



Measuring AIR QUALITY in Your Community

The South Coast AQMD Sensor Library Program seeks to enable communities to investigate their questions related to air quality and learn more about their local environment. To learn more visit our website at www.aqmd.gov/aq-spec.

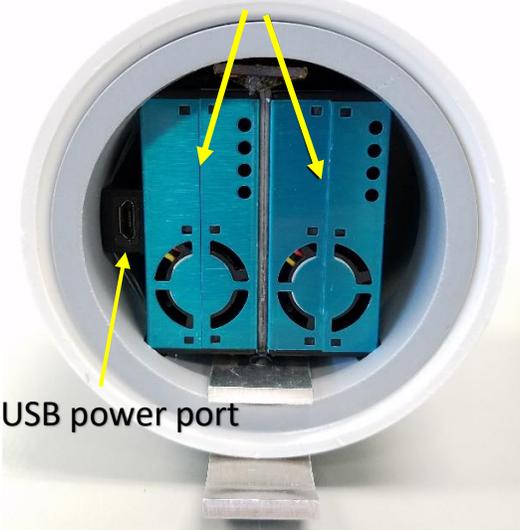
Technology for Measuring Particulate Matter (PM)

PurpleAir PA-II Dual Laser Air Quality Sensor



- ① PurpleAir PA-II Dual Laser Sensor
- ② Outdoor-rated Nest Power Supply
- ③ USB Cable

Two raw sensors



Micro-USB power port

PurpleAir PA-II Features:

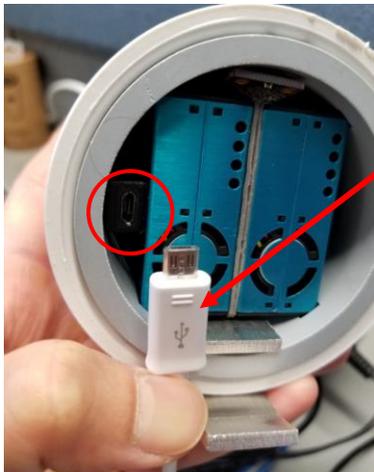
- Dual PM sensors
- Measures PM_{1.0}, PM_{2.5}, and PM₁₀ along with Temperature, Relative Humidity, and Pressure
- Requirements:
 1. Available power outlet
 2. Available Wi-Fi to log data to PurpleAir map
- Easy to install with a single screw or zip ties
- Wi-Fi data logging with open data access at www.purpleair.com/map

PurpleAir PA-II Air Quality Sensor Quick Start Guide

(Note: helpful information is available on page 6 of this guide)

STEP 1 — Finding a Location and Installation

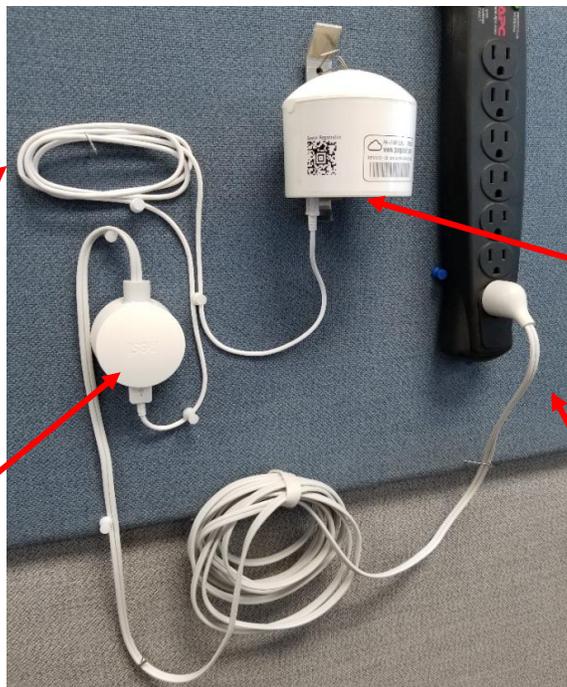
1. Before mounting your sensor, take a photo of the label (you will need the Device-ID and Location Name, see Step 3 on page 4 of this guide)
2. Look for a shady place, usually a north-facing part of the house, away from tall trees.
Note: Location will need a nearby power outlet and Wi-Fi signal
3. Mount sensor away from local sources of pollution (A/C units, vents, BBQs)
4. Mount the sensor & power supply using either cable ties (for railing) or a screw (for beneath the roof edge)
5. Connect the USB cable to the sensor and to the nest power supply. The sensor will automatically power on once the power is plugged in (see images below)
 - The power supply should be mounted so it will not be submersed in water and ensure that the cord is secured safely to avoid a tripping hazard
 - The power supply should be installed such that the included USB plug is oriented down



Plug the micro-USB end of the USB cable into the sensor



Insert the larger end of the USB cable into the nest power supply



USB Cable

Outdoor nest power supply

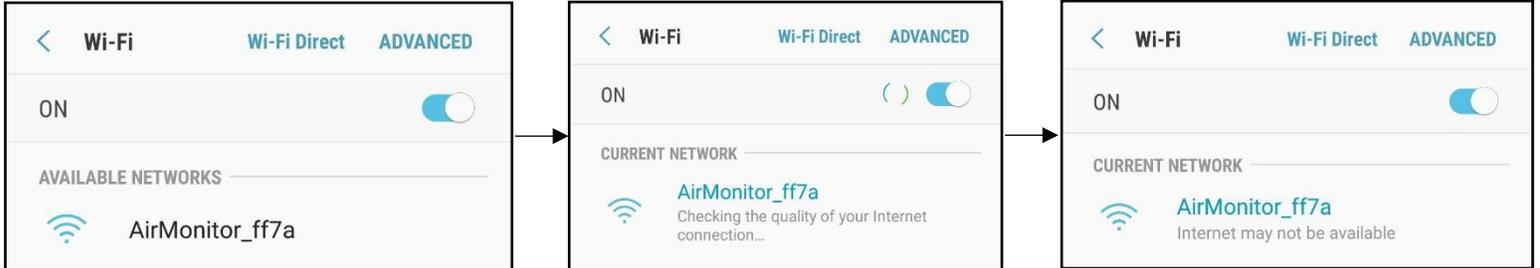
A dim red LED will be lit on the underside of the housing when the sensor is powered

Insert the wall outlet plug from the nest power supply into an appropriate outlet

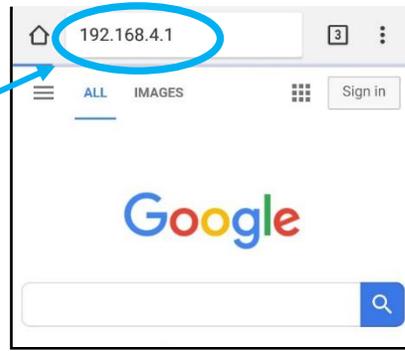
6. Take a photo of the installed sensor and area around the sensor (it may help with data analysis later)

STEP 2 — Configuring the Wi-Fi

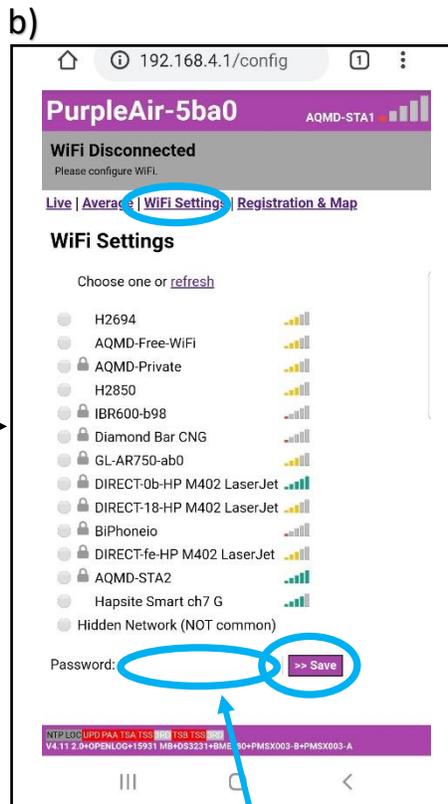
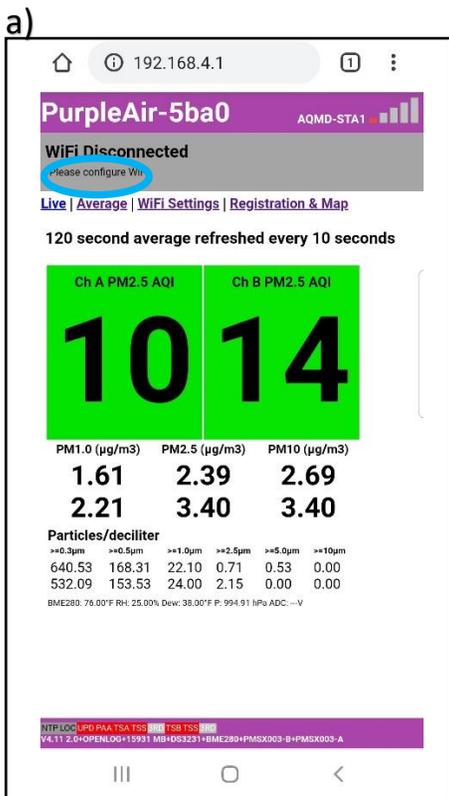
1. Ensure that the sensor is connected to power. When powered, you will see a red LED on inside the sensor.
2. Using a Wi-Fi-enabled device (cell phone, tablet, or laptop), connect to the Wi-Fi network called "PurpleAir-xxxx" where xxxx is the last 4 characters on the sensor Device ID. Your device may display an error like "Internet may not be available." This is normal and you can proceed to the next step. (Note: old models display AirMonitor_XXXX)



3. Once you have connected your device to the "PurpleAir-xxxx" network, open an internet browser, type "192.168.4.1" in the search bar, and search.



4. a) Press/click on the "Wi-Fi Settings" link.
 b) Select your personal Wi-Fi access name from the list, enter your password, and save.
 c) Your sensor will reboot to configure the settings.



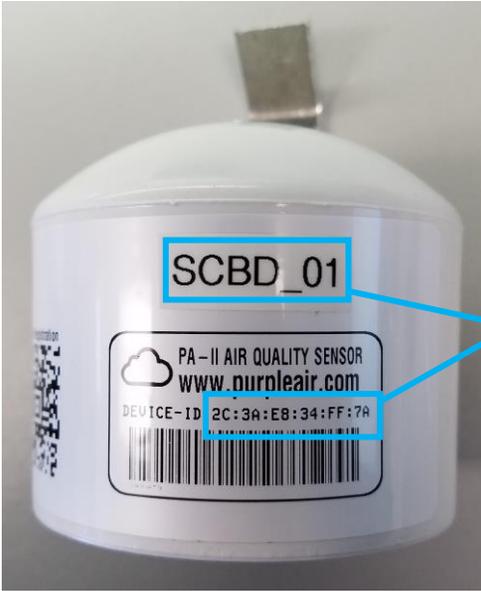
Be sure to input the correct Wi-Fi password!
 Passwords are case-sensitive.

Configuring the Wi-Fi (continued)

- 5. Once the monitor successfully connects to your Wi-Fi, it will start uploading data and the “PurpleAir-xxxx” network will no longer be available to connect to via Wi-Fi.

STEP 3 — Registering Your PurpleAir Device

Enter www.purpleair.com/register on an internet-enabled device and input the following information. Note, marking your sensor “Public (everyone)” will only share the sensor location and data, but will not result in any of your personal information being shared.



Device-Id (MAC)* Printed on the device label just above the bar code. Please include the colons (:)

Associated Email * This email address would have been used in the device purchase or other communication with PurpleAir. (A copy of this sensor registration will be e-mailed to this address.)

Installed* Outside Inside

Location Name*

Visibility* Public (everyone) Private (only me)

Set a location on the map

Map Location* (drag the marker to adjust)

Latitude

Longitude

Using the interactive map, click and drag the marker to your sensor’s location (use the zoom functions to change the scale).

Registering Your PurpleAir Device (continued)

Leave the information in this section as-is, no edits needed.

Data Processors

In addition to PurpleAir, send data and the sensors "Map Location" to these 3rd party services:

Data Processor #1	To help citizen science, share your device's location and sensor readings with Weather Underground, an IBM business.	
	<input type="text" value="Weather Underground"/>	
	<input checked="" type="checkbox"/> Create new Weather Underground sensor ID	
Data Processor #2		
	<input type="text" value="None"/>	

Your first and last name (required)

Your email address (required)

Your phone number (optional)

Device Owner's Information

This person can manage the device on the PurpleAir web site and may receive device notifications.

Owner's Name*	We use this name when sending alerts for this device.	<input type="text" value="Probably Your First & Last name"/>
Owner's Email*	Used as a key to link you with this device. It must match any current value you may have set before.	<input type="text" value="An email address"/>
SMS Alert Phone Number	May be used to send text alerts for this device.	<input type="text" value="Your phone number"/>

After reading and agreeing to the Terms of Use and Conditions, click this box then click "Register" to complete the registration.

PurpleAir Terms Of Use And Conditions

(Updated as of June 1, 2017)

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I agree with the terms and conditions

Register 

The installation is now complete and your sensor is now visible on the PurpleAir Map! (www.purpleair.com/map)

(Note: helpful information is available on page 6 of this guide)

Helpful Information:

- If your sensor loses power, it will remain configured with the Wi-Fi information and automatically reconnect once the power comes back on as long as the SSID name and password remained the same.
- If your sensor loses Wi-Fi connection, the data previously collected and uploaded to PurpleAir will still be available. However, the sensor will not collect data while the Wi-Fi connection is down, resulting in data loss.
- The "PurpleAir-xxxx" network is only available to connect to while the sensor isn't configured to a Wi-Fi. *Models prior to 4.11 firmware display "AirMonitor_XXXX."*
- To change the information the sensor was registered with, simply repeat the registration process with the current/updated information and the original information will be replaced.
- The sensor can be relocated and registered again provided the new location is within 1 mile of the focused area of the study. Registering the sensor with the updated information will replace the previously-registered information. Contact the AQ-SPEC program at SCAQMD before a relocation is completed.
- If you can't find your sensor on the PurpleAir Map, it is possible that your sensor may have become inactive for an extended amount of time. On the PurpleAir Map, find the panel on the top left side of the page. Go to "Last Active" and select "All Time". Your sensor should now appear on the map as a gray oval icon, , indicating it is currently Offline and not reporting data. Your sensor's Wi-Fi may need to be reconfigured and/or power may need to be supplied to your sensor. If you still cannot see your sensor on the map, it is possible that your sensor has not been registered or it was registered incorrectly. Register your sensor again by simply repeating the PurpleAir registration process with the corrected information.
- If your sensor stops reporting data on the PurpleAir Map, perform a power cycle by unplugging the unit, waiting 10 seconds, and plugging it back in.

Technical Support

e-mail: support.aq-spec@aqmd.gov

Tel: +1 (909) 396-2713

To contact the sensor developer:

<https://www2.purpleair.com/community/faq>