DESIGN AND CONSTRUCTION OF QUADCOPTER TYPE AUTONOMOUS DRONE FOR DELIVERY OF GOODS

Zahrowani Yusuf Alfaridzi
Electrical Engineering Study Program, Faculty of Science & Technology
University of Technology Yogyakarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
E-mail : zahrowaniyusufalfaridzi@gmail.com

ABSTRACT

The system of delivering goods by land has long been implemented in various places and requires expensive fuel. There is a solution, namely using the air route using drone transportation. This research is designing a quadcopter model drone as an autonomous delivery of goods. In this study, the PIXHAWK flight controller was used to control the flight of the vehicle and was also equipped with a GPS module to help the vehicle obtain information on the coordinates of the vehicle. The waypoint system is used in this study to create an autonomous flight path. Based on the test results that have been carried out delivering goods from the starting point to the destination point using autonomous mode, the average value of the difference between the drop point and the actual point is 44.45 cm with the initial point to the drop point distance is 23 meters. The results of the flight length (duration) test by varying the mass of the load given to the drone show that the greater the mass, the less the duration of the flight, while for testing the communication of the vehicle, the maximum distance of communication between the drone and telemetry is 900 meters.

Keywords*: Drone, Quadcopter, Autonomous*