

Ambi100 Dust Monitoring System

In some parts of the United States such as the Mojave Desert region of Southern California it can be difficult to access power and data services. These areas are known for being extremely hot, dry and windy. These conditions lead to increased levels of fugitive dust. Ambilabs has developed a solution perfectly suited to stratify this need for monitoring particulate in remote areas. The system can provide continuous PM₁₀ and PM_{2.5} data transmitted by wireless communications and run for up to 5 days with minimal to no sunlight.

The Ambilabs solution incorporates the following:

- Mobile Platform
- Solar Mounted Panel
- Modem for Communications
- Web Access for Reports

The dust monitoring system is a modular unit with cellular communications and solar power. It is a combination of 5 components integrated to provide particulate data in remote areas. The system consists of the following:

The Platform: the platforms are either in a permanent or semi-permanent configuration. Platform stability against wind draught and surface winds can be achieved using a duckbill anchors or tie downs.

Power Supply: the power supply consists of a solar panel, power regulator and AGM batteries mounted to and secured to the platform by brackets. It is designed to run for up to 5 days without sunlight.

Communications: the communications component is contained in its own weather-proof enclosure. A cellular SIM card will allow communications to the cloud based database. Integrating software allows for the data to be streamed and managed for custom presentation to the end user.

Dust Monitoring Instrumentation: a laser nephelometer particulate monitor.

Meteorological Gear: Met gear will measure wind speed / wind direction.



Possible Configurations

