

**DESIGN AND SIMULATION OF
ELECTRICAL POWER
SYSTEM
OF
NANO SATELLITE**

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PREFACE

Recent progress in miniaturized space system technologies may make it possible for nanosatellites to complement today's large, extremely high reliability, single mission satellites with smaller, less costly platforms that greatly reduce development, integration, and launch timelines. To fully realize this transition, Academia and Industry must make additional technological advances in all supporting satellite subsystems.

The nanosatellite that respects the standard form CubeSat present various engineering challenges due to its small size and surface area. The challenge is to incorporate a large amount of technology in a cubic form no bigger than 10cm³ and consumes only 1W. This paper details the design of a photovoltaic-battery based power supply utilizing direct energy transfer for solar array regulation and battery charging. Also, the simulation results for the management of the power system in the nanosatellite are displayed.

 *Author*

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