Chhotubhai Gopalbhai Patel Institute of Technology, Bardoli

# MULTI-PURPOSE DRONE


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# Introduction

- The materials and parts selection have been considered based on detailed evaluation of drones available in the market along with the considerable mass of payload to be carried.

# Literature Review

1.Multi-Purpose Drone Using IoT, (Srividhya Sekar.C),(International Journal of Advance Research in Science & Engineering),(2019)

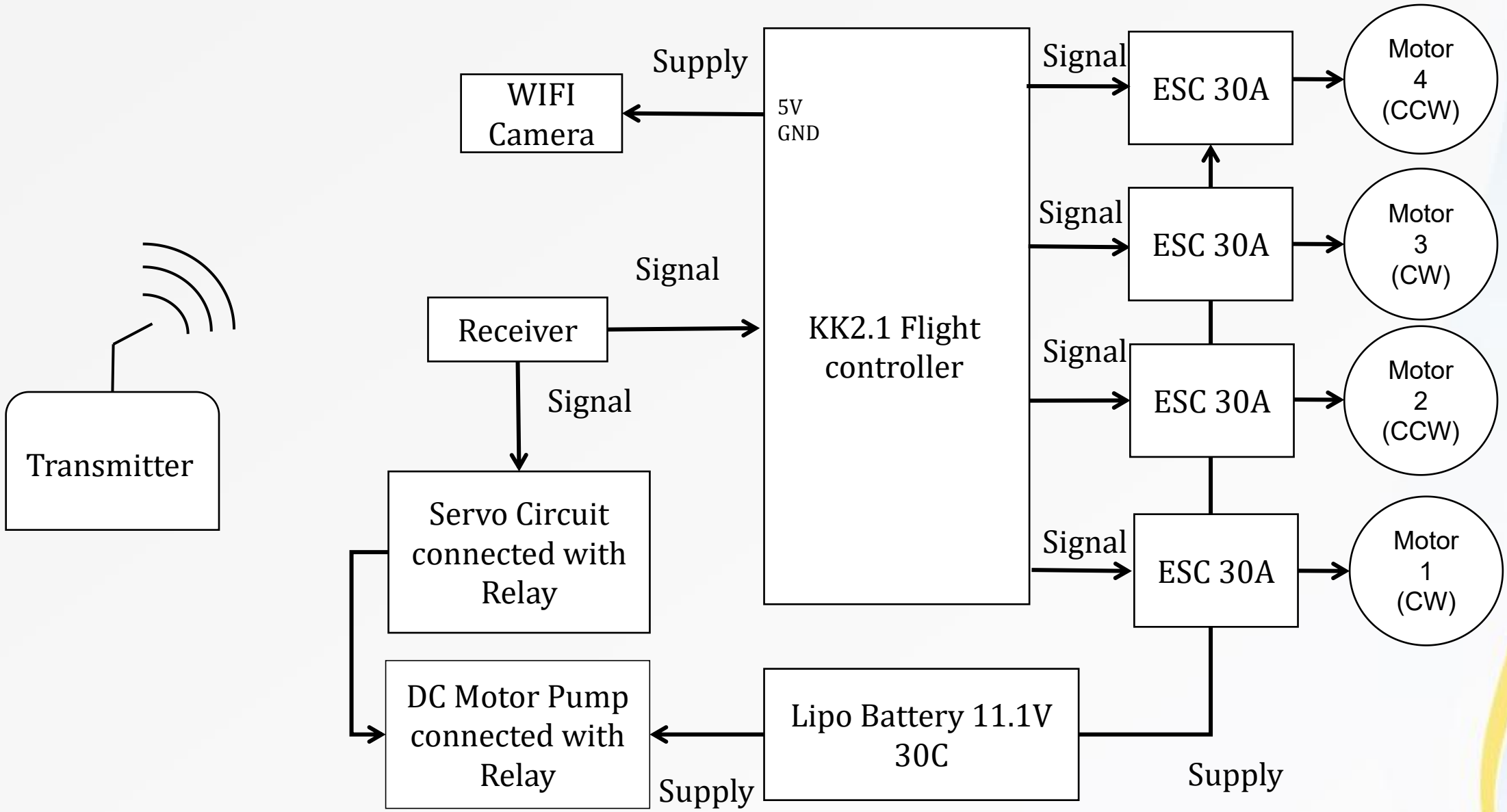
2.Autonomus Drone Project. (Abin vaghrsee), (Mr Ajit V Babu)

3.Multi Purpose Drone with Search and Destroy Rover. (Sabitha Gauni),(International Science Press),(2016)

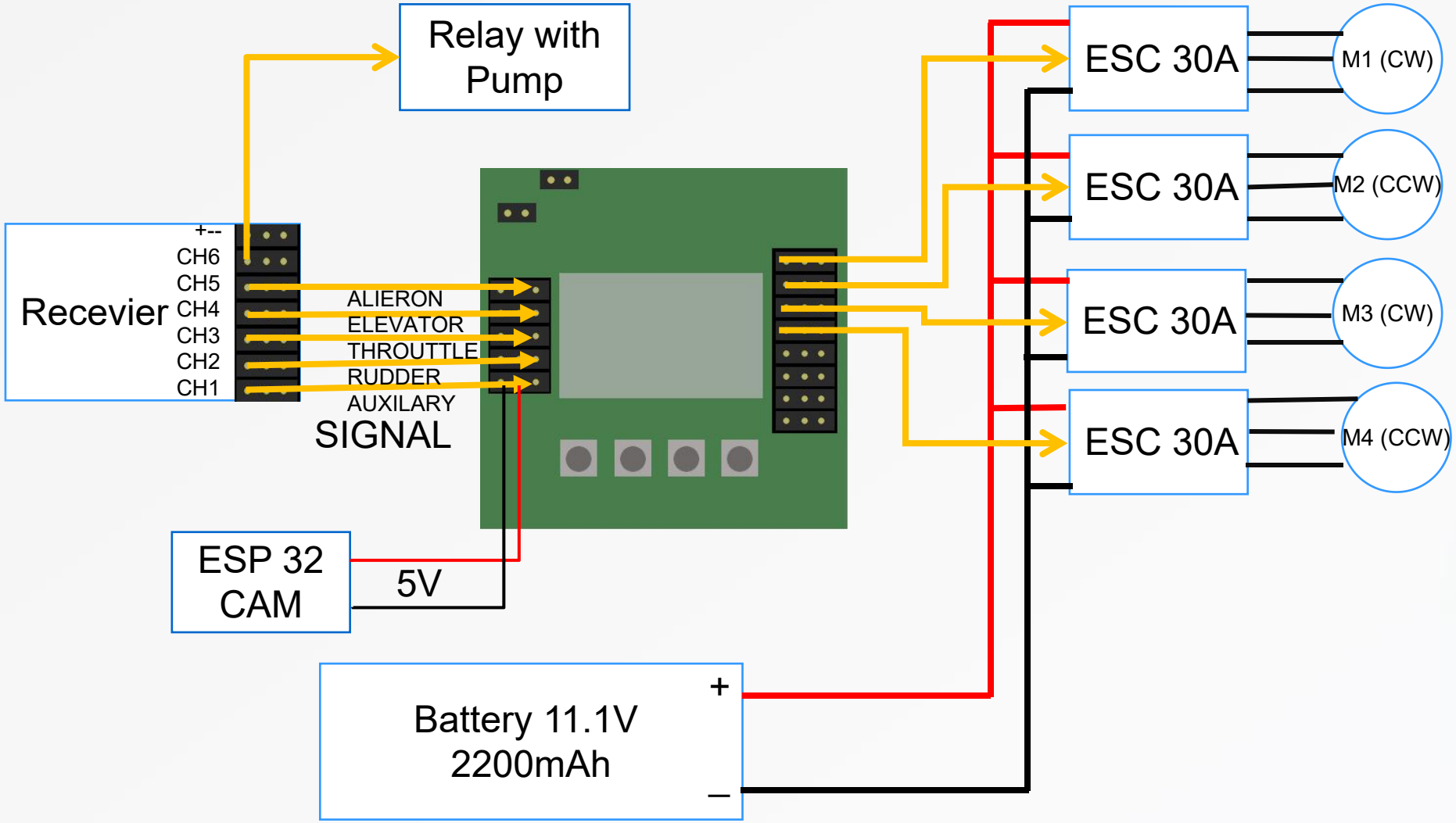
# Objective

- In this project our main concept is to make a prototype multi-tasking drone using KK2.1 Flight controller which will help us to easy our work like Pesticides the plants in farm, Pick and place the object and photography.

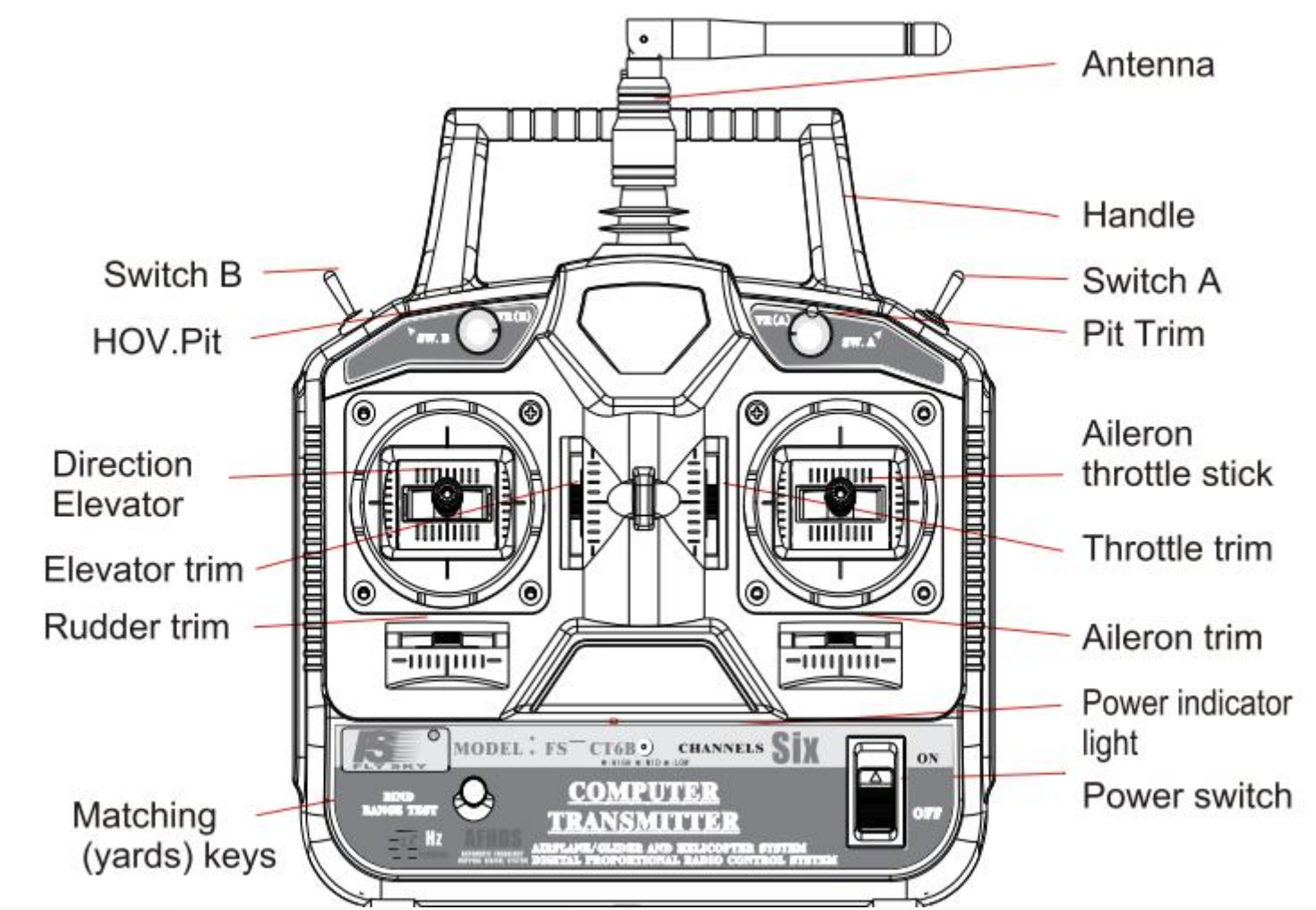
# Block diagram of Multi-Purpose Drone



# Circuit diagram of Multi-Purpose Drone



# Remote Control Unit



# List of Components

1. Propeller Pair 10*4.5 Inch

2. Quadcopter Frame 4-Axis- Integrated PCB Wiring (F45

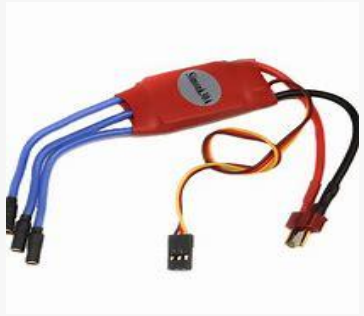
3. BLDC Brushless Motor (2450K


4. 11.1V - 2200mAh LiPo Rechargeable Battery- 30C

5. B3 Lithium Polymer (LiPo) Battery  Charger for 2S-3S LiPo

6. Landing Gear

7. ESC30A



8. XT60

9. Water Pump

11. ESP- 32 Cam

12. FS-CT6B(Remote controller with Receiver)

# Cost Estimation

| Sr.no | Product | Quantity | Price(RS) |
|---|---|---|---|
| 1. | Propeller Pair 10*4.5 Inch | 2 | 65 |
| 2. | Quadcopter Frame 4-Axis- Integrated PCB Wiring | 1 | 590 |
| 3. | BLDC Brushless Motor | 4 | 330 |
| 4. | 11.1V - 2200mAh LiPo Rechargeable Battery- 30C | 1 | 1075 |
| 5. | B3 Lithium Polymer (LiPo) Battery Charger for 2S-3S LiPo | 1 | 425 |
| 6. | Landing Gear | 1 | 300 |
| 7. | ESC30A | 4 | 1600 |
| 8. | XT60 | 1 | 50 |
| 9. | DC Water Pump | 1 | 125 |

# Cost Estimation

| Sr no. | Product | Quantity | Price |
|---|---|---|---|
| 10. | Relay | 1 | 100 |
| 11. | FS-CT6B Remote controller with Receiver) | 1 | 2500 |
| 12. | ESP- 32 CAM | 1 | 600 |
| 13. | Servo Motor | 2 | 100 |
| 14. | Jumper Wire | 1 | 20 |
| 15. | KK 2.1 Flight Controller | 1 | 2000 |

The total cost of project is Rs15000/-.

# FUTURE Work

1. Pick and Place

# THANKYOU