

# Design and Implementation of a Flight Control (Autopilot) System for an Off-The-Shelf Small Flying Vehicle

## Project completed by:

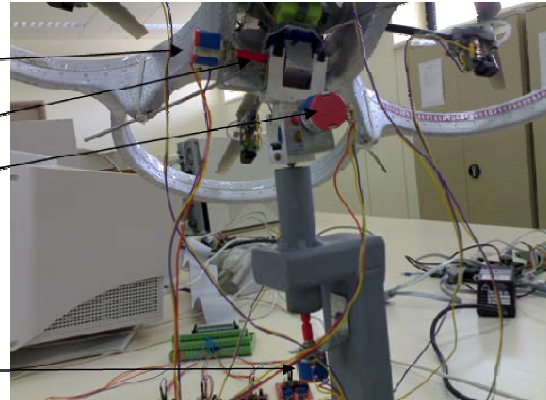
Al-Sult Al-Hinai  
 Rashed Al- Weshahi  
 Yahya Al-Rubaiey  
 Malek Al-Sharaiqi

Roll potent.

Heat shrink

Pitch potent.

Yaw potent.



## Under the supervision of:

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## Project Summary:

Flying Robots have increasing applications nowadays, and their use in many fields is increasing, such as their use in search operations, spy work, rescue, surveillance and remote inspection. In the past few years, engineers made a great effort to improve the performance of these flying robots, increase their flying altitude and try to make their size even smaller. Design of the controller that can fly such machines is the heart of such researches, and the main important part of them. The project aim is to design and implement a flight control (Autopilot) system for an off-the-shelf small flying vehicle. The vehicle is a 4-Rotor flying machine, and we have designed and implemented a PC-based controller such that it controls the 4-Rotor angles (Yaw, Roll, Pitch) using MATLAB software and NI Data Acquisition Card (DAQ). Design of the attitude (angles) controller is the first step towards designing the full autopilot system.

