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## ETHERNET BASED INDUSTRIAL DATA ACQUISITION SYSTEM

### DESCRIPTION:

The Ethernet standards comprise several wiring and signaling variants of the OSI physical layer in use with Ethernet. The original 10BASE5 Ethernet used coaxial cable as a shared medium. Later the coaxial cables were replaced with twisted pair and fiber optic links in conjunction with hubs or switches. Data rates were periodically increased from the original 10 megabits per second to 100 gigabits per second. In our project we can simply use it for transmitting data to embedded web server.

The project is designed to provide environment data acquisition. The user is able to access the web server throughout the internet. The details of temperature sensor , humidity sensor, LDR sensor values are showed in the webserver page and the user can see that sensor values in that server page..

The micro controller is interfaced to the Ethernet modem and s temperature sensor , humidity sensor, LDR sensor. And the controller generates the server in Ethernet modem and allowed it in throughout the internet. When the controller detects the abnormal conditions in sensors then it will be updated in the server. Then the owner can see the details.

In this prototype model step-down power supply circuit is used. First from 230Volts AC is converted as 12V AC by using a step-down transformer. Then a 1000uf capacitor is used to convert it to pure 12V DC. 7805 will convert the 12V DC supply to 5V DC along with a 100uf capacitor. This 5V DC is used for all components like microcontroller, inputs and outputs.

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## **TECHNICAL SPECIFICATIONS:**

### **HARDWARE SPECIFICATIONS**

- Micro controller :
- Crystal : 11.0592 MHz
- LED : 5mm Red LED
- Ethernet Modem
- Basic GPIOs
- LDR
- Temperature sensor
- Humidity sensor

### **POWER SUPPLY**

- Transformer : 12V step down
- Filter : 1000uf/25V
- Voltage Regulator : 7805 / 7812

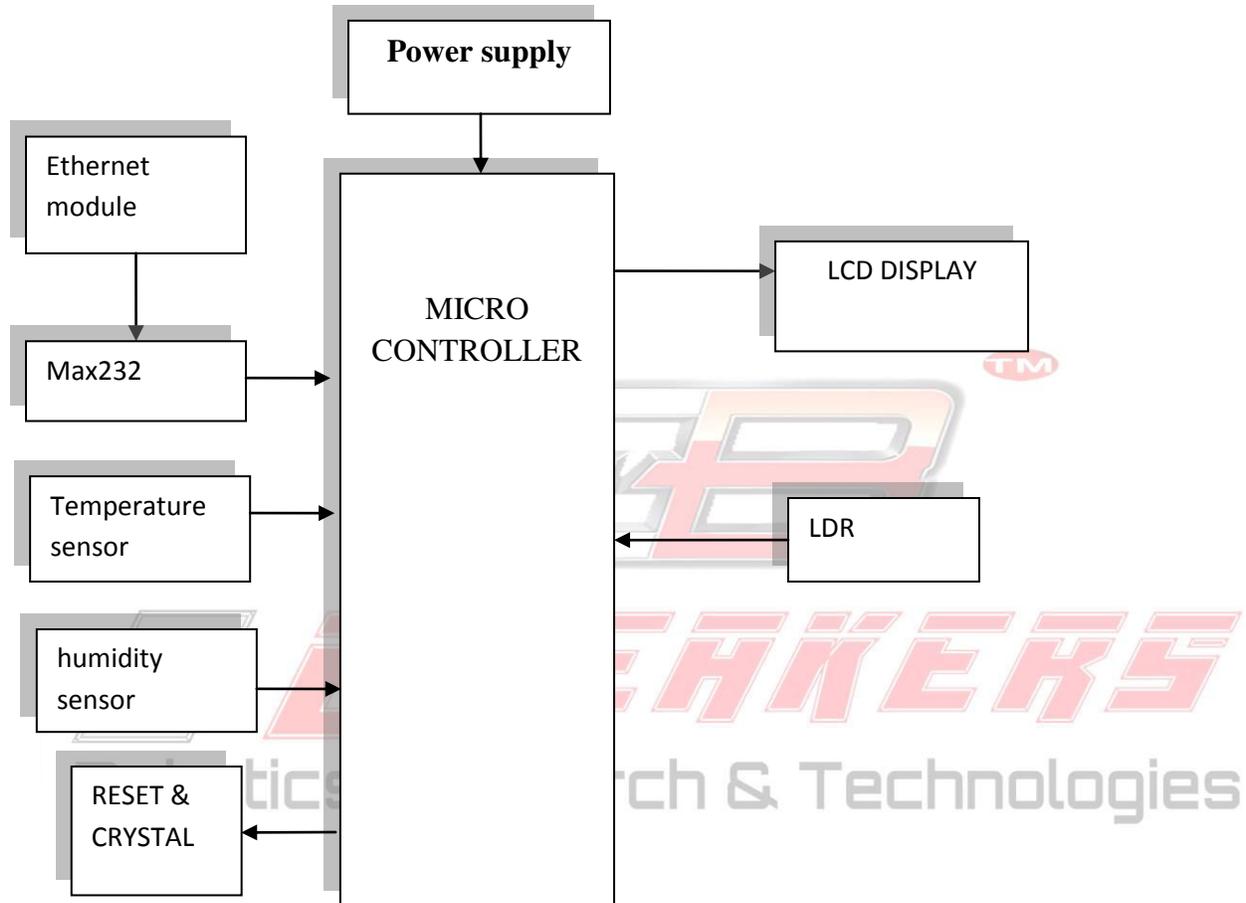
### **SOFTWARE SPECIFICATIONS**

- Keil IDE
- Proteus VSM
- UC flash

### **APPLICATIONS**

- Weather reporting system
- Home appliances
- Industrials

## Block diagram



## POWER SUPPLY BLOCK DIAGRAM:

