PC DESKTOP SOFTWARE MANUAL

Revision 1

24.1.2025

REVISION HISTORY

Date	Initials	Description
2025-01-13	MJ	First draft
2025-01-16	MJ	Revision 1

CONTENTS

Introduction

This document provides detailed instructions on using the PC software to operate the GASERA ONE instrument remotely. GASERA ONE is a high-performance gas analysis instrument designed to measure trace gases with exceptional precision and reliability. It supports various applications, including environmental monitoring, industrial processes, and scientific research. The accompanying software complements the instrument by offering enhanced remote operational control, data management, and monitoring functionalities.

A basic understanding of gas analysis and familiarity with PC-based software applications will be helpful but is not mandatory.

Installation and requirements

Install gasera-one-desktop-win32-x64.zip to your computer and extract the file. Start the program by clicking gasera-one-desktop-forge applivation icon.

The Software is compatible with Windows 10 or later version.

User instructions

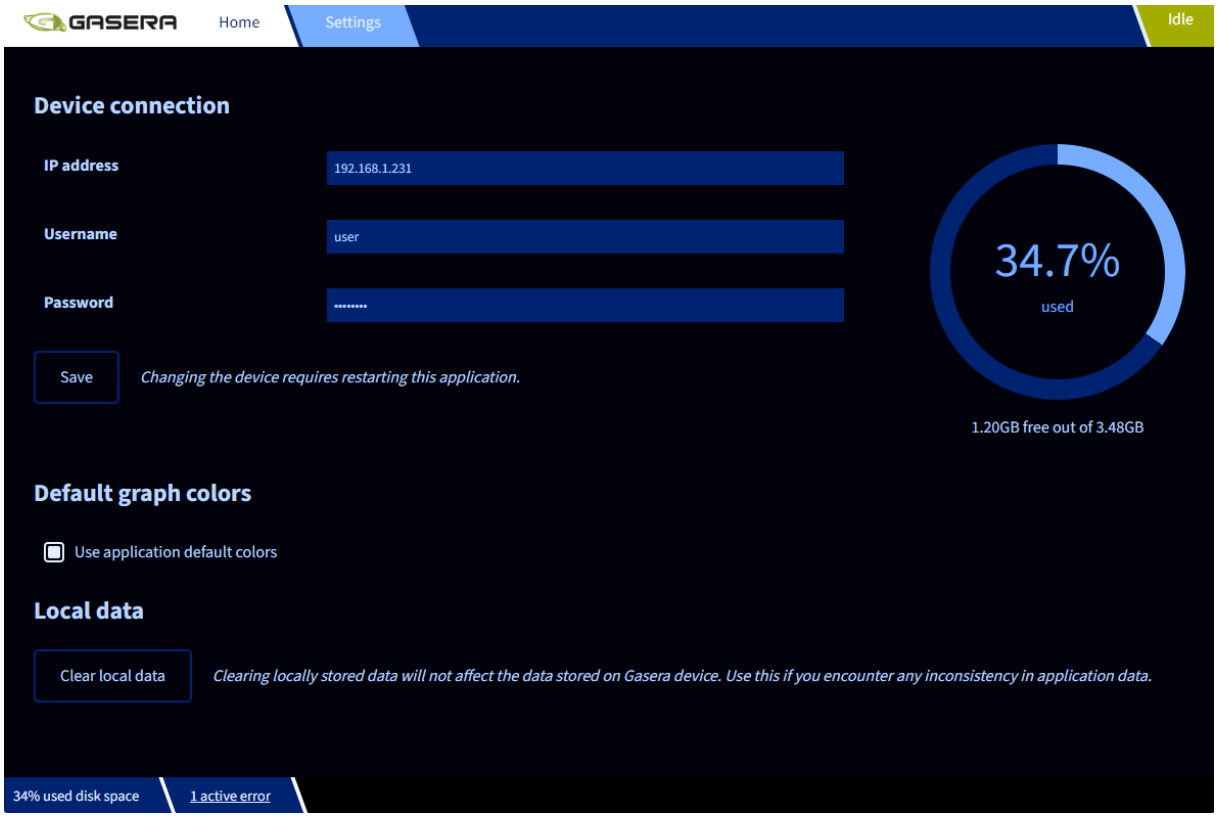
Quick instructions chapter describes shortly the steps on how to connect the software to the instrument, start and stop the measurement, and explore and export the data. The later chapters describe the functions more specifically.

Quick instructions

1. Log in by setting IP-address in SETUP-interleaf.
2. Start measurement in MEASURE interleaf. Select measurement task and click Start.
3. Follow the results real time in RESULTS interleaf.
4. Stop the meassurement by clicking ”Stop measuring” in status bar.
5. Explore results in RESULTS interleaf.
6. Export data in xls, csv and pdf form in the bottom of RESULTS interleaf.

Log in

Log in to GASERA ONE by setting IP address and clicking “Save” in SETUP-interleaf. GASERA ONE IP-address can be found in GASERA ONE user interface Setup > General, or Setup > Network settings after the instrument is connected to the network via Ethernet cable.



1.1. Device connection in Setup.

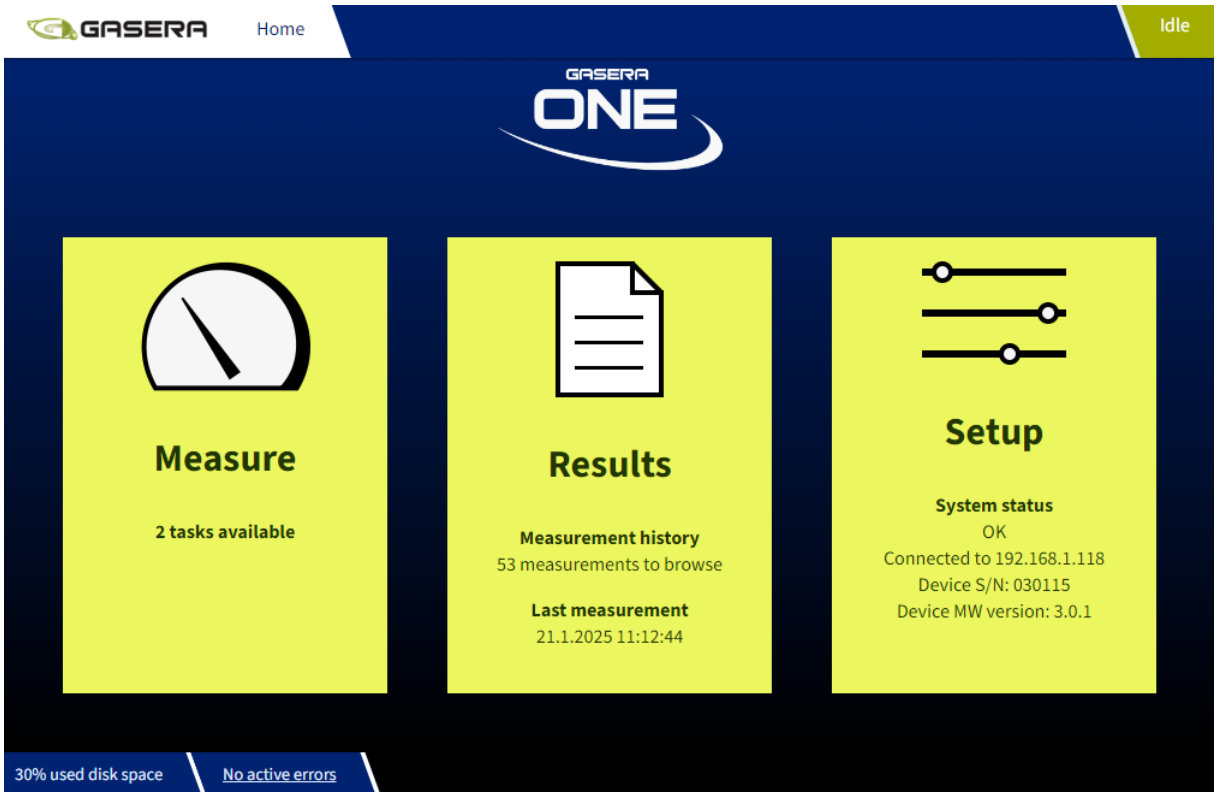
Home page

Once connection to GASERA ONE instrument has been established, user can navigate to Home page. Home page consists of three menus; MEASURE, RESULTS and SETUP.

In MEASURE, user can modify and create measurement tasks, and start measurement.

The RESULTS page contains the list of measurement results stored in the Gasera ONE device. The results may be observed and exported in the CSV, PDF or Excel format, as well as deleted from the memory.

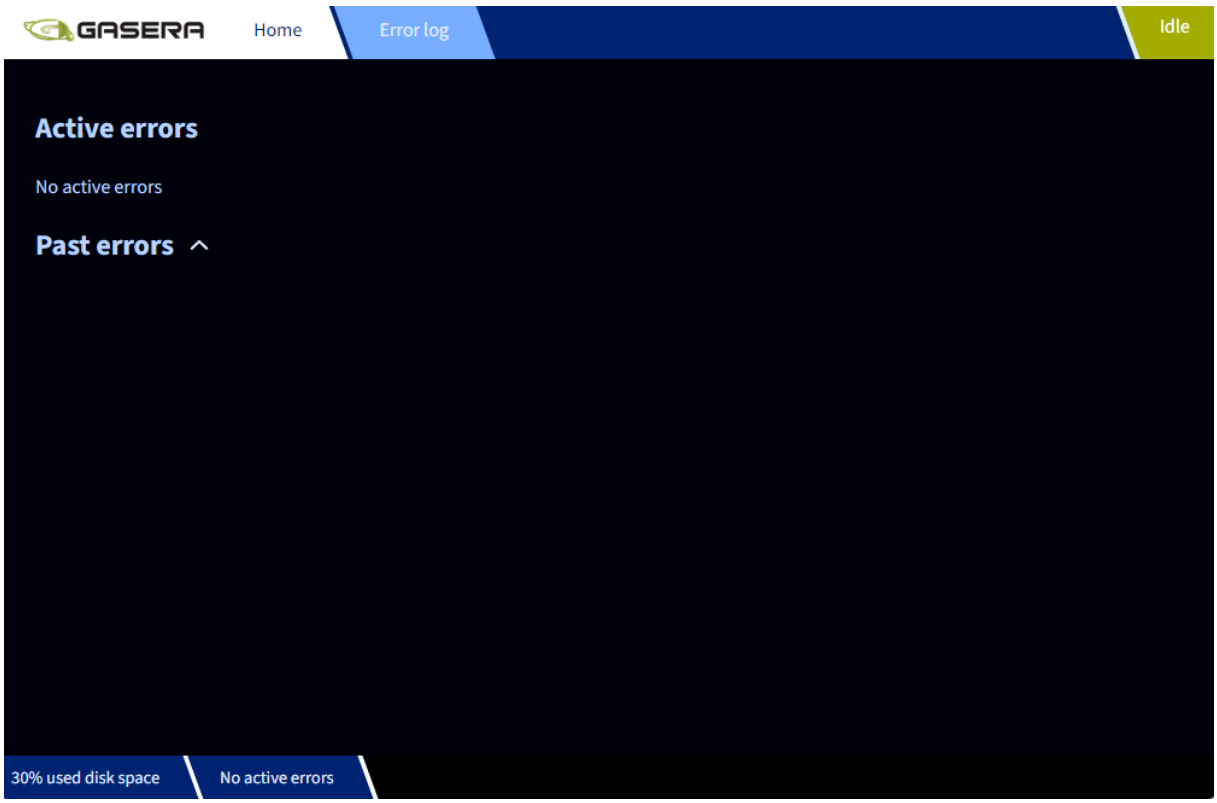
The user can return to previous menus by clicking the target menu in the top left of the remote interface view.



1.2. Home Page.

The Status bar in the top right corner corner shows the current status of the device. The status of the device will either be displayed as ”Idle” when the device is state powered on but not measuring, or as ”Busy” when measuring or performing a specific action.

Active error messages can be viewed by clicking the error message field on the bottom left of the Home page. The error history of the device can also be viewed in this menu.



1.3. Active errors list.

Measure

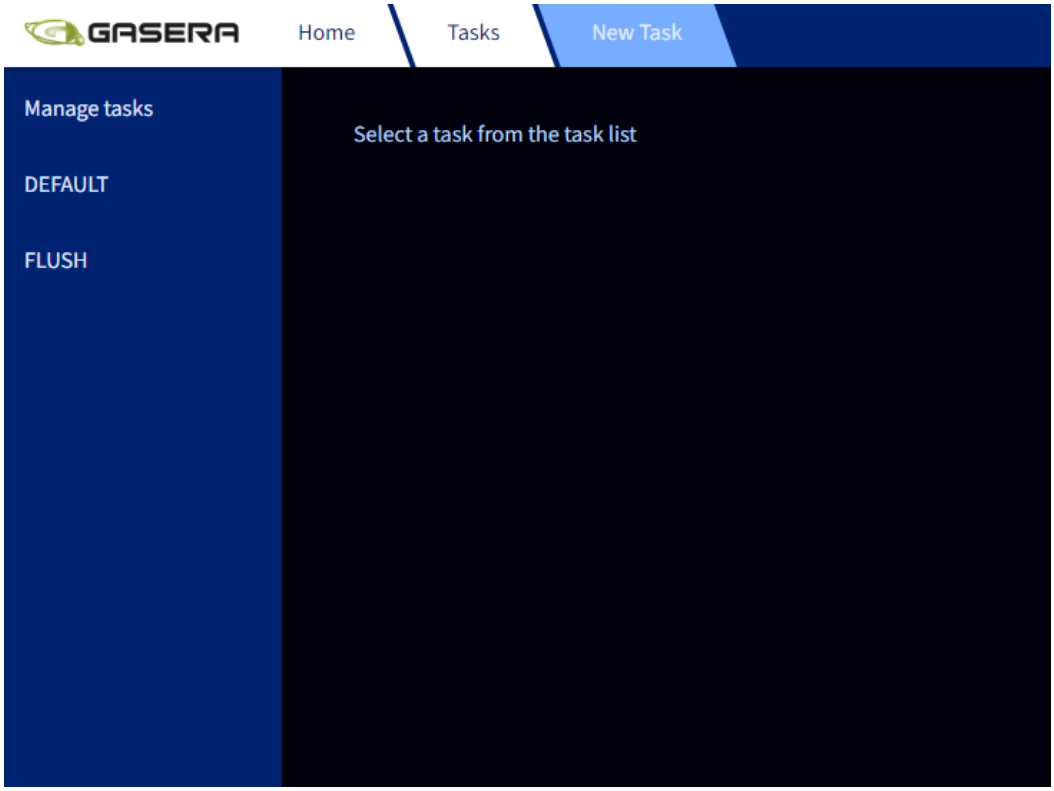
In the MEASURE menu, the user can start measurements with predefined parameters or modify the measurement parameters.

Measurement tasks

The TASKS page contains the list of measurement tasks configured in the Gasera ONE device. The tasks can be managed (created, deleted and reconfigured) either in GASERA ONE User Interface, or in the remote Desktop Software.

The TASKS page is vertically divided into the task list pane (on the left) and the task parameters pane on the right.

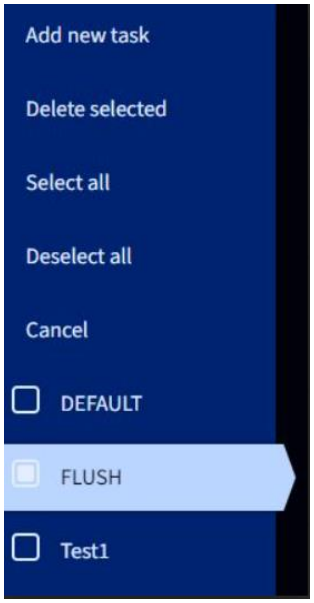
By clicking “Manage tasks” the user can modify the measurement task parameters, or create a new task. See more detailed instructions in GASERA ONE manual on how to configure the parameter settings.



1.4. Measure – Manage tasks.

By clicking the "Manage tasks" button on top of the task list, following options can be selected:

- "Add new task" will create a new measurement task on the Gasera ONE device and the task's parameters will be immediately editable.
- Note that the task buttons have a selection radio button added to them. These buttons allow the user to select one or multiple tasks
- "Select all" will select all existing measurement tasks.
- "Deselect all" will deselect any currently selected measurement tasks.
- "Delete selected" will delete all selected measurement tasks from the GASERA ONE device.
- “Cancel” will return the user to the measurement menu.



1.5. Deleting measurement tasks.

Clicking on any previously configured task on the task list will display the task's parameters on the right pane.

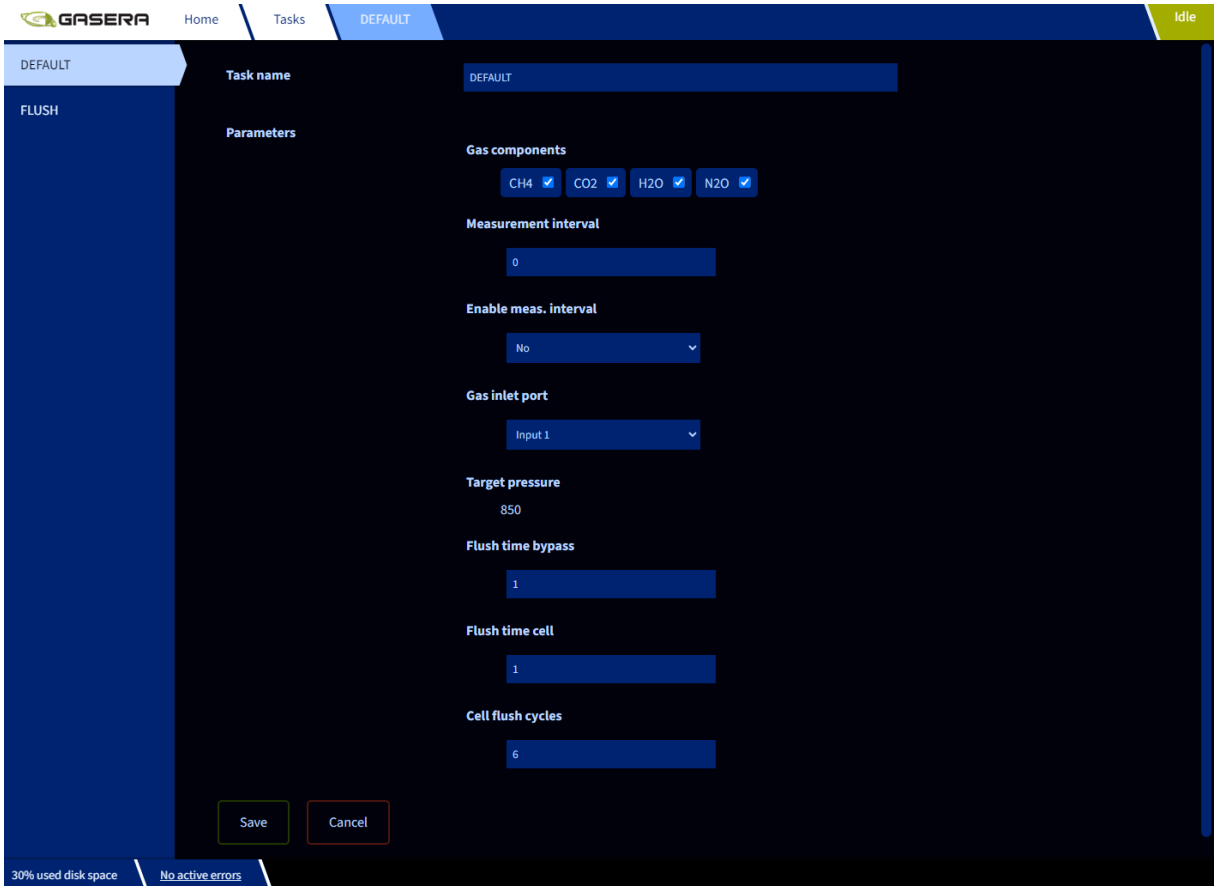
The parameters are as follows:

- Name – Measurement task name
- Gas components – Enable which gases are analyzed
- Target pressure – Pressure in cell during measurement, cannot be modified
- FlushTimeBypass – Bypass flushing time in seconds
- FlushTimeCell – Cell flushing time in seconds
- NFlushCell – Number of cell flush cycles
- GasInput – 1 (input 1) or 2 (input 2)
- IntervalEnabled – 0 (disabled) or 1 (enabled)
- Interval Timeout – Time between measurement starting points in seconds

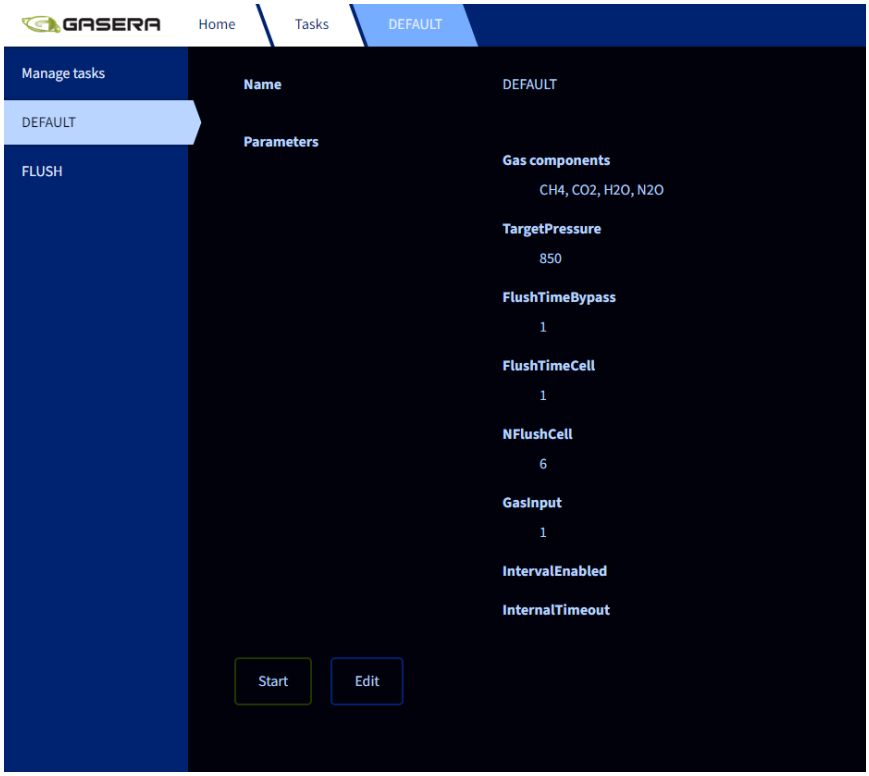
Starting the measurement

There are two buttons on the bottom of the parameter list, "Start" and "Edit":

- "Start" will start a new measurement using the selected measurement task. Clicking on "Start" will automatically take the user to the RESULTS page, where the incoming measurement results may be observed in real time.
- "Edit" allows the user to reconfigure the task's parameters.

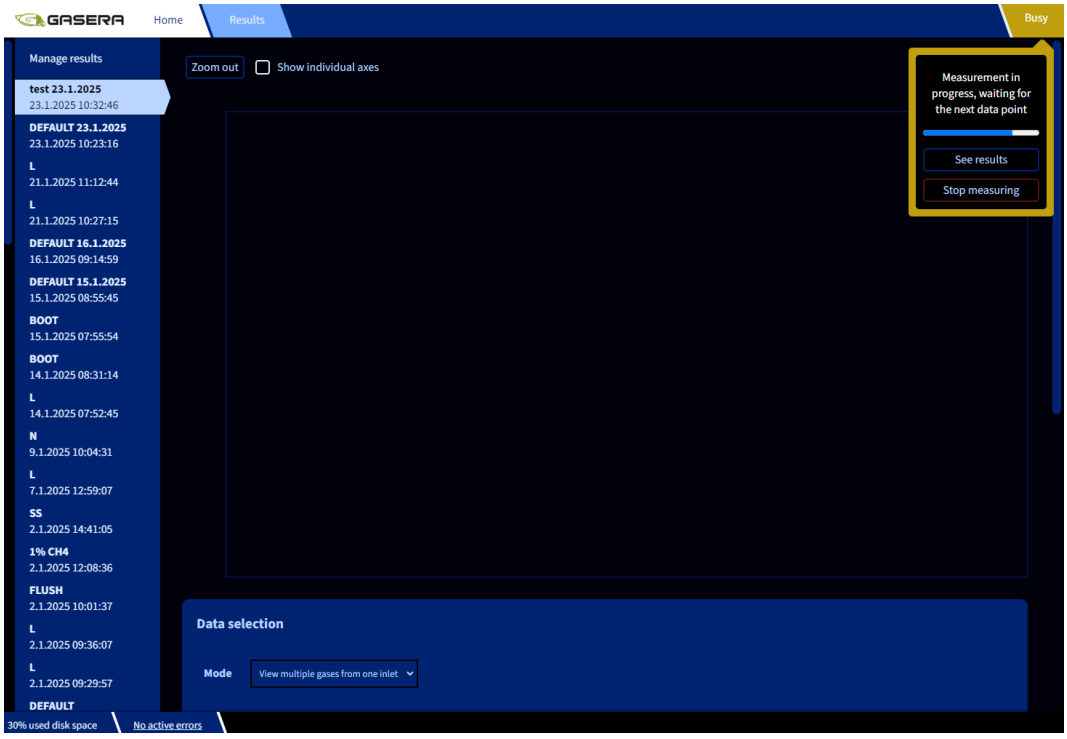


1.6. Measure – Manage task parameters.



1.7. Measure – Start measurement or edit task.

When measurement is ongoing, status bar is showing “Busy”.



1.8. Measure – Results menu in 1st measurement.

Measurement results will appear in real-time in the RESULTS view after a measurement cycle is completed.

1.9. Measure – Stop measurement.

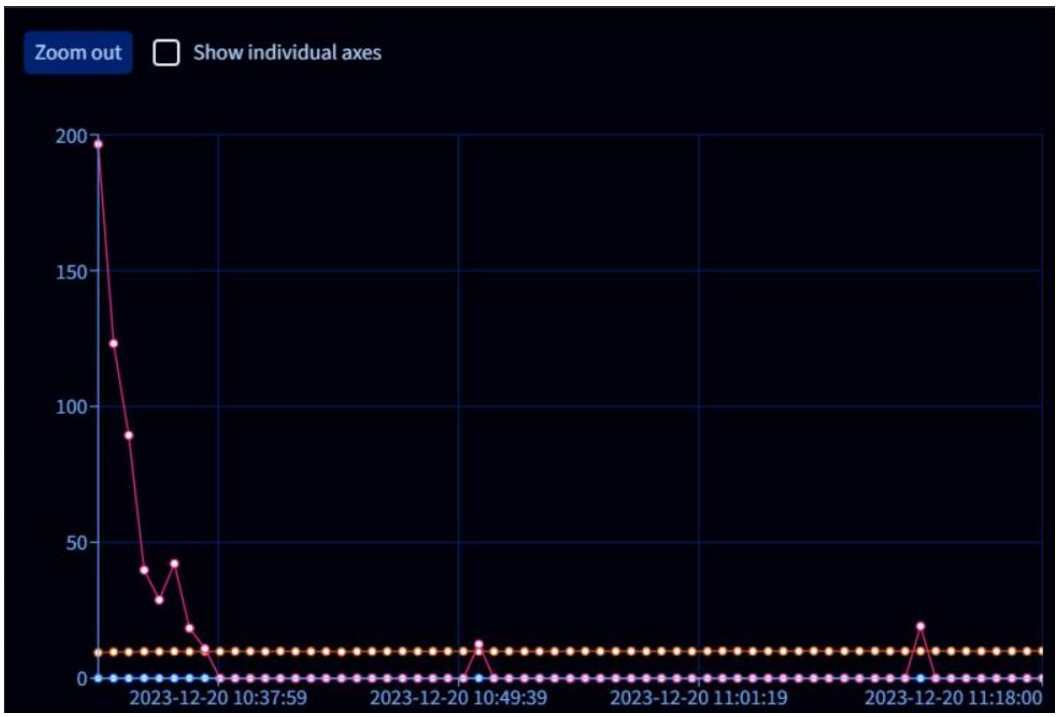
Results

The RESULTS page is vertically divided into the result list pane (left) and the results pane (right). After a measurement cycle is completed, results appear in the graph and table.

While clicking the status bar ”Busy” button, the measurement progress bar and stop button are shown.

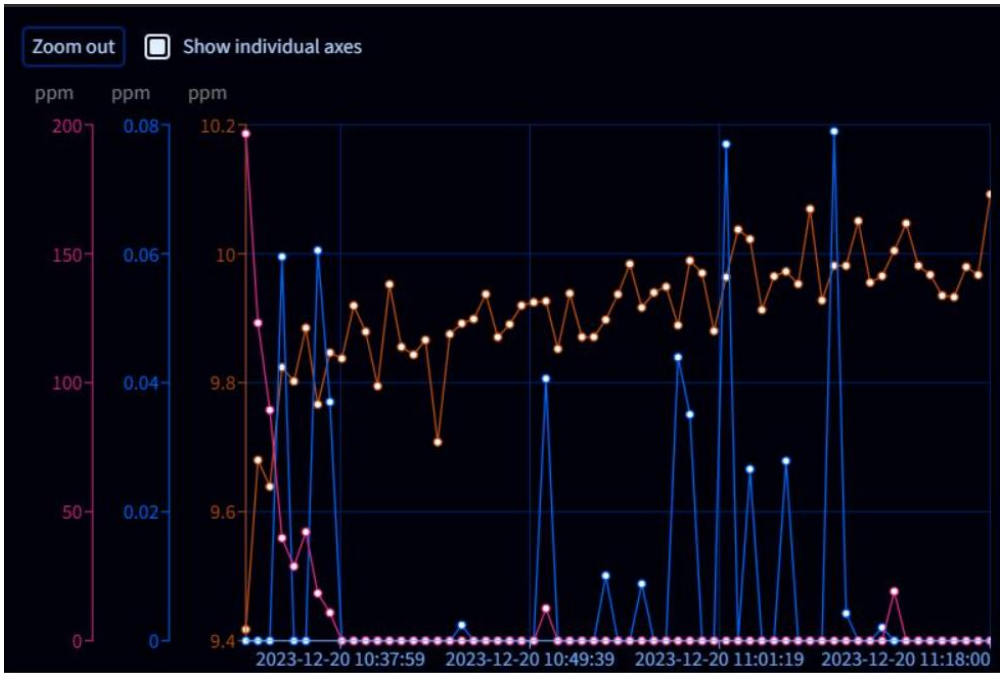
Graph

The user can select whether to show gases on their own individual y-axis or only one. Moving the cursor to an individual measurement point will show the concentration value and standard deviation on the area visible in graph.



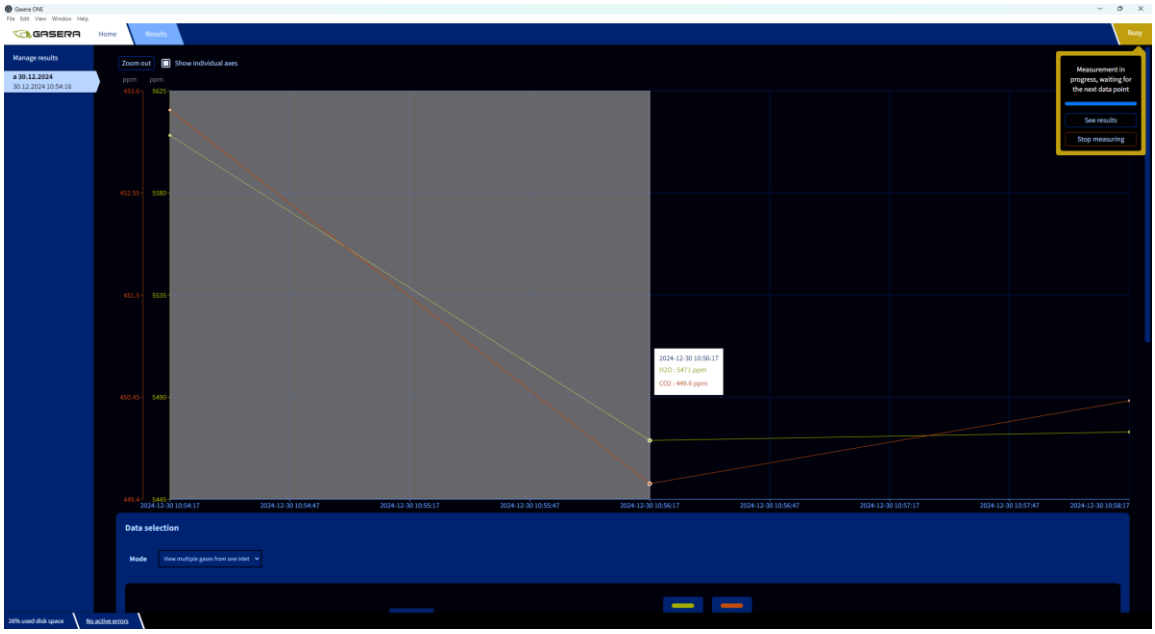
1.10. Measurement results in graph.

"Show individual axes" will create a separate vertical axis for each measured gas. The scale of the vertical axis for each gas will adjust itself to the range of measured values for said gas. This allows for a clear visualization of all curves, irrespective of the relative magnitude of their values.



1.11. Measurement results in graph, individual axes.

The user may zoom into the results graph by pressing the left mouse button on top of a result point, holding the button and moving the button left or right. This will create a highlighted time span. Letting go of the left mouse button will expand the time span to cover the extent of the graph. The view can be zoomed out from the button above graph, or by clicking tight mouse button.



1.12. Zooming in graph.

User can select which target components are shown in the graph, table and exported results file. When using a multipoint sampler, the user can define which input is shown, or which gas is displayed from several multiple inlets. The time range can also be selected as well as the moving average for a defined time period.

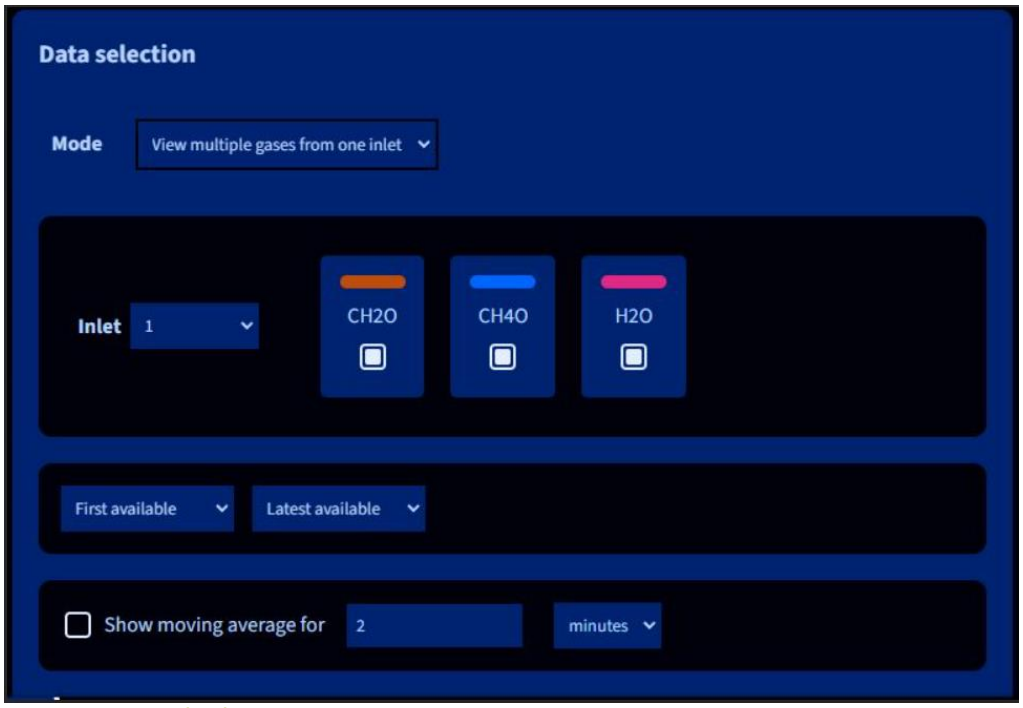
Data selection

The "Mode" dropdown menu allows selecting the display mode of the gases between two options:

- "View multiple gases from one inlet" allows choosing a single inlet and will display the results of any combination of gases selected by the user.
- "View one gas from multiple inlets" allows choosing a single gas and will display the concentration graph(s) of said gas from one or more inlets.

Below the inlet/gas selection there are dropdown menus for selecting the earliest data point and the last data point to display.

The "Show moving average" button will create an additional line for each gas displaying a running average. The average is calculated over a time range that may be also determined by the user.



1.13. Data selection.

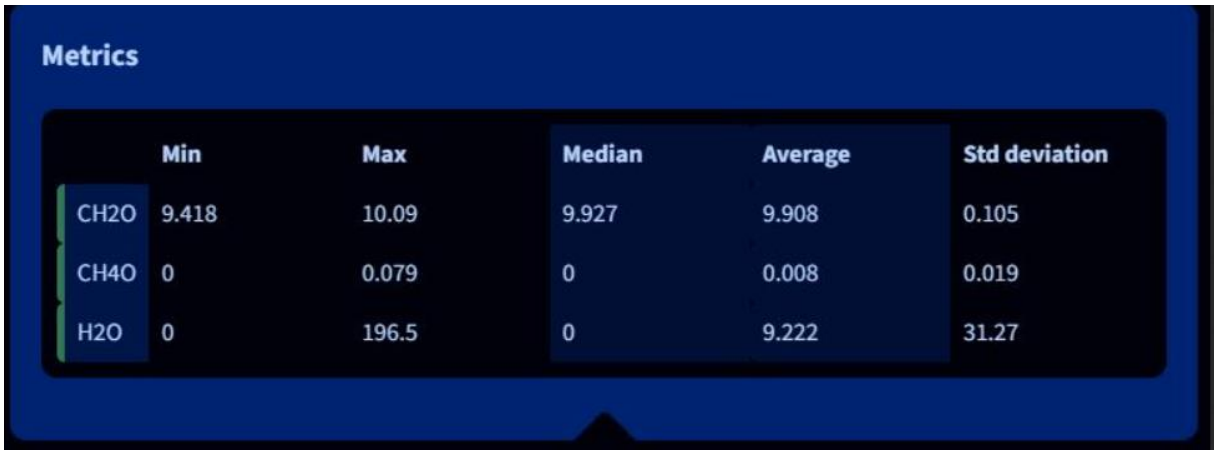
Tabular data

This section will display the same results as the graph in a table format.

1.14. Results table.

Metrics

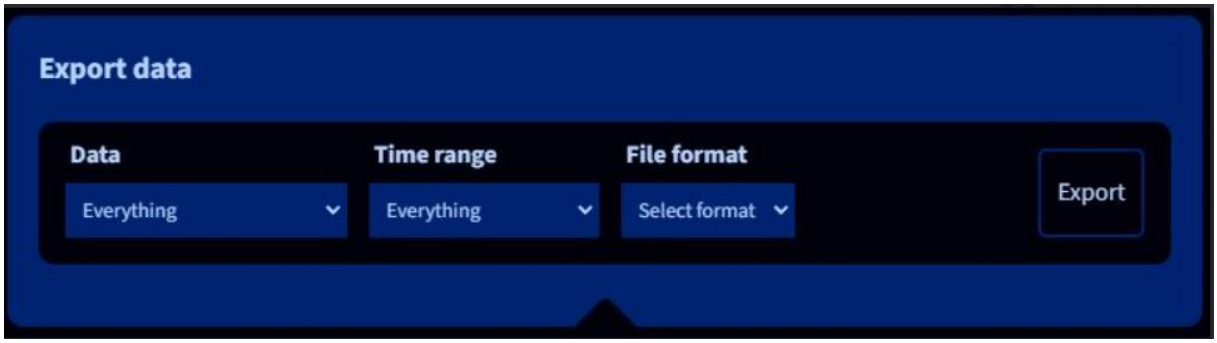
This section will show certain statistical quantities (calculated over the time range displayed in the graph) for each inlet or gas. Displayed values are the minimum and maximum of the measured concentrations, as well as their median, average and standard deviation over the duration of the measurement.



1.15. Metrics table.

Export data

This section allows the user to export the measured data onto a file. The measurement results can be exported during the measurement or in idle state. The report forms are xls, csv and pdf. For a pdf file, the user can add description rows to add information in text form.



1.16. Export data section.

- The "Data" dropdown menu: The user may choose to export either all measurement data (for every gas and on every inlet), or only those results that correspond to the selected gases/inlets in the "Data selection" section.
- The "Time range" dropdown menu: The user may choose to export results either for the entirety of the measurement period, or only those results that correspond to the selected time range in the "Data selection" section.
- The "File format" dropdown menu: The user may select to export the results onto a csv (comma-separated values) file, a pdf file or an xls file.

The exported files will be saved in a defined file path.

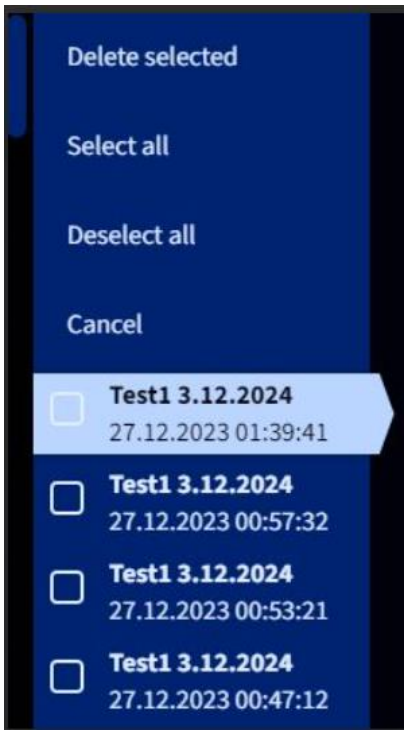
Viewing and managing the results

When GASERA ONE is in idle state, the user can open existing measurement files, review data and export data files in similar way as during the measurement.

Clicking on any result button will display the results on the right pane. The pane contains the results graph and several sections, which may be closed or opened individually by clicking on the section header.

By clicking the "Manage results" button on top of the result list, some options open up: (Note that the result buttons have a selection radio button added to them. These buttons allow the user to select one or multiple results at once).

- "Select all" will select all existing results.
- "Deselect all" will deselect any currently selected results.
- "Delete selected" will delete all selected results from the Gasera ONE device.



1.17. Deleting measurement results.

Setup

The SETUP page allows the user to configure the software's functionality. Among other things, the device's IP address is set here.

The SETUP page is divided into various sections:

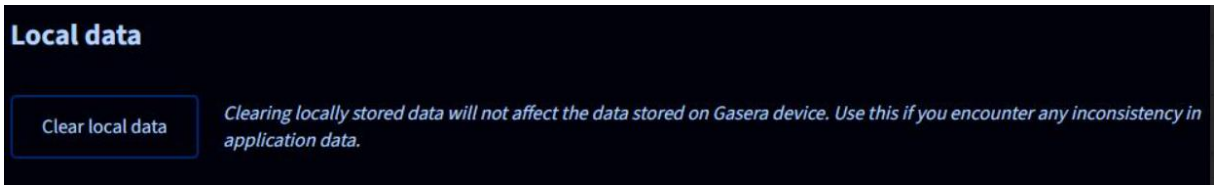
- The "Device connection" section: Set the device's name and IP address where the Gasera ONE device may be reached.

- The "Default graph colors" section: The user may choose the colors that will be used for gas graph lines in the results page.

1.18. Default graph colors.

The "Local data" section: The software uses a local database to cache the measurements stored in the GASERA ONE device. Its purpose is to minimize network traffic between the software and the device. The "clear local data" will clear the database if it becomes necessary.

Note that this will not affect the results stored in the GASERA ONE device, only their copy on the user's computer. It is therefore always safe to clear the database.



1.19. Local data.