

# ENS Dashboard

## ENS210 Eval Kit User Manual

### ENS210 Eval Kit User Manual

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# 1 Introduction

This document describes the ENS Dashboard software for Windows.

The ENS Dashboard is developed for evaluation of environmental sensor devices. Its main features include:

- Monitoring and logging sensor measurement and information
- Sensor development kit firmware update

Currently, it supports the ENS210 evaluation kit and requires a micro-USB-to-I<sup>2</sup>C convertor.



ENS210

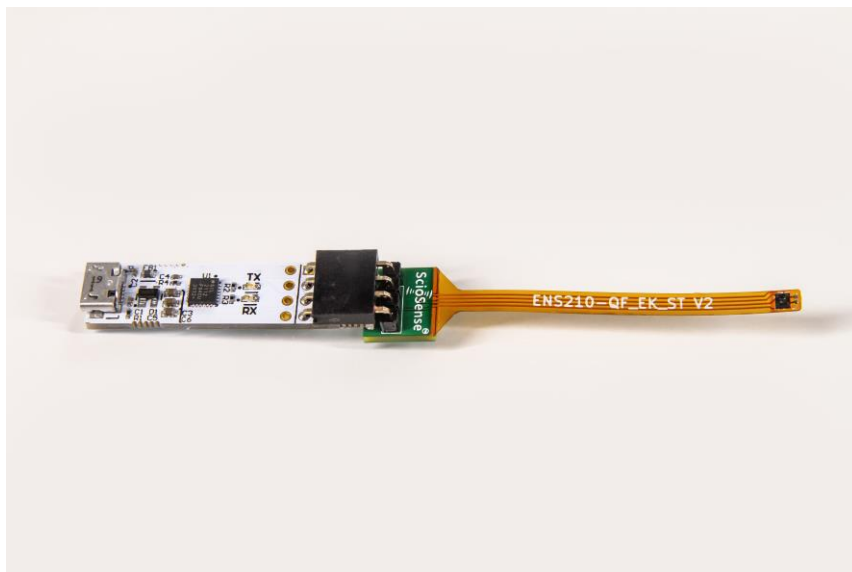
*ENS210-QF\_EK\_ST V2*



micro-USB-to-I<sup>2</sup>C converter

*(Device driver installation may be required)*

To ensure proper communication with the ENS Dashboard, the ENS210 device should be connected to the micro-USB-to-I<sup>2</sup>C convertor as shown in picture below.



ENS210 correctly connected to micro-USB-to-I<sup>2</sup>C convertor

## 2 Getting Started

The section describes installation steps of ENS Dashboard software for Windows.

### 2.1 Prerequisites

The following lists the requirements for installing and running ENS Dashboard on a Windows machine:

- Microsoft Windows 7 or above
- Microsoft .NET Framework 4.5.1 or above
- Internet connection (for installation and access to the latest documentations)

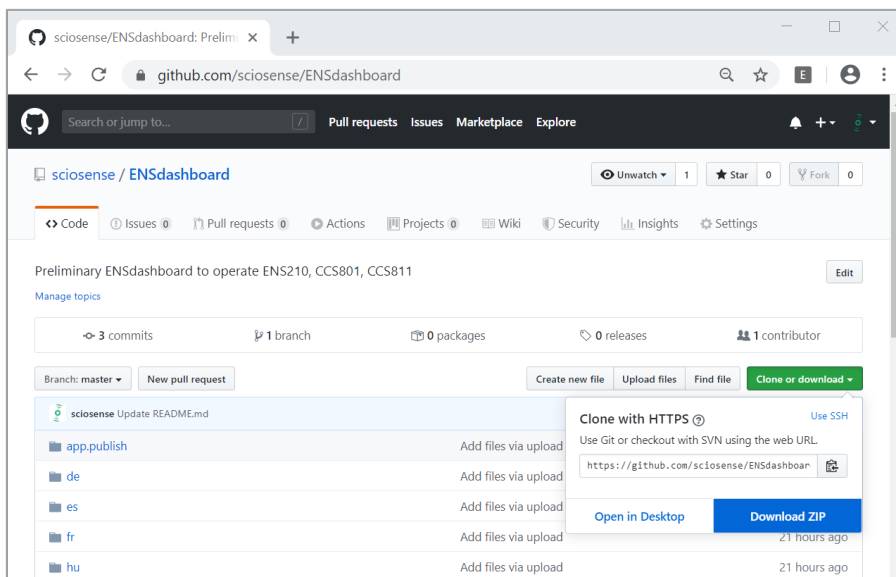
Device driver installation of USB I2C bridges may be required.

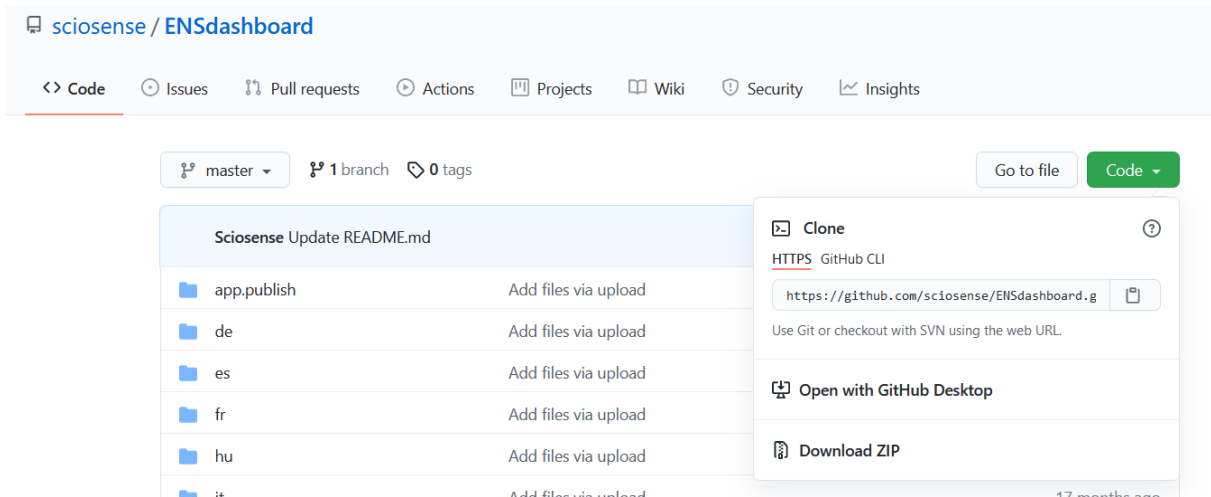
<https://www.sciosense.com/products/relative-humidity-and-temperature-sensors/ens210-relative-humidity-and-temperature-sensor/>

### 2.2 Installation

ENS Dashboard program can be downloaded from:

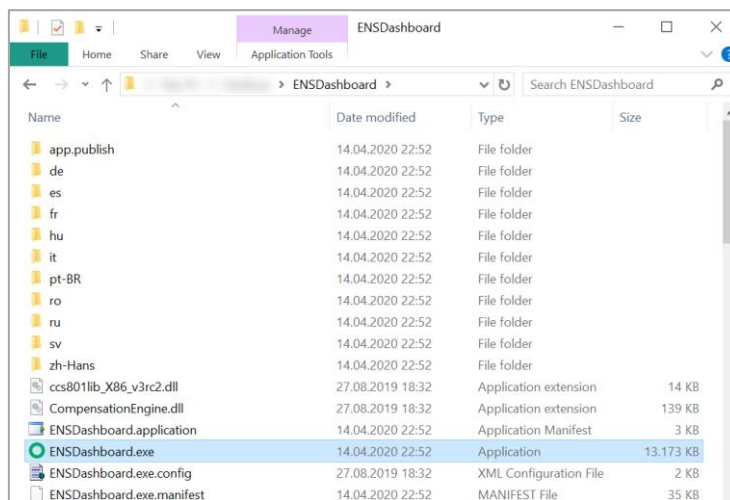
- <https://github.com/sciosense/ENSdashboard>
- <https://downloads.sciosense.com/ens210/>



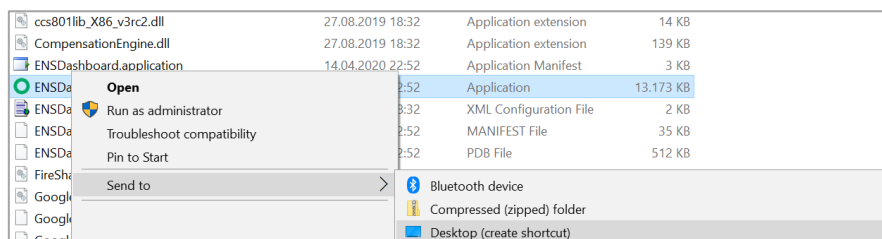


The current release of the ENS Dashboard software is not deployed via a Windows web installer program. Download the full program as ZIP file and extract from file ENSdashboard-master.zip to your preferred location.

Double click on “ENSDashboard.exe” to start the launcher program.

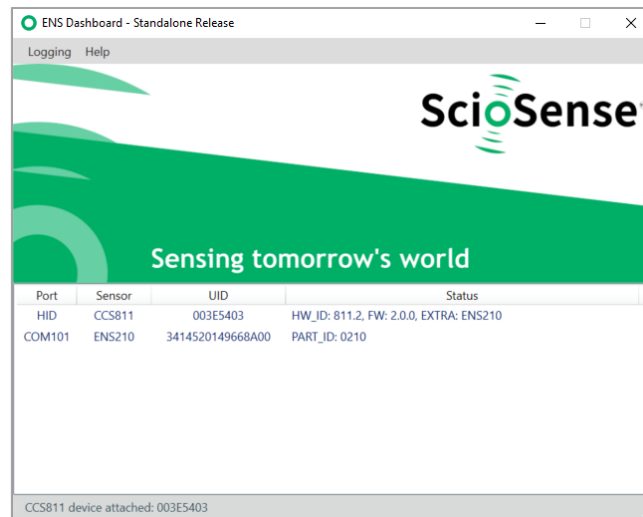


If required, users can create a shortcut to the program on the desktop manually by right click on ENSDashboard.exe, selecting “Send to” followed by “Desktop (create shortcut)”



### 3 Launcher

The Launcher window is shown upon starting ENS Dashboard. The window shows a list of all currently attached shields/bridges, their connected bridge port, sensor type, UID and status. It can take up to 30 seconds before the device is recognized after it has been connected to the USB port.



**Status** will display auxiliary sensors (prefixed with “Extra: “) information if available on the sensor shield device, such as humidity, temperature, and pressure sensor. When the sensor device is performing measurements, whereas sensor measurement data will also be displayed in the **Status** (same message as described in section 4.4).

#### 3.1 Menu

Several menu options are available from the Launcher window:

*Table 1: Launcher Menu Options*

Menu	Options
Logging	Enable Local Logging Logfile Size... View Logfiles... Change Log Data Location...
Help	User Manual Group Sensors by Bridge Dashboard Settings (.json) Quick Start (All) About ENS Dashboard...

### 3.1.1 Enable Local Logging

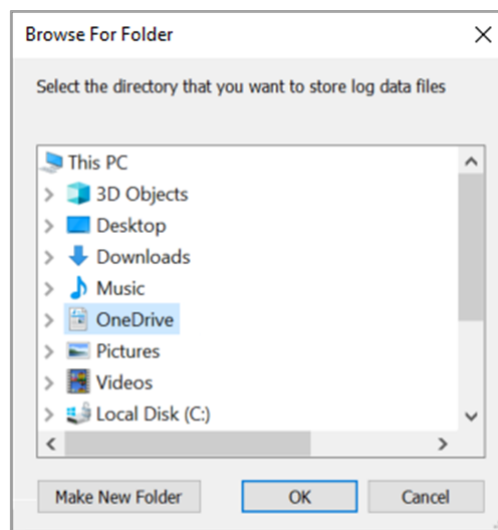
By default, measurement and error logging are enabled for all attached devices. Users can use “**Enable Local Logging**” option to enable/disable local data logging.

### 3.1.2 Logfile Size...

The local “**Logfile Size**” can be specified, by default it is set to 976MB.

### 3.1.3 Change Log Data Location...

The default local logging location can be changed by selecting “**Change Log Data Location**” option from the menu. User will be promoted to select a new location:



Please note that changing local log data location, or enabling/disabling local logging, will not have effects on existing running devices. Existing opened device **Dashboard** windows will continue to run using previous local logging setup until the device **Dashboard** window is closed and reopened.

By default, log data are stored in #EnsDashboard folder locally under user’s profile Documents directory, typically:

*C:\Users\{username}\Documents\#EnsDashboard*

### 3.1.4 View Logfiles...

Users can select **View Logfiles** option from the menu to open log data folder in file explorer.

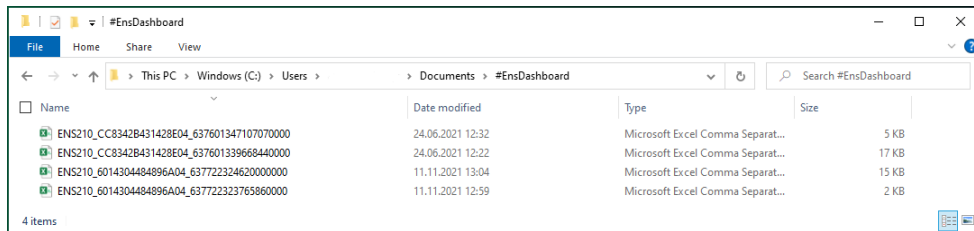
Local log data filenames are prefixed with sensor type and UID. In general, measurement log data filename has the following format:

*{sensor/device}\_{UID}\_{timestamp}.csv*

System and error data are stored in a file separated from measurement log data file, which has the following filename convention:

*#{sensor/device}\_{UID}\_SYS.log*

The following screenshot shows an example of files in log data directory:



Please refer to “Log File Format” document for information on log file content format.

### 3.1.5 User Manual

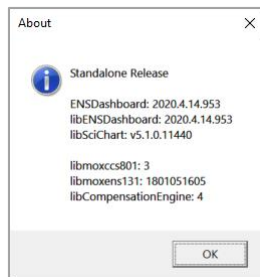
Users can download the latest ENS Dashboard user manual by selecting this option.

### 3.1.6 Quick Start (All)

With the quick start option, the user is able to start data logging of all connected sensors at once without display individual sensor windows.

### 3.1.7 About ENS Dashboard...

**About ENS Dashboard** dialog displays ENS Dashboard software version information:





### 3.2 Device Options

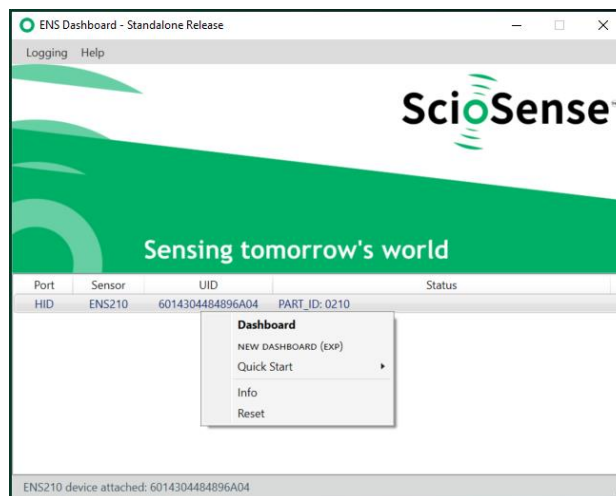
Various device options are available via right-click context menu. Availability of device actions are device dependent:

Table 2 Device Menu Options

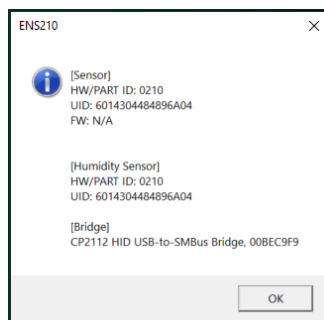
Option	Description
<b>Dashboard*</b>	Main measurement window
Quick Start	Start sensor and data logging without starting main measurement window
Info	Device version and information
Update	Device firmware update
Reset	Device software reset

Note: \* Default option (bold), can also be accessed by double-click on selected device.

For example, the following window shows options available for ENS210 sensor device:

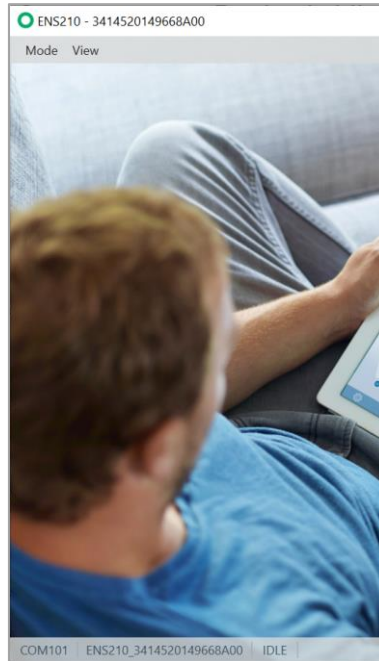


Info option shows device information such as attached bridge and sensor shield device:



## 4 Dashboard

The Dashboard window displays sensor information and measurement data of an attached sensor device. The Dashboard window can be launched from the Launcher window, either by double-click on a selected device, or by selection “Dashboard” from the right-click option menu. By default, all devices will be running in idle mode.



*ENS210*

The **Dashboard** displays sensor device information and measurement data as described in following sections.

### 4.1 Status Information

The measurement window provides the following status information at the bottom bar:

- Bridge Communication Port
- Sensor Type and UID
- Measurement Mode
- Status

### 4.1.1 Sensor Type and UID

Sensor Type and UID status shows the sensor type and UID of current attached sensor device to the measurement window. Detail information of the sensor device is displayed when user hover on the status area:



Sensor type and sensor/bridge device UID information are also displayed in the title bar:



### 4.1.2 Measurement Mode

Measurement Mode status shows current running measurement mode. For more information about measurement modes, please refer to section 4.2.1.

### 4.1.3 Status Message

Status displays various device message and status, such as measurement data and error message, etc. Status area is color coded based on the device and measurement state:

Table 3: Status Message Options (refer to section 4.4 for more information)

Color	Measurement/Device State
Grey	Device is idle, not running measurement 
Green	Device is a) starting up or b) running in one of supported measurement mode a) b)

## 4.2 Menu Options

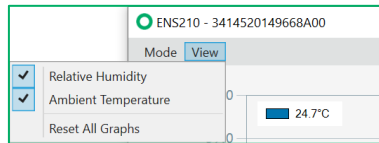
The **Dashboard** window provides several menu options to perform sensor measurement and display. From the **Dashboard** window menu, user may start or switch between supported measurement modes on attached device, and toggle various measurement display options.

### 4.2.1 Measurement Modes

Measurement **Modes** menu lists all supported operation modes of sensor devices. The ENS210 has one measurement mode “RH/T Single Shot” supported.

### 4.3 View Options

**View** menus provide options to configure measurement graphs. User can adjust various setting of displaying measurement graph. Measurement graphs can be individually enabled or disabled, by selecting corresponding measurement graphs from the **View** menu. For example, for ENS210, available measurement graphs are:



Availability of measurement graphs are sensor device dependent. The table below shows a list of measurement graphs available for all supporting devices:

*Table 4: Measurement Graphs*

Sensor	ENS210
Graph	Relative Humidity Temperature

The following table lists general view options which will apply to all displaying measurement graphs:

*Table 5: View Options*

Menu	Description
Configure	Adjust maximum number of display points on all measurement graphs
Reset	Clear measurement points from all graphs

## 4.4 Measurement Graphs

When the device is not idle and running one of the supported measurement modes, the Dashboard window will display all available sensor measurement graphs by default (refer to Table 4). This provides the user a graphical overview of all sensor measurement data received from the attached device.

Measurement graphs can be individually enabled/disabled. However, all sensor measurement data will still be shown in the **Status**.

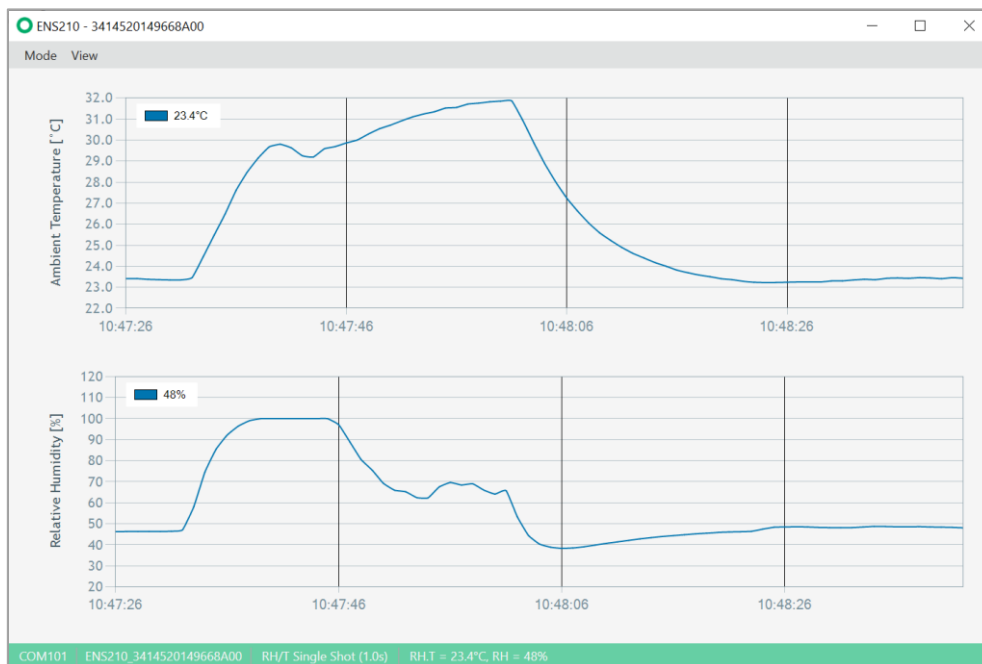
Displaying of measurement data are sensor device dependent. In general, one or more of the following measurement data may be displayed:

- {SENSOR}.T: Ambient temperature in degree Celsius °C
- {SENSOR}.RH: relative humidity in %

Currently, all measurement data will be displayed in measurement units as described above.

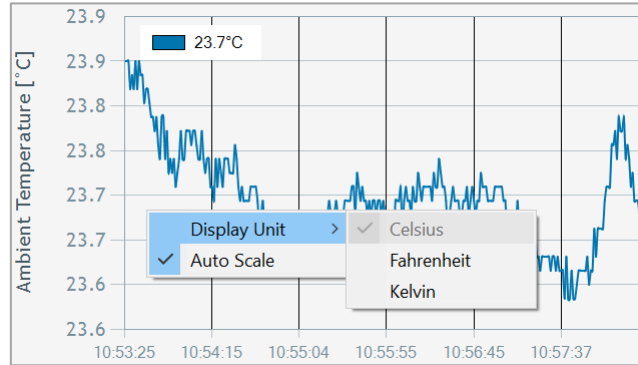
### 4.4.1 Graphs for ENS210

ENS210 sensor device has humidity and temperature measurement data available. By default, graphs for both measurement data are displayed when the device is not idle:



#### 4.4.2 Graph Options

Several additional options to configure the graphs are available via independent context menu (right-click). For example:



Context menu available for each of measurement graph:

*Table 6: Measurement Graph Options*

	Ambient temperature	Relative Humidity	Resistance	eCTO2	eTVOC
Auto Scale	X	X	-	-	-
Display Unit	X	-	-	-	-

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## 7 Document status

Table 7: Document status

Document Status	Product Status	Definition
Product Preview	Pre-Development	Information in this datasheet is based on product ideas in the planning phase of development. All specifications are design goals without any warranty and are subject to change without notice.
Preliminary Datasheet	Pre-Production	Information in this datasheet is based on products in the design, validation or qualification phase of development. The performance and parameters shown in this document are preliminary without any warranty and are subject to change without notice.
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Datasheet (Discontinued)	Discontinued	Information in this datasheet is based on products which conform to specifications in accordance with the terms of SciSense B.V. standard warranty as given in the General Terms of Trade, but these products have been superseded and should not be used for new designs.

## 8 Revision information

Table 8: Revision history

Revision	Date	Comment	Page
1.0	2021-12-10	Initial Version	All

### Note(s) and/or Footnote(s):

1. Page and figure numbers for the previous version may differ from page and figure numbers in the current revision.
2. Correction of typographical errors is not explicitly mentioned.



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