

FACE MASK ENABLED HAND SANITIZER

AIM:

Design and Development of Face mask enabled hand sanitizer.

PURPOSE:

Now a day face mask is mandatory to avoid virus infection. Sanitization is also necessity to protect from Covid virus. Here we want to combine these two requirements together to provide smart solution for hygiene and healthy process. We proposed system that can have both facemask detection and sanitizer dispenser. When face mask detected then only it will allow sanitizer dispensing. Without face mask wearing it will not allow us for sanitizer deepening. We can install this system at shopping malls, auditoriums, movie theaters and crowded areas.

DESCRIPTION AND WORKING:

In this project we used ESP32-CAM for detecting face mask. ESP32-CAM placed on daughter board and it has 5v DC output. ESP32-CAM operates on 5V DC. ESP32-CAM has built-in camera and WIFI module. It can stream video on html web page through its IP address. We can see camera view in this web page on laptop or mobile phone. L9110S controls DC pump and connected to ESP32-CAM digital pin. IR sensor, LED and button connected to ESP32-CAM. While detecting face mask user need to press button and show face in front of camera. If face mask detect then green LED will ON and this will indicates to allow sanitizer dispensing. Without face mask detection it will not allow for sanitizer dispensing. For sanitizer dispensing, we have to place hand near to IR sensor.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Esp32-Cam
Detection sensor	:	IR sensor
DC pump driver	:	L9110S
DC pump	:	5V/12V DC
Buzzer	:	DC 5V
Power Source	:	12v 1 amp Adaptor

SOFTWARE:

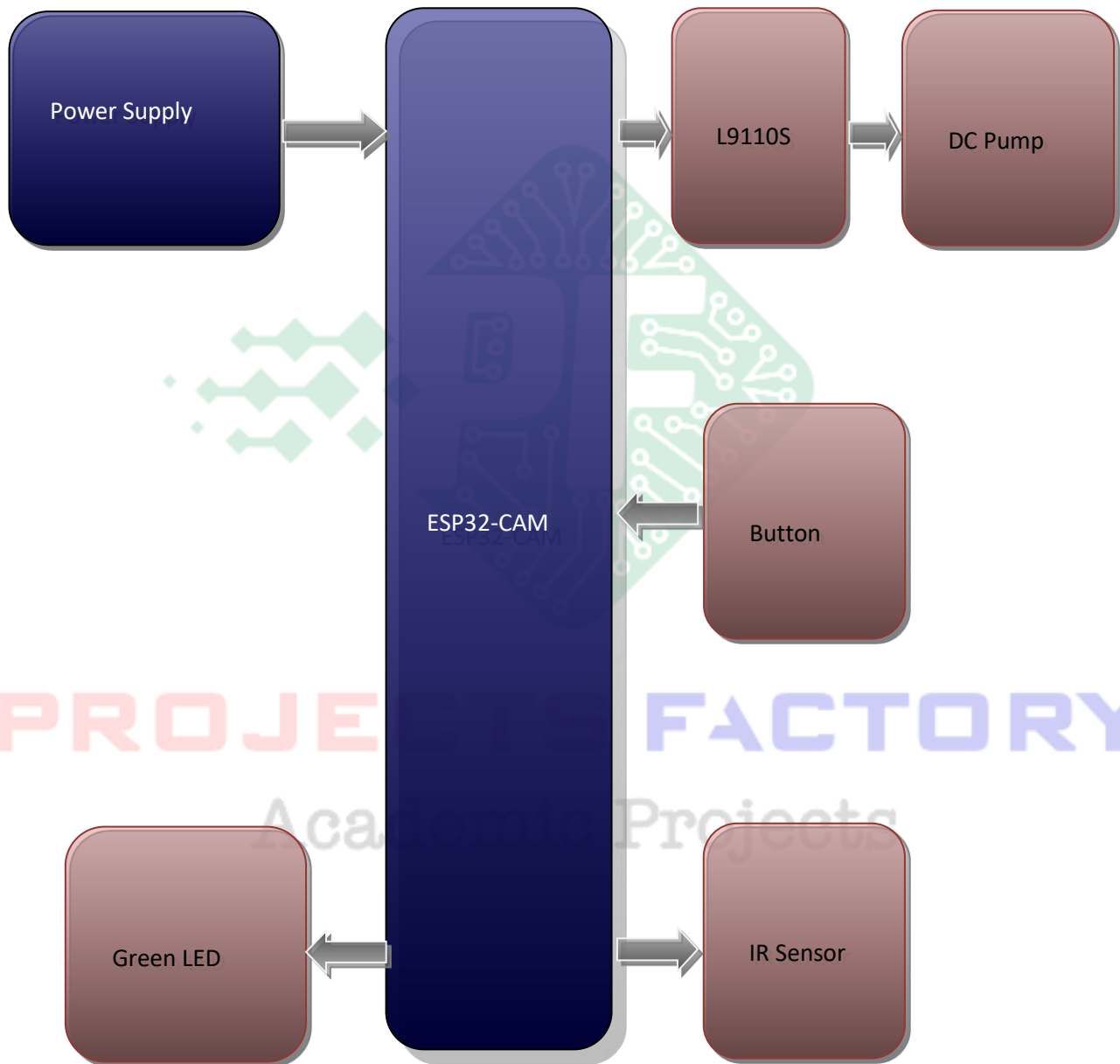
Arduino IDE

APPLICATIONS:

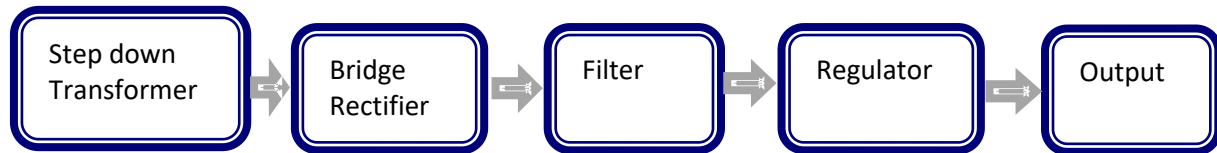
- Smart Sanitizer
- Face mask detection

PROJECTS FACTORY
Academic Projects

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered Esp32-Cam
- Sanitizer Dispenser design
- Face Mask detection algorithm

PROJECTS FACTORY
Academic Projects