

# Amphenol

MILITARY & AEROSPACE



Military & Aerospace Operations

# AT-A-GLANCE

7.2016

## THE AMPHENOL ADVANTAGE

# Amphenol Military & Aerospace Operations (AMAOO) offers unique advantages that no other interconnect manufacturer can:

### **Global footprint, local support:**

With 21 divisions in North America, Europe, and Asia, we can provide a local, regional presence to design and build any interconnect solution.

### **Cost-effective partnerships:**

AMAO utilizes a vertically integrated supply chain to flow down the most competitive costs to our customers, even on the most complex solutions.

### **Manufacturing versatility:**

Many AMAO interconnect solutions have dual-production locations and off-set options which means our customers benefit from low-cost options without the fear of a single-source position.

### **Technology proliferation from other Amphenol divisions:**

As the second largest interconnect company in the world, we're highly diversified and can provide our proven COTS technology from the antennas, sensors, industrial, and automotive markets to the military and aerospace world.

Amphenol Military & Aerospace Operations is perfectly aligned to provide the latest technologies, cost-effective manufacturing and supply chain management, and local support to solve any military and aerospace interconnect need.



Visit [amphenolmao.com](http://amphenolmao.com) for more information

## International Manufacturing Footprint:



## Industry Product Specs:

- ABS 1152
- ARINC 404
- ARINC 600
- ARINC 801
- ARINC 809
- ARINC 810
- AS39029
- AS85049
- BACC63CM/CN/DB/DC
- EN2997
- EN3155
- EN3545
- EN3645
- EN3661
- EN4165
- ESC10/ESC11
- JSFC15/16/17/18
- M31031
- M39012
- M39030
- M3933
- M55339
- M83517
- MIL-C-9177
- MIL-DTL-22992
- MIL-DTL-24308
- MIL-DTL-26482 Series 1 and 2
- MIL-DTL-26500
- MIL-DTL-27599
- MIL-DTL-28876
- MIL-DTL-38999 Series I, II, III
- MIL-DTL-5015
- MIL-DTL-55116
- MIL-DTL-55181
- MIL-DTL-55302
- MIL-DTL-83513
- MIL-DTL-83527
- MIL-DTL-83723
- MIL-PRF-12883
- MIL-PRF-29504
- MIL-S-8805/3
- MIL-T-81714 Series I, II
- SMA
- SMP
- SMPM
- SMPS
- SMPTE 304M
- SSMA
- TFOCA I, II, III
- TNC
- Type N
- VITA 46/60/66/67
- VME64



## PRODUCTS

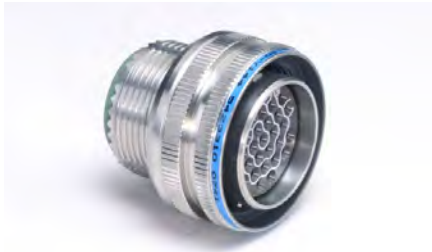
Amphenol Military & Aerospace Operations has the **largest** and **broadest selection** of interconnect products in the military and aerospace markets.

Amphenol can provide all interconnect needs, from small, lightweight system attachments to large, complex assemblies and everything in between.



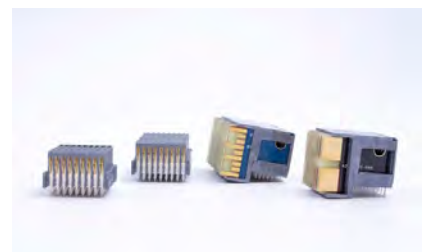
### **Circular Connectors:**

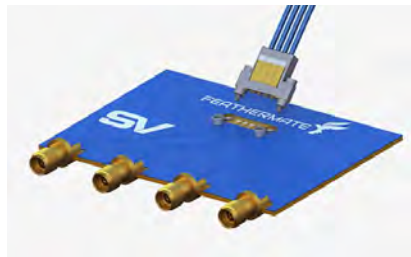
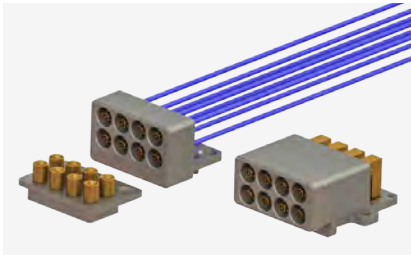
- Mil-Spec Connectors
- Micro-Miniature Connectors
- Filtered and Sealed Connectors
- Audio Connectors
- Circular Rack and Panel Connectors
- High-Power Connectors
- Quick-Disconnect/Push-Pull Connectors



### **Rectangular & Board-Level Connectors:**

- Rectangular Connectors
- Board-Level Connectors
- Rack and Panel Connectors
- D-Sub and Micro-D Connectors
- Filtered and Sealed Connectors
- SIM/Modular Connectors
- VITA Interconnects



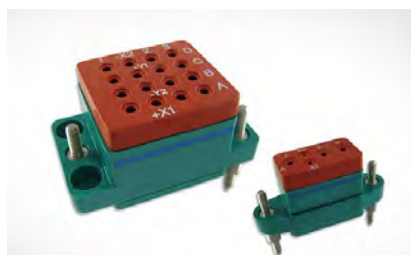


### RF Interconnects:

TNC and Type N Series  
SMP, SMPM, SMPS Series  
PN, PTNC Series  
Blindmate Connectors  
FeatherMate Series  
Multiport High Density Connectors  
RF Components and Adapters

### High Speed & Fiber Optics:

10GB+ Copper Connectors  
USB, HDMI Solutions  
ARINC 801 Connectors  
TFOCA, TFOCA II, TFOCA III Connectors  
LC and MT Circular Connectors  
Rugged Ethernet Solutions  
Fiber-to-Antenna Connectors



### Junction Modules & Relay Sockets:

Grounding Modules  
Electronic Splices  
Quick-Mount Relay Sockets  
PCB Modules  
In-Line Junctions  
Ground Blocks  
Mil-Spec Relay Sockets

# PRODUCTS

## Contacts & Termini:

Quadrax, Differential Twinax Contacts  
ARINC 801 Termini  
MT Ferrules  
PC Tail Coax, Twinax, Triax Contacts  
Oval Contact System  
Lux Beam & Lumiere  
Quadrax Fiber Optic Adapters



## Backshells & System Attachments:

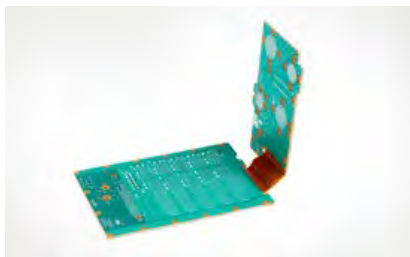
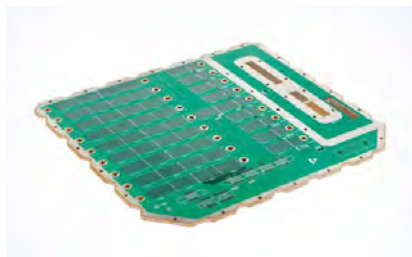
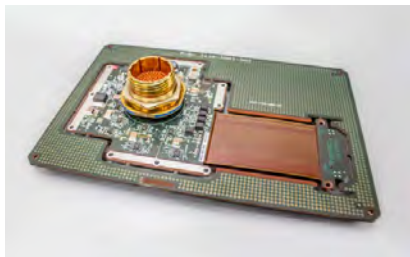
Environmental & Non-Environmental Backshells  
EMI/RFI Backshells  
Adapters & Strain Reliefs  
Dust Caps  
P-Clamps & C-Clamps  
Standoffs & Raceways  
Cable Separators

## Cabling & Cable Harnesses:

High-Speed and Fiber Optic Cables  
Engine Harnesses  
Heavy Duty Power Cables  
Overmolded Cable Assemblies  
Ethernet and USB Cables  
Cable Adapters  
RF Cable Assemblies





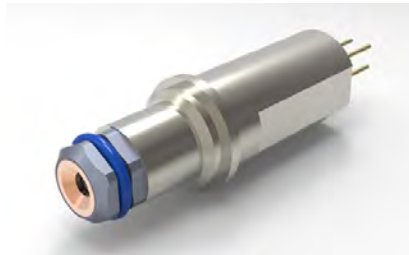


## Printed Circuit Board/ Flex/Rigid-Flex:

Standard PCBs  
Flex Products  
Rigid-Flex Products  
Backplane Assemblies  
Printed Electronics  
RF Printed Circuit Boards  
Circuit Card Assemblies

## Media Converters & Ethernet Switches:

Copper-to-Fiber Digital Media Converters  
Analog-to-Digital Media Converters  
Ethernet Media Conversion  
Opto-Electronic Contacts  
Rugged Ethernet Switches  
Expanded Beam Converters  
Butt Joint Fiber Connector



## Complex Assemblies:

Electro-Mechanical Integration  
Panel Assemblies  
Engine & Systems Controls  
Aircraft Ground Support Equipment  
Ruggedized Displays  
Electronic Assemblies  
Test Systems

## SWaP

### **Size, Weight, and Power (SWaP):**

Amphenol has more interconnect options to reduce size and weight, while maintaining needed power requirements, than any other manufacturer. From system attachments to complex assemblies, AMAO has led the industry in the use of lightweight materials, high contact density design, and unique packaging without sacrificing power and performance.



### **Ruggedization:**

Amphenol has the broadest range of ruggedized, harsh environment interconnect solutions in the industry. For over 60 years, AMAO has led the military and aerospace industries with countless designs that withstand high altitude and temperature ranges, shock, vibration, humidity, and the harshest sealing requirements.



### **High-Speed:**

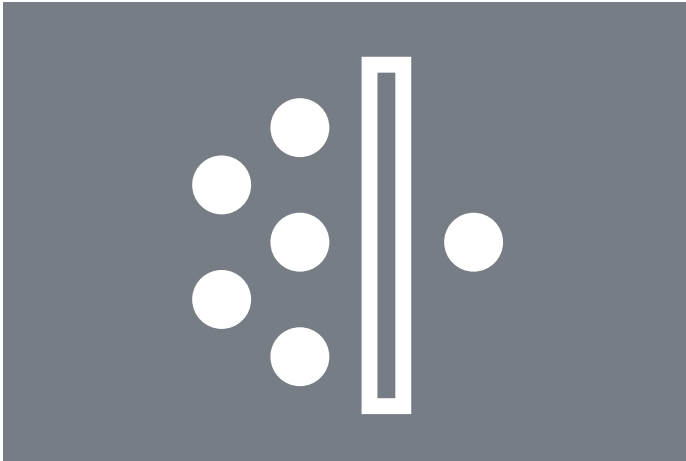
Amphenol designs and builds custom connector and cable solutions for High Speed Copper, Fiber Optic, and Integrated applications. AMAO has numerous interconnect options to solve any high-speed data transmission needs from 10 Gb/s and beyond, while incorporating solutions for all high-speed protocols and media conversion.





### **RF Transmission:**

Amphenol designs and manufactures standard and custom RF/Microwave coaxial connectors, cable assemblies and passive components designed for military, satellite, aerospace, and commercial applications. AMAO has the most extensive RF connector Mil-Spec product offering of any supplier, including adapters, attenuators, and terminations.



### **EMI and EMP Protection:**

Amphenol's EMI & EMP Protection solutions 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 circular and rectangular connectors can be incorporated with filter devices.



### **Electronics Packaging:**

At Amphenol, we understand that high reliability electronics requires state-of-the-art equipment, experienced and passionate people, and rigorous process validation. AMAO's expertise in electronics design, design-for-manufacturer, assembly, and test is second-to-none in the industry.

# MARKETS

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## **Military Aircraft:**

Amphenol is at the leading edge of the latest products and technologies demanded by the military aircraft market. Whether its proven legacy aircraft, the newest unmanned aircraft or rotorcraft, or the most technologically advanced future aircraft, Amphenol designs and builds high-speed, high-reliable, ruggedized product solutions for all subsystems to keep these aircraft flying.



## **Commercial Aircraft:**

Amphenol follows the latest trends in the commercial aerospace market to ensure we provide the right product solutions for the smallest general aviation and business jet to the largest commercial airliner. The transition to a more electric and lighter aircraft is reflected in our interconnect design and development. We hold many industry specification qualifications and our years of material innovations has resulted in multiple interconnect developments.



## **Avionics:**

Amphenol's product portfolio is perfectly suited for the high-speed, high-density demands of flight control systems, both in military and commercial aircraft. From the terminal blocks and relay sockets to complex solutions combining fiber optics, EMI/EMP protection, backplane assemblies, and custom metal machining, Amphenol helps keep aircraft flying safely and reliably.



## **Unmanned Systems:**

As the world of unmanned systems continues to grow, so does Amphenol's product innovations. While early unmanned systems utilized legacy interconnect product, the newest systems place a premium on small, lightweight, high-speed developments for air, land, and sea unmanned systems.



## **Space:**

Amphenol has a rich history with space-related product developments found on many of the landmark space achievements over the years. As the market transitions to incorporate more commercial space development, Amphenol is working closely with the industry to ensure we're leading the design of interconnect solutions for the next generation of space exploration to Mars and beyond.



### **Ground Systems:**

Amphenol leads the military ground vehicle market with interconnect solutions. Current and future ground vehicles demand more sophisticated onboard C4I systems, power distribution, and active protection systems. Amphenol's innovative engineering and diverse product offerings meet and exceed the challenges of SWaP, high speed, and material restrictions for any vehicle sub-system.



### **Missiles and Missile Defense:**

Reliability is the most important aspect of interconnect design for missiles and missile defense. The systems need to work perfectly every time, without fail. Amphenol has a wide range of high-reliable, high-speed, high-bandwidth products that reduce SWaP: from micro-miniature and backplane connectors to RF, power cables and rigid-flex assemblies, to ensure effective missile defense.



### **C4ISR:**

In the ever growing market of communications and surveillance, Amphenol provides a reliable, rugged, and innovative array of products to support the important task of information collection. From powering individual systems to providing secure and efficient transfer of data, Amphenol has the technology to accommodate any C4ISR application. Amphenol allows our soldiers to continue to obtain the most important resource of all, knowledge.



### **Naval:**

Amphenol is an industry leader of harsh environment electronic interconnects servicing the Naval market. Whether powering vital control systems, initiating countermeasures, or transmitting critical communication data; Amphenol's broad product offerings and high reliability ensure a safe and successful mission. We take pride in supporting the Naval market and will continue to provide our highest level of technology, quality, and service to do so.



### **Soldier Systems:**

The modern warfighter is a walking network, connected to multiple sensors, their command, and each other. A premium is placed in simple, yet powerful connectivity that reduces weight while being ergonomic and rugged at the same time. Amphenol's micro-miniature, high-speed interconnect solutions are ideal for keeping the soldier connected.



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### **Amphenol PCD**

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### **Amphenol SV Microwave**

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### **Amphenol Times Microwave, Inc.**

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### **Amphenol Fiber Systems International**

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### **Amphenol Borisch Technologies**

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### **Amphenol Printed Circuit Board Technology**

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