

LIFI BASED INDUSTRIAL PARAMETERS MONITORING SYSTEM

AIM:

Design and development of LIFI based industrial parameters monitoring system.

PURPOSE:

Sensors data monitoring and displaying is important for any kind of applications. For Industries it is more important to monitor machines and process. There are several kinds of systems that can monitor industrial parameters. Here we want to use LIFI for wireless communication. LIFI works based on light communication.

DESCRIPTION:

LIFI module interface to Arduino through UART communication. Other side of LIFI module connected to PC or laptop through Serial port. DHT11 connected to Arduino digital pin. LDR and Smoke sensors connected to Arduino digital pins.

WORKING:

In this project we can monitor sensors data on LCD through LIFI communication. All sensors data read by arduino and send to LIFI module. LIFI module converts data into light format. This will be transmitted through LED array in light form. At receiver side LIFI module has solar panel and received light signals. These light signals will be amplified and converted into text format in LIFI driver. This data will be displayed on LCD display.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
LIFI Module	:	UART based LIFI module
Smoke sensor	:	MQ series
Light sensor	:	Light Depending Resistor (LDR)
Temperature sensor	:	DHT11
Humidity Sensor	:	DHT11
Power Source	:	12v 1 amp DC battery

SOFTWARE:

Arduino IDE

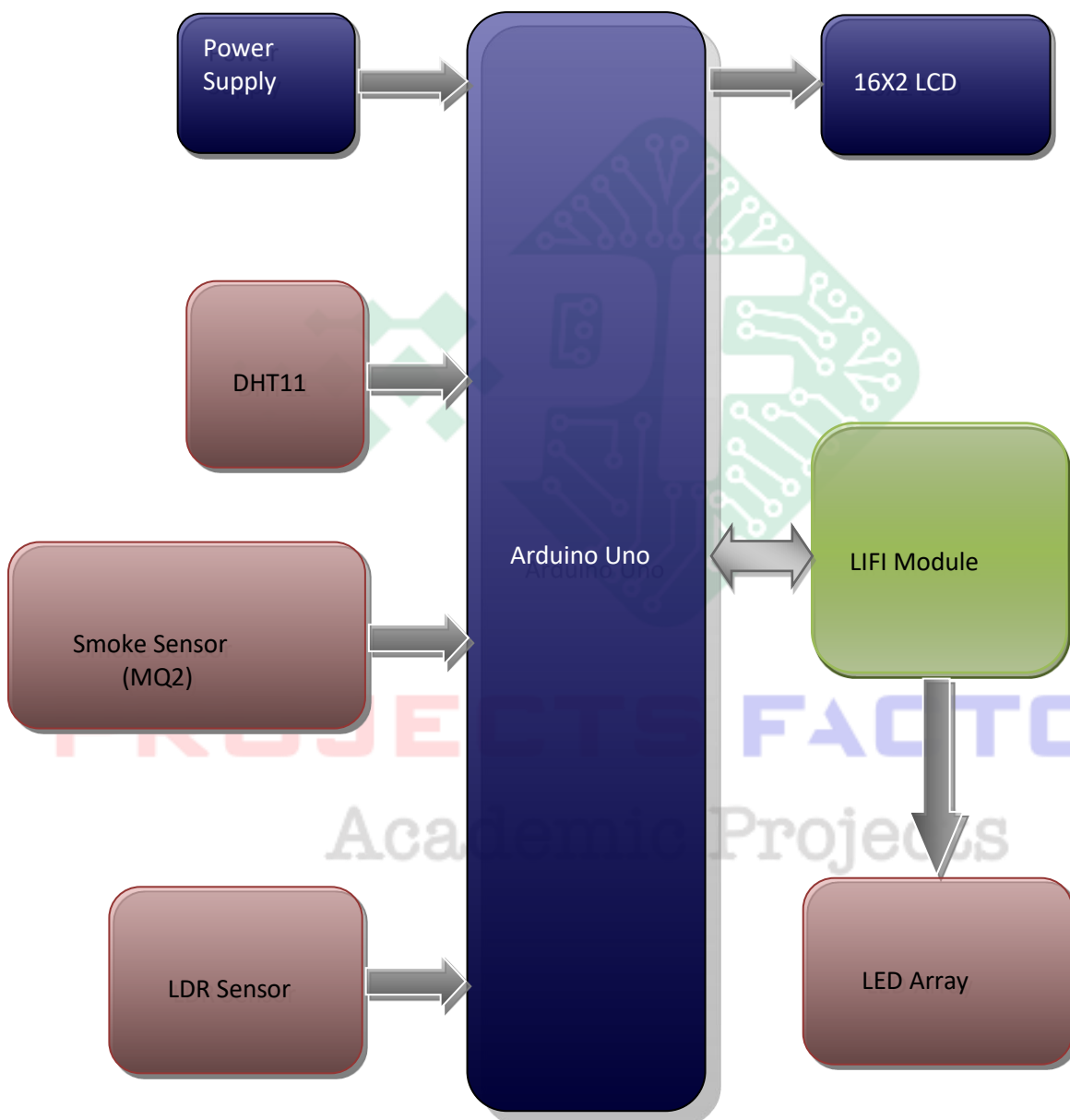
Proteus based circuit diagram

APPLICATIONS:

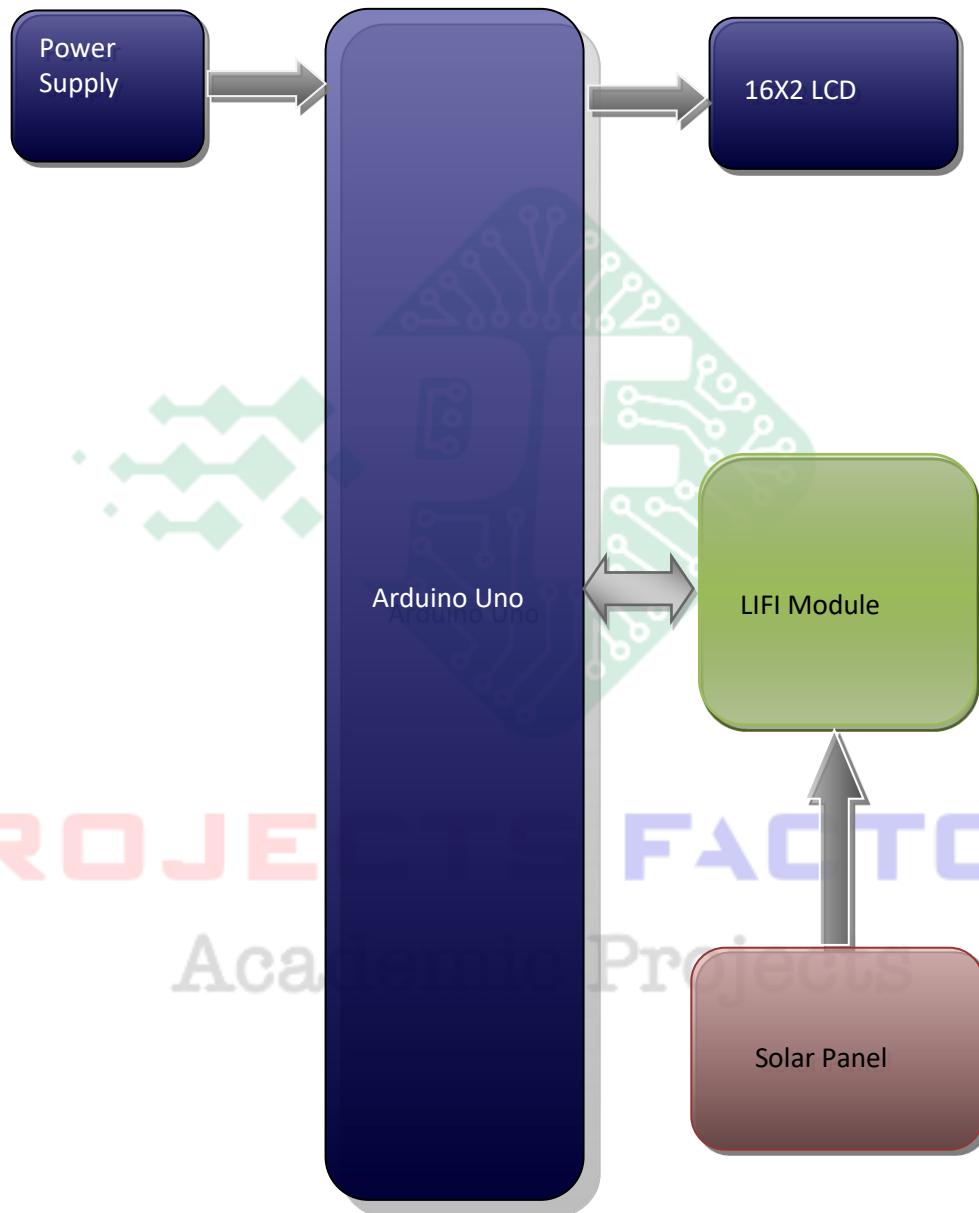
- Industrial Appliances
- Industrial monitoring
- LIFI based projects
- LIFI communication

BLOCK DIAGRAM:

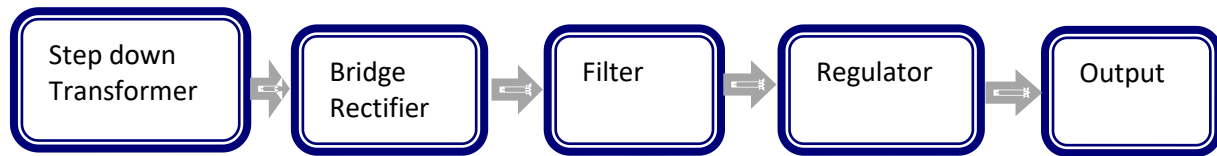
Transmitter Section:



Receiver Section:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered LIFI module interfacing
- Sensors Like DHT11, LDR and smoke sensor



PROJECTS FACTORY
Academic Projects