smiths interconnect

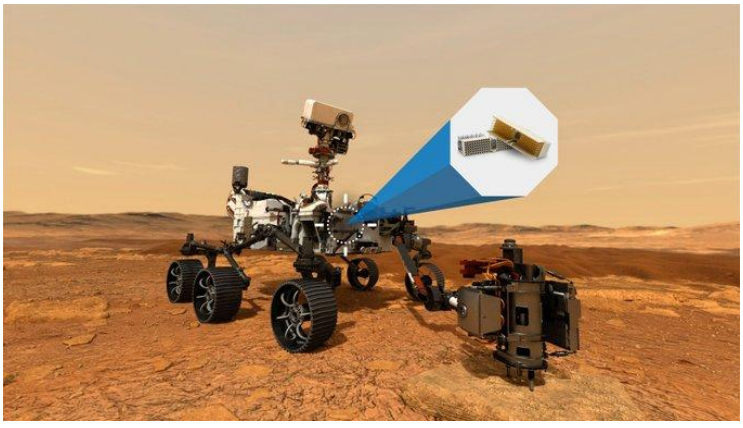
# Smiths Interconnect's contact technology launched on NASA Mars Perseverance Rover

NASA's Mars Perseverance Rover finally touched down on Mars on February 18, 2021. Smiths Interconnect provides the Mars Perseverance Rover with high performance ruggedized cPCI 2mm connectors addressing NASA's need for a high reliability connector solution to meet the mechanical, electrical and environmental performance requirements.

Designed to be the most sophisticated rover NASA has built, the Mars Perseverance Rover will use advanced systems to explore the diverse geological landscape, discover ancient habitats, gather rock and soil samples that will be returned to Earth and demonstrate cutting-edge technology for future human exploration.

Mars Perseverance Rover is loaded with state-of-the-art scientific instruments, advanced computational capabilities for landing, upgraded sensors, computers and algorithms. It will enable the rover to quickly and autonomously realize its location on Mars and modify its course during descent. This technology will be able to provide invaluable assistance for both robotic and crewed missions landing on future planets and a must for future robotics and missions to Mars.

Smiths Interconnect provides the Mars Perseverance Rover with high performance ruggedized cPCI 2mm connectors addressing NASA's need for a high reliability connector solution to meet the mechanical, electrical and environmental performance requirements. Rigorous testing was performed at the Jet Propulsion Laboratory for extreme environmental conditions, including thermal excursions, corrosive atmospheres, excessive shock and vibration, contact engagement/separation cycling, and other key NASA requirements.



*"Smiths Interconnect is proud to support the Mars Perseverance Rover with a connectivity solution specifically engineered and optimized to mitigate the effects of heat and shock and vibration, while maintaining exceptional levels of signal integrity"* said Paul Harris, President, Smiths Interconnect.

The cPCI 2mm connectors is based on Smiths Interconnect's unique Hypertac® hyperboloid contact technology, renowned for its immunity to shock, vibration and fretting. Tested to high level space and aerospace standards, the K2 series delivers high performance in mission critical applications such as military land systems, shipboard, spacecraft, and defence applications.

The cPCI series is qualified to NASA GSFC: S-311-P-822 and assigned NASA Goddard part numbers. It provides:

- High speed signal integrity up to 3.125 Gbps
- High-temp LCP insulators that meets NASA outgassing requirements
- Keying features to ensure proper mating
- An integrated shield to maximize EMI/RFI leakage
- Compatibility with reflow soldering processes
- Low insertion and extraction forces for reduced board strain and improved serviceability.