



## SparkFun OpenLog Data Collector with Machinechat – Air Quality Monitoring

KIT-20684

The Air Quality Monitoring version of the SparkFun OpenLog Data Collector Kit with Machinechat is an easy way to organize and display your data from an included SGP40 Qwiic Air Quality Sensor with the OpenLog Artemis and JEDI One. The [SparkFun OpenLog Artemis \(without IMU\)](#) is an open source data logger that comes preprogrammed to automatically log GPS / GNSS, serial data, and various pressure, humidity, and distance data as well as the ability to expand out to any number of our Qwiic sensors.



Machinechat's JEDI One provides an easy-to-use, customizable, one stop dashboard solution for IoT data collection, transformation, visualization, and reporting. Built-in HTTP and TCP servers allow you to start collecting data from sensors and devices in minutes, and custom plug-ins allow you to collect data from virtually any sensor or device. In addition, a fully integrated and self-contained MQTT broker makes it easy to integrate any MQTT based device or sensor. No need to set up a separate broker or use Azure or AWS for MQTT. Just configure and go.

The SparkFun SGP40 Air Quality Sensor provides a measurement of the quality of the air in your room or house. The SGP40 is based on Sensirion's CMOSens<sup>®</sup> technology and uses a metal oxide (MOx) sensor with a temperature controlled micro hotplate and provides a humidity-compensated volatile organic compound (VOC) based indoor air quality signal. Both the sensing element and VOC Algorithm feature an unmatched robustness against contaminating gases present in real world applications enabling a unique long-term stability as well as low drift and device to device variation.

Simply connect the BME280 Breakout of another compatible Qwiic-enabled device, power up the OpenLog Artemis, and all incoming serial data is automatically recorded to a log file with baud rates up to 500000bps, supported! The OLA also has four ADC channels available on the edge of the board. Voltages up to 2V can be logged with 14-bit precision up to 1900Hz for one channel and 1000Hz logging all four channels. Additionally, based on feedback from users we've added an on-board RTC so that all data can be time stamped.

The OpenLog Artemis is highly configurable over an easy-to-use serial interface. Simply plug in a USB-C cable and open a terminal at 115200bps. The logging output is automatically streamed to both the terminal and the microSD. Pressing any key will open the configuration menu.

Included in this kit, you will find an OpenLog Artemis (without IMU), an SGP40 Qwiic Atmospheric Sensor Breakout, a unique JEDI One license, and connector cables. Additional sensors must be purchased separately. If you are interested in picking up a different version of this kit, be sure to check out the [Base Kit](#) or [Environmental Monitoring Kit](#), instead!

**Note:** The version of OpenLog Artemis included in this kit has the ICM-20948 IMU sensor removed. This IC is becoming increasingly difficult to locate. This version still supports auto-detection and logging of over a dozen sensors and GNSS receivers.

## Kit Includes

- 1x SparkFun OpenLog Artemis (without IMU)
- 1x SparkFun Air Quality Sensor - SGP40 (Qwiic)
- 1x Machinechat Software License Card - JEDI One
- 1x SparkFun Qwiic Cable Kit
- 1x Reversible USB A to C Cable - 0.8m

<https://www.sparkfun.com/products/20684> 12-1-2022