



# IntesisBox<sup>®</sup>

## USB-ENO-ASCII / C

v.1.0.3

**For Supervision and Control of any IntesisBox<sup>®</sup> Enocan Gateways for Air Conditioners from USB enabled Controllers or PC software using simple text messages.**

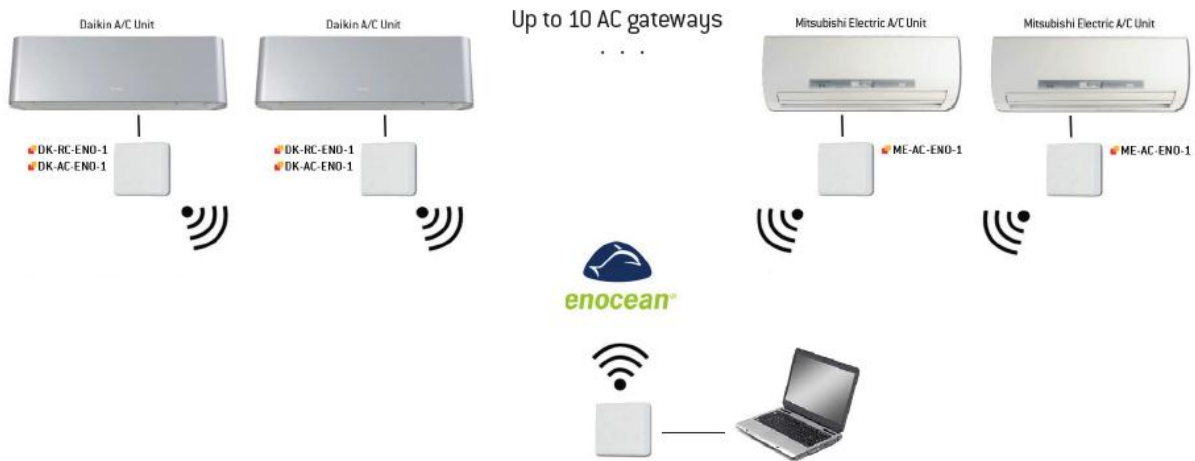
IntesisBox<sup>®</sup> USB-ENO-ASCII / C gateways allow supervision and bidirectional control of any IntesisBox<sup>®</sup> Enocan AC gateway and one reference temperature sensor from PC systems such as SCADA's or others using simple text messages.

### 1. Main Features:

- Bidirectional: Supervision and Control.
- Up to 10 AC IntesisBox<sup>®</sup> gateways.
- 1 external temperature sensor as a temperature reference
- Control of the AC indoor units using simple text messages.
- Spontaneous messages avoid continuous polling
- Fast and easy commissioning.
- USB Powered. No external power supply needed.
- Plug and Play (virtual COM port).
- Suitable look for home applications.
- Small dimensions.

## 2. Typical application

In Figure 2.1 it is shown a typical integration example using the USB-ENO-ASCII / C to control and supervise up to 10 IntesisBox® EnOcean AC Interfaces.



**Figure 2.1** Integration example

### 3. EnOcean Interface

EnOcean Interface	
<b>References</b>	<i>USB-ENO-ASCII: Transceiver @ 868 MHz</i> <i>USB-ENO-ASCII-C: Transceiver @ 315 MHz</i>
<b>Devices supported</b>	Up to 10 IntesisBox <sup>®</sup> AC gateways 1 external temperature sensor

**Table 3.1** General features

Coverage distance	Conditions
< 30 m	Under ideal conditions: Broad room, no obstacles and good antenna position.
< 20 m	The room is filled with furniture and people And penetration through up to 5 dry walls or up to 2 brick walls or up to 2 aero concrete walls
< 10 m	Identical to the previous case but the receiver is placed to a room corner or range along a narrow floor.
< 1 m	Metal-reinforced ceilings at upright penetration angle (in strong dependence of reinforcement density and antenna positions).

**Table 3.2** Device coverage distance

## 4. ASCII serial (USB) Interface

- The USB bus is used to power up the gateway so no external power supply is needed.
- Plug and Play. When the gateway is connected to the computer's USB port, a virtual COM port is generated and the gateway can be used right away without any configuration.
- The IntesisBox<sup>®</sup> can be configured to notify any change in the AC indoor unit variables to the control system, sending spontaneous messages. This working mode avoids the control system to perform continuous polling.
- Serial port communication settings:

<b>Baud rate</b>	9600 bps
<b>Stop bit</b>	1
<b>Data bits</b>	8
<b>Flow control</b>	none
<b>Parity</b>	No parity

**Table 4.1** Serial port communication settings

- Communication using simple ASCII text messages listed in the user manual. The AC variables can be easily read/written with these simple messages.

## 5. EnOcean Interoperability Table

In this section there is a list of the allowed devices

### 5.1 Compatible IntesisBox® Air conditioner gateways

In Table 5.1 the compatible IntesisBox® AC gateways are listed.

USB-ENO-ASCII	USB-ENO-ASCII-C
ME-AC-ENO-1	ME-AC-ENO-1-C
DK-AC-ENO-1	DK-AC-ENO-1-C
DK-RC-ENO-1	DK-RC-ENO-1-C

Table 5.1 **Device compatibility**

The IntesisBox® Air conditioner gateways use all the following EEP's:

EEP	EEP <sup>1</sup> description
[07-10-03]	Temperature Sensor; Set Point Control
[07-20-10]	HVAC Components. Generic HVAC interface. Functions: Mode, vane position, fan speed, sensors and on/off
[07-20-11]	HVAC Components. Generic HVAC interface. Functions: Error control: AC Error code, Error states and disablements

Any EnOcean IntesisBox® AC gateways not specified in this list might not be compatible. To check the model compatibility, contact your USB-ENO-ASCII / C supplier for this.

### 5.2 Compatible temperature sensors

Any temperature sensor using one of the following EEPs can be used with the USB-ENO-ASCII

EEP Rx	EEP description
[07-02-04]	Temperature Sensor. Range -10°C to +30°C
[07-02-05]	Temperature Sensor. Range 0°C to +40°C
[07-02-06]	Temperature Sensor. Range +10°C to +50°C
[07-02-07]	Temperature Sensor. Range +20°C to +60°C
[07-02-11]	Temperature Sensor. Range -50°C to +30°C
[07-02-12]	Temperature Sensor. Range -40°C to +40°C
[07-02-13]	Temperature Sensor. Range -30°C to +50°C
[07-02-14]	Temperature Sensor. Range -20°C to +60°C
[07-02-15]	Temperature Sensor. Range -10°C to +70°C
[07-02-16]	Temperature Sensor. Range 0°C to +80°C
[07-02-17]	Temperature Sensor. Range +10°C to +90°C
[07-10-xx]	Room controller panel. Range 0°C to +40°C

<sup>1</sup> EnOcean Equipment Profiles (EEP) V2.1



## 6. Technical specifications

<b>Envelope</b>	ABS (UL 94 HB). 2,5 mm thickness
<b>Dimensions</b>	71 x 71 x 27 mm
<b>Weight</b>	60g
<b>Color</b>	White
<b>Power supply</b>	USB powered. USB limitations apply
<b>ASCII port</b>	1 x USB
<b>Mounting options</b>	Desktop Wall
<b>LED indicators (internal)</b>	1 x USB connection error 1 x NOT (Notification) LED 1 x CONF (configuration) LED
<b>Configuration</b>	Through ASCII commands
<b>Operating Temperature</b>	From -25°C to 85°C
<b>Operating humidity</b>	<93% HR, no condensation
<b>Stock humidity</b>	<93% HR, no condensation
<b>RoHS conformity</b>	Compliant with RoHS directive (2002/95/CE).
<b>Certifications</b>	USB-ENO-ASCII: <ul style="list-style-type: none"><li>• CE</li></ul> USB-ENO-ASCII-C: <ul style="list-style-type: none"><li>• FCC (ID: SZV-STM300C)</li><li>• IC (ID: 5713A-STM300C)</li></ul>