



# **Colswe-CO<sub>2</sub> Module (EU)**

## **User Manual**

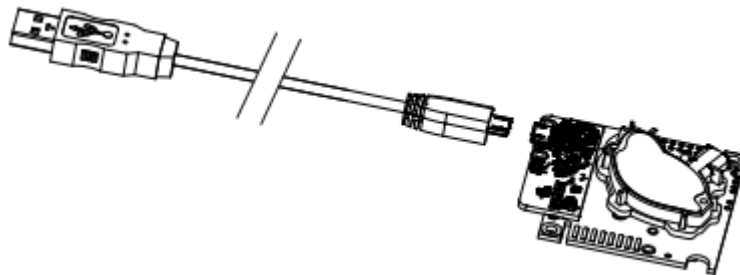
[www.colswe.com](http://www.colswe.com)

## 1. Introduction

Colswe-CO<sub>2</sub> manual offers a quick step-by-step start-up of the operation of the Colswe-CO<sub>2</sub> Module. Technical information can be found in the Specification Sheet of this product in [www.colswe.com](http://www.colswe.com).

## 2. Positioning (see below “Connection”)

- During the measuring/logging process only 5V DC power is needed.
- Colswe-CO<sub>2</sub> can be mounted horizontally onto a regular 230 V power socket with the included power USB charger/adaptor and a USB-A to USB-micro-B plug adapter (not included).
- For best measuring results the enclosure should be placed vertically or horizontally against any surface that is of neutral temperature. Heated or cooled surfaces can influence the readings.
- For the most convenient positioning, angled USB cables can be chosen.



You must plug in your Colswe-CO<sub>2</sub> module with a USB-A to USB micro-B cable

## 3. Connection (measuring/logging)

- During the basic measuring/logging process only 5V DC power is needed.
- Colswe-CO<sub>2</sub> can be powered by a 5V AC/DC power adapter with USB outlet (included) and a USB cable and with micro-B connector (included).
- Care should be given to the USB micro-B connector; it is delicately soldered onto the PCB and should be handled with care.

## 4. Connection (Testing; sensor management; data retrieval)

For testing purposes, sensor management and data retrieval, Colswe-CO<sub>2</sub> should be connected to a PC using the included USB-A USB-micro-B cable or the included plug adapter which can also be used for powering Colswe-CO<sub>2</sub>.

## 5. Preparation – Access to Colswe-CO<sub>2</sub>

- The only way to communicate with Colswe-CO<sub>2</sub> is with an installed software.
- To start with, the VirtualHub.zip file is to be retrieved from the Colswe website to enable a communication of Colswe-CO<sub>2</sub> through an IP network.

Choice between several versions: Windows, Linux, Mac-OS-X and Qnap.

- After unzipping the file, apply/install the VirtualHub.
- Open your web browser and link to <http://127.0.0.1:4444>

- e. The link gives access to a **Device List**, which shows the VirtualHub and all the devices connected to the PC. The unique serial (ID) numbers of the VirtualHub and the devices are shown.
- f. Congratulations, you are now able to communicate with your Colswe-CO2.

A pop-up menu shows a list of all Colswe devices connected to your host. For further information about each one of these devices just click on the serial numbers. To configure click on the corresponding “**configure**” button. Each **beacon** button will toggle the blue beacon LED light on the corresponding device allowing you to locate it.

Serial	Logical Name	Description	Action
VIRTHUB0-34714531bb	Colswe	VirtualHub	<a href="#">configure</a> <a href="#">view log file</a>
network	Colswe		
TMPSENS1-A92BC	Colswe-Temperature	Yocto-Temperature	<a href="#">configure</a> <a href="#">view log file</a> <a href="#">beacon</a>
dataLogger		OFF	
temperature		22.31	
YVOCMK02-AA4E9	Colswe-VOC-V2	Yocto-VOC-V2	<a href="#">configure</a> <a href="#">view log file</a> <a href="#">beacon</a>
dataLogger		OFF	
voc		450	
YC02MK01-AA563	Colswe-CO2	Yocto-CO2	<a href="#">configure</a> <a href="#">view log file</a> <a href="#">beacon</a>
carbonDioxide		896	
dataLogger		OFF	

*Device list as displayed in your web browser*

- g. An initial glimpse of the current measured values can be obtained by left clicking the button in the lower right-hand corner “**show device functions**” and the pop-up menu below appears

## Device list

Here is the list of all devices connected to your host. If you want more information about each of these devices just click on serial number. If you want to configure one device, just click on the matching **configure** button. Each **beacon** button will toggle the blue beacon led on matching device allowing you to locate it.

Serial	Logical Name	Description	Action
VIRTHUB0-34714531bb	Colswe	VirtualHub	<a href="#">configure</a> <a href="#">view log file</a>
network	Colswe		
TMPSENS1-A92BC	Colswe-Temp	Yocto-Temperature	<a href="#">configure</a> <a href="#">view log file</a> <a href="#">beacon</a>
dataLogger		OFF	
temperature		22.31	
YVOCKM02-AA4E9	Colswe-VOC-V2	Yocto-VOC-V2	<a href="#">configure</a> <a href="#">view log file</a> <a href="#">beacon</a>
dataLogger		OFF	
voc		454	
YCO2MK01-AA563	Colswe-CO2	Yocto-CO2	<a href="#">configure</a> <a href="#">view log file</a> <a href="#">beacon</a>
carbonDioxide		1052	
dataLogger		OFF	

- h. The device functions can be hidden again by left clicking the button in the lower right- hand corner “**Hide device functions**”.

## 6. Configuration of Colswe-CO<sub>2</sub>Module

- Colswe-CO<sub>2</sub> can be accessed and configured by left clicking the button “**configure**” on the line of the corresponding device.
- The properties of the device are shown.

YCO2MK01-AA563

Edit parameters for device YCO2MK01-AA563, and click on the **Save** button.

Serial # YCO2MK01-AA563

Product name: Yocto-CO2

Firmware: 28721 [upgrade](#)

Logical name:

Luminosity:  (signal leds only)

**Device functions**

Each function of the device has a physical name and a logical name. You can change the logical name using the **rename** button.

YCO2MK01-AA563.carbonDioxide / [rename](#)

YCO2MK01-AA563.dataLogger / [rename](#)

recording is OFF [configure](#)

no recorded data

**carbonDioxide calibration**

Calibration parameter: 0 [edit](#)

Resulting measure: 916 ppm [calibrate](#)

[Save](#) [Cancel](#)

Properties of the Colswe-CO<sub>2</sub> module

- c. First of all the firmware of the sensor has to be upgraded. This can be done by left clicking the button “**upgrade**”.

A pop-down menu appears. It is recommended to choose: “*Use most recent firmware from [www.yoctopuce.com](http://www.yoctopuce.com)*”. Click on “**Upload**” and the upgrade process starts; the led- light in Colswe-CO2 blinks brightly briefly. A successful upgrade is confirmed; please close the menu.

- d. Click again on “**configure**” in the Device List.
- e. Colswe-CO<sub>2</sub> can be given a unique Logical name, which can simply be a unique device name by the client. This name can have a maximum length of 19 characters. Authorized characters are A..Z, a..z, 0..9, \_, and -.

**NOTE:** No same name for different devices.

- f. The signal LED light of Colswe-CO<sub>2</sub> can be set at a low or high luminosity by a slider. When the sensor is positioned in a working or a public place, it is recommended to set the luminosity at “low” (slider to the left).
- g. Units of temperature and humidity can be set:
- The temperature can be set at °C, °F (or °K)
  - The humidity can be set at % RH (relative humidity)
  - The humidity can be set at g/m<sup>3</sup> (absolute humidity)

## 7. Configuration of the datalogger

Read below about the different alternatives to activate or deactivate the datalogger.

- h. In the device List, click on the “**configure**” button of the device you want to activate. The pop-up menu below appears, follow the instructions to this alternative.

YCO2MK01-AA563

Edit parameters for device YCO2MK01-AA563, and click on the **Save** button.

Serial # YCO2MK01-AA563

Product name: Yocto-CO2

Firmware: 28721 **upgrade**

Logical name: Colswe-CO2

Luminosity:  (signal leds only)

**Device functions**

Each function of the device has a physical name and a logical name. You can change the logical name using the **rename** button.

YCO2MK01-AA563.carbonDioxide / **rename**

YCO2MK01-AA563.dataLogger / **rename**

recording is OFF **configure**

no recorded data

**carbonDioxide calibration**

Calibration parameter: 0, **edit**

Resulting measure: 964 ppm **calibrate**

**Save** **Cancel**

Click the **configuration** button

In the new window select how to start logging, close the window and Click the **Save** button

- i. After clicking on the **“Save”** button a new pop-up menu below appears

**Data logger configuration**

You can choose which functions you want to record, and the frequency at which data should be recorded. Note that if you choose a recording rate higher than the effective sensor refresh rate, the same value will be recorded multiple time.

**Global settings**

Recording: ☐ On ☒ Off

Recording rate: 12/m

☐ Auto-start recording at power-on

☒ Link recording to beacon button

**Recordable functions**

☒ humidity

☒ pressure

☒ temperature

Ok Close

Manual start, click the **On** button

Auto-start when connecting the sensor to the PC or to the power supply.

Manual start with the beacon button

After the selection  
Click the **Ok** button

- j. The alternative with the beacon button is applicable if the beacon button has been activated.

Serial	Logical Name	Description	Action
VIRTHUB0-34714531bb	Colswe	VirtualHub	<a href="#">configure</a> <a href="#">view log file</a>
TMPSSENS1-A92BC	Colswe-Temperature	Yocto-Temperature	<a href="#">configure</a> <a href="#">view log file</a> <a href="#">beacon</a>
YVOCHK02-AA4E9	Colswe-VOC-V2	Yocto-VOC-V2	<a href="#">configure</a> <a href="#">view log file</a> <a href="#">beacon</a>
YC02MK01-AA563	Colswe-CO2	Yocto-CO2	<a href="#">configure</a> <a href="#">view log file</a> <a href="#">beacon</a>


Click on the beacon button to start logging if that was the selected option

The blue square indicates the sensor is logging

Show device functions

- k. For the following alternative, In the Device List, click on the serial number of the device to be activated. A pop-up menu appears, click on **“Open API browser (Popup)”**. Follow the instructions below.

YCO2MK01-AA563

 YCO2MK01-AA563 / Colswe-CO2 is a 58x57mm hybrid board featuring a CO2 sensor.

**Kernel**

Serial #

YCO2MK01-AA563

Product name:

Yocto-CO2

Logical name:

Colswe-CO2

Firmware:

28721

Consumption:

45 mA

Beacon:

Inactive

turn on

Luminosity:

50%

**Sensors**

	Min	Current	Max
CO2	869 ppm	1045 ppm	1150 ppm

CO2 data are shown in ppm by volume.

**Misc**

Open API browser (pop-up)

Get user manual from [yoctopuce.com](http://yoctopuce.com)

Close

The second alternative to start logging is to click on the device in the device list.

In the new window click the Turn on button to activate the beacon button

The third alternative is to click on Open API browser (pop-up), scroll the API browser to get to datalogger where it's possible to select between the following alternatives:

- Clicking on the ON button
- Autostart
- Activating the beacon button

**dataLogger** refresh

logicalName:

Colswe-CO2

edit

advertisedValue:

OFF

edit

currentRunIndex:

2

edit

timeUTC:

1522615322

edit

recording:

OFF

edit

autoStart:

OFF

edit

beaconDriven:

ON

edit

clearHistory:

FALSE

edit