

# Advanced Command Module for Vehicles – Drones

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**Abstract:** *The interest in using drones in various applications has grown significantly in recent years. The reasons are related to the continuous advance in technology, especially the advent of fast microprocessors control of survey systems. Photography, construction, monitoring, surveillance and transportation are mainly some the area in which the use of drones is being common. In this work we had focus on advancement and updating benchmarking for exclusive and intelligent UAV'S (drones) we survey and classify the existing works and we provide perspective for future research. In recent decades, aerial robots especially small UAVs and drones have witnessed tremendous improvements in terms of their structure, working methodology, flying features and navigation control. UAVs are highly utilized in a wide range of services such as photography, path planning, search and rescue, inspection of power lines and civil constructions, etc. This manuscript reports a wide overview and comprehensive survey of recent developments in commercially available UAV's and gives a brief note on the progress and research covered in last 10 years. The research presents a roadmap to understand the successive development of advanced drones/ UAVs in terms of their geometric structure, flying mechanism, sensing and vision ability, aviation quality, path planning, intelligent behaviour and adoptability. A literature survey is conducted systematically on 254 retrieved articles published in the last 10 years and scaled down to 96 relevant articles. In these shortlisted articles, path planning, neural network, artificial intelligence, inspection, surveillance, tracking and identification, etc. are the most relevant methodologies or applications presented. The current research is concerned about the growth and impact of UAVs/drones in the society and also inspires the newbies to carry research in this field and propose new methods to select or equip the flying robot for a specific application in various fields. This article also assists researchers in understanding and evaluating their research work in the context of existing solutions. It also helps newcomers and pilots/practitioners to quickly gain an overview of the existing vast literature.*

**Keywords:** Civil survey, Agriculture, Emergency service and Military

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