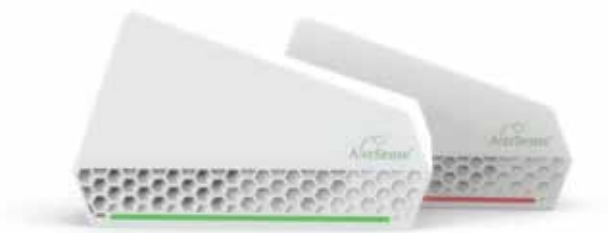


INTRODUCTION

The AlerSense™ Smart Air Quality Sensor for Allergies and Asthma is designed to detect indoor air quality parameters which act as 'triggers' for people suffering from allergies, asthma and other respiratory issues. Triggers are contaminants, particles or chemicals present in the air that can illicit a response for people with allergies or asthma including pollen, dust mites, mold spores, dust and chemicals in the air. Most people are unaware of their own specific triggers, and therefore are often unaware of impending attacks.

The AlerSense™ Sensor continuously monitors the air in your home and transmits this data to the cloud where it is analyzed creating 'smart' alerts which users receive on their smartphone. These alerts are 'smart' because they are personalized based on air quality analysis and previous user feedback whenever an allergy or asthma issue occurred. The AlerSense™ system is continuously refining alerts delivered to users – informing them in advance, for example, that they previously had sore eyes whenever similar air quality was last detected, what is likely to be causing this symptom (based on what the sensors are detecting) and links to resources on how to prevent this from occurring. AlerSense™ uses proprietary algorithms and data in order to continually improve sensing conditions in the home. AlerSense™ software combines all air quality parameters in order to create a personalized experience for each user.

Over time the AlerSense™ system becomes much smarter as it learns about the specific environmental conditions which are present when allergy or asthma attacks occur in your home. Additionally, the system can be customized for each room of your house, and each family member. This precise customization enables you to manage your home environment in order to best manage airborne conditions that could affect your family. The combination of sensors continuously monitoring the home combined with smart alerts delivered to users via an easy to use and accessible smart phone app can result in improved comfort, awareness and improved management of asthma and allergy symptoms.



CARBON DIOXIDE (CO2)

The primary source of indoor CO₂ is humans. While typical outdoor concentrations are around 380 ppm, indoor concentrations can go up to several thousand ppm. Higher indoor CO₂ concentrations relative to outdoors are due to low rates of ventilation, which are often driven by the need to reduce energy consumption from weather tight windows and doors. High levels of CO₂ can cause drowsiness, headaches and is usually noticed as a stuffy atmosphere in rooms.

TEMPERATURE AND HUMIDITY

The AlerSense™ sensor measures temperature and humidity as they also play a key role, especially in maintaining a comfortable and healthy environment. Whereas the Particle and VOC sensors will provide you with detailed information regarding the specifics of physical air constituents, the temperature and humidity sensors will allow for a range of other features.

HUMIDITY

Maintaining a low humidity level can be helpful to people who suffer from asthma and allergies, as both dust mites and moulds favour damper environments. Lower humidity has also been shown to lower indoor pollen counts. But the side effect of lowering humidity is that your general comfort may be impacted. Skin and lips may lose valuable moisture, and nasal passageways may become dry and irritated. A healthy balance is necessary, keeping allergens and contaminants at a minimum while maintaining the comfort in your home. This is even more important in geographic areas that on average have very low or very high levels of humidity.

TEMPERATURE

Temperature is the most personal of all of the features of indoor air quality. Each individual will prefer a specific temperature range. Bouts of cold air can be a trigger for respiratory issues, especially in asthmatics, and elevated levels (alongside raised humidity levels) can create an increasingly attractive environment for mold to grow. Again, it is all about the perfect balance of comfort and care that will be most beneficial.



AlerSense™

Mail: info@alersense.com

www.alersense.com

The World's First Smart Allergy and Asthma Air Quality Alert System.

(As a part of your overall Allergy and Asthma management plan)

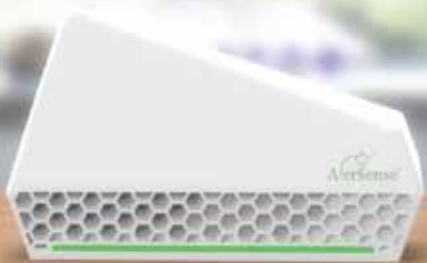
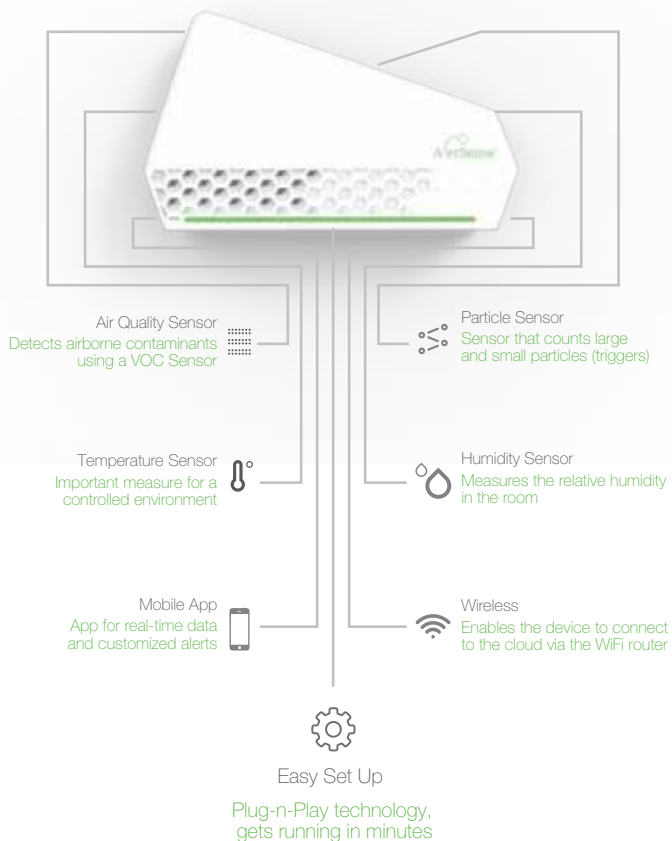


AlerSense™
BreatheEasy



ABOUT THE SENSOR

The system works using a combination of sensors on the device as well as smart software features informing users of current air quality as well as recording feedback and sending alerts.



HARDWARE TECHNICAL SPECIFICATIONS:

AIR QUALITY SENSORS

Particulate Matter Sensor – Fine Particles
Particulate Matter Sensor – Coarse Particles
Volatile Organic Compound (Toxins) & Carbon Dioxide Sensor

ENVIRONMENTAL SENSORS

Temperature Sensor
Humidity Sensor

WIRELESS CONNECTIVITY

Wi-Fi: 802.11 B/G/N
Data measurement every 60 seconds

POWER

AC-DC 5V 1.0 amp USB Adapter

SIZE

130 x 85 x 40mm

WEIGHT

150 grams

IN-UNIT LED FEEDBACK

Green, Red, Orange LED light display indicates levels of contaminants and toxins

PARTICULATE MATTER SENSING

Particulate matter (contaminants) sensing is the most critical parameter of air quality for asthma and allergy sufferers and includes common triggers such as mold, pet dander as well as dust mites allergens.

Guidelines set by the United States Environmental Protection Agency group's particles into 2 main categories;

- Inhalable coarse particles – typically between 2.5 and 10 micrometers in diameter
- Fine particles – particles smaller than 2.5 micrometers in size

The AlerSense™ system uses a robust particulate matter sensor that can differentiate between coarse and fine particles providing a critical input to personalized smart alerts. The differentiation between particles sizes can provide feedback on what could be causing the allergy or asthma issues – e.g. fine particles such as pet dander or large particles such as mold spores.

COARSE PARTICLES:

Coarse particles encompass a range of pollutants and possible triggers. Molds, for example, reside in the coarse range of particles, and recent studies have not only shown that mold spores are a high risk trigger for asthmatics, but that the presence of molds at a young age (~ 12 months old) can be a cause for the development of asthma. Dust, ash, large bacteria, and dense oil smoke are some of the other examples of coarse particles.

Coarse particles are small enough to avoid being caught by the cilia (protective hair like structures) in the nasal passages and trachea, bypassing these natural defenses, and entering the lungs. Coarse particles can then cause allergic reactions, or hinder breathing as they can block oxygen from passing into your bloodstream. Coarse particles typically sediment faster than fine particles, and are often stirred up by external interactions.

FINE PARTICLES:

Fine particles cover a range of pollutants, from allergens (pet dander, dust mites etc.), dense smoke, fine dust and some bacterial spores. These pollutants can be of more danger to individuals, as they can be small enough to pass through the lining of the lungs, and pass directly into the bloodstream, possibly leading to much harsher allergic reactions. Fine particles can remain in the air for extended periods of time as they sediment much slower than the larger coarse particulates. This allows the fine particles to travel over much larger distances, carried by natural or disturbed air currents.

CONTAMINANTS - VOLATILE ORGANIC COMPOUNDS (VOC'S) AND CO2

The AlerSense™ VOC (Volatile Organic Chemical) sensor is a high quality sensor designed to measure indoor pollutants and chemical toxins as well as Carbon Dioxide CO2 in the air and is another input to the smart alerts.

VOC'S

VOCs are chemical contaminants which easily evaporate, quickly spreading and becoming suspended in the air, possibly for prolonged periods. Every cleaner, chemical or product that has a distinct smell is releasing these chemicals, and they are ever present in the modern home. But it is a known fact that an overabundance of these chemicals can lead to nausea, unease and discomfort. Monitoring of these levels is therefore advantageous to everyone, but especially for those suffering from respiratory difficulty. Although small, much smaller than particles in the air, these chemicals can also trigger potentially dangerous reactions in individuals.