SMALL SATELLITE MISSIONS SYMPOSIUM (B4)
Design and Technology for Nano-Sats and Cube-Sats (6B)

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LOW COST TURNKEY MISSIONS USING THE SENTRY NANOSPACECRAFT BUS

Abstract

With the standardization of the CubeSat form factor, CubeSats are becoming readily available for integration with custom payloads, but the options available on the market today have limited performance capability and require the user to coordinate their own ride to space.

The idea of a low cost turn-key mission in less than 18 months from the word "go" is what Andrews Space is offering with its SENTRY nanospacecraft bus combined with regularly scheduled secondary payload rides using SpaceFlight Services. Andrews Space (Andrews) has developed the SENTRY and SENTRY XP nanospacraft satellite bus to support spacecraft that range from 3U to 24U (4 kg to 40 kg) in size. Furthermore, Andrews has created SpaceFlight Services, a company dedicated to the launch of small and secondary payloads.

This paper describes the SENTRY spacecraft bus and its variants that address spacecraft sizes ranging from 3U to 24U. The SENTRY subsystems and capabilities are described in detail as well as payload integration options. This paper outlines spacecraft designs for a variety of mission applications, as well as the launch integration and flight options offered by SpaceFlight Services.