

ENS Dashboard

ENS210 Eval Kit User Manual

ENS210 Eval Kit User Manual

Revision: 1 Release Date: 2021-12-10 Document Status: Production





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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-I²C convertor.





ENS210 ENS210-QF_EK_ST V2

micro-USB-to-I²C 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-I²C convertor as shown in picture below.



ENS210 correctly connected to micro-USB-to-I²C 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
- <u>https://downloads.sciosense.com/ens210/</u>

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Preliminary ENSdashboard to operate ENS210, CCS801, CCS811 Manage topics								
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-o- 3 commits Branch: master New pull reques	₿ 1 branch	🗊 0 packages	© 0 Create new file	Upload files	LL Find file	1 contribut	or wnload -]
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		Add files via upload		17 months ago

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.

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File Home Share View	Application Tools					~ 0
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ccs801lib_X86_v3rc2.dll	2	7.08.2019 18:32	Applica	tion extension	14	KB
CompensationEngine.dll	2	7.08.2019 18:32	Applica	tion extension	139	KB
ENSDashboard.application	1	4.04.2020 22:52	Applica	tion Manifest	3	KB
O ENSDashboard.exe	1	4.04.2020 22:52	Applica	tion	13.173	КВ
ENSDashboard.exe.config	2	7.08.2019 18:32	XML Co	onfiguration File	2	KB
ENSDashboard.exe.manifest	1	4.04.2020 22:52	MANIF	EST File	35	KB

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)"

4	ccs801lib_X86_v3rc2.dll 27.08.2019 18			8:32	Application extension	14 KB	
4	S CompensationEngine.dll 27.08.2019 18			8:32	Application extension	139 KB	
ENSDashboard.application 14.04.2020 22			2:52	Application Manifest	3 KB		
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	ENSDa	•	Run as administrator		3:32	XML Configuration File	2 KB
	ENSDa		Troubleshoot compatibility		2:52	MANIFEST File	35 KB
	ENSDa		Pin to Start		2:52	PDB File	512 KB
8) 8)	FireSha		Send to	>	8	Bluetooth device	
	Google				-	Compressed (zipped) folder	
	Google					Desktop (create shortcut)	

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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:

Browse For Folder					
Select the directory that you want to store log data files					
	_				
S This PC	^				
> 🧊 3D Objects					
> Desktop					
> 🕹 Downloads					
> 👌 Music					
> 🗟 OneDrive					
> E Pictures					
> 🧱 Videos					
> 🔩 Local Disk (C:)	~				
< >					
Make New Folder OK Cancel					

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:

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← → × ↑ 🖡 → This PC → Windows (C:) → Users →	> Documents > #EnsDashboard	Q 5 V	Search #EnsDashboard	
Name Y	Date modified	Туре	lize	
ENS210_CC8342B431428E04_637601347107070000	24.06.2021 12:32	Microsoft Excel Comma Separat	5 KB	
ENS210_CC8342B431428E04_637601339668440000	24.06.2021 12:22	Microsoft Excel Comma Separat	17 KB	
ENS210_6014304484896A04_637722324620000000	11.11.2021 13:04	Microsoft Excel Comma Separat	15 KB	
ENS210_6014304484896A04_637722323765860000	11.11.2021 12:59	Microsoft Excel Comma Separat	2 KB	
4 items				

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:



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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
Dashboard*	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

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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:

O ENS2	210 - 3414520149668A00
Mode	View

4.1.2 Measurement Mode

Measurement Mode status shows current running measurement mode. For more infor-mation 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 HID ENS210_6014304484896A04 IDLE PART_ID: 0210
Green	Device is a) starting up or b) running in one of supported measurement modea)HIDENS210_6014304484896A04RH/T Single Shot (1.0s)Waiting for datab)HIDENS210_6014304484896A04RH/T Single Shot (1.0s)RH.T = 23.7°C, RH = 66%

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 (rightclick). For example:



Context menu available for each of measurement graph:

Table 6: Measurement Graph Options

	Ambient temperature	Relative Humidity	Resistance	eCT02	eTVOC
Auto Scale	Х	Х	-		-
Display Unit	Х		-		-

5 RoHS Compliance & ScioSense Green Statement

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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.
Datasheet	Production	Information in this datasheet is based on products in ramp-up to full production or full production which conform to specifications in accordance with the terms of ScioSense B.V. standard warranty as given in the General Terms of Trade.
Datasheet (Discontinued)	Discontinued	Information in this datasheet is based on products which conform to specifications in accordance with the terms of ScioSense 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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