EasySens airScan

USB Transceiver & Software – EnOcean Field Strength Test Tool

Thermokon Sensortechnik GmbH

Data Sheet

Subject to technical alteration
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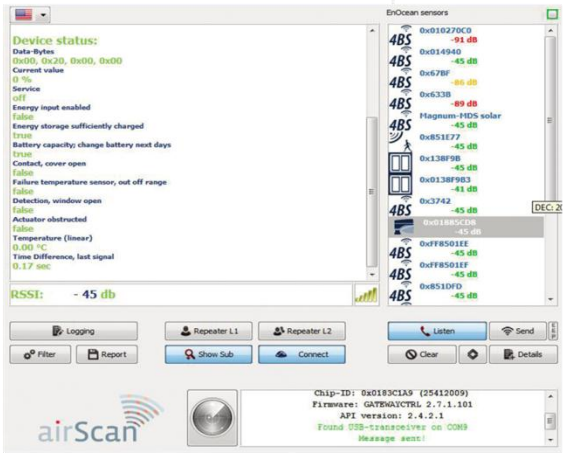
The efficient planning tool airScan



enocean alliance
No Wires. No Batteries. No Limits.

Application

Thermokon **airScan** consists of an EasySens USB transceiver and a software, that converts your notebook or Windows® tablet into a field strength test tool. It helps integrators to measure sufficient radio ranges and/or to find the right location for wireless EnOcean receivers. airScan is designed to give a quick overview of received EnOcean telegrams and to read status, ID, field strength and manufacturer of integrated products.

All EnOcean telegrams received will be shown in the airScan tool/USB, which should be mounted in the location of the existing or intended EnOcean receiver's antenna. We recommend using the 3m/10ft USB extension cable.

The software should be downloaded from Thermokon's web site www.thermokon.de/download-center/ which ensures that the newest version will be obtained.

Installation

System requirements:

Thermokon airScan is available for devices with operating system Microsoft® Windows XP or newer.
For using the USB transceiver the device needs an USB 2.0 port.

Hardware:

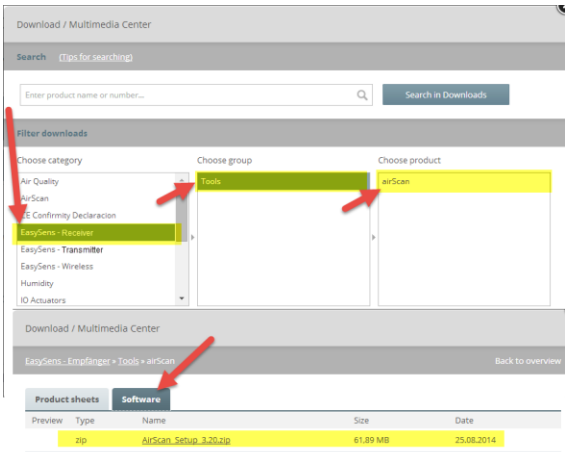
Plug Thermokon EasySens USB transceiver into USB port of you notebook/tablet. Follow the instructions to install the drivers.

If the driver cannot be found automatically, please download the latest driver from FTDI´s website for your operating system http://www.ftdichip.com/Drivers/VCP.htm.

Make sure that you have administrative rights to complete the installation of the drivers.

Software:

1. Download the software from our Mediacenter at www.thermokon.de
2. Click on ‚Downloads/Media'
3. Choose "EasySens - Receivers" in Category, "Tools" in Group and "airScan" in product
4. Use Software to download the latest version
5. Install the software following the installation instructions



Automatic query for available updates

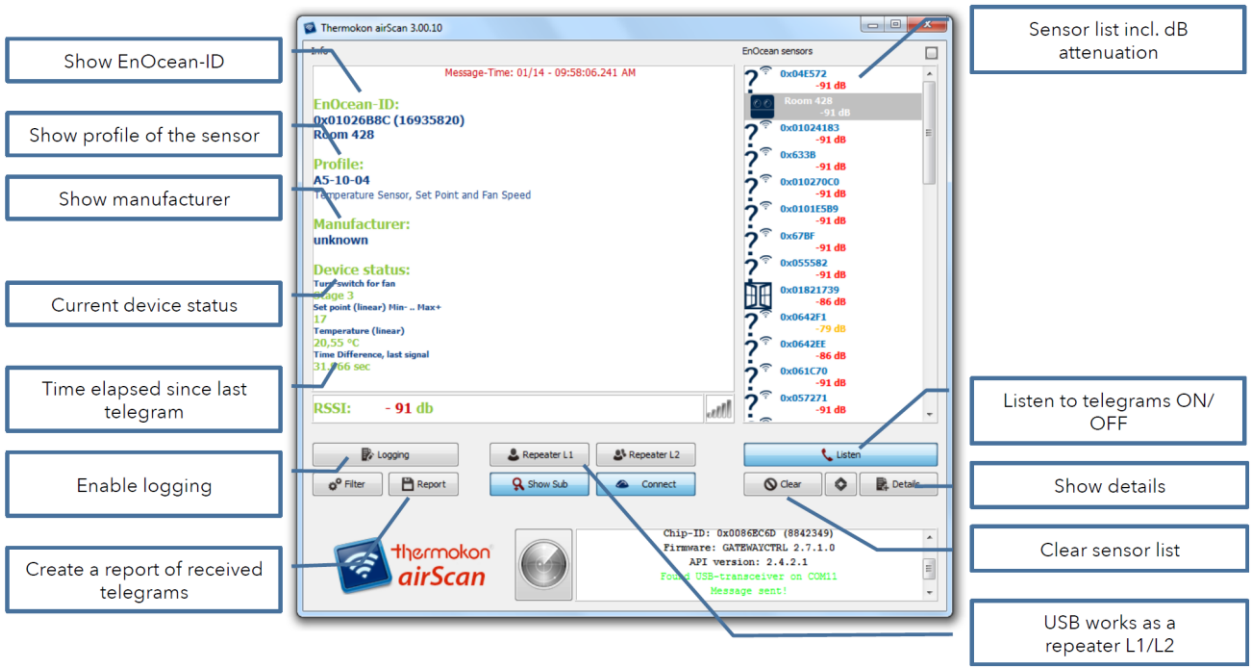
In order to keep the software up-to-date, please open PORT 2016 to regularly let the software search for new updates. Once you bought airScan, those updates are free of charge!

Operating Thermokon airScan

Starting airScan will search for a USB transceiver with an airScan license.

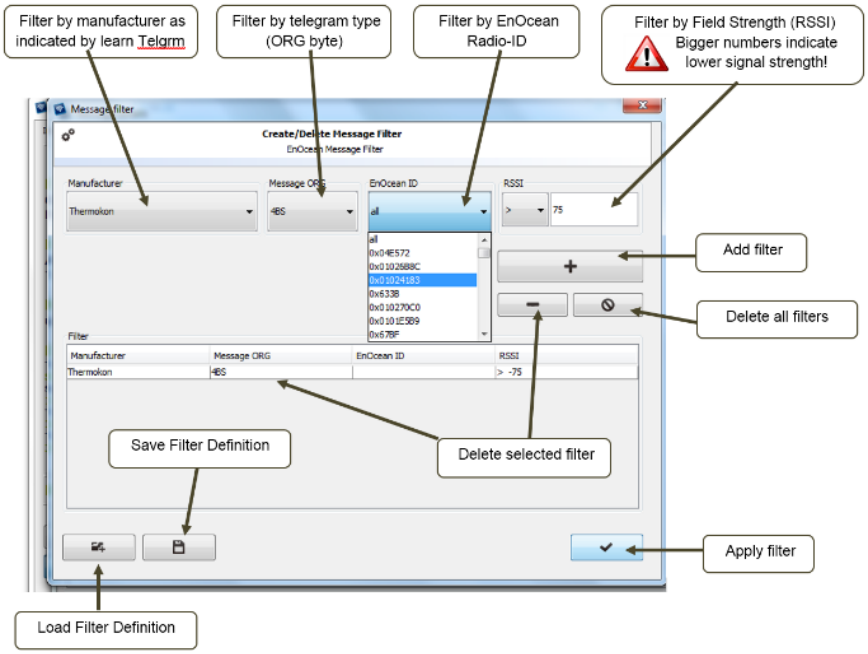
Please note: Thermokon airScan software will work only with an original **EasySens** USB stick with an airScan licence. *3rd party devices are not supported.*

Main window of airScan



By clicking 'Filter', it is possible to set a filter on incoming telegrams. Only signals, that match the filter definition, will be shown in the main window, while active 'Logging' to the file logfile.txt is not affected by the filter. The signal can be filtered by manufacturer (if the manufacture ID is transmitted with the teaching telegram of the sensor; as long as no teaching telegram has been received for a particular EnOcean ID, "Unknown" will be displayed in the main window).

Filter definitions

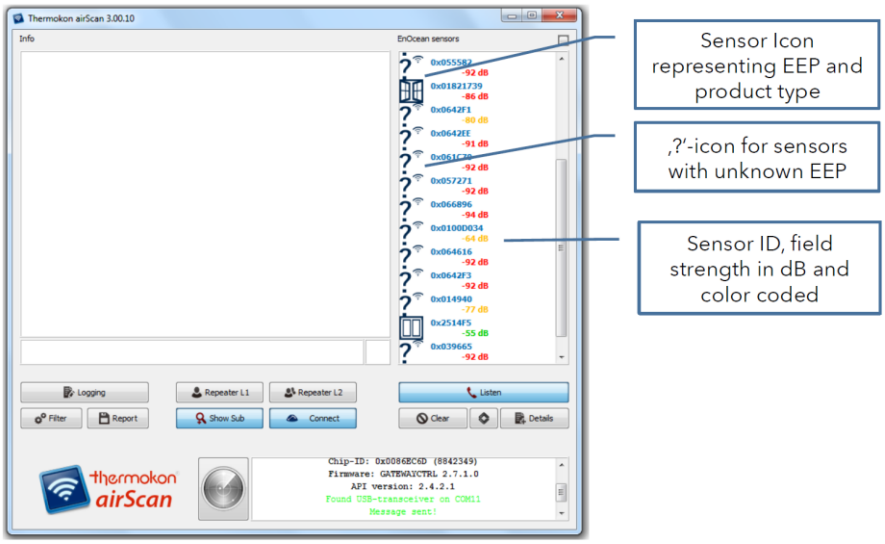


Filters can be set on the selected type of telegram being received. Only telegrams which are selected will be shown in the sensor list.

- RPS = switch signals, incl. keycard or remote
- 1BS = 1 Byte sensor (i.e. window contact, window handle),
- 4BS = 4-byte sensors, (i.e. Thermokon solar powered sensors)
- MSC = Manufacturer Specific Command (no standardized content, see product data sheet)
- VLD = Variable Length Data (no standardized content, see product data sheet)
- ADT = Addressed Data Telegram (no standardized content, see product data sheet)

A filter can be set on the EnOcean Radio-ID or the signal strength (RSSI) received by the USB transceiver.

Information shown in sensor list



Info window shows the information from the sensor marked in the sensor list.

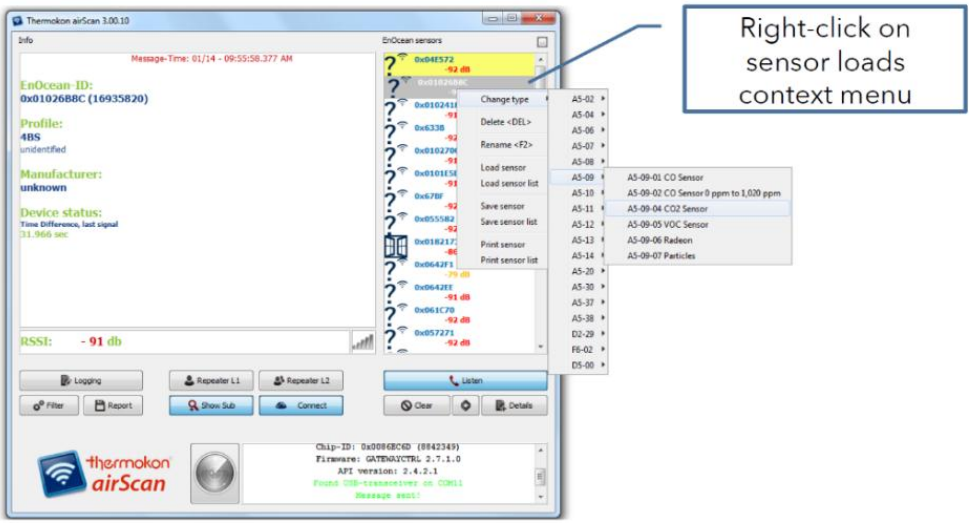
Remark: RSSI levels are scaled in dB with higher numbers indicating weaker signals.

We recommend to use a USB extension cable (Art.-#574044) and place the USB transceiver at the position, where the signal strength shall be monitored.

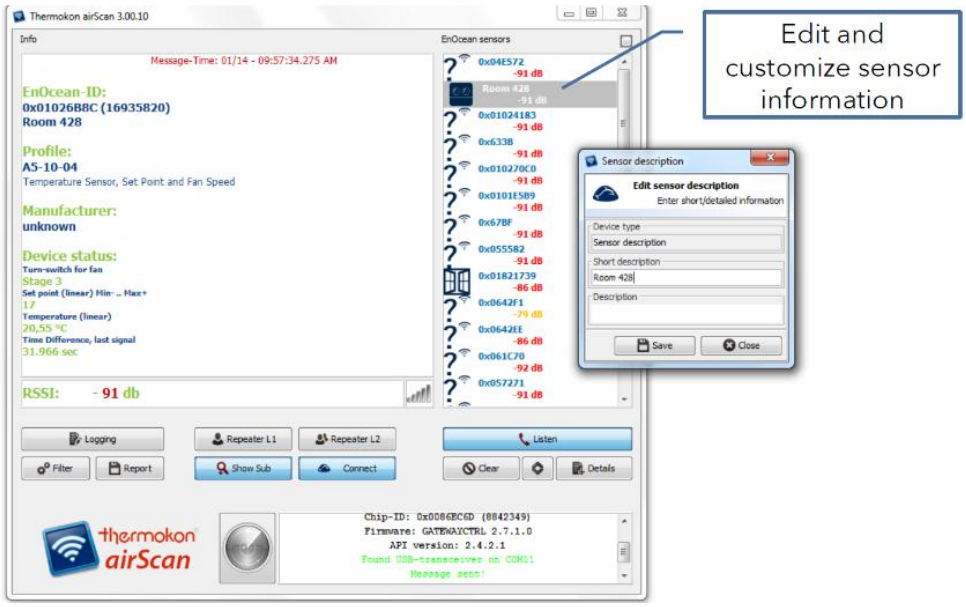
Defining the EEP (EnOcean Equipment Profile)

Using right mouse click will open a context menu.

The EEPs are intellectual property of the EnOcean Alliance. The latest version of the EEP-list can be obtained from the website of the EnOcean-Alliance: http://www.enocean-alliance.org/en/enocean_standard/



A renaming functionality has been integrated to be able to individualize sensor information in sensor list e.g. “living room light”.



Details functionality

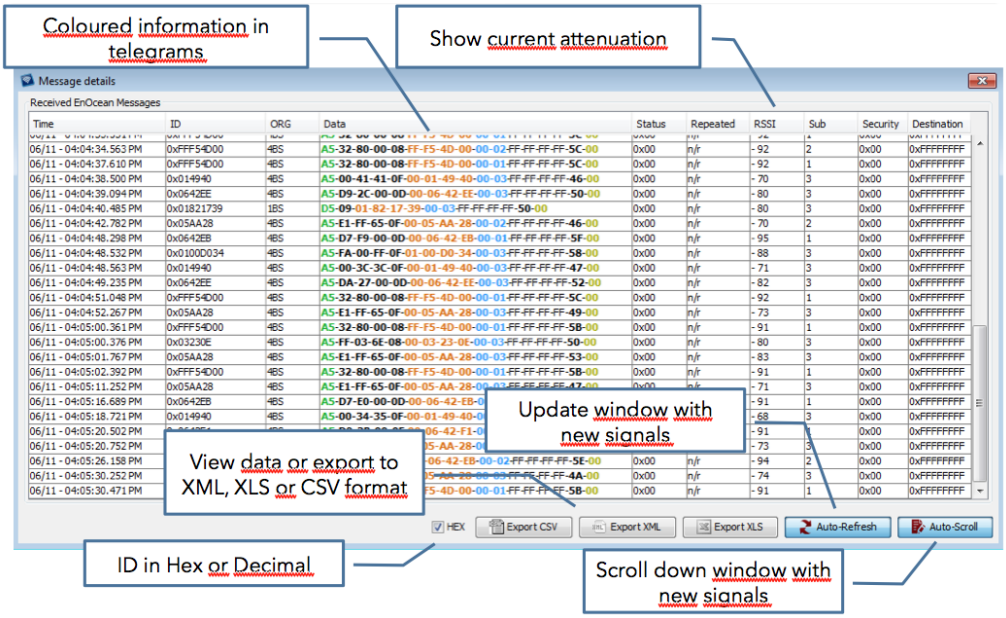
By clicking on the ‘Details’ button, a window containing all telegrams, that have been received and selected according to the filter setting, will be shown. The window shows data and time of the telegram, Radio-ID, type of Telegram (ORG) and EnOcean telegram in raw format.

Status column indicates whether a L1 or L2 repeater has been forwarding the signal.

Solar powered sensors send 3 sub-telegrams, sensors with mechanical harvester send 3 or more telegrams depending on the amount of energy harvested. Less than 3 sub-telegrams indicate a collision or a weak signal with range problems (See RSSI)

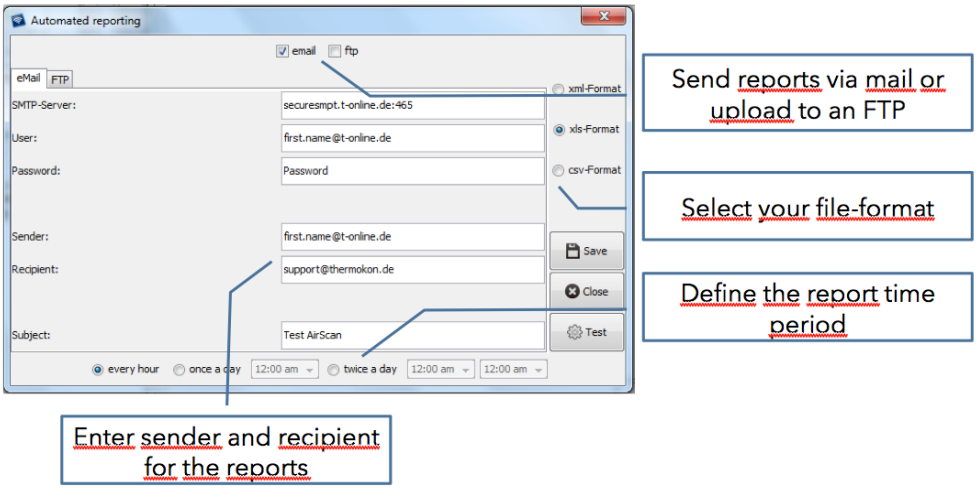
When a repeater is involved more than 3 sub-telegrams indicate that the original signal has been received as well as the repeated signal (totals 3+3).

The signal strength limit of EnOcean receivers typically is -90..-95 dB. Signals lower than this cannot be differentiated from the background noise. Because damping of signals will vary over time, a safety margin of 15..20 dB is strongly advised to ensure reliable communication.



Reporting functionality

The Report feature can be used to define automatic saving of the log file containing the telegrams that matched the filter settings and can be sent via email or uploaded to a specified FTP-Server. The format can be chosen from XML, CSV or XLS (Microsoft® Excel).

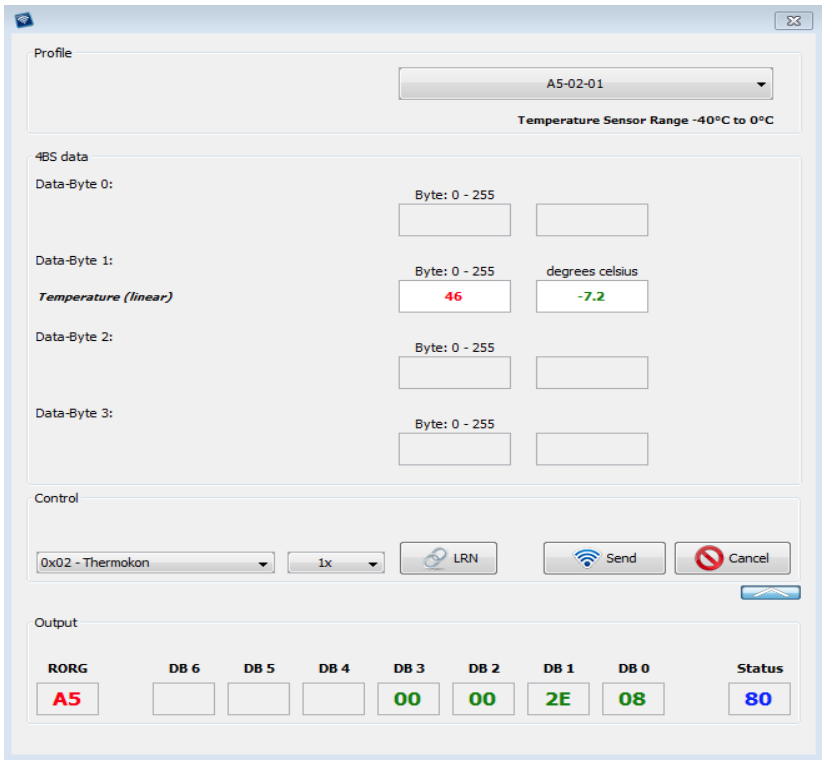


Generating and sending telegrams

You also have the option to send out your set values (e.g. set temperature, status etc.) and let them be generated just by entering your desired value either in °C/°F, OPEN/CLOSE, LEARN and more. Via a drop-down menu at the top, you can select the EEProfle of the sensor. (You may also download the EEP list here: http://www.enocean.com/fileadmin/redaktion/enocean_alliance/pdf/EnOcean_Equipment_Profiles_EEP_V2.6_public.pdf

After that, all your data-bytes and the information contained will be shown, both in decimal and in units.

Under the menu ‘Control’, you are also able to send LEARN-telegrams. First you select the manufacturer and then how many sub-telegrams (1x, 3x, UTE) shall be sent. Click on LRN and the LEARN-telegram for this specific device (defined by the profile) is sent.



Accessories

USB extension 3m/10”, Art.-# 574044