G-14: A New Kind of Multi-rotors

Abdelkader, Fares
Elmasry, Abdelaziz

All UAVs have some problems like helicopters can't fly in narrow places and exposed to crash and have bare propellers which make them more exposed to crash. The G-14 is a round anti-collision stable flying body mixed between helicopter planes which flies vertically and fixed wings planes which can fly horizontally with high speed and with the same consumption. It works with three motors The two EDF fans gives it the speed like jet models and a counter rotation propeller which gives anti-torque to cancels the torque of the propeller and allows for vertical takes off. Therefore, it can reach far places faster than helicopters and quad-copters and can move in narrow places and receive shocks without damage or even falling. Also, It can fly fast or slow as the mission need. So it can do more missions with high speed or low speed. Like explorations in narrow places and photographing or even fixing things in high towers like electric towers. Also, it can be used for the police because is can reach the crime scene fast and have the ability to chasing in narrow places. The G-14 considered as a development for the multi rotors which most of people who developed it use programing with Proportional-Integral-Derivative controller (PID controller) which can added to the G-14 to be much more stable and smarter. When we built it takes off vertically and stable with position 1 and with position 2 it flies horizontally with high speed and low consumption of electricity

Awards Won: