



# Amphenol

MILITARY & AEROSPACE

**CONNECTING  
HUMANITY TO  
OUTER SPACE**

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# CONNECTING HUMANITY TO OUTERSPACE



As humanity continues to explore the "final frontier" of space, so too will the trend toward smaller, lighter spacecraft that can achieve breakneck velocities and complex maneuvers, all while executing miraculous technological feats at high speeds to ensure the wellbeing of the crew and facilitate scientific progress. Satellites are getting smaller too and are being equipped with smarter, faster, and more-compact subsystems as they're expected to carry out more-demanding tasks. With a new era in space travel upon us, the demand for advanced interconnect solutions has never been greater.

It's an exciting time in space exploration. Humanity is set to return to the moon with the NASA-led Artemis program, followed by the planned establishment of a sustained human presence on the Lunar surface and a manned journey to Mars. On Earth, the technologies that define modern life are propelled by a network of satellites that blanket low Earth orbit, and more continue to be launched as technology advances and new programs emerge. Advanced payload and propulsion systems and Very High Throughput Satellites (VHTS) are just some of the trends fostering innovations in connectivity such as 5G and soon-to-be-launched 6G networks. The coming decades will feature significant innovation and investment in this sector as nations and leading organizations strive to break new ground in space travel and satellite technology.

But these exciting developments come with severe risks associated with the harsh environment of space.

The extreme conditions of space travel require interconnect solutions that can comfortably withstand radiation, extreme temperatures, and vacuum environments, while maintaining steadfast signal integrity and power transfer capabilities. For decades, Amphenol has pushed the envelope of innovation to design and develop interconnect solutions that meet these unique challenges. With our industry-leading portfolio of circular, board level, and high-speed connectors and contacts, cable assemblies, sensors, and much more, our interconnect solutions push the frontier of interconnectivity, enabling space missions to go further and achieve more than ever before.

Amphenol stands ready to exceed the demands of next-generation space applications as humanity continues to take the next leap forward.



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# MIL-SPEC CIRCULAR



## MIL-DTL-38999 Series III

Amphenol Tri-Start MIL-DTL-38999 Series III / EN3645 thread coupling connectors offer the highest performance capabilities for both general duty and severe environment applications. Different versions are available: "TV" metal versions (aluminum, stainless steel or marine bronze) as well as "CTV" composite versions, which offer a lightweight, corrosion resistant connector with the same high performance features as its metal counterpart.

**Contact:** Joe Ryder • [jryder@amphenol-aoa.com](mailto:jryder@amphenol-aoa.com) • (607) 563-5001



## MIL-DTL-26482 Series II

Amphenol Aerospace offers the Matrix product line of MIL-DTL-26482, Series 2 Connectors. This series provides a bayonet coupling connector with crimp rear insertable, rear releasable contacts.

**Contact:** Brandon Brown • [bbrown@amphenol-aoa.com](mailto:bbrown@amphenol-aoa.com) • (607) 563-5685



## MIL-DTL-83723 (Matrix)

Matrix MIL-DTL-83723 series provides many choices within the range of a medium sized, environmentally resistant circular connector. With three coupling style choices- bayonet, threaded and quick-disconnect - the versatility of this family makes it increasingly popular for panel mount, box mount and line-to-line applications in aircraft. For general duty environmentally resistant requirements, this family of connectors provides a wide range of interconnection solutions. There are three coupling styles with multiple options.

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## MIL-DTL-5015

Amphenol Aerospace's MIL-DTL-5015 with crimp rear release contacts provides an alternative to the older MIL-C-5015 solder type. It bridges the gap between an old connector standard and the high performance needs of current technologies.

**Contact:** David Salt • [dsalt@amphenol-aoa.com](mailto:dsalt@amphenol-aoa.com) • (607) 563-5161

# MIL-SPEC DERIVATIVES



## Series Five

Amphenol's new Series Five connector is the next evolutionary step in that impressive lineage, combining all of the capabilities of the traditional 38999 style connector in a lighter, smaller, and more compact package to support the aerospace industry's ever-changing demands.

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## Deep Space 38999

The Deep Space 38999 Connector series is designed for extreme cold-weather environments. They are built to retain a grommet-to-wire and contact-to-contact seal in temperatures beyond minus 65 degrees Celsius, with inserts that have been cycle tested between 200 degrees Celsius and minus 100 degrees Celsius.

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## D38999+

Amphenol offers a full range of D38999 derivative connectors with integrated accessories, High Power and High Speed contacts, and of course AAO can easily customize any connector to meet a specific applications needs. With over 20 custom connector shell styles including bulkhead feedthrough connectors, this is the widest range of Series III derivative products ever offered by Amphenol.

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## Dualok High Vibration System

Dualok is an enhanced anti-decoupling mechanism that can be used on virtually any cylindrical plug connector and backshell. The Dualok Interconnect System greatly improves electrical performance in harsh environments while providing a size and weight savings when compared to standard connectors in the same class. Dualok technology is applied to the plug connector and backshell only and will mate with standard receptacles.

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# MIL-SPEC DERIVATIVES



## D38999 Space Blind Mate Connector

Introducing Amphenol Aerospace's Space Blind Mate Connector, part of the D38999+ family of products. Designed specifically for large panels where extra float is required in all axes, or for any application requiring a floating interface.

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## High Temperature Series Five Connectors

High Temperature Series Five connectors are the ideal solution for interconnect and electrical wire assemblies near engines, firewalls, and other high-heat sources. Built for applications with higher temperatures such as hypersonic weapon systems, space launch vehicles, and other advanced aircraft, these high-heat connectors are built to operate under temperatures up to 300 °C for longer durations, with continuous duty at 260 °C assured.

**Contact:** Joe Ryder • [jryder@amphenol-aoa.com](mailto:jryder@amphenol-aoa.com) • (607) 563-5001



## Ram-Lock Connectors

The 2M Ram-Lock utilizes ball bearings for locking and a traditional D38999 EMI band for Shell-to-Shell conductivity enabling much more consistent and reliable engagement between the plug and receptacle.

**Contact:** Peter Cook • [pcook@amphenol-aoa.com](mailto:pcook@amphenol-aoa.com) • (607) 563-5519



## RNJ / RNJLP

The RNJ / RNJ LP Series are circular connectors derived from the 38999 standard, dedicated to blind-mate connections in critical environments demands such as aerospace and defense industries. RNJ are traditional Rack and Panel and our RNJ LP are our low profile for electrical and optical devices between a moving unit (rack) and a fixed unit (panel) without any coupling / uncoupling device. They are 100% scoop-proof. The design prevents bent pins and a short circuit occurring during mating.

**Contact:** Amphenol PCD • [rugged\\_solutions@amphenolpcd.com](mailto:rugged_solutions@amphenolpcd.com) • (978) 624-3400

## Tracer Rapid Connector Prototype Tool



Introducing Amphenol's newest innovation – TRACER Rapid Prototyping. Achieve any pin-out you can imagine – without sacrificing performance or lead time. Thanks to Amphenol's revolutionary insulator technology (patent pending), we can rapidly produce connectors in any contact configuration and get you fully functional sample pieces within a week.

**Contact:** Tracer Team • [tracer@amphenol-aoa.com](mailto:tracer@amphenol-aoa.com) • (607) 563-5532

## HD38999 Connectors



The HD38999 family of connectors has 30% more contact density than the highest density Mil spec D38999 connectors of its size. For those users who need to increase the amount of contacts in their application, the HD38999 series allows them to do so without increasing the size of their connector.

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## D38999 with PCB Contacts



Amphenol provides circular connectors with PC Tail contacts for solder mounting on printed circuit boards. They are available in MIL-DTL-38999 Series I, II, and III, MIL-DTL-26482, and MIL-DTL-5015 Connectors. These connectors incorporate PCB contacts in sizes 16, 20, and 22D.

**Contact:** Joe Ryder • [jryder@amphenol-aoa.com](mailto:jryder@amphenol-aoa.com) • (607) 563-5001

## Breakaway Fail Safe Connectors



Amphenol Tri-Start Breakaway Fail Safe Connectors provide unequalled performance in environments requiring instant disengagement. Designed to provide quick disconnect of a connector plug and receptacle with an axial pull on the lanyard. The "Breakaway" Fail Safe connector family offers a wide range of electrical and mechanical features.

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# CIRCULARS



## HV38999

Future power distribution architecture is moving toward higher voltages beyond the capabilities of standard connectors. Through insert optimizations these specialty D38999s can safely carry high voltages and large currents at altitude while remaining partial discharge free to extend connector life.

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## Voltarius

Voltarius is a high power interconnect optimized for higher voltages. This connector series was designed to provide performance up to 1000Vdc and 450A with proven RADSOK® technology. It also provides essential safety features such as interlock circuitry and a secondary locking mechanism.

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## 2M Micro38999 Series

The 2M Series is a superior and versatile connector designed and tested to mil-spec standards, comparable to MIL-DTL-38999. The 2M Series is designed for interconnect applications requiring high performance and reduced size and weight. This smaller, high density, lightweight connector far exceeds the competition in quality and performance levels. 2M is intermateable with Glenair's Mighty Mouse.

**Contact:** Peter Cook • [pcook@amphenol-aoa.com](mailto:pcook@amphenol-aoa.com) • (607) 563-5519



## High Power Contacts

Amphenol offers two high power contacts offering up to 40% more current carrying capability than a standard M39029 contact, RadSok and Temper-Grip sockets. These contacts allow the user to reduce connector size and weight by reducing the shell size and wire gauge. The lower pin-socket resistance with these two custom socket designs produces less heat rise, which allows more current in a smaller package. Available in many connector series throughout the AMAO group.

**Contact:** David Salt • [dsalt@amphenol-aoa.com](mailto:dsalt@amphenol-aoa.com) • (607) 563-5161



## RANGER - Pin & Socket Push/Pull Breakaway

Ranger's quick and easy mate and unmate feature makes it ideal for use in soldier-worn, harsh environment applications. This rugged, light-weight, multipurpose connector can be used for signal and power applications. Multi-pin configurations are coming soon.

**Contact:** Kevin Truman • [ktruman@nexus.com](mailto:ktruman@nexus.com) • (203) 327-7300



## Pegasus Series

The Pegasus Series is one of Amphenol's latest innovation in small, lightweight, rugged connectors. Designed for use in harsh environments, Pegasus builds on the successful Luminus Aerospace connector with the addition of EMI shielding. EMI shielding is provided by electroless copper and nickel plate, with a copper alloy spring finger gasket to ensure shell-to-shell conductivity. Tests show between 60db and 40db of attenuation, depending on frequency. This combination of lightweight, small size, and EMI shielding makes Pegasus the ideal choice where protection against ambient noise transients, or suppression of emitted noise is required, and space and weight are at a premium.

**Contact:** Amphenol PCD • [produced@amphenolpcd.com](mailto:produced@amphenolpcd.com) • (978) 624-3400



## Pegasus High Speed

Amphenol Pcd has expanded the capability of the Pegasus Series to support industry standard Twinax and Quadrax style contacts. Pegasus HS brings an easy to use, light weight, low cost connection solution to applications that have typically relied on heavier, more complicated, and therefore more expensive, metal shell connectors. Supporting the AS39029/90, /91, /113, /114 Twinax and ARINC 600, ARINC 404, AS39029/119, /120 Quadrax rear release, rear removable, size 8 style contacts, Pegasus HS provides exceptional performance in tight spaces, with a shell size 8 (0.512") outer diameter.

**Contact:** Amphenol PCD • [produced@amphenolpcd.com](mailto:produced@amphenolpcd.com) • (978) 624-3400



## Nano-Pegasus

Nano-Pegasus is a small, metal plated, plastic, easy to use connector designed specifically for sensing, command and control applications where a Micro (M83513) or Nano D-sub (M32139) would be used. Nano-Pegasus provides exceptional performance in tight spaces, packing eleven high grade contacts in a shell size 5 housing (0.325" outer diameter). High shock & vibration (300G), a wide operating temperature range (-65C to +175C), and IP67 sealing improve upon Micro & Nano-D performance, guaranteeing worry free operation under severe operating conditions.

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# RECTANGULAR CONNECTORS



## VITA - Space VPX

VITA 78 connector, also known as SpaceVPX are specifically designed for use in space based electronic systems. Amphenol's VITA 78 SpaceVPX connectors leverage open VPX architecture and technology while designed and tested for extreme space environment, including exposure to radiation, extreme temperatures and vibration. Space VPX connectors utilize specific wafer loads per the VITA 78 spec to achieve dual redundancy to meet fault tolerance requirements for space systems.

**Contact:** Cat Brandas • [cbrandas@amphenol-ao.com](mailto:cbrandas@amphenol-ao.com) • (607) 563-5129



## VITA 91 - MIL-HD2

MIL-HD2 provides developers with a readily available robust solution for tighter card pitches and chassis designs where space requirements and density are critical. These connectors are available in 3-, 4-, and 6-pair configurations. Providing the MIL embedded market with the highest count of differential pairs available today in a 3U configuration at 56Gb/s PAM 4 speeds. This series was selected by the SOSA Consortium and provides a SOSA aligned solution for next gen switch and payload card requirements enabling the MIL-embedded market to meet next gen performance levels while still meeting COTS requirements.

**Contact:** Cat Brandas • [cbrandas@amphenol-ao.com](mailto:cbrandas@amphenol-ao.com) • (607) 563-5129



## HDB3/HSB3 Connectors

This connector series incorporates a higher density contact pattern and lower mated height than Amphenol's standard low mating force rectangular connectors. HDB3 connectors utilize the same durable and reliable B3 brush contact in a tighter .070" X .060" staggered grid pattern.

**Contact:** Cat Brandas • [cbrandas@amphenol-ao.com](mailto:cbrandas@amphenol-ao.com) • (607) 563-5129



## Brush Rack and Panel

This connector series utilizes Amphenol's durable and reliable B3 contact system in a rugged, non-floating Rack and Panel connector. Included in this series are digital and power/digital "hybrid" insert arrangements. The hybrid series utilizes Amphenol's high performance RADSOK® power contacts along with Amphenol's proven B3 contact.

**Contact:** Cat Brandas • [cbrandas@amphenol-ao.com](mailto:cbrandas@amphenol-ao.com) • (607) 563-5129

# RECTANGULAR CONNECTORS



## RMM Series

Amphenol's Rectangular Modular Micro RMM Series is a low-profile, high-density rugged connector that fills the gap between the Micro-D (MIL-DTL-83513) and D-Sub (MIL-DTL-24308) product lines. This series is designed to meet harsh environments and is ideal for use wire to PCB applications on ultra-small satellite builds.

**Contact:** Amphenol Canada • [sales@amphenolcanada.com](mailto:sales@amphenolcanada.com) • (416) 291-4401



## SP Max

The SP Max is specifically designed for power and signal management in military, space, satellite, and commercial air applications. Its slim precision machined shell is available in three sizes with a variety of contact sizes and layouts available for versatility.

**Contact:** Mark Cumpton • [mcumpton@connectpositronic.com](mailto:mcumpton@connectpositronic.com) • (417) 895-9297



## MMA Series

Amphenol Canada's MMA series connector is a blind mating, low contact force modular product, employing proven ARINC 600 standard components in a unique and versatile package. Supports all types of RF, optical, and power contact solutions, for endless high-density contact arrangements. EMI shielding is ensured with available 360° springs and multiple backshell options.

**Contact:** Amphenol Canada • [sales@amphenolcanada.com](mailto:sales@amphenolcanada.com) • (416) 291-4401



## R39 Series (Rectangular 38999)

The R39 Series covers a family of connectors providing high performance in the severe environment demands of military and space specifications. All are based on the unique Amphenol Canada R39 rectangular space-saving footprint alternative to circular D38999. Using the same wide range of contacts, and the same crimp and insert/removal tooling as D38999. R393 Series is a rugged multiport option supporting multiple RF contact styles including shielded quadraX for reliable high-speed communications. R398 Series offers compact scoop-proof arrangements d-sub alternative size 23 contact with available PCB and crimp terminations.

R39U Series offers industry matching reverse-gender quadraX configurations for drop-in design. More variations and custom options are available.

**Contact:** Amphenol Canada • [sales@amphenolcanada.com](mailto:sales@amphenolcanada.com) • (416) 291-4401

# RECTANGULAR CONNECTORS



## MACH-D

High-performance D-Sub Connectors designed for use in next-generation harsh environments. All MACH-D products boast machined aluminum or stainless steel shells for the ultimate in shock and vibration protection, durability, precision, planarity, and electromagnetic compatibility and conform to the quality and performance standards of MIL-DTL-24308.

**Contact:** Amy Fitch • [afitch@connectpositronic.com](mailto:afitch@connectpositronic.com) • (630) 674-6157



## Next Gen ARINC 600

Amphenol Canada's NextGen ARINC 600 addresses the Aircraft industries issues of weight and cost. By incorporating stamped and formed overmoulded wafer technology and selective plating the result is a significantly reduced cost and weight product that is qualified to meet all the requirements of ARINC 600.

**Contact:** Amphenol Canada • [sales@amphenolcanada.com](mailto:sales@amphenolcanada.com) • (416) 291-4401



## ARINC 600

- Low insertion force contacts
- Both environmental and non-environmental versions
- Front removable keying posts
- Field replaceable inserts for size 22 and power contacts
- Up to 800 size 22 contact positions in one connector
- Crimp, coaxial, power, printed circuit, and wire wrap contacts
- Waveguide connections

**Contact:** Amphenol Canada • [sales@amphenolcanada.com](mailto:sales@amphenolcanada.com) • (416) 291-4401



## ARINC 404

- Available in five shell styles with up to four insert cavities
- Inserts accommodate signal and power contacts in sizes 12, 16, 20, and 22
- Coaxial contacts are available in sizes 5 and 9
- Combination standard and coaxial contact arrangements available
- Both non-environmental and environmental options offered

**Contact:** Amphenol Canada • [sales@amphenolcanada.com](mailto:sales@amphenolcanada.com) • (416) 291-4401

# RECTANGULAR CONNECTORS



## Micro-D Connectors

Amphenol Micro-D provide small interconnect solutions, which will exceed the requirements of the US military standard MIL-DTL-83513 and maintaining QPL status for over 20 years, which allows for drop-in use up to NASA Level 1 qualification, and is ready to meet ESA qualification standards. What differentiates Amphenol from the competition is our overall connector design. Custom solutions can easily be engineered to ensure exact performance in any application including circular connectors, strip line connectors, PC board connectors, and hybrid connectors utilizing power, signal, coaxial and fiber optics contacts. Both precision stamped and available twist pin options are available to meet all competitor offerings.

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## Rectangular D-Sub Type Connectors with Split Pair Quadrax Contacts

Amphenol offers the high performance interconnect solution for CAT6A type cable. For use with: 10/100/1000/10G Base-T Ethernet; DVI; USB 2.0/3.0; PCI-Express 2.0; HDMI 1.3a; SATA 2.0.

**Contact:** Sandra Wildenstein • [swildenstein@amphenol-aoa.com](mailto:swildenstein@amphenol-aoa.com) • (607) 563-5379



## EN4165 / SIM Connectors

Designed and qualified to EN4165 European military aerospace standards, Amphenol's SIM Connector is a modular, multi-functional rectangular connector geared at the US Com-Air and Military markets. While similar to MIL-DTL-38999 in performance, the SIM Connector provides additional benefits with its small footprint and versatility. The SIM Connector is comprised of shells and modules, which together create an integrated solution for advanced signal and power requirements – all at a fraction of the space typically required for the same results.

**Contact:** Matt Fletcher • [mfletcher@amphenolpcd.com](mailto:mfletcher@amphenolpcd.com) • (863) 605-1471



## SIM Mono-Module Connectors

The SIM Mono-Module Connectors (ARINC 809) is a single module, push-pull connector that is ideal for inflight entertainment systems, cabin service systems, and other interconnect system requirements.

**Contact:** Matt Fletcher • [mfletcher@amphenolpcd.com](mailto:mfletcher@amphenolpcd.com) • (863) 605-1471

# RECTANGULAR CONNECTORS



## Micro-C Series

This series represents an update on traditional micro-D connectors, offering unique Amphenol "compression termination" technology. The solderless installation also results in a much more compact footprint than military standard, while meeting all M83513 performance requirements. The novel termination style means designers have double-sided board applications and a unique compliant-tail alternative to traditional press-fit products among other options. This series is ready for high speed applications and space qualification, in both precision stamped or twist pin options.

**Contact:** Amphenol Canada • [\(416\) 291-4401](mailto:sales@amphenolcanada.com)



## MicroPlus Series

This is another unique Amphenol Canada product, using the same solderless board termination options as Micro-C, offering an alternate ultra compact solderless format meeting M83513 performance. Mezzanine or stacker options are available, and novel applications like "fly-over" space-saving configurations are possible, with flex circuit or wired termination available. (NanoPlus M32139 alternative in development)

**Contact:** Amphenol Canada • [\(416\) 291-4401](mailto:sales@amphenolcanada.com)



## Pogo Pin Connectors

Amphenol Nexus is capable of making custom pogo assemblies to meet demanding requirements. All aspects of the connection can be adjusted, and the connector can be customized to your application. Accessories can be insert molded for mounting or secondary functions. The contact tails can be formed to save space in the end user assembly. Contact tip profiles can be designed to customer specification to ensure perfect mating.

**Contact:** Kevin Truman • [\(203\) 327-7300](mailto:ktruman@nexus.com)



## M24308 D-Sub Connectors

Qualified to MIL-DTL-24308, Amphenol's D-Sub Connectors are subminiature rack & panel type connectors with polarized shells. They use pin & socket machined contacts that provide high reliability & density for the connectors. With its versatile designs including non-magnetic and low outgass, these high-performance connectors are used in a variety of applications including space where weight & dimensions are critical factors.

**Contact:** Mathew Tharakan • [\(508\) 932-2214](mailto:mtharakan@amphenolpcd.com)



High performance D-Sub Connectors available in standard, high, and combination densities for applications requiring non-outgassing and low magnetism. All products conform to performance requirements of one or more of the following: MIL-DTL-24308, MIL-C-28748, SAE AS39029, GSFC S-311-P-4, GSFC S-311-P-10 and DSCC 85039.

**Contact:** Amy Fitch • [\(630\) 674-6157](mailto:afitch@connectpositronic.com)

# FILTERED, SEALED HERMETIC CONNECTORS



## Mil-Spec Circular Filter Connectors

Amphenol's EMI/EMP Protection Connectors offer the versatility of standard connectors with EMI/EMP protection for sensitive circuits. Internal housing of the EMI/EMP devices eliminates costly and bulky exterior discrete protection devices. Virtually all major MIL-Spec circulars can be incorporated with filter devices.

**Contact:** Larissa Williams • [lwilliams@amphenol-aoa.com](mailto:lwilliams@amphenol-aoa.com) • (607) 563-5313



## Hermetic Connectors

In applications where the reliability and performance of electrical connectors are critical, such as gas tight barriers or high-pressure differentials, hermetic connectors are essential to maintain system integrity. Amphenol Martec offers hermetic connectors tailored specifically to your requirements, providing seals able to withstand pressures of up to 60,000psi (4,100Bar), temperatures up to 1,000°C (1832°F) and for use in aggressive and hostile environments. They can be optimized to match existing or specialist mounting requirements, often providing alternative solutions to conventional connectors, particularly where space is a problem, with value engineering to optimize functionality.

**Contact:** Peter Kapogiannatos • [pkapogiann@amphenol-aoa.com](mailto:pkapogiann@amphenol-aoa.com) • (607) 563-5119



## Custom Hermetic Feed-through

In applications where the reliability and performance of electrical feed-throughs are critical, such as gas tight barriers or high-pressure differentials, hermetic feedthroughs are essential to maintain system integrity. AMAO offers hermetic feedthroughs tailored specifically to your requirements, providing seals able to withstand pressures up to 90,000psi (6,200 Bar), temperatures from cryogenic up to 1,000°C and for use in aggressive and hostile environments. Such seals can be manufactured using a range of materials such as Stainless Steel, Titanium, or Inconel.

**Contact:** Peter Kapogiannatos • [pkapogiann@amphenol-aoa.com](mailto:pkapogiann@amphenol-aoa.com) • (607) 563-5119



## Epoxy Sealed D38999

Amphenol Aerospace is offering superior electrical performance plus the rugged design of a glass sealed hermetic connector. Amphenol glass sealed hermetic connectors are available in a wide variety of Mil-Spec and custom configurations. Amphenol epoxy sealed connectors are a lightweight alternative to glass sealed hermetic connectors for use in avionics and other weight-sensitive applications where a high level of sealing is required. Epoxy sealed connectors are an optimal solution when increasingly stringent sealing requirements must be met in radio and vetronics applications.

**Contact:** Peter Kapogiannatos • [pkapogiann@amphenol-aoa.com](mailto:pkapogiann@amphenol-aoa.com) • (607) 563-5119

# FILTERED, SEALED HERMETIC CONNECTORS



## Air-Tight Lightweight Hermetic

With Amphenol's new Air-Tight Lightweight Hermetic connectors, there's no longer a need to sacrifice weight to provide a high-quality hermetic seal and operating temperatures. Utilizing high performance materials, these hermetically sealed connectors will meet a leak rate of  $1 \times 10^{-7}$  cc helium per second and maintain an operating temperature of  $-65^{\circ}\text{C}$  to  $200^{\circ}\text{C}$ .

**Contact:** Peter Kapogiannatos • [pkapogiann@amphenol-aoa.com](mailto:pkapogiann@amphenol-aoa.com) • (607) 563-5119



## XAVAC Series Connectors

XAVAC are Hermetically sealed D-Subminiature feedthroughs for SPACE or INDUSTRIAL vacuum applications. They utilize precision machined contacts for strength and durability. They withstand extreme temperature variations, from approximately  $-40^{\circ}$  to  $125^{\circ}\text{C}$  and resist damaging vibration. The materials and finishes, as well as the technical characteristics of the XAVAC series connectors conform to the performance requirements of MIL-DTL-24308 and NASA Goddard.

**Contact:** Amy Fitch • [afitch@connectpositronics.com](mailto:afitch@connectpositronics.com) • (630) 674-6157



## Filtered Micro-D M13 Series

Compact filtered connector based on standard M83513 configurations, using the same monolithic planar capacitor technology as with other filtered Amphenol Canada products. This is a rugged, compact, high density package, fully intermating to M83513, and is available in a variety of filter types and configurations including wired harnesses and PCB terminations.

**Contact:** Amphenol Canada • [sales@amphenolcanada.com](mailto:sales@amphenolcanada.com) • (416) 291-4401



## 485 - Filtered ARINC Connectors

The Amphenol 485 Series is a range of filtered ARINC 404 and 600 rack and panel connectors designed to provide space and cost-effective solutions to EMC compliance issues in avionics products.

**Contact:** Amphenol Canada • [sales@amphenolcanada.com](mailto:sales@amphenolcanada.com) • (416) 291-4401



## 308 Series - Filtered D-Sub Connectors

Amphenol's 308 Series connectors are available in the full range of standard, high-density and hybrid power arrangements, either pin or socket. These connectors are supplied with fixed screw machine contacts and are available with all termination styles. The patented stress-isolated solderless design is an industry leader in ruggedness and performance, allowing for shock & vibration resistance and protecting filter elements. Countless design options are available for sealed and high reliability applications, with years of military and space pedigree.

**Contact:** Amphenol Canada • [sales@amphenolcanada.com](mailto:sales@amphenolcanada.com) • (416) 291-4401

# BACKSHELLS



## Lightweight Rectangular Aluminum Backshells

Lightweight Aluminum Backshells ensure high performance connections and a long life in the field. Built for mission-critical applications, these backshells provide an excellent combination of size, weight, performance, and protection. Choose from one of our three standard designs or a custom solution to meet your needs.

**Contact:** Amy Fitch • [afitch@connectpositronic.com](mailto:afitch@connectpositronic.com) • (630) 674-6157



## AlumaLight

Ideal for Commercial Aerospace applications, AlumaLight is the latest innovation in Amphenol's Backshell product family. With its unmatched combination of weight, performance, and price, AlumaLight exceeds the performance and functionality of Mil-standards and is more durable than composites with enhanced EMI performance. AlumaLight also comes in three different product families - Environmental, Strain Relief/EMI RFI, and Band Lock/EMI RFI.

**Contact:** Amphenol PCD • [backshells@amphenolpcd.com](mailto:backshells@amphenolpcd.com) • (978) 624-3400



## Pre-Shield Adapters

Amphenol Pcd's Pre-Shield Adapter has a longer length of braid attached to it. This braid overlaps with the cable braid and effective shielding takes place due to its 360° contact. It is designed to accept a heat shrink boot, is easy to use and saves time during cable termination.

**Contact:** Amphenol PCD • [backshells@amphenolpcd.com](mailto:backshells@amphenolpcd.com) • (978) 624-3400



## Miniature Backshells

Amphenol Pcd's Miniature Backshell product line support both backshells and caps for Amphenol's 2M circular connector line. These high performance metal backshells have strain relief, EMI, and environmental capabilities.

**Contact:** Amphenol PCD • [backshells@amphenolpcd.com](mailto:backshells@amphenolpcd.com) • (978) 624-3400

# BACKSHELLS / RF/MICROWAVE PRODUCTS



## Rectangular Backshells

Amphenol Canada has standard and custom designs to supply backshell assemblies and kits for all ACC rectangular connector products, including:

- Micro-D (MIL-DTL-M83513)
- R39 (Rectangular 38999)
- R27 (MIL-DTL-83527/EN 3682)
- R58 (MIL-DTL-83733)
- ARINC 600
- ARINC 404 (MIL-C-81659, AS81659)
- MMA (Multi Modular ARINC)

With in-house, vertically-integrated design and manufacture, we can accommodate many optional features, and cater to various

**Contact:** Amphenol Canada • [sales@amphenolcanada.com](mailto:sales@amphenolcanada.com) • (416) 291-4401

## RF/MICROWAVE CONNECTORS & ACCESSORIES



### MaxGain® Space 130, 160, 200, 300

MaxGain® Assemblies are high-performance, ultra-lowloss microwave coaxial cables. Built with our unique spiral outer conductor technology, this light-weight cable is a reliable, high frequency interconnect solution.

**Contact:** Maria Calia • [maria.calia@timesmicrowave.com](mailto:maria.calia@timesmicrowave.com) • (484) 238-3060



### InstaBend® Space 086

InstaBend® are flexible, coaxial microwave assemblies designed for interconnects between RF circuit cards, modules and enclosure panels. The cable can be formed very closely behind the connector, simplifying cable routing.

**Contact:** Maria Calia • [maria.calia@timesmicrowave.com](mailto:maria.calia@timesmicrowave.com) • (484) 238-3060



### InstaBend® Space 047

InstaBend® are flexible, coaxial microwave assemblies designed for interconnects between RF circuit cards, modules and enclosure panels. The cable can be bent very closely behind the connector, simplifying cable routing.

**Contact:** Maria Calia • [maria.calia@timesmicrowave.com](mailto:maria.calia@timesmicrowave.com) • (484) 238-3060

# RF/MICROWAVE CONNECTORS & ACCESSORIES



## InstaBend® Phase Stable 047

IBPS-047 is a low-loss, highly flexible, foam-core micro coaxial cable. Originally designed for space satellite programs, this high-performance cable has many applications across multiple markets. It has a broad frequency range and strong durability making it ideal for medical, test equipment, and many other RF applications.

**Contact:** Maria Calia • [maria.calia@timesmicrowave.com](mailto:maria.calia@timesmicrowave.com) • (484) 238-3060



## InstaBend® Phase Stable 092

InstaBend® PhaseStable 092 is an Ultra-Flexible phase-stable coax assembly featuring a proprietary fluorocarbon dielectric, TF4®, eliminating the PTFE phase change occurring around 19 °C. PhaseTrack assemblies have the same triple-shield construction used in our popular SF®, SFT®, SilverLine®, and MilTech® cables and are ideal for applications demanding stable electrical performance over temperature.

**Contact:** Maria Calia • [maria.calia@timesmicrowave.com](mailto:maria.calia@timesmicrowave.com) • (484) 238-3060



## Advantage™ No Braid Trim Connectors

No-Braid-Trim-X series of connectors feature a termination process that does not require trimming of the braid shield thereby facilitating the cable termination procedure and reducing the time required to terminate the cable. Cable can be stripped using CST-type LMR® cable stripping tool. Combination hex/knurl coupling nut allows tightening by hand or with a wrench. Chamfered cable entry hole for ease of termination.

**Contact:** Kevin Moyher • [kevin.voyher@timesmicrowave.com](mailto:kevin.voyher@timesmicrowave.com) • (203) 464-9618



## SilverLine® LPA Low PIM Adapters

SilverLine®-LPA low PIM adapters exhibit exceptional PIM performance in any cellular or wireless frequency range. Times Microwave uses the most robust designs for long product life regardless of the environment. All product is 100% tested and individually packaged prior to shipping.

**Contact:** John Muzzio • [john.muzzio@timesmicrowave.com](mailto:john.muzzio@timesmicrowave.com) • (203) 514-8814



## SilverLine® XF (Extra Flex)

SilverLine®-XF was designed for testing delicate components such as exposed RF circuits with edge launch connectors. Thin, lightweight and flexible this coax makes handling PC boards easy yet does not compromise RF stability and isolation. Using Times' proprietary TF-4 dielectric SilverLine®-XF goes one step further, exhibiting linear phase change from 0°C to +30°C.

**Contact:** John Muzzio • [john.muzzio@timesmicrowave.com](mailto:john.muzzio@timesmicrowave.com) • (203) 514-8814

# RF/MICROWAVE CONNECTORS & ACCESSORIES



## Mil-Spec RF Connectors, Adapters and Components

Amphenol SV Microwave has an extensive line of RF connector MIL-SPEC offering. We have a long history of supporting DLA and promoting the standardization of RF connectors, adapters and components. All MIL-SPEC parts are certified through in-house qualification testing. Our product line includes 2.92mm, SMA, TNC and Type N and are readily available in distribution.

**Contact:** Amphenol SV Microwave • [sales@svmicro.com](mailto:sales@svmicro.com) • (561) 840-1800



## Secure Locking SMP/SMPM Series Cable Assemblies with QuarterBack®

Amphenol SV Microwave's QuarterBack® connector line utilizes a quarter turn bayonet style coupling nut with a locking feature for standard SMP/SMPM interfaces. These connectors are ideal for high vibration and test applications that require a large number of mating cycles.

**Contact:** Amphenol SV Microwave • [sales@svmicro.com](mailto:sales@svmicro.com) • (561) 840-1800



## VITA 67

Amphenol SV Microwave's VITA 67.1, .2 and .3 product lines are the latest addition to the RF/coaxial section of the VPX platform. These modular solutions include contacts, cable assemblies, adapters and connector Backplane and Plug-in modules that support the entire RF signal path of your embedded system. Our VITA products are designed for side-by-side implementation with other VITA connector standards and are readily available through distribution.

**Contact:** Amphenol SV Microwave • [sales@svmicro.com](mailto:sales@svmicro.com) • (561) 840-1800



## IPB™ Weather Seal Boot Systems

The IPB™ weatherproof boot system works with the most popular RF coaxial cables and connector combinations. The soft silicone boot weatherproofing boots replaces difficult to use butyl and mastic tape weatherproofing methods. Compatible with the most popular cable and connector combinations as well as female bulkhead connector connections. Fully IP68 rated.

**Contact:** Kevin Moyher • [kevin.voyher@timesmicrowave.com](mailto:kevin.voyher@timesmicrowave.com) • (203) 464-9618

# RF/MICROWAVE CONNECTORS & ACCESSORIES



## UltraLite RF Cable Connectors

Amphenol SV Microwave's UltraLite RF Cable Connector product line features aluminum construction with the goal of creating durable, reliable, and lightweight high-performance RF cable connectors. Available in threaded SMA and 2.92mm series, these Ø.047" cable connectors are 66% lighter than their stainless steel counterparts. This product line is ideal for Space and other applications where weight is at a premium. DC – up to 40 GHz.

**Contact:** Amphenol SV Microwave • sales@svmicro.com • (561) 840-1800



## Wedge TNC

Amphenol SV Microwave manufactures high performance Wedge TNC connectors that incorporate a unique tapered dielectric design. This distinctive design allows the mating connectors' dielectrics to physically overlap which effectively minimizes air gaps and generates a longer voltage path for improved voltage breakdown. The Wedge TNC allows for outstanding passive intermodulation (PIM) performance due to the tapered dielectric design feature and the tri-alloy plated brass connector body.

**Contact:** Amphenol SV Microwave • sales@svmicro.com • (561) 840-1800



## M3933/30 Attenuators

Amphenol SV Microwave is the ONLY DLA approved source for these 2.92mm attenuators (DC through 32 GHz). SV's line has the precision, quality and performance unmatched in the marketplace. Our dB values range from 0.5 to 30 dB with low VSWR and flat attenuation. Available in screened and non-screened versions.

**Contact:** Amphenol SV Microwave • sales@svmicro.com • (561) 840-1800



## Coaxial PCB Connectors

Amphenol SV Microwave's portfolio of RF PCB connectors include compact, high-performing and durable 2.92mm, 2.4mm, 1.85mm, SMA, SMP, SMPM and SMPS product lines. With a wide variety of mounting types like edge launch, board mount, and thru-hole, as well as finishes like stainless steel, gold, and pre-tinned, there is a connector to suit every need. Amphenol SV Microwave's push-on SMP, SMPM, and SMPS connectors are ideal for high density applications and allow for axial and radial misalignment to compensate for tolerance stack up.

**Contact:** Amphenol SV Microwave • sales@svmicro.com • (561) 840-1800

# HIGH SPEED



## Split-Pair Quadrax Contacts

Amphenol offers the high performance interconnect solution for CAT6A type cable. For use with: 10/100/1000/10G Base-T Ethernet; DVI; USB 2.0/3.0; PCI-Express 2.0; HDMI 1.3a; SATA 2.0.

**Contact:** Sandra Wildenstein • [swildenstein@amphenol-ao.com](mailto:swildenstein@amphenol-ao.com) • (607) 563-5379



## Octonet Contacts

Superior Ethernet contact system for MIL-DTL-38999, Series III. Eight strategically spaced inner contacts form four 100 Ohm matched impedance differential pairs. Easy drop-in replacement to installed connectors; no need to redesign. Self-removing contact feature - no extra contact extraction tool needed (24 Gauge only). Octonet Contacts are ideal for Ethernet or AFDX networks with a reduced envelope. This contact range fits within standard size 8 cavity of MIL-DTL-D38999/EN3645, SIM/EN4165, ARINC.

**Contact:** Sandra Wildenstein • [swildenstein@amphenol-ao.com](mailto:swildenstein@amphenol-ao.com) • (607) 563-5379



## Quadrax Contacts

High Speed Quadrax Contacts consist of an outer contact with four inner contacts spaced to form two 100 or 150 Ohm controlled impedance differential pair. Both contacts, when used in Amphenol MIL-DTL-38999 Series III and ARINC type connectors, provide an excellent option for harsh environment applications such as: Ethernet 100 Base-T-100 Ohm, Gigabit Ethernet 1000 Base-T-100 Ohm, Fibre Channel-150 Ohm, IEEE 1394B FireWire-110 Ohm. Used in MIL-DTL-38999/EN3645, SIM/EN4165 and ARINC600 connectors.

**Contact:** Sandra Wildenstein • [swildenstein@amphenol-ao.com](mailto:swildenstein@amphenol-ao.com) • (607) 563-5379

## Differential Twinax Contacts

Offers several advantages for high data transfer rates, low power consumption and excellent EMI compatibility. Amphenol Twinax contacts terminate to a variety of cables and are also available with PCB tails.

**Contact:** Sandra Wildenstein • [swildenstein@amphenol-ao.com](mailto:swildenstein@amphenol-ao.com) • (607) 563-5379

# FIBER OPTICS



## ARINC 801

Amphenol FSI offers fiber optic high performance termini and connector systems within a wide range of cylindrical and rectangular interconnect packaging. Amphenol offers ARINC 801 compliant termini for use in both cylindrical and rectangular connectors in commercial and military applications.

**Contact:** Michelle Zimmer • [mzimmer@fibersystems.com](mailto:mzimmer@fibersystems.com) • (214) 547-2437



## MT38999 Multi-Channel Connectors

Amphenol offers a multi-channel circular connector with high density MT fiber optics. High fiber density in a relatively small circular connector package with all the advantages of the MIL-DTL-38999, Series III connector.

**Contact:** Joe Ingold • [jingold@amphenol-aoa.com](mailto:jingold@amphenol-aoa.com) • (607) 267-0699



## Fiber-to-Antenna (FTTA) Connector Solutions

Borne from the foundation of D38999 mil-spec harsh environment connectors, the FTTA interconnect solution combines standard fiber optic LC components and copper contacts in a rugged, affordable package. The FTTA series is highly configurable to support a wide range of industrial applications where fiber and copper connectivity are required in a single connector for rapid deployment and easy maintainability.

**Contact:** Joe Ingold • [jingold@amphenol-aoa.com](mailto:jingold@amphenol-aoa.com) • (607) 267-0699



## LC Field D38999-Type Connectors

The patented RJStop® system allows use of a standard LC or LX5 patchcord in a metallic plug, which will protect it from shock, dust and fluids. There is no need for field termination. This metallic plug is connected into a receptacle, using a Tri-Start Thread coupling mechanism (MIL-DTL-38999 Series III type) with anti-decoupling device for high vibrations.

**Contact:** Michelle Zimmer • [mzimmer@fibersystems.com](mailto:mzimmer@fibersystems.com) • (214) 547-2437

# FIBER OPTICS



## Board Level/Rectangular Fiber Optics

Amphenol is uniquely qualified to design and manufacture a wide range of rectangular connector products containing MIL-PRF-29504, HD20, MT Ferrule Fiber Optic Termini and ARINC 801 Termini.

**Contact:** Joe Ingold • [jingold@amphenol-aoa.com](mailto:jingold@amphenol-aoa.com) • (607) 267-0699



## MFM Simplex

The Simplex MFM Fibre Optic range has been specifically designed to operate in Harsh Environments. The rugged, anti-vibration, corrosion resistant design ensures high environmental and optical performance in a variety of applications in the air, on land, and above / below sea.

**Contact:** Michelle Zimmer • [mzimmer@fibersystems.com](mailto:mzimmer@fibersystems.com) • (214) 547-2437



## LowPro Low Profile Fiber Optic Connectors

Amphenol FSI offers the LowPro series of low-profile, fiber optic connectors. The FS115 LowPro has a height of 0.25" making it ideal for edge-card connections and other applications that require minimal connector profiles. Using field-proven M29504/14 & /15 termini, this fiber optic connector has excellent optical performance with insertion losses of 0.35 dB (typical), 0.75 dB (maximum) and typical back reflection of -50 dB (single mode).

**Contact:** Michelle Zimmer • [mzimmer@fibersystems.com](mailto:mzimmer@fibersystems.com) • (214) 547-2437

# FIBER OPTIC



## Space ST Connectors

Amphenol FSI offers a fiber optic MIL-STD-83522 style connector and strain relief boot compliant to NASAEEE-INST-002 material guidelines for space applications. AFSI's Space ST connectors were tested to ASTME595 to evaluate the boot's out-gassing properties and are available for all of the popular fiber sizes. The Space ST is a M83522 style variant, which features a higher spring force than commercial ST connectors, allowing it to meet the shock and vibration requirements of MIL-C-83522. Stainless steel construction provides excellent mechanical strength and superior corrosion resistance. A companion adapter is available to support bulk head applications.

**Contact:** Michelle Zimmer • [mzimmer@fibersystems.com](mailto:mzimmer@fibersystems.com) • (214) 547-2437



## MT Ferrule Termini

Designed for use in Amphenol MT38999 circular connectors and also for rectangular products: printed circuit board interconnects, LRM, VME64 and VITA46 interconnects.

**Contact:** Joe Ingold • [jingold@amphenol-aoa.com](mailto:jingold@amphenol-aoa.com) • (607) 267-0699



## ARINC 801 Termini

ARINC 801 termini are designed for use in Amphenol ARINC 801 fiber optic connectors-manufactured to comply with ARINC 801. Termini are available with both PC and APC end-face finishes.

**Contact:** Joe Ingold • [jingold@amphenol-aoa.com](mailto:jingold@amphenol-aoa.com) • (607) 267-0699



## M28876 MPC Termini

The Amphenol Fiber Systems International (AFSI) design of the M29A1350 and M29B1350 APC termini are based on qualified M29504 /14 and /15 termini. These termini are designed exclusively for use in the APC28876 low back reflection, multi-channel count connector series. The connectors and termini, based on the military qualified M28876 connector, are designed for use in harsh environment applications.

**Contact:** Michelle Zimmer • [mzimmer@fibersystems.com](mailto:mzimmer@fibersystems.com) • (214) 547-2437

# FIBER OPTICS



## Lux Beam

Lux Beam is a single expanded beam termini compatible with multi-source connectors (38999, EN4165, EN3645). Featuring ball lens technology with an expanded beam superior to 50X in multimode, this solution is ideal for head-up display, tactical communication, avionics communication, equipment with hybrid connection in harsh environments.

**Contact:** Emmanuel Lambert • Emmanuel.Lambert@amphenol-socapex.fr  
• +33 (0)4.50.89.28.53



## FSAF Series Termini

The FSAF series fiber optic termini provide superior optical and mechanical performance and are compatible with Amphenol Fiber Systems International's (AFSI) TFOCA-III® and THD connectors. The front release stainless steel design utilizes a 1.25mm ferrule allowing the technician to use a standard LC polishing puck and termination procedure.

**Contact:** Michelle Zimmer • mzimmer@fibersystems.com • (214) 547-2437

## JUNCTION MODULES/RELAY SOCKETS/TERMINAL BLOCKS



## M81714-Style Electronic Splices & Modules

Single and Dual Electronic splices and Electronic Junction Modules are designed to provide a quick and efficient solution to application design wiring requirements. Single and Dual Wire Splices conform to M81714/21, /23 and /24. TJE Electronic Modules conform to M81714/25, /26. SJE Electronic Modules conform to M81714/62. All can be supplied with a wide variety of diodes, resistors, capacitors, and fuses. Amphenol's electronic solutions allow customers to incorporate system modifications into a wire bundle, avoiding changes in panels or boards.

**Contact:** Amphenol PCD • produced@amphenolpcd.com • (978) 624-3400

# MEDIA CONVERTERS & ETHERNET SWITCHES



## CTF-QUAD

Amphenol Aerospace adds CTF-QUAD to the CTF (Copper to Fiber) Media Converter Product Family. This product line utilizes standard quadra receptacle connectors and inserts. The CTF-QUAD product line is fiber to copper and copper to fiber media conversion in quadra form factor pins for standard D38999 quadra insert arrangements.

**Contact:** Jared Sibrava • [jsibrava@amphenol-aoa.com](mailto:jsibrava@amphenol-aoa.com) • (607) 563-5372



## Analog-to-Digital Media Converters

Amphenol Aerospace's High Speed Solutions offers a fully integrated standalone Analog-to-Digital Converter package. Our integrated Analog-to-Digital Converters support input through High Frequency 50Ω MMCX RF type interconnects in a rugged MIL-DTL-38999 ultra-small form factor package. The analog inputs are single-ended and coupled to the latest in TI's family of open architecture high speed ADC devices using a balun and AC coupling capacitor configuration to produce the broadband differential input required by the devices.

**Contact:** Jared Sibrava • [jsibrava@amphenol-aoa.com](mailto:jsibrava@amphenol-aoa.com) • (607) 563-5372



## VPX Module

The VPX media conversion products provides the sweet spot of conversion from both backplane and Base-T connectors, as VPX well as backplane and high-end fiber connections. The product suite includes the components needed to quickly integrate this unit into a new sub-system, as well as install and field in rugged environments.

**Contact:** Jared Sibrava • [jsibrava@amphenol-aoa.com](mailto:jsibrava@amphenol-aoa.com) • (607) 563-5372



## Copper-To-Fiber Digital Media Converters

Amphenol Aerospace High Speed Solutions offers copper-to-fiber and fiber-to-copper media conversion with our hybrid integrated connectors. The family consists of protocol independent and Ethernet media conversion converters with more products being developed to meet our customers' application needs.

**Contact:** Jared Sibrava • [jsibrava@amphenol-aoa.com](mailto:jsibrava@amphenol-aoa.com) • (607) 563-5372

# MEDIA CONVERTERS & ETHERNET SWITCHES



## Miniature Rugged Ethernet Switches

Amphenol's rugged managed-military-grade Ethernet switches, offer Gigabit Ethernet 10/100/1000/10Gbps Ports. Developed for SWaP (Size Weight and Power) the switches feature mechanical packaging enhancements designed for MIL-STD-810F airborne and ground environmental compliance and high reliability. Units have been especially hardened to improve ingress, impact, and shock/vibration protection, as well as eliminate all moving parts through passive cooling, and interface through sealed miniature circular connectors. Leveraging best-in-class switching technology, they serve as a robust solution for providing local area network (LAN) connectivity to IP-enabled computing and net-centric devices. Compact in size, units are particularly useful for expanding port density in space-constrained airborne and ground vehicle environments.

**Contact:** Amphenol PCD • [rugged\\_solutions@amphenolpcd.com](mailto:rugged_solutions@amphenolpcd.com) • (978) 624-3400



## USB-C Rugged Connectors

USB3CFTV is a ruggedized solution for USB Type-C standard connectors. Based on MIL-DTL-38999 series III type, plugs, and receptacles are mated thanks to a Tri-Start thread coupling mechanism. This solution strengthens and protects your devices against fluids, dust, shocks, and disconnection due to vibrations. The assembly of your standard USB type-C cordset into our ruggedized plugs does not require any tool and can be easily performed on the field. In addition, reversibility for data and power transmission is achieved for both plug and receptacles. Benefit from USB type-C flexibility to design many different data, power delivery, and video configurations with all the advantages of Amphenol know-how in ruggedized connector solutions.

**Contact:** Amphenol PCD • [rugged\\_solutions@amphenolpcd.com](mailto:rugged_solutions@amphenolpcd.com) • (978) 624-3400



## Ruggedized Video Signal Connectors

MDPFTV & HDMIFTV are complete ruggedized solutions around Mini DisplayPort & HDMI standards using a Tri Start Thread coupling mechanism (MIL-DTL-38999 series III type) to connect the two plug and receptacle parts. This solution allows you to insert a standard video cordset into a metallic plug which will protect it from shock, dust and fluids. The assembly of this ruggedized plug doesn't require any tool and can be easily done directly in the field. The corresponding MDP/HDMI FTV receptacle dedicated to be mounted on your box/panel enables you to reinforce and protect your system against leakage, shocks, vibrations and much more.

**Contact:** Amphenol PCD • [rugged\\_solutions@amphenolpcd.com](mailto:rugged_solutions@amphenolpcd.com) • (978) 624-3400

# CABLE HARNESES & SYSTEM ATTACHMENTS



## Overmolded Cable Assemblies

Amphenol manufactures a wide scope of overmolded cable assemblies for all types of environments. High & low temperatures, fuel resistance, hermetically sealed etc. We have specialized processes for compounds such as Viton, EPDM, Polyurethane, Neoprene and more.

**Contact:** Amphenol PCD • [cablesales@amphenolpcd.com](mailto:cablesales@amphenolpcd.com) • (978) 624-3400



## Ruggedized Ethernet and USB Cables

Amphenol offers high reliability Ethernet and USB cable assemblies designed both for harsh or industrial environments. Our exterior cable designs consist of a UV resistant, polyurethane, halogen free flame retardant (HFFR) jacket. Conductors are doubled shielded with a braid and foil (SFTP). Cat5e/6/6a cables are designed to ISO/IEC11801 requirements. Our extensive offering of Ethernet & USB connectors can be sold as cordsets with molded plugs and /or transversal receptacle sealing. We also offer a range of rugged USB extender assemblies.

**Contact:** Amphenol PCD • [cablesales@amphenolpcd.com](mailto:cablesales@amphenolpcd.com) • (978) 624-3400



## High Speed RF Cable Assemblies

Amphenol SV Microwave offers a complete line of high frequency cable assemblies utilizing threaded and push-on RF connectors in series 2.92mm, 2.4mm, 1.85mm, SMA, SMP, SMPM and SMPS. With a variety of cable types including Ø.047 and Ø.085 standard flexible cable Ø.047 SuperFlex cable with a tight internal bend radius, and a new low loss cable type Ø.087-LL. Our cable assemblies feature low solder wicking and our high flexibility allow for tight bends behind the cable ferrule. Our low loss is your gain

**Contact:** Amphenol SV Microwave • [sales@svmicro.com](mailto:sales@svmicro.com) • (561) 840-1800



## Space Flight Microwave Cable Products

Times Microwave Systems offers a complete product line of space qualified cable assemblies. The SPFLT series cable offers low loss, high power handling capability for the most demanding space flight environments. The Phase Track® series is the most phase stable product versus temperature change in a flexible cable. Our SiO2 series cable is designed for the most extreme temperature requirements. All of these cable types have high performance, impedance matched RF connectors available and use only the highest quality, low outgassing materials. These connectors are designed for high power and meet, or exceed requirements for multipactor and corona breakdown.

**Contact:** Maria Calia • [maria.calia@timesmicrowave.com](mailto:maria.calia@timesmicrowave.com) • (484) 238-3060

# CABLE HARNESES & SYSTEM ATTACHMENTS



## High Speed Copper Cables

Amphenol provides a large array of cable assemblies with high-speed quadraX and differential twinax contacts, as well as coax and concentric twinax contacts. Amphenol offers customers the most up-to-date range of cable assemblies in the market. Amphenol can design and supply your cable needs for high speed contacts and connector, from a simple point-to-point cable to a multi-branch cable system.

**Contact:** Sandra Wildenstein • [swildenstein@amphenol-aoa.com](mailto:swildenstein@amphenol-aoa.com) • (607) 563-5379



## Fiber Optic Cable Assemblies

Amphenol's cable assembly expertise dates back to the first industry standard fiber optic connector, over 25 years ago. Our depth of understanding of connector and termini design, and the complete control of connector materials, make Amphenol Fiber Optic cable assemblies one of the best in the industry. Amphenol offers a comprehensive line of single-mode and multi-mode cable assemblies in a variety of cable configurations. From sim plex jumpers to multi-fiber custom assemblies, Amphenol can design and supply all of your cable needs.

**Contact:** Joe Ingold • [jingold@amphenol-aoa.com](mailto:jingold@amphenol-aoa.com) • (607) 267-0699



## Space Qualified Cable Assemblies

Amphenol SV Microwave has over 50 years experience in assembly, inspection, testing and qualification of space products. SV's space qualified cable assemblies offer high power / low PIM options. Additionally, our in-house Real Time X-Ray Machine allows for solder coverage verification throughout the assembly process. SV's wedge dielectric interfaces are also available to prevent multipaction. SV's trainers are J-STD-001 and IPC WHMA-A-620 Certified.

**Contact:** Amphenol SV Microwave • [sales@svmicro.com](mailto:sales@svmicro.com) • (561) 840-1800

# CABLE HARNESES & SYSTEM ATTACHMENTS



## 75P-Clamps

Engineered for lean manufacturing and high performance, the 75P Clamp was designed as a one-for-one replacement to outperform industry standard metal clamps (i.e. AS21919). Featuring benefits such as a locking feature, butterfly stacking, weight savings, durable PEEK polymer band material and multiple cushion material options that are non-conductive and non-corrosive, the 75P Clamp is a versatile solution for anyone looking to reduce weight and installation time.

**Contact:** Randy Gautreaux • [rgautreaux@amphenolpcd.com](mailto:rgautreaux@amphenolpcd.com) • (978) 624-3407



## CC5516 Light

CC5516 Light series is the Lightweight version of the CC5516 standard Cable Clamps series. The CC5516 Light clamps are up to 65% lighter than their metal counterparts. They are designed to keep the cable harnesses or hydraulic pipes securely maintained on structure. They have an integrated prelocking system which allows to preposition the clamp on the harness. The screw (not supplied) allows the clamp to lock and fix onto the structure in one step. CC5516 Light clamps absorb shock and vibration and offer an unequalled protection for the bundles and pipes against pinching, crushing, or mechanical wear. They are suited for applications in harsh environment and temperatures up to 225°C. Thanks to their design, it is possible to stack them whatever their size. They are available in 10 sizes, for bundles or pipes diameters from 5 to 25,4 mm.

**Contact:** Randy Gautreaux • [rgautreaux@amphenolpcd.com](mailto:rgautreaux@amphenolpcd.com) • (978) 624-3407



## ABS2195 / CC5516 Clamps

The ABS2195/CC5516 Clamps are made to both Military and Commercial Aerospace specifications. These composite clamps are up to 65% lighter than metal clamps and utilize overmold technology to better secure and protect pipes and wire bundles. PEEK Polymer bands offer a temperature range of up to 435°F. There are 37 sizes available, all of which conform to ABD 031 and FAR 25853.

**Contact:** Randy Gautreaux • [rgautreaux@amphenolpcd.com](mailto:rgautreaux@amphenolpcd.com) • (978) 624-3407



## Strain Relief Clamps

Amphenol Pcd's Strain Relief Clamps not only tidy-up the cable after termination, but also provide good strain relief at the termination area. It is a cost-effective cable holding option when environmental protection is not a concern, and weight saving is a major consideration.

**Contact:** Mathew Tharakan • [mtharakan@amphenolpcd.com](mailto:mtharakan@amphenolpcd.com) • (508) 932-2214

# CABLE HARNESES & SYSTEM ATTACHMENTS



## SiO2

The SiO2 semi-rigid cable assemblies are used in applications demanding the ultimate in phase tracking performance and extreme environments

**Contact:** Maria Calia • [maria.calia@timesmicrowave.com](mailto:maria.calia@timesmicrowave.com) • (484) 238-3060



## Thermoplastic Solution

Amphenol PCD's Carbon PEEK Thermoplastic solutions offer strong, lightweight, low-cost alternatives to Titanium (Ti-6Al-4V) solutions currently used in the space industry. Molded parts can be designed into shapes that are difficult or impossible to attain with CnC machining, enabling more weight efficient and cost-effective designs. As a molded part, Carbon PEEK Thermoplastic parts use less material, and generate less process waste than machining Ti-Al-4V. Highly resistant to most chemicals and fluids, Carbon PEEK Thermoplastic solutions are suitable for fuel, cooling and heat pipe applications. And unlike Ti, Carbon PEEK Thermoplastic does not suffer from Cold Dwell Fatigue, helping ensure more reliable operation over the life of the system.

**Contact:** Randy Gautreaux • [rgautreaux@amphenolpcd.com](mailto:rgautreaux@amphenolpcd.com) • (978) 624-3407



## Standoffs & Brackets

Designed to help guide wire bundles through aircraft and vehicles, Amphenol Air LB's Standoffs were designed with strength, stability, and weight reduction in mind. These standoffs are made with black thermoplastic and conform to ABD031 flammability standard. There are two types of these standoffs - Type I has an operating temperature range of -67° to 266° and uses a screw mount; whereas Type II has an operating temperature range of -67° to 185° and uses a tie-down mount.

**Contact:** Randy Gautreaux • [rgautreaux@amphenolpcd.com](mailto:rgautreaux@amphenolpcd.com) • (978) 624-3407



## Multi-Channel Fiber Optic Cable Assemblies

Amphenol FSI builds custom cable assemblies for virtually any applications. Our stringent quality system, certified to MIL-STD-790, ensures the highest levels of workmanship and performance available today in each and every cable assembly built. There are virtually no connector standards that AFSI does not support. In addition to 100% optical performance testing, AFSI also provides value-added services such as thermal cycling, high-temperature aging, and other post-build environmental testing.

**Contact:** Michelle Zimmer • [mzimmer@fibersystems.com](mailto:mzimmer@fibersystems.com) • (214) 547-2437

# GLOBAL DIVISIONAL REFERENCE GUIDE

## US & CANADA

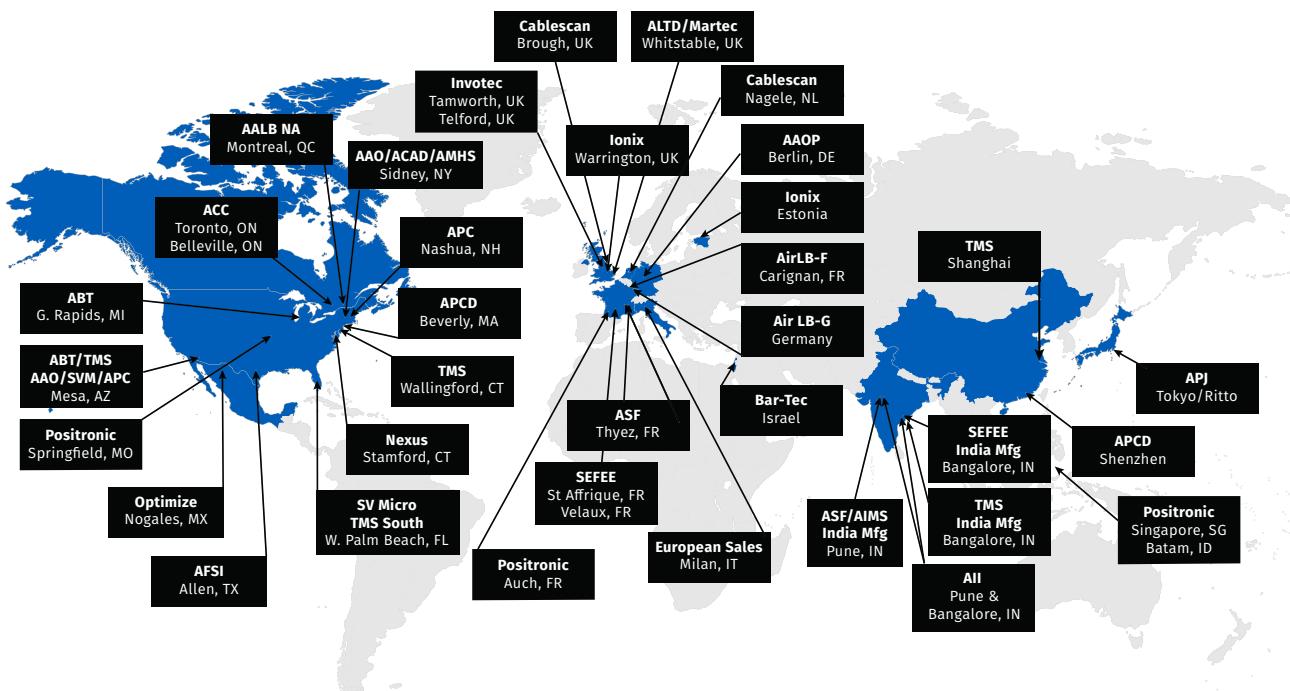
<b>AAO</b>	Amphenol Aerospace (Sidney, NY)
<b>ACAD</b>	Amphenol Commercial Air Division (Sidney, NY)
<b>AMHS</b>	Amphenol Military High Speed Division (Sidney, NY)
<b>ACC</b>	Amphenol Canada (Toronto, ON)
<b>NEX</b>	Amphenol Nexus Technologies (Stamford, CT)

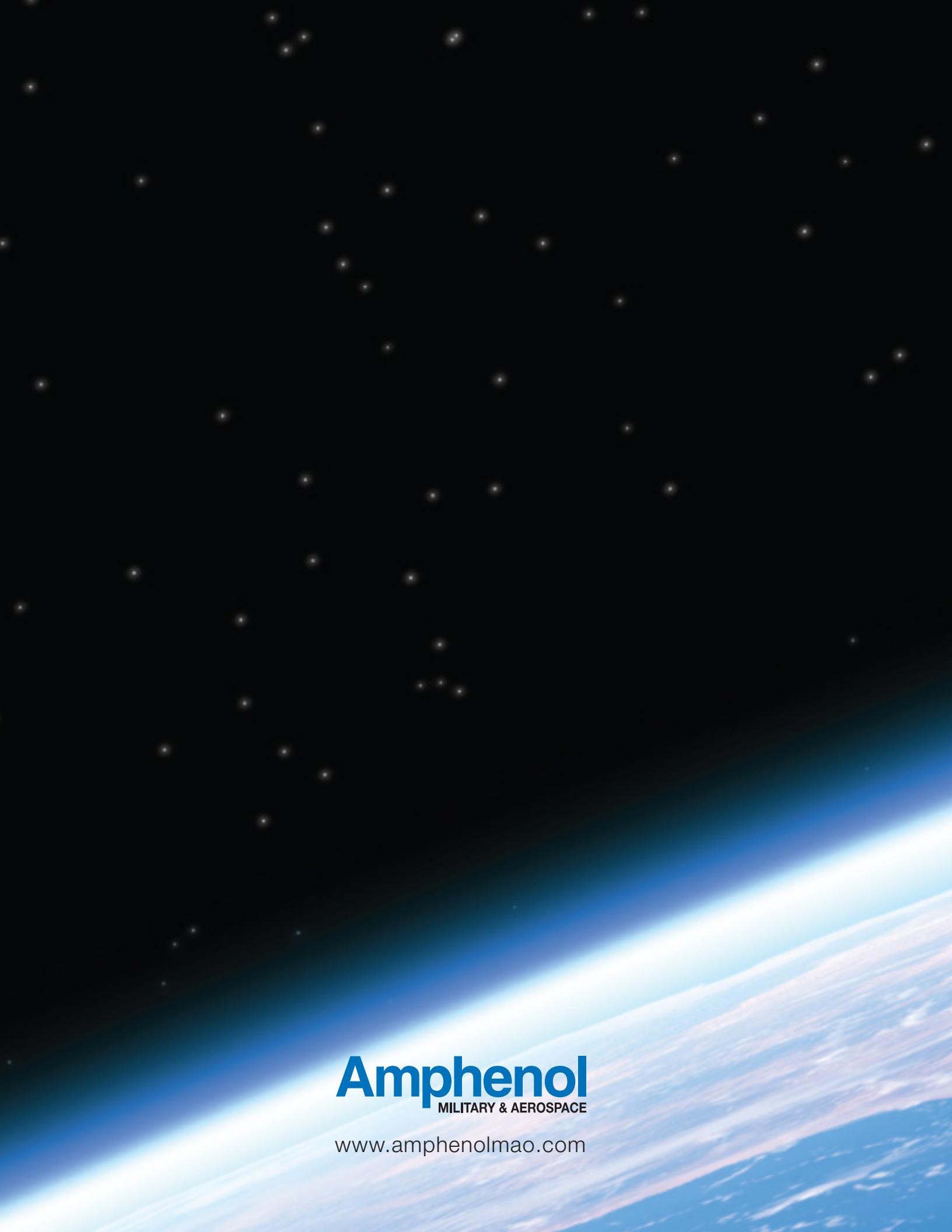
<b>FSI</b>	Amphenol Fiber Systems International (Allen, TX)
<b>PCD</b>	Amphenol Pcd (Beverly, MA)
<b>SVM</b>	SV Microwave (West Palm Beach, FL)
<b>TMS</b>	Times Microwave Systems (Wallingford, CT)

## INTERNATIONAL

<b>ASF</b>	Amphenol Socapex (France/India)
<b>LTD</b>	Amphenol Limited (UK)
<b>MAR</b>	Martec Solutions (UK)
<b>AALB-F</b>	Amphenol AirLB France
<b>AALB-G</b>	Amphenol AirLB Germany
<b>AIX</b>	Amphenol Ionix Systems (UK/Estonia)
<b>AINV</b>	Amphenol Invotec (UK)

<b>SEFEE</b>	Amphenol Sefee (France/India)
<b>AII</b>	Amphenol India
<b>APJ</b>	Amphenol Japan
<b>ABAR</b>	Amphenol BarTec (Israel)
<b>ACAB</b>	Amphenol Cablescan (UK/The Netherlands)
<b>AAOP</b>	Amphenol Active Optic Products (Germany)





**Amphenol**  
MILITARY & AEROSPACE

[www.amphenolmao.com](http://www.amphenolmao.com)