WebSupervisor

Web Based System for Monitoring and Controlling

SW version 5.0.0

Global Guide

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1 Document information

1.1 Clarification of notation

Note: This type of paragraph calls readers attention to a notice or related theme.

IMPORTANT: This type of paragraph highlights a procedure, adjustment etc., which can cause a damage or improper function of the equipment if not performed correctly and may not be clear at first sight.

Example: This type of paragraph contains information that is used to illustrate how a specific function works.

1.2 About this guide

This manual contains important instructions and information about the functionality and operation of WebSupervisor. It is mainly dedicated for operators of gen-sets or anybody who is concerned with monitoring, operation and maintenance of gen-sets.

1.3 Document history

Number	Version	Date	Author
4	5.0.0	20.9.2019	Robert Jalůvka
3	4.3.0	15.6.2017	Lukas Smol
2	3.2.0	5.3.2014	Lukas Smol
1	2.0.0	24.7.2013	Lukas Smol

Note: Changelog of the current version available in Help/About section in the application.

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Please note that possible cyber-attacks cannot be fully avoided by the below mentioned recommendations and set of measures already performed by ComAp, but by following them the cyber-attacks can be considerably reduced and thereby to reduce the risk of damage. ComAp does not take any responsibility for the actions of persons responsible for cyber-attacks, nor for any damage caused by the cyber-attack. However, ComAp is prepared to provide technical support to resolve problems arising from such actions, including but not limited to restoring settings prior to the cyber-attacks, backing up data, recommending other preventive measures against any further attacks.

Warning: Some forms of technical support may be provided against payment. There is no legal or factual entitlement for technical services provided in connection to resolving problems arising from cyber-attack or other unauthorized accesses to ComAp's Products or Services.

General security recommendations and set of measures

1. AccessCode

• Change the AccessCode BEFORE the device is connected to a network.

• Use a secure AccessCode – ideally a random string of 8 characters containing lowercase, uppercase letters and digits.

• For each device use a different AccessCode.

2. Password

• Change the password BEFORE the device enters a regular operation.

• Do not leave displays or PC tools unattended if an user, especially administrator, is logged in.

3. Controller Web interface

• The controller web interface at port TCP/80 is based on http, not https, and thus it is intended to be used only in closed private network infrastructures.

• Avoid exposing the port TCP/80 to the public Internet.

4. MODBUS/TCP

• The MODBUS/TCP protocol (port TCP/502) is an instrumentation protocol designed to exchange data between locally connected devices like sensors, I/O modules, controllers etc. From it's nature it does not contain any kind of security – neither encryption nor authentication. Thus it is intended to be used only in closed private network infrastructures.

• Avoid exposing the port TCP/502 to the public Internet.

5. SNMP

• The SNMP protocol (port UDP/161) version 1,2 is not encrypted. Thus it is intended to be used only in closed private network infrastructures.

• Avoid exposing the port UDP/161 to the public Internet.

1.5 Terms Of Use

ComAp disclaims all responsibility:

▶ for controlling devices (eg. engines) either manually or electronically, either locally or remotely;

▶ for any damage to health and property;

▶ loss of connection, accessibility, insufficient connection speed, etc.

> **IMPORTANT: Always ensure another means of controlling (e.g. hardwired start/stop button) of your devices in case of e.g. loss of the internet connection. Moreover a redundant internet connection can further increase the reliability of your system.**

You declare that all your devices are operated by only a qualified and fully trained personel familiar with:

▶ all the documentation supplied with these devices;

▶ all functions of these devices;

▶ all safety rules necessary for operating these devices.

ComAp provides its Services as "Best effort", however ComAp cannot guarantee a correct function of the WebSupervisor application in case of a power outage, loss if internet connection, failure of the operated device, etc.

Make sure you have secured continual backup of all your data for their subsequent restoration in case of any outage, equipment failure or unavailability of the Services. Failure to follow these rules and any damages arising therefrom shall be fully at your expense.

1.6 List of abbreviations

ECU	Engine Electronic Control Unit
FW	Firmware
Fls	Sensor fails alarm
GUI	Graphical User Interface
GPS	Global Positioning System
HW	Hardware
OS	Operating System
PC	Personal Computer
PX	Pixels
Sd	Shutdown
SW	Software
Wrn	Warning alarm
WSV	WebSupervisor

1.7 Symbols in this manual

Shutdown Alarm

Unit is in alarm, WSV has no info about type of alarm

Warning

ECU Alarm Active

FIst (Sensor Failed) Alarm Active

Σ_A Total alarms

No Communication + Shutdown

No Communication + Warning

No Communication + ECU Alarm Active

No Communication + Unspecified alarm was Active

No Communication + FIst (Sensor Failed) Alarm Active

No Communication - No AirGate slot available

No Communication - Wrong Access Code

No Communication - Configuration error

No Communication

Communication OK, No Alarm

Unit Disabled

Device is in initialization (the device is preparing to read data when a device is being available after no comm state)

Controller data up-to-date

Controller data - last update more than 1 minute ago

Controller data - last update more than 1 hr ago

Controller data - last update more than 1 day ago

User is online - internet connection is OK

User is offline - internet connection is lost

AirGate

Unit Group - Basic

Unit Group - Site

Unit Group - Webcontrol

Location Icon - Site

Location Icon - Unit

Location Icon - Unit w/o GPS

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2 System overview

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2.1 General description

WebSupervisor is cloud-based application that enables remote monitoring, management and analysing of a genset fleet and 3rd party devices from anywhere.

WebSupervisor contains a map overview of all monitored devices with email and push notifications in case of any occurring alarms. Genset management with offering of group representation allows better overview of devices registered under the account.

Built-in fleet statistics, various reporting including alarm report and advanced trends allow overviewing performance and optimize revenue. The layout of the device details screen is editable according to individual needs.

The functions of WebSupervisor are designed to bring the added values to customers from the following markets:

- ▶ cogeneration
- ▶ rental
- ▶ microgrids
- ▶ telecommunications market

The features gives customers the opportunity to:

- ▶ decrease total technology cost
- ▶ maximise the revenue
- ▶ and lower operating costs on genset farms

API gives an option to download and store complete data from WebSupervisor to user's premises, integrate data or automate some activity.

Security is the top priority. Customer's data is secure with WebSupervisor. WebSupervisor is hosted at Microsoft Azure platform. WebSupervisor passed security audit. User management with several categories of permissions allow combine the permission and set permission according to individual needs. a

Administrators of the account can see the history logs of every user, so they can monitor user's actions, which leads to increased security and surveillance.

From your PC, tablet or mobile phone you can instantly reach the most important and relevant data. The responsive design ensures easy to use operation on any screen size.

WebSupervisor is offered as a cloud or private solution. In cloud a user can select from WebSupervisor Lite (simple monitoring) or WebSupervisor Pro subscription (advanced monitoring and data analysing).

2.1.1 User roles in WebSupervisor

WebSupervisor uses three types of user roles:

1. Account Owner (Main Administrator) a person who created/registered a new WebSupervisor account. As an administrator, please check your email!
2. User with Administrator role – registered sub-user of the account with admin permissions (ticked checkbox in user's profile). The admin permissions can set main administrator of the account only.
3. User – sub-user of the account with no permissions (just see and edit own profile)

Persistent permissions for Account Owner:
▶ Has the highest permission for the account and all devices and users registered there (it is a default feature, it is not possible to unselect)
▶ Has special slot for log in, when all online connections are occupied
▶ Can change account branding
▶ Can change account settings (reports, controller history download etc.)
▶ Can add/edit/delete units
▶ Can add/edit/delete user accounts
▶ Can delegate admin permissions to users with Admin role
▶ Can activate API
▶ Can modify a screen template
▶ Can modify a report template
▶ Pays for the account (if it is paid account WebSupervisor Pro)
▶ Sees all activities related to device registered under the account
▶ Receive information about account expiration 30 days, 15 days and 1 day before expiration (in case of WebSupervisor Pro subscription)

Sub-User set as admin:
▶ Has almost the same rights as account owner
▶ Sees all units and users registered under the account as a Account owner
▶ Get all permissions for all units under account
  ● See all user's activities under the account
  ● Can add/delete units
▶ Can modify screen template
▶ Can modify report template
▶ Can add/delete user accounts
▶ Can't delete Account owner account
▶ Can't remove account owner rights to his units
▶ Can't change account branding (in a case of WebSupervisor Pro account)
▶ Can't purchase / prolong WebSupervisor Pro subscription (If it is paid account)
▶ Does not special slot for online connection

Sub-User set as user without admin permissions:

- ▶ Can only see and access units he has permissions to
- ▶ Can access and edit own user's profile
- ▶ Can see own activity under the account or activity associated with unit he has "modify" permission
- ▶ Can't add units
- ▶ Can't add/edit/delete users
- ▶ Can't edit account settings

2.2 Registration and Login

WebSupervisor is a closed system so to access it you must register and log in the account first. To do so you need to use WebSupervisor webpage located at https://websupervisor.net/. **(sign up).**

During registration process all mandatory fields have to be provided (fields with asterisk). To be registration fully completed, it is necessary to confirm registration email you receive at provided email address.

> **IMPORTANT: Email provided during registration is used for sending all important information relating to your subscription.**
> - ▶ **WSV and airgate maintenance announcement**
> - ▶ **WSV outage**
> - ▶ **WSV account expiration announcement (in case of WSV Pro)**

To ensure the security of your accounts you have only limited number of tries to log in. After few wrong tries account gets suspended for 5 minutes and then after few more incorrect tries it gets blocked.

To unblock your account, you need to contact our local Technical support or technical support in Prague (support@comap-control.com) in case local technical support will be out of working hours.

You can use function for Forgotten password to recover your account before it gets blocked. The function is located at the bottom of login form. Type in your LoginID and email address and follow the instructions send to you via email you insert during registration process.

Note: Forgotten password function does not work, if the account is already blocked.

3 Operator guide

Note: WebSupervisor is optimized for Google Chrome. If you use another browser, WebSupervisor may not work properly effectively and may be slower. We fix issues in WebSupervisor that are reported from other browsers, but our priority is Google Chrome.

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3.1 Main Menu

The WebSupervisor application can be navigated via the main menu bar. The menu consists of:

Image 3.1 Main Menu Bar

#	Description
①	▶ Company logo or company name ▶ See also **Company Name and Logo Customization (page 78)**
②	▶ **Alerts (page 13)** indication
③	▶ **Dashboard (page 38)**
④	▶ **Units (page 17)**

#	Description
(5)	▶ **Trends (page 45)**
(6)	▶ **Reports (page 56)**
(7)	▶ **Settings (page 76)**
(8)	▶ **Help (page 86)**
(9)	▶ User name and time zone indication ▶ **Internet Connection Monitoring (page 88)**
(10)	▶ Logout button / WSV Pro trial activation

Table 3.1 Main Menu Bar - Legend

Note: A Tooltip is available for the graphical elements of the WSV GUI. When the user hovers the cursor over an icon (e.g. ▥), a hint with the icon meaning (e.g. "Actual") is displayed.

3.2 Alerts

"Alerts" sub-menu contains summary of all the important messages and alerts related to your account and devices registered or shared under your account. Alerts are displayed until the condition of their occurrence persists (mostly alarm alerts) or until the user confirms / deletes them in the alert section. The overview can be activated via the 🔔 icon on the Main Menu bar.
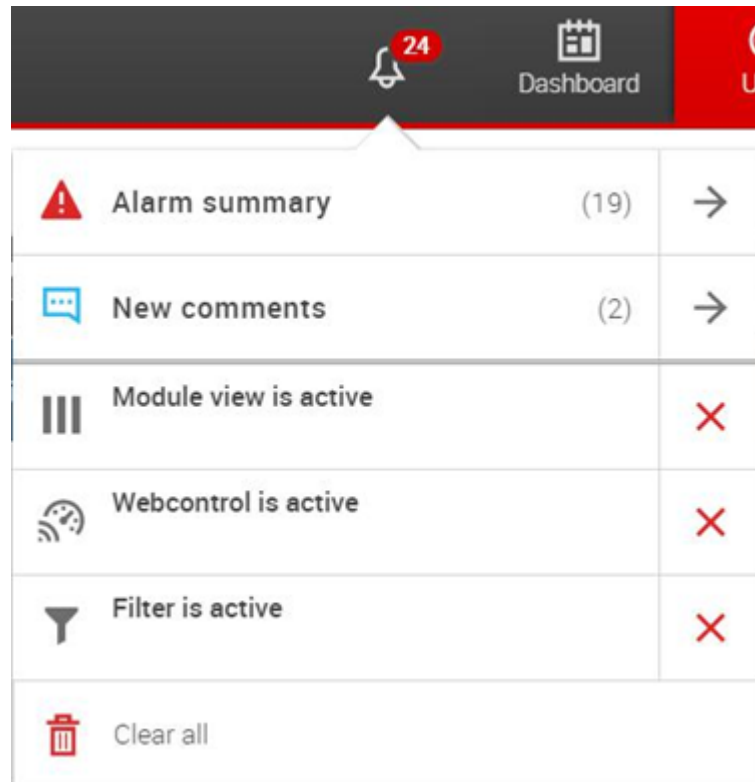
Image 3.2 Alerts - Menu

Alerts icon

The number on the top right corner of the icon indicates the overall number of active alerts. Moreover, in case a new alert is activated (new alarm, new comment, etc.) the icon starts blinking for approx. 3s. After opening the *"Alerts"* menu, the summary number of a group containing new alerts is highlighted with a bold font.

The *"Alerts"* groups are defined as follows:

▶ **Alerts - Alarm Summary (page 14)**

▶ **Alerts - New Comments (page 15)**

▶ **Alerts - Downloads (page 16)**

▶ **Alerts - Others (page 16)**

3.2.1 Alerts - Alarm Summary

The *"Alarm Summary"* field displays an overall number of **active and not confirmed alarm** related alerts for all devices* associated with your account. The following types of alarms are included in the *"Alerts"* indication:

▶ Shutdown

▶ No Communication

A click on the *"Alarm Summary"* field opens a detailed list of alarms per unit, which **offers several actions:**

Clear Alert(s)

The displayed alerts can be removed from the list one by one via the ✕ button or all together via the 🗑 ("Clear All") button on the bottom of the list.

WebSupervisor

Note: Clearing of the alerts related alarm do not acknowledge the alarm on the unit! Acknowledgement of alarms is possible to do in Alarmlist of every device.Alarmlist is located in Detail view screen or in Mini detail device.

Activate Unit Detail

Clicking on the unit name in the list will redirect you to the unit's detail, where you can see the entire Alarm List of the unit and acknowledge the alarm.

Note: This action also removes the related alert from the list.

Change the List Order

As a default, the alarm related alerts are ordered by date (newest on top). You can change that by activating the list order option via the ⇕≡ icon (top right corner of the list) and change the ascending (🔼) or descending (🔽) order based on the following criteria:

▶ Alarm Type

▶ Unit Name

▶ Alert Date (default)

3.2.2 Alerts - New Comments

The *"New Comments"* field displays an overall number of active (unread) comments for all the units associated with your account.

A click on the *"New Comments"* field opens a detailed list of units with unread comments. For each unit, the amount of unread comments as well as a total comment number is displayed (Unread/Total).

Moreover, the list offers several actions:

Clear Alert(s)

The displayed alerts can be removed from the list one by one via the ✖ button or all together via the 🗑 ("Clear All") button on the bottom of the list.

Note: Clearing of the comment related alert does not mark the comment as read. You can do so from the "Unit Detail" (see below).

Activate Unit Detail

Clicking on the unit name in the list will redirect you to the unit's detail, where you can see all the comments for the unit and mark the comments as read.

Note: This action also removes the related alert from the list.

Change the List Order

As a default, the comment related alerts are ordered by date (newest on top). You can change that by activating the list order option via the ⇕≡ icon (top right corner of the list) and change the ascending (🔼) or descending (🔽) order based on the following criteria:

▶ Device Name

▶ Number of Unread Comments

▶ Alert Date (default)

3.2.3 Alerts - Downloads

Note: Available only for WSV Pro subscription

The "Downloads" field displays an overall number of manual or automatic generated reports and unit history downloads for all the units associated with your account.

A click on the "Downloads" field opens a detailed list of all generated reports and downloaded histories.

Moreover, the list offers several actions:

Clear Alert(s)

The displayed alerts can be removed from the list one by one via the ✕ button or all together via the 🗑 ("Clear All") button on the bottom of the list.

Note: Clearing of the related alert does not make report impossible to download later. You can do so from the "Downloads" (see below)

Active Downloads

Clicking on the report name in the list will redirect you to the Downloads section, where you can see all reports for all units associated with your account. For more information see **Downloads (page 62)**

Note: This action also removes the related alert from the list.

Change the List Order

As a default, the download related alerts are ordered by datet(newest on top). You can change that by activating the list order option via the ⇅≡ icon (top right corner of the list) and change the ascending (🔼) or descending (🔽) order based on the following criteria:

▶ Download Type (Manual/Automatic)

▶ Device Name

3.2.4 Alerts - Others

All the alerts that cannot be included in any of the above mentioned groups are listed separately on the bottom of the "*Alerts*" list:

Alert Type	Activated By
Lost Internet Connection	Connection to the internet or the WebSupervisor server is lost.
Filter Is Active	Any of the filters in **Filter (page 33)** is active.
"*Show As Modules*" Is Active	The option "*Show As Modules*" is selected in **Filter (page 33)**
Show Only Selected" Is Active	The option "*Show Only Selected*" is selected in **Filter (page 33)**
"*Webcontrol*" Is Active	The function **Webcontrol (page 36)** is active.
Generic Message	A message from the application admin, e.g. upcoming maintenance.

Table 3.2 Other Alerts Types

Clear Alert(s)

The displayed alerts can be removed from the list one by one via the ✕ button or all together via the 🗑 ("Clear All") button on the bottom of the list.

3.3 Units

The *"Units"* section provides an overview of the state and position of the monitored units.

To navigate to the *"Units"* section, click on the *"Units"* icon on the Main Menu bar:
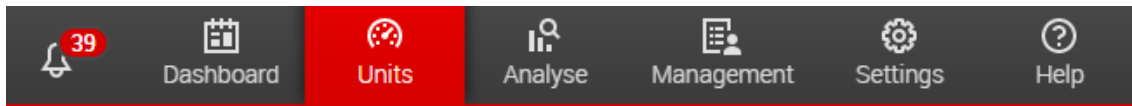
Image 3.3 Main Menu - Units Selected

The displayed section consists of two main areas:

▶ **Monitored Units (page 18)**

▶ **Map (page 31)**

The *"Units"* section layout can be adjusted according to your preferences.

The following layouts can be toggled via the ❮ ❯ arrows on the *"Monitored Units"* menu bar:

▶ Wide Table and Map

▶ Wide Map with Table

▶ Table only

All of the layouts above can be also displayed with a sidebar displaying *"Filter"* selection or a *"Mini Detail"* of a selected unit. For more details see **Monitored Units (page 18)**
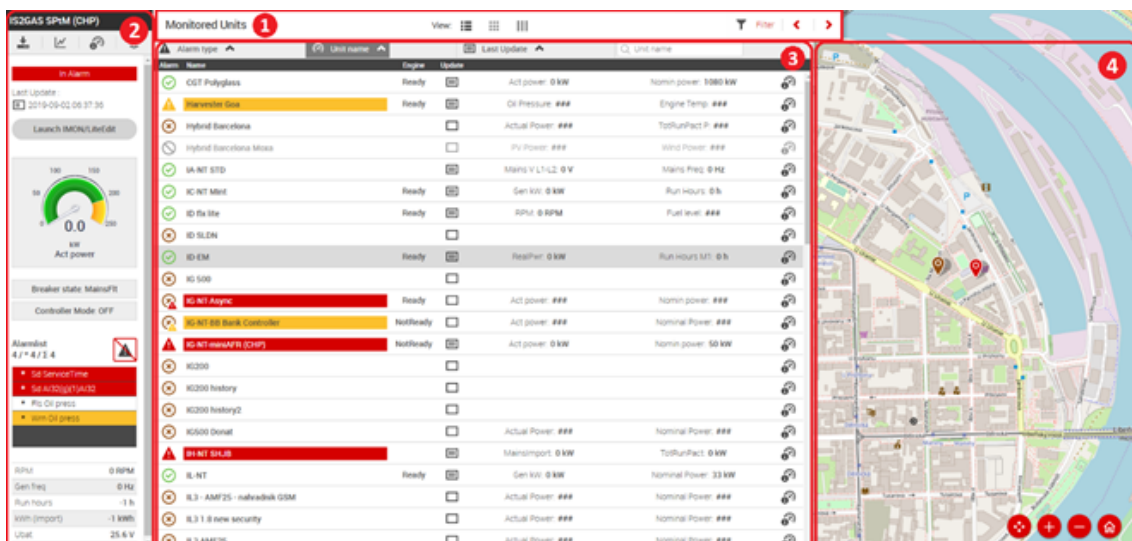
Image 3.4 Units - Page Layout Example (Wide Table & Map)
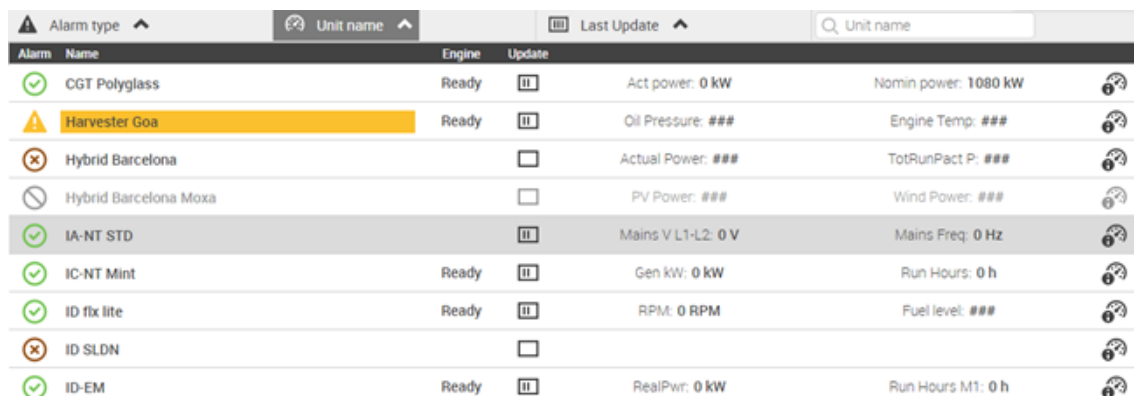
#	Description
1	*"Monitored Units"* menu bar
2	Sidebar - **Unit Mini Detail (page 24)**
3	**Monitored Units (page 18)** Table (table view)
4	**Map (page 31)**

Table 3.3 Units - Page Subsections Explanation

3.3.1 Monitored Units
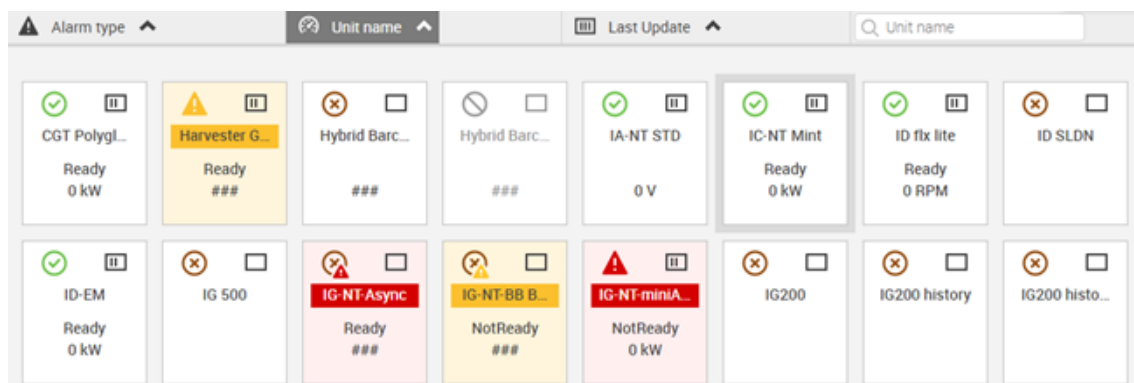
The *"Monitored Units"* section consists of a list of all the units registered under the currently logged user account and also of the units, that have been shared with the user.

For each unit, the values read from the controller are listed in a table or on a unit tile. The view mode can be switched via the icons ▤ (*"Table View"*) and ▦ (*"Icon View"*) on the Monitored Units menu bar.

Image 3.5 Monitored Units - Table View

Image 3.6 Monitored Units - Icon View
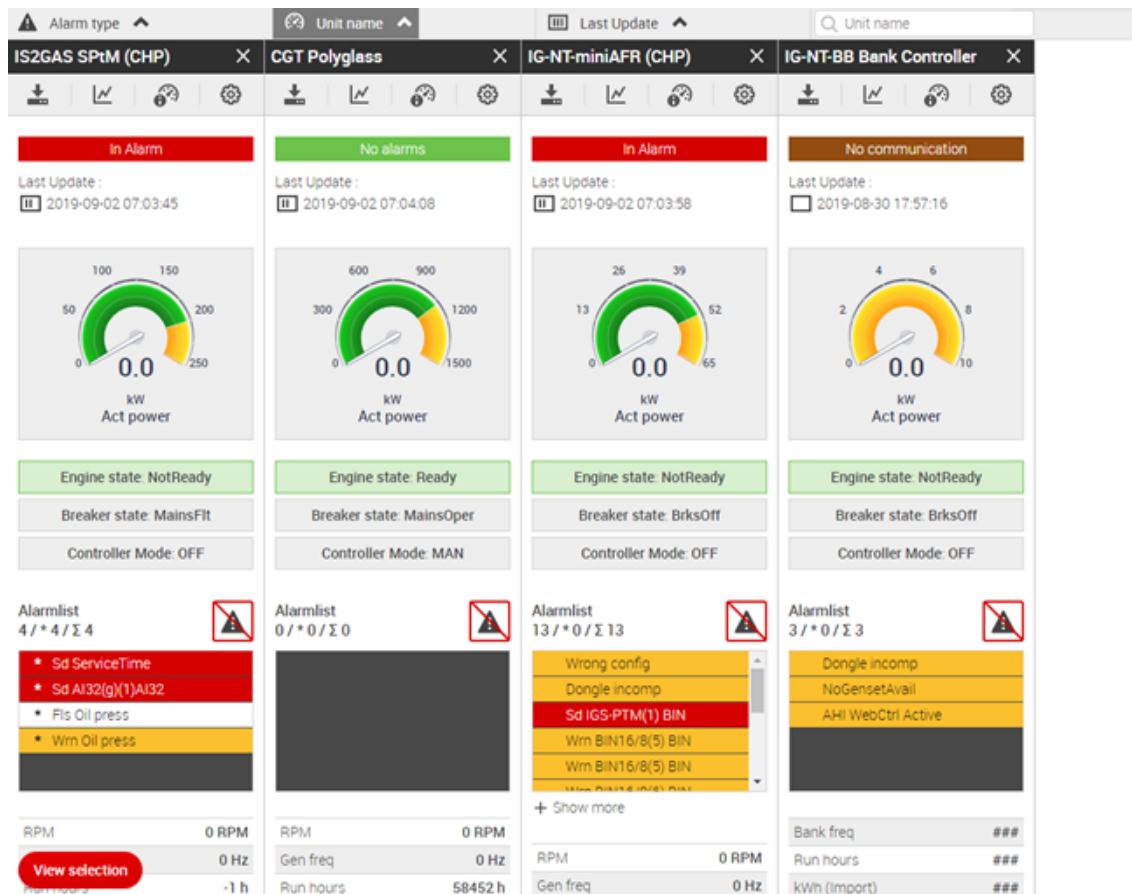
Image 3.7 Monitored Units - Module View

Regardless of the selected view mode, the following information are displayed for each unit:

▶ **Alarms (page 19)**

▶ **Unit Name (page 22)**

▶ **Engine state (page 22)**

▶ **Update (page 22)**

▶ **Controller Values (page 23)**

Alarms

Alarm Indications

For each unit, the state of alarms and communication is indicated:

▶ On the **Dashboard (page 38)**

  ● Depends on the number of alarms - see **New Alarms Table (page 43)**

▶ On the **Monitored Units (page 18)** table

  ● Alarm Icon displayed (see table below)

  ● Unit or group name highlighted according to the current alarm

  ● If multiple alarms are active, the alarm with the highest priority is displayed

▶ On the **Map (page 31)**

- Position icon color changes according to the current alarm

- If multiple alarms are active, the alarm with the highest priority is displayed

▶ On the **Main Menu (page 12)** bar

- **Alerts (page 13)** counter displays the summary number of active priority 1 alarms

▶ On the **Unit Detail (page 27)** and the **Unit Mini Detail (page 24)**

- All the alarms of the unit displayed in the Alarm List

Communication State	Icon	Description	Priority
Online - Communication OK		No alarm	6
		Warning active	5
		Shutdown alarm active	1
		Unspecified alarm active	2
		ECU alarm active	4
		Flst (Sensor Failed) alarm active	3

Communication State	Icon	Description	Priority
		No alarm was active	10
		Warning was active	9
		Shutdown alarm was active	5
		Unspecified alarm was active	6
Offline - No Communication		ECU alarm was active	8
		Flst (Sensor Failed) alarm was active	7
		Configuration error	4
		Wrong acces code	3
		No AirGate slot available	2
		Unit Disabled	1

Table 3.4 Alarm Icons Description

In addition to that, the appearance of a new alarm is actively indicated:

▶ The alarm icon starts blinking (for 3 seconds with a period of 1 second)

▶ Sound indication is triggered

▶ The new alarm is recorded in **Alerts (page 13)**

▶ Depending on the permissions set for the user and specific units, an email notification can be sent (see *"Permissions"* in **Add New Unit (page 66)** or **Add New User (page 70)**)

Alarms Priorities

Only one alarm/state is indicated on the *"Monitored Units"* table and the *"Map"*. If multiple alarms are active in a specific unit, the alarm with the highest priority is displayed.

In the table above, the alarms are divided into online and offline groups. Alarms from both groups cannot appear in a unit in the same time, therefore priorities are defined for each group separately. The highest priority is 1.

Example: The unit is online and both ECU Alarm and Warning are active. ECU Alarm has a higher priority, therefore on the *"Monitored Units"* table, the unit is highlighted in blue with a ⚠ icon displayed. On the *"Map"* the color of the position icon is blue.

Alarms Reset

You can acknowledge the alarms via the ⚠ button located on the **Unit Detail (page 27)** or the **Unit Mini Detail (page 24)**

If the alarm cause is still active, the alarm indication on the *"Monitored Units"* table and the *"Map"* will remain active as well.

Unit Name

Displays the unit name as defined by the user. In case the unit reports an alarm or a warning, the unit name is highlighted as illustrated on the pictures below.

Image 3.8 Unit Name - Warning

Image 3.9 Unit Name - Alarm

Engine state

The engine state (e.g. Ready, Loaded, etc.) as read from the controller is displayed in the Engine column.

Note: For a detailed description of the engine states, please, refer to the user guide of the respective controller.

Update

The data displayed in WSV GUI are periodically read from the controller. The Update column indicates the time since the last data reading:

Icon	Description
▥	Up-to-date Data
▥	Last Update - more than 1 minute ago
▯	Last Update - more than 1 hour ago
☐	Last Update - more than 1 day ago

Table 3.5 Update Icons Description

Controller Values

Predefined values (e.g. actual power, frequency, RPM) read from the controller are displayed for each unit. The amount and alignment of the displayed values depends on the selected view (Table vs. Icons, see **Monitored Units (page 18)** and the selected page layout (Map vs. Table, see **Units (page 17)**).

	Table View	Icon View
Table Only	4 values per unit	1 value per unit
Wide Table with Map	2 values per unit	1 value per unit
Wide Map with Table	No values	N/A

Table 3.6 Values Displayed for Various Layout Combinations

Search, Filter and Order Units

The WSV application provides several functions for managing the *"Monitored Units"* table:

▶ Dynamic string search, see **Search Units (page 23)**

▶ Unit list filtering, see **Filter (page 35)**

▶ Unit list ordering, see **Order Units (page 23)**

▶ Manual selection, see **Selected Units Actions (page 37)**

Search Units

You can search for a unit by typing a unit name into the search column on the Monitored Units header.

Image 3.10 Monitored Units Table - Top bar

The search function is dynamic, i.e. the table is filtered gradually as the user types and the matching strings are underlined. The search is not case or diacritic sensitive.

Note: When there is an active search filter and a user adds another unit with a name matching the filter, the unit is added to the table.

Order Units

You can order the units displayed in the Monitored Units table by choosing an ascending ⌃ or a descending ⌄ order based on one of the three categories:

▶ Unit Alarm - the units are ordered according to the Alarm priority (see **Alarms (page 19)**)

▶ Unit Name - the units are ordered according to the unit name (A-Z or Z-A)

▶ Last Update - the units are ordered according to the last data update (see **Update (page 22)**)

Webcontrol

The *"Webcontrol"* tool allows you to control (start / stop) several units at once, when all of the following conditions are met:

▶ Units are grouped in a group type *"Webcontrol"*, see **Add New Group (page 74)**

▶ Current user's rights include *"Control"*, see **Add New User (page 70)**

▶ All controllers are from IGS-NT controller family and Remote switch 8 is configured to Remote start function. Settings is done in GenConfig, go to LBI tab and set *"Rem start/stop"* function to source *"Log Bout / RemoteControl8"*. Confirm the settings by writing the configuration to the controller.

▶ Remote Control is enabled in all of the controllers in the group - refer to the specific controller's guide

▶ All of the controllers in the group are in AUT mode - refer to the specific controller's guide

Webcontrol - How To

▶ Make sure the preconditions for *"Webcontrol"* are met (see above)

▶ On the *"Tools"* sidebar, choose *"Open Webcontrol"*

▶ A list of all the *"Webcontrol"* groups defined under or shared with the current user account is displayed. To control one of the groups, click on the *"Control Group"* button (⊙) of the respective group.

▶ Select the whole group or some chosen units by ticking the respective check-boxes.

Note: The summary nominal power of the selected units is displayed on the bottom of the list as "Selected Nominal".

▶ Use the START and STOP buttons to control the selected units as a group.

Image 3.11 Start Multiple Units Via Webcontrol

▶ To return from the *"Webcontrol"* of a selected group, click on the ↩ button on the right side of the group row.

3.3.2 Detail Views

In addition to the *"Monitored Units"* table, a detailed view of each unit is available.

Unit Mini Detail

"Unit Mini Detail" is a concise version of **Unit Detail (page 27)**, which can be displayed for each unit in form of a sidebar (left side of the GUI screen). You can activate this sidebar by clicking on the chosen unit - either on the *Monitored Units (page 18)* table or on the **Map (page 31)**.

The information and actions available on the *"Unit Mini Detail"* are described in the table and picture below.

#	Description
1	Unit Name and Shortcut menu: ▶ Open **Downloads (page 62)** ▶ Open **Trends (page 45)** for the unit ▶ Open **Unit Detail (page 27)** ▶ Open **Units Settings (page 65)**
2	Indication of the communication state
3	Button to launch one of our PC tools and connect to the unit – available only in the PRO version
4	**Controller Values (page 23)**
5	**Alarms (page 19)** of the unit with the Reset Alarms button
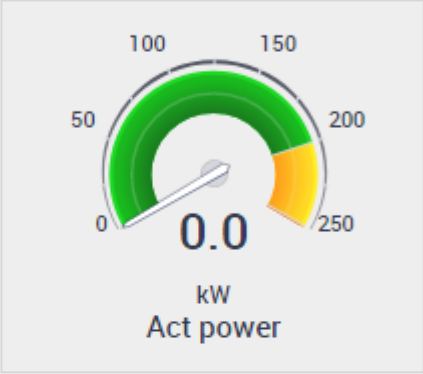
Table 3.7 Unit Mini Detail - Overview

(1) IS2GAS SPtM (CHP) ✕

⬇ | 〜 | 🕑 | ⚙

(2)
In Alarm

Last Update :
▥ 2019-09-02 07:37:29

(3)
Launch IMON/LiteEdit

(4)

0.0
kW
Act power

Breaker state: MainsFlt

Controller Mode: OFF

(5)
Alarmlist
4 / * 4 / ∑ 4   ⚠

*	Sd ServiceTime
*	Sd AI32(g)(1)AI32
*	Fls Oil press
*	Wrn Oil press

(4)

RPM	0 RPM
Gen freq	0 Hz
Run hours	-1 h
kWh (Import)	-1 kWh
Ubat	23.6 V

Image 3.12 Unit Mini Detail - Example

Note: In case you wish to display "Unit Mini Detail" for several units at once, click on the "Module view" in menu bar, select those units by ticking the checkboxes and use the "Show As Modules" button at the bottom of the page.

Unit Detail

"Unit Detail" is the main tool for monitoring and control of the unit. The *"Unit Detail"* of a specific unit can be activated via the 🔵ⁿ Unit Detail icon either from the **Unit Mini Detail (page 24)** shortcut menu or from the Unit table.

"Unit Detail" provides an overview of the state of your unit, it's values and statistics and offers some fundamental unit control commands. For a more precise description, see the table and image below.

You can switch between the detail views of all your units via the **Unit List panel (page 60)**, that can be activated by a ☰ⁿ button on the *"Unit Detail"* navigation bar.

Unit detail can be customized via the Screen editor – this feature is available only in PRO version.

#	Description
①	▶ Main indicators of the unit state
	● Last Update indication
	● Engine and breakers states
	▶ Button for launching InteliMonitor or InteliConfig – available only in the PRO version
②	▶ Gauge meters for analog values
③	▶ Main unit commands
	● Start / Stop
	● Breaker control with breaker state indication
④	▶ Alarm List with a Alarm Reset button
⑤	▶ Chosen analog and binary values read from the controller (e.g. generator frequency, oil pressure, etc.)
⑥	▶ Chosen unit information (e.g. unit name, type of communication, etc.)
⑦	▶ Unit statistics (e.g. number of starts, fuel consumption, etc.)
⑧	▶ User comments list (unread comments highlighted in red)

Table 3.8 Unit Detail - Overview
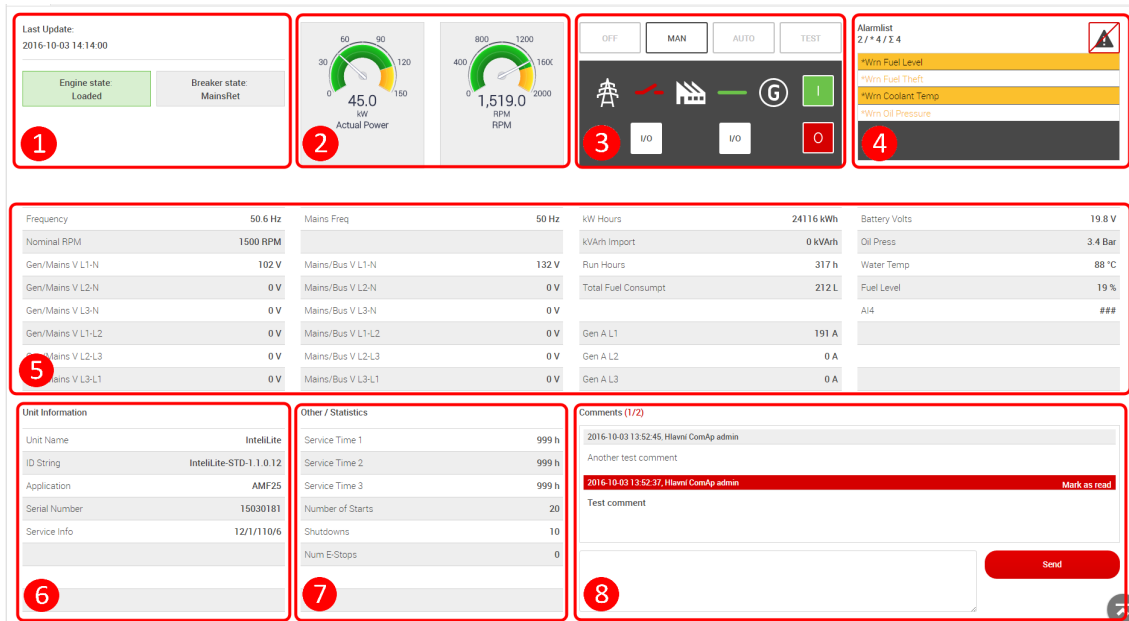
Image 3.13 Unit Detail - Example

In addition to the Main Unit Detail tab, more tabs are available for some units:

▶ **ECU Tab**

- If applicable, displays ECU related values

▶ **Internal I/O Tab**

- Displays values from built-in inputs and outputs

▶ **Analog I/O Tab**

- If applicable, displays values from external analog inputs and outputs

▶ **Binary I/O Tab**

- If applicable, displays values from external binary inputs and outputs

▶ **Geolocation Tab**

- If applicable, displays position, geofencing and geotracking function (available only in the PRO version)

Geolocation Tab

The Map (Geolocation) view enables you to visualize the current status as well as the history of the position of your mobile units.

The structure of the tab and available tools and information are described on the picture and related table below.

Note: Functions related to "Geolocation" are available only for units that are equipped with a GPS module or support LOCATE function. Moreover, the "GPS Position" option in the Units Settings (page 58) must be set up to "Mobile - LOCATE or GPS used".
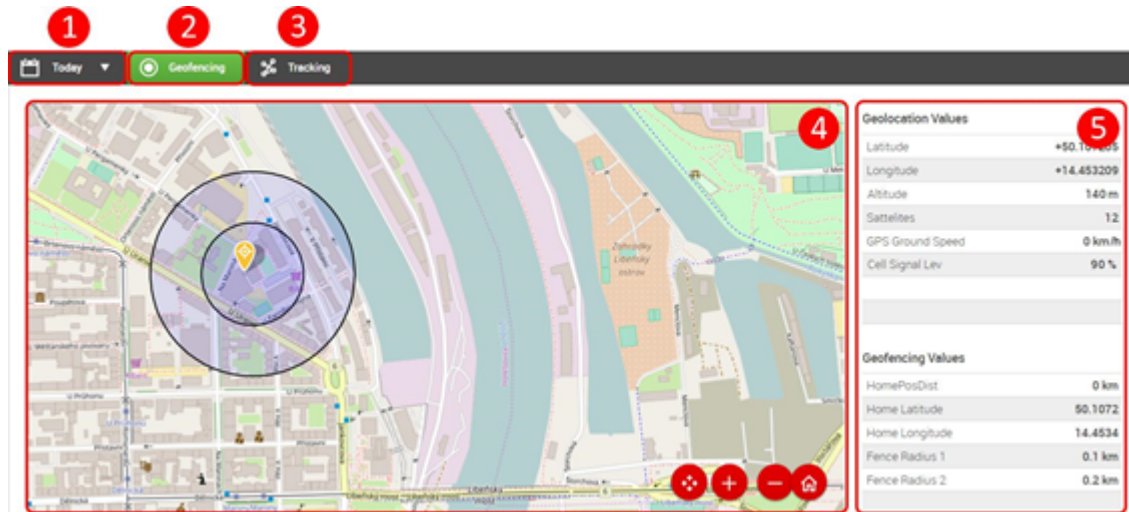
Image 3.14 Unit detail - Geolocation tab structure

#	Description
1	▶ Time Range
2	▶ Geofencing - turn view on/off
3	▶ Tracking - turn view on/off
4	▶ Map view for the current unit (Geofencing view activated)
5	▶ Table of Geolocation Values

Table 3.9 Unit detail - Geolocation overview

Map

In general, the Map in the "Geolocation" tab offers the same functionality and information (for a selected unit) as the Map in **Units (page 17)** section (e.g. current position, alarm state, etc.). Additionally to that, (if applicable for the respective unit) it visualizes the **Geofencing (page 29)** parameters (home position, radiuses) as well as the unit's trajectory over a selected time period (see **Tracking (page 30)**.

Geofencing

Geofencing is a protection function that evaluates whether the actual GPS location of a unit is within a predefined area. The area is defined in the controller via specific setpoints (e.g home position, fence radius 1, fence radius 2, etc.). If the unit leaves one of the areas, the Geofencing function generates an action (e.g. activates an alarm).

In order to visualize these areas on the "Data Log" map, click on the [Geofencing] button located above the map.

When the function is activated, the button is highlighted in green (see image below).
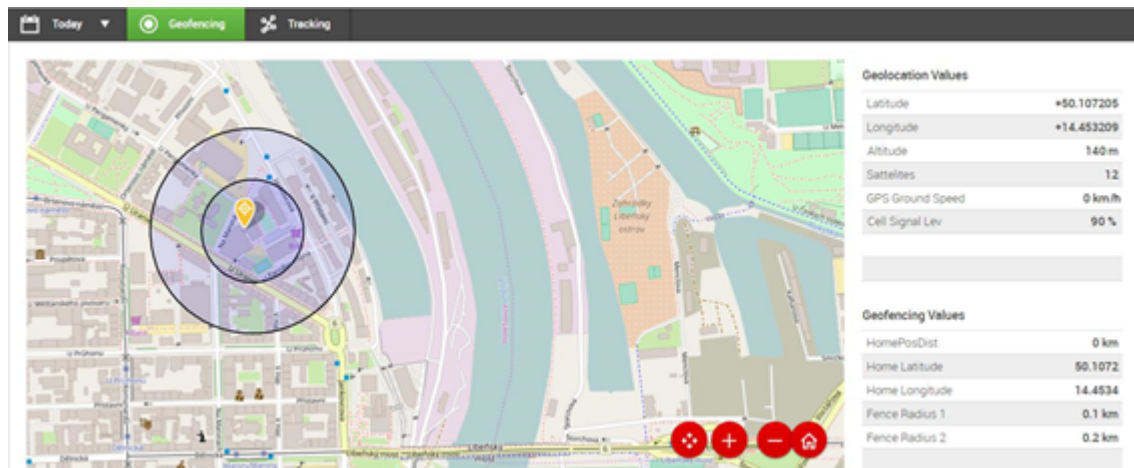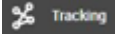
Image 3.15 Unit detail - Geofencing example

Note: Geofencing must be supported and defined in the monitored unit. For more information, please, refer to the unit's user manual.

Tracking

To visualize the change of position of a mobile unit within a chosen time range, click on the button [Tracking] located above the map. When the function is activated, the button is highlighted in blue.

The position points read from the unit are then displayed on the map and connected by straight lines. The color of the lines indicates the recency of the displayed data in respect to the selected Time Range:

▶ **Red** - newest data within the range

▶ **Blue** - data acquired around the middle of the selected time range

▶ **Black** - oldest data within the range
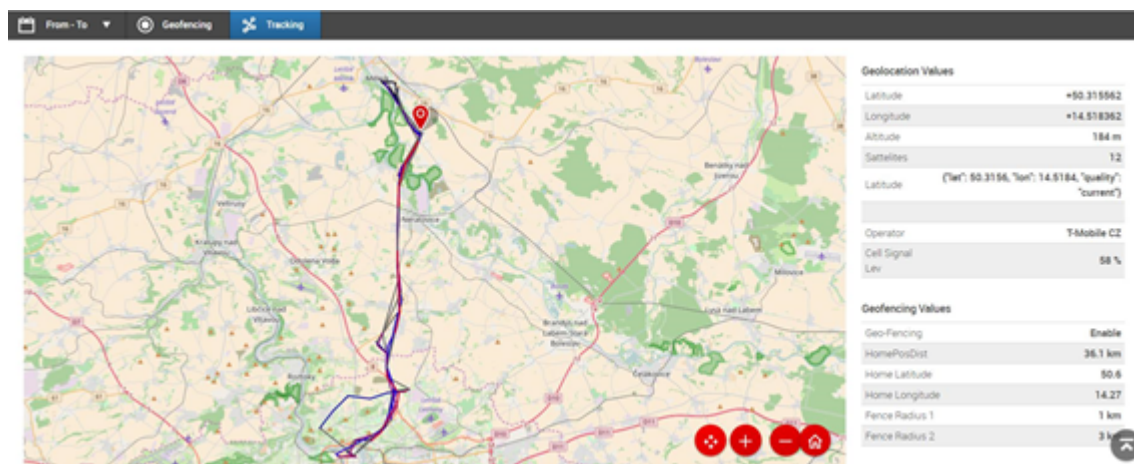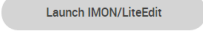
Image 3.16 Unit detail - Unit tracking example

To change the time range of the visualized data, click on the icon and select either one of the predefined time frames (e.g. last week, last month) or define your own period by selecting the *"From - To"* option.

Geolocation values

Values related to Geolocation (e.g. current GPS coordinates) and **Geofencing (page 29)** (e.g.fence radiuses, if applicable) are displayed on the table located on the right side of the map.

Launch ComAp PC tools

ComAp PC tools can be launched from **Unit Detail (page 27)**or **Unit Mini Detail (page 24)** via the

[Launch IMON/LiteEdit] button. The specific tool to be launched is automatically selected based on your controller type.

Note: For this function to work properly, the supported version of the PC tools must be installed on your device.

3.3.3 Map

You can monitor the position and state of your units on the map. It is available in the **Units (page 17)** section and it's appearance and dimensions depends on the selected page layout.

The following layouts can be toggled via the ❮ ❯ arrows on the *"Monitored Units"* menu bar:

▶ Wide Table and Map

▶ Wide Map with Table

▶ Table only

All of the layouts above can be also displayed with a sidebar displaying *"Tools"* selection or a *"Mini Detail"* of a selected unit. For more details see **Monitored Units (page 18)**

Map Visualization

In a default view, the Map scale is adjusted to display all the units registered under the current user account and also the units that have been shared with the user.
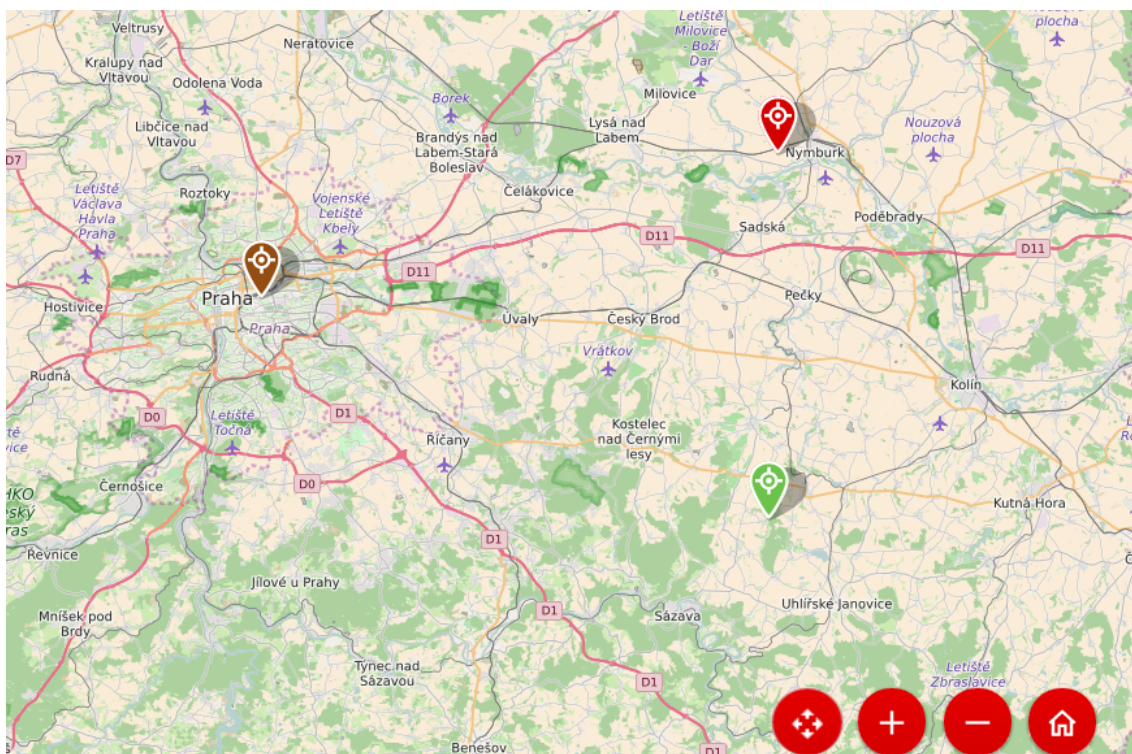
Image 3.17 Example of a Map Display

If a unit is equipped with a GPS module or supports Locate services, it's current position is displayed on the map. If not, the unit's position can be entered manually (see **Add New Unit (page 66)**). The provided coordinates are then used for the map display.

The state of the unit is indicated by the type and the color of the map icons. For more details, see the table below. Moreover, a selected unit is visualized with by an enlarged icon.

*Note: As a default, units with the state "Disabled" are not displayed on the map. This setting can be changed in settings, see **General Settings (page 77)***

Icon	Description
	Displayed unit - generic icon
	Unit without a GPS localization (position entered manually).
	Unit or a group with an active comment.
	Group - type Site (see also **Groups Settings (page 73)**)
	▶ Concentration of several units close to each other (relatively to current map scale). ▶ The amount of units is indicated by the number in the circle. ▶ Separate units are displayed when zoomed in.

Table 3.10 Map Icons

The color variations of the icons above (except for the icon with the number of units) correspond to the colors listed for varius unit states in **Alarms (page 19)** table.

Map Actions

The control of the map is intuitive and similar to standard electronic map applications. It supports both the control with a mouse as well as a touch control. The more detailed description is available in the table below (actions for touch devices are listed in brackets).

Button / Action	Description	Alternative
⊕	Zoom in on the map	▶ Mouse scroll up (spread two fingers apart on the screen) ▶ Double click (double tap) on a map point or a unit icon
⊖	Zoom out on the map	▶ Mouse scroll down (pinch two fingers together on the screen)
⌂	Home position - adjust the map scale to show all the units under the account	▶ N/A
✛	Pan the map view - displays arrow buttons for panning the map view left, right, up and down	▶ Left click (tap) anywhere on the map, hold and drag
Left click (tap) on a unit icon	Selects the unit on the *"Monitored Units"* table	▶ N/A

Table 3.11 Map Actions

3.3.4 Filter

The *"Tools"* sidebar is available on the *"Units"* page and can be activated via the 🔧 button on the *"Monitored Units"* menu bar. This action also displays check-boxes for each item (unit or group) on the *"Monitored Units"* table.

The *"Tools"* sidebar consists of three sections:

#	Description
1	**Webcontrol (page 36)**
2	**Selected Units Actions (page 37)**
3	**Filter (page 35)**

Table 3.12 Tools Sidebar - Sections
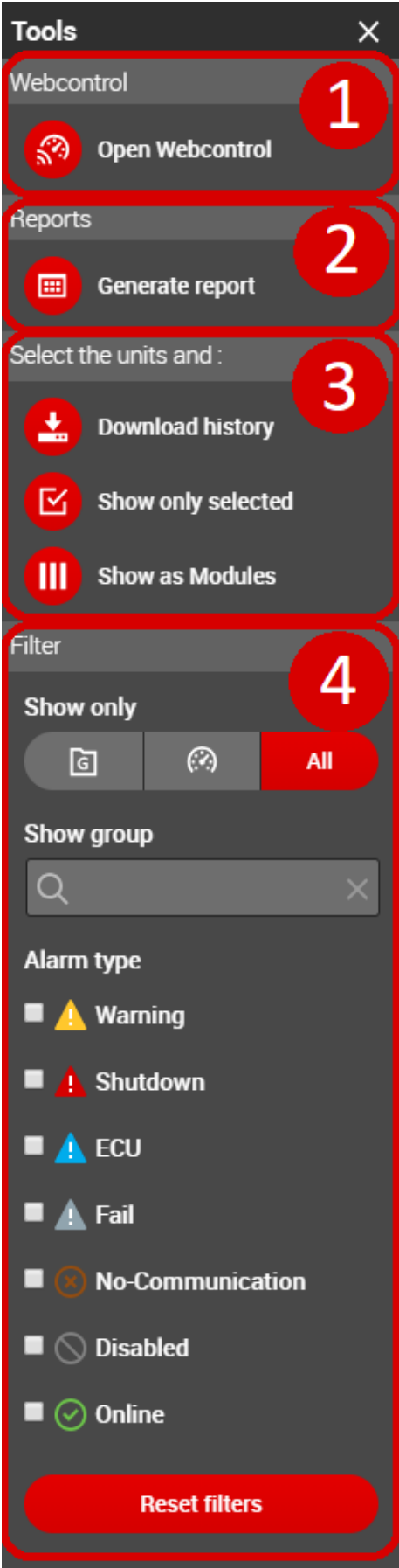
Image 3.18 Tools Sidebar - Sections

Filter

The *"Filter"* sidebar is available on the *"Units"* page and can be activated via the ▼ button on the *"Monitored Units"* menu bar.

The *"Filter"* sidebar enables you to adjust the display of items on the *"Monitored Units"* table based on their type and state, which helps you to monitor your units more effectively in different situations.

Note: For more possibilities on filtering and adjusting the "Monitored Units" table, see also Search, Filter and Order Units (page 23)
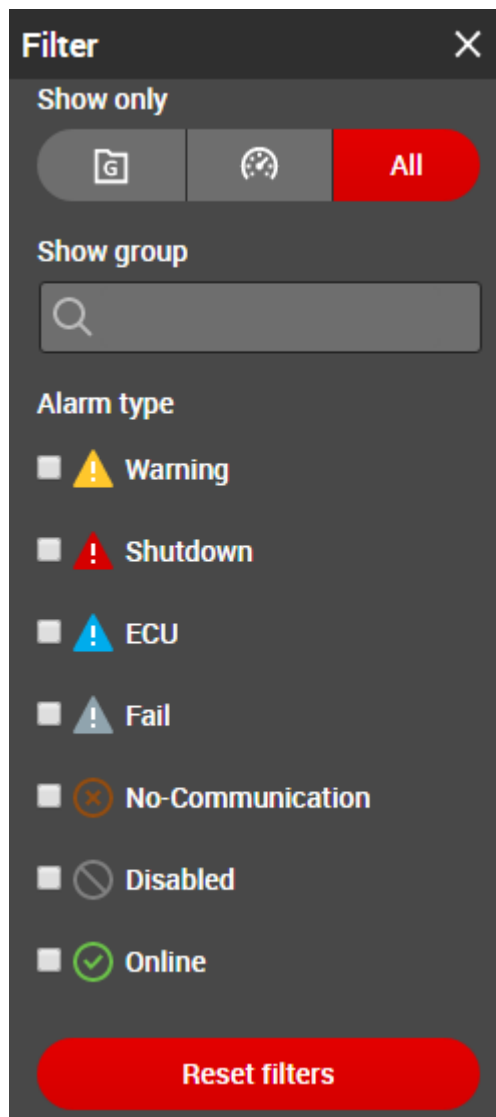
Filter Options

Various filter criterion can be selected and combined together::

▶ ***"Show Only Groups"***

- Display only groups (type *"Basic"* or *"Site"* or *"WebControl"*, see **Add New Group (page 74)**). The groups can be expanded to display associated units.
- Active when the 🄶 button is ticked.

- ▶ *"Show Separate Units"*
  - Display all the units regardless of their association with any group
  - Active when the ⊚ button is ticked.
- ▶ *"Show All"*
  - Display both groups and units.
- ▶ *"Show Group"*
  - Dynamic search field - start typing an existing group name (type *"Basic"* or *"Site")* or *"WebControl"* in the search field and choose from the offered matches (the matches are gradually filtered)
  - Several groups can be entered in the search field
- ▶ *"Alarm Type"*
  - Filter the list by ticking the check-boxes of specific alarm types or communication states
  - For detailed explanation on the available alarms and states, see **Alarms (page 19)**
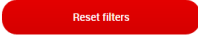
Reset Filters

Separate filter criteria can be undone by un-ticking the respective check-boxes of the alarm type filter or deleting chosen group names from the group search field.

To remove all the defined filters, press the **Reset filters** button on the bottom of the *"Tools"* sidebar.

Moreover, in case some filters are active and the *"Tools"* sidebar has been deactivated, an info message appears on the top of the *"Monitored Units"* table (see image below). This message tile also offers to reset all the active filters.
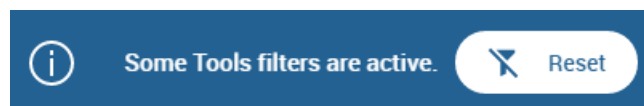
Image 3.19 Message - Filters Active

Webcontrol

The *"Webcontrol"* tool allows you to control (start / stop) several units at once, when all of the following conditions are met:

- ▶ Units are grouped in a group type *"Webcontrol"*, see **Add New Group (page 74)**
- ▶ Current user's rights include *"Control"*, see **Add New User (page 70)**
- ▶ All controllers are from IGS-NT controller family and Remote switch 8 is configured to Remote start function. Settings is done in GenConfig, go to LBI tab and set *"Rem start/stop"* function to source *"Log Bout / RemoteControl8"*. Confirm the settings by writing the configuration to the controller.
- ▶ Remote Control is enabled in all of the controllers in the group - refer to the specific controller's guide
- ▶ All of the controllers in the group are in AUT mode - refer to the specific controller's guide

Webcontrol - How To

- ▶ Make sure the preconditions for *"Webcontrol"* are met (see above)
- ▶ On the *"Tools"* sidebar, choose *"Open Webcontrol"*
- ▶ A list of all the *"Webcontrol"* groups defined under or shared with the current user account is displayed. To control one of the groups, click on the *"Control Group"* button (⊚) of the respective group.

► Select the whole group or some chosen units by ticking the respective check-boxes.

Note: *The summary nominal power of the selected units is displayed on the bottom of the list as "Selected Nominal".*

► Use the START and STOP buttons to control the selected units as a group.

Image 3.20 Start Multiple Units Via Webcontrol

► To return from the *"Webcontrol"* of a selected group, click on the ↰ button on the right side of the group row.

Selected Units Actions

When the *"Tools"* sidebar is activated (click on the 🔧 button on the *"Monitored Units"* menu bar), check-boxes for each item (unit or group) on the *"Monitored Units"* table are displayed.

You can select particular units or groups by ticking their respective check-boxes and the launch one of the *"Tools"* actions:

► *"Download History"*
  ● Download history of all selected units into a file.

► *"Show Only Selected"*
  ● Only the selected units will be displayed on the *"Monitored Units"* table
  ● When clicked again, the view is reset (all units displayed)

► *"Show As Modules"*
  ● A **Unit Mini Detail (page 24)** of selected units is displayed on the *"Monitored Units"* table
  ● When clicked again, the view is reset (standard *"Monitored Units"* table view, all units displayed)
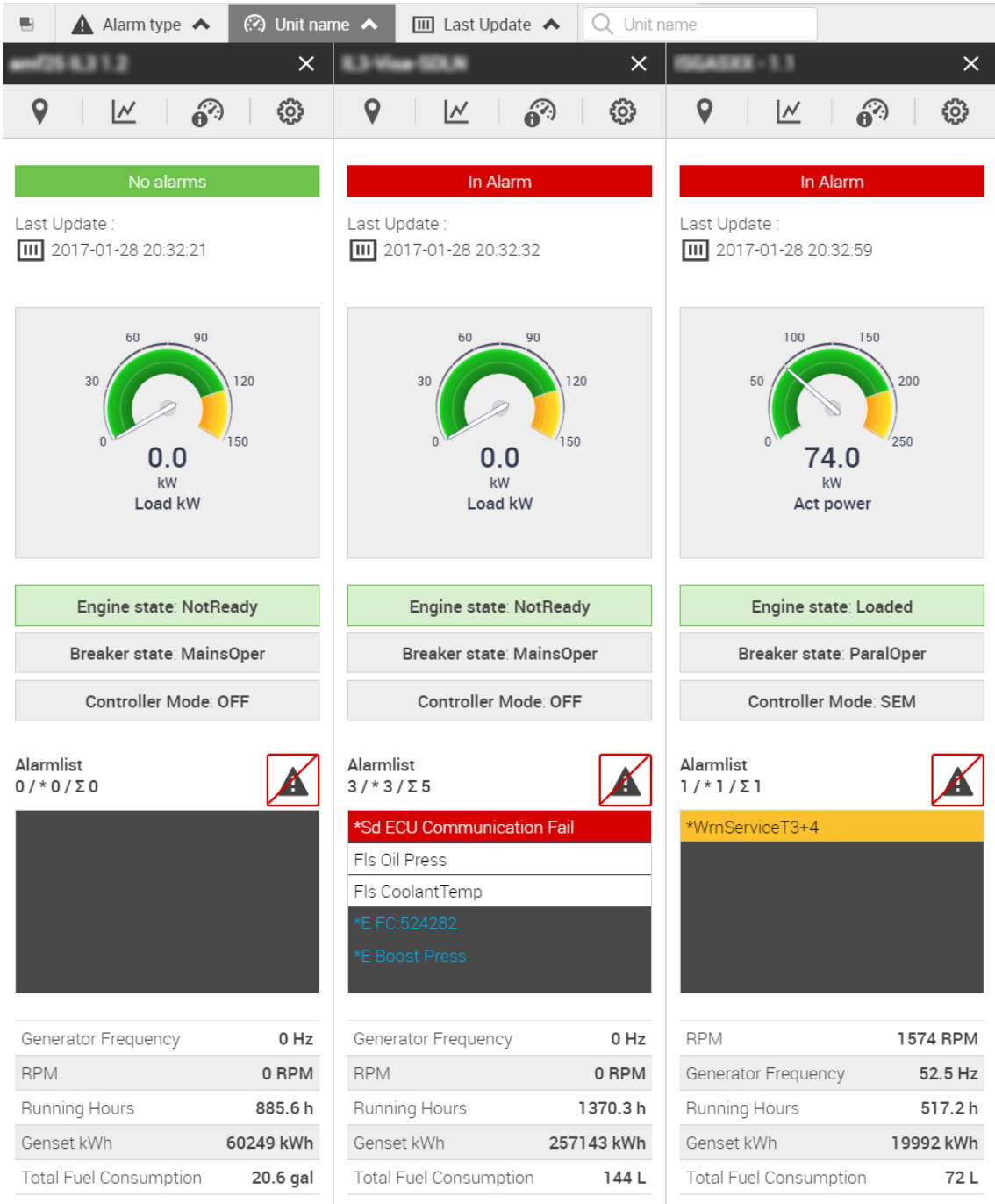
Image 3.21 Monitored Units - Show As Modules

3.4 Dashboard

Dashboard shows a fleet/group statistics. After logging into the WebSupervisor application, the "Dashboard" page can be displayed as a homepage if the user set Dashboard as a Nome screen in Application setting.

by default.
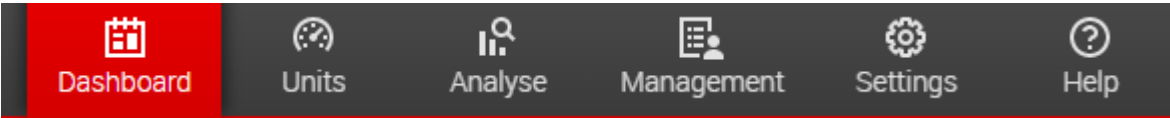
Image 3.22 Main Menu - Dashboard Selected

Note: Dashboard is available for WSV Pro subscription. For WSV Lite subscription is offered in limited version.

At any time, the *"Dashboard"* page can be switched into by clicking the respective icon on the Main Menu bar. The structure of the page is described in the table and picture below:

#	Description
1	▶ **Device Statistics - Summary (page 39)**
2	▶ **Graphs and Tables (page 40)**
3	▶ **New Alarms Table (page 43)**
4	▶ **List of groups available in the accounts**

Table 3.13 Dashboard - Overview
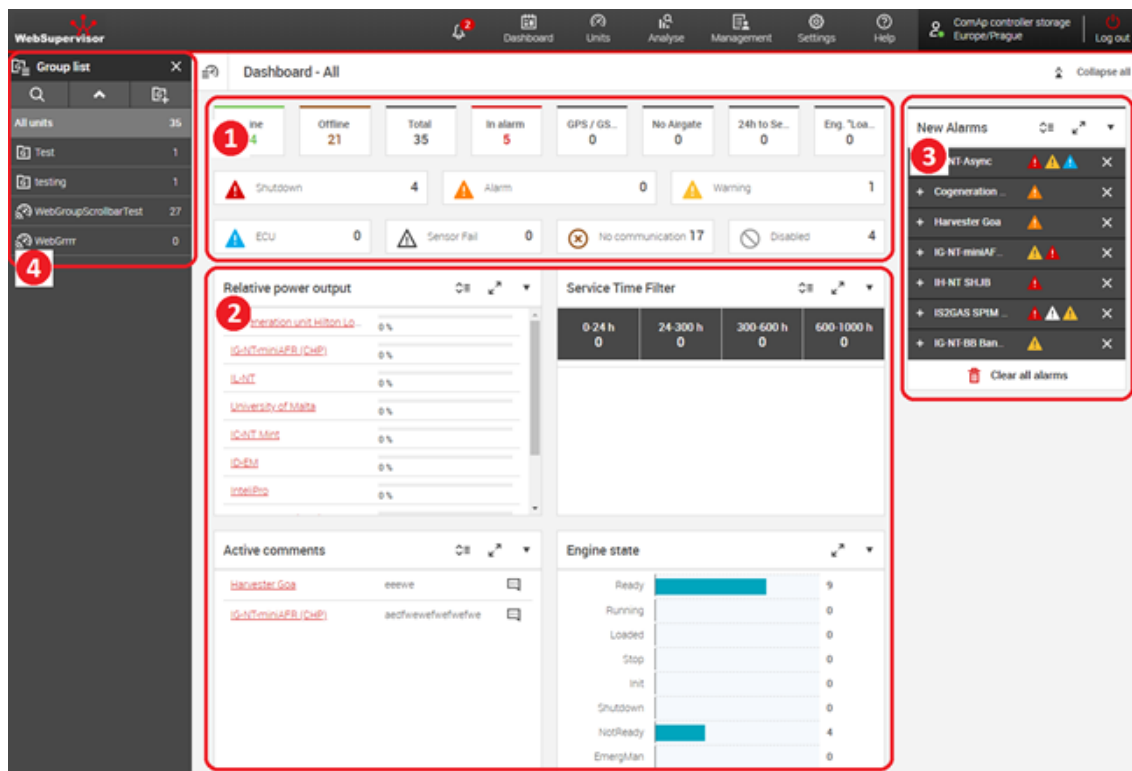
Image 3.23 Dashboard WSV Pro - Example

*Note: If you wish to change the Homepage settings, see "Homepage" in **General Settings (page 77)***

3.4.1 Device Statistics - Summary

These statistics are divided into several square tiles, each of them displaying the cumulative amount of devices* in a specific state at the moment (see the table below).

Moreover, if any counter (except "Total") on the tile is greater than 0, left click on the tile opens a list of corresponding units. Information about Service and engine state is not available for WSV Lite users.
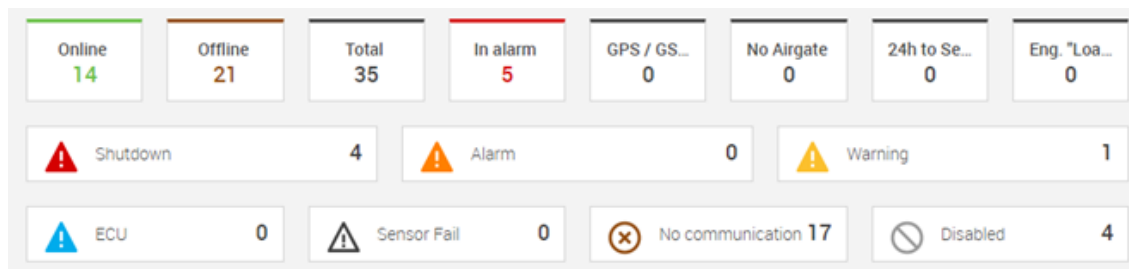
Image 3.24 Device Statistics -Example

Tile Label	Description
Online	Summary number of units in online state (regardless of alarms).
Offline	Summary number of units in offline state (regardless of alarms).
Total	Total number of all units of the account.
In Alarm	Summary number of units with at least one active alarm.
No AirGate	Summary number of units which are not communicating due to occupied AirGate ports.
GPS/GSM	Summary number of units with the LOCATE or GPS function enabled (see **Add New Unit (page 66)**).
24h To Service	Summary number of all units with their service time countdown lower than 24 hrs.
Eng. Loaded	Summary number of all units currently in the "Loaded" state.
Shutdown	Summary number of all units with an active Shutdown alarm.
Alarm	Summary number of all devices with an alarm WSV does not get information about alarm type from device (e.g. old IS-CU; FLST and ECU alarms from IL-NT based controllers, 3rd party controllers & devices)
Warning	Summary number of all units with an active warning.
ECU	Summary number of all units with an active ECU alarm.
Sensor Fail	Summary number of all units with an active Flst alarm.
No Comm	Summary number of all units with an active with lost communication.
Disabled	Summary number of disabled units.

Table 3.14 Device* Statistics - Description

Note: * Only for ComAp brand controllers

Note: For further description of the states above see **Alarms (page 19)**. For other available actions see **General Dashboard Actions (page 44)**.

3.4.2 Graphs and Tables

Note: Available only for WSV Pro subscription

This area consists of 4 main sub-sections:

▶ **Relative Power Output Graph (page 41)**

▶ **Service Time Filter (page 41)**

▶ **Active Comments Table (page 42)**

▶ **Engine State Graph (page 43)**

Relative Power Output Graph

For each device* of the account, the device name is listed with a respective graphical representation (bar-graph with a value label) of it's Relative Power Output.

The Relative Power Output of a device is a value computed from the unit's Actual Power and the value of Nominal Power setpoint:

*Relative Power Output = (Actual Power / Nominal Power) * 100*
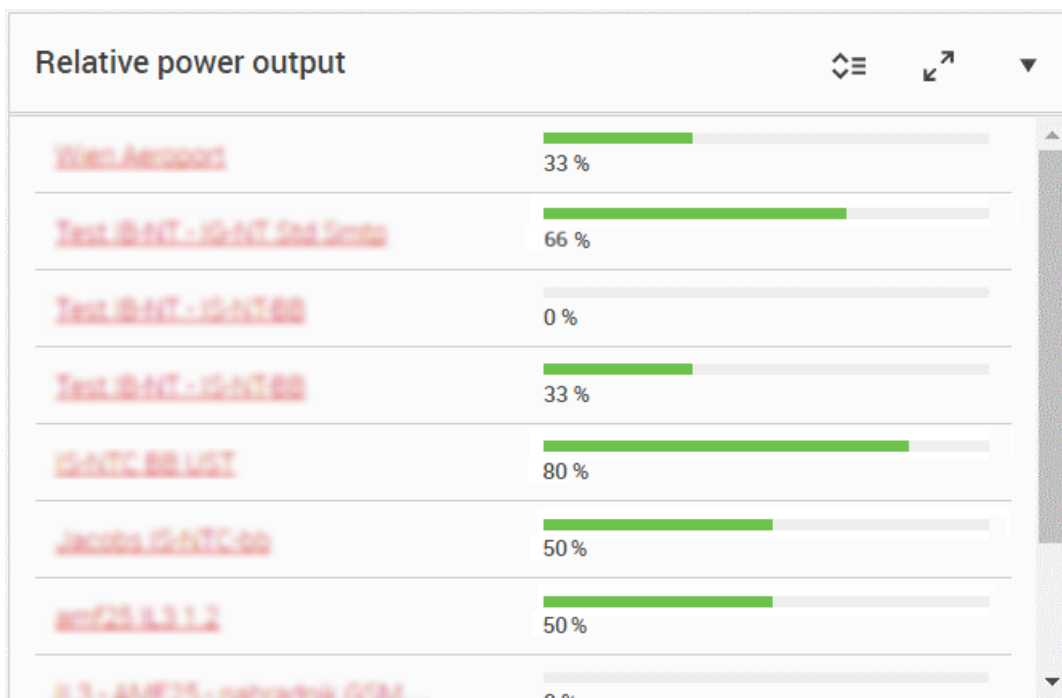
Image 3.25 Relative Power Output Graph - Example

Service Time Filter

This table divides units into 4 categories based on their current value of the Service Time countdown counter:

▶ 0 - 24 hrs

▶ 24 - 300 hrs

▶ 300 - 600 hrs

▶ 600 - 1000 hrs

The time frames above are displayed on tiles in the table's header. Clicking on a specific tile displays a list of units with their current Service Time within the respective time frame. For each unit of the list, the unit's name is displayed with the name of the specific value in the controller used for the calculation, as well as it's current value. Moreover, each tile displays a counter of units, that are currently in the time frame.

In case none of the tiles is selected, the table displays the current Service Time value for all units in the account. To un-select a tile, click again on the selected one.

Service Time			⇕≣ ↗ ▼
0-24 **1**	**24-300** **1**	**300-600** **3**	**600-1000** **1**
amf25,IL3,1,2	Maintenance 1		0 h
IL3-Visa-SDLN	Maintenance 1		276 h
Test IBAT - IGATC80	Service time 1		300 h
Test IBAT - IGATC80	Service time 1		300 h
Wien Aeroport	Maintenance 1		564 h
IL3 - AMF25 - nahradnik GSM	Maintenance 1		999 h

Image 3.26 Dashboard - Service Time Table Example

Active Comments Table

The table contains a list of all devices in the account with at least one active comment (i.e. not marked as read). For each displayed device, the device's name is listed along with a preview of the most current active comment.

Left click on the 🗩 icon redirects you to the unit's **Unit Detail (page 27)**, where you can read the full comment and mark it as read.

Active comments		⇕≣ ↗ ▼
Loc IGATC80	Unit set to manual.	🗩
Test IBAT 01 - IGATC80	Test planned for W12.	🗩
iO-Mobile - Zdenecn	Unit restarted.	🗩
Test IBAT - IGATC80	Checked. OK.	🗩
amf25,IL3,1,2	Test comment	🗩
IL3 Unit3 - MRS16 XG5	Ok. Thank you.	🗩
Wien Aeroport	\add\comment	🗩

Engine State Graph

This sub-section displays a statistical overview of a device* value Engine State. In a form or a bar-graph, it displays the current number of devices in various states (e.g., Ready, Loaded, Cooling, etc.).

Clicking on a bar, that represents a specific state, opens a window with a list of all devices, that are currently in that state.
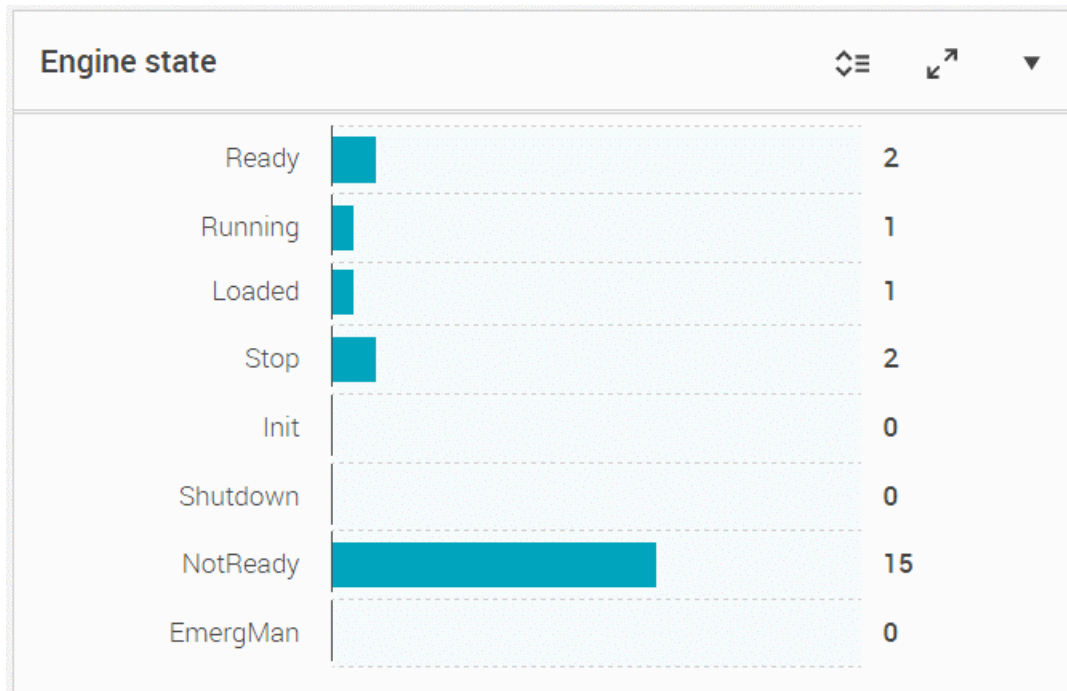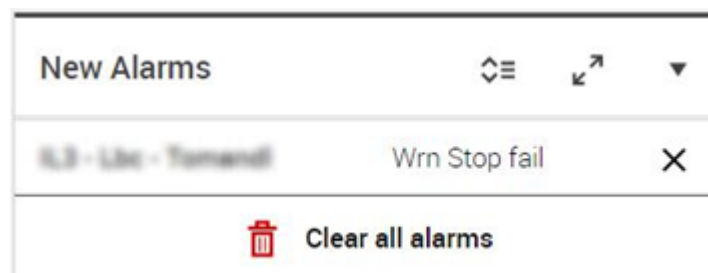
Image 3.28 Engine State Graph - Example

3.4.3 New Alarms Table

This table aggregates all the new active alarms for all the units of the account. The structure of the table depends on the number of active alarms per unit:

▶ **One active alarm per device***:

● The device* name and alarm label is displayed in one row of the table

● The row is highlighted according to the current alarm color (see **Alarms (page 19)**)

Image 3.29 New Alarms Table - Single Alarm

▶ **Multiple active alarms per device*:**

● The unit name and icons of active alarms are displayed in one row of the table (for the list of alarm icons, see **Alarms (page 19)**

● The row can be expanded by clicking on a ⊞ symbol on the left side of the row to show the list of all active alarms of the unit.
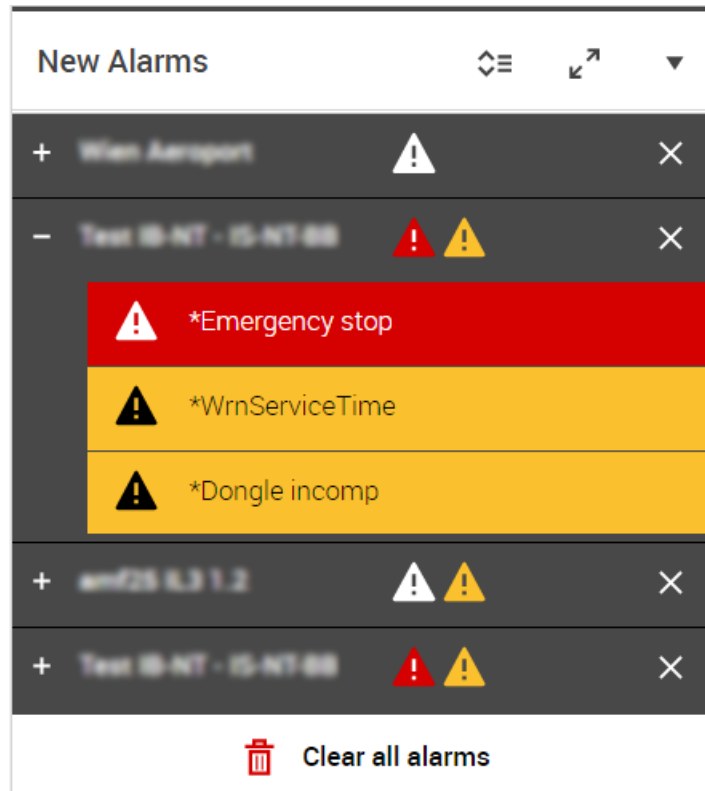
Image 3.30 New Alarms Table - Multiple Alarms

To remove an item from the list, click on the ✕ symbol on the right side of the item row. It removes only the alert in this list, it is not performing Fault reset nor removing alarm from the Unit detail etc.

Note: For other available actions, see General Dashboard Actions (page 44).

3.4.4 General Dashboard Actions

In addition to the actions described in the chapters above, there are a few more applicable to all the sub-sections of the *"Dashboard"* page.

Jump To Unit Detail

Left click on a unit name in any of the lists and tables on *"Dashboard"* redirects you to the **Unit Detail (page 27)** of the respective unit.

You can always return back to the *"Dashboard"* page by clicking the ← icon in the top left corner.

Open Full-Screen View

A full-screen view of a table (graph) can be open by clicking the ⤢ icon in the top right corner of the table (graph). In order to close the full-screen view, click on the ⤢.

Expand / Collapse

Each table (graph) on the*"Dashboard"* can be collapsed to show only a tile with the table's (graph's) title by clicking the ▼ icon in the top right corner of the table (graph). To expand back, click ▲ icon located in the same position.

Moreover, this can be applied to all of the tables and graphs at once, by clicking ⌃ Collapse all (resp. ⌄ Expand all) icon in the top right corner of the *"Dashboard"* page.

Change Table Order

The default order of items in tables can be changed by choosing an ascending 🔼 or a descending 🔽 order based on categories applicable for a specific table (e.g. Unit Name, Alarm Type, Value, etc.).

The buttons for order change can be toggled on and off by clicking on a ⇕≡ icon in the top right corner of any *"Dashboard"* table.

Note: This function is also available in Full-Screen View.

3.5 Trends

The *"Trends"* section offers a graphical overview on how the selected values of the monitored units changed over time.

To navigate to the "Trends" section, click on the *"Analyse"* icon in the Main Menu or hover over the *"Analyse"* icon in the Main Menu and choose *"Trends"* section.
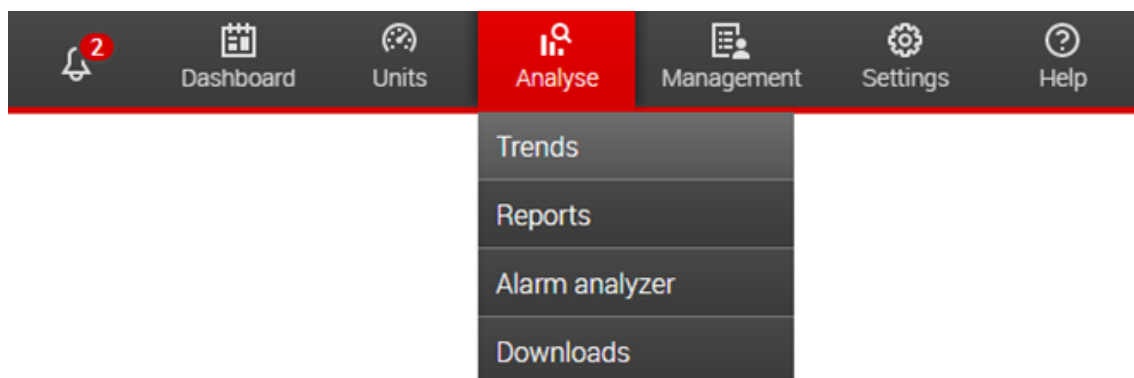
Image 3.31 Main Menu - Trends

Navigation bar of the "Trends" section offers various view modes and shortcuts. For more details, see the image and the table below.

Image 3.32 Trends - Navigation Bar

#	Description
1	Activate **Unit List panel (page 46)** Sidebar
2	Switch to **Graph View (page 47)**
3	Switch to **Table View (page 54)**
4	Shortcuts to other sections for selected unit

Table 3.15 Trends - Navigation Bar Legend

3.5.1 Data History

WebSupervisor automatically stores predefined values read from the controller.

To ensure reliability, the history is read in two parallel modes:

Batch Reading

The controller is adjusted to save the history data each hour. These data are then read from the controller as a batch and saved by the WebSupervisor. The time stamp of the data is rounded to a full hour (e.g. 9:00:00).

Periodical Reading

Additionally to the batch reading, once every hour the values are read from the controller directly. This happens regardless of whether the user is logged into the application or not. These values are not synchronized to a full hour.

3.5.2 Unit List panel

The *"Unit List"* provides tools for selection of units and data to be displayed in the history summaries. It can be activated by a ⎘ button on the left side of the *"Trends"* navigation bar.

The sidebar displays the list of all units registered under (or shared with) the current account.

The available actions are described below.

Unit Search

The unit list can be filtered via dynamic search tool. The search field is activated via the 🔍 icon on the top of the *"Unit List"* sidebar. Start typing an existing unit name in the search field and choose from the offered matches (the matches are gradually filtered). The filter is not case or diacritic sensitive. Several units can be entered into the search field.

Favorites units

User can choose to see only the favorites units. He can mark the unit as favorite by clicking on the ☆ icon next to the unit's name. To remove the unit from the favorites, use the ★ icon. Filter displaying only favorite units is activated via the ⎘ icon.

All units

To see all units in the list, click on the 🖥 icon.

Unit Values

Left click on the 📋 icon on the right side of a unit, expands the sub-list of values available for the unit.

To add or remove the values from the "Trends" graph (table) display, tick or un-tick the checkboxes of the values. Data from several units can be displayed on one graph (table) and thus easily compared. For each unit user can set favorite values by ⭐ icon and remove the value from the favorite by ⭐ icon. To show only favorite values tick the checkbox at the top of the values list marked *"Show only favorite values"*.
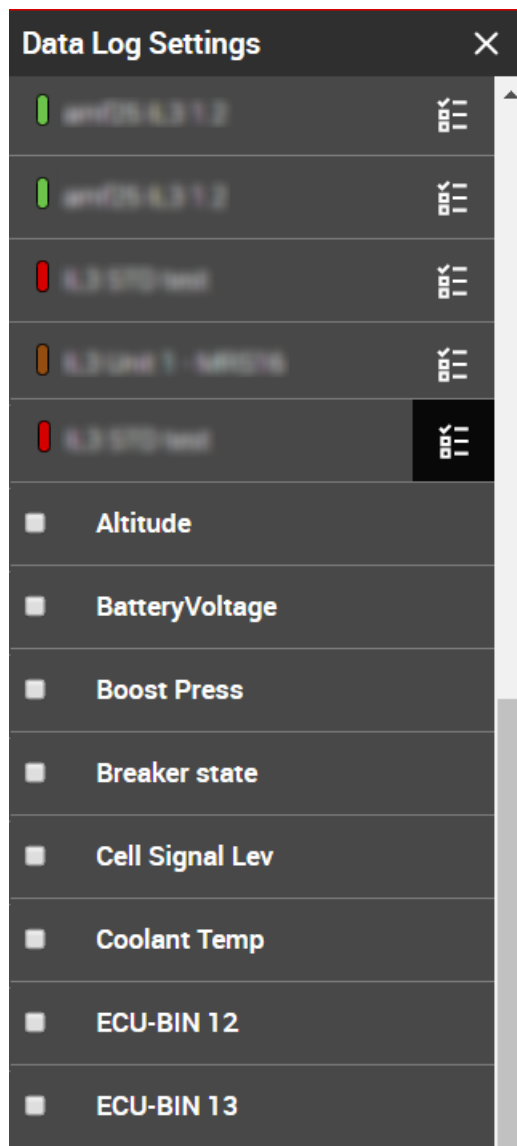
Image 3.33 Data Log Unit List - Example

3.5.3 Graph View

To display your history data graphically switch to the Graph view - click on the 📈 icon on the *"Trends"* top menu. You can choose which values to display on the graph via the **Unit List panel (page 46)**. A legend with a

brief description of the selected values is displayed on the top left corner of the graph (for more legend options, see **Display (page 52)**).

Moreover, for each unit you can define and save user specific tabs to keep the values you've selected for plotting even after re-login (for more details, see **Trends Tabs (page 55)**).

Note: In Graph view, you can also temporarily remove values from the plot, by clicking on the value name on the graph legend. The removed value is marked as crossed-out.

Graph Options

Graph view offers several functions and tools that allow you to adjust the figures according to your preferences and keep the settings. These functions are described below.

Time Range

To change the time range of the visualized data, click on the ▣ icon and select either one of the predefined time frames (e.g. last week, last month) or define your own period by selecting the *"From - To"* option.

Graph Type

There are 3 main Graph types available in *"Trends"*:

▶ **Line Graph (page 48)**

▶ **Bar Graph (page 49)** - Available only in PRO version

▶ **Heat Map (page 50)** - Available only in PRO version

Line Graph

This graph type is a default option. For each value read from the controller, the individual data points are connected by a line to visualize the change of the value over time. The current value at any time can be displayed by hovering the cursor over the graph (this function can be turned off in **Display (page 52)** options).
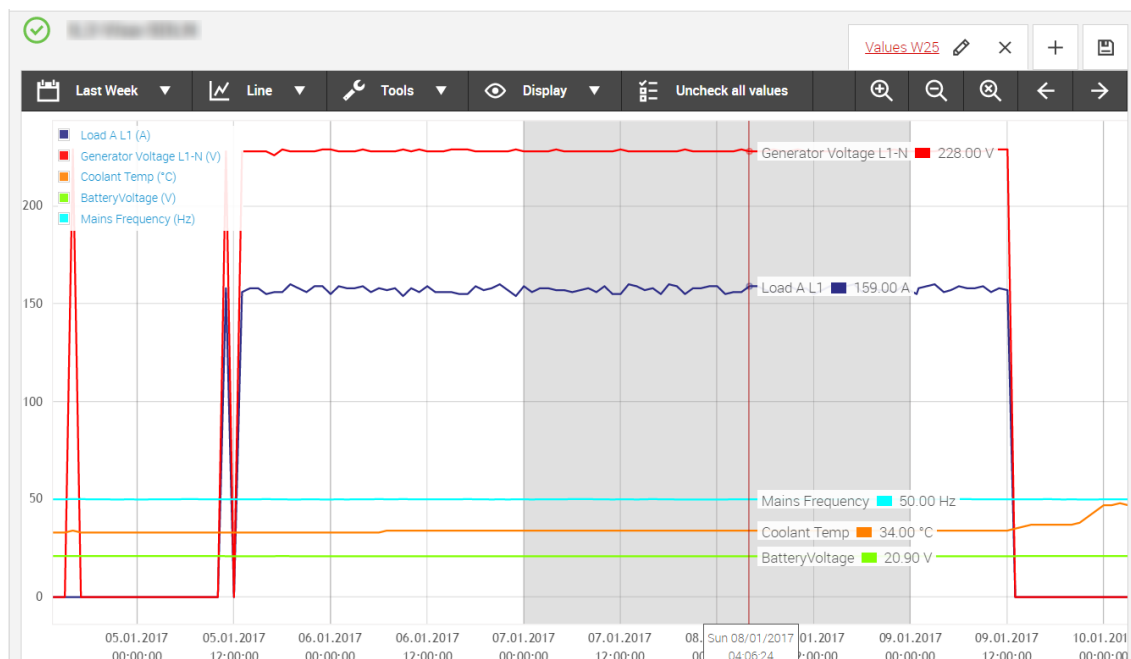
Image 3.34 Data Log - Line Graph Example

Note: The grey area on the graph indicates weekends.

Bar Graph

Note: Available only for WSV Pro subscription

The values are represented in form of vertical bars that allows summation and comparison of data. Bar graphs are available only in Pro version.
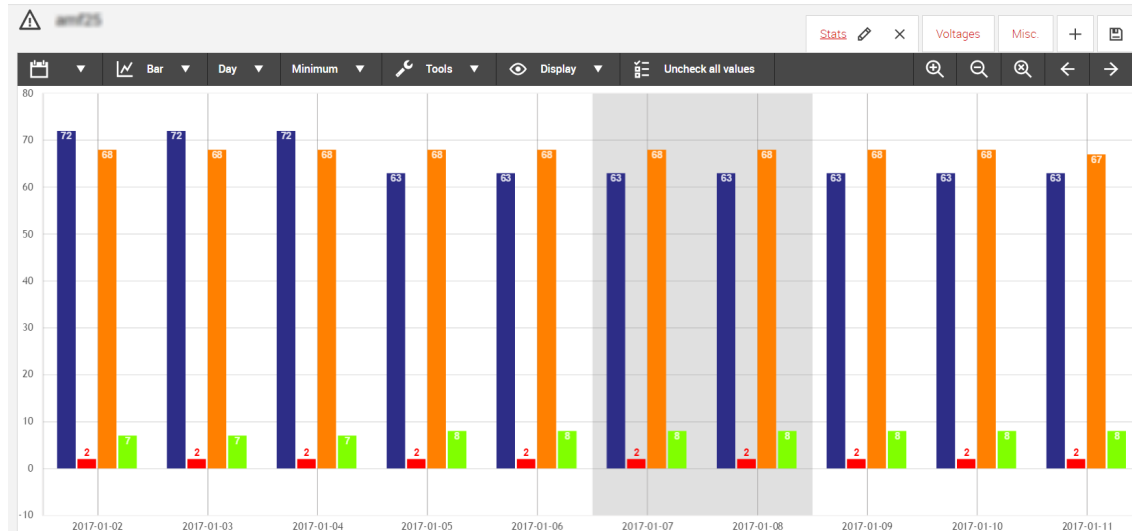
Image 3.35 Trends - Bar Graph Example

When a "Bar" is selected as a graph type, two additional options appear on the graph toolbar.

Bar Graph Sampling

Defines a sample period:

- ▶ 1/4 Hour
- ▶ Hour
- ▶ Day
- ▶ Week
- ▶ Month
- ▶ Year

Bar Graph Method

A mathematical operation to be performed over the sample data:

- ▶ "Sum" of all the data in the sample period
- ▶ "Average" value of the data in the sample period
- ▶ "Minimum" value of the data in the sample period
- ▶ "Maximum" value of the data in the sample period
- ▶ "Difference" - maximum difference between the values within the sample period
- ▶ "Difference Increasing" - displays only the positive difference (greater than 0)

Example: To display the maximum temperature of coolant liquid for each day during last week, select: Time Range = "Last Week"and Graph Type = "Bar". As the additional options, select "Day" and "Maximum" (see also the image below)
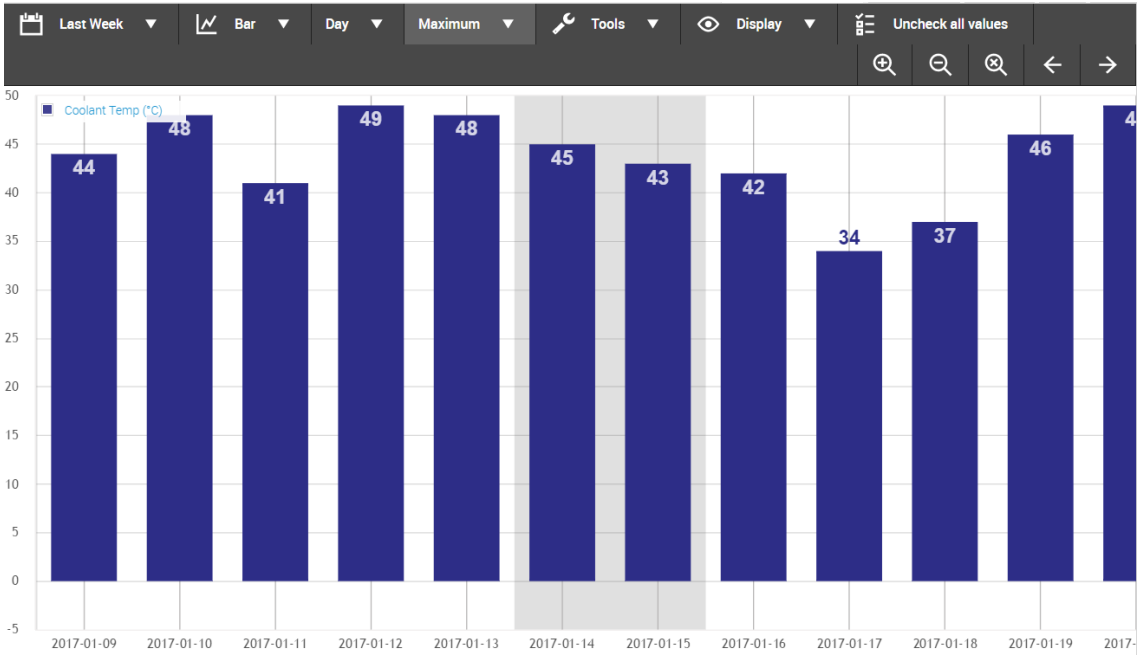
Image 3.36 Trends - Bar Graph Example (Daily Maximum Value)

Heat Map

Note: *Available only for WSV Pro subscription*

The data are visualized in a form of a time matrix where individual values are represented by different colors. Heat maps are available only in PRO version.
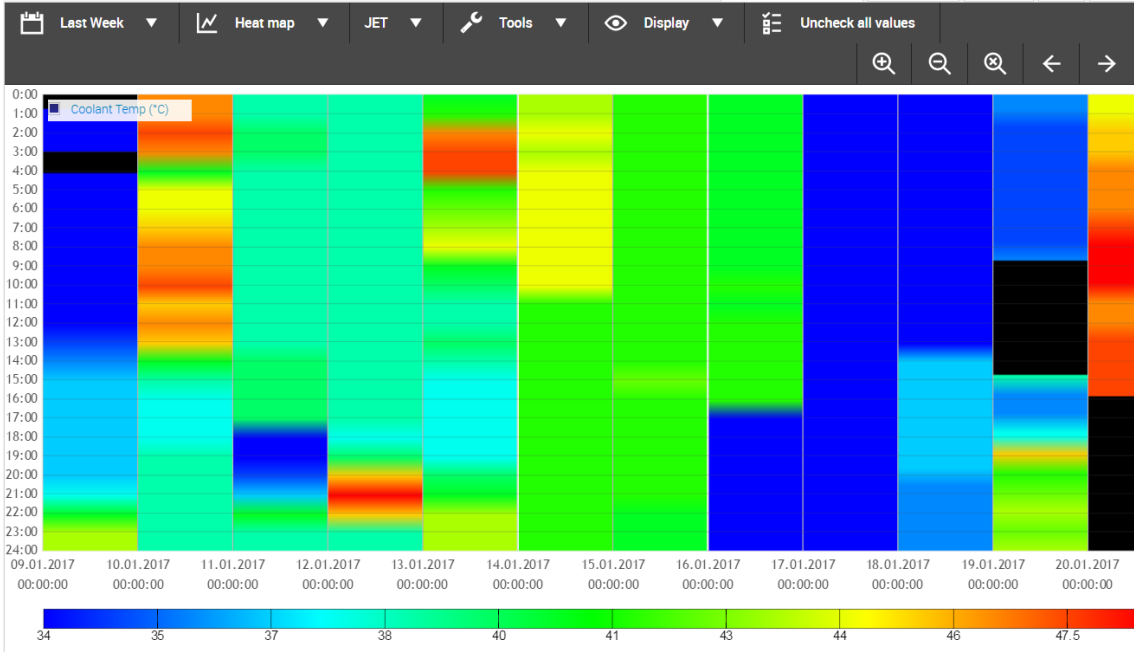
Image 3.37 Trends - Heat Map Example

Note: *Only one variable (e.g. temperature) can be displayed on a heat map at a time. If another one is selected on the **Unit List panel (page 46)**, it is automatically crossed out.*

As an additional option, the preferred colormap type(JET, Linear, etc.) can be selected.

Tools

To choose from various graph tools click on the ⚙ icon on the graph bar.

Connect All Points

In case of missing data points, the default setting of the graph is to keep the respective part of the plot blank. Ticking the "Connect All Points" tool will connect the nearest valid data values with a straight line.
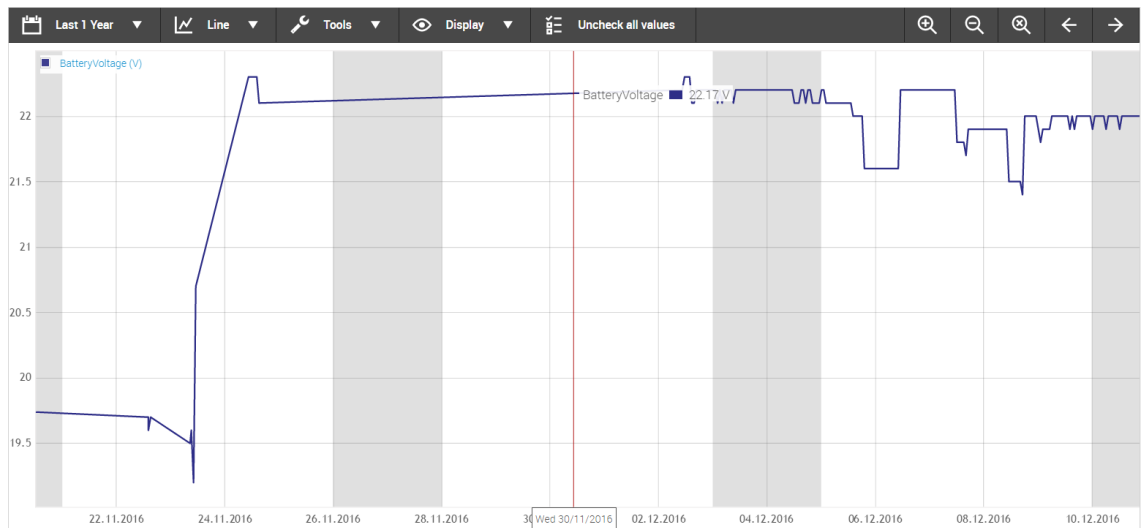
Image 3.38 Data Log - Missing Data Connected

Trim Visible Data

If there is a longer period of missing data before or after the displayed fragment of the plot, ticking this option will adjust the plot zoom to display the existing data only.
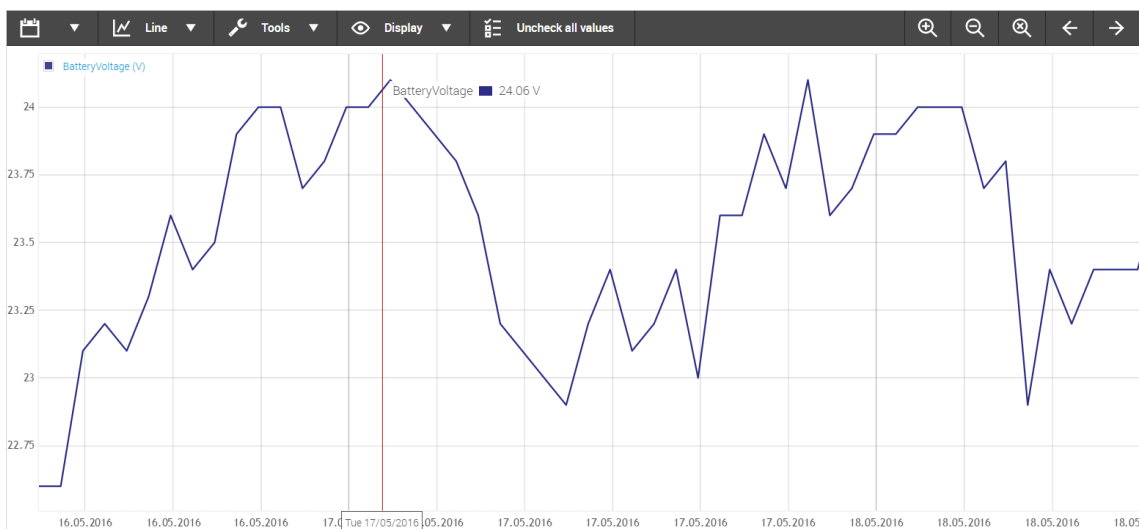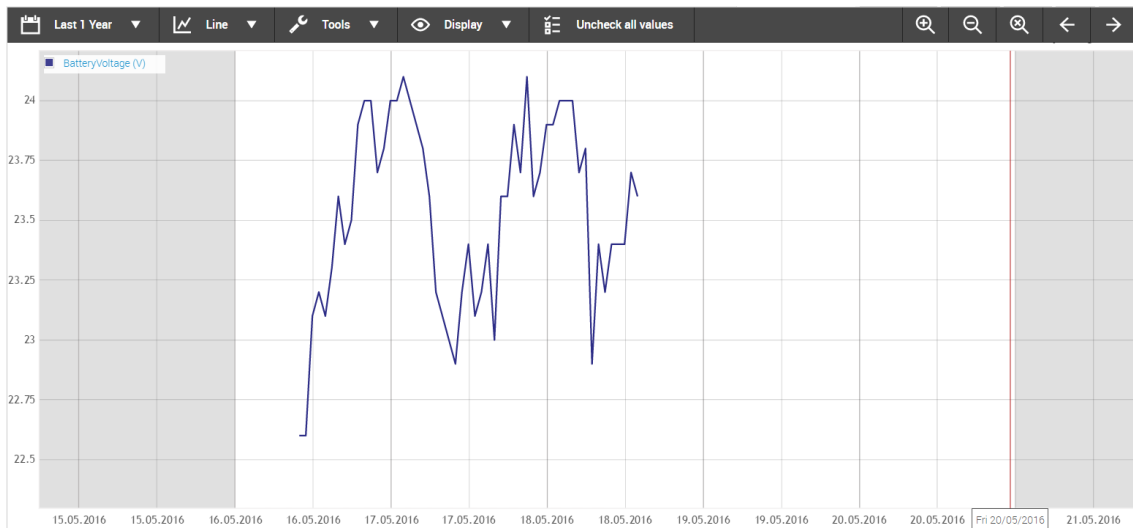
Image 3.39 Data Log - Visible Data Trimmed

Oscilloscope Mode

Switch into oscilloscope mode. New values will appear at the right side and they will push the oldest data out of the scope.

Reload All Data

The option re-reads all the data and plots the updated data set.

Export Graph As XLSX

The selected values within the selected time frame (i.e. what is currently displayed on the graph/table) are exported into an excel table and automatically saved on your device. Export is in a form of a table.

Display

The appearance of the visualized data can be further adjusted by various view modes. Click on the [eye icon] icon and select one of the available options.

Show Points

Ticking the option shows / hides the data points on the graph.

Multiple Axis

In case you wish to plot data of various types and ranges, tick this option and the graph will display separate Y-axis for each of the values.
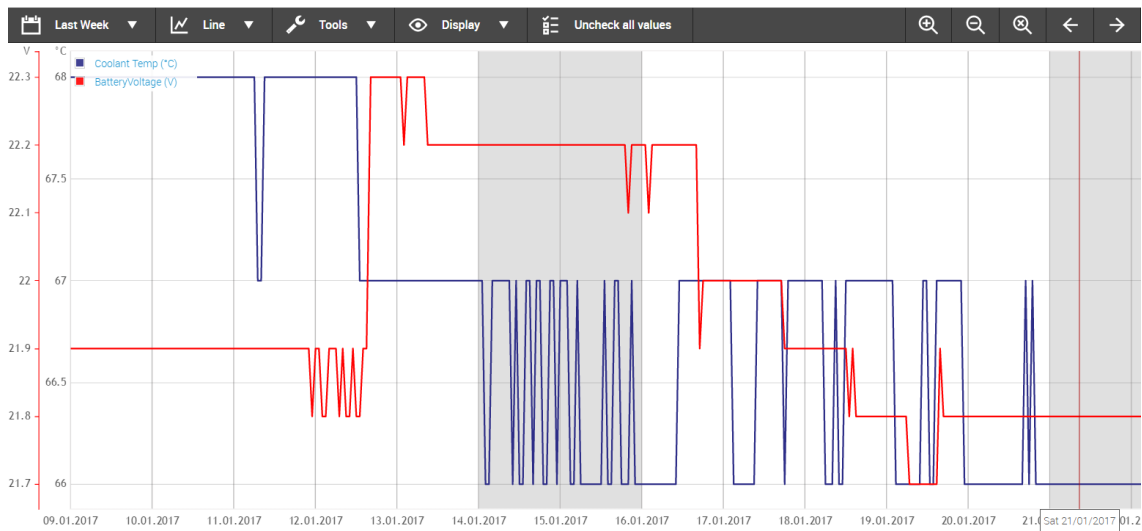
Image 3.40 Trends - Multiple Axis Display

No Legend

By default, a legend with a brief description of the selected values is displayed on the top left corner of the graph. To hide / show the legend, tick the "No Legend" option.

Short Legend

Short legend contains of the name and the unit (if applicable) of the displayed values as well as the indication of their respective colors on the graph.
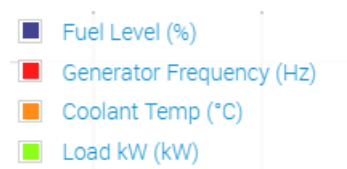
Image 3.41 Trends - Short Legend

Full Legend

Additionally to Short Legend, the Full Legend displays the unit name as well.
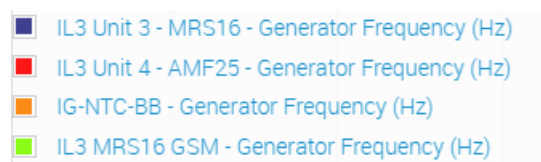
Image 3.42 Trends - Full Legend

Hide Tooltips

When you hover above a plotted line of the graph, the current at the respective time is displayed. This function is activated by default and can be deactivated by checking the option "Hide Tooltips".

Show Full Screen

Displays the graph view in full-screen mode. Un-tick the option to return back to normal view.

Uncheck All Values

Unchecks all the values selected in the **Unit List panel (page 46)** and clears the graph.

Zoom And Pan

Buttons for zooming and panning of the graph view are located on the right side of the graph bar.

Symbol	Description
	Zoom-in on the time axis (within the selected time frame)
	Zoom-out on the time axis.
	Cancel the zoom (return back to the selected time frame)
	Pan the view to the left along the time axis.
	Pan the view to the right along the time axis.

Table 3.16 Trends - Zoom and Pan Buttons Description
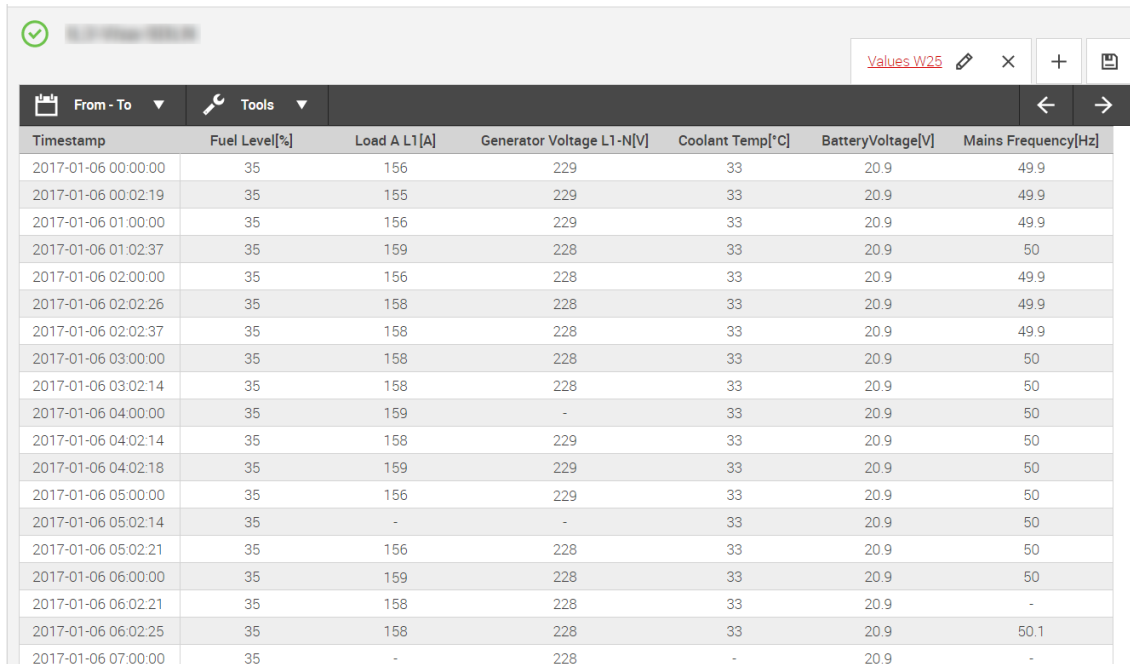
Note: Alternatively, you can also zoom into a specific time frame by selecting it with a mouse left button.

3.5.4 Table View

To display your history data in a form of a table, switch to the Table view - click on the ⊞ icon on the *"Data Log"* top menu. You can choose which values to display in the table via the **Unit List panel (page 46)**.

Each row of the Table represents one history record. The individual values are then listed in separate columns, with the first column always containing the time stamp of the record.

Moreover, for each unit you can define and save user specific tabs to keep the values you've selected for the table even after re-login (for more details, see **Trends Tabs (page 55)**).

Image 3.43 Trends - Table View Example

Table Options

A toolbar available on the top of the plot area enables you to adjust the way the selected data are displayed. The following options are available:

Displayed Time Range

To change the time range of the visualized data, click on the ⊞ icon and select either one of the predefined time frames (e.g. last week, last month) or define your own period by selecting the *"From - To"* option.

Tools

Clicking on the 🔧 symbol unrolls two available tools:

Reload All Data

The option re-reads all the data and plots the updated data set.

Export Graph As XLSX

The selected values within the selected time frame (i.e. what is currently displayed on the graph/table) are exported into an excel table and downloaded to your device.

3.5.5 Trends Tabs

In *"Trends"* section, user specific tabs can be created and saved for each unit associated with the account. This means you can select specific values you want to have displayed on one Graph or Table, saved it as a new tab, name it and use repeatedly (the selection will be saved also after re-logging into the account).

For each tab, the selection can be displayed in both Graph and Table view.
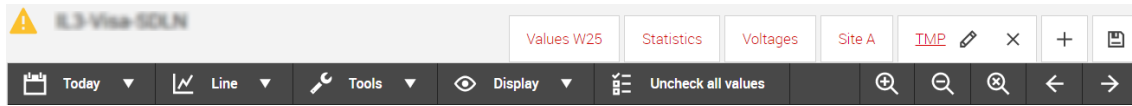
Image 3.44 Trends- Tabs Bar

Create New Tab

To create a new tab, click on the + icon located on the tabs bar above the Graph (Table). When first created, the tab name is set to "Tab x" (x being an incremental counter) as default.

Rename Tab

To change the name of an existing tab, click on it to display the tab options. Then click on the ✎ .icon, type in the name and confirm by Enter or by clicking on the ✎ icon again.

Remove Tab

To remove an existing tab, click on it to display the tab options. Then click on the ✕ icon. There is no further confirmation needed - the tab is deleted immediately.

Save Tabs

To save your tab settings, click on the 💾 icon located on the tabs bar above the Graph (Table). The settings (i.e. tab name and value selection) will be saved also after re-logging into the account.

3.6 Reports

Note: *Available only for WSV Pro subscription*

The *"Reports"* section offers generation and customization of periodical reports summarizing the relevant statistical data of your devices.

To navigate to the *"Reports"* section, click on the *"Reports"* icon under Analyse item located on the Main Menu bar.

There are 2 types of reports available in WebSupervisor:

▶ **Web Reports (page 57)**

▶ **Downloads (page 62)**

"Reports" navigation menu bar contains the following links:
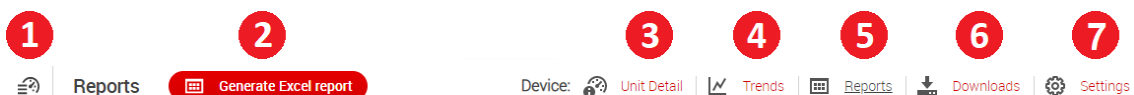
Image 3.45 Reports - Navigation Menu Bar

#	Description
①	Activate **Unit List panel (page 60)**
②	Manual generation of excel report
③	Switch to **Unit Detail (page 27)**
④	Switch to **Trends (page 45)**
⑤	Actual screen reports
⑥	Switch to **Downloads - Reports (page 64)**
⑦	Switch to **Units Settings (page 65)**

Table 3.17 Reports - Top Menu Bar Description

3.6.1 Web Reports

Selecting a device or group of devices in the **Unit List panel (page 60)** displays a tableconsisting of a record of pre-defined template of controller values over selected time range.

Timestamp	Run hours daily	Fuel daily	NrOfstarts	NrOfUnscStarts
▲ 2017 January	263.9	74	17	2
▼ 5 Week	25.4	0	1	0
▼ 4 Week	68.6	74	2	1
2017-01-22	0	0	0	0
2017-01-21	0	0	0	0
2017-01-20	15.2	4	0	0
2017-01-19	8.5	20	1	1
2017-01-18	14.4	26	0	0
2017-01-17	24	10	0	0
2017-01-16	6.5	14	1	0
▼ 3 Week	20.9	0	8	0
▼ 2 Week	125	0	6	0
▼ 1 Week	24	0	0	1
▼ 2016 December	522.2	2	41	0
▼ 2016 November	57.6	0	5	0

Image 3.46 Web Report Table for single device - Example

Web Reports Values

The values used for the report are predefined and depend on the type of your controller (various types of controllers might provide different types of data). The amount of displayed values (e.g. past month, past 3 months, etc.) depend on the selected period. The default period is set to: last 3 months.

The values are logged daily in the table and they are automatically grouped into weekly and monthly summaries:

▶ Each value in the month row equals to the sum of all the recorded values of the same type during the whole month.

▶ Left click on the month row will expand the row into week rows, each of them containing the sum of all the recorded values of the same type during the respective week.

▶ Left click on the week row will expand the row into a list of daily values.

▶ To collapse the expanded row, click on it again.

Web Reports Options

The Web Report table view can be further adjusted by selecting some of the options on the tool bar above the table.

Displayed Time Range

To change the time range of the visualized data, click on the ▦ icon and select either one of the predefined time frames (e.g. last week, last month) or define your own period by selecting the *"From - To"* option.

Export

The Export function (⇱ button) will generate a pdf version of the displayed report, that can be downloaded to your device.
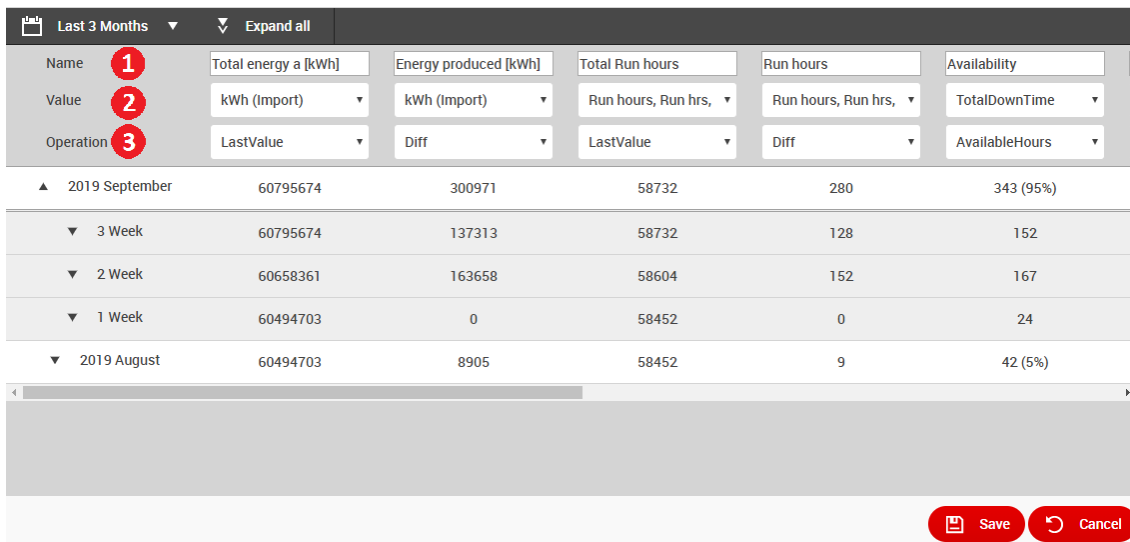
Expand / Collapse All

All the expandable rows of the table (months, weeks) can be expanded or collapsed at once via the ⤓ Expand all resp. ⤒ Collapse all button.

Fast report customization

The fast report customization function (click ✎ button) allows fast modification of report values as is change of name of value; selecting a new value etc.. If you need the create a new template or do bigger medication, please go to Setting - Report settings.

By clicking on the button ✎ following screen opens:

Image 3.47 Web Report fast template customization - Example

#	Description
1	Value name displayed in the report
2	Value source
3	Operation with the value

There are 3 options in the operation field:

▶ Last values

▶ Difference of last values

▶ Available hours - available only in case of Availability value selection

The modified report template has to be saved. The button [Save] appears after the first change in the report at the right bottom corner. If you need to discharge all changes, please click on [Cancel]

3.6.2 Unit List panel

The *"Unit List"* provides tools for selection of units and data to be displayed in the reports. It can be activated by a button on the left side of the *"Reports"* top menu bar. The sidebar displays the list of all units registered under (or shared with) the current account including groups.

Note: The color label at each unit corresponds to the unit alarm state. For more details, see Alarms (page 19)

The available actions are described below.

Unit Search

The unit list can be filtered via dynamic search tool. The search field is activated via the [search] icon on the top of the *"Unit List"* sidebar. Start typing an existing unit name in the search field and choose from the offered matches (the matches are gradually filtered). The filter is not case or diacritic sensitive. Several units can be entered into the search field.

Change List Order

The units in the *"Unit List"* are order alphabetically. The default order (A to Z) can be changed via the [up] and [down] buttons on the top bar of the list.

3.7 Alarm analyser

Note: Available only for WSV Pro subscription

The "Alarm analyser section" analyses occurred active alarms during selected period and offers an alarm report. The alarm report for selected unit shows what kinds of alarms occurred, the number of occurrences and its duration.

This allows to monitor frequent alarms that occur with the device and reduce potential maintenance costs due to device issues.

For correct function of Alarm analyser, it is necessary to activate "Alarm analyser & extended tracking support" by ticking of checkbox available in **Units Settings (page 65)**

> **IMPORTANT: Activation of "Alarm analyser & extended tracking support" causes reading of several values every minute even when all users are log out on setting independently on set Offline refresh period.**

To navigate to the *"Alarm analyser"* section, click on the *"Alarm analyser"* item under Analyse item located on the Main Menu bar.

"Alarm analyser" navigation menu bar contains the following links:

Image 3.48 Alarm analyser - Navigation Menu Bar

#	Description
①	Activate **Unit List panel (page 60)**
②	Switch to **Unit Detail (page 27)**
③	Switch to **Trends (page 45)**
④	Switch to **Reports (page 56)**
⑤	Switch to **Downloads - Reports (page 64)**
⑥	Switch to **Units Settings (page 65)**

3.7.1 Alarm report

The alarm report for selected shows the results of alarm analysis with following information:

▶ Alarm type statistics

▶ what kinds of alarms occurred (alarm name)

▶ the number of occurrences

▶ and its duration.

The results are displayed in graphs. The alarm report is generated for selected unit from **Unit List panel (page 60)** panel.
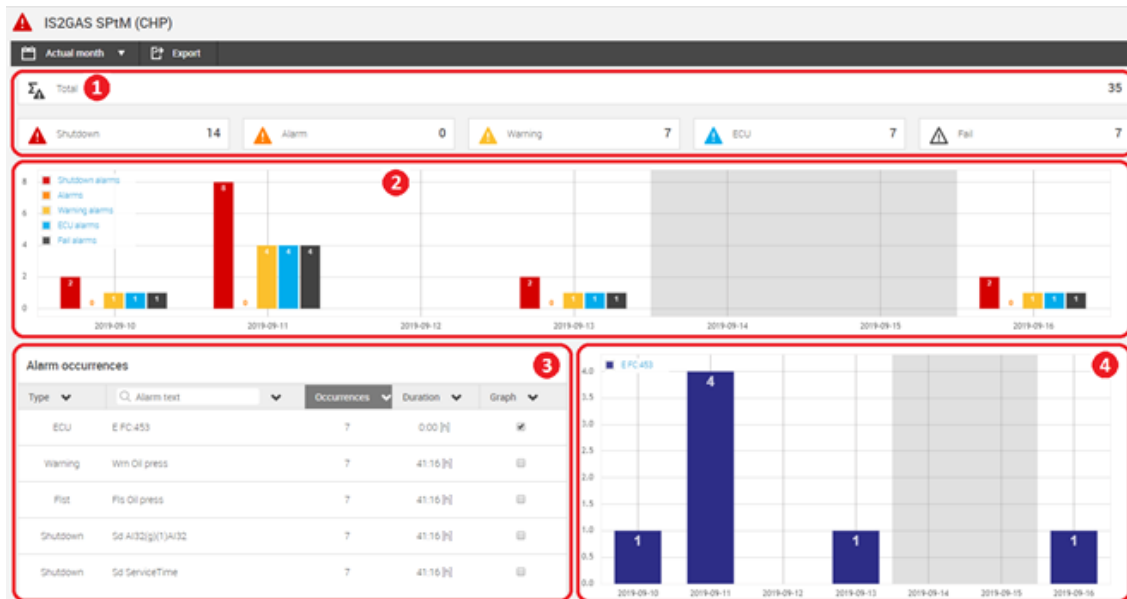
Image 3.49 Alarm report - example

#	Description
①	Alarm type statistics
②	Alarm type statistics per day during selected period
③	Table provides information about name of occurred alarms, its occurrence and total duration in hours. By ticking of graph checkbox, the alarm is displayed in the graph (4). Items in the table is possible to sort. Further it is possible to search alarms according to name
④	Selected alarms from the table are displayed in the graphs to be visible day when they occurred.

3.7.2 Alarm analyser options

The Alarm analyser view can be further adjusted by selecting some of the options on the tool bar above the table.

Time Range

To change the time range of the visualized data, click on the [icon] icon and select either one of the predefined time frames (e.g. day, actual month, last month) or select month option.

Export

The Export function ([button] button) will generate a pdf version of the displayed report, that can be downloaded.

3.8 Downloads

Note: Available only for WSV Pro subscription

The *"Downloads"* section allows downloading reports and controller's history files from WebSupervisor. There is also possibility to generate a report or download a controller's history file manually.

To navigate to the *"Downloads"* section, click on the *"Downloads"* item under Analyse item located on the Main Menu bar.

"Downloads" section can be also accessed via the ![icon] (resp. ![icon] Downloads) symbol on the **Unit Mini Detail (page 24)**, **Unit Detail (page 27)**, **Trends (page 45)** or the **Reports (page 56)**.

The section consists of two sub-sections:

▶ **Downloads - Reports (page 64)**

▶ **Downloads - History (page 64)**
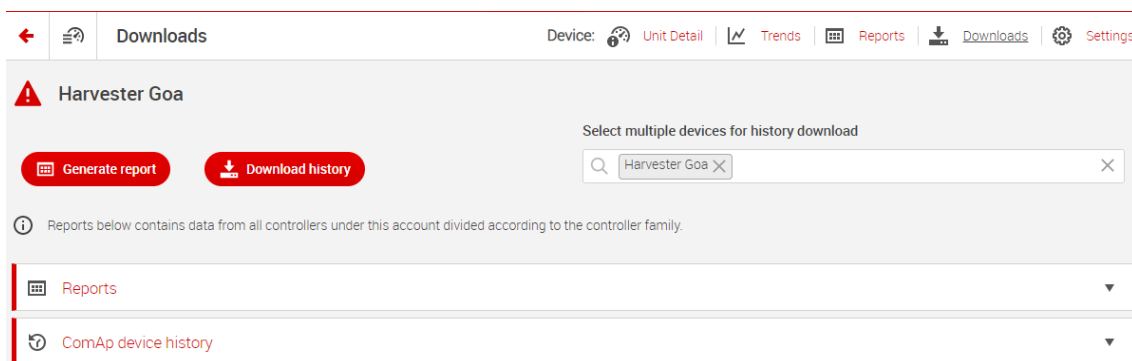
Image 3.50 Downloads - Section overview

Reports and history files are displayed for selected unit. The unit is possible to select from **Unit List panel (page 60)** sidebar

Under the unit name there is possible to generate report or download controller's history manually by click on the button. In case it is necessary to download history file from more controllers, it is possible to use selection box at the right side and select multiple units first.

"Downloads" navigation menu bar contains the following links:
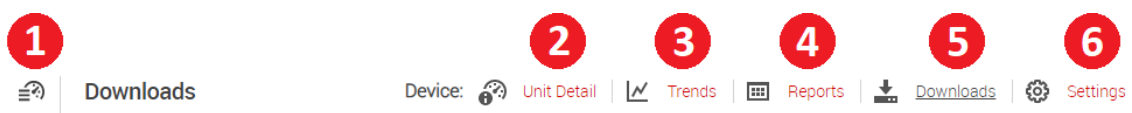
Image 3.51 Reports - Navigation Menu Bar

#	Description
1	Activate **Unit List panel (page 60)**
2	Switch to **Unit Detail (page 27)**
3	Switch to **Trends (page 45)**

#	Description
4	Switch to **Reports (page 56)**
5	Actual screen downloads
6	Switch to **Units Settings (page 65)**

3.8.1 Downloads - Reports

This sub-section is structured as a table (see image below) and provides the overview and management of automatically generated excel reports.

Report file name ⌃	Template ⌃	Period ⌃	Last download ⌃	Count ⌃	Download	Delete
☐ 2016-12-22_Test report 01	default	Monthly	22. 12. 2016	7	⬇	🗑
☐ 2016-12-01_Test report 02	My-W-template	Weekly	-	0	⬇	🗑
☐ 2016-11-10_Test report 03	default	Weekly	12. 11. 2016	50	⬇	🗑

Selected: [Choose bulk action ▾] **OK**

Image 3.52 Downloads - Reports Example

The periodicity (monthly, weekly) as well as the report template can be defined in **Download Settings (page 79)** under **Reports Settings (page 80)**.

The table also allows you to download (⬇) or delete (🗑) a file. Moreover, both of these actions can be performed in a bulk for several reports at once. Just select the files you wish to download (delete) by ticking the checkboxes on the left side of the file name, select a corresponding action from the roll-down menu below and confirm by the **OK** button.

3.8.2 Downloads - History

This sub-section is structured as a table (see image below) and provides the overview and management of the history data automatically downloaded from the unit.

Selected: [Choose bulk action ▾] **OK**

☐ History file name ⌄	Type ⌃	Status ⌃	Generated ⌃	Downloaded ⌃	Download	Delete
☐ 2018-07-25_09-27_IL3 STARTER KI...Manually		Successful	2018-07-25 09:27:29	-	⬇	🗑

Image 3.53 Downloads - History Example

The periodicity as well as the file name format can be defined in **Download Settings (page 79)** under **Download Settings (page 79)**

The table also allows you to download (⬇) or delete (🗑) a file. Moreover, both of these actions can be performed in a bulk for several reports at once. Just select the files you wish to download (delete) by ticking the

checkboxes on the left side of the file name, select a corresponding action from the roll-down menu below and confirm by the **OK** button.

3.9 Management

The section *"Management"* provides tools to manage units, groups and user accounts and view all the user actions.

To navigate to the *"Management"* section, click on the *"Management"* icon on the Main Menu bar.
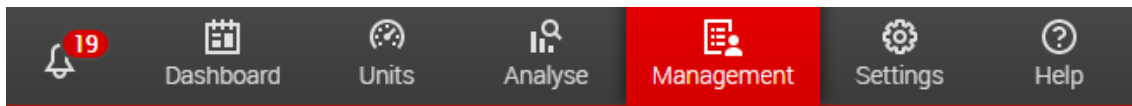
Image 3.54 Main menu - Management selected

The action activates a roll-down menu with the following items:

▶ **Units Settings (page 65)**

▶ **User Management (page 70)**

▶ **Groups Settings (page 73)**

▶ **Activity logger (page 75)**

Alternatively, when the "Management" section is active, you can navigate via a navigation bar.

Image 3.55 Management - Navigation bar

For each sub-section, any changes performed will only be considered after saving the new configuration with a **Save** button. Successful application of the new settings is indicated by a message, that will appear on the top of the sub-section window.
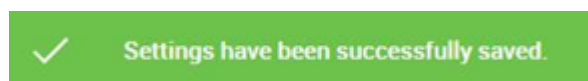
Image 3.56 Confirmation message - Example

In order to undo the latest changes and restore the settings to the last saved configuration, press the **Restore to previous** button.

3.9.1 Units Settings

The management of existing units and registration of a new unit is performed via "Unit Management". When choosing the menu option Management/Units, an overview of all the units under the current user account (i.e. units with at least "Read" rights) is displayed.

The overview displays basic unit parameters (unit name, group, customer and an AirGate ID or an IP address) and offers some predefined actions (disable unit, activate GPS/GSM location, delete a unit). The list of units

can be filtered by the unit parameters and a bulk action can be executed for several chosen units at once. Advanced unit settings can be displayed by left click on the respective unit name.

Add New Unit

To register a new unit under your customer account, go to Settings/Units and click on the [Add New Unit] button. A fill-in form will appear with the mandatory fields marked with a star. The configuration of a new unit is saved by a [Save] button. However, in case any of the mandatory fields are omitted or are filled incorrectly, a warning message appears and the unit is not saved. Also the missing/incorrect fields are highlighted in red.

Note: A new unit can be also added from the "Units List" tool. For more details, see "Unit List" in Edit an Existing Unit (page 69).

Unit Information

Unit Information Field	Description / Options	Mandatory Field
Unit Name	Type in the name of the new unit.	Yes
	This name will be displayed in the WSV application.	
Communication Type	Select the means of communication between the unit and WSV: ▶ *"AirGate"*, see **AirGate (page 90)** ▶ *"InternetBridge-NT"*	Yes
AirGate ID	A unique alphanumeric code.	Yes
	To be filled-in when the chosen com. type is *"AirGate"*.	
	The AirGate ID is available in the controller under Values.	
Host / IP: port	Enter the IP address of the controller (e.g. 111.222.3.45).	Yes
	Optional - port number on which the unit communicates, default port is 23 (e.g. 111.222.3.45**:23**).	
	To be filled-in when the chosen communication type is *"InternetBridge-NT"*.	
Controller Address	Enter the address of your controller.	Yes
	It is defined in the controller under Setpoints.	
	Default address is 1.	
Access Code	Enter the code to unblock the remote communication with the unit.	Yes
	Default access code is 0.	
Inputs/Outputs	No external I/O	No
	Binary I/O	
	Analog I/O	
	Binary and Analog I/O	
Application Type	Select the application for your unit (rental, bi-fuel, marine, etc.).	No

Unit Information Field	Description / Options	Mandatory Field
Unit State	Set the state of communication with the unit: ▶ *"Enabled"* - unit communicates with the WSV (default state). ▶ *"Disabled"* - communication is suspended until you change the state to *"Enabled"*.	Yes
Language	Select a language for the unit data.	No
Time Zone	Select the time zone in which the unit is located.	No
Controller Password	Enter the unit password to enable the unit control (start/stop). The password is defined in the controller. If you do not want to control the unit , leave the field blank.	No
Retype Controller Password	Retype the password from the field above.	No
GPS Longitude (E) / GPS Latitude (N)	For stationary units, their GPS coordinates can be entered manually. The entered position is automatically visualized on the map below.	No
GPS Position	Select how should the unit's position be evaluated: ▶ *"Static - No GPS"*: ● GPS function is disabled ● The unit's position can be entered manually in the fields *"GPS Longitude (E)"* / *"GPS Latitude (N)"* ▶ *"Mobile - LOCATE or GPS used"*: ● LOCATE or GPS function is enabled ● The unit's position on the **Map (page 31)** is continually updated based on it's real position ● Neccessary for **Map View - Geolocation (page 1)** ● The controller must be equipped with a GPS module or support LOCATE function	No
Map	The unit's position can be entered manually by clicking on a map (*"GPS Longitude (E)"* and *"GPS Latitude (N)"* fields are then filled automatically) Otherwise, the map displays the position previously entered in the *"GPS Longitude (E)"* and *"GPS Latitude (N)"* fields	No

Table 3.18 Unit Information Overview

Unit Groups
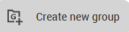
The new unit can be added either to one of the existing groups or a new group can be created directly from the *"Unit Groups"* section.

To add the unit to an existing group, use the dynamic search field under *"Add Unit to Group"* - start typing the group name in the search field and choose from the offered matches (the matches are gradually filtered). Several units can be added at once (see image below).

The unit is finally added to the respective group (groups) by the Add button.

Image 3.57 Add unit to multiple groups

In order to create a new group for your unit, click on the Create new group button. This action redirects you to the **Add New Group (page 74)** section. After defining the new group, you can return to *"Units Settings"* via the ← icon on the left upper corner of the *"Group Settings"* section. At that moment, the newly created group is available in the search field and you can continue registering the new unit (all the previously filled fields are saved).

After a unit is added to a group (groups) by the Add button (see above) it appears in the *"Manage Groups"* list. Before the unit is finally saved, some of the associations with a group can be removed:

▶ One by one by clicking the ✕ icon

▶ Several groups at once by ticking the check-boxes of the chosen group, selecting a bulk action *"Remove"* and confirming by the OK button.

Permissions

A user with the Administrator rights can set the rights of other users for the unit.

Use the dynamic search field under "Add User to Permission List" - start typing the user name in the search field and choose the offered matches (the matches are gradually filtered). For sharing the unit with a user outside of your account, you must enter his whole loginID correctly. Rights for several users can be defined at once (see image below).

Image 3.58 User Permissions Form

The following permissions can be set by ticking the respective check-box and confirming with the Add button:

User Rights Setting	Description
Sd	User receives an email only in case of a Shutdown type alarm (Sd, BOC)
All Alarms	User receives an email in case any alarm is activated (including Sd).
Read	User can see the unit, it's position, state and parameters
Control	User can control the unit (start / stop)
	The "Control" permission includes "Read" rights
Modify	User can modify the unit's parameters
	The "Modify" permission includes "Read" rights

Table 3.19 User Rights Settings

A new user can be registered directly from the *"User Persmissions"* section by clicking on the ⏣ Create new user button. This action redirects to the **Add New User (page 70)** section. After creating the new user, you can return to *"Units Settings"* via the ⬅ icon on the left upper corner of the *"User Settings"* section. At that moment, the newly created user is available in the search field and you can continue registering the new unit (all the previously filled fields are saved).

After a user (users) is associated with the unit by the (Add) button (see above) it appears in the *"Manage User Permissions"* list. Before the unit is finally saved, some of the associations with users can be removed or edited:

▶ Remove one by one by clicking the ✕ icon

▶ Edit several user rights at once by ticking the check-boxes of the chosen user (users), selecting one of the bulk actions and confirming by the (OK) button:

- Send Shutdowns
- Send All Alarms
- Read
- Control
- Modify
- Remove

Edit an Existing Unit
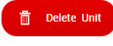
Left click on a unit name in the *"Units Settings"* table opens a unit editing fill-in form which is essentially the same as the form for adding a new unit.

You can edit the unit parameters:

▶ Unit Information

▶ Unit Groups

▶ User Permissions

For more details on the items above, see **Add New Unit (page 66)**.

While editing an existing unit, you can also:

▶ Delete the selected unit via the (🗑 Delete Unit) button.

▶ Activate the *"Units List"* sidebar via the ≣⑦ button.

▶ Switch to the *"Unit Detail"* view via the 🛈⑦ Unit Detail button.

▶ Switch to the *"Data Log"* via the ⎍ Data Log button.

Units List

See **Unit List panel (page 60)**.

Bulk Actions
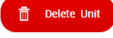
A roll-down menu with various bulk actions is available above and below the *"Units Settings"* table. You can select several units by ticking their respective check-boxes, selecting one of the actions and confirming:

▶ **Disable unit** (available also as a check-box on the table)

▶ **Turn on GPS positioning** (available also as a check-box on the table)

▶ **Export unit**

▶ **Delete Unit** (available also on the table via the 🗑 button)

Delete a Unit

There are several ways to remove a registered unit from your account. Go to Settings/Units and choose one of the following actions:

▶ Click on the 🗑 icon in the respective row of the units table and confirm the action on the consequent pop-up window.

▶ Select the unit or several units by ticking the check-box on the left side of the unit table, choose a bulk action *"Delete"* and confirm with the **OK** button.

▶ Click on the unit name. When a *"Unit Settings"* window appears, click on the 🗑 Delete Unit button and confirm the action on the consequent pop-up window.

Filter Units

The list of units in the Units Settings table can be filtered via the basic units information:

▶ Unit name

▶ Unit group

▶ Customer

▶ AirGate / IP Address

To filter the unit list, start typing the search string into one of the fields listed above. The filter function is dynamic, i.e. the table is filtered gradually as the user types. The filter is not case or diacritic sensitive.

3.9.2 User Management

The management of registered users and registration of a new user is performed via "User Management". When choosing the menu option Management/Users, an overview of all the users under the customer account is displayed.

The overview displays basic user attributes (username, login, email, number of units, language and number of used online connections) and offers some predefined actions (activate reports, allow API access, delegate admin rights, delete the account). The list of users can be filtered by the user attributes and a bulk action can be executed for several chosen user accounts at once.

Advanced user settings can be displayed by left click on a respective username.

Add New User

To register a new user under your customer account, go to Settings/Users and click on the 👤+ Add New User button.

A fill-in form will appear with the mandatory fields marked with a star. The new user is saved by a 💾 Save button. However, in case any of the mandatory fields are omitted or are filled incorrectly, a warning message appears and the unit is not saved. Also the missing/incorrect fields are highlighted in red.

Note: A new user can be also added from a "User List" tool. For more details, see "User List" in Edit an Existing User (page 72)

Account Information

Account Information Field	Description / Options	Mandatory Field
Send Reports	If ticked, notification e-mails with a download link to generated reports will be sent to the user.	No
Disable User Account	To disable the account, tick the check-box.	No
Set User As Administrator	To delegate admin rights to the user, tick this option.	No
Login ID	Enter the user's login alias (e.g. *jsmith*)	Yes
Password	Enter the user's password for logging into the application,	Yes
	Required password characteristics:	Yes
	▶ At least 8 characters,	
	▶ Contains special characters (i.e. @#$%^&),	
	▶ Contains both lowercase and uppercase letters,	
	▶ Do not use any common combinations, such as "password123", your login name, etc.	
Confirm Password	Retype the password from the field above.	Yes
Language	Select WSV GUI language for the user.	No
Time Zone	Select the time zone the user is located in.	No

Table 3.20 Account Information Overview

Personal Information Field	Description / Options	Mandatory Field
Name	Enter the user's full name (e.g. *John Smith*)	Yes
E-mail	Enter the user's email address. It will be used for notification messages and password recovery.	Yes
Company name	Enter the name of the user's company.	Yes

Table 3.21 Personal Information Overview

Permissions

A user with the Administrator rights can define the new user's permissions for one or several units.

Use the dynamic search field under *"Add Unit to Permission List"* - start typing the unit name in the search field and choose from the offered matches (the matches are gradually filtered). Rights for several units can be defined at once (see image below).
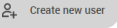

Image 3.59 Unit Permissions Form

The following permissions can be set by ticking the respective check-box and confirming with the Add button:

User Rights Setting	Description
Sd	User receives an email only in case of a Shutdown type alarm (Sd, BOC)
All Alarms	User receives an email in case any alarm is activated (including Sd).
Read	User can see the unit, it's position, state and parameters
Control	User can control the unit (start / stop)
	The "Control" permission includes "Read" rights
Modify	User can modify the unit's parameters
	The "Modify" permission includes "Read" rights

Table 3.22 User Rights Settings

After a unit (units) is associated with the user by the **Add** button (see above) it appears in the *"Manage Units Permissions"* list. Before the user is finally saved, some of the associations with units can be removed or edited:

▶ Remove one by one by clicking the ✕ icon

▶ Edit several unit rights at once by ticking the check-boxes of the chosen unit (units), selecting one of the bulk actions and confirming by the **OK** button:

- Send Shutdowns
- Send All Alarms
- Read
- Control
- Modify
- Remove

Image 3.60 Manage Units Permissions

Edit an Existing User

Left click on a user name in the *"Users Settings"* table opens a user editing fill-in form which is essentially the same as the form for registering a new user.

You can edit the user parameters:

▶ Personal Information

▶ Permissions

For more details on the items above, see **Add New User (page 70)**.

While editing an existing user, you can also activate the *"User List"* sidebar via the ⊖≡ User list button.
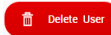
User List

While adding or editing a specific user, a list of all users registered under the customer account can be displayed via the ⌂☰ button. This list offers several functions:

▶ Search for and order existing users

▶ Switch into editing another user by clicking on the user name in the list

▶ Create a new user via the ⌂+ button

Delete a User

There are several ways how to remove an existing user account. Go to Settings/Users and choose one of the following actions:

▶ Click on the 🗑 icon in the respective row of the users table and confirm the action on the consequent pop-up window.

▶ Select the user or users by ticking the check-box on the left side of the users table, choose a bulk action *"Delete"* and confirm with the ⬤ OK button.

▶ Click on the user account. When a *"User Settings"* window appears, click on the 🗑 Delete User button and confirm the action on the consequent pop-up window.

3.9.3 Groups Settings

The management of existing units groups and/or definition of new units group is performed via Groups Settings. When choosing the menu option Settings/Groups, an overview of all the groups defined by the user is displayed.
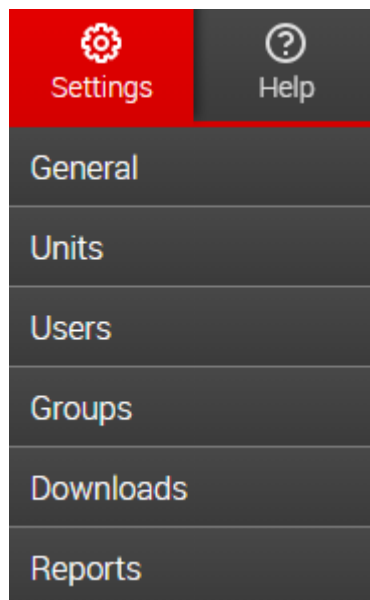
Image 3.61 Groups Settings Activation

The overview lists basic group parameters (e.g. group type, name, units in the group) and can be filtered using a dynamic search function via the group name or can be ordered based on the group parameters (type, name, number of units). A bulk action can be executed for several chosen units at once.

Advanced group settings can be displayed by left-click on a respective group name.

Add New Group

In order to simplify the monitoring and control of units, WebSupervisor supports creation of unit groups.

To define a new group, go to Settings/Groups and click on the [Add New Group] button. A fill-in form will appear with the mandatory fields marked with a star. The configuration of a new group is saved by a [Save] button. However, in case any of the mandatory fields are omitted or are filled incorrectly, a warning message appears and the unit is not saved. Also the missing/incorrect fields are highlighted in red.

Group Name

Type in a name for the new group.

Group Type

Select one of the available group types:

Group Type	Description	Icon in Monitored Units
Site	Units with the same or similar location	⊞s - Unroll group ⊟s - Collapse group
	Each unit can be part of only one Site	
	Does not allow bulk-control of units in the group	
	Displayed in **Monitored Units (page 18)** table	
Webcontrol	Bulk-control - start/stop of multiple units with one click	⊞c - Unroll group ⊟c - Collapse group
	Specific user rights needed for bulk-control	
	Units do not have to be geographically located together	
	A unit can be part of several Webcontrol Groups	
	Not displayed in **Monitored Units (page 18)** table	
	For more information, see **Webcontrol (page 36)**	
Basic Group	For grouping units for other reasons than described above	⊞G - Unroll group ⊟G - Collapse group
	Units do not have to be geographically located together	
	Does not allow bulk-control of units in the group	
	A unit can be part of several Basic Groups	
	Displayed in **Monitored Units (page 18)** table	

Image 3.62 Group Types Overview

Add Unit to Group

Use the dynamic search field under *"Add Unit to Group"* - start typing the unit name in the search field and choose from the offered matches (the matches are gradually filtered). Several units can be added at once (see image below).

The units are finally added by the [Add] button.
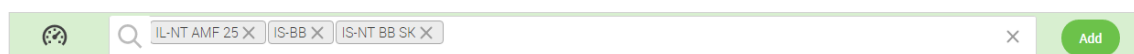
Image 3.63 Multiple units addition

Manage Units

After a unit (units) is added to the group by the [Add] button (see above) it appears in a *"Manage Units"* list. Before the group is finally saved, some of the units can be removed:

▶ One by one by clicking the ✕ icon

▶ Several units at once by ticking the check-boxes of the chosen units, selecting a bulk action *"Remove"* and confirming by the [OK] button.

> *Note: A new group can be also added from a Group List tool. For more details, see "Group List" in **Edit an Existing Group (page 75)**.*

> *Note: A new group can be also defined while adding a new unit. For more details, see "Unit Groups" in **Add New Unit (page 66)**.*

Edit an Existing Group

Left click on a group name in the *"Groups Settings"* table opens a group editing fill-in form which is essentially the same as the form for adding a new group.

You can edit the group parameters:

▶ Group Name

▶ Group Type

▶ Add or delete units in the group

For more details on the items above, see **Add New Group (page 74)**.
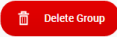
Group List

While editing a specific group a list of all defined groups can be displayed via the [G≡] button. That allows you to:

▶ Search for and order existing groups

▶ Switch into editing another group by clicking on the group name in the list

▶ Create a new group via the [G+] button

Delete a Group

There are several ways how to remove an existing group of units. Go to Settings/Groups and choose one of the following actions:

▶ Click on the 🗑 icon in the respective row of the groups table and confirm the action on the consequent pop-up window.

▶ Select the unit group or groups by ticking the check-box on the left side of the group table, choose a bulk action *"Delete"* and confirm with the [OK] button.

▶ Click on the group name. When a *"Group Settings"* window appears, click on the [🗑 Delete Group] button and confirm the action on the consequent pop-up window.

3.9.4 Activity logger

> *Note: Available only for WSV Pro subscription*

List of all actions performed by the users and performed on the units registered under users account.

When choosing the menu option Management/Activity logger, an overview of all actions in the account is displayed in chronological order.

The overview lists basic parameters (e.g. date and time, user Login ID, IP address, action and description) and can be filtered by:

▶ From – actions since selected date

▶ Login ID – full-text search

▶ IP address – full-text search

▶ Action – multiple actions can be selected

▶ Description – full-text search

All filter settings must be confirmed by the **Filter** button.

3.10 Settings

The section "Settings" allows user to change basic account settings, set up automatic history download and modify templates for reports and screens.

To navigate to the "Settings" section, click on the "Settings" icon on the Main Menu bar.
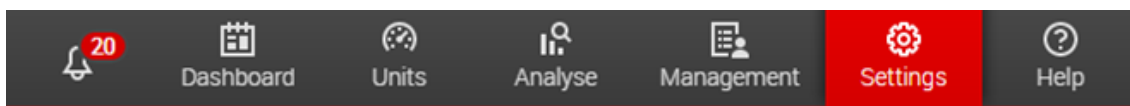
Image 3.64 Main Menu - Settings Selected

The action activates a roll-down menu with the following items:

▶ **General (page 76)**

▶ **Download Settings (page 79)**

▶ **Reports Settings (page 80)**

▶ **Screen editor (page 80)**

For each sub-section, any changes performed will only be taken into account after saving the new configuration with a **Save** button. Successful application of the new settings is indicated by a message, that will appear on the top of the sub-section window.
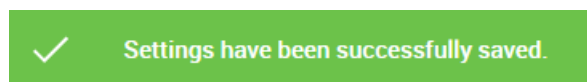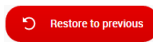
Image 3.65 Confirmation Message Example

In order to undo the latest changes and restore the settings to the last saved configuration, press the **Restore to previous** button.

3.10.1 General

"Application Settings" contain general setting categories for WebSupervisor:

▶ **General Settings (page 77)**

▶ **Sound And Email Notifications (page 78)**

▶ **Bulk registration of Controllers (page 78)**

▶ **Brand settings (page 78)**

To go to *"Application Settings"*, select *"Settings"* and *"General"* on the Main Menu bar.
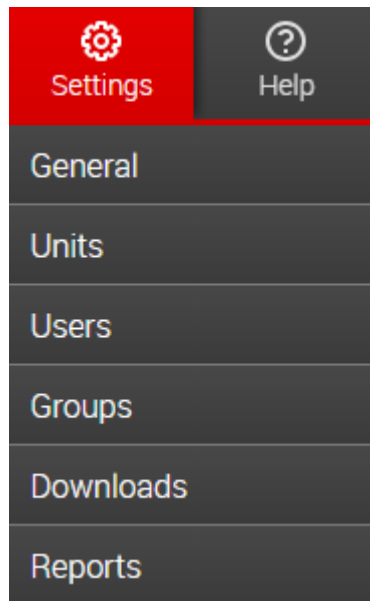
Image 3.66 Application Settings Activation

General Settings

The *"General Settings"* sub-section allows you to personalize some of the GUI settings, i.e. the application's homepage, rows height and the visibility of disabled units.

Homepage

The first page to be displayed (e.g. Dashboard, Units, Data Log or Settings) when the user logs into the WSV application can be selected here. The predefined setting is *"Dashboard"*.

Rows Height

There are two rows height settings to be chosen from:

Setting	Description
Small	▶ Default setting (30 pxs row height)
Default	▶ Wider rows ▶ Recommended for touch-screen devices

Table 3.23 Rows Height Settings

Note: With row height set to large, the maximum number of units that can be displayed in the Monitored Units table is smaller than with the normal setting.

Disabled Units & Maps

As a default, the disabled units are not displayed on the map. In order to display them as well, check the option *"Display the Disabled Units on the Map"*.

No comm status

You can manage the visibility of the units in no communication state in **Alerts (page 13)** or in the statistics on **Dashboard (page 38)**.

Sound And Email Notifications

The Notifications sub-section defines how the user is notified in case of an alarm or a warning. For more details on alarm notifications, see **Alarms (page 19)**.

Sound Notifications

The sound notification of an incoming alarm can be disabled by ticking the option *"Mute Alarm Sound"*

Email Notifications

The default email notification messages in case of various alarms can be customized.

Two options are available:

▶ *Default message*

▶ *Custom message* - you can define a customized message of up to 255 characters

Note: Sending mail notification is available also for non-active and non-confirmed Sd type alarm.

Bulk registration of Controllers

Function to register multiple controllers at the same time.

Upload file

Upload template back to the WebSupervisor to register all units filled inside.

Templates

You can choose from two formats (xlsx and csv). Templates include all necessary instructions for you to fill them.

Brand settings

Note: Available only for WSV Pro subscription

The predefined visual elements of the WebSupervisor GUI can be customized according to your personal preferences.

Company Name and Logo Customization

The default WebSupervisor logo on the left side of the main menu panel can be replaced by a custom image (e.g. a company logo) or a custom text (e.g. a company name).

Note: Either a custom logo or a custom text can be displayed on the main menu panel, not both.

In order to upload a custom logo, choose the file to be uploaded via the `Choose File` button. If the file is accepted (see the image requirements below), a preview of the new image is displayed.

The position of the new logo is predefined, however it can be adjusted by specifying the desired spacing in the "Top", "Right", "Bottom" and "Left" fields (the spacing is represented in pixels).

Custom image requirements:

- ▶ Supported file types: .jpg or .png
- ▶ Recommended image dimensions: 200 x 55 px

To display a custom text instead of a custom image, type your text into the *"Company Name"* field and save your changes.

Note: The maximum length of the text is limited by the space reserved for the custom image - 200 px.

Finally, save your settings with the [💾 Save] button.

Color Scheme Customization

The default color settings of the WSV application can be adjusted. The options are described in the table below.

Color Item	Applied On	Default Setting	How To Change
Primary Color	Buttons, selected menu items, etc.	Red	Select *"Custom"* from the roll-down menu and pick one of the basic colors or define a new one using the color palette
Primary Text Color	Primary color items	White	
Secondary Color	Menu background	Dark grey	
Secondary Text Color	Menu background	White	
Sidebar color	Tools and settings sidebar	Dark	Choose one of the two options (*"Dark"*, *"Light"*) from the roll-down menu.

Image 3.67 Color Settings

Any new color settings must be changed with a [💾 Save] button.

Adjusting color schema of alarmlist for IL-NT, IC-NT and ID-DCU/Marine controllers is also available:

- ▶ Yellow color is displayed for a warning protection level
- ▶ Red color is displayed for a Shutdown protection level
- ▶ Orange color is displayed for the rest of protection levels (Flst and general ECU alarms)

3.10.2 Download Settings

The various parameters for automatic download of a controller history can be set under the *"Controller History Download"* sub-section. The history files themselves can be then accessed and managed via the **Downloads - History (page 64)** sub-section.

Send Email Notice

If the option is ticked, a notification email will be sent to the address provided in your personal information in case of a failed history download.

Download Recurrence Date

The period for automatic history download can be set here. You can choose the history to be downloaded daily or every other day, on predefined days of a week (e.g. every Monday and Friday) or a month (e.g. every 10th day of a month).

Download Recurrence Time

Set the time of a day at which the history shall be downloaded.

File Name Format

The default name format of the history files is *"Date_ControllerName"* (e.g. 2017-05-06_IG-NT).

Genset Select

Select the gensets you wish to apply the settings for from a list by ticking the checkboxes. You can set the automatic download only for gensets registered under the account, not for shared units from different accounts.

3.10.3 Reports Settings

Templates for web and excel reports can be defined under "Reports Settings".

Reports family

Choose controllers family for which you want to change the template.

Template Type

Choose which template type you want to change for chosen reports family (web/xls/web+xls).

You see predefined template for chosen report family and template type in the table. Above the table you can insert new column by typing the name in the 'column' field, choosing value and operation (Diff - difference between last value for each day, LastValue – last value read from the controller for each day).

You can also modify the order of displayed columns by the up/down buttons, edit existing column by the edit button or delete the column.

Image 3.68 Report settings

To add your own xlsx template you can use upload function at the bottom of the page. Two tabs will be added to your template file. One for raw data and one for pivot table.

To delete your xlsx template press delete button on the lower left side.

3.10.4 Screen editor

Note: Available only for WSV Pro subscription

Owner of the account or account administrator can modify screens for each unit.

Template manager

The management of existing templates and definition of a template is performed via template manager.

When choosing the menu option Settings/Screen editor, an overview of all the templates in the account is displayed.

The overview lists basic template parameters (e.g. name, time when template was edited) and offers some predefined actions (open editor, delete the template). List can be filtered using a dynamic search function via the template name or can be ordered based on the Edited parameter.

Advanced template settings can be displayed by left click on a respective group name.
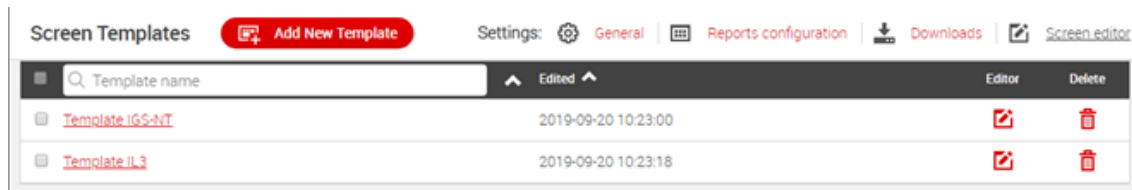
Image 3.69 Template manager

Add new template

To add a new template, go to Settings/Screen editor and click on the [Add New Template] button.

Dialog will appear:

- ▶ **Template name** – name visible in template manager
- ▶ **Template type** – choose between blank template or template based on any registered unit under your account
- ▶ **Template unit** – unit on which the template is based on

To confirm the creation, press [Create] button.

Image 3.70 New template dialog

Assign template to unit

Click on template name to open Template settings. Multiple templates can be assigned to one unit, in this case all tabs from all assigned templates will be visible on Unit detail.

Use the dynamic search field under "Add Unit to Template list" - start typing the unit name in the search field and choose from the offered matches (the matches are gradually filtered). Several units can be added at once (see image below).

The units are finally added by the button.

Image 3.71 Multiple units addition

After a unit (units) is assigned to the template by the button (see above) it appears in a "Manage Unit templates" list.

Before the group is finally saved, some of the units can be removed by clicking the ✕ icon.

Delete a template

To remove an existing template, go to Settings/Screen editor and click on the 🗑 icon in the respective row of the template table and confirm the action on the consequent pop-up window.

Editor

Editor allows user to customize each screen of the template. User can change a layout and displayed values. All changes **must be saved** before leaving the editor.
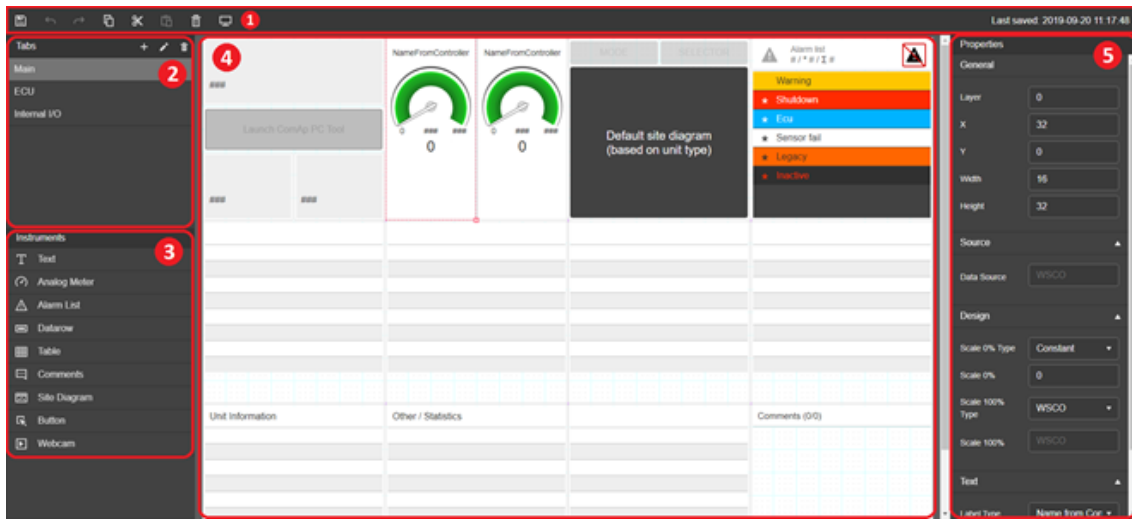
Image 3.72 Editor layout

#	Description
1	Editor toolbar
2	Tabs panel
3	Instrument panel
4	Editor canvas
5	Properties panel

Table 3.24 Editor legend

Editor toolbar

Image 3.73 Editor - toolbar

Available tools:

▶ **Save** – save all changes

▶ **Undo** – undo user actions

▶ **Redo** – undo an undo

▶ **Copy** – copy selected instrument, standard shortcut (Ctrl + C) is also available

▶ **Cut** – cut selected instrument, standard shortcut (Ctrl + X) is also available

▶ **Paste** – paste copied/cut instrument, standard shortcut (Ctrl + V) is also available

▶ **Delete** – delete selected instrument, standard shortcut (Delete button) is also available

▶ **Preview** – show actual tab in preview mode

▶ **Last saved** – information about the time when template was saved

Tabs panel

Allows user to Add/Edit/Delete tabs. Each tab is displayed after clicking on its name.

New tab is created by ➕ button. Dialog with two inputs appears:

▶ Tab name – name of the tab visible in the Editor and at the Detail view Screen

▶ Number of rows – define length of the tab

To edit existing tab, highlight the tab by clicking on its name and press 🖊 button. Same dialog as for new tab appears and user can modify the values.

Tab is deleted by highlighting it, clicking on 🗑 button and confirming the action on the consequent pop-up window.

Tabs	+	✏	🗑
Main
ECU
Internal I/O
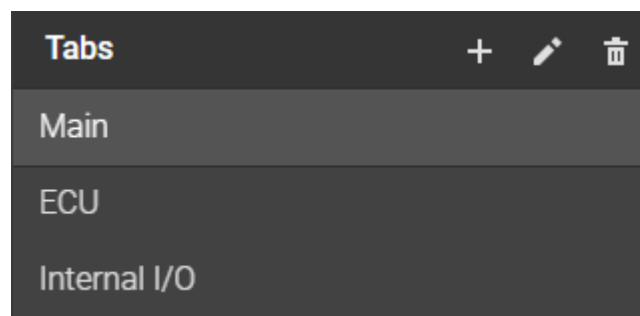
Image 3.74 Editor - Tabs panel

Instrument panel

List of all available instruments. New instrument is placed on the canvas by Drag and drop function (press and hold left mouse button on selected instrument, place the cursor on the canvas and drop the instrument by releasing the button).
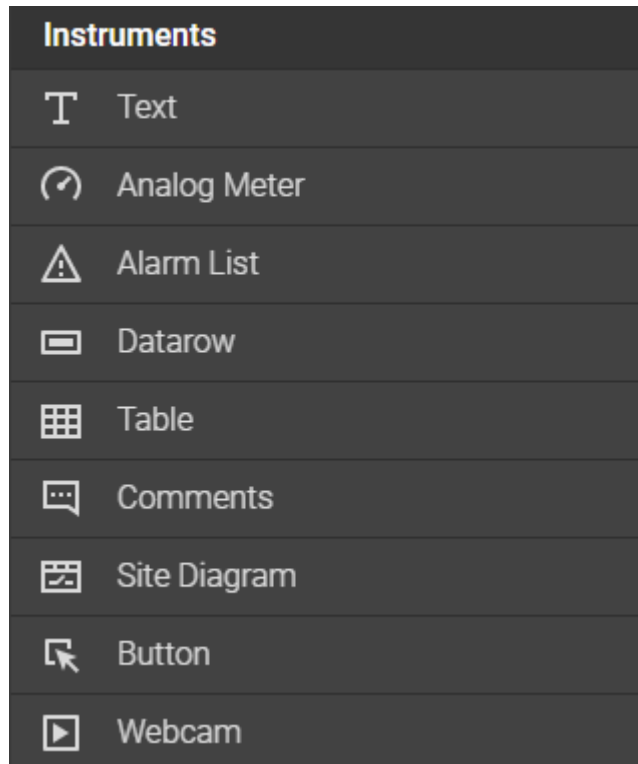
Image 3.75 Editor - Instrument panel

Editor canvas

Place for user to place his new instruments or modify existing layout. Canvas shows responsive layout, and everything placed on the canvas snaps to a grid. To keep tab responsive user must place instruments inside purple columns (instruments cannot overlap). When instrument is placed over 2 or more columns, responsive design is disabled.

Instruments are selected by clicking on them. Selected instrument is then highlighted by red dashed border and its properties are displayed in the properties tab. To unselect instrument, click on empty canvas.

Selected instrument can be moved or resized using a mouse. Instrument is moved by drag and drop function (hover over the instrument, press and hold left mouse button and move the instrument to desired place). Resizing works in a same way but user must use red square in the bottom right corner.

When instrument is selected all available actions from toolbar are enabled.
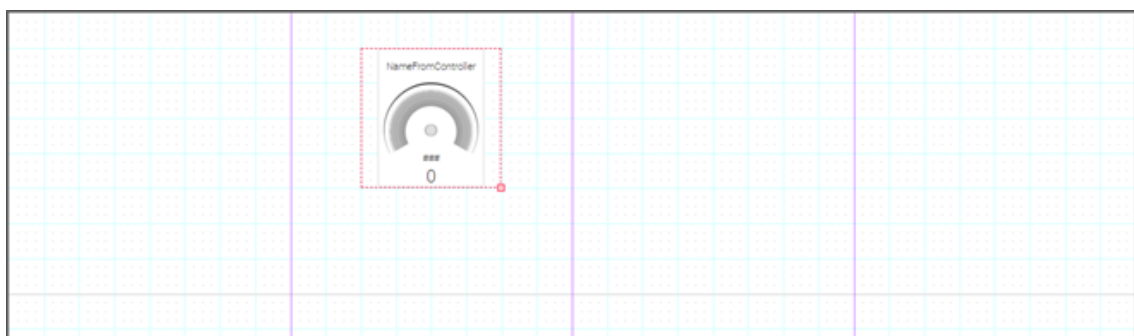
Image 3.76 Editor - Canvas

Properties panel

List of all available properties for selected instrument. Properties are logically divided into expandable sections.

Each property has set limits for minimal and maximal values and value out of range won't be accepted.

Image 3.77 Editor - Properties panel

3.11 Help

To navigate to the *"Help"* section, click on the *"Help"* icon on the Main Menu bar:
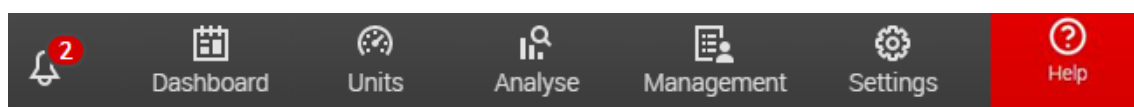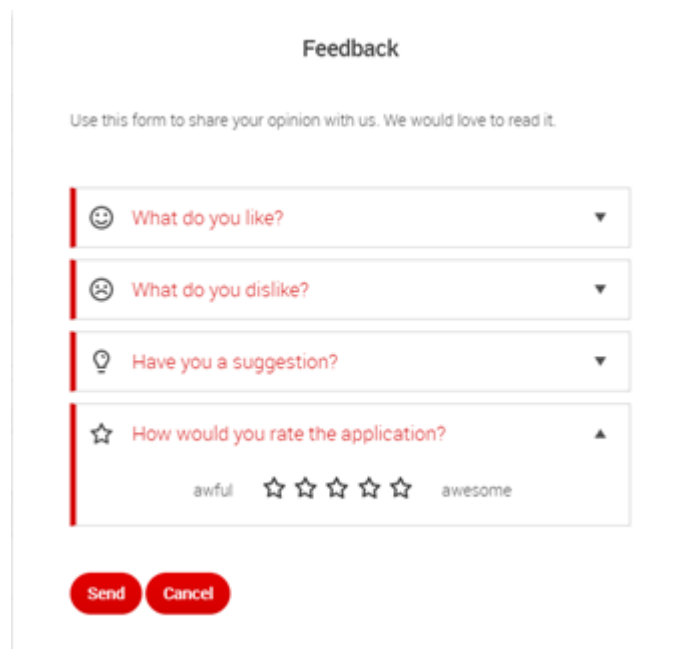
Image 3.78 Main Menu - Help Selected

This action will open an online user guide and activates scroll-down menu with following items:

- ▶ **Online help**
- ▶ **Download user guide**
- ▶ **Send us feedback**
- ▶ **About**
- ▶ **API Management**

3.11.1 Send us feedback

We will be happy to get feedback from you. Feel free to send it and go to Help section and use feedback form.

Image 3.79 Main Menu - Help Selected

3.11.2 About

Section with information about new features / fixed bugs in every release.

3.11.3 API Management

API (Application Programming Interface) is set of subroutine definitions for communication between two or more software components.

Examples of using API:

- ▶ Downloading actual or historical data for your own analysis
- ▶ Integrate WebSupervisor data with your CRM, ERP or other systems
- ▶ Generate advanced reports with using PowerBI or other application
- ▶ Automate some activity (mostly calculation) you do manually
- ▶ Starting gensets based on some external calculation (i.e. demand response)

API is one of the key addon available with the Pro account. In default every Pro account includes access to API with limit of 1500 queries for basic actions (downloading files from WSV is not allowed). More queries including possibility to download files from WSV are subject of an additional payment.

Documentation is available at API management portal. The link to get there is at WebSupervisor webpage https://www.websupervisor.net/ You do not need log in. Just click to documentation link.

Activation of API in your account

Permission to access API is granted by owner of the WSV account or his admins for each user separately. It is done in "Management / Users" section by the checkboxes in the table of all users or in user settings in Account information. Checking of the checkbox automatically create an account in API management.

Access API you need to login to our API portal: https://portal.websupervisor.net

Image 3.80 Main Menu - Help Selected

Use same credentials as you have for WebSupervisor. If you have permission to access API you will be redirected to API portal.

API portal offers you a documentation for all available queries and mainly primary and secondary key to be able to query the API. Both keys are available in your profile and can be regenerated at any time rendering the old ones useless. Key has to be filled in **"Comap-Key"** header in all queries.

Documentation for each query contains basic description, all mandatory/available headers, example of body if there is any, examples of responses and code samples how to use query in popular programming languages. You can also try the query directly from the API portal.

3.12 Internet Connection Monitoring

The state of the internet connection is being continuously monitored and indicated on the right side of the Main Menu bar:

Icon	Description
	User is online - Internet connection is estabilished.
	User is offline - Internet connection is lost.

Table 3.25 Connection State Icons

Moreover, the loss of internet connection is indicated by a red pop-up message in the right upper corner, that remains displayed until the connection is established again or until it's dismissed by the user.

Image 3.81 Message - loss of internet connection

As soon as the connection is re-established, user is informed by a message in the right upper corner that is displayed for 4 seconds. The message can also be dismissed sooner by the user.
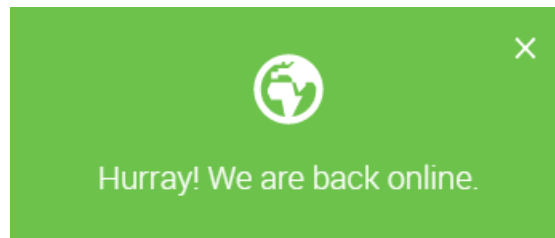
Image 3.82 Message - internet connection re-established

⏶ **back to Operator guide**

4 Appendix

⏶ **back to Table of contents**

4.1 AirGate

4.1.1 General description

ComAp controls incorporate the powerful AirGate connection technology to make access to the internet as simple as possible. AirGate technology was designed to overcome the issues commonly faced when trying to connect remote equipment using internet based communications.

It allows our controllers to connect to the internet using the existing network infrastructure, negotiating firewalls and VPN systems and removing the requirement for static IP addresses.

This connection type is intended for remote connection from WebSupervisor or any other ComAp PC tool over the Internet in situations, where obtaining fixed public IP address is not possible.

> **IMPORTANT: Only two remote clients can be connected at the same time.**

Currently 2 Airgate servers are available worldwide:

▶ Airgate server located in Europe with public airgate address: "airgate.comap.cz"

▶ Airgate server located in Australia with public airgate address: "aus.airgate.link"

Benefits if Airgate server is set correctly:

▶ much faster response times

Please use Airgate server from region where the units are connected.

> *Note: You get the most benefits if a controller and location from where you will monitor/manage units is the same*

> **IMPORTANT: AirGate IDs for every server are different!**

> **IMPORTANT: Do not change the AirGate server settings remotely! Plan any AirGate changes during your regular maintenance visit. If you change the AirGate settings remotely you risk losing the connection to the controller.**

4.1.2 Technical requirements

To run AirGate connection is a need to have:

▶ Internet connection

▶ AirGate support in Controller

4.1.3 AirGate supports in ComAp controllers

Controllers	Available ports, modules and plug-in modules
InteliLite	CM-Ethernet Plug-in module CM-GPRS Plug-in module CM-4G-GPS Plug-in module
InteliGen NTC GC	InteliBridge-NT extension module
InteliGen NT BaseBox	InteliBridge-NT extension module
InteliGen NTC BaseBox	Ethernet port
InteliMains NT GC	InteliBridge-NT extension module
InteliMains NT BaseBox	InteliBridge-NT extension module
InteliMains NTC BaseBox	Ethernet port
InteliSys NT BaseBox	InteliBridge-NT extension module
InteliSys 2 GAS	*Note: From version 1.2.0*
InteliSys NTC BaseBox	Ethernet port
[[[Undefined variable TechnicalTerms.ProductName]]]	Ethernet port
InteliDrive IPU	InteliBridge-NT extension module IB-Lite Plug-in module
InteliDrive IPC	InteliBridge-NT extension module IB-Lite Plug-in module
InteliLite NT	IB-Lite Plug-in module IL-NT GPRS Plug-in module
InteliCompact NT	InteliBridge-NT extension module IB-Lite Plug-in module
InteliBifuel	InteliBridge-NT module ID-Mobile GPRS Plug-in module
InteliDrive Mobile	InteliBridge-NT module ID-Mobile GPRS Plug-in module
InteliDrive DCU	InteliBridge-NT extension module IL-NT GPRS Plug-in module
InteliPro	IB-Lite Plug-in module IL-NT GPRS Plug-in module
InteliDrive Lite	IB-Lite Plug-in module IL-NT GPRS Plug-in module IB-NT extension module
InteliLite Telecom	IB-Lite Plug-in module IL-NT GPRS Plug-in module
MainsCompact NT	IB-Lite Plug-in module IL-NT GPRS Plug-in module
InteliATS NT	IB-Lite Plug-in module IL-NT GPRS Plug-in module

4.1.4 How To Establish AirGate Communication

⬤ back to AirGate

InteliLite

AirGate connection settings

This connection type is intended for remote connection from WebSupervisor or LiteEdit over the Internet in situations, where obtaining a fixed public IP address is not possible. Only two remote clients can be connected at the same time.

AirGate is set up by the setpoint *AirGate Address*. Connection type is active if AirGate connection is ENABLED. Setpoint *AirGate Address* must contain the AirGate server address. It can be entered in text form as well as numeric form. There is a public AirGate server available at address "airgate.comap.cz" or aus.airgate.link in case you are from Australia region. For more information about setpoints setting see InteliLite Global Guide.

Once the controller is connected to the Internet and the AirGate server address is properly adjusted then the controller registers automatically to the server and an identification string AirGate ID is given to a controller, which is visible at the controller screen.

To connect your PC tool to the controller use the AirGate connection, put the same AirGate address as in the controller into the AIRGATE ADDRESS field and use the AirGate ID displayed on the controller.
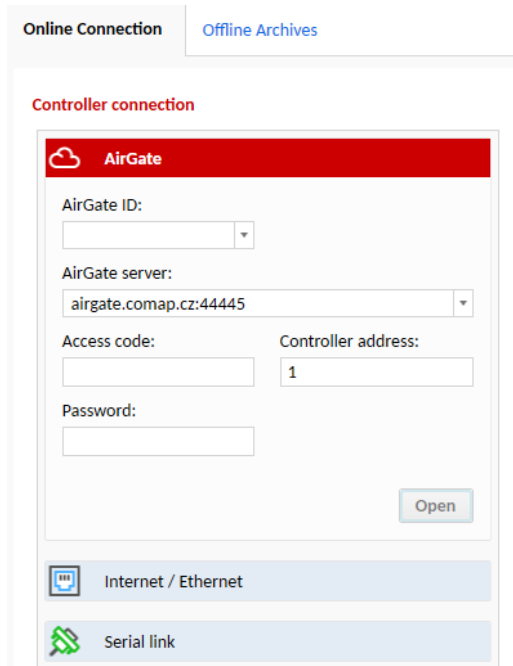
> IMPORTANT: To avoid unauthorized access to the controller change the access code and keep it secret.

Connection to LiteEdit via AirGate server

1. Select **Connect to controller**
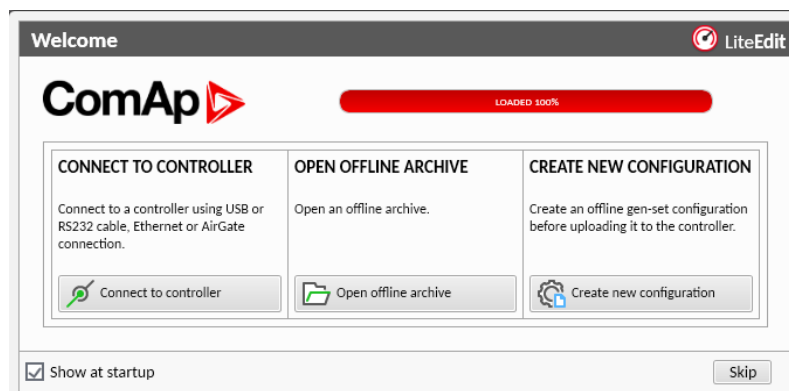
2. Select **AirGate**

AirGate connection via CM-Ethernet

CM-Ethernet is a plug-in card with Ethernet 10/100 Mbit interface in RJ45 connector. It provides an interface for connecting a PC with through ethernet/internet network, for sending active e-mails and for integration of the controller into a building management (MODBUS TCP and SNMP protocols). This card also enables to monitor and control the gen-set over web browser from any location with internet access using appropriate security measures.

Parameters can be set directly in the controller or via any type of connection (USB, RS232, Ethernet). Setup is provided via LiteEdit. For Ethernet connection set these parameters in CM-Ethernet group:

Image 3.83 Parameters of CM-Ethernet group

Module setup

All settings related to the module can be adjusted via the controller setpoints. The respective setpoints are located in the setpoint Group: CM-Ethernet. For more information about CM-Ethernet setup see InteliLite Global Guide.

All actual operational values like actual IP address etc. are available in controller values in a specific group as well.

AirGate connection via CM-4G-GPS

CM-4G-GPS plug-in module containing a GPS receiver and GSM/WCDMA/LTE modem which can works in two modes of operation based on the settings in the setpoint Mode. For more information see InteliLite Global Guide.

Parameters can be set via any type of connection (USB, RS232, Ethernet). Setup is provided via LiteEdit. For Ethernet connection set these parameters in CM-4G-GPS group:

| AirGate Connection | Enabled ▼ ● |
| AirGate Address | airgate.comap.cz ● |

Image 3.84 Parameters of CM-G-GPS Ethernet group

How to start using CM-4G-GPS module

▶ You will need a controller, CM-4G-GPS module, antenna and SIM card with SMS and packet data service.

Note: Make sure that your SIM supports the packet data network type you want to use. - i.e. if you want to use the module in LTE (4G) network you have to confirm with the operator that the particular SIM card supports 4G network.

▶ Contact your mobile operator for getting packet data APN (APN = Access Point Name), username and password.

Example: APN Name = "internet", UserName = [blank], Password = [blank].

▶ Make sure SIM card does not require PIN code. Use any mobile phone to switch the SIM PIN security off.

▶ Place the SIM card into slot on CM-4G-GPS card

▶ Connect the antenna to Cellular module antenna connector.

▶ If you want to use the built-in GPS receiver connect also an **active** GPS antenna to the GPS antenna connector.

▶ Switch off the controller.

▶ Insert CM-4G-GPS module into controller

▶ Power up the controller.

▶ Select the mode of CM-4G-GPS module by adjusting setpoint Mode.

▶ Enter correct APN Name, APN User Name and APN User Password in controller's setpoint group CM-4G-GPS which is accessible by PAGE button from any measurement screen on controller. Setpoints can be set on controller's front panel keyboard or by LiteEdit.

▶ Switch the controller off and on.

▶ Wait for approx 2 - 4 minutes for first connection of the system to AirGate. AirGate will generate automatically the AirGate ID value. Then navigate to measurement screens where you will find signal strength bar and AirGate ID identifier.

Note: For more detailed information about using CM-4G-GPS module please see InteliLite Global Guide.

Image 3.85 Screen of AirGate

AirGate connection via CM-GPRS

CM-GPRS plug-in module is a GSM/GPRS modem which can works in two modes of operation based on the settings in the setpoint Mode. For more information see InteliLite Global Guide.

Parameters can be set via any type of connection (USB, RS232, Ethernet). Setup is provided via LiteEdit. For Ethernet connection set these parameters in CM-GPRS group:

AirGate Connection	Enabled ▼ ●
AirGate Address	airgate.comap.cz ●

Image 3.86 Parameters of CM-GPRS group

How to start using CM-GPRS module

▶ You will need a controller, CM-GPRS module, antenna and SIM card with SMS and packet data service.

Make sure that your SIM supports the packet data network type you want to use. I.e. if you want to use the module in GPRS (2,5G) network you have to confirm with the operator that the particular SIM card does support 2,5G network.

▶ Contact your mobile operator for getting packet data APN (APN = Access Point Name), username and password.

   Example: APN Name = "internet", UserName = [blank], Password = [blank].

▶ Make sure SIM card does not require PIN code. Use any mobile phone to switch the SIM PIN security off.

▶ Place the SIM card into slot on CM-GPRS card

▶ Connect the antenna to Cellular module antenna connector.

▶ Switch off the controller.

▶ Insert CM-GPRS module into controller

▶ Power up the controller.

▶ Select the mode of CM-GPRS module by adjusting setpoint Mode.

▶ Enter correct APN Name, APN User Name and APN User Password in controller's setpoint group CM-GPRS which is accessible by PAGE button from any measurement screen on controller. Setpoints can be set on controller's front panel keyboard or by LiteEdit.

▶ Switch the controller off and on.

▶ Wait for approx 2 - 4 minutes for first connection of the system to AirGate. AirGate will generate automatically the AirGate ID value. Then navigate to measurement screens where you will find signal strength bar and AirGate ID identifier.

Image 3.87 Screen of AirGate

Note: For more detailed information about using CM-GPRS module please see InteliLite Global Guide.

⏏ **back to How To Establish AirGate Communication**

InteliSys Gas

AirGate connection settings

IGS-NT controllers family can be monitored from WebSupervisor, GenConfig or InteliMonitor via Internet and using of AirGate technology.

> **IMPORTANT: To avoid unauthorized access to the controller change the access code and keep it secret.**

Parameters can be set directly in the controller or via any type of connection (USB, RS232, Ethernet). Setup is provided via InteliMonitor. For Ethernet connection set these parameters in Comms Settings group:

Image 3.88 Parameters of Comms Settings group

Connection to InteliMonitor via AirGate server

1. Select the AirGate connection type.
2. Fill-in the correct AirGate ID for each controller.
3. Enter the AirGate server address.

You will obtain the AirGate ID by the registration of the particular controller on the AirGate server. Set all setpoints in Comms Settings group according to AirGate connection settings and connect controller to LAN. Controller AirGate ID will be viewed on the screen.

Image 3.89 AirGate connection settings

AirGate connection via Ethernet

Parameters can be set directly in the controller or via any type of connection (USB, RS232, Ethernet). Setup is provided via InteliMonitor. For Ethernet connection set these parameters in Comms Settings group:

Image 3.90 Parameters of Comms Settings group

AirGate connection via InternetBridge-NT

AirGate connection is recommended if you want to access the bridge using ComAp protocol (i.e. ComAp tools like InteliMonitor, GenConfig or WebSupervisor) and the bridge does not have fixed IP address and/or there is no route from the client computer to the bridge.

AirGate is to be activated in the General Settings menu. When the InternetBridge-NT connects to the AirGate first time it is registered into the AirGate database and gets AirGate ID, which remains then the same even if the module is switched off and on again. This AirGate ID is used for all controllers connected to the InternetBridge-NT, the controllers are distinguished from each other by their controller address. AirGate ID is displayed in IBNT

Config (**STATUS → WAN Connection → AirGate ID**).

Max. 2 clients of ComAp type (InteliDDE server, WebSupervisor) can be connected simultaneously.

For more information please search on the InternetBridge-NT GlobalGuide.

General setup

The menu **SETTINGS → General** contains essential settings of the module.

1. **WAN connection mode** selects the communication interface which the module uses for accessing the external network (Internet). Select **Cellular** if you want to use the built-in cellular modem or select **Ethernet** if you want to use the Ethernet socket.

2. **AirGate Enable** switches AirGate protocol extension on and off. If AirGate is on then you can use "AirGate" connection type in ComAp PC tools.

3. **AirGate Address** specifies the AirGate address. Use "airgate.comap.cz" or aus.airgate.link" in case you are from Australia region.

4. **Controllers connection type** selects the communication inferface which is used for connection of the controllers.

> *Note: If CAN bus is used and there are other communication devices/bridges, such as I-LB, IG-IB or InteliVision-8(CAN) the CAN address collision must be avoided, e.g. each device must use different CAN address.*

Example: If you want to use two InternetBridge-NT with SIM card from two different operators at one site and connect them via CAN bus then configure one InternetBridge-NT to CAN, Addr#1 and the other to CAN, Addr#2.

Option	Physical CAN address
CAN, Addr#1	124
CAN, Addr#2	123
CAN, Addr#3	125
CAN, Addr#4	122

Image 3.91 Assignment of physical CAN addresses

Note: For using address 3 and 4 the setpoints CANAddrSwitch1 resp. CANAddrSwitch2 must be switched to OTHER in all connected controllers.

5. **If RTC Synchronization** is enabled the InternetBridge-NT module will synchronize the RTC clock of the connected controllers with accurate time obtained from either GPS or Internet (NTP servers)

IGS-NT controller family

AirGate connection settings

IGS-NT controllers family can be monitored from WebSupervisor, GenConfig or InteliMonitor via Internet and using of AirGate technology.

> **IMPORTANT: To avoid unauthorized access to the controller change the access code and keep it secret.**

Parameters can be set directly in the controller or via any type of connection (USB, RS232, Ethernet). Setup is provided via InteliMonitor. For Ethernet connection set these parameters in Comms Settings group:

Image 3.92 Parameters of Comms Settings group

Connection to InteliMonitor via AirGate server

1. Select the AirGate connection type.
2. Fill-in the correct AirGate ID for each controller.
3. Enter the AirGate server address.

You will obtain the AirGate ID by the registration of the particular controller on the AirGate server. Set all setpoints in Comms Settings group according to AirGate connection settings and connect controller to LAN. Controller AirGate ID will be viewed on the screen.

Note: This function is available in InteliMonitor version 2.6 and higher. Please go to the ComAp website for detailed information.

Although the controllers in your site are not connected together by the CAN2 bus they must have different controller addresses.

Image 3.93 AirGate connection settings

AirGate connection via Ethernet

Parameters can be set directly in the controller or via any type of connection (USB, RS232, Ethernet). Setup is provided via InteliMonitor. For Ethernet connection set these parameters in Comms Settings group:

Image 3.94 Parameters of Comms Settings group

AirGate connection via InternetBridge-NT

AirGate connection is recommended if you want to access the bridge using ComAp protocol (i.e. ComAp tools like InteliMonitor, GenConfig or WebSupervisor) and the bridge does not have fixed IP address and/or there is no route from the client computer to the bridge.

AirGate is to be activated in the General Settings menu. When the InternetBridge-NT connects to the AirGate first time it is registered into the AirGate database and gets AirGate ID, which remains then the same even if the module is switched off and on again. This AirGate ID is used for all controllers connected to the InternetBridge-NT, the controllers are distinguished from each other by their controller address. AirGate ID is displayed in IBNT

Config (**STATUS** → **WAN Connection** → **AirGate ID**).

Max. 2 clients of ComAp type (InteliDDE server, WebSupervisor) can be connected simultaneously.

For more information please search on the InternetBridge-NT GlobalGuide.

General setup

The menu **SETTINGS** → **General** contains essential settings of the module.

1. **WAN connection mode** selects the communication interface which the module uses for accessing the external network (Internet). Select **Cellular** if you want to use the built-in cellular modem or select **Ethernet** if you want to use the Ethernet socket.

2. **AirGate Enable** switches AirGate protocol extension on and off. If AirGate is on then you can use "AirGate" connection type in ComAp PC tools.

3. **AirGate Address** specifies the AirGate address. Use "airgate.comap.cz" or aus.airgate.link" in case you are from Australia region.

4. **Controllers connection type** selects the communication inferface which is used for connection of the controllers.

   Note: If CAN bus is used and there are other communication devices/bridges, such as I-LB, IG-IB or InteliVision-8(CAN) the CAN address collision must be avoided, e.g. each device must use different CAN address.

Example: If you want to use two InternetBridge-NT with SIM card from two different operators at one site and connect them via CAN bus then configure one InternetBridge-NT to CAN, Addr#1 and the other to CAN, Addr#2.

Option	Physical CAN address
CAN, Addr#1	124
CAN, Addr#2	123
CAN, Addr#3	125
CAN, Addr#4	122

Image 3.95 Assignment of physical CAN addresses

Note: For using address 3 and 4 the setpoints CANAddrSwitch1 resp. CANAddrSwitch2 must be switched to OTHER in all connected controllers.

5. **If RTC Synchronization** is enabled the InternetBridge-NT module will synchronize the RTC clock of the connected controllers with accurate time obtained from either GPS or Internet (NTP servers)

InteliLite NT controller family

AirGate connection settings

InteliLite NT controllers family can be monitored from WebSupervisor, LiteEdit or InteliMonitor via Internet using AirGate technology.

Common SIM card with GPRS service is suitable for this system. It overcomes problems with special SIM card (fixed and public IP) necessity, with firewalls and difficult communication settings. For AirGate connection is possible to use extension modulesIB-Lite or IL-NT GPRS plug-in module.

IMPORTANT: **To avoid unauthorized access to the controller change the access code and keep it secret.**

Parameters can be set directly in the controller or via any various type of connection. Setup is provided via LiteEdit. For Ethernet connection set these parameters in Comms Settings group:

Image 3.96 Parameters of Comms Settings group

AirGate connection via IB-Lite

IB-Lite is a plug-in module with Ethernet 10/100 Mbit interface in RJ45 connector. The module is internally connected to both COM1 and COM2 serial channels and provides an interface for connecting a PC with WebSupervisor, LiteEdit or InteliMonitor through ethernet/internet network, for sending active e-mails and for integration of the controller into a building management (Modbus/TCP protocol).

Use Ethernet UTP cable with RJ45 connector for connection of the module into your ethernet network. The module can be also connected directly to a PC using cross-wired UTP cable.

The module requires some settings before initial usage. For more information see IL-NT, IA-NT, IC-NT Communication Guide.

How to start using IB-Lite Plug-in module

▶ Turn on the controller.

▶ Setup "Comms Settings" in the controller or via LiteEdit.

● For more information see IB-Lite Quick Guide.

▶ Connect the IB-Lite to the router (or Internet/Ethernet socket) via UTP cable.

● Wait a while (or turn the controller off and on again).

● Check the "AirGate ID": Press the **UP button** a few times on the basic controller display until you will see GSM/Modem status screen. Remember the AirGate ID.
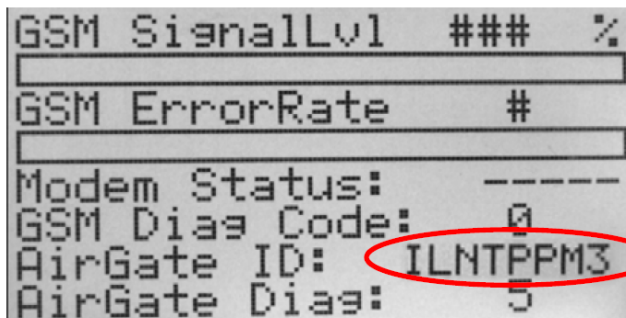
▶ For connection to a controller use WebSupervisor or LiteEdit. Connect to the controller via AirGate with typing of the AirGate ID and using of "airgate.comap.cz" or "aus.airgate.link" in case you are from Australia region as an AirGate address (AirGate Server).

AirGate Diag

Code	Description
0	Waiting for connection to AirGate Server
1	Controller registered, waiting for authorization
2	Not possible to register, controller blacklisted
3	Not possible to register, server has no more capacity
4	Not possible to register, other reason
5	Controller registered and authorized

AirGate connection via IL-NT GPRS

IL-NT GPRS is GSM/GPRS Modem Plug-in module. It supports GPRS wireless internet connection or GSM modem function for dial-up connection. For more information see IL-NT GPRS Quick Guide.

Parameters can be set via various types of connection. Setup is provided via LiteEdit. For Ethernet connection set these parameters in Comms Settings group:

Image 3.97 Parameters of Comms Settings group

How to start using IL-NT GPRS Plug-in module

▶ You will need one of supported ComAp controllers (IL-NT/IC-NT/ID-Lite), IL-NT-GPRS, antenna, SIM card with GPRS service and optionally IL-NT-RS232 or IL-NT-S-USB module. Firmware supporting IL-NT-GPRS module is IL-NT-WSUP or selected customer branches (contact support@comap.cz for details). It is available here: http://www.comap.cz/products/detail/IL-NT-GPRS/

▶ Contact SIM card operator for getting GPRS APN (APN = Access Point Name) name, username and password. Some operator's APNs are listed here: http://www.quickim.com/support/gprs-settings.html#Australia

> **Example:** APN Name = internet.t-mobile.cz, UserName = [blank], Password = [blank]

▶ Make sure SIM card does not require a PIN code. If it does, it is possible to disable it in any common network unlocked mobile telephone.

▶ Power up the ComAp controller.

▶ Enter correct APN Name, APN UserName and APN UserPass in controller's setpoint group Comms Settings. Set COM1 Mode = DIRECT. Comms settings as every sepoint group are accessible by PAGE button from any measurement screen on controller. Setpoints can be set on controller's front panel keyboard or by LiteEdit 4.5 and higher.

▶ Switch off ComAp controller.

▶ Place the SIM card into slot on IL-NT-GPRS card, plug in the IL-NT-GPRS card into communication slot on back side of ComAp controller.

▶ Connect the antenna to designated SMA connector.

▶ Connect power supply to IL-NT-GPRS module. It supports 8-36V DC voltage.

▶ Power up the system (Controller and module together).

▶ Wait for approx 2 - 4 minutes for first connection of the system to AirGate. AirGate will generate automatically the AirGate ID value. Then navigate to last of measurement screens where you will find signal strength bar and AirGate ID identifier.

InteliDrive Lite controller family

AirGate connection settings

InteliDrive Lite controllers family can be monitored from WebSupervisor, GenConfig or InteliMonitor via Internet andusing of AirGate technology.

Common SIM card with GPRS service is suitable for this system. It overcomes problems with special SIM card (fixed and public IP) necessity, with firewalls and difficult communication settings. For AirGate connection is possible to use extension modules IB-NT, IB-Lite or IL-NT GPRS plug-in module.

For Ethernet connection set these parameters in Comms Settings group:

| AirGate | ENABLED | ENABLED | |
| AirGate IP | airgate.comap.cz | airgate.comap.cz | |
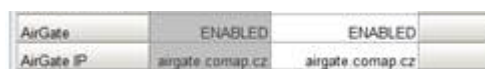
Image 3.98 Parameters of Comms Settings group

> **IMPORTANT: To avoid unauthorized access to the controller change the access code and keep it secret.**

AirGate connection via IB-Lite

IB-Lite is a plug-in module with Ethernet 10/100 Mbit interface in RJ45 connector. The module is internally connected to both COM1 and COM2 serial channels and provides an interface for connecting a PC with WebSupervisor, LiteEdit or InteliMonitor through ethernet/internet network, for sending active e-mails and for integration of the controller into a building management system (Modbus/TCP protocol).

Use Ethernet UTP cable with RJ45 connector for connection of the module into your ethernet network. The module can be also connected directly to a PC using cross-wired UTP cable.

The module requires some settings before initial usage. For more information see IL-NT, IA-NT, IC-NT Communication Guide.

Parameters can be set directly in the controller or via any various type of connection. Setup is provided via LiteEdit. For Ethernet connection set these parameters in Comms Settings group:
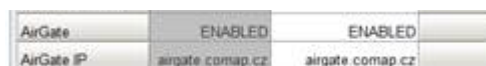

Image 3.99 Parameters of Comms Settings group

How to start using IB-Lite Plug-in module

▶ Turn on the controller.

▶ Setup "Comms Settings" in the controller or via LiteEdit.

- For more information see IB-Lite Quick Guide.

▶ Connect the IB-Lite to the router (or Internet/Ethernet socket) via UTP cable.

- Wait a while (or turn the controller off and on again).

- Check the "AirGate ID": Press few times **UP button** on the basic controller display until you will see GSM/Modem status screen. Remember the AirGate ID.

▶ For connection with controller use WebSupervisor or LiteEdit. Connect to the controller via AirGate with typing of the AirGate ID and using of "airgate.comap.cz" or "aus.airgate.link" in case you are from Australia region as an AirGate address (AirGate Server).

AirGate connection via IL-NT GPRS

IL-NT GPRS is GSM/GPRS Modem Plug-in module. It supports GPRS wireless internet connection or GSM modem function for dial-up connection. For more information see IL-NT GPRS Quick Guide.

Parameters can be set via various types of connection. Setup is provided via LiteEdit. For Ethernet connection set these parameters in Comms Settings group:
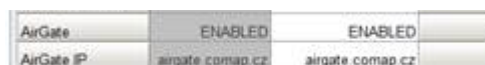

Image 3.100 Parameters of Comms Settings group

How to start using IL-NT GPRS Plug-in module

▶ You will need one of supported ComAp controllers (IL-NT/IC-NT/ID-Lite), IL-NT-GPRS, antenna, SIM card with GPRS service and optionally IL-NT-RS232 or IL-NT-S-USB module. Firmware supporting IL-NT-GPRS module is IL-NT-WSUP or selected customer branches (contact support@comap.cz for details). It is available here: http://www.comap.cz/products/detail/IL-NT-GPRS/

▶ Contact SIM card operator for getting GPRS APN (APN = Access Point Name) name, username and password. Some operator's APNs are listed here: http://www.quickim.com/support/gprs-settings.html#Australia

  Example: APN Name = internet.t-mobile.cz, UserName = [blank], Password = [blank]

▶ Make sure SIM card does not require a PIN code. If it does, it is possible to disable it in any common network unlocked mobile telephone.

▶ Power up the ComAp controller.

▶ Enter correct APN Name, APN UserName and APN UserPass in controller's setpoint group Comms Settings. Set COM1 Mode = DIRECT. Comms settings as every sepoint group are accessible by PAGE

button from any measurement screen on controller. Setpoints can be set on controller's front panel keyboard or by LiteEdit 4.5 and higher.

▶ Switch off ComAp controller.

▶ Place the SIM card into slot on IL-NT-GPRS card, plug in the IL-NT-GPRS card into communication slot on back side of ComAp controller.

▶ Connect the antenna to designated SMA connector.

▶ Connect power supply to IL-NT-GPRS module. It supports 8-36V DC voltage.

▶ Power up the system (Controller and module together).

▶ Wait for approx 2 - 4 minutes for first connection of the system to AirGate. AirGate will generate automatically the AirGate ID value. Then navigate to last of measurement screens where you will find signal strength bar and AirGate ID identifier.

AirGate connection via InternetBridge-NT

AirGate connection is recommended if you want to access the bridge using ComAp protocol (i.e. ComAp tools like InteliMonitor, GenConfig or WebSupervisor) and the bridge does not have fixed IP address and/or there is no route from the client computer to the bridge.

AirGate is to be activated in the General Settings menu. When the InternetBridge-NT connects to the AirGate first time it is registered into the AirGate database and gets AirGate ID, which remains then the same even if the module is switched off and on again. This AirGate ID is used for all controllers connected to the InternetBridge-NT, the controllers are distinguished from each other by their controller address. AirGate ID is displayed in IBNT Config (**STATUS** → **WAN Connection** → **AirGate ID**).

Max. 2 clients of ComAp type (InteliDDE server, WebSupervisor) can be connected simultaneously.

For more information please search on the [InternetBridge-NT GlobalGuide](#).

General setup

The menu **SETTINGS** → **General** contains essential settings of the module.

1. **WAN connection mode** selects the communication interface which the module uses for accessing the external network (Internet). Select **Cellular** if you want to use the built-in cellular modem or select **Ethernet**

if you want to use the Ethernet socket.

2. **AirGate Enable** switches AirGate protocol extension on and off. If AirGate is on then you can use "AirGate" connection type in ComAp PC tools.

3. **AirGate Address** specifies the AirGate address. Use "airgate.comap.cz" or aus.airgate.link" in case you are from Australia region.

4. **Controllers connection type** selects the communication inferface which is used for connection of the controllers.

> *Note: If CAN bus is used and there are other communication devices/bridges, such as I-LB, IG-IB or InteliVision-8(CAN) the CAN address collision must be avoided, e.g. each device must use different CAN address.*

> **Example:** If you want to use two InternetBridge-NT with SIM card from two different operators at one site and connect them via CAN bus then configure one InternetBridge-NT to CAN, Addr#1 and the other to CAN, Addr#2.

Option	Physical CAN address
CAN, Addr#1	124
CAN, Addr#2	123
CAN, Addr#3	125
CAN, Addr#4	122

Image 3.101 Assignment of physical CAN addresses

> *Note: For using address 3 and 4 the setpoints CANAddrSwitch1 resp. CANAddrSwitch2 must be switched to OTHER in all connected controllers.*

5. **If RTC Synchronization** is enabled the InternetBridge-NT module will synchronize the RTC clock of the connected controllers with accurate time obtained from either GPS or Internet (NTP servers)

InteliCompact NT controller family

AirGate connection settings

InteliCompact NT controller family can be monitored from WebSupervisor, LiteEdit or InteliMonitor via Internet andusing of AirGate technology.

Common SIM card with GPRS service is suitable for this system. It overcomes problems with special SIM card (fixed and public IP) necessity, with firewalls and difficult communication settings. For AirGate connection is possible to use extension module IB-NT, IB-Lite or IL-NT GPRS plug-in modules.

> **IMPORTANT: To avoid unauthorized access to the controller change the access code and keep it secret.**

AirGate connection via IB-Lite

IB-Lite is a plug-in module with Ethernet 10/100 Mbit interface in RJ45 connector. The module is internally connected to both COM1 and COM2 serial channels and provides an interface for connecting a PC with WebSupervisor, LiteEdit or InteliMonitor through ethernet/internet network, for sending active e-mails and for integration of the controller into a building management system (Modbus/TCP protocol).

Use Ethernet UTP cable with RJ45 connector for connection of the module into your ethernet network. The module can be also connected directly to a PC using cross-wired UTP cable.

The module requires some settings before initial usage. For more information see IL-NT, IA-NT, IC-NT Communication Guide.

Parameters can be set directly in the controller or via any various type of connection. Setup is provided via LiteEdit. For Ethernet connection set these parameters in Comms Settings group:

| AirGate | ENABLED | ENABLED | |
| AirGate IP | airgate.comap.cz | airgate.comap.cz | |

Image 3.102 Parameters of Comms Settings group

How to start using IB-Lite Plug-in module

▶ Turn on the controller.

▶ Setup "Comms Settings" in the controller or via LiteEdit.

  ● For more information see IB-Lite Quick Guide.

▶ Connect the IB-Lite to the router (or Internet/Ethernet socket) via UTP cable.

  ● Wait a while (or turn the controller off and on again).

  ● Check the "AirGate ID": Press few times **UP button** on the basic controller display until you will see GSM/Modem status screen. Remember the AirGate ID.

▶ For connection with controller use WebSupervisor or LiteEdit. Connect to the controller via AirGate with typing of the AirGate ID and using of "airgate.comap.cz" or "aus.airgate.link" in case you are from Australia region as an AirGate address (AirGate Server).

AirGate connection via IL-NT GPRS

IL-NT GPRS is GSM/GPRS Modem Plug-in module. It supports GPRS wireless internet connection or GSM modem function for dial-up connection. For more information see IL-NT GPRS Quick Guide.

Parameters can be set via various types of connection. Setup is provided via LiteEdit. For Ethernet connection set these parameters in Comms Settings group:

| AirGate | ENABLED | ENABLED | |
| AirGate IP | airgate.comap.cz | airgate.comap.cz | |

Image 3.103 Parameters of Comms Settings group

How to start using IL-NT GPRS Plug-in module

▶ You will need one of supported ComAp controllers (IL-NT/IC-NT/ID-Lite), IL-NT-GPRS, antenna, SIM card with GPRS service and optionally IL-NT-RS232 or IL-NT-S-USB module. Firmware supporting IL-NT-GPRS module is IL-NT-WSUP or selected customer branches (contact support@comap.cz for details). It is available here: http://www.comap.cz/products/detail/IL-NT-GPRS/

▶ Contact SIM card operator for getting GPRS APN (APN = Access Point Name) name, username and password. Some operator's APNs are listed here: http://www.quickim.com/support/gprs-settings.html#Australia

  Example: APN Name = internet.t-mobile.cz, UserName = [blank], Password = [blank]

▶ Make sure SIM card does not require a PIN code. If it does, it is possible to disable it in any common network unlocked mobile telephone.

▶ Power up the ComAp controller.

- ▶ Enter correct APN Name, APN UserName and APN UserPass in controller's setpoint group Comms Settings. Set COM1 Mode = DIRECT. Comms settings as every sepoint group are accessible by PAGE button from any measurement screen on controller. Setpoints can be set on controller's front panel keyboard or by LiteEdit 4.5 and higher.

- ▶ Switch off ComAp controller.

- ▶ Place the SIM card into slot on IL-NT-GPRS card, plug in the IL-NT-GPRS card into communication slot on back side of ComAp controller.

- ▶ Connect the antenna to designated SMA connector.

- ▶ Connect power supply to IL-NT-GPRS module. It supports 8-36V DC voltage.

- ▶ Power up the system (Controller and module together).

- ▶ Wait for approx 2 - 4 minutes for first connection of the system to AirGate. AirGate will generate automatically the AirGate ID value. Then navigate to last of measurement screens where you will find signal strength bar and AirGate ID identifier.

AirGate connection via InternetBridge-NT

AirGate connection is recommended if you want to access the bridge using ComAp protocol (i.e. ComAp tools like InteliMonitor, GenConfig or WebSupervisor) and the bridge does not have fixed IP address and/or there is no route from the client computer to the bridge.

AirGate is to be activated in the General Settings menu. When the InternetBridge-NT connects to the AirGate first time it is registered into the AirGate database and gets AirGate ID, which remains then the same even if the module is switched off and on again. This AirGate ID is used for all controllers connected to the InternetBridge-NT, the controllers are distinguished from each other by their controller address. AirGate ID is displayed in IBNT Config (**STATUS → WAN Connection → AirGate ID**).

Max. 2 clients of ComAp type (InteliDDE server, WebSupervisor) can be connected simultaneously.

For more information please search on the [InternetBridge-NT GlobalGuide](#).

General setup

The menu **SETTINGS → General** contains essential settings of the module.

1. **WAN connection mode** selects the communication interface which the module uses for accessing the external network (Internet). Select **Cellular** if you want to use the built-in cellular modem or select **Ethernet** if you want to use the Ethernet socket.

2. **AirGate Enable** switches AirGate protocol extension on and off. If AirGate is on then you can use "AirGate" connection type in ComAp PC tools.

3. **AirGate Address** specifies the AirGate address. Use "airgate.comap.cz" or aus.airgate.link" in case you are from Australia region.

4. **Controllers connection type** selects the communication inferface which is used for connection of the controllers.

Note: If CAN bus is used and there are other communication devices/bridges, such as I-LB, IG-IB or InteliVision-8(CAN) the CAN address collision must be avoided, e.g. each device must use different CAN address.

Example: If you want to use two InternetBridge-NT with SIM card from two different operators at one site and connect them via CAN bus then configure one InternetBridge-NT to CAN, Addr#1 and the other to CAN, Addr#2.

Option	Physical CAN address
CAN, Addr#1	124
CAN, Addr#2	123
CAN, Addr#3	125
CAN, Addr#4	122

Image 3.104 Assignment of physical CAN addresses

Note: For using address 3 and 4 the setpoints CANAddrSwitch1 resp. CANAddrSwitch2 must be switched to OTHER in all connected controllers.

5. **If RTC Synchronization** is enabled the InternetBridge-NT module will synchronize the RTC clock of the connected controllers with accurate time obtained from either GPS or Internet (NTP servers)

InteliDrive DCU

AirGate connection settings

InteliDrive DCU controller family can be monitored from WebSupervisor, DriveConfig or InteliMonitor via Internet andusing of AirGate technology.

> **IMPORTANT: To avoid unauthorized access to the controller change the access code and keep it secret.**

Parameters can be set directly in the controller or via any type of connection (USB, RS232, Ethernet). Setup is provided via InteliMonitor. For Ethernet connection set these parameters in Comms Settings group:

Image 3.105 Parameters of Comms Settings group

Connection to InteliMonitor via AirGate server

1.   Select the AirGate connection type.

2.   Fill-in the correct AirGate ID for each controller.

3.   Enter the AirGate server address.

You will obtain the AirGate ID by the registration of the particular controller on the AirGate server. Set all setpoints in Comms Settings group according to AirGate connection settings and connect controller to LAN. Controller AirGate ID will be viewed on the screen.

Note: This function is available in InteliMonitor version 2.6 and higher. Please go to the ComAp website for detailed information.
Although the controllers in your site are not connected together by the CAN2 bus they must have different controller addresses.

AirGate connection via InternetBridge-NT

AirGate connection is recommended if you want to access the bridge using ComAp protocol (i.e. ComAp tools like InteliMonitor, GenConfig or WebSupervisor) and the bridge does not have fixed IP address and/or there is no route from the client computer to the bridge.

AirGate is to be activated in the General Settings menu. When the InternetBridge-NT connects to the AirGate first time it is registered into the AirGate database and gets AirGate ID, which remains then the same even if the module is switched off and on again. This AirGate ID is used for all controllers connected to the InternetBridge-NT, the controllers are distinguished from each other by their controller address. AirGate ID is displayed in IBNT Config (**STATUS → WAN Connection → AirGate ID**).

Max. 2 clients of ComAp type (InteliDDE server, WebSupervisor) can be connected simultaneously.

For more information please search on the InternetBridge-NT GlobalGuide.

General setup

The menu **SETTINGS → General** contains essential settings of the module.

1. **WAN connection mode** selects the communication interface which the module uses for accessing the external network (Internet). Select **Cellular** if you want to use the built-in cellular modem or select **Ethernet** if you want to use the Ethernet socket.

2. **AirGate Enable** switches AirGate protocol extension on and off. If AirGate is on then you can use "AirGate" connection type in ComAp PC tools.

3. **AirGate Address** specifies the AirGate address. Use "airgate.comap.cz" or aus.airgate.link" in case you are from Australia region.

4. **Controllers connection type** selects the communication inferface which is used for connection of the controllers.

Note: If CAN bus is used and there are other communication devices/bridges, such as I-LB, IG-IB or InteliVision-8(CAN) the CAN address collision must be avoided, e.g. each device must use different CAN address.

Example: If you want to use two InternetBridge-NT with SIM card from two different operators at one site and connect them via CAN bus then configure one InternetBridge-NT to CAN, Addr#1 and the other to CAN, Addr#2.

Option	Physical CAN address
CAN, Addr#1	124
CAN, Addr#2	123
CAN, Addr#3	125
CAN, Addr#4	122

Image 3.106 Assignment of physical CAN addresses

Note: For using address 3 and 4 the setpoints CANAddrSwitch1 resp. CANAddrSwitch2 must be switched to OTHER in all connected controllers.

5. **If RTC Synchronization** is enabled the InternetBridge-NT module will synchronize the RTC clock of the connected controllers with accurate time obtained from either GPS or Internet (NTP servers)

InteliDrive Mobile and InteliBiFuel Mobile controllers

AirGate connection settings

InteliDrive Mobile and InteliBifuel Mobile controllers can be monitored from WebSupervisor, DriveConfig or InteliMonitor via Internet andusing of AirGate technology.

Common SIM card with GPRS service is suitable for this system. It overcomes problems with special SIM card (fixed and public IP) necessity, with firewalls and difficult communication settings. For AirGate connection is possible to use extension module IB-NT or ID-Mobile GPRS plug-in modules.

IMPORTANT: To avoid unauthorized access to the controller change the access code and keep it secret.

AirGate connection via ID-Mobile GPRS

ID-Mobile GPRS is GSM/GPRS Plug-in module. It supports GPRS wireless internet connection or GSM modem function for dial-up connection. For more information see ID-Mobile Reference Guide.

Note: For more detailed information about ID-Mobile GPRS module installation please see ID-Mobile GPRS Assembling manual.

How to start using ID-Mobile GPRS Plug-in module

▶ Assemble ID-Mobile controller, ID-Mobile-GPRS, antenna, SIM card with GPRS service.

▶ Contact SIM card operator for getting GPRS APN name, username and password.

▶ Make sure SIM card does not require PIN code. If it does, it is possible to disable it in every common mobile telephone.

▶ Power up the ComAp controller and open the DriveMonitor on-line connection.

▶ Enter correct APN Name, APN UserName and APN UserPass in controller's Comms Settings. Set COM1 Mode = DIRECT.

▶ Switch off the ID-Mobile controller.

▶ Place the SIM card into slot on ID-Mobile-GPRS.

▶ Connect the antenna to designated SMA connector.

▶ Power up the system.

▶ Wait for approx 2 - 4 minutes for the first connection to the AirGate. Then navigate to DriveMonitor: Info screen where you will find AirGate ID value.
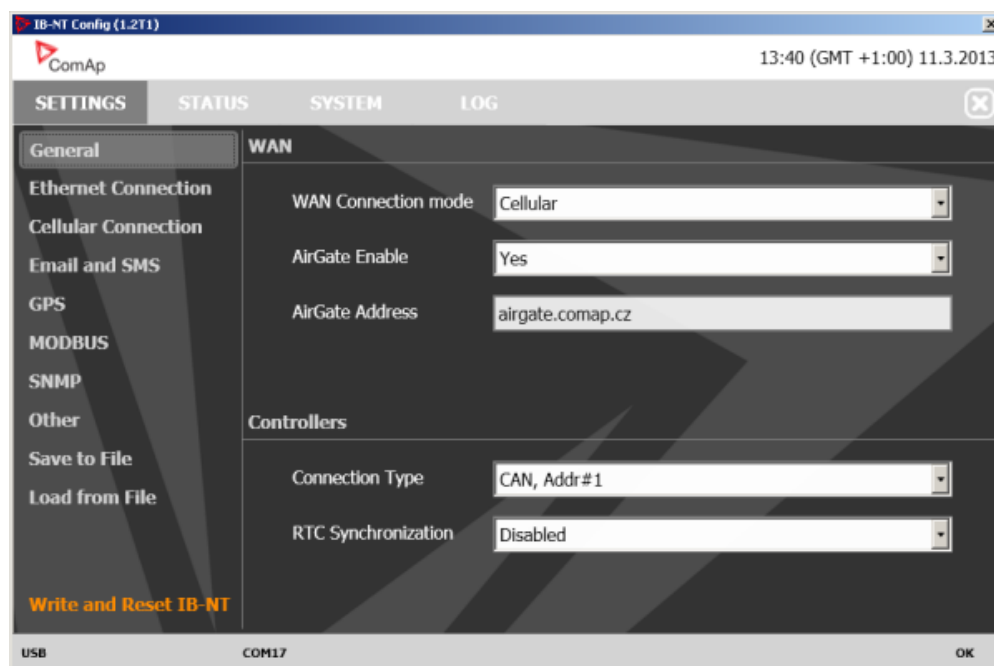
AirGate connection via InternetBridge-NT

AirGate connection is recommended if you want to access the bridge using ComAp protocol (i.e. ComAp tools like InteliMonitor, GenConfig or WebSupervisor) and the bridge does not have fixed IP address and/or there is no route from the client computer to the bridge.

AirGate is to be activated in the General Settings menu. When the InternetBridge-NT connects to the AirGate first time it is registered into the AirGate database and gets AirGate ID, which remains then the same even if the module is switched off and on again. This AirGate ID is used for all controllers connected to the InternetBridge-NT, the controllers are distinguished from each other by their controller address. AirGate ID is displayed in IBNT Config (**STATUS** → **WAN Connection** → **AirGate ID**).

Max. 2 clients of ComAp type (InteliDDE server, WebSupervisor) can be connected simultaneously.

For more information please search on the InternetBridge-NT GlobalGuide.

General setup

The menu **SETTINGS** → **General** contains essential settings of the module.

1. **WAN connection mode** selects the communication interface which the module uses for accessing the external network (Internet). Select **Cellular** if you want to use the built-in cellular modem or select **Ethernet** if you want to use the Ethernet socket.

2. **AirGate Enable** switches AirGate protocol extension on and off. If AirGate is on then you can use "AirGate" connection type in ComAp PC tools.

3. **AirGate Address** specifies the AirGate address. Use "airgate.comap.cz" or aus.airgate.link" in case you are from Australia region.

4. **Controllers connection type** selects the communication inferface which is used for connection of the controllers.

Note: If CAN bus is used and there are other communication devices/bridges, such as I-LB, IG-IB or InteliVision-8(CAN) the CAN address collision must be avoided, e.g. each device must use different CAN address.

Example: If you want to use two InternetBridge-NT with SIM card from two different operators at one site and connect them via CAN bus then configure one InternetBridge-NT to CAN, Addr#1 and the other to CAN, Addr#2.

Option	Physical CAN address
CAN, Addr#1	124
CAN, Addr#2	123
CAN, Addr#3	125
CAN, Addr#4	122

Image 3.107 Assignment of physical CAN addresses

Note: For using address 3 and 4 the setpoints CANAddrSwitch1 resp. CANAddrSwitch2 must be switched to OTHER in all connected controllers.

5. **If RTC Synchronization** is enabled the InternetBridge-NT module will synchronize the RTC clock of the connected controllers with accurate time obtained from either GPS or Internet (NTP servers)

Diagnostic Code for AirGate

AirGate Diag

Code	Description
0	Waiting for connection to AirGate Server
1	Controller registered, waiting for authorization
2	Not possible to register, controller blacklisted
3	Not possible to register, server has no more capacity
4	Not possible to register, other reason
5	Controller registered and authorized

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