

Welcome to Digital Environment!

Thank you for your purchase of a Digital Environment enabled device. You should have received an e-mail containing your username and password for the web and mobile applications. You can login to your account on the web app at <https://solutions.digienv.com/>. The web app is where you can 1) plan your work, access your AQI survey data, and generate reports. Next, please e-mail info@digienv.com to schedule a time for a free 30-40 minute online training session. The online training will follow this [slide deck](#). The training will cover how to use the software, how to perform surveys, and guidance for selling the surveys to your customer base. This will also provide you with information on how best to utilize the platform.

The AQI sensor should be charged using the micro-USB on the backside of the sensor. The device will be fully charged in around 1.5 to 2 hours. With a full charge the sensor will be able to run for approximately 2 hours. You can now download and install the SmartENV app from the Apple App Store or Google Play Store. For general instructions and guidance, please refer to our user's guide for directions on how to get started on the Solutions website and pair to the device which was emailed to you after registration and also available at this [link](#). The user's manual and other references for Air Quality and Home inspection are available [here](#). If you are interested in the science behind air quality, see the back of this document.

If you have any questions or concerns, please e-mail info@digienv.com and we will contact you shortly. We are happy to assist in any way possible.

- Slide Deck - https://www.digienv.com/lib/frontend/pdf/homeins/slide_deck.pdf
- User Manual - https://www.digienv.com/lib/frontend/pdf/homeins/user_manual.pdf
- Additional Documents - <https://dev-www.digienv.com/industries/homeins>

How Does It Work?

The Particle Plus sensor measures particulates of two particular sizes, 2.5 (PM 2.5) and 10 (PM 10) microns. These are the two particulate sizes typically measured when assessing air quality. This is because particles of these sizes are capable of entering the lungs. The PM 2.5 particles are capable of penetrating to the very deepest parts of the lungs while PM 10 particles typically only enter the main airways. The EPA has more information on the effects of particulate pollution¹. Mold spores are typically between 3 to 30 microns and will show up on the PM 10 channel of the Particle Plus sensor.

What Else Is Detected?

You can also detect other types of particles that have a similar particle size. We have observed that pollen will set off the PM 10 channel. Excessive amounts of household dust will also likely be detected on both the PM 2.5 and PM 10 channels. For PM 2.5 channel only, we have found that smoke will be detected even when it is difficult to smell. Second hand smoke from cigarettes has been found to be detectable for several hours, even if ventilation is attempted. Smoke from cooking or fireplaces is also easily detected. Smog from car exhaust can also be detected on the PM 2.5 channel. Regardless of source, excessive particulate matter present in building has been shown to cause a wide range of health issues², including inducing asthma attacks, sick building syndrome, and increased incidence of respiratory infections.

What are VOCs?

VOCs are volatile organic compounds that evaporate at room temperature. These include things such as gasoline, perfumes, vinegar, and paint thinner. Elevated VOC levels could be caused by a mold infestation, gas leak, or off gassing of building materials and is a concern for overall indoor air quality. These compounds include a number of toxic compounds, including benzene, toluene, and formaldehyde. Mold can produce a number of VOCs. These compounds are what produce the “musty” smell associated with mold infested dwellings. While most of the compounds are innocuous, there is experimental evidence that some of these compounds could be toxic³. Detection of VOC is yet another tool that can be used to detect and locate an active mold infestation, as they are only produced by actively growing mold colonies.

¹ <https://www.epa.gov/pmcourse/particle-pollution-exposure>

² <https://iaqscience.lbl.gov/air-summary>

³ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4591661/>