

CL510 Ethernet command set

History

No	Issue Date	Version	Description	Apply Firmware
1	2012/06/28	1.0	First version	TBD
2	2013/11/08	1.1		
3	2013/11/13	1.3		
4	2017/07/20	1.4	Add Load/Save Preset command	PVL209

1 Overview

This is the proprietary network control protocol designed by Lumens Digital Optics Inc. to enable applications to access Document Cameras manufactured by Lumens. The API allows for configuration of the settings and inquiry of current status on these Document Cameras. The API is structured and transmitted over HTTP protocols.

2 HTTP Transaction

An HTTP transaction always starts with a request from a client application. The request is received by the Web server on the Camera device and processed by the Camera. Finally, it ends with a response which is sent back to the requesting client.

The client HTTP request is taken in form:

HTTP GET: Used to configure the settings or status of the Camera

3 Command Format

3.1 Format:

http://<Account:Password>@<IP address>/vb.htm?< HTTP Request >=<Value>

3.2 Example:

3.2.1 If you want to power off the document camera. You use account name "admin", password is 9999, the IP address of the device is "192.168.1.128". An example is provided for each request type below:

3.2.1.1 **<Account:Password>**=admin:9999

3.2.1.2 **<IP address>**=192.168.1.128

3.2.1.3 **< HTTP Request >**= powerstatus

3.2.1.4 **<Value>**=0

3.2.2 Client request

```
GET http://admin:9999@192.168.1.128/vb.htm?powerstatus=0
```

3.2.3 Server response

```
OK powerstatus
```

4 Command table

No.	Function	HTTP Request	HTTP Response	Parameters
1	System power control	powerstatus	OK powerstatus	Value=00/01:Power Off/Power On
2	Auto Tune	autotune	OK autotune	NA
3	Freeze	freeze	OK freeze	Value=00/01:Off/On
4	Zoom	zoomset	OK zoomset	Value=0~32
5	Brightness	brightnessset	OK brightnessset	Value=0~255
6	Capture(single)	capture	OK capture	NA
7	Capture(continue)	capture	OK capture	Value=00/01:Off/On
8	Laser	lamp	OK lamp	Value=00/01:Laser Off/ Laser On **Please refer to 4.3
9	Auto Exposure	autoexposure	OK autoexposure	Value=00/01:Off/On
10	Auto Focus	autofocus	OK autofocus	NA(One trigger command)
11	Rotate	rotate	OK rotate	NA (One trigger command, device will change to next status)
12	Photo/Text	phototext	OK phototext (0/1/2)	NA (One trigger command, device will change to next status)
13	Image Mode	operationmode	OK operationmode (0/1/2)	NA (One trigger command, device will change to next status)
14	Playback	playaction	OK playaction	NA(One trigger command)
15	Live Image	liveimage	OK liveimage	NA(One trigger command)
16	Slide Show	slideshow	OK slideshow	Value=00/01:Off/On
17	Enter	enteraction	OK enteraction	NA(One trigger command)
18	Up	upaction	OK upaction	NA(One trigger command)
19	Down	downaction	OK downaction	NA(One trigger command)
20	Left	leftaction	OK leftaction	NA(One trigger command)
21	Right	rightaction	OK rightaction	NA(One trigger command)
22	Get server status command	getlumensstatus	Please reference 5.1	Please refer to “ 5. Illustration for Get server status command ”
23	Get server status command (XML)	getlumensxml	Pleaese reference 6.1	Please refer to “ 6. Illustration for Get server status command(XML) ”
24	Load Preset setting	loadpreset	OK loadpreset	Value=1~8
25	Save Preset setting	savepreset	OK savepreset	Value=1~8

4.1 Client can get camera settings or status with **Get server status command** or **Get server status command (XML)**.

- 4.2 One trigger command doesn't need to apply value.
- 4.3 Client can get "Laser" function by setting "lamp" command.
- 4.4 The undefined parameter will be equal zero value.

5 Illustration for Get server status command (HTTP Response)

Http Request	Property	Value	Parameter
getlumensstatus	cPower	0 ~ 2	0 = System standby 1 = Warm up 2 = Preview
	zoomValue	0 ~ 32	
	birthness	0 ~ 255	
	cFreeze	0 ~ 1	0 = Unfreeze 1 = freeze
	cLamp	0 ~ 1	0 = Laser Off 1 = Laser On
	cContinueCapture	0 ~ 1	0 = off 1 = on
	cCaptureType	0 ~ 2	0 = Single capture 1 = Continue capture 2 = Off
	cMachineStatus	0~19	0 = Preview mode 1 = NA 2 = Mask mode 3 = NA 4 = Record mode 5 = Pan mode 6 = Main OSD mode 7 = Thumbnail mode 8 = PIP Thumbnail mode 9 = Playback mode 10 = NA 11 = NA 12 = Slide Show mode 13 = NA 14 = NA 15 = NA 16 = Service Menu mode 17 = NA 18 = Power Down mode 19 = NA
	user_name		Current user account
	user_ip		Current's client IP
	cUpnp		UPNP title data

5.1 Get server status command HTTP Response Example

OK

```
getlumensstatus=cPower:2;zoomValue:0;birthness:124;cFreeze:0;cLamp:0;cContinueCapture:0;cCaptureType:0;cMachineStatus:0;account:admin,9999;account:;;account:;;account:;;account:;;account:;;account:;;account:;;user_name:admin;user_ip:192.168.3.169;cUpnp:Document Camera(192.168.3.177)
```

6 Illustration for Get server status command(XML) (HTTP Response)

Http Request	Property	Value	Parameter
getlumensxml	<POWER> \$Value </POWER>	0 ~ 2	0 = System standby 1 = Warm up 2 = Preview
	<FREEZE> \$Value </FREEZE>	0 ~ 1	0 = Unfreeze 1 = freeze
	<LAMP> \$Value </LAMP>	0 ~ 1	0 = Laser Off 1 = Laser On
	<CONTINUECAPTURE> \$Value </CONTINUECAPTURE>	0 ~ 1	0 = Off 1 = On
	<MACHINESTATUS> \$Value </MACHINESTATUS>	0 ~ 19	0 = Preview mode 1 = NA 2 = Mask mode 3 = NA 4 = Record mode 5 = Pan mode 6 = Main OSD mode 7 = Thumbnail mode 8 = PIP Thumbnail mode 9 = Playback mode 10 = NA 11 = NA 12 = Slide Show mode 13 = NA 14 = NA 15 = NA 16 = Service Menu mode 17 = NA 18 = Power Down mode 19 = NA
	<USERNAME>\$Value </USERNAME>		Login user account
	<USERIP>\$Value</USERIP>		Login user IP
	<CAPTURETYPE>\$Value </CAPTURETYPE>	0 ~ 2	0 = Single capture 1 = Continue capture 2 = Off

Http Request	Property	Value	Parameter
	<UPNP> \$Value </UPNP>		UPNP title data
	<OPMODE>\$Value</OPMODE>	0 ~ 2	Camera Image Mode 0 = Normal 1 = Slide 2 = Film
	<PHOTOTEXT>\$Value</PHOTOTEXT>	0 ~ 2	Camera Photo/Text Mode 0 = Photo 1 = Text 2 = Gray
	<ZOOMVALUE>\$Value</ZOOMVALUE>	0 ~ 32	
	<BRIGHTNESS>\$Value</BRIGHTNESS>	0 ~ 255	
	<AEENABLE>\$Value</AEENABLE>	0 ~ 1	0 = Auto Exposure Off 1 = Auto Exposure On

6.1 Get server status command (XML)HTTP Response Example

```
<POWER>2</POWER><FREEZE>0</FREEZE><LAMP>0</LAMP><CONTINUECAPTURE>
0</CONTINUECAPTURE><MACHINESTATUS>0</MACHINESTATUS><USERNAME>
admin</USERNAME><USERIP>192.168.3.169</USERIP><CAPTURETYPE> 0</CAPTURETYPE><UPNP>
Document
Camera(192.168.3.177)</UPNP><OPMODE>0</OPMODE><PHOTOTEXT>0</PHOTOTEXT><ZOOMVA
LUE>0</ZOOMVALUE><BRIGHTNESS>128 </BRIGHTNESS><AEENABLE>1</AEENABLE>
```