

Glossary

Sensors

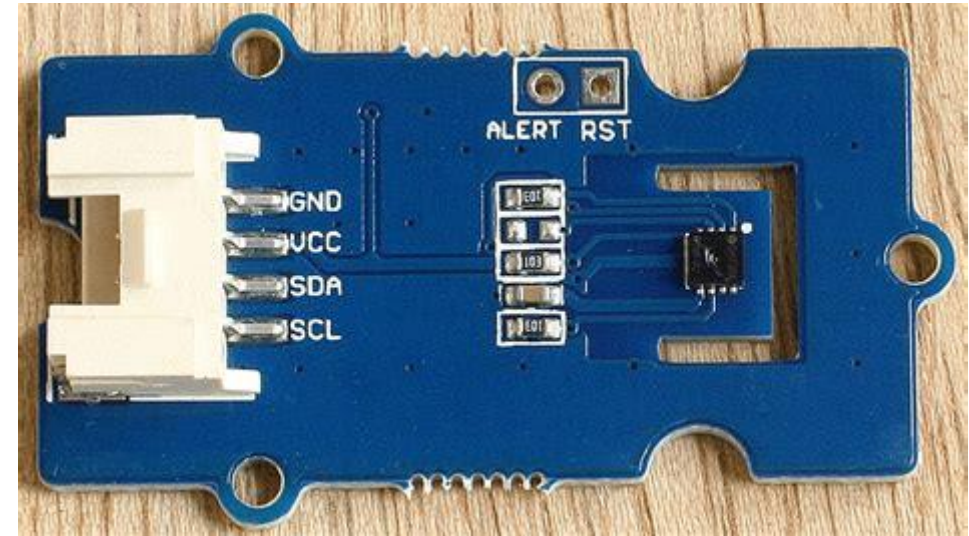
Plantower PMS5003

- Particulate matter sensor



SHT35

- Temperature and humidity sensor



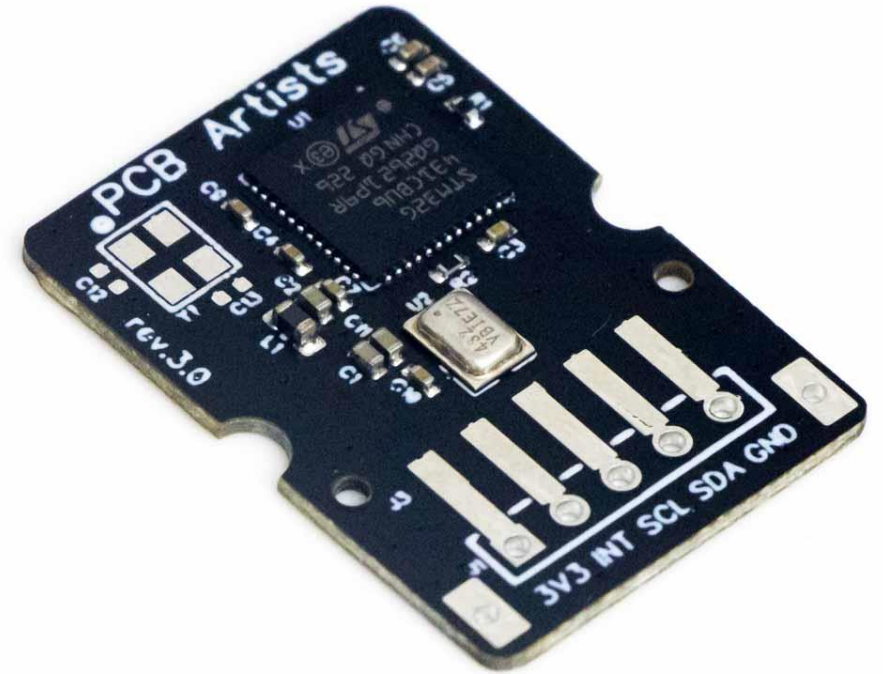
WS3 Weather Station

- Rain gauge, wind speed & wind direction sensors



Decibel meter

- Decibel sound level meter
- Measurement range: 35 – 120 dB
- Accuracy: ± 2 dB SPL
- Interface: I2C



NO2 Sensor

- Factory Calibrated Electrochemical Nitrogen Dioxide Sensor
- Measurement range: 0-20ppm
- Resolution: 0.1ppm
- Interface: I2C



SO2 Sensor

- Factory Calibrated Electrochemical Sulphur Dioxide Sensor
- Measurement range: 0-20ppm
- Resolution: 0.1ppm
- Interface: I2C

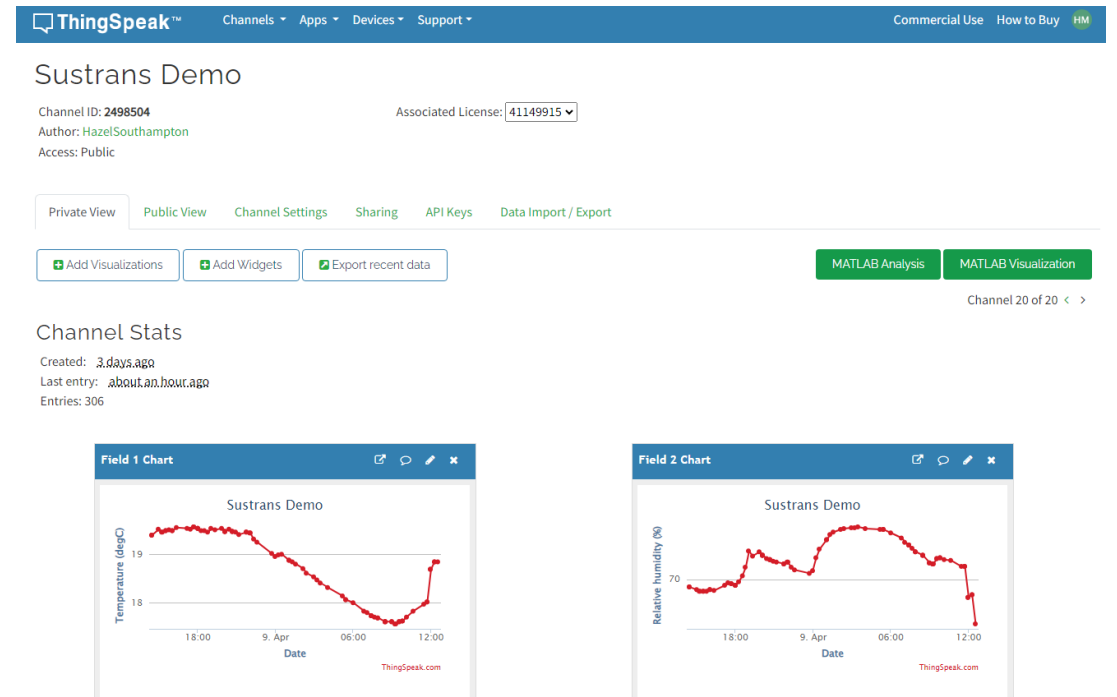


Software & websites

Thingspeak

- Main data hosting & dashboard platform

- <https://thingspeak.com/>



Blues Notehub

- Data forwarding & device health monitoring
- <https://dev.blues.io/notehub/notehub-walkthrough/#what-is-notehub>



MATLAB

- A programming language and platform
- Compatible with Thingspeak
- Can be used to plot additional figures on the web dashboard or to process downloaded data
- <https://uk.mathworks.com/products/matlab.html>

Arduino

- A brand of microcontrollers
- May refer to either a microcontroller or the IDE (software) used to program them
- <https://www.arduino.cc/>

Other terms

Sensors

- NO₂ = Nitrogen Dioxide
- SO₂ = Sulphur Dioxide
- PPM, ppm = Parts Per Million
- PM = Particulate Matter
- PM_{1.0} = Extremely fine particulates, diameter < 1 microns
- PM_{2.5} = Fine particles, diameter < 2.5 microns
- PM₁₀ = Particles, diameter < 10 microns
- dB = Decibels
- RH = Relative Humidity

Other components

- LiPo = Lithium Polymer battery
- Qwiic = A type of connector (small, 4 pins)
- Grove = A type of connector (larger than Qwiic, 4 pins)
- Notecard = An IoT device that transmits collected data
- Swan = The microcontroller or “brains” of the monitors
- Notecarrier = The PCB that connects the Notecard, Swan and various ports
- JST = A type of connector (small, 2 pins), used for batteries

General electronics

- V = Volts
- I2C = A common communication protocol
- UART = A common communication protocol
- OTA = Over-The-Air (wireless)
- JSON = A data formatting standard
- CSV = Comma Separated Variables, a common file type, can be opened as a Spreadsheet in Excel
- API request = A method of retrieving data from a website
- IDE = Integrated development environment (software development application)