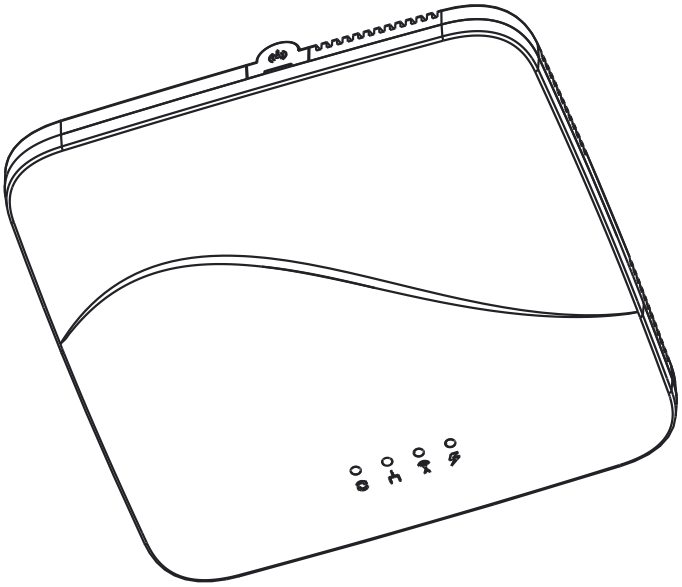
BACnet / IP Gateway Setup Manual

M9-EBOX



MAGNUM FIRST

1 Seneca Street 29thFloor M55
Buffalo, NY 14203

Revision 1.7
071123

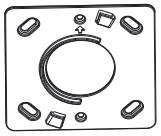
Contents

Hardware Overview

The product package should contain the following items:

- EBOX Device
- Backplate
- 24V Power supply (optional upon request)

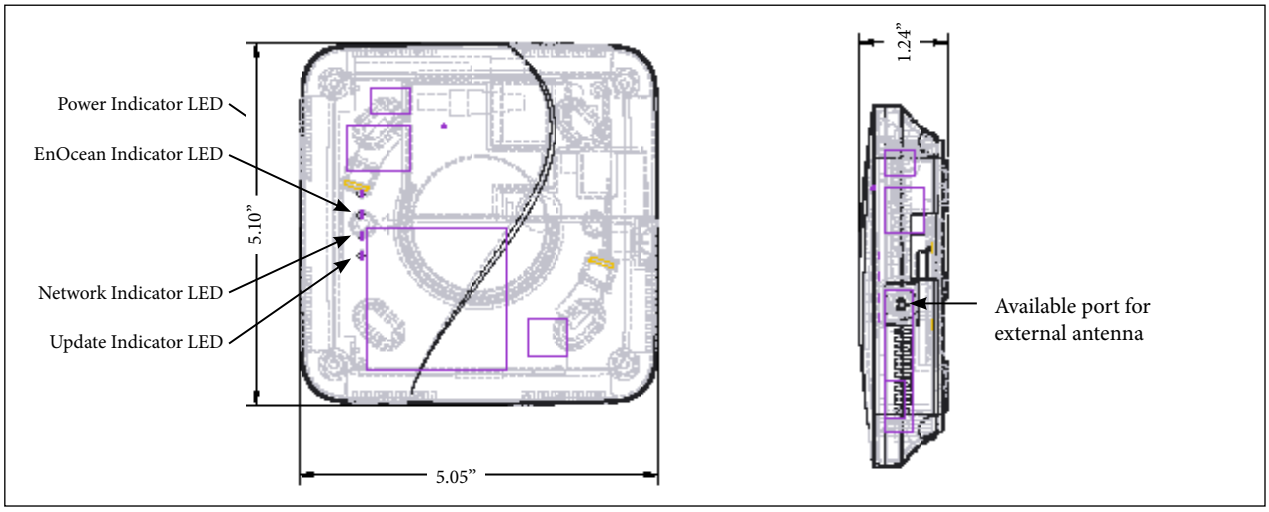
EBOX Device



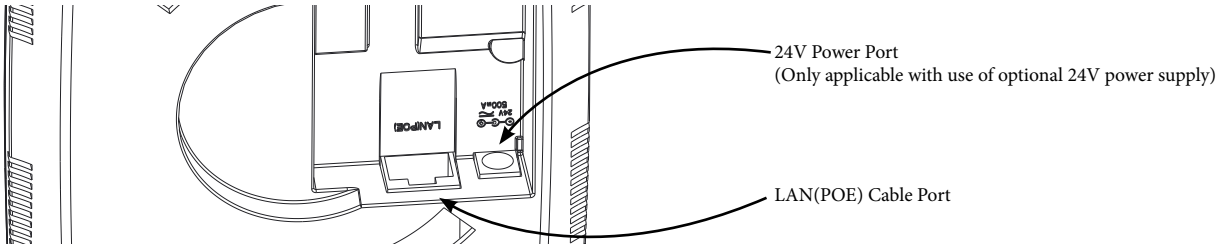
Device Backplate

Device Overview

- LED Overview & Dimensions



- Port Overview (back of device)



What you need before you begin

- PoE Cable
- 4 screws
- Screwdriver
- airConfig Software (*email support@magnumfirst.com for download instructions*)

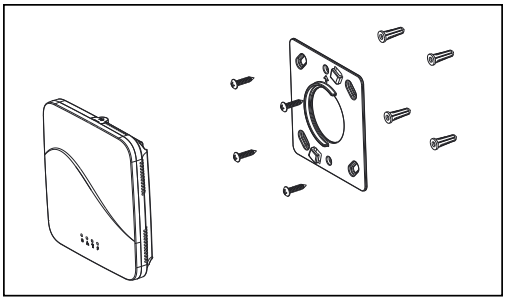
Mounting Instructions

- Screw backplate to wall or ceiling

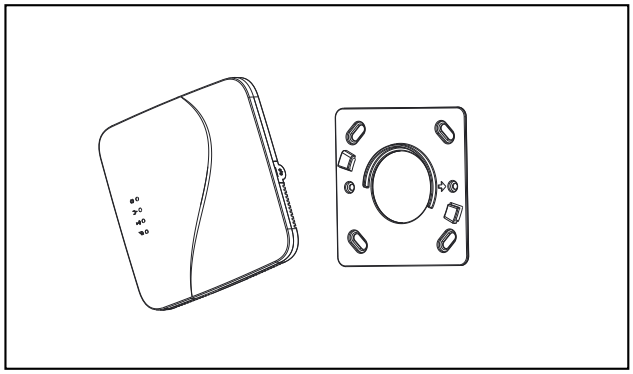
NOTE: Optimal mounting is at or below ceiling height and in conditioned environment.

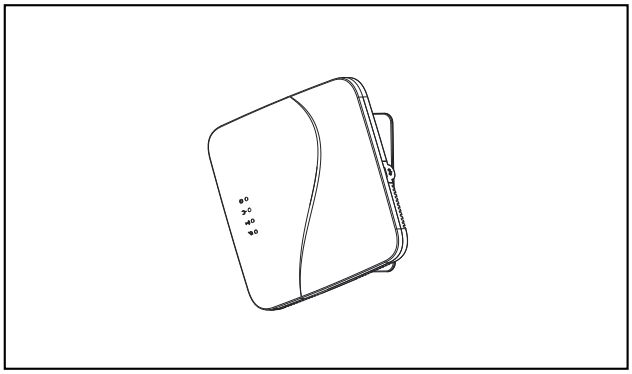
NOTE: Range can vary greatly based on building materials, device positioning, interferance, etc.

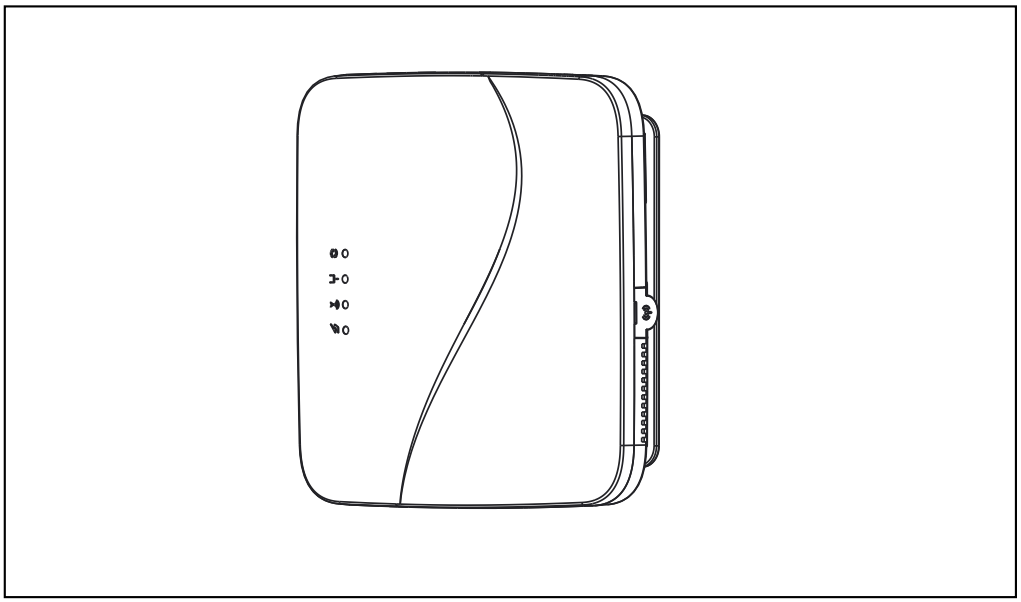
Reference the EnOcean Range Planning Guide prior to installation.



- Attach device to backplate by aligning tabs and twisting / locking into place (see below)







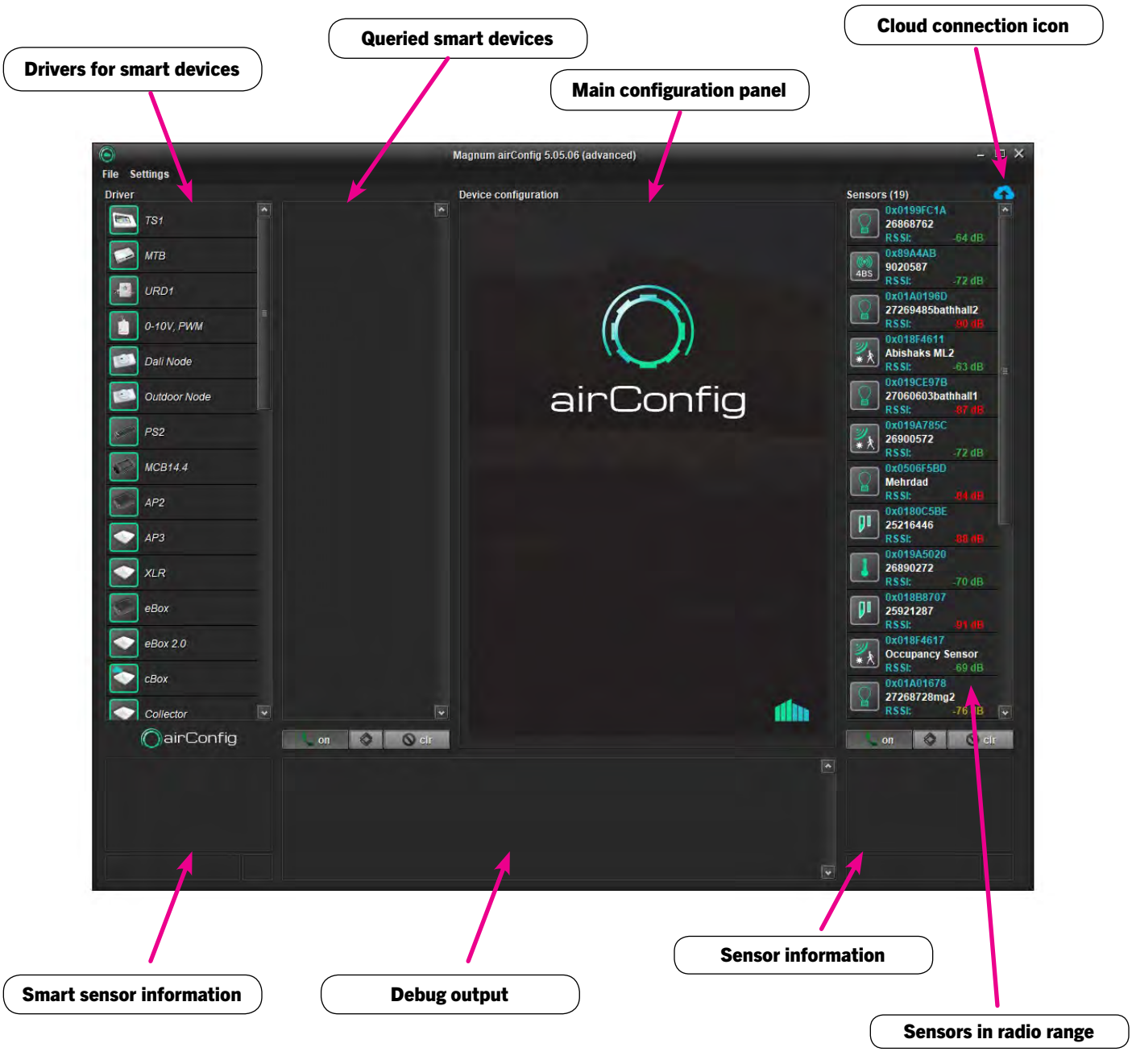
Configuration Process

• Download and install airConfig (email support@magnumfirst.com for download instructions))

- Select USB port with USB-transceiver or network card.
- The eBox may be configured without the USB-Tranceiver when it can be reached on the network.
- The eBox factory default is DHCP, so it will receive and IP Address if a DHCP server is available.
- If your computer running airConfig is on the network, you will be able to configure the device without the USB-transceiver.

Configuration Process

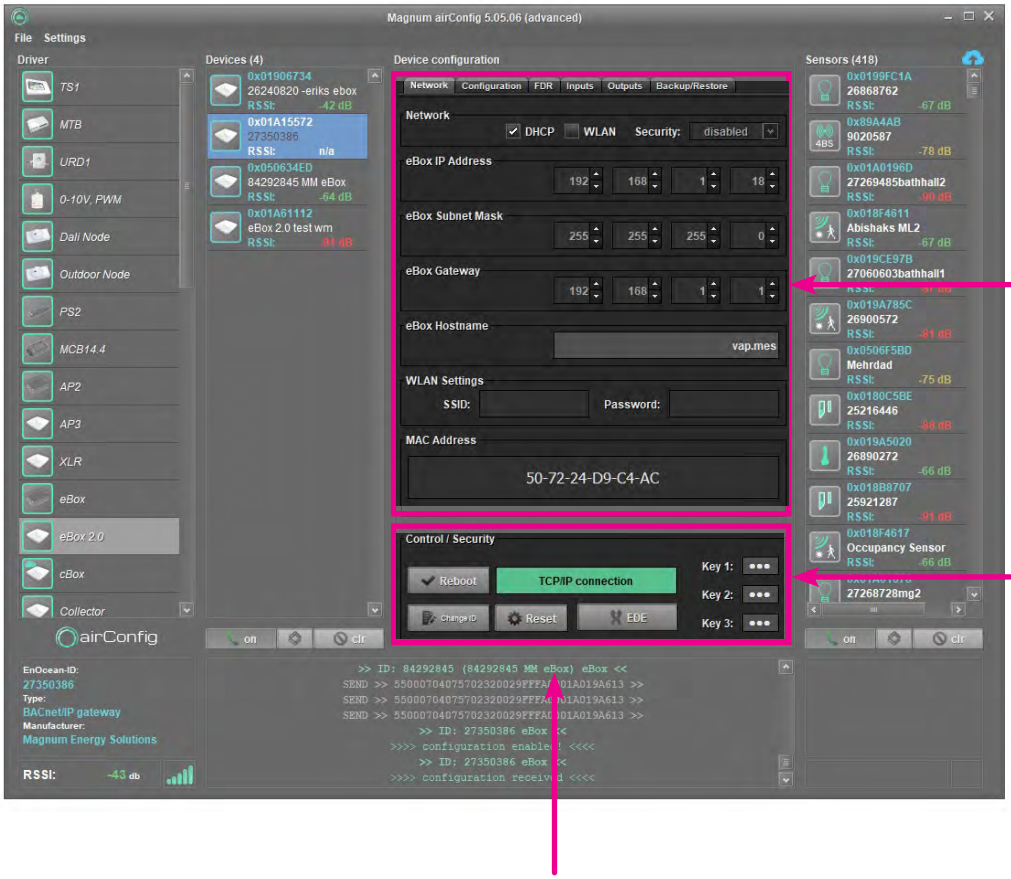
• Please find the airConfig panel overview below.



Configuration Process

- If airConfig is started without the USB-Transceiver, it will identify EBOXES on the same network automatically. The EBOXES will not need to be queried.

Configuration Process



Network Settings

- DHCP
- WLAN
- IP Address
- MAC Address of the EBOX

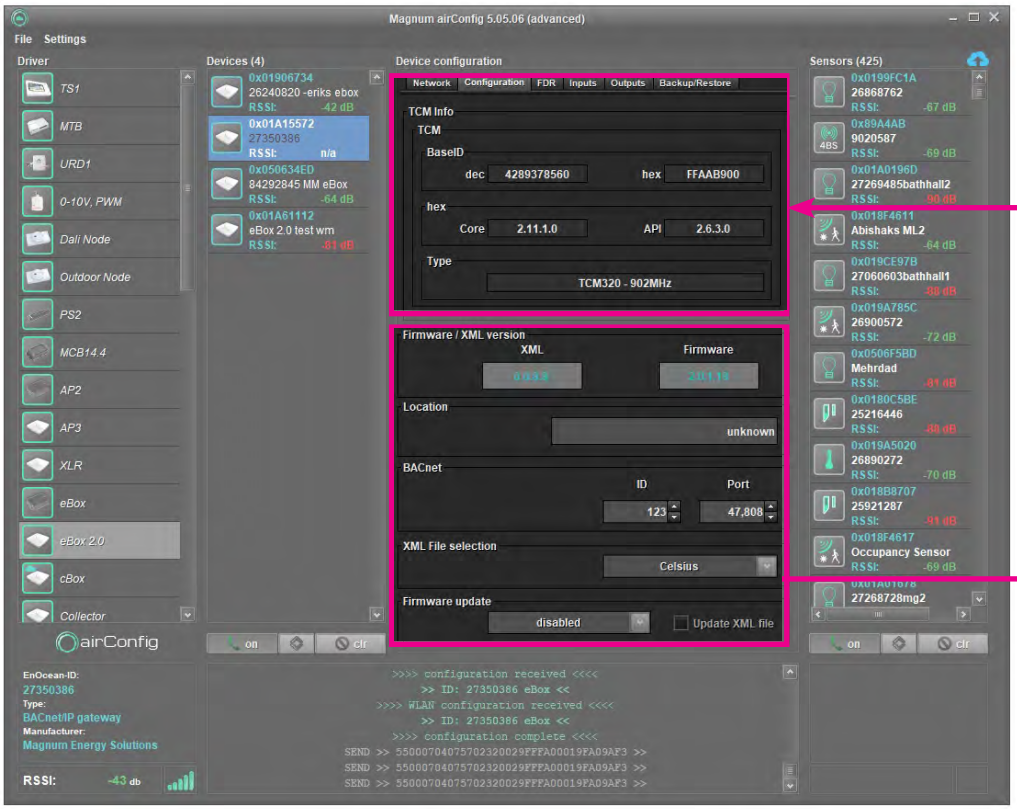
Active TCP/IP Connection

- Without an active connection, only the network settings can be adjusted.
- airConfig requires a network connection to the EBOX for full configuration.

Control / Security

- Reboot - Reboots the EBOX
- Reset - Factory reset that deletes all current configuration as well as inputs and outputs
- Change ID - Changes the Base ID of the radio Chip. CAN ONLY BE DONE 10 TIMES!
- EDE - See page 14
- Key - Configuration keys to lock the device.

Configuration Process



Information on the radio chip of the EBOX

- **XML and Firmware Version (1)**
- **BACnet Location**
- **BACnet ID and port**
- **XML Type (2)**
- **Firmware Update**

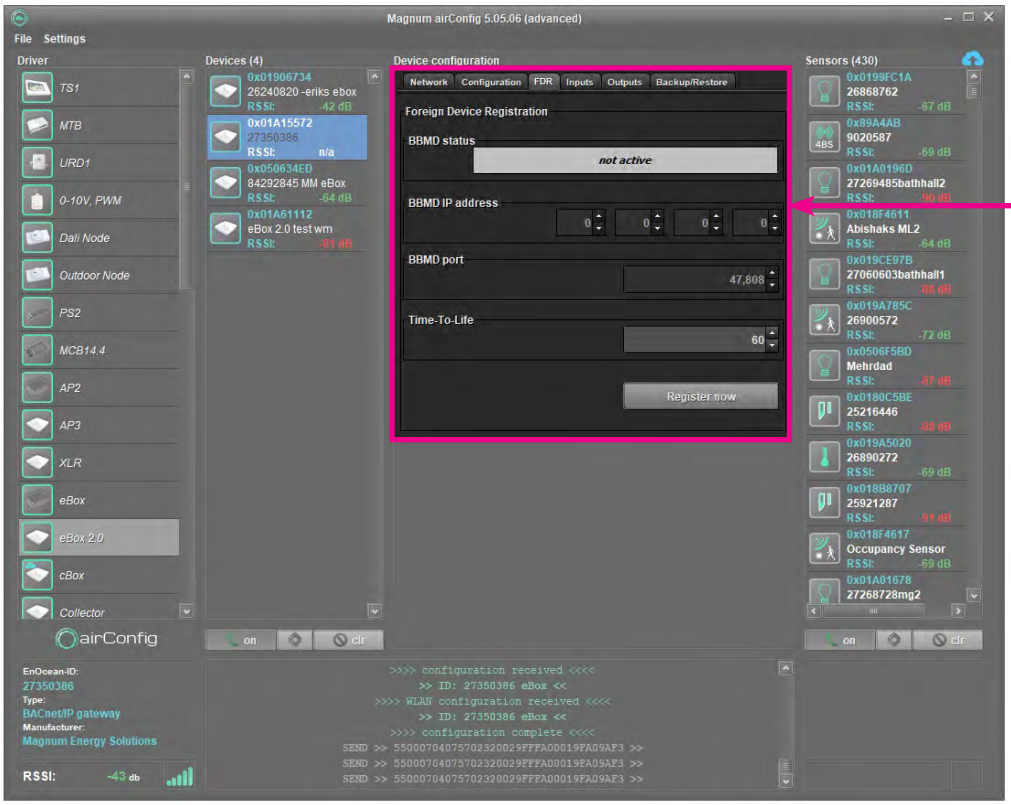
The EBOX can automatically check for new firmware. You can specify the frequency of how often the EBOX check for new firmware. This feature requires internet access for the EBOX.

(1) Actual firmware version of the EBOX and XML file. airConfig will prompt if there is a new firmware version available. In a case where the EBOX has direct internet access, it will also have a BACnet point that indicates a new firmware's availability.

The XML file contains all EnOcean profiles and is updated regularly.

(2) EBOX points are created based on the XML file. The standard XML file shows temperature values in °C. This can be changed to °F. Since all sensors send in °C, this is the recommended unit.

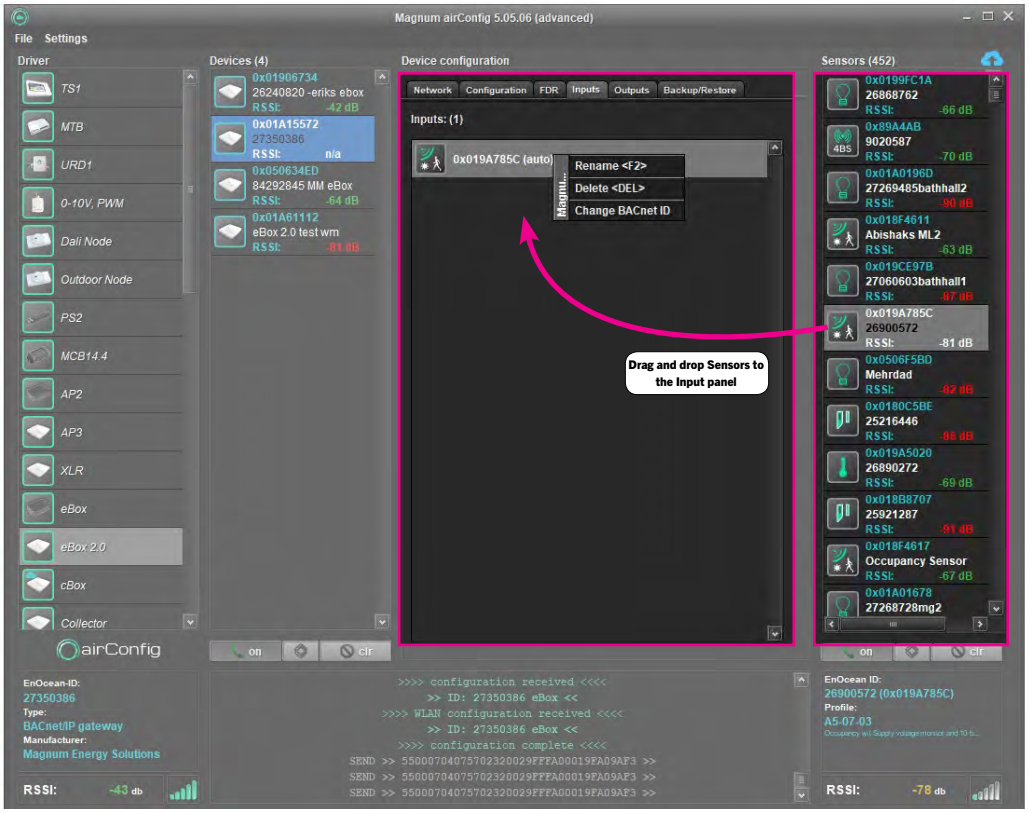
Configuration Process



FDR Settings - In a case where a BBMD server is present on the network, the EBOX can be configured as a foreign device.

The EBOX is NOT a BBMD server!

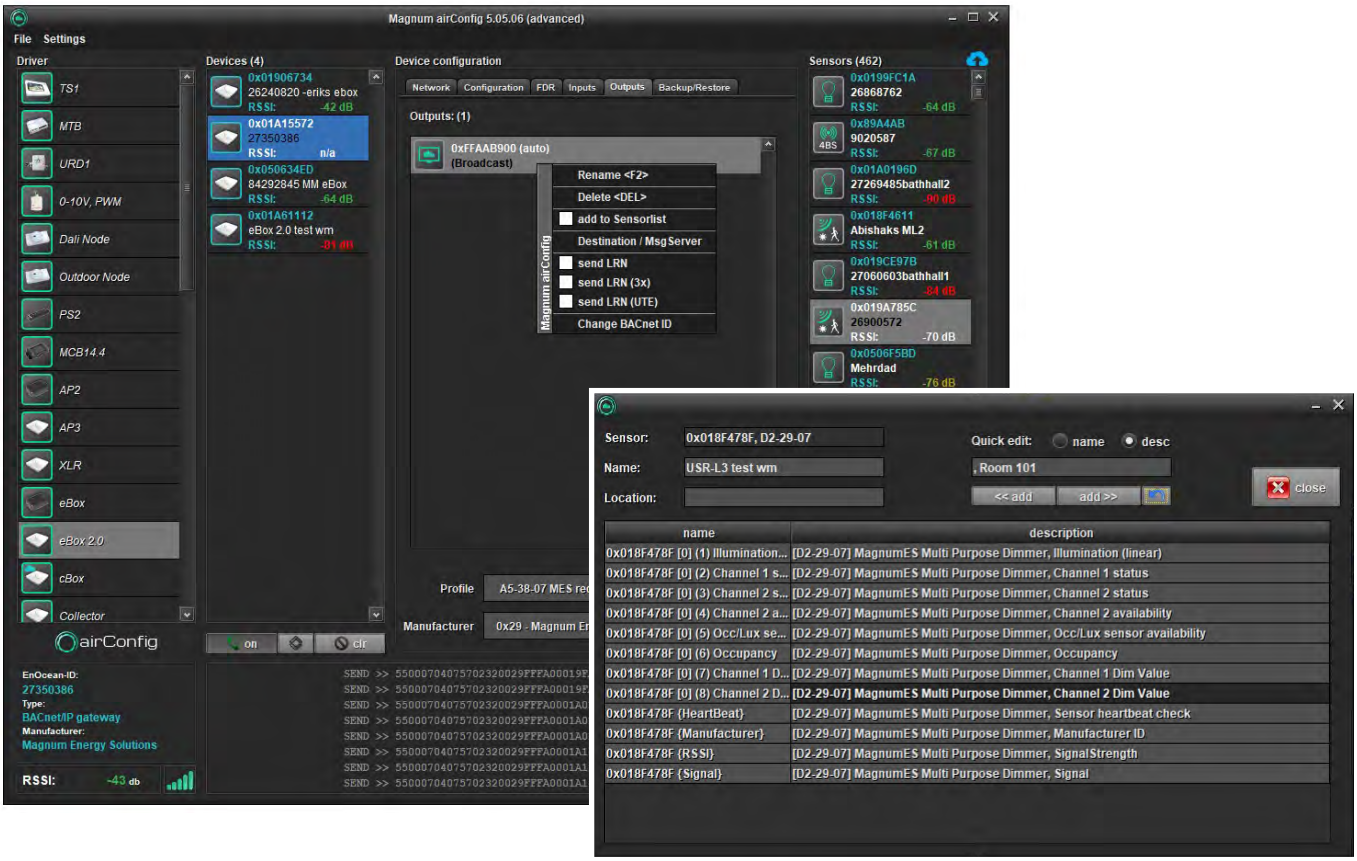
Configuration Process



Sensors can be added to the EBOX by simply dragging and dropping sensors from the Sensor panel to the Inputs panel.

You can rename, delete and change the BACnet ID of the sensors. You will need to send the configuration to the EBOX first and read it again.

Configuration Process

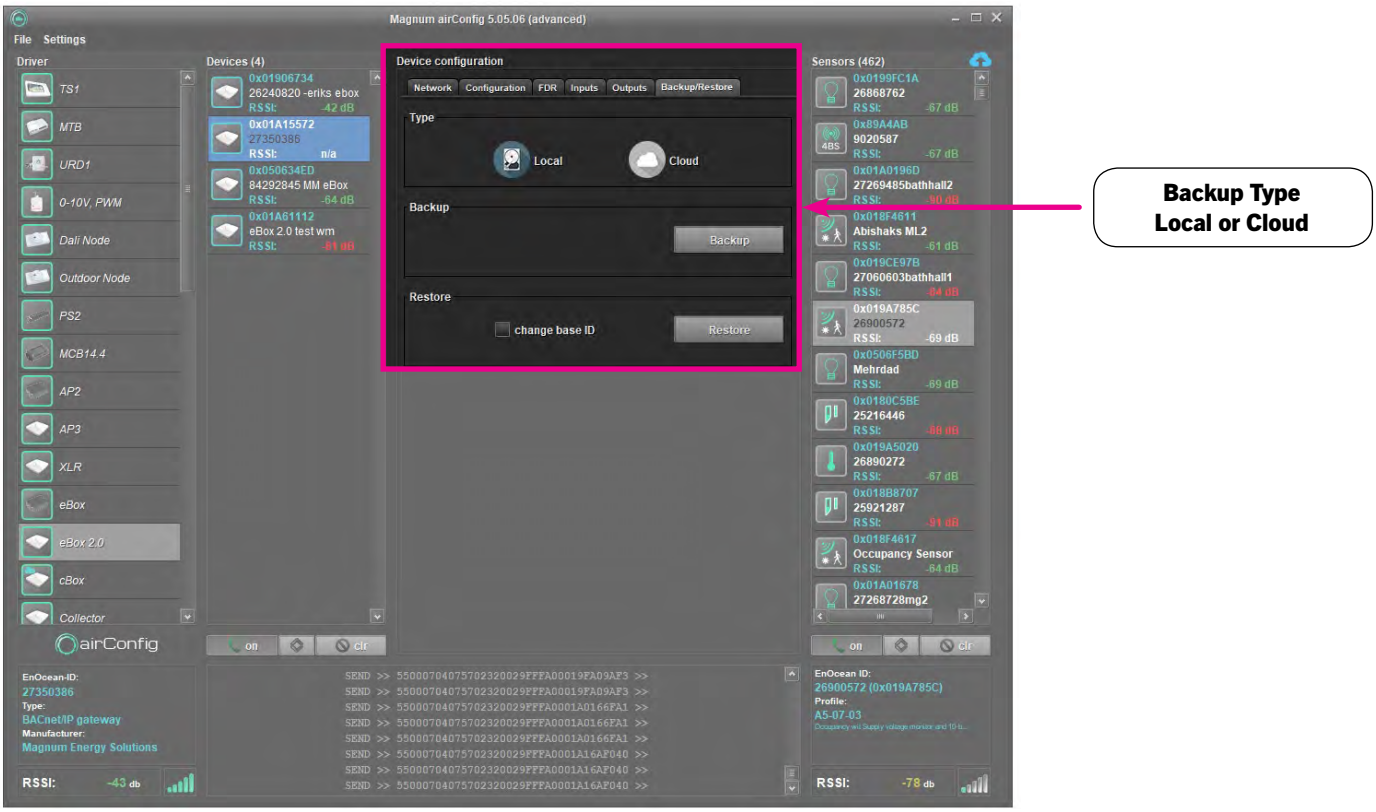


To add outputs to the EBOX, select profile and manufacturer and click on the “+”.

Options:

- Rename: Renames the output. Renaming allows you to add additional information to each BACnet point that a device creates. You are able to add text to the beginning / end of the Name or Description to provide additional identifiers (Room numbers, Office names, etc.).
- Delete: Deletes the output.
- Add to sensor list: Adds output to the sensor list so it can be used as an input for the device it is supposed to control
- Destination / MsgServer: Some devices need to be addressed (instead of using broadcast messages). Others may only be able to receive commands in a very short window, after they have sent a message themselves. Both can be configured here. Please refer to the device manual.
- Send LRN: Sends a learn telegram to the sensor. LRN sends 1 4BS learn telegram
- LRN(3x): Sends 3 consecutive learn telegrams.
- LRN(UTE): Sends 1 UTE telegram (please refer to device manual)
- Change BACnet ID: Take from input

Configuration Process

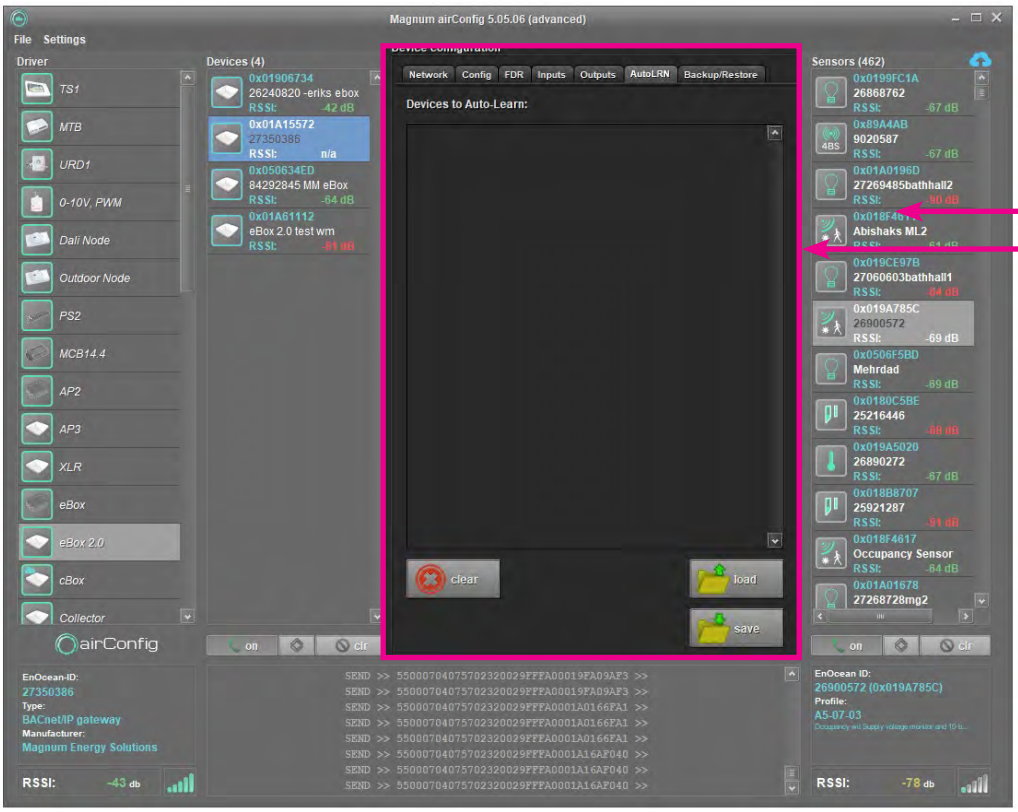


airConfig can backup and restore all of its configuration, including inputs and outputs either to your local HDD or to the Cloud.

Change base ID will also change the Base ID of the new EBOX if the destination device is different from the source. This will allow the new EBOX to control all the devices that the old one did.

A Base ID can only be changed 10 times.

Configuration Process



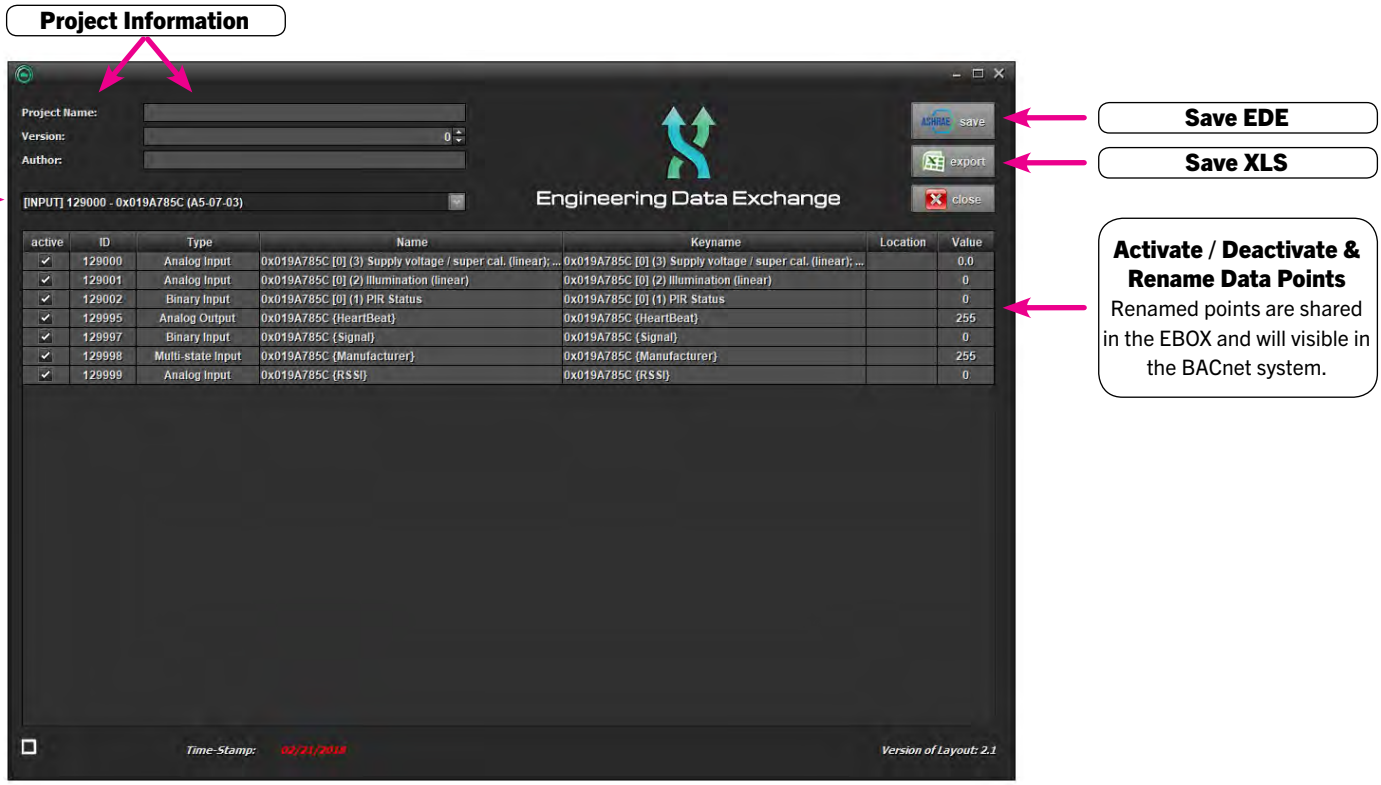
Drag Magnum Auto Learn Compatible Devices from the "Sensors" panel into the "Auto Learn" panel.

Auto Learn

Magnum Auto Learn compatible devices enable the EBOXs to learn in devices based on signal strength. In installations where the devices fall into multiple EBOXs range, Auto Learn will allow the EBOXs to study the signal strength for the devices. After a 5-6 hour period, the EBOXs will use that information to assign the devices to the ideal EBOX.

You are able to Save / Load these Auto Learn lists and apply them to multiple EBOXs.

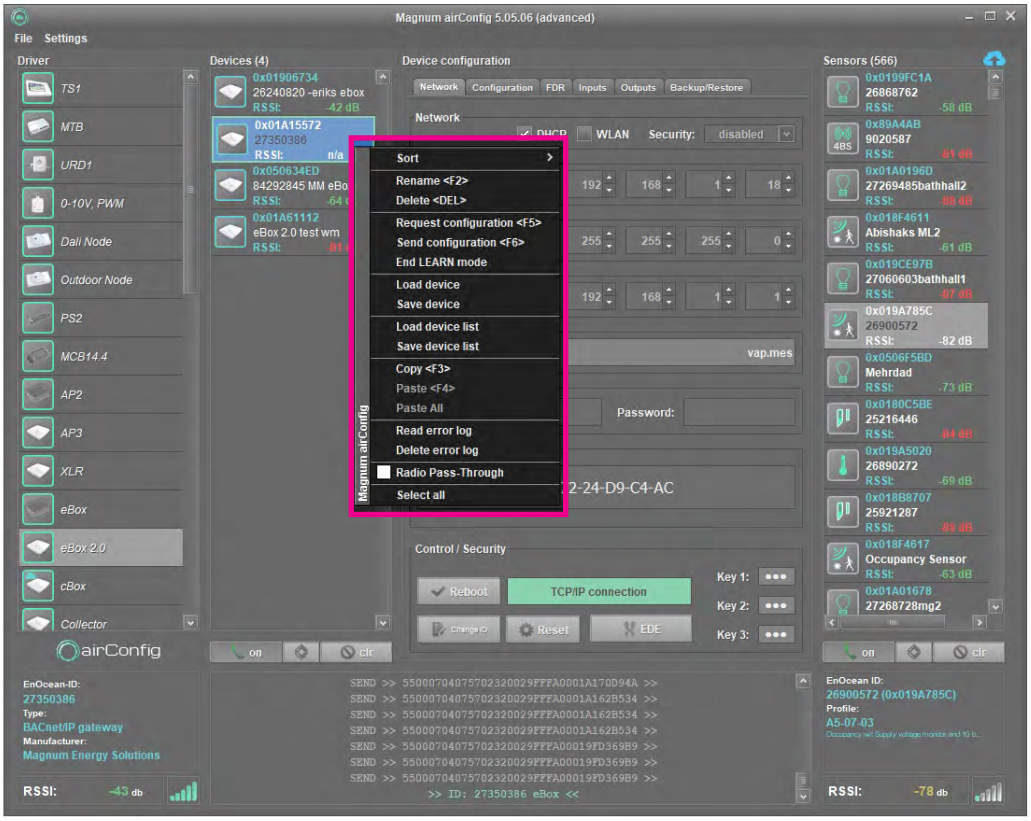
Configuration Process



Select inputs / outputs and EBOX points.

Since data points are created in the EBOX, you will need to send / receive the configuration before you can edit the EDE file.

Configuration Process



- Sort: Sort EBOXES by RSSI, name, location and EnOcean ID
- Rename: Rename the EBOX
- Delete: Delete the EBOX
- Requestion Configuration: Request configuration from the EBOX
- Send Configuration: Send configuration to the EBOX
- Start / End Learn Mode: Start / end learn mode toggle
- Load Device: Load a single EBOX from disc
- Save Device: Save a device
- Load Device List: Load an EBOX list from a disc
- Save Device List: Save selected EBOXES as a list to a disc
- Copy: Copy the configuration
- Paste: Paste without inputs and outputs
- Paste All: Paste with all inputs and outputs
- Read Error Log: Request error log from EBOX
- Delete Error Log: Delete error log from EBOX
- Radio Pass-Through: Activating radio pass-through causes the EBOX becomes the radio of airConfig. All radio messages will be forwarded from the EBOX to airConfig. All commands are being sent through the EBOX
- Select All: Select all EBOXES