

## ESP32-CAM MILITARY SPYING ROBOT

### AIM:

Design and Development of ESP32-CAM military Spying robot.

### PURPOSE:

There are so many types of military spying robots available. Every model has its own features and operations. Here our target is to implement low cost high reliable robot that can stream video through wireless. Also it has laser pointer that can target objects or people. Laser point moved in vertical direction with the help of motor. All these operations done through web page.

### DESCRIPTION:

ESP32-CAM is main functionality system of entire project along with Arduino. It can stream video through WIFI network. DC gear motors controlled by L293d which are connected to Arduino digital pins. Laser LED controlled by relay which is connected to Arduino digital pin. Also it will rotate in vertical direction with DC gear motor.

### WORKING:

ESP32 CAM- module can be connected to WIFI credentials. It needs SSID and password to access web page. This web page contains video streaming window and robot controlling buttons. We can control robot from web page also it has few more buttons. Those can help to control laser light as well camera rotation. While pressing buttons on webpage ESP32-CAM sends those commands to Arduino through UART port. Based on these commands motors will be controlled.

## TECHNICAL SPECIFICATIONS:

### HARDWARE:

Microcontroller	:	Esp32-Cam and Arduino
H-Bridge	:	L293D
Relay	:	12V DC
Laser Light	:	5V DC
DC gear motor	:	60 r. p. m
Power Source	:	12v 1 amp DC battery
Cable	:	USB to Serial cable

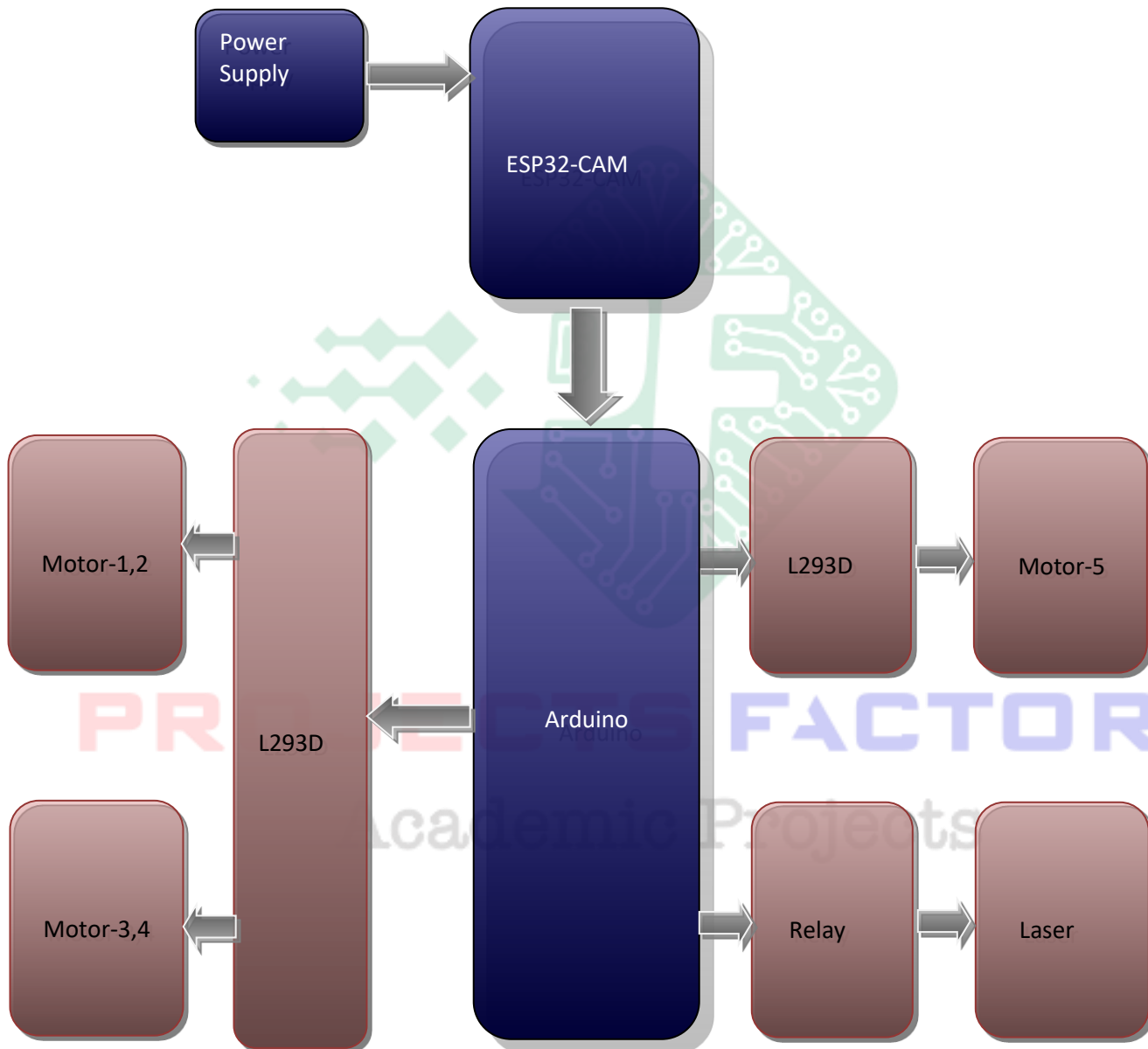
### SOFTWARE:

Arduino IDE

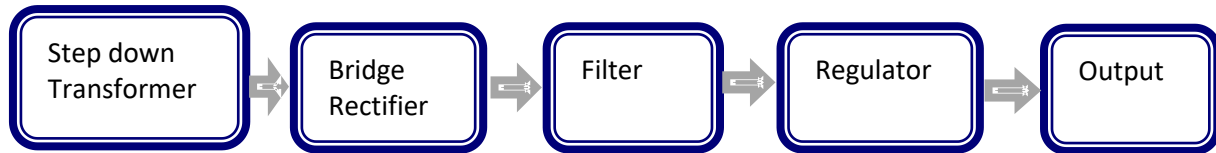
### APPLICATIONS:

- Military Applications
- Robotic Applications
- Remote Control of vehicles
- Web page based robots

## BLOCK DIAGRAM:



## POWER SUPPLY BLOCKDIAGRAM:



## INTERFACES COVERED:

- We have covered Esp32-Cam and Arduino
- Laser LED control with Relay
- H-Bridge L293D and DC gear motors

**PROJECTS FACTORY**  
Academic Projects