

## Power And Control Equipment (PACE) Design for Small Satellite

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This paper describes PACE design for the small satellite. The objective of PACE is to provide hardware and software for efficient electrical testing of integrated small satellite in the Attitude Orbit Control Subsystem and Electrical Power Subsystem. Recent design trend of small satellite and EGSE is to take short development time and less cost. The design concept of PACE is generic modular design with preference in part selection with commercial off-the-shelf, flexible/user friendly operational environment (graphical interface preferred), minimized new design and self test capability. The PACE provides the following major capabilities : Provide and monitor external power, Provide and monitor launch vehicle power, Provide and monitor spacecraft battery activation, Provide and monitor solar array simulated power to Solar Array Regulator interface, Provide and monitor spacecraft signal interface for test point, Provide launch vehicle interface, Provide RS-422 serial interface for spacecraft Power Control and Distribution Unit, Monitor Deploy Device Equipment and Valve Drive Equipment pulse signals, Provide and monitor load simulation for validation and spacecraft bus and monitor MIL-STD-1553B Bus signals.