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NYARKOA CANSAT MODULE: A COST-EFFECTIVE APPROACH TO SIMULATING SPACE
MISSIONS

Abstract

This paper delineates the methodology utilized in crafting an experimental satellite that showcases a pragmatic approach to emulate real-world space missions. Our findings affirm that it is feasible to construct experimental satellites using readily available components, providing an easier, cost-effective, and sustainable means of simulating actual space missions. The implemented satellite seamlessly integrates crucial elements, encompassing flight software, hardware components like the microcontroller, payload systems, communication modules, ejector modules, GPS, and power systems. This research offers a compelling starting point for launching space projects and programs. Furthermore, the results underscore the pivotal role of experimental satellites as a technologically robust and economically viable entry point for embarking on space initiatives with limited budgets.

Keywords: Experimental Satellites, CanSat, KiCad, Payload System, Nyarkoa