

Mars Environmental Module- The Aura of The Red Planet

Finding the possibility of life in Mars!

We plan to demonstrate the working of a telemetric environmental module made up of multiple environmental-parameter sensors. Our standalone module will consist of environmental sensors managed by one Arduino microcontroller that communicates with sensors and records sensor data that characterize the surrounding environment.

We plan to integrate temperature and humidity sensors to record temperature and humidity of the environment. A soil moisture sensor to obtain data on any possible water present within the soil. A motion sensor to detect any possible motions (such as earthquake) around the module. Finally, an ultrasonic sensor to detect speed of moving objects close to the module. The telemetric module shall capture, record, and transmit the environmental data to a client PC for further analysis. The basic idea is to remotely be able to record the environmental data and save it with the time stamp.

We anticipate that such a telemetric environmental module is a suitable candidate to hitch a ride on future Mars missions. This module will be put together to collect significantly important data to better understand the aura of our neighboring red planet and possibly, help further the research on whether life is possible on Mars.

Keywords- Mars, Telemetric Module, Arduino, Temperature and Humidity Sensor, Soil Moisture Sensor, Motion Sensor, Ultrasonic Sensor, Mars Missions