required. Use the sta argument to display the current setting. The default setting is on.

#### Syntax

```
IPLogin X
```

Parameter	Description	Range
X	State	on, off, sta

#### Example

```
IPLogin off
```

#### Feedback

```
IPLogin off
```

## IPPort

Sets the TCP/IP listening port for the AT-DISP-CTRL. It is not recommended to use the following ports:

80 (HTTP)  
 443 (HTTPS)  
 22 (SSH)  
 9000 - 9100 (TCP socket ports)

### Syntax

```
IPPort X
```

Parameter	Description	Range
X	Port	0 ... 65535, sta

**Example**  
 IPPort 230

**Feedback**  
 IPPort 230

## IPStatic

Sets the static IP address, subnet mask, and gateway (router) address of the AT-DISP-CTRL. Before using this command, DHCP must be disabled on the AT-DISP-CTRL. 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 of the AT-DISP-CTRL 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

### IPTimeout

Specifies the time interval of inactivity before the TCP/IP session is terminated. When terminated, both the Telnet and web server session will be closed. The default setting is 300 seconds.

#### Syntax

```
IPTimeout X
```

Parameter	Description	Range
X	Time interval (seconds)	1 ... 3600

#### Example

```
IPTimeout 300
```

#### Feedback

```
IPTimeout 300
```

### Mreset

Resets the AT-DISP-CTRL to factory-default settings.

#### Syntax

```
MReset
```

**This command does not require any parameters**

#### Example

```
Mreset
```

#### Feedback

```
Mreset
```

### ProjSWMode

Sets the projector lamp cool-down timer, in seconds. This value specifies the time interval that must elapse, after the display control “off” command is sent, before the display “power on” command can be sent. This command is used to prevent the projector from missing a “power on” command while the lamps are cooling. Use the sta argument to display the current setting.

#### Syntax

```
ProjSWMode X
```

Parameter	Description	Range
X	Time interval (seconds)	10 ... 300, sta

#### Example

```
ProjSWMode 120
```

#### Feedback

```
ProjSWMode 120
```

### ProjWarmUpT

Sets the projector lamp warm-up timer, in seconds. During the warm-up interval, the AT-DISP-CTRL will not start the auto power-off timer. This value specifies the time interval that must elapse, after the display control “on” command is sent, before the display “power off” command can be sent. This command is used to prevent a “power off” command from being sent while the lamps are warming up. Use the sta argument to display the current setting.

#### Syntax

```
ProjWarmUpT X
```

Parameter	Description	Range
X	Time interval (seconds)	10 ... 300, sta

#### Example

```
ProjWarmUpT 120
```

#### Feedback

```
ProjSWMode 120
```

### RepCmdTime

Sets the number of times a command will be sent. This may be required in systems where a command must be transmitted more than once, before an acknowledgement message is received. Specify the sta argument to display the current setting.

#### Syntax

```
RepCmdTime X
```

Parameter	Description	Range
X	Times to repeat command	2, 3, 4, sta

#### Example

```
RepCmdTime 3
```

#### Feedback

```
RepCmdTime 3
```

### RepeatCmd

Enables / disables the [RepCmdTime](#) feature. Specify the sta argument to display the current setting.

#### Syntax

```
RepeatCmd X
```

Parameter	Description	Range
X	State	on, off, sta

#### Example

```
RepeatCmd on
```

#### Feedback

```
RepeatCmd on
```

## 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 DISPCTRL-000227
```

## SetCmd

Assigns the Command parameter to the specified command string, executing the desired function on the display (sink) device. For example, “SetCmd on[foo]” will assign the on command to “foo”. Consult the documentation for the display device for a listing of valid command strings.

### Syntax

```
SetCmd X[Y]
```

Parameter	Description	Range
X	Command	on, off, vol+, vol-, mute, mute_on, mute_off
Y	Command string	String

### Example

```
SetCmd on[PWRON]
```

### Feedback

```
SetCmd on[PWRON]
```

## SHostName

Sets the hostname of the unit. The hostname can be changed to easily identify the unit within the Atлона Management System (AMS) or a network. If using a custom hostname, it must meet the hostname standards defined here: <https://tools.ietf.org/html/rfc1123>

### Syntax

```
SHostName X
```

Parameter	Description	Range
X	Name	String (maximum 15 characters)

### Example

```
SHostName DISPCtrl_ConfR
```

### Feedback

```
SHostName DISPCtrl_ConfR
```



## System

Displays information about the AT-DISP-CTRL. The sta argument must be specified.

### Syntax

```
System X
```

Parameter	Description	Range
X	Constant	sta

### Example

```
Status sta
```

### Feedback

```
Model: AT-DISP-CTRL
MAC Addr: b8-98-b0-00-02-27
Address Type: DHCP
IP Addr: 10.20.20.40
Netmask: 255.255.255.0
Gateway: 10.20.20.1
HTTP Port: 80
Telnet Port: 23
Firmware: 1.0.00
On/Up Time <dd HH:mm:ss>: 00 22:26:15
Hostname: DISPCTRL-000227
```

## TrigCEC

Sends the specified command to the display using the CEC protocol.

### Syntax

```
TrigCEC X
```

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

### Example

```
TrigCEC on
```

### Feedback

```
TrigCEC on
```

## TrigIP

Sends the specified command to the display using IP.

### Syntax

```
TrigIP X
```

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

### Example

TrigIP on

### Feedback

TrigIP on

## TrigRS

Sends the specified command to the display using RS-232.

### Syntax

```
TrigRS X
```

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

### Example

TrigRS on

### Feedback

TrigRS on

## Type

Displays the SKU of the AT-DISP-CTRL.

### Syntax

```
Type
```

**This command does not require any parameters**

### Example

Type

### Feedback

AT-DISP-CTRL

## Version

Displays the current firmware version of the unit.

Syntax
Version

**This command does not require any parameters**

### Example

Version

### Feedback

1.0.00

