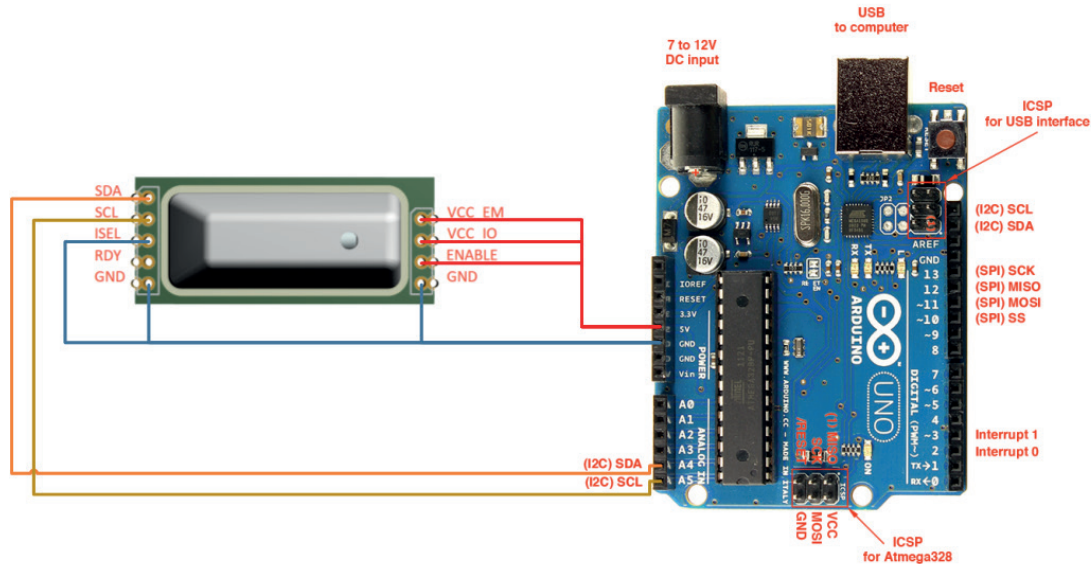


QUICK START GUIDE

This document deals with the communication between an EE895 Sensor Module and an Arduino Uno via simplified I²C.

STEP 1

Connect the EE895 Sensor Module with Arduino according to the following scheme:



STEP 2

Download and install the Arduino IDE (<https://www.arduino.cc/en/Main/Software>). Version >1.8.7 recommended.

STEP 3

Connect the Arduino to your PC by means of the USB cable. Select Board "Arduino Uno" and the appropriate COM-Port from Tools menu and upload the following sketch.

Please note:

The Arduino Uno board has no hardware pull-up resistors for the I²C bus. These are enabled internally in the microcontroller library. In case of communication problems, pull-up resistors can be added externally. See page 9, figure 8: Example I²C interface in the EE895 User Manual.

```
#include <Wire.h>

#define REQUEST_INTERVAL_MS    15000
#define CSV_DELIMITER          ','

unsigned char i2cResponse[8];
float co2, temperature, pressure;

void setup()
{
    Serial.begin(115200);
    Wire.begin(); // initialize I2C peripheral (SDA..A4, SCL..A5)

    // print CSV header
    Serial.print("co2");           Serial.print(CSV_DELIMITER);
    Serial.print("temperature");   Serial.print(CSV_DELIMITER);
    Serial.println("pressure");
}
```

```

void loop()
{
    int i = 0;

    // set register address 0 an simple I2C interface
    Wire.beginTransmission(0x5E);
    Wire.write(0);
    Wire.endTransmission(true);

    // read data from slave device
    Wire.requestFrom(0x5E, 8, true);
    while (Wire.available())
    {
        i2cResponse[i++] = Wire.read();
    }

    // check if all requested data could be read
    if (i >= 8)
    {
        co2 = (float)(i2cResponse[0] * 256 + i2cResponse[1]);
        temperature = (float)(i2cResponse[2] * 256 + i2cResponse[3]) / 100;
        pressure = (float)(i2cResponse[6] * 256 + i2cResponse[7]) / 10;

        Serial.print(co2);          Serial.print(CSV_DELIMITER);
        Serial.print(temperature); Serial.print(CSV_DELIMITER);
        Serial.println(pressure);
    }
    else
    {
        Serial.println("Error - not able to read measurement data");
    }
    delay(REQUEST_INTERVAL_MS);
}

```

Disclaimer:

This application example is non-binding and does not claim to be complete with regard to configuration and equipment as well as all eventualities. The application example is intended to provide assistance with EE895 Miniature Sensor Module design-in and is provided "as is". You yourself are responsible for the proper operation of the products described. This application example does not release you from the obligation to handle the product safely during application, installation, operation and maintenance. By using this application example, you acknowledge that we cannot be held liable for any damage beyond the liability regulations described. We reserve the right to make changes to this application example at any time without notice. In case of discrepancies between the suggestions in this application example and other E+E publications, such as catalogues, the content of the other documentation takes precedence.

We assume no liability for the information contained in this document.