



Samtec Sudden Service® solutions
for standard and application-specific
military and aerospace designs

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The military and aerospace world utilises products that must be able to properly perform in harsh conditions. Because of this, many Mil/Aero manufacturers typically use full Mil-Spec products.

Samtec's Sudden Service® solutions for standard and application-specific military and aerospace are designed to meet the stringent quality, production and compliance requirements of its customers. The combined efforts of Samtec's ongoing Severe Environment Testing initiative with its extremely flexible high-speed interconnects provides a quick turn and cost-effective solution for military and aerospace applications that require reliable performance and durability.

Severe Environment Testing (SET) is a Samtec initiative to test products beyond typical industry standards and specifications, many set forth by common requirements for rugged/harsh environment industries. These products undergo additional testing to ensure they are more than suitable for military, space, automotive, industrial and other extreme applications. Samtec's SET products are approved for NASA Class D missions that require high-reliability, quick-turn and cost-effective solutions for LEO and GEO satellites, SmallSats,

CubeSats and other space exploration applications. And while these tests might not be the exact same as a Mil-Spec qualification test, they afford the user the confidence that a COTS product will perform as needed in their application.

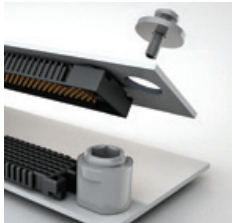
SEVERE ENVIRONMENT TESTING (SET)

Developed to bridge the gap from standard qualification testing offered on COTS products and a full Mil-Spec product, SET takes the standard qualification test and builds on top of it to prove to the customer that Samtec products can withstand the rugged environments and conditions of the Mil/Aero world. Current available test results can be viewed at samtec.com/SET.

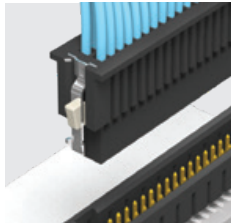
ADDITIONAL TESTING INCLUDES:

- Mating/unmating/durability
- Mechanical shock/random vibration/LLCR and nanosecond event detection
- Temperature cycling
- Non-operating class temperature
- DWV at altitude
- Electrostatic Discharge (ESD)

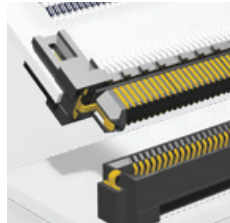
RUGGEDISING OPTIONS



JACK SCREWS
Ideal for high normal force, zippering and other rugged applications



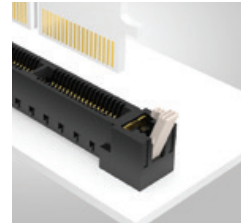
POSITIVE LATCHING
Manually activated latches increase unmating force by up to 200%



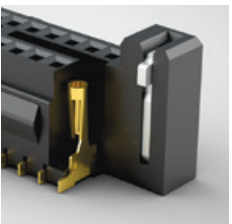
FRICTION LOCKS
Metal or plastic friction locks increase retention/withdrawal force



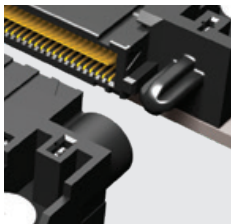
RETENTION PINS
Increase unmating force by up to 50%



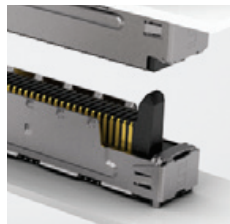
BOARD LOCKS
Boards are mechanically locked together



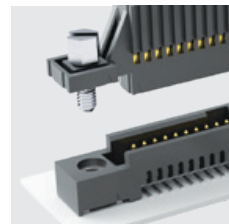
WELD TABS
Significantly increase shear resistance of connector to PCB



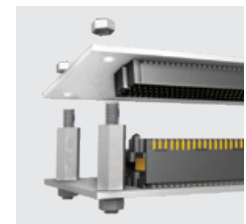
GUIDE POSTS
Easy and secure mating



SHIELDING
360° shielding reduces EMI



SCREW DOWNS
Secure mechanical attachments to the board



BOARD STANDOFFS
Precision machined standoffs for 5mm to 25mm board spacing

Samtec Sudden Service® solutions for standard and application-specific military and aerospace designs

SAMTEC MIL/AERO PRODUCT RANGE

Each application has different levels of service requirements, budgets, testing requirements, and lead-times. Because of the unique requirements of Mil/Aero applications, Samtec offers three different styles of products to meet the wide range of needs:

- Commercial Off-The-Shelf (COTS)
- Application Specific Product (ASP)
- Military/Aerospace Product (MAP)

Each style of product offering affords the customer different options. Product modification such as non-standard plating options up to 50µ" gold can be ordered with ASP or MAP offerings. Rugged situations require rugged solutions, and a majority of the time they still need to offer high-speed performance as well. Samtec offers rugged signal integrity solutions with speeds up to 112Gbps PAM4 and extreme design flexibility to ensure performance reliability. Some of these rugged solutions include jack screws, positive latching, friction locks, retention pins, board locks, weld tabs, guide posts, and shielding.



Severe Environment Tested badge.

SAMTEC MIL/AERO PRODUCT SOLUTIONS		
<p>COMMERCIAL OFF-THE-SHELF (COTS)</p> <ul style="list-style-type: none"> • Certified ISO-9001 • Cost effective • Short lead times • No minimum order quantity • Full qualification testing online 	<p>APPLICATION SPECIFIC PRODUCT (ASP)</p> <ul style="list-style-type: none"> • Modified COTS built to Samtec's print • AS9102 FAI available • Non-standard options available • Similar part qualification testing online 	<p>MILITARY/AEROSPACE PRODUCT (MAP)</p> <ul style="list-style-type: none"> • Modified COTS built to Samtec's print • Manufacturing location control available • Product specification control available • Non-standard options available • AS9102 FAI available • ITAR control available
<p>ADDITIONAL CAPABILITIES</p> <ul style="list-style-type: none"> • Up to 30µ" gold • Tin lead • -55°C to +125°C operating temperature on most connectors; • -40°C to +125°C on THV/FEP cables 	<p>ADDITIONAL CAPABILITIES</p> <ul style="list-style-type: none"> • Customer specified plating (up to 50µ" gold, tin lead) • Non-standard product options 	<p>ADDITIONAL CAPABILITIES</p> <ul style="list-style-type: none"> • Customer specified plating (up to 50µ" gold, tin lead) • Non-standard product options • ITAR control available

Samtec can also perform Salt Fog Testing and conformal coating for its FireFly™ series.

Have a question?
 Get in touch with our team in your local language at avnet-abacus.eu/ask-an-expert

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