CE Series Universal Control Extenders

HControl Protocol Document

HARMAN Pro HControl

The HControl protocol is available for third parties to query certain aspects of the CE product. HControl is a text-based protocol using a JSON-like syntax. Simple commands can be used to query certain parameters.

Protocol for port commands (RS-232, IR, relays, etc) are located in the Instruction Manual.

GET

The GET command is used to obtain information from the device. A simple get command has the following syntax:

```
get {"path":"$endpoint"}\n
```

All get commands have responses. A response has the following syntax:

```
@get {"path":"$endpoint","value":"$value"}
```

You can use telnet to experiment with the command/response values. An example is shown below:

```
telnet 10.35.92.85 4197

get {"path":"/configuration/device/name"}\n
@get {"path":"/configuration/device/name","value":"CEREL8-6388E5"}

get {"path":"/configuration/device/location"}\n
@get {"path":"/configuration/device/location","value":"Richardson Lab"}
```

Booleans will return true/false (case sensitive) by default, if no specific format is specified. The format can be specified to return alternate values:

```
get {"path":" /configuration/network/interface/1/enable"}\n
@get {"path":"/configuration/network/interface/1/enable","value":true}

get {"path":"/configuration/network/interface/1/enable","format":"string"}\n
@get {"path":"/configuration/network/interface/1/enable","value":"true"}
```

Enumerations can return either the string value or the index value of the enumerated value. Returns will depend on the format requested. By default the index value is returned:

DHCP *['DHCP','STATIC']*:

```
get {"path":"/configuration/network/interface/1/ipv4/dhcp"}\n
@get {"path":"/configuration/network/interface/1/ipv4/dhcp","value":0}

get {"path":"/configuration/network/interface/1/ipv4/dhcp","format":"string"}\n
@get {"path":"/configuration/network/interface/1/ipv4/dhcp","value":"DHCP"}
```

SET

Parameters are set via the SET command. SETs generally have an immediate impact. The following command will change the LED color. The SET response will confirm the value that was set.

```
set {"path":"/configuration/device/location","value":"New York"}\n
@set {"path":"/configuration/device/location","value":"New York"}
```

Booleans use true/false (case sensitive) in SETs by default, if no specific format is specified. The format can be specified for alternate values:

```
set {"path":"/configuration/ntp/enable","value":true}\n
@set {"path":"/configuration/ntp/enable","value":true}

set {"path":"/configuration/ntp/enable","format":"string","value":"true"}\n
@set {"path":"/configuration/ntp/enable","value":"true"}
```

Enumerations can use either the string value or the index value of the enumerated value. The following are equivalent SET commands:

DHCP *['DHCP','STATIC']*:

```
set {"path":"/configuration/network/interface/1/ipv4/dhcp","value":0}\n
@set {"path":"/configuration/network/interface/1/ipv4/dhcp","value":0}

set {"path":"/configuration/network/interface/1/ipv4/dhcp","format":"string","value":"DHCP"}\n
@set {"path":"/configuration/network/interface/1/ipv4/dhcp","value":"DHCP"}
```

HControl	Description	Data Type	Get	Set	Example
DEVICE CONFIGURATION					
/configuration/device/version	OS Version	String	GET		get {"path":"/configuration/device/version"}\n @get {"path":"/configuration/device/version","value":"1.2.8"}
/configuration/device/serialnumber	Serial Number	String	GET		
/configuration/device/name	Device Name	String	GET	SET	set {"path":"/configuration/device/name","value":"CEREL8-6388E5"}\n @set {"path":"/configuration/device/name","value":"CEREL8-6388E5"}
NETWORK					
/configuration/network/interface1/ipv4/ip_address	Network IP Address. This must be known in order to run any queries	String	GET	SET	
/configuration/network/interface1/ipv4/subnetmask	Subnet Mask	String	GET	SET	get {"path":"/configuration/network/interface/1/ipv4/subnetmask"}\n @get {"path":"/configuration/network/interface/1/ipv4/subnetmask", "value":"255.255.255.0"}
/configuration/network/interface1/ipv4/gateway	Gateway IP	String	GET		get {"path":"/configuration/network/interface/1/ipv4/gateway"}\n @get {"path":"/configuration/network/interface/1/ipv4/gateway", "value":"192.168.3.1"}
/configuration/network/interface1/ipv4/dhcp	DHCP or Static	Enum	GET	SET	
/configuration/network/interface1/dnsserver/% where % = 1-5	DNS addresses	String	GET	SET	get {"path":"/configuration/network/interface/1/dnsserver/1"}\n @get {"path":"/configuration/network/interface/1/dnsserver/1", "value":"192.168.3.1"} set {"path":"/configuration/network/interface/1/dnsserver/2","value":"8.8.8.8"}\n @set {"path":"/configuration/network/interface/1/dnsserver/2", "value":"8.8.8.8"}
/configuration/network/interface1/mac	MAC Address	String	GET		

Executing Commands

EXEC

HControl	Description	Data Type	Arguments / Example
REBOOT & RESET			
reboot	Reboot	command	`reboot\n`
locate	Locate	command	`Locate\n`

/configuration/commands/reset	Reset	command	**System Reset:**
			`exec {"path":"/configuration/commands/","command":"reset","format":"string","value":"System"}\n`
			Factory Reset:
			`exec {"path":"/configuration/commands/","command":"reset","format":"string","value":"Factory"}\n`

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