

MicroMod Environmental Function Board

SEN-18632

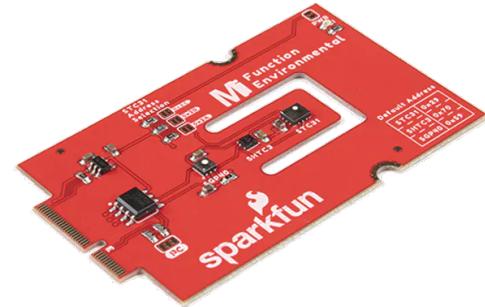
Product Overview

09/29/2022

For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description

SparkFun MicroMod Environmental Function Board is designed to work with the MicroMod modular interface ecosystem. This board includes three sensors to monitor air quality (SGP40), humidity and temperature (SHTC3), and CO₂ concentrations (STC31). The three sensors are based on Sensirion CMOSens® technology, which combines the sensor element, signal processing, and digital calibration on a small CMOS chip.



The SGP40 measures the quality of the air in a room or house. This sensor uses a metal oxide (MO_x) sensor with a temperature-controlled micro hotplate and provides a humidity-compensated volatile organic compound (VOC) based indoor air quality signal. The SHTC3 is a highly accurate digital humidity and temperature sensor. This sensor uses a capacitive humidity sensor with a relative humidity measurement range of 0%RH to 100%RH and a bandgap temperature sensor with a -40°C to 125°C temperature measurement range. The STC31 measures CO₂ concentrations based on thermal conductivity and has two CO₂ measurement ranges.

The MicroMod environmental function board features a 2.5V to 6V input voltage range, 3.3V I/O voltage, power LED, and AP2112 3.3V voltage regulator (rated 600mA). This board requires no soldering and can be read via the I²C port.

Features

- Works with the MicroMod modular interface ecosystem
- Communicates via the MicroMod I²C bus
- Input voltage range:
 - 2.5V to 6.0V
 - 5V (typical) via MicroMod main board USB connector
 - 3.7V to 4.2V via MicroMod main board LiPo battery Connector
- 3.3V I/O voltage
- AP2112 3.3V voltage regulator
- Power LED
- I²C pull-up resistors
- Jumpers

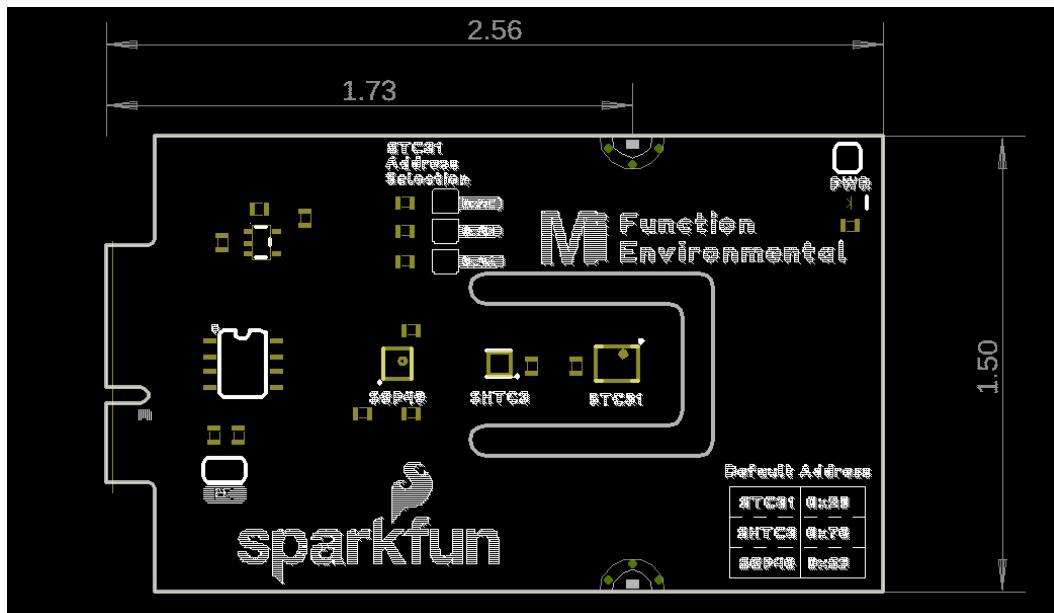
Features

- STC31 address selection
- Includes:
 - Sensirion SGP40 Air Quality Sensor
 - Sensirion SHTC3 Humidity and Temperature Sensor
 - Sensirion STC31 CO2 Sensor

Schematic

- [MicroMod Environmental Function Board](#)

Board Dimensions



Additional Resources

- [Sensirion SGP40 Air Quality Sensor](#)
- [Sensirion SHTC3 Humidity and Temperature Sensor](#)
- [Sensirion STC31 CO2 Sensor](#)

Mouser Part Number

[View Part](#)

To learn more, visit <https://www.mouser.com/new/sparkfun/sparkfun-micromod-environmental-function-board/>