Preliminary Design of Drone for Security

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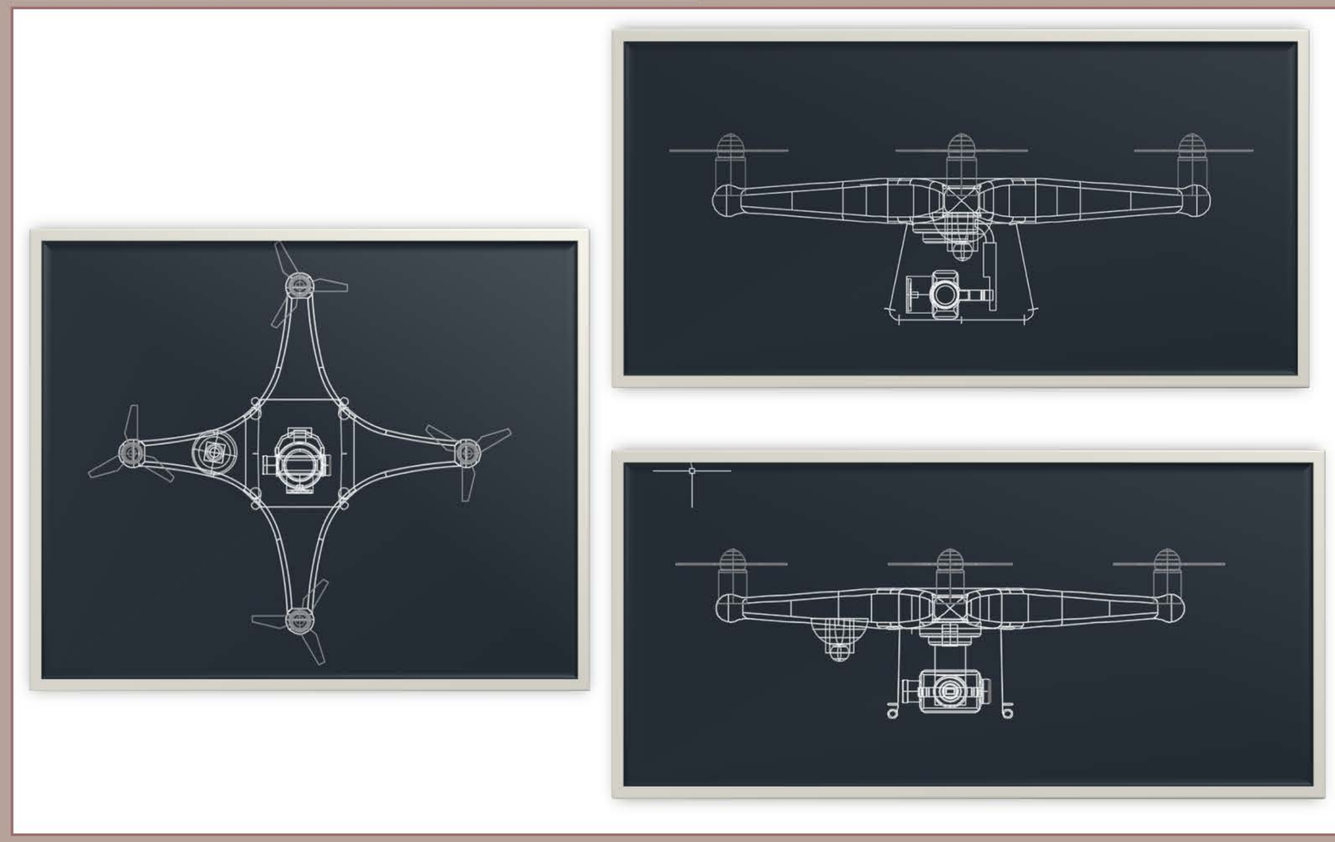
No of components	Type of components	No of components used
1	Motor	4
2	Propeller	8
3	Arm	4
4	Camera	1
5	Airborne Sensors	1



INTRODUCTION

The mechanical concept is usually done in a CAD (computer-aided design) tool. The output is usually a standard file format that can be opened/imported in any CAD application software or multiple image files showing the sectional view such as top, bottom, and cross-sectional view of the target 3D model concept. The design of the drone is for Security purposes. s. In this scenario, the complexity of the missions (flight and measurement/data gathering specifications) drastically increases, requiring new techniques and tools to easily define and perform a flight. In this paper, we focus on the infrastructure inspection problem with multi-rotors, although the involved techniques and tools can be adapted for other applications.

MECHANICAL DESIGN

A quadcopter is an Unmanned Aerial Vehicle (UAV) with 4 propellers providing required force for motion. It has four equally spaced rotors, typically arranged at the corners of a central body. With four independent rotors, the need for a swashplate mechanism like that in a regular helicopter is alleviated. Propellers, Airborne Sensors, a turbofan motor, a camera, an aluminium stand, and a stainless-steel drone body are among the mechanical components required.

DRONE APPLICATION

Drone Mission Definition and Implementation for Automated Infrastructure Inspection Using Airborne Sensors.

REFERENCES

[1] Autodesk, (2022). Panduan Asas AutoCAD (S. Widyarto, Ed. & Trans.; 1st ed.). International Community Forum (ICF).

[2] Setyawan Widyarto and Muhammad Shafie, Abd. Latiff (2007), the use of virtual tours for cognitive preparation of visitors: a case study for VHE, Emerald Group Publishing Limited, Vol. 25 (7/8), pp. 271-285

AUTODESK

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