



**Military  
& Aerospace  
& DEFENSE**



## Reliable, Life-of-System Interconnect Performance

Wiring and interconnect components installed in military aircraft are subject to aging and degradation impacts depending on different levels of exposure to environmental stress factors including caustic chemicals, heat, non-pressurized zone condensation, vibration-induced contact fretting and more. These environmental stress factors are exactly defined and tested for in military-grade connector qualifications. Conductive and barrier platings, environmental sealing technologies, EMC shielding and grounding methodologies and other design parameters have been perfected over many years of deployment and maintenance. Next-generation interconnect technologies both incorporate all of the above design standards as well as innovative techniques for reducing size and weight, optimizing instrumentation signal data through-put, and enhancing immunity to electromagnetic and RF interference.

Guided missile systems employed in modern military aircraft take advantage of advanced detection, tracking, and targeting electronics and are also subject to stress factors that limit the range of suitable, available interconnects. Missile system components are compartmentalized by function with modular subsystems and wire harness or flex circuitry interconnections. Telemetry systems, for example, are comprised of many subsystem components typically connectorized with MIL-PRF-83513 type Micro-D connectors.



Missile-grade Micro-D wire assembly

### MIL/AERO INTERCONNECT REQUIREMENTS

- Optimize size, weight, application tooling, and maintenance support IAW mil-spec standards
- Crimp contact termination for all harness applications
- Sealing / backpotting in all PCB connectors
- Environmental sealing in both pressurized and non-pressurized zones
- MIL-STD 810 vibration and shock
- EMI shielding effectiveness per MIL-DTL-38999M para. 4.5.28
- 10,000 amp indirect lightning strike
- MIL-S-901 Grade A high impact shock
- Altitude immersion: EIA-364-03 75,000 feet altitude

## PROVEN PERFORMANCE Military-Aerospace and Guided Missile System Interconnect Technologies



### NEXT-GENERATION MILITARY AIRCRAFT INTERCONNECT TECHNOLOGY



SuperNine Environmental Crimp Contact

SuperNine Glass-Seal and CODE RED Hermetic

SuperNine Tight-Tolerance Fiber Optics

SuperNine PCB Connectors with Parylene-Compatible Sealing

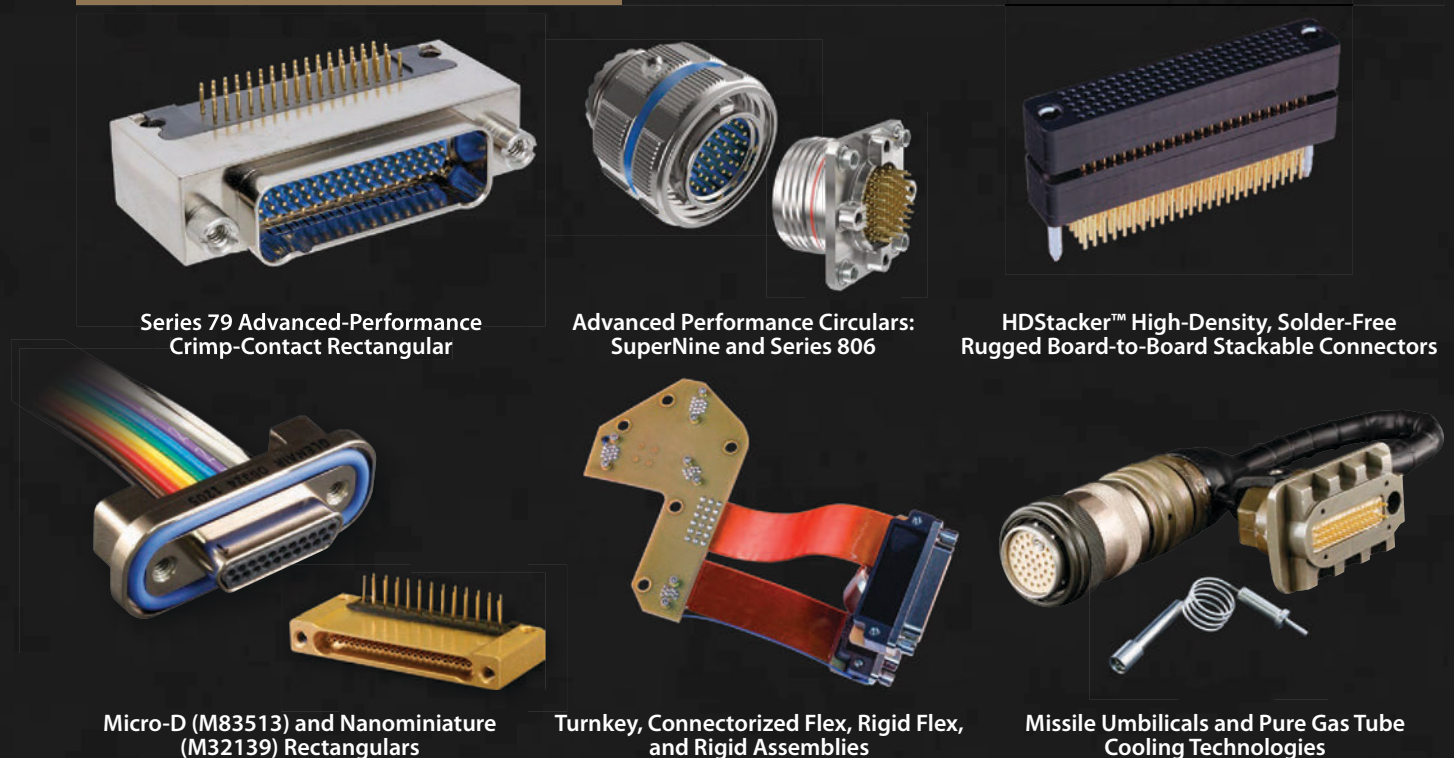
Powerload™ Power Distribution Connectors

Pressure Boundary and Firewall Feedthrus

ArmorLite Microfilament EMI/RFI Shielding

Swing-Arm FLEX Composite Backshells

### GUIDED MISSILE INTERCONNECT TECHNOLOGY



Series 79 Advanced-Performance Crimp-Contact Rectangular

Advanced Performance Circularity: SuperNine and Series 806

HDStacker™ High-Density, Solder-Free Rugged Board-to-Board Stackable Connectors

Micro-D (M83513) and Nanominiature (M32139) Rectangulars

Turnkey, Connectorized Flex, Rigid Flex, and Rigid Assemblies

Missile Umbilicals and Pure Gas Tube Cooling Technologies