

GSM Based Solar Power Forest Fire Detection and Prevention System.

About This Project:

A forest consists of different types of trees, herbs shrubs and other variety of vegetation. In different ways this renewable resource is helpful to man. The most common hazard in forests is forests fire. Forests fires are as old as the forests themselves. This fire seriously damages forest wealth as well as the bio-diversity gets disturbed. Since forest is very important natural resource it has a great impact on environment due to which their early detection is very vital. The aim of the project is to continuously monitoring forest condition, detection of forest fire, its position and to inform the forest authority, so that necessary action can be taken immediately. The two main modules present in the project are the Monitoring Module and the Forest Module. This project gives an importance of sensor technology. The DHT 11, fire sensor collects data and transmits to the central unit as well as alert is send via call or message using GSM Module. It also shows that the Optimized Solar Energy Harvester increases the efficiency to about 90%.

Block Diagram:

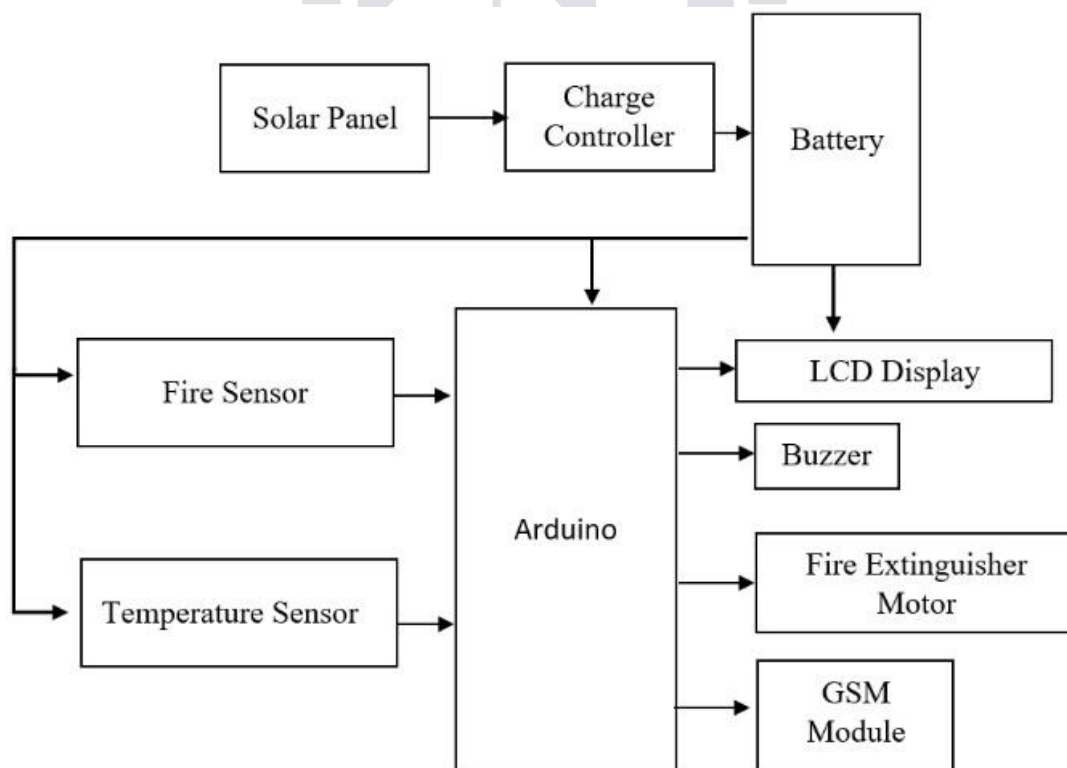


Figure: Block Diagram of GSM Based Solar Power Forest Fire Detection and Prevention System.

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Required Instrument:

- Solar Panel.
- Arduino Nano.
- GSM Module SIM800L.
- LCD Display.
- Flame Sensor.
- Temperature Sensor DHT11.
- Relay.
- Motor.
- Transformer.
- Battery.

Advantages:

There are many advantages of our project because of its accuracy. Some of the advantages are pointed out below:

- By using this system, it is possible to reduce Forest fire.
- Wireless notification system.
- Automatic protection system.
- Easy installation.
- Cost effective.

Applications:

The application areas for this project in this modern and practical world are huge and some of these are given below:

- Tea Garden.
- Paddy Filed.
- Sugarcane filed.
- BRRI (Bangladesh Rice Research Institute).
- BADC Harvest Testing Field.
- Flowers Garden.
- Different kind of nursery.
- Any Commercial Garden.
- The Forest of Bandarban, Rangamati, khagratori & Sundarban.
- Wheat & Corn Field.
- Mango & Litchi Garden.
- Tespata Garden.
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N.B: *Any modification of this project can be done as per your requirement. We will make the project according to your needs. Contact us with your any innovative engineering projects idea. We will help you to implement your project.*

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