1. List of Components

* [Particle Electron](https://docs.particle.io/guide/getting-started/intro/electron/)

Particle Electron is a breadboard-friendly, embedded microcontroller based board from particle family that makes it easy to connect any product to cellular network. It is similar to arduino boards in terms of programming but with added functionality of cellular network connection which makes it useful for IoT products. It can be configured using any SIM card and can be programmed using Particle IDE. Particle Electron has 1MB of flash, 128 K RAM and 30 mixed-input GPIO pins. The board can be powered using USB Micro B connector or a 3.7V LiPo battery. The onboard Vin pin can endure 3.9V DC to 12V DC.

* [Particle Electron Asset Tracker](https://docs.particle.io/datasheets/particle-shields/#electron-asset-tracker)

The asset tracker is a shield for Particle Electron board. It is a cellular connected shield with onboard GPS module and an accelerometer which is useful for applications that require location, movement and orientation tracking. On its own it is apt for outdoor projects but an external GPS antenna can be added for indoor projects. This shield can be powered using onboard screw terminal from a 5V to 12V DC supply or 3.7V LiPo battery used for electron. The GPS module on shield uses Serial1 UART and accelerometer module uses SPI to communicate to electron.

* [Nova Dust Sensor (SDS011)](https://www.aliexpress.com/store/product/nova-PM-sensor-SDS011-High-precision-laser-pm2-5-air-quality-detection-sensor-module-Super-dust/421570_32317805049.html)

This sensor collects dust data from the surroundings and outputs dust particle concentration in the air. It works on the principle of laser scattering and provides output over UART. This sensor works on power supply 5V.

4. Block Diagram

