

DustLog 8.0
Data Logging Software



SINTROL
For Good Measure

Sintrol DustLog 8

Manual

Software Version 8.0.15XXXXXXXX



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1 INTRODUCTION

This manual describes how to install and use SINTROL's DustLog 8 application. Sintrol shall not be liable for any loss or damage whatsoever arising from use of any information or details therein, or omission or error in this manual, or any misuse of the application.

NOTE

The Application License is needed to use SINTROL's DustLog 8 application.

1.1 End User License Agreement (EULA)

Copyrights and End-User License Agreement

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1.2 Recommended System Requirements

OS: Windows 7 or Windows 10

Processor: Intel i5 or above / AMD FX 4000 series or above

RAM: 4 gigabyte (GB)

Hard Disk: 7,2k rpm HDD or SSD (recommended)

Display: Full HD 1920x1080

1.3 Installation

Run the installation file (DustLog-8_0_15XXXXXXXXX-installer.exe) and follow the Installation Wizard's instructions on the screen. The installation program creates a new program group in the start menu. Clicking on the DustLog 8 icon starts the program.



1.3.1 License types

In order the software to operate, a valid license file is needed. There are three different licensing categories available.

1. PC-computer locked license

This license type locks to a specific PC-computer and operates with all Sintrol products. The license is created based on the request made by the software itself after the installation.

2. Device locked license

This license type works with prelisted Sintrol products, but the software itself can be installed and run in as many PC-computers as required. Also, the actual license can be created before the installation for as long as the serial numbers of the devices are known.

3. Trial license

This license type is meant for testing. It will operate until the expiration date of the license. Using this license requires the PC to be able to connect to internet to acquire the validated date from Sintrol server on boot-up.

The license (and request) files can be acquired directly from Sintrol server via the internet or they can be save as a files from and into the program. For simplicity, using the internet connection is recommended.

1.3.2 Purchase code option

As each particular license needs to be approved by Sintrol personnel, it might create some uncomfortable delays in installation, thus making the customer service on site unnecessarily complicated.

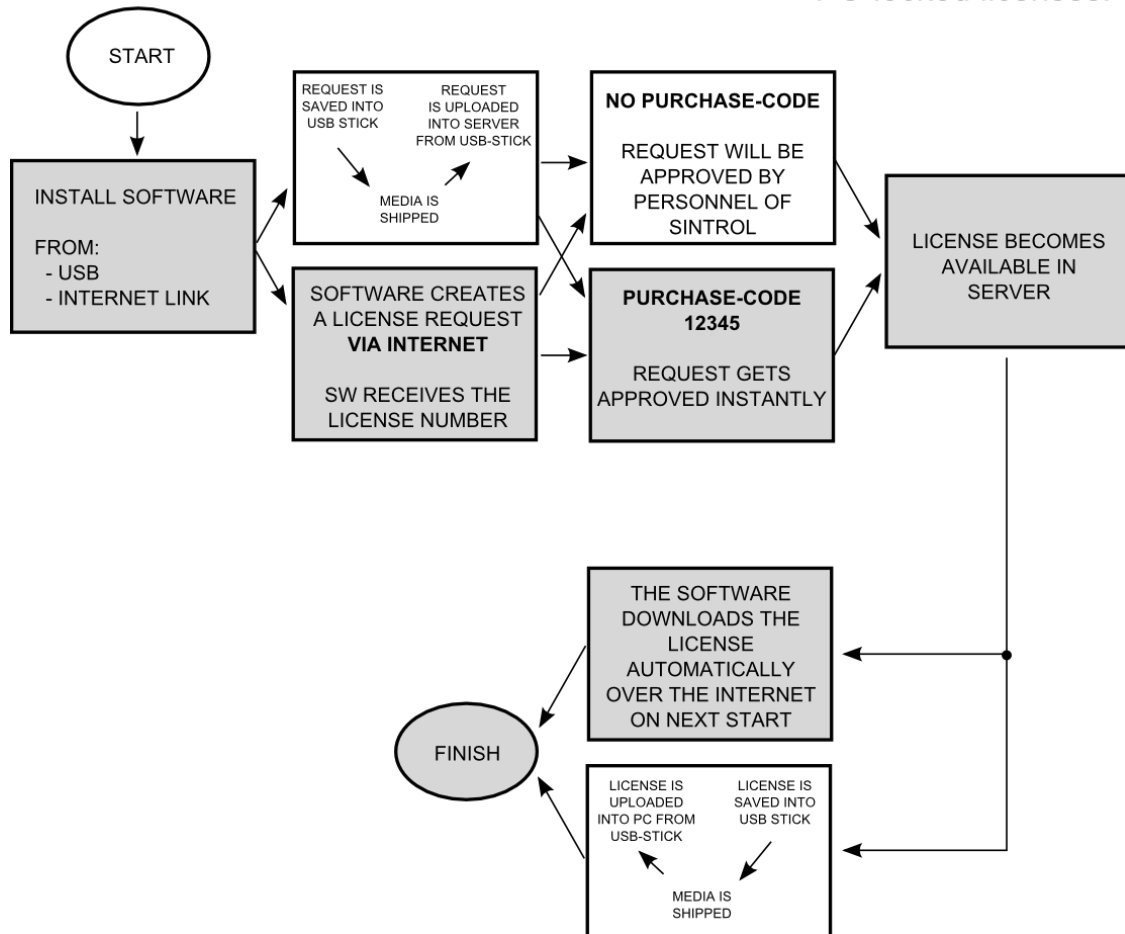
For this reason it is possible to buy a specific license beforehand.

This means that for that particular license will be created a temporary (one time usable) *purchase code*. Then, by giving this unique purchase-code during the installation the Sintrol license server will authorize the license creation immediately. Naturally, this means also allowing the PC-computer to connect via internet to Sintrol license server.

1.3.3 Procedure with PC-locked license

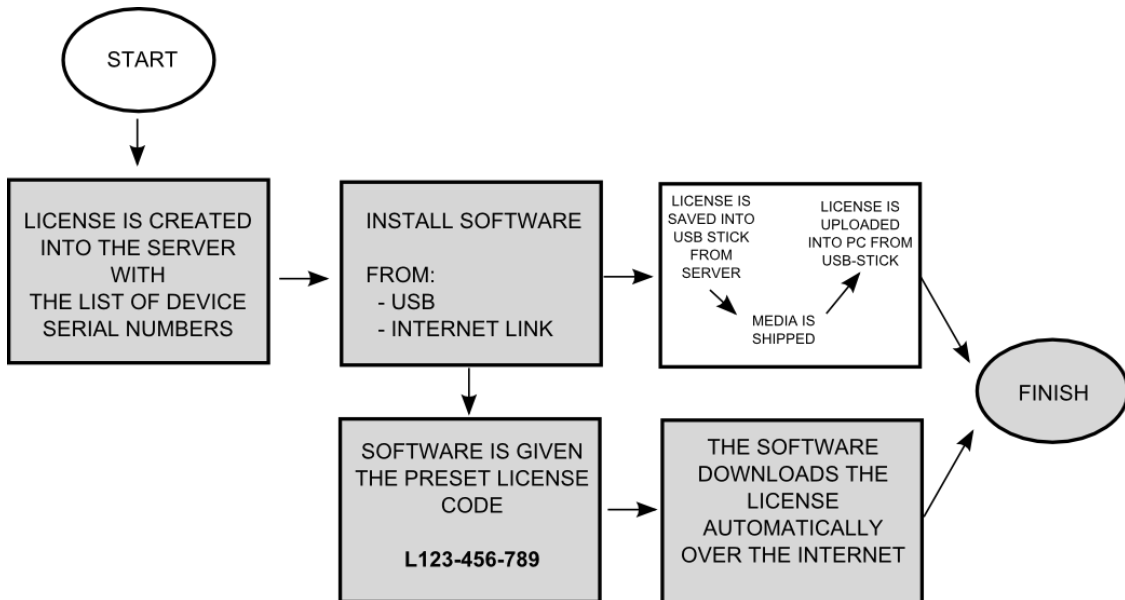
Here's the description on phases required to acquire PC-locked license type. The recommended path is presented in gray and it requires internet connection at the moment of installation.

PC-locked licenses:



1.3.4 Procedure with Device locked license

Here is presented the device locked license procedure. The procedure itself needs the creation of license by Sintrol personnel beforehand. The license is then only pointed to the software from file or via internet.



1.3.5 Making changes in a license

Changes are mostly done in order to extend the existing network of dustmonitors.

A License file itself cannot be modified directly. All modifications need to be done and approved by Sintrol, after which a new license file will be available.

In order to apply the new license, user needs to acquire it from the server. First open the SETTINGS window and find the LICENSE section. Then open the LICENSE WIZARD to manage your license.

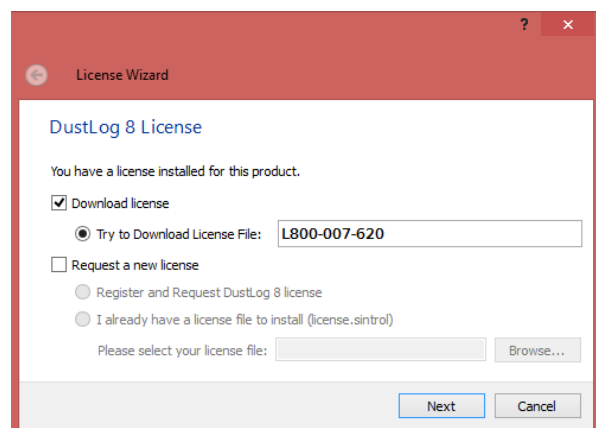
To apply a new license, there is two options to do this:

1. Via internet

Select next, and the software will load the updated license file from server automatically.

2. Using file (on data media)

Select 'request a new license' option and use BROWSE option to point to the new license file.



2 SOFTWARE OPERATION

NOTE

The **signal** is the output of the measurable data. The **signal** is created from the device.

2.1 Home Screen

The Home Screen is the main screen of the DustLog 8 application. From the Home Screen you can open other views of DustLog 8 like Reports, Monitor, Alarms, Signals, Network, Help, Settings or Devices window.

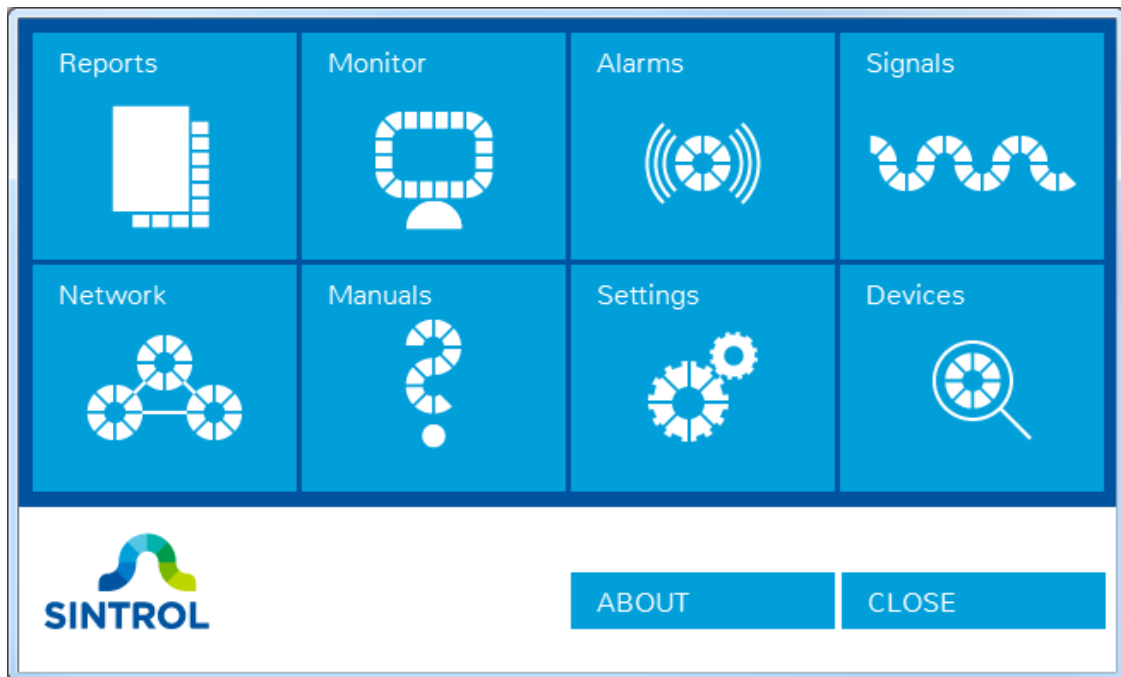


Figure 1 The DustLog 8 application Home Screen

The main views of DustLog 8 application:

1. Reports View:

You can create a single signal report from signals. You can also export reports to CSV files or review and print reports.

2. Monitor View:

You can view historical trend, average value and current value of the signals.

3. Alarms View:

You can create and modify alarms. You can view alarms log of the signals.

4. Signals View:

You can modify signals. You can change name or color of the signal, you can change the plot title and fixed scales, and you can change the group of the signal. You also give calibration values of mA output.

5. Network View:

You can set and view the position of the device on the custom map (e.g. the factory map).

6. Manuals View:

You can open the latest device manuals. You can also find the latest version of this manual.

7. Settings View:

You can change the settings of this application like: database, network, language or master password. You can check the latest update of DustLog 8 application and see the license information.

8. Devices View:

You can easily control of the parameters and features of your Sintrol products.

The **About** button shows the other license information of the DustLog 8 application. The **Close** button will hide the application. See the *note* below:

NOTE

The Home Screen close button won't close the DustLog 8 application. The DustLog 8 application will keep running in the system tray! Data saving will continue until termination. To terminate the DustLog 8 application, choose **Quit** in the context menu of the system tray entry (right click the DustLog 8 icon).

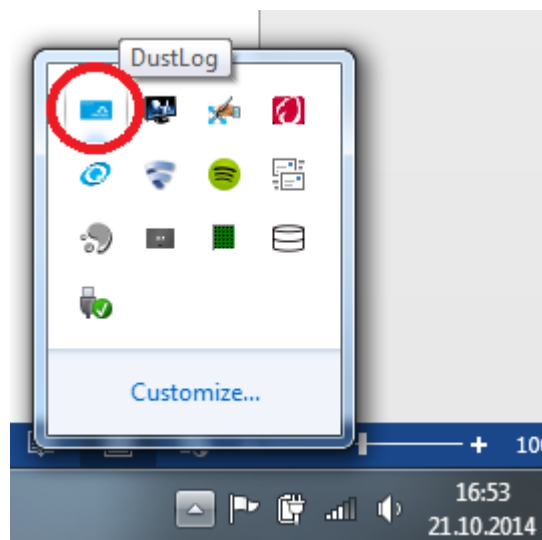


Figure 2 System Tray Entry of DustLog 8 application

2.2 Reports

The Report View handles the reports. You can create a report from the single device. You can also export reports to CSV files or review and print reports.

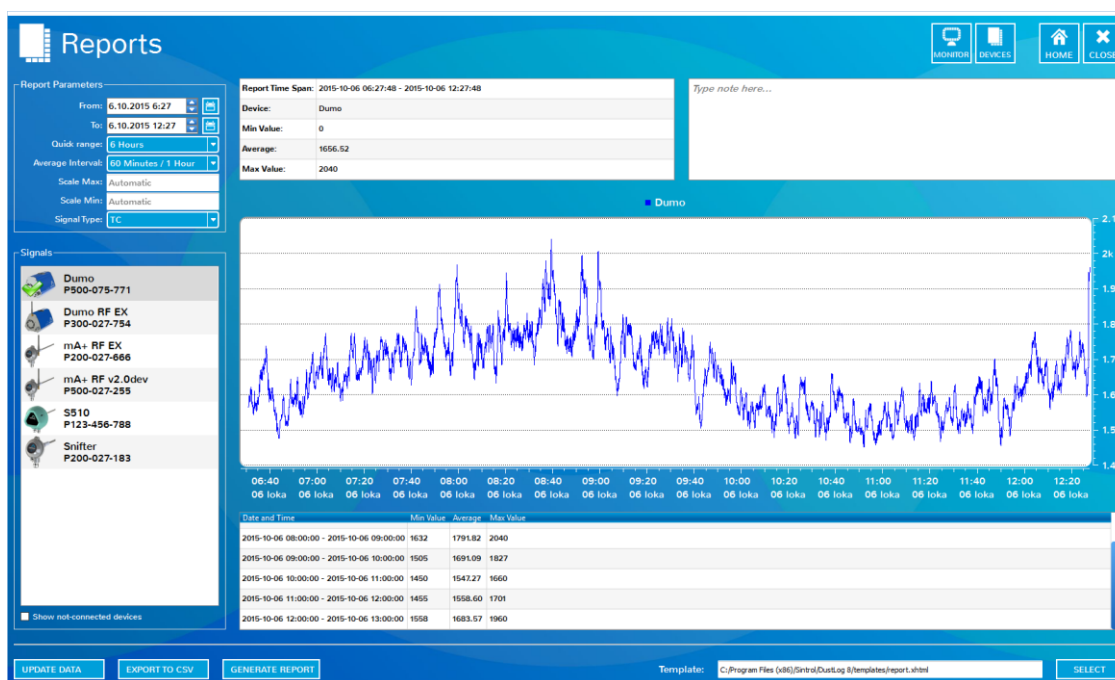


Figure 3 The DustLog 8 application Reports View

2.2.1 Report Parameters

You can change the time span of the report. You can select the quick range of the time span. It is also possible to select average interval of the values. You can give fixed scale for the plot.

- <from>** Starting time of the report.
- <to>** End time of the report.
- <quick range>** Quick selection for start and end time of the report.
- <average interval>** Average for values which will show on the value table.
- <scale min>** Minimum value which will show on the plot.
- <scale max>** Maximum value which will show on the plot.
- <signal type>** Signal type of the value.

2.2.2 Report Buttons

- <update data>** Updates data of the report.
- <export to csv>** Export data to CSV (comma-separated values) file.

- <generate report> Creates a report from template file.
- <template> Html template file which is used to create the report.
- <home> Opens the Home Screen window.
- <close> Closes the Reports view.

2.2.3 Signals List

The signal which will be used as the source of the report. Only single selection is supported.

NOTE

The report data won't be updated until the **UPDATE DATA** button has been pressed. If the system time is changed, the original data will be displayed. The duplicate data with same timestamp will be ignored.

2.3 Monitor

The Monitor view shows the historical trend of signals. You can see the latest value and the average value of the signals. You can also see possible alarm limits of the signals. You can configure signals from Signals View (name, color, group, scale, unit, etc.).

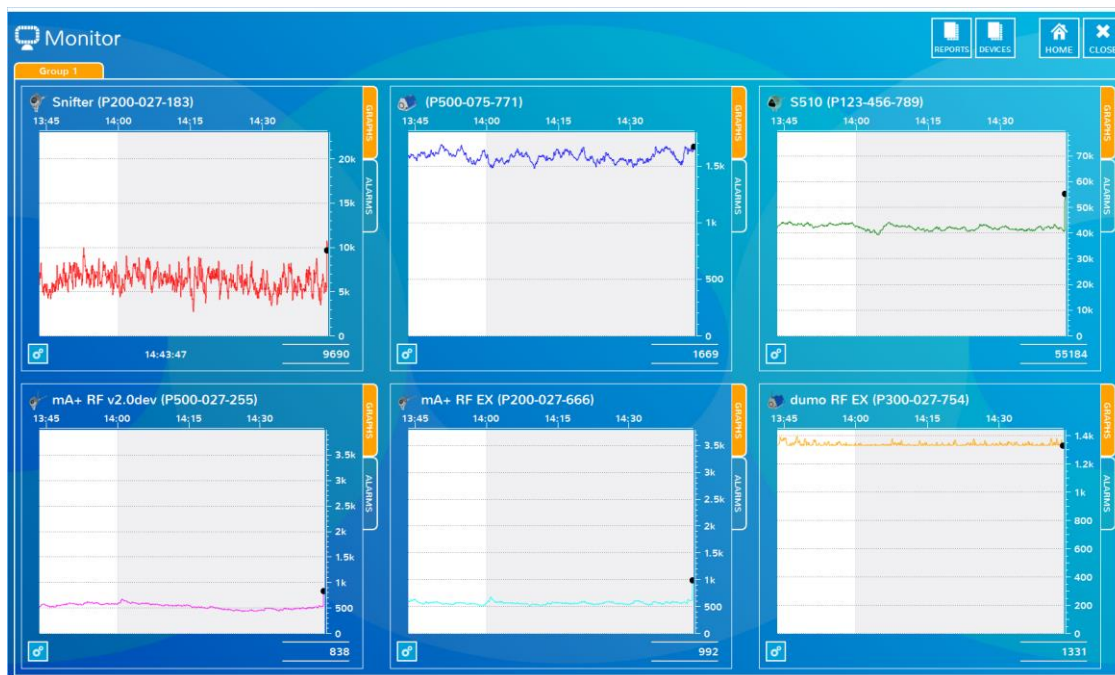


Figure 4 Monitor View of DustLog 8 application

2.3.1 Monitor Tabs

You can group the signals (You can change and rename the groups from Signals View). One group can have up to 12 signals. The **GRAPHS** tab shows the trend of the signals and the **ALARMS** tab shows the list of alarms of the signal.

2.3.2 Monitor Settings

You can change the scale of the plot by clicking the hour radio button. Available scales are 1, 6 and 24 hours. You can also see the average line, clock and minimum/average/maximum values by checking the checkboxes. Unchecking it will remove the information.

2.3.3 Monitor Buttons

- <home> Opens the Home Screen window.
- <close> Closes the Monitor view.

2.4 Alarms

You can create and modify alarms. You can view the signal alarms log.

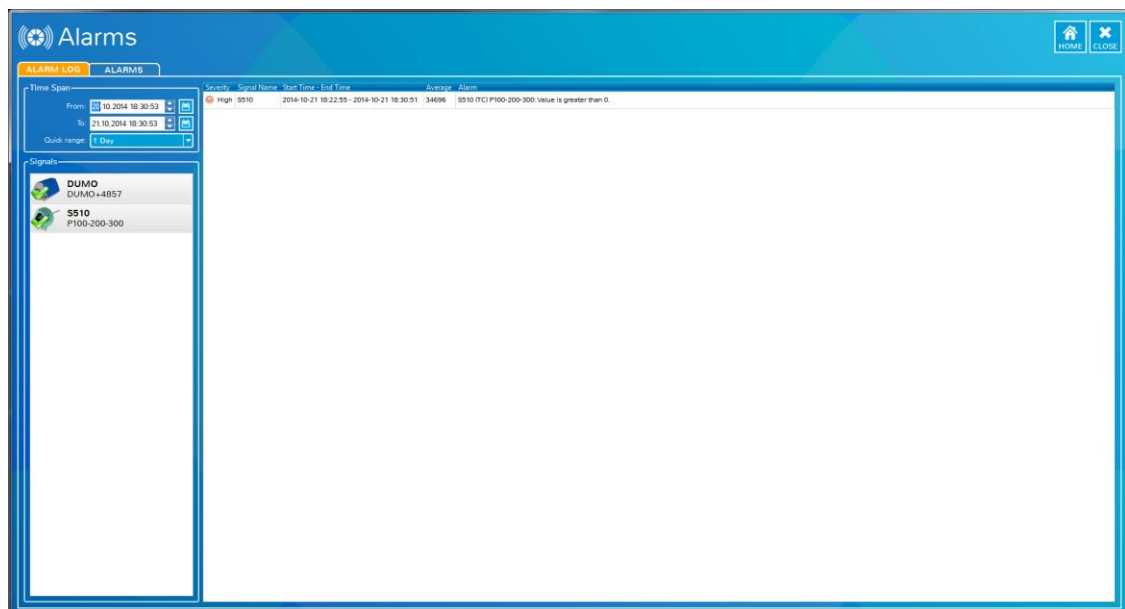


Figure 5 The DustLog 8 application Alarm Log View

2.4.1 Alarm Log Tab

You can change the time span of the alarm log. You can also select the quick range of the time span.

- <from> Starting time of the alarm log entries.
- <to> End time of the alarm log entries.
- <quick range> Quick selection for start and end time of the alarm log

2.4.2 Signals List of Alarm Log

You can view the alarm log for the selected signal. Multiple signals can be selected.

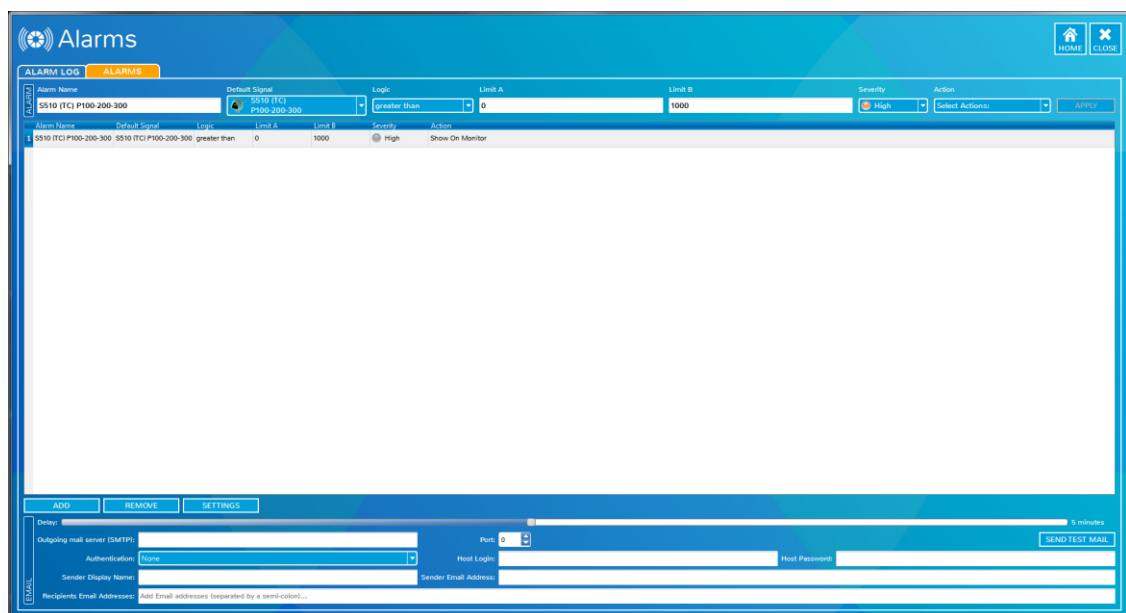


Figure 6 The DustLog 8 application Alarms View

2.4.3 Alarms Tab

You can create and remove alarms. You can change alarm settings.

- <add> Creates a new alarm.
- <remove> Removes the alarm.
- <settings> Shows email settings of the alarms.

2.4.4 New Alarm

You can create a new alarm by pressing **ADD** button.

- <alarm name> Alarm name (default name is the signal name)
- <default signal> The signal which data is used for the alarm.
- <logic> The logic which is used to activate the alarm.

<limit A>	First compare value for the logic.
<limit B>	Second compare value for the logic.
<severity>	Severity for the alarm.
<action>	Action for the alarm. Possible actions are 'Send Alarm Mail', 'Show Notification' and 'Show on Monitor'. It is possible to select multiple actions.

2.4.5 Email Settings

Email Settings are used to configure the outgoing mail server which are used to send alarm mails. The alarm mail will be sent when the alarm is active. You can also test email settings by pressing the **SEND TEST MAIL** button. Please, ask your company's IT support for the mail server settings.

<delay>	Delay for the alarm email. Set the time, for how long an alarm must be active before alarm mail will be send.
<SMTP>	Outgoing email server address. (e.g. smtp.gmail.com)
<port>	Outgoing email server port number. (e.g. 587)
<authentication>	Authentication method of the mail server.
<host login>	The mail server username.
<host password>	The mail server password.
<sender display name>	The name which is shown as alarm email sender.
<sender email address>	The email address which is shown as alarm email sender.
<recipients email address>	Receiver address of the alarm email. There can multiple receivers. Use semi-colon to separate the receivers.

2.4.6 Alarms Buttons

<home>	Opens the Home Screen window.
<close>	Closes the Alarms view.

2.5 Signals

You can modify signals. You can change the name or color of the signal, you can change the plot title and fixed scales, and you can change the group of the signal. You can also give calibration values of mA output.

NOTE

You cannot create or remove signals. Signals are created automatically by the DustLog 8 application when a new device has been added through the Devices View.

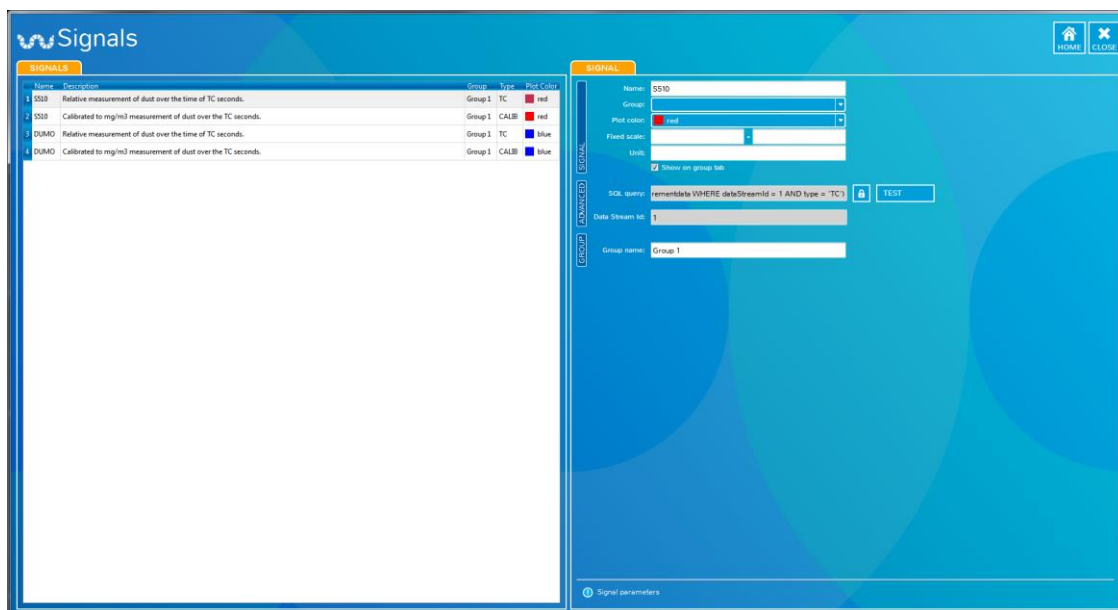


Figure 7 The DustLog 8 application Signals View

2.5.1 Signal Parameters

- <name>** Name of the signal.
- <group>** Group of the signal. Groups are used on Monitor View.
- <plot color>** The plot color of the signal.
- <fixed scale>** Minimum and maximum value of the signal plot scale.
- <unit>** Unit which is shown on the signal plot.
- <show on group tab>** Possibility to hide the signal from group tab of Monitor View.
- <mA calibration>** The measurement values for 0 or 4 and 20 mA. The resolution of the measurement can be 12 or 16 bits.
- <SQL query>** For advanced use only!
- <data stream id>** For advanced use only!
- <group name>** Name of the group tab.

2.5.2 Signal Buttons

- <home>** Opens the Home Screen window.
- <close>** Closes the Signals view.

2.6 Network

You can set and view the position of the devices on the custom map (e.g. the factory map).

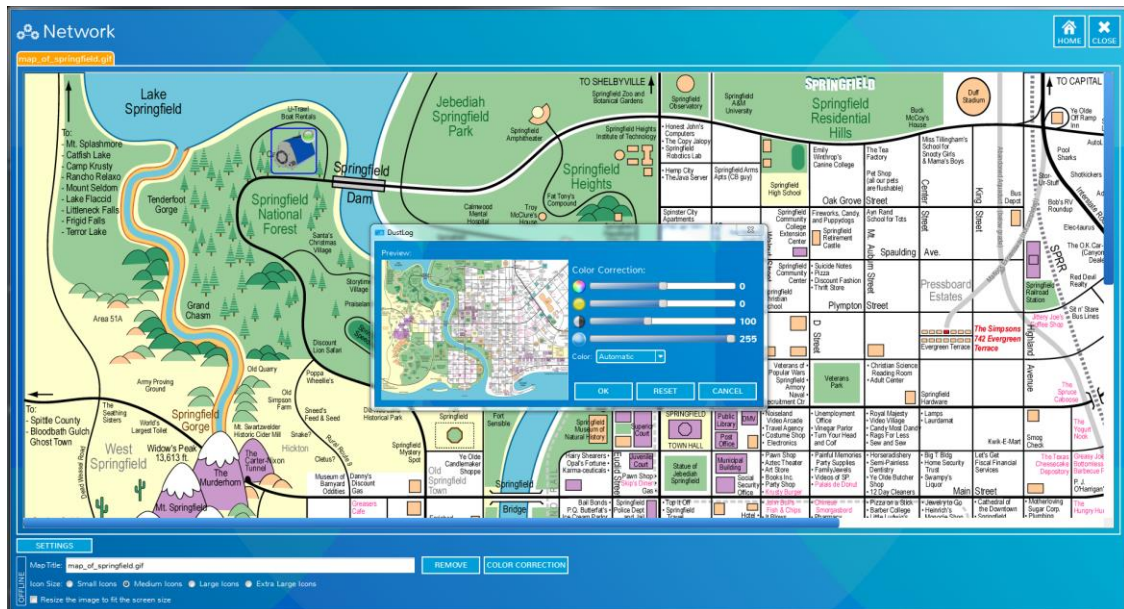


Figure 8 The DustLog 8 application Network View

2.6.1 Network View Settings

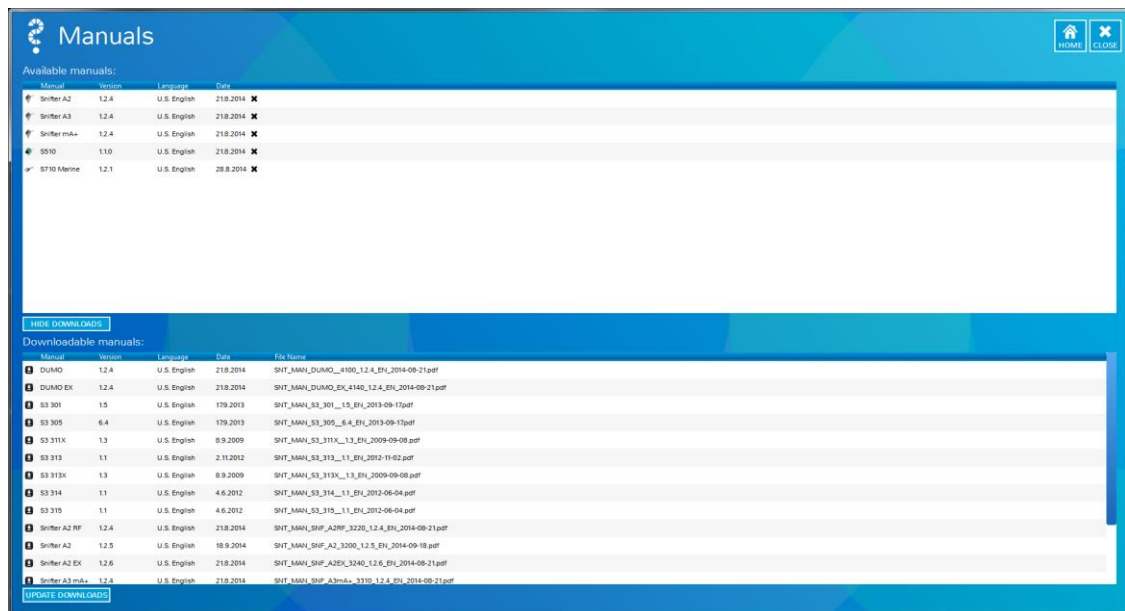
- <add>** Adds map image from the computer.
- <remove>** Removes current map image file.
- <color correction>** You can change the colors of your map image. You can change the image saturation, brightness, contrast and transparency. You can also create grayscale or black & white image from your map image.
- <icon size>** Changes the icon size of the device icon.
- <resize the image to fit the screen size>** Resizes the background image to fit the screen.

2.6.2 Network Buttons

- <home>** Opens the Home Screen window.
- <close>** Closes the Network view.

2.7 Manuals

You can access the latest version manuals of the Sintrol's devices. You can also find the latest version of this manual. Click manual name to open or download the manual.



The screenshot shows the 'Manuals' application interface. At the top, there is a 'Manuals' header with a search icon and 'HOME' and 'CLOSE' buttons. Below the header, there are two sections: 'Available manuals:' and 'Downloadable manuals:'. The 'Available manuals:' section contains a table with columns for Manual, Version, Language, and Date. The 'Downloadable manuals:' section contains a table with columns for Manual, Version, Language, Date, and File Name. Both tables list various manual models and their corresponding file names.

Manual	Version	Language	Date
Sprinter A2	1.2.4	U.S. English	21.8.2014
Sprinter A3	1.2.4	U.S. English	21.8.2014
Sprinter mA+	1.2.4	U.S. English	21.8.2014
5510	1.1.0	U.S. English	21.8.2014
S710 Merve	1.2.1	U.S. English	28.9.2014

Manual	Version	Language	Date	File Name
DUMD	1.2.4	U.S. English	21.8.2014	SHT_MAN_DUMD_4100_1.2.4_EN_2014-09-21.pdf
DUMD EX	1.2.4	U.S. English	21.8.2014	SHT_MAN_DUMD_EX_4140_1.2.4_EN_2014-09-21.pdf
S3 301	1.5	U.S. English	17.9.2013	SHT_MAN_S3_301_1.5_EN_2013-09-17.pdf
S3 305	6.4	U.S. English	17.9.2013	SHT_MAN_S3_305_6.4_EN_2013-09-17.pdf
S3 311X	1.3	U.S. English	8.9.2009	SHT_MAN_S3_311X_1.3_EN_2009-09-08.pdf
S3 313	1.1	U.S. English	2.11.2012	SHT_MAN_S3_313_1.1_EN_2012-11-02.pdf
S3 313X	1.3	U.S. English	8.9.2009	SHT_MAN_S3_313X_1.3_EN_2009-09-08.pdf
S3 314	1.1	U.S. English	4.6.2012	SHT_MAN_S3_314_1.1_EN_2012-06-04.pdf
S3 315	1.1	U.S. English	4.6.2012	SHT_MAN_S3_315_1.1_EN_2012-06-04.pdf
Sprinter A2 RP	1.2.4	U.S. English	21.8.2014	SHT_MAN_SHP_A2RP_3220_1.2.4_EN_2014-09-21.pdf
Sprinter A2	1.2.5	U.S. English	18.9.2014	SHT_MAN_SHP_A2_3200_1.2.5_EN_2014-09-18.pdf
Sprinter A2 EX	1.2.6	U.S. English	21.8.2014	SHT_MAN_SHP_A2EX_3240_1.2.6_EN_2014-09-21.pdf
Sprinter A3 mA+	1.2.4	U.S. English	21.8.2014	SHT_MAN_SHP_A3mA+_3310_1.2.4_EN_2014-09-21.pdf

Figure 9 The DustLog 8 application Manuals View

NOTE

PDF reader is needed to open/read the manuals.

2.8 Settings

You can change the settings of this application like: database, network, language or master password. You can check the latest update of DustLog 8 application and see the license information.

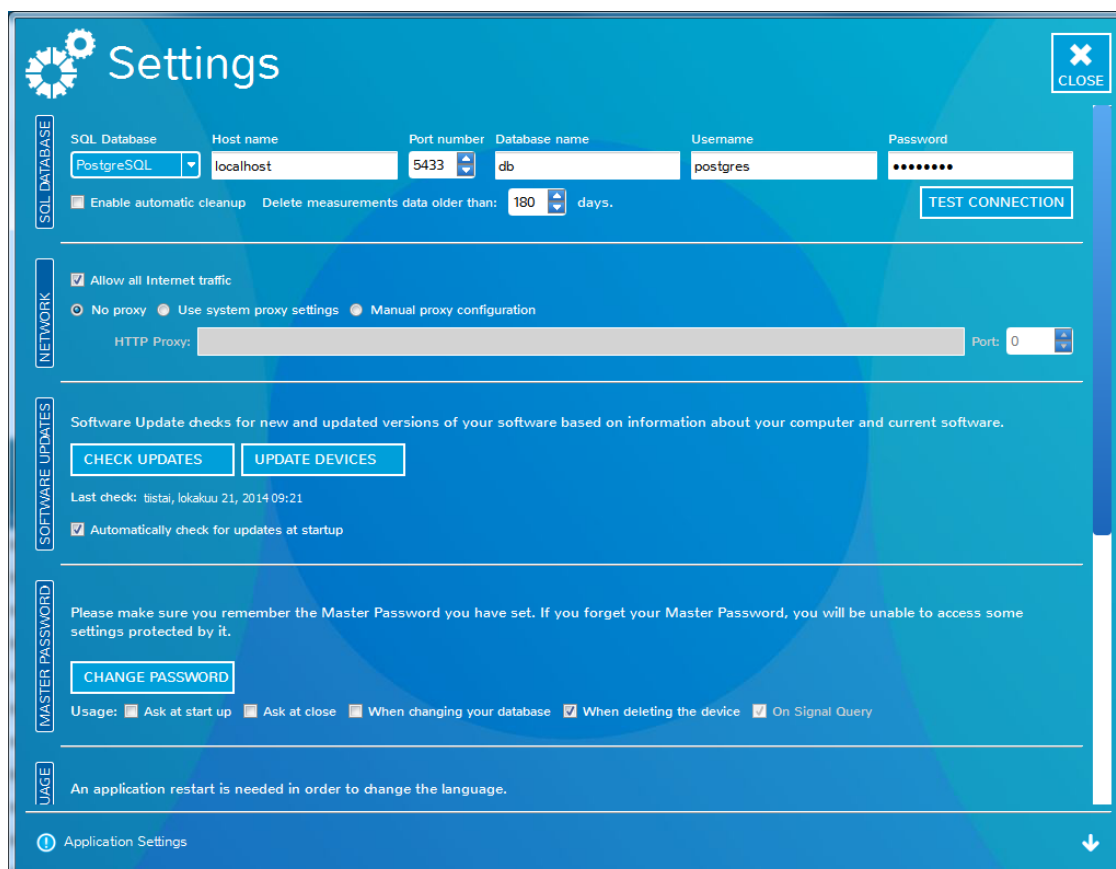


Figure 10 The DustLog 8 application Settings View

2.8.1 SQL Database

<sql database> Shows which SQL database is in use. The DustLog 8 application supports SQLite, PostgreSQL and Microsoft SQL databases. The DustLog 8 application will be restarted after Close button has been pressed.

<host name> Host Name of SQL database.

<port number> Port Number of SQL database.

<database name> Database name of SQL database.

<username> Username of SQL database.

<password> Password of SQL database.

<enable automatic cleanup> Allows you to automatically delete permanently measurement data from SQL database which is older than defined value (days).

2.8.2 Network

<allow all internet traffic> Allows DustLog 8 application to connect to the Internet in order to retrieve data like manuals and software updates.

<proxy> Proxy settings which DustLog 8 application is using to connect to the Internet.

2.8.3 Software Updates

<check updates> Check for the latest software updates from the Sintrol Server.

<updates devices> Check for the latest device description files from the Sintrol Server.

<automatically check for updates at startup> Check for the latest software updates at DustLog 8 application startup.

2.8.4 Master Password

The Master Password is used to protect the important DustLog 8 settings and actions. The Master Password is needed to change these settings.

<change password> Changes the Master Password.

<usage> Select which actions and settings should be password protected.

NOTE

If you forget the Master Password, please contact Sintrol at info@sintrolproducts.com

2.8.5 Language

To change the DustLog 8 Application language. Restart is needed!

2.8.6 License

<license wizard> Request the new license or update the current license.

<print license> Prints the current license.

2.8.7 Startup

Open DustLog 8 application automatically after you log into the computer.

2.8.8 Settings Buttons

<close> Closes the Settings view.

2.9 Devices

You can easily control the parameters and features of your Sintrol products.

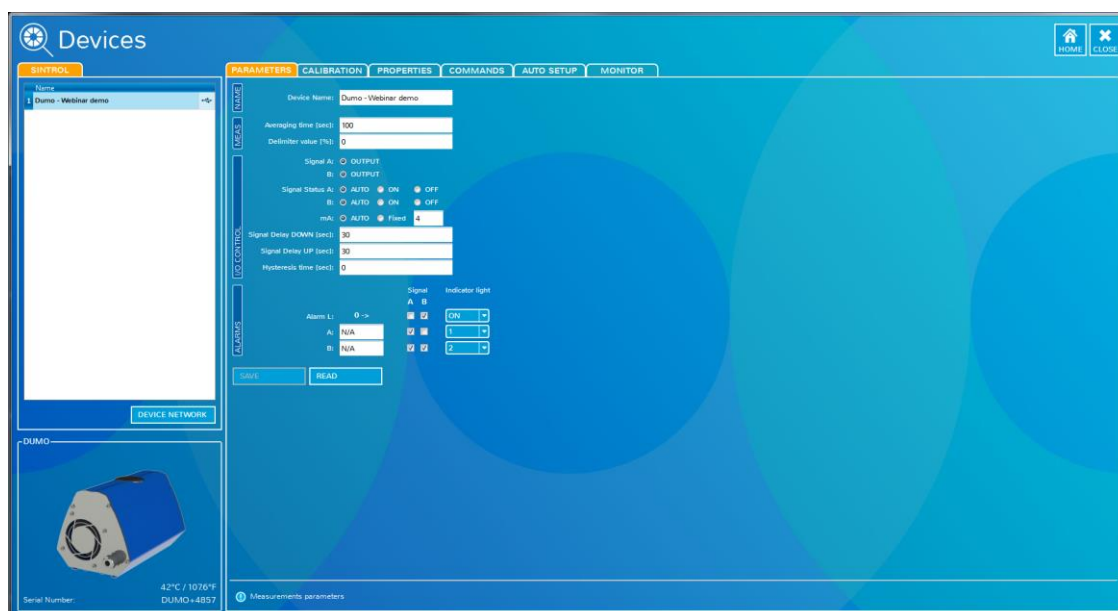


Figure 11 The DustLog 8 application Devices View

2.9.1 Parameters / Calibration / Properties

On the parameters page, user can modify the operating parameters of the connected Dust meter. On the calibration page, user can modify the calibration parameters of the connected Dust meter. On the properties page, user can modify the properties of the connected Dust meter

The basic operating principle to change parameters / calibration / properties are:

Change parameter to the desired value.

Press “Save” button to save the changes into the memory of the instrument. If the “Save” button is not pressed, the changes will not be sent to the device and the values will be lost at program shut down or when device is detached.

By pressing “Read”, the parameters which are currently saved in the instrument will be loaded from the device.

2.9.2 Commands

- <identify>** Identify operation makes the front cover illumination of the product blink.
- <reset>** Reset operation set devices to factory defaults.
- <disconnect>** Disconnect operation disconnects the device from the network.

2.9.3 Auto setup

- <run>** Initiates the auto setup procedure.
- <stop>** Stops auto setup procedure.

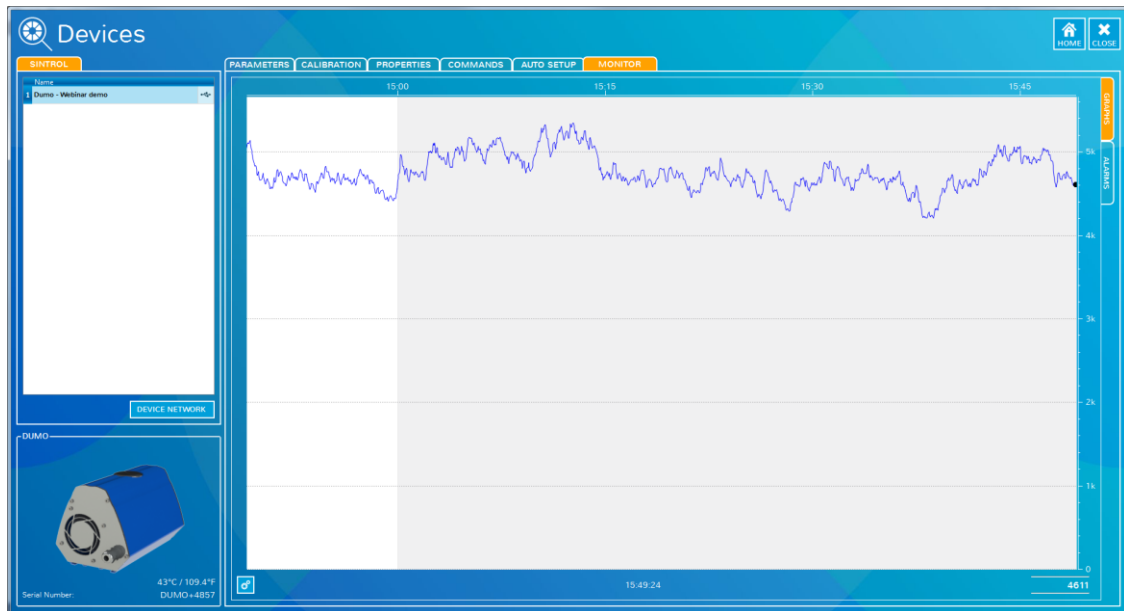


Figure 12 The DustLog 8 application Monitor tab

2.9.4 Devices Buttons

- <home>** Opens the Home Screen window.
- <close>** Closes the Devices view.

2.10 NETWORK

On the network tab one can manage the current Sintrol Network routing and topology. The graphical presentation of connections shows links within the Sintrol Network: Dotted line between units present the RF connection and solid lines stand for the RS485-wires.

Modifications on the network are done via menu that appears by right-clicking the desired node/unit.

2.10.1 Create the network

By right-clicking the Wireless Router itself a control menu appears. From the menu it is possible to scan the network, in order to add new devices. Sintrol devices that are not a part of any network, will appear and join the new network automatically.

Before manual re-routing of devices within the network, action must be enabled first by command 'Enable Manual Re-routing' from the router's menu.

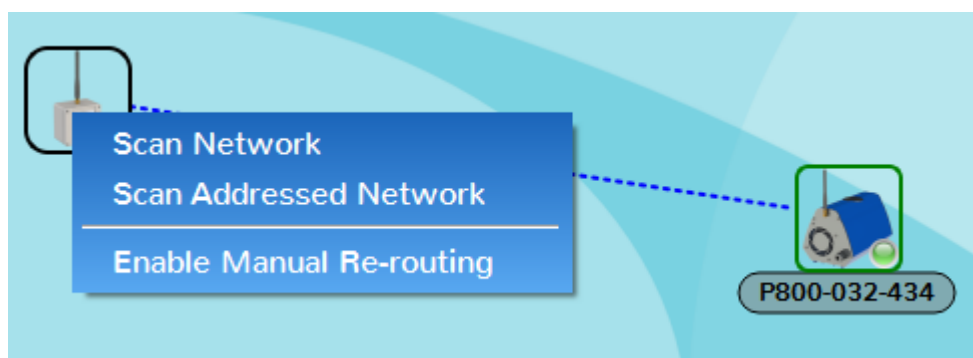


Figure 2 Router menu

2.10.2 Manually routing the devices

To get started with re-routing the devices, first one must right-click the Wireless Router and enable Manual routing for the network.

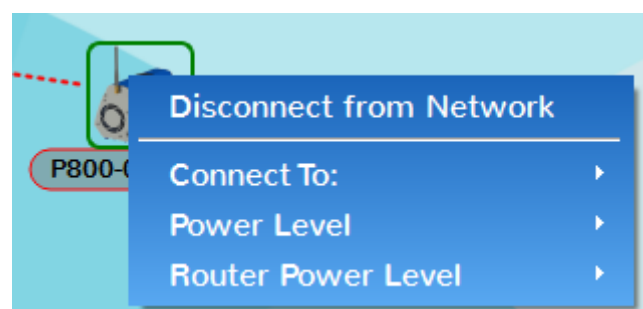
When the manual routing is enabled, the devices in the network can be right-clicked and via the menu:

1. Disconnected from the network.

The device will disappear from this network and stay ready to join other networks.

2. Moved around the network by reconnecting them into another node (device) within the network.

Every Sintrol network device can be selected as a link.



3. Or their RF-transmission power levels can be adjusted.

Each device has a setting of their own RF-transmission levels for upstream and downstream, which can be manually adjusted.

2.10.3 Transmission power level options

Each RF-link within the Sintrol Network has its own transmission power levels in order to ensure best possible operation and minimal interference with possible other networks within the area.

Transmission power level setting is also directional and device role dependent.

Every device within the Sintrol Network has a separate upstream and downstream transmission levels. Upstream level is used with transmission towards the network root node (towards the Wireless Router) as the downstream transmission level is used to communicate with the devices further away in the network.

Wireless Router operates as the root node of the network and thus has no upstream level at all. However, the Wireless Router manages unique transmission levels for each first level devices in the network independently.

2.10.4 Usage of transmission power levels

Links between nodes in RF-network work generally most reliably, when the transmission levels match the receiver sensitivity. The transmission level settings of Sintrol Network provide a flexible and powerful way to optimize the reliability of communication.

The error levels of a received message is highly dependent on the distance between the two devices. Also the conditions in between the devices, like structures (f.ex. metal and concrete) typically have a notable role in dampening or reflecting the RF-signals.

In some cases it is also possible that devices may receive the transmitted signal way too well due to reflections or very close distance. In this case it would be in order to lower the transmitting level of the link to ensure best possible reliability of the message transmissions.

NOTES
