Abstract

This research and development focused on hybrid robot for air and land. Hybrid robot is combination of wheeled robot and unmanned aerial vehicle (UAV) system also called as Drone.
Drone is controlled by using Telemetry module and wheeled robot is controlled by using Dual Tone Multi-Frequency (DTMF) module. Electronic Speed Controllers (ESC’s) are used for balancing the speed of Drone and Flight Controllers are used for take-off and landing. Humidity, light and temperature sensors are implemented for measuring the weather in surrounding environment. Ultra sonic Sensors are used for proper landing and obstacle avoidance. Signals originating from sensors are sensed by microcontroller. This system results in hovering of drone with maintaining its proper balance and constant stability. Maximum time operated of drone is eight minutes using 2200 mAh Lipo battery. Battery performance can be increased by using large battery capacity.

References

- Pearce and C. Guckenber, "Designing a spatially aware, automated quadcopter using an Android control system"; IEEE, 2014.
- Pathik and Ahmed, "Development of a cell phone based vehicle remote control system"; IEEE, 2014.

Index Terms

Computer Science
Automation
Keywords
Drone  Dtmf  Uav  Multi Rotors  Hybrid Robot.