

Arduino Based Quadcopter with Monitoring Camera

Safaa N. Saud, M. A. Mohamed Nazar, R. Junaidi Daud, Hasni Abdullah
Faculty of Information Sciences and Engineering, Management and Science University

safaa_najah@msu.edu.my, aakifmnm@live.com, r_junaidi@msu.edu.my, hasni@msu.edu.my

Abstract

This project focused on develops and modify a remotely operated Quadcopter system with a first person view camera. These Quadcopter is controlled through a 2.5 GHz remote control system. Communication between remote controller and Quadcopter is done by using wireless communication system. The balancing system of the Quadcopter is controlled by a gyro sensor attached with the main board. For a damage less landing and a smooth takeoff the quadcopter has a 12 cm long landing gears. The camera has been attached under the quadcopter for a better view and it uses Wi-Fi communication method to stream the video to the laptop. The main also contains a GPS module and a light sensor which can help to locate the quadcopter in case of any lost and the light sensor is attached if the quadcopter enter dark zone so the pilot can spot the quadcopter with the automatic light. Output from Arduino Uno board used to control quadcopter propellers the sensors and the communication. The output sensor data is been monitored by a GUI (Android application) and the communication between the sensors and the application made using Bluetooth module.

Keywords:

Gas Leakage Alarm, Microcontroller, User Alert System, RF Module, LEDs indicator