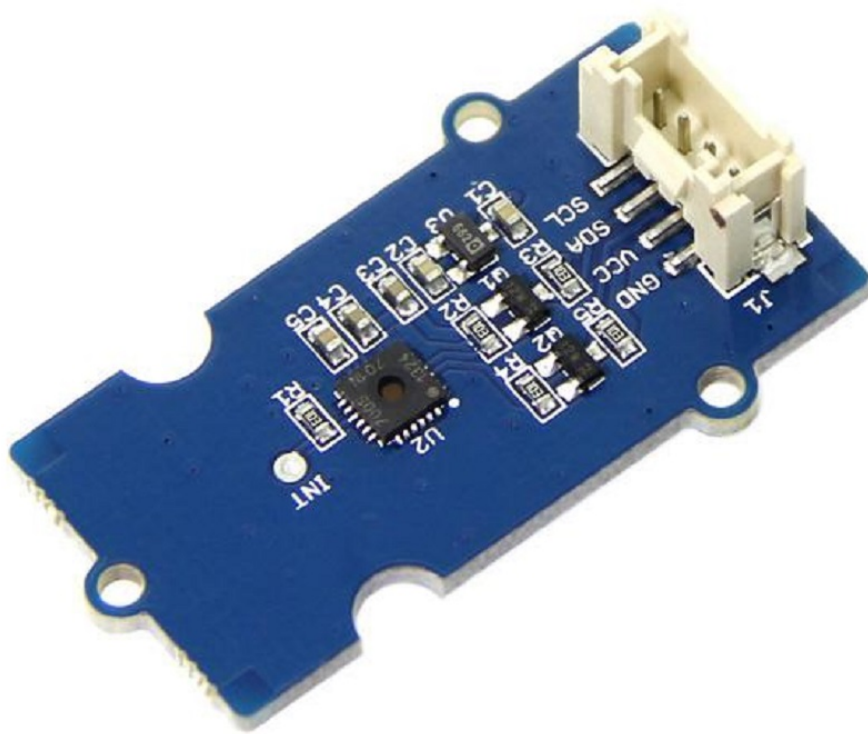# Grove - Temperature&Humidity Sensor (High-Accuracy &Mini) v1.0

This is a multifunctional sensor that gives you temperature and relative humidity information at the same time. It utilizes a TH02 sensor that can meet measurement needs of general purposes. It provides reliable readings when environment humidity condition in between 0-80% RH, and temperature condition in between 0-70°C,

covering needs in most home and daily applications that don't contain extreme conditions.

Get One Now 🛒

[https://www.seeedstudio.com/Grove-Temperature%26Humidity-Sensor-(High-Accuracy-%26-Mini)-p-1921.html]

Specifications

- Wide operating voltage range

    - (3.3V ~ 5V)

- Low Power Consumption

    - 350 μA during RH conversion

- 0 to 100% RH operating range

- Measuring Range:

    - Humidity: 0% - 80% RH

    - Temperature: 0 ~ 70 °C

- Accuracy:

    - Humidity: ±4.5% RH

    - Temperature: ±0.5°C
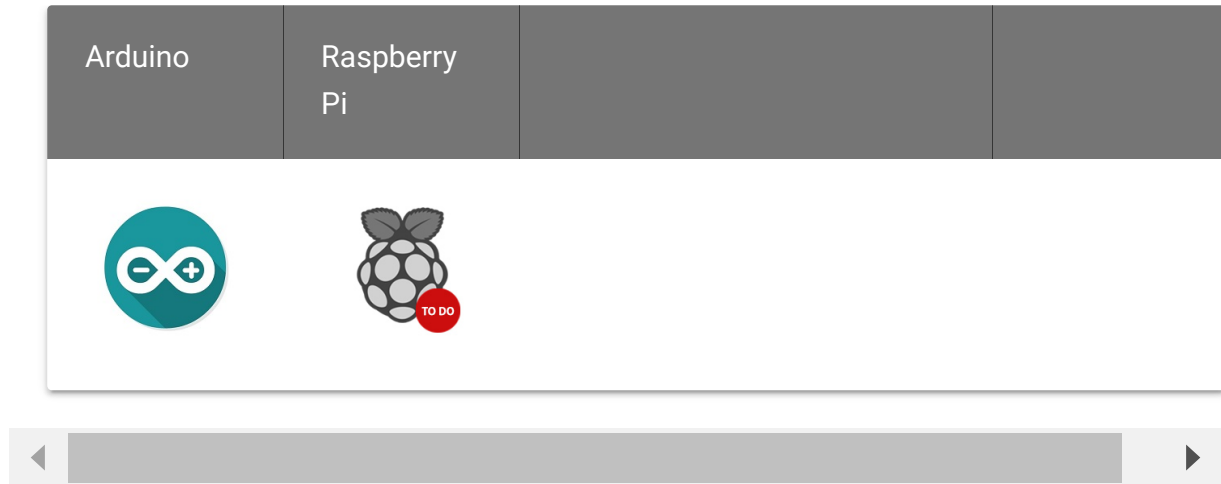
- I2C host interface

- Excellent long term stability

> 🔥 **Tip**
> More details about Grove modules please refer to Grove System [https://wiki.seeedstudio.com/Grove_System/]

Platforms Supported

Arduino	Raspberry Pi		

◀   ▶

> ⚠ **Caution**
> The platforms mentioned above as supported is/are an indication of the module's software or theoritical compatibility. We only provide software library or code examples for Arduino platform in most cases. It is not possible to provide software library / demo code for all possible MCU platforms. Hence, users have to write their own software library.

Applications

- Industrial HVAC/R
- Thermostats/humidistats
- Micro-environments/data centers

Getting Started

> ✏ **Note**
> If this is the first time you work with Arduino, we firmly recommend you to see Getting Started with Arduino

[https://wiki.seeedstudio.com/Getting_Started_with_Arduino/] before the start.

Play With Arduino

Hardware
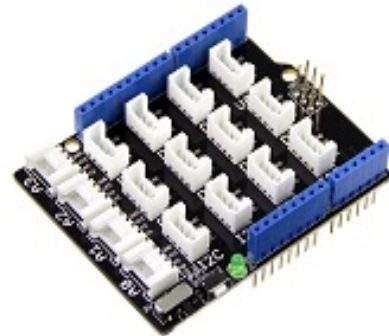
- **Step 1.** Prepare the below stuffs:

Seeeduino V4.2	Base Shield
Get One Now [https://www.seeedstudio.com/Seeeduino-V4.2-p-2517.html]	Get One Now [https://www.seeedstudio.com/Base Shield-V2-p-1378.html]

- **Step 2.** Connect Grove - Temperature&Humidity Sensor (High-Accuracy &Mini) v1.0 to **I2C** port of Grove-Base Shield.

- **Step 3.** Plug Grove - Base Shield into Seeeduino.

- **Step 4.** Connect Seeeduino to PC via a USB cable.
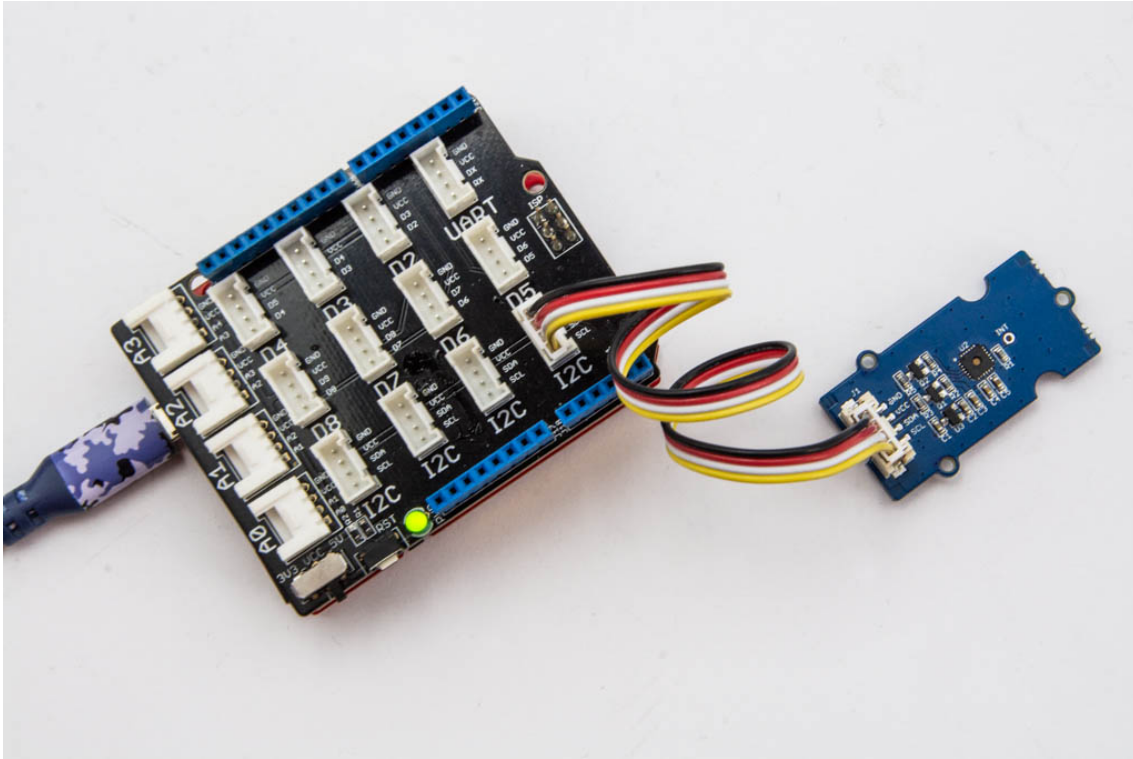
> ✏️ **Note**
> If we don't have Grove Base Shield, We also can directly connect Grove - Temperature and Humidity Sensor Pro to Seeeduino as below.

Seeeduino	Temperature&Humidity Sensor
5V	Red
GND	Black
SDA	White
SCL	Yellow

Software

- **Step 1.** Download the Grove Temperature&Humidity TH02 library [https://github.com/Seeed-Studio/Grove_Temper_Humidity_TH02] from Github.

- **Step 2.** Refer How to install library [https://wiki.seeedstudio.com/How_to_install_Arduino_Library] to install library for Arduino.

- **Step 3.** Restart the Arduino IDE. Open " TH02_demo" example via the path: **File → Examples → Grove Temper Humidity_TH02 → TH02_demo**. Through this demo, we can read the temperature and relative humidity information of the environment.
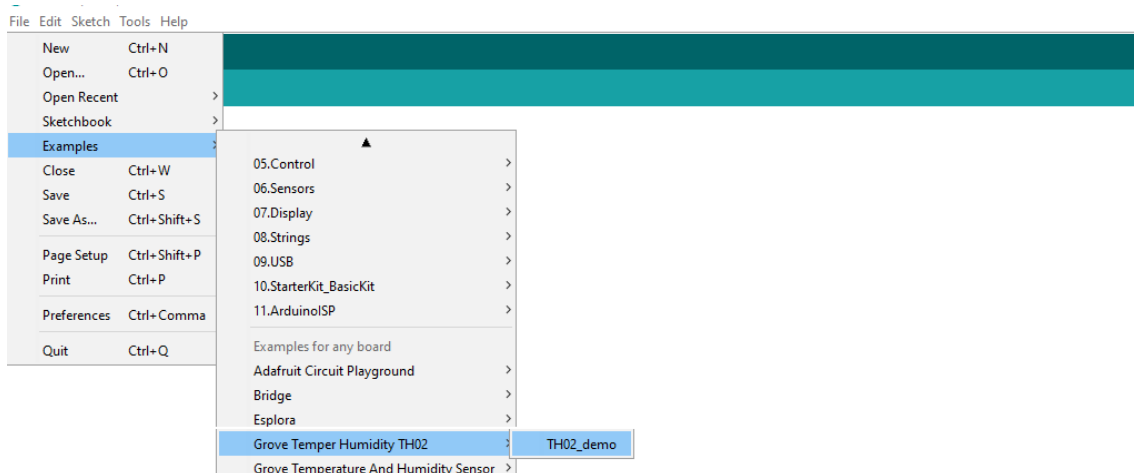

This demo is going to show you how to read temperature and humidity information from this Grove - Temperature&Humidity Sensor (High-Accuracy &Mini) Sensor.

- **Step 4.** Upload the demo. If you do not know how to upload the code, please check how to upload code [https://wiki.seeedstudio.com/Upload_Code/].

- **Step 5.** Open the **Serial Monitor** of Arduino IDE by click **Tool-> Serial Monitor**. Or tap the `Ctrl` + `Shift` + `M` key at the same

time. if every thing goes well, you will get the temperature.

The result should be like:
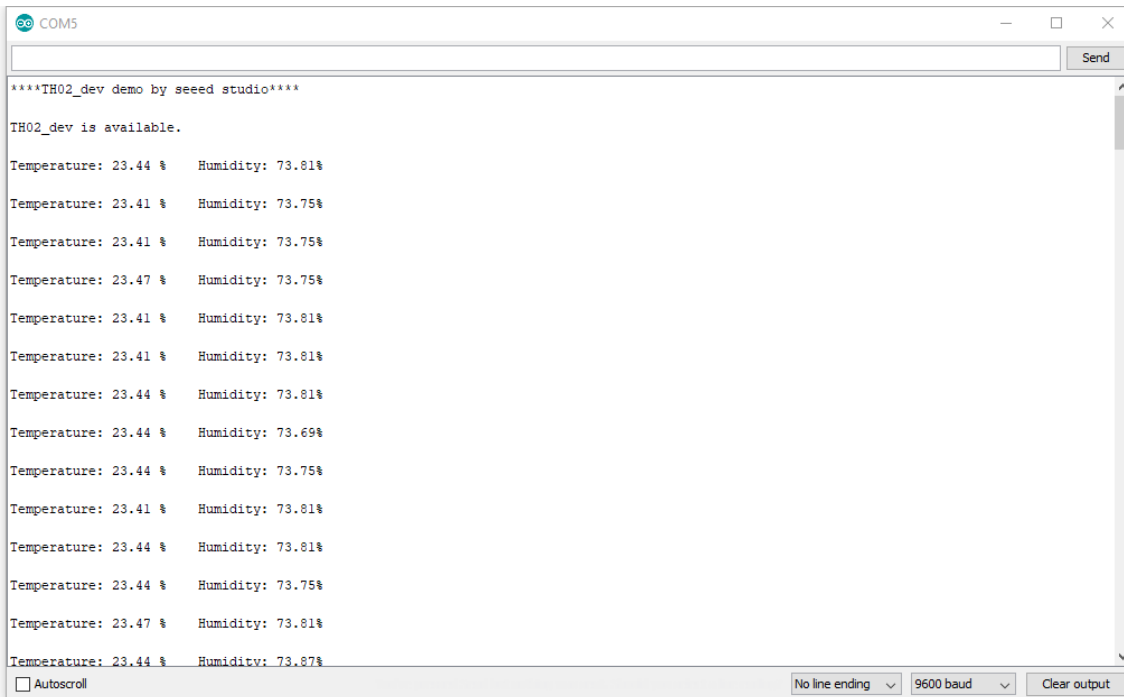
Schematic Online Viewer

Resources

- **[Zip]** Grove - Temperature&Humidity Sensor (High-Accuracy & Mini) V1.0 sch pcb [https://files.seeedstudio.com/wiki/Grove-TemptureAndHumidity_Sensor-High-Accuracy_AndMini-v1.0/res/Grove-TemperatureAndHumidity_Sensor-High-Accuracy_And_Mini-V1.0_sch_pcb.zip]

- **[PDF]** TH02_SENSOR.pdf [https://files.seeedstudio.com/wiki/Grove-

TemptureAndHumidity_Sensor-High-Accuracy_AndMini-
v1.0/res/TH02_SENSOR.pdf]

- **[Library]** Grove_Temper_Humidity_TH02 library
[https://github.com/Seeed-
Studio/Grove_Temper_Humidity_TH02]

Projects

Smart Mali: A Smart Pot for Indoor Gardening! {Wondering what
Mali means?}

Cold Transport Chain Monitoring and Tracking: IoT based solution
to make delivery of temperature sensitive perishable products more
efficient and to reduce wastage.

(https://www.hackster.io/musketeers/col
transport-chain-monitoring-and-
tracking-48b2c5)
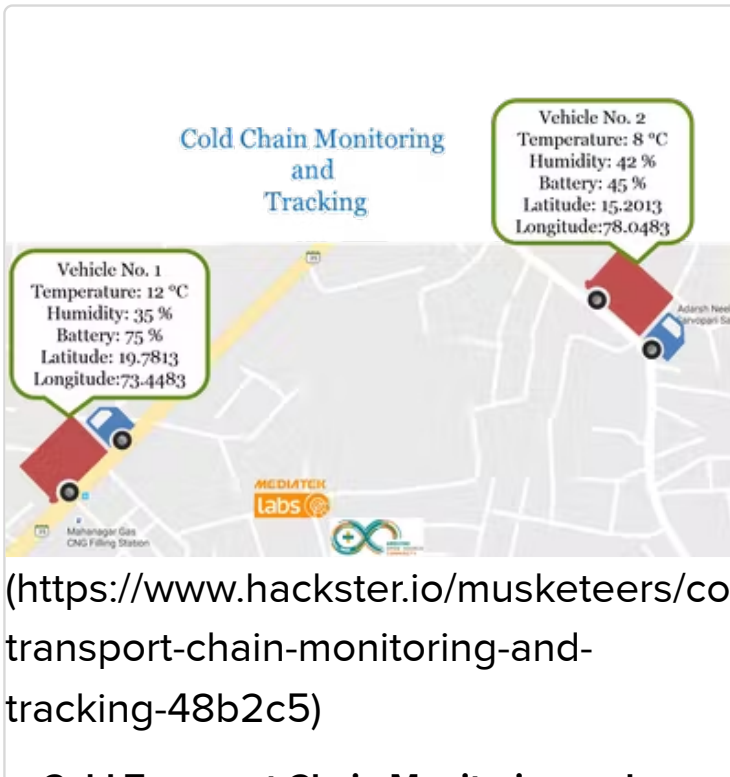
Tech Support

Please submit any technical issue into our forum
[https://forum.seeedstudio.com/].

[https://www.seeedstudio.com/act-4.html?
utm_source=wiki&utm_medium=wikibanner&utm_campaign=newpr
oducts]