

**ARDUINO MICROCONTROLLER**

POWER INPUT

9.3V DC

DHT 11

Digital temp &

Humidity sensor

BMP 180

Barometric pressure

Sensor

MPU 6050

Accelerometer.

DATA LOGGER

REAL TIME CLOCK

RF 433 Mhz (Transmitter)

COMPUTER TO MONITOR REAL TIME DATA

SIMULATION.

The working mechanism is very basic and simple. The major units are categorized as

* Power unit
* Sensing unit
* Transmitting and receiving unit
* Real time data simulation unit
* Storage unit

Power unit:

The arduino is powered by 9.3 voltage dc power supply. It carries 5 sensors which senses the analog and digital data and powered on 3.3 voltage. However the recommended power supply for dht 11 and mpu6050 is 5V stable.

Sensing unit:

This unit consists of valuable sensors which collect analog and digital information and stores to data logger respectively. Some sensors are highly power sensitive and must be handled with care. Sensor can malfunction and blow up at any time is power is not stable and supplied voltage is greater than 5. Most sensors can tolerate maximum 5v. Hence 3.3 is the safe level input voltage. Some sensors are slow sensors and require stable input voltage. Example dht11.

Transmitting and receiving unit:

We can use wifi module like esp8266 or any powerful radio module so no information gets lost.

Simulating unit:

The transmitting data are sent and received on ground and is simulated graphically. Processing 3, visual studio, Qt creator are most popular software for rapid software development for GUI or graphical user interface.

Storage unit:

Data are precious. Reliable and accurate data is very useful for prediction. We can store data directly to database or sd logger which is very easy idea. Data can also be stored directly to database like mysql by which GUI can be transformed to web based which can be alternative to Rapid software development.