

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

“Jnana Sangama” Belagavi – 590010



PROJECT REPORT ON

“DESIGN OF AN AUTONOMOUS QUAD COPTER TO SERVE THE EMRGENCY COMMODITY USING ARM 32”

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING IN ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
Gaganashree P	4AL15EC024
Kavyashree M	4AL15EC036
Mahima Shetty	4AL15EC045
Deeksha U Shettigar	4AL16EC019

Under the Guidance of
Mr. Deepak Raj
Assistant professor
Department of E&C Engineering



DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574225.

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ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI - 574225

(Affiliated to VTU, BELAGAVI)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

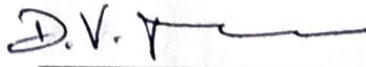
Certified that the project work entitled "DESIGN OF AN AUTONOMOUS QUAD COPTER TO SERVE THE EMERGENCY COMMODITY USING ARM 32" is a bona fide work carried out by

Gaganashree P	4AL15EC024
Kavyashree M	4AL15EC036
Mahima Shetty	4AL15EC045
Deeksha U Shettigar	4AL16EC019

in partial fulfillment for the award of BACHELOR OF ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2019-2020. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.



Signature of the Guide
Mr. Deepak Raj



Signature of the H.O. D
Dr. D V Manjunatha
H. O. D.

Dept. Of Electronics & Communication
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225



Signature of the Principal
Dr. Peter Fernandes
PRINCIPAL

Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225, D.K

EXTERNAL VIVA

Name of the Examiners

1.....

2.....

Signature with date

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ABSTRACT

Drones are unmanned aerial vehicles that are remotely controlled. Drones have recently become a promising solution for rapid parcel delivery due to advances in battery technology and navigation systems. Drones have inherited limitations in battery capacity and payload, which make their efficient operation and management a critical problem for a successful delivery system. Adopting modularity in the drone design can provide operational benefits to increase overall fleet readiness and reduce overall fleet size. The potential value of introducing modular design to a drone delivery system is being worked on. We propose an optimization method for the operation management of a modular delivery drones. The results show that a simple management strategy that can make a drone delivery system unstable with increasing demand on certain types of modules in the fleet. The results comparing modular and non-modular drone operation also prove that the proposed operation management method with modular drones can save delivery time, energy consumption and use an android mobile application during a delivery operation. However, it is not possible for all people to make use of smart phone.

This paper proposes a system that will help people to get served by the emergency commodity that is in need for them such as first aid box and petrol etc. The proposed system is a combination of drone and mobile application which will help the user to communicate with the source. People can easily access the mobile application and receive their emergency commodity at the earliest. The details of the user will be acknowledged by the source person and given to the drone such that it reaches the destination point. Any comments or message to be communicated by the user to the source person can be sent through the comment box that is available in the mobile application.