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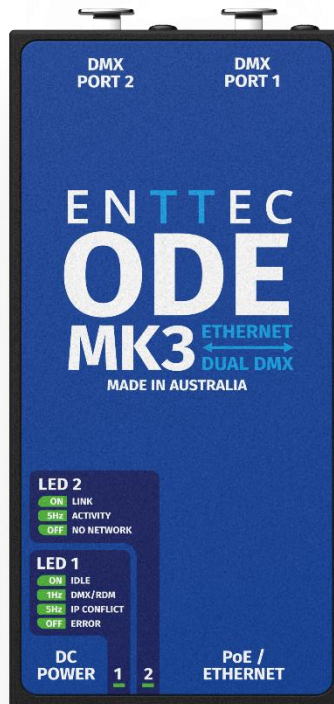
ODE MK3 – API

API requirement for the two-universe bi-directional eDMX – DMX/RDM controller supporting Power over Ethernet (PoE).

AUSTRALIAN DESIGNED + MADE

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Purpose

This document specifies the API message requirements for text-based application programs such as Command Prompt or third-party applications to communicate with the ENTTEC ODE MK3.

Application Messages

This section demonstrates the API message format required for different communication purposes alongside the parameter for each setting.

The API messages are presented in examples factored in the followings:

- PC Command Line Interface (CLI): CURL. **Note:** Replace 'curl --' if other CLI is used.
- The IP address of the ODE MK3: "10.10.3.61". **Note:** Replace this IP address with the one from your device.

1. Current Configuration

This example message requests the ODE MK3 to display the current configuration information.

Example Message

```
curl --http0.9 http://10.10.3.61/index.html?config=1
```

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2. Change Settings

This application message allows user to change settings of the ODE MK3 within one command.

Example Message

Space here!

```
curl --header "Content-Type: application/x-www-form-urlencoded" -d
"ip=192%2C168%2C0%2C10&netmask=255%2C255%2C255%2C0&dhcp_enable=1&gateway_ip=192%2C168%2C
0%2C254&config_name=ODE+MK3+PORT+1&dmx_repeat_rate=40%2C40&port_assignment=2%2C1&universe
=0%2C0&sacn_tx_priority=100%2C100&merge=0%2C0&protocol=0%2C0&bcast_type=1%2C1&unicast_ip1=19
2%2C168%2C0%2C11&unicast_ip2=192%2C168%2C0%2C11" 10.10.3.61/index.html?save_settings=1
```

The message is composited with 3 elements:

- Header line
- Configuration line: where each individual setting is placed together with "&" and the changeable values are highlighted in magenta. Instead of "." or "," the separator is "%2c".
- Device IP and command area line: replace the IP address from your device.

To change settings, enter the **Example Message** above with your IP address replaced and adjust the changeable values by following the **Application Message Format and Parameter Table.**

The changes will be conducted directly without a return message. Request current configuration information for verification after change.

Note: *Due to pdf format restriction, it is recommended to edit the code in plain text editing tool such as Notepad before pasting the code to the prompt command.*

Application Message Format and Parameter Table:

Settings	Description	Parameter
ip	The Static IP when DHCP is disabled.	**Format:** ip=X%2CX%2CX%2CX **Parameter** X= 0~255 *E.g. 192.168.0.10 = 192%2C168%2C0%2C10*
netmask	The netmask when static IP is enabled.	**Format** netmask=X%2CX%2CX%2CX **Parameter** X= 0~255
dhcp_enable	Enable or disable DHCP.	**Format** dhcp_enable=X **Parameter** X= 0 or 1 0: disable 1: enable
gateway_ip	Gateway IP when static IP is enabled.	**Format** gateway_ip=X%2CX%2CX%2CX **Parameter** X= 0~255
config_name	The node name discoverable on the network.	**Format** config_name=X **Parameter** X= any value in alphabet and number characters. Use "+" for space. *E.g. Node Name: ODE MK3 PORT 1 Config_name=ODE+MK3+PORT+1*

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dmx_repeat_rate	DMX frames per second refresh rate.	**Format** dmx_repeat_rate=X%2CY
		Parameter X= 0~60, Port 1 refresh rate Y= 0~60, Port 2 refresh rate
port_assignment	DMX data direction and type.	**Format** port_assignment=X%2CY
		Parameter X= 0/1/2/3, Port 1 DMX data type Y= 0/1/2/3, Port 2 DMX data type
		0: DMX disabled 1: DMX in 2: DMX out 3: DMX out with RDM
universe	Set the Ethernet-DMX protocol's input universe number.	**Format** universe=X%2CY
		Parameter X= see below, Port 1 Universe Y= see below, Port 2 Universe
		0-32767 for Art-Net 0-255 for ESP 0-63999 for sACN
sacn_tx_priority	sACN Priority when sACN unicast is enabled.	**Format** sacn_tx_priority=X%2CY
		Parameter X= 0~200, Port 1 sACN Priority Y= 0~200, Port 2 sACN Priority
merge	When enabled, this allows the merging for two DMX sources from different IP address whilst sending on the same Universe in either LTP or HTP merge.	**Format** merge=X%2CY
		Parameter X= 0/1/2, Port 1 output merging type Y= 0/1/2, Port 2 output merging type
		0: No merge 1: HTP 2: LTP
protocol	Choose between Art-Net, sACN and ESP as the input Protocol.	**Format** protocol=X%2CY
		Parameter X= 0/1/2, Port 1 input protocol Y= 0/1/2, Port 2 input protocol
		0: Art-Net 1: ESP 2: sACN
bcast_type	Choose either broadcast or unicast when DMX in.	**Format** bcast_type=X%2CY
		Parameter X= 0 or 1, Port 1 input casting type Y= 0 or 1, Port 2 input casting type
		0: Broadcast 1: Unicast

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unicast_ip1	Define a specific single IP address for Port 1 when unicast is enabled.	**Format** unicast_ip1=X%2CX%2CX%2CX
		Parameter X= 0~255
unicast_ip2	Define a specific single IP address for Port 2 when unicast is enabled.	**Format** unicast_ip2=X%2CX%2CX%2CX
		Parameter X= 0~255

3. Reset to Factory Default

This message requests the ODE MK3 to resume settings back to factory default.

Example Message

curl --http0.9 http://10.10.3.61/index.html?set_to_defaults=1

The device will be reset to factory default without a return message. Request current configuration information for verification after change.

4. Access to Boot

This message requests to access the boot of the ODE MK3.

Example Message

curl --http0.9 http://10.10.3.61/index.html?firmware

Once successful, the return message will be '*curl: (56) Recv failure: Connection was reset.*'

5. Reboot Device

This message requests the ODE MK3 to reboot or to exit the boot.

Example Message

curl --http0.9 http://10.10.3.61/index.html?reboot=1

Once successful, the return message would be '*curl: (56) Recv failure: Connection was reset.*'

6. DMX Buffer – Port 1

This message requests the ODE MK3 to display the current DMX buffer information for Port 1

Example Message

curl --http0.9 http://10.10.3.61/index.html?buffer1

7. DMX Buffer – Port 2

This message requests the ODE MK3 to display the current DMX buffer information for Port 2.

Example Message

curl --http0.9 http://10.10.3.61/index.html?buffer2

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8. Art-Net Stats

This API message requests the ODE MK3 to display the current Art-Net Stats.

Example Message

> curl --http0.9 http://10.10.3.61/index.html?artnet=1

9. ESP Stats

This API message requests the ODE MK3 to display the current ESP Stats.

Example Message

> curl --http0.9 http://10.10.3.61/index.html?esp

10. sACN Stats

This API message requests the ODE MK3 to display the current sACN Stats.

Example Message

> curl --http0.9 http://10.10.3.61/index.html?acn

Conclusion

This brings us to the end of the guide. By utilizing the API messages, ODE MK3 allows third-party hardware integration and communications from user's preferable command system. This guide provides the message format required for communication interface in examples. While there will be return messages for most of the commands, the Change Settings and Reset to Factory Default command will be executed directly without return messages. It is recommended to request current configuration information for verification.

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Due to constant innovation, information within this document is subject to change.