



## DIN ETHERGATE – API

API requirement for the two-universe bi-directional eDMX - DMX/RDM controller in a compact 4-module DIN-rail form factor.



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<b>Compatible firmware</b>	DIN ETHERGATE Firmware Version V2.0 onward

### 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 DIN ETHERGATE.

### Application Messages

This section demonstrates the API message format required for different communication purposes alongside the parameters 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 DIN ETHERGATE to display the current configuration information.

##### Example Message

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

## 2. Change Settings

This application message allows user to change settings of the DIN ETHERGATE within one command.

### Example Message

```
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=DIN+ETHERGATE+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
```

Space here!

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.	<b>Format:</b> ip= <b>x</b> %2C <b>x</b> %2C <b>x</b> %2C <b>x</b> <b>Parameter</b> <b>x</b> = 0~255 E.g. 192.168.0.10 = 192%2C168%2C0%2C10
netmask	The netmask when static IP is enabled.	<b>Format</b> netmask= <b>x</b> %2C <b>x</b> %2C <b>x</b> %2C <b>x</b> <b>Parameter</b> <b>x</b> = 0~255
dhcp_enable	Enable or disable DHCP.	<b>Format</b> dhcp_enable= <b>x</b> <b>Parameter</b> <b>x</b> = 0 or 1 0: disable 1: enable
gateway_ip	Gateway IP when static IP is enabled.	<b>Format</b> gateway_ip= <b>x</b> %2C <b>x</b> %2C <b>x</b> %2C <b>x</b> <b>Parameter</b> <b>x</b> = 0~255
config_name	The node name discoverable on the network.	<b>Format</b> config_name= <b>x</b> <b>Parameter</b> <b>x</b> = Any value in alphabet and number. Use “+” for space. E.g. Node Name: DIN ETHERGATE 1 Config_name=DIN+ETHERGATE+1

<b>dmx_repeat_rate</b>	DMX frame refresh rate.	<p><b>Format</b> dmx_repeat_rate=<i>x</i>%2C<i>y</i></p> <p><b>Parameter</b> <i>x</i>= 0~60, Port 1 refresh rate <i>y</i>= 0~60, Port 2 refresh rate</p>
<b>port_assignment</b>	DMX data direction and type.	<p><b>Format</b> port_assignment=<i>x</i>%2C<i>y</i></p> <p><b>Parameter</b> <i>x</i>= 0/1/2/3, Port 1 port DMX data type <i>y</i>= 0/1/2/3, Port 2 port DMX data type</p> <p>0: DMX disabled 1: DMX in 2: DMX out 3: DMX out with RDM</p>
<b>universe</b>	Set the Ethernet-DMX protocol's input universe.	<p><b>Format</b> universe=<i>x</i>%2C<i>y</i></p> <p><b>Parameter</b> <i>x</i>= see below, Port 1 Universe <i>y</i>= see below, Port 2 Universe</p> <p>0-32767 for Art-Net 0-255 for ESP 0-63999 for sACN</p>
<b>sacn_tx_priority</b>	sACN Priority when sACN unicast is enabled.	<p><b>Format</b> sacn_tx_priority=<i>x</i>%2C<i>y</i></p> <p><b>Parameter</b> <i>x</i>= 0~200, Port 1 sACN Priority <i>y</i>= 0~200, Port 2 sACN Priority</p>
<b>merge</b>	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.	<p><b>Format</b> merge=<i>x</i>%2C<i>y</i></p> <p><b>Parameter</b> <i>x</i>= 0/1/2, Port 1 output merging type <i>y</i>= 0/1/2, Port 2 output merging type</p> <p>0: No merge 1: HTP 2: LTP</p>
<b>protocol</b>	Choose between Art-Net, sACN and ESP as the input Protocol.	<p><b>Format</b> protocol=<i>x</i>%2C<i>y</i></p> <p><b>Parameter</b> <i>x</i>= 0/1/2, Port 1 input protocol <i>y</i>= 0/1/2, Port 2 input protocol</p> <p>0: Art-Net 1: ESP 2: sACN</p>
<b>bcast_type</b>	Choose either broadcast or unicast when DMX in.	<p><b>Format</b> bcast_type=<i>x</i>%2C<i>y</i></p> <p><b>Parameter</b> <i>x</i>= 0 or 1, Port 1 input casting type <i>y</i>= 0 or 1, Port 2 input casting type</p> <p>0: Broadcast 1: Unicast</p>

<b>unicast_ip1</b>	Define a specific single IP address for Port 1 when unicast is enabled.	<b>Format</b> unicast_ip1= <i>x</i> %2C <i>x</i> %2C <i>x</i> %2C <i>x</i>
		<b>Parameter</b> <i>x</i> = 0~255
<b>unicast_ip2</b>	Define a specific single IP address for Port 2 when unicast is enabled.	<b>Format</b> unicast_ip2= <i>x</i> %2C <i>x</i> %2C <i>x</i> %2C <i>x</i>
		<b>Parameter</b> <i>x</i> = 0~255

### 3. Reset to Factory Default

This message requests the DIN ETHERGATE 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 access to the boot of the DIN ETHERGATE.

#### 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 DIN ETHERGATE 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 DIN ETHERGATE 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 DIN ETHERGATE to display the current DMX buffer information for Port 2.

#### Example Message

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

## 8. Art-Net Stats

This API message requests DIN ETHERGATE 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 DIN ETHERGATE 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 DIN ETHERGATE 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, DIN ETHERGATE allows third-party hardware integration and communications from user's preferable command system. This guide provides the message format required for communication interface with 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. 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.*