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PacSci EMC Announces New Compact SmallSat Propulsion System

The new Modular Architecture Propulsion System significantly reduces satellite integration time and delivers precise performance in orbit.

CHANDLER, Ariz., March 21, 2017 — PacSci EMC announces the release of its new Modular Architecture Propulsion System (MAPS™) for the small satellite market. The compact design of MAPS is a breakthrough in reducing time and cost of integrating the propulsion system with the satellite and launch vehicle. MAPS reduces the time from fabrication and testing to integration on the launch vehicle by up to 78%. The solid propellant thrusters provide precise and predictable performance from satellite deployment to decommissioning.

MAPS is a solid, clean-burning propellant array of rocket motors. By using a solid propellant (rather than hydrazine or even a less toxic liquid propellant) there is no need for valves, fittings, welds, filters, heaters or complex thrusters, significantly reducing assembly time and cost–and greatly improving system reliability. The solid propellant does not contaminate optics or solar panels and does not require warm-up time. There is also no need to fuel the system, which can save approximately one week during launch vehicle integration.

“True to our company’s mission, MAPS provides precise and predictable performance when the mission is dependent on all systems working at the exact moment they are supposed to, down to the millisecond,” said Steve Nelson, PacSci EMC’s vice president, commercial product line management. “Our development team is focused on designing and engineering a propulsion system that delivers operational efficiencies from fabrication to launch, and precise performance from the moment the satellite is launched into orbit to deorbit or decommissioning.”

During operation, the propulsion system is operational anytime within 300 milliseconds. The thrusters can be fired in pairs, triplets or any symmetrical combination to achieve precise, predictable and repeatable delta-V increments and variable acceleration. The hermetically sealed motors are ready to fire at satellite deployment and 10 or more years later for deorbit or decommissioning.

MAPS is highly configurable to fit the mission, and the compact design fits in the unused separation system or other spaces leaving plenty of payload room. MAPS can also be configured as a standalone system with attitude control and communications for satellites and upper stages. The system’s bolt-on, compact design eliminates complex integration within the satellite.

ABOUT PACIFIC SCIENTIFIC ENERGETIC MATERIALS COMPANY LLC (PacSci EMC):
PacSci EMC makes critical missions possible. Throughout the product lifecycle, our employees solve the toughest technical challenges with a dedication to Safety First, Quality Every Time™. We enable success for innumerable missions on a daily basis, impacting the lives of military personnel, law enforcement officers, commercial airline pilots, astronauts, and oil field operators. For nearly a century, PacSci EMC’s experience and expertise has been relied upon in the times When Milliseconds Matter™. For more information please visit: www.psemc.com.

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