PROTOTYPE PRESENTATION

BY BACKSTREET HACKERS

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CONTENTS

MINISTRY / ORGANIZATION : MINISTRY OF HEALTH AND FAMILY WELFARE

PROBLEM STATEMENT

Throughout the developed and developing world, access to life-saving and critical health products is hampered by what is known as the last-mile problem - the inability to deliver the needed medicine/blood from a city to rural or remote locations because of inadequate transportation, communication or supply chain infrastructure .To solve this connectivity problem, national drone delivery system needs to be created to carry urgent medicines to patients in need in Hilly and inaccessible areas. Team needs to build a drone that can deliver essential medical products/blood of up to 2.0 kilograms per flight while maintaining the cold chain if needed- in an average fulfilment time of 30 minutes. Also, it should be usable in emergencies and disaster prone areas.

PROJECT OBJECTIVE

- For giving services in remote and inaccessible areas using unmanned aerial vehicles.

OVERVIEW

In primitive and backward areas where internet and other network facilities cannot serve (rather inaccessible areas) , even those places are capable of being monitored by satellites thus allowing GPS accessibility. In our present drone model we are using GPS module which provides exact location data. Thus, the drone can be send to remote areas in less time in order to provide important and life saving drugs thus making it extremely beneficial for outreach. It contains Flight Controller APM 2.8 which makes it autonomous, so once the way points are set it easily reaches to the destination.

MAIN EQUIPMENTS USED

FLIGHT CONTROLLER APM 2.8

Features:

- Arduino Compatible
- Optional off-board GPS , a uBlox LEA-6H module with compass
- One of the first open-source autopilot systems

POWER MODULE XT60

Features:

- Maximum Input Voltage : 18V
- Maximum current sensing : 90A
- Connected with LiPo battery

MOTOR - 1400kV (BRUSHLESS DC MOTOR)

Features :

- Capable of withstanding competitional conditions giving high stability to our drone

ESC 30 Amp

Features :

- Constant current : 30 Amps
- Input Voltage : 11.1 - 11.7
- Ni - MH 4-10 cells Auto Detect

TRANSMITTER RECEIVER

Features :

- Frequency Range : 2.4055 - 2.475 GHz
- Band Width Number : 140
- Transmitting Power : <= 20 dBm

BUSINESS OUTLOOK

- One time investment.
- Low Maintenance Cost
- Time Efficient for Delivery Purposes
- Cutting off human effort.
- We are not here to make money, we are here to save money

THANK YOU