

ANDROID BASED INDUSTRIAL SECURITY AND VIDEO SURVEILLANCE ROBOT

AIM:

Design and Development of Android based industrial security and video surveillance robot.

PURPOSE:

Security is primary concern in industries. Sometimes heavy fire accidents won't allow man power. Robots play major role where humans can't enter. If robot has video surveillance then it we can monitor from remote place. Also if robot can read industrial parameters then we can send it to any place where humans can't enter. This entire feature in single application is difficult. But here we propose system like Android based industrial security and video surveillance robot.

DESCRIPTION:

This project includes Bluetooth (HC-05) module, which is connected to Arduino through UART interface. L293D connected to Arduino digital pins and it can control robot motor. LM35 connected to Arduino analog pin. Smoke (MQ135) and fire (IR) sensors connected to Arduino digital pins.

WORKING:

Here we have customized android Application. Using this Application we can control robot in different directions. Application has video monitoring facility and here we used second smart phone to send video to Android application. Also Application can display sensors data which are coming from robot. Temperature, Smoke and fire can be monitor in Android application along with robot control and video surveillance. Sensors data display on 16x2 LCD display.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
Bluetooth	:	HC-05
Motor Driver	:	L293d
Motors	:	DC gear motors 60 r.p.m
Temperature Sensor	:	LM35
Smoke Sensor	:	MQ135
Fire Sensor	:	IR Type
Power Source	:	12v 2 amp Adaptor

SOFTWARE:

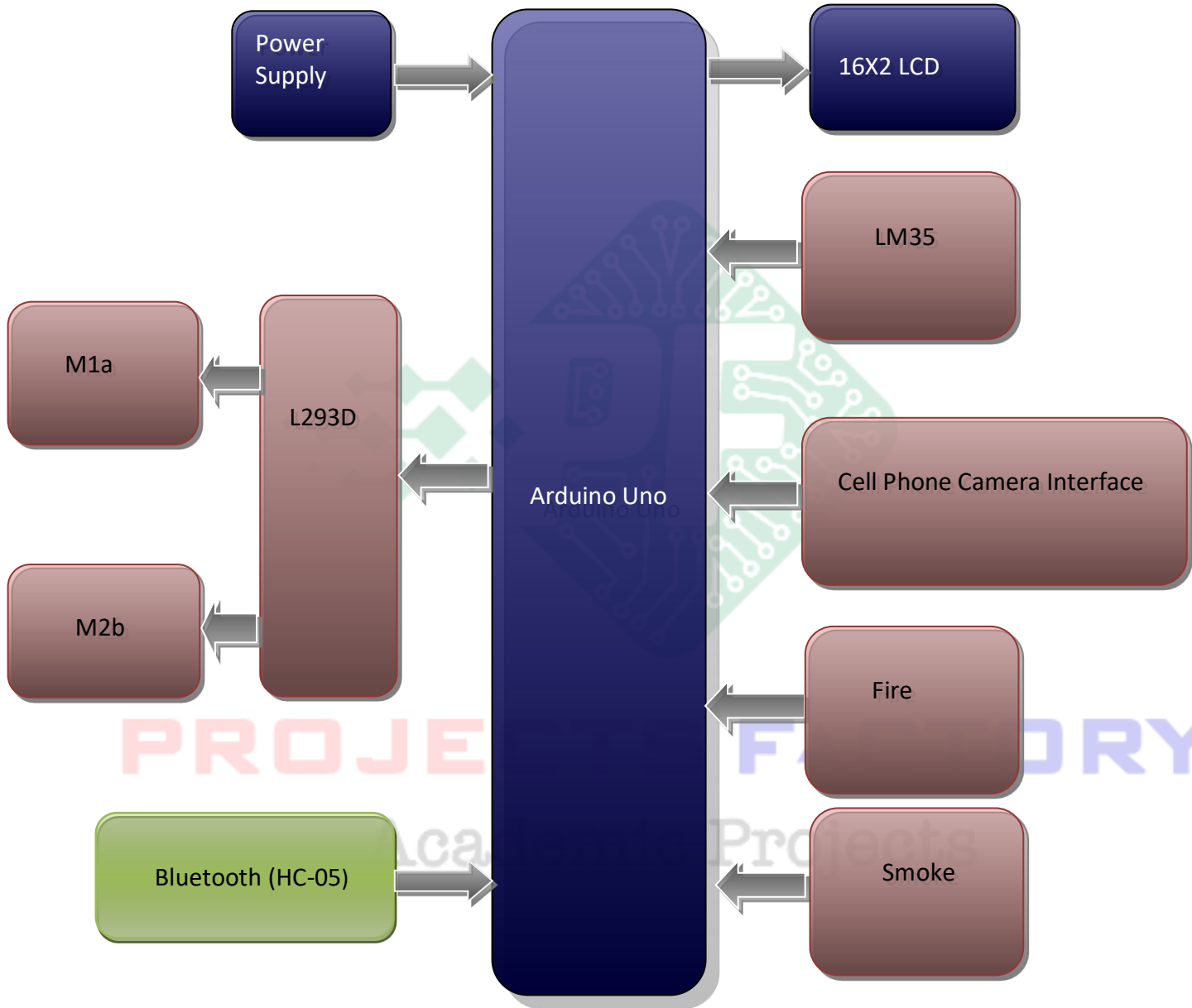
Arduino IDE

Proteus based circuit diagram

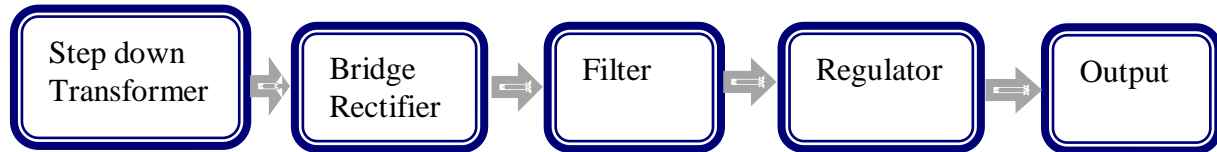
APPLICATIONS:

- Industrial Security Applications
- Medical Labs

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered Bluetooth (HC-05) module interfacing
- L293D Motor driver interface
- Temperature sensor (LM35), Smoke (MQ135) and Fire sensor interface



PROJECTS FACTORY
Academic Projects