

# Amphenol

Enabling the Electronics Revolution

NEW EDITION  
2025

## INTERCONNECT SOLUTIONS FOR AEROSPACE APPLICATIONS

Overview of Amphenol solutions dedicated to Space, Advanced Air Mobility, Commercial & Military Aerospace applications, in the fields of Connectors, Sensors, Attachment systems, PCB/Flex, Complex Cable Harnesses, Cable Assemblies and Electronic Packaging.



**Commercial Aircraft**



**Military Aircraft**



**Helicopter**



**Advanced Air Mobility**



**Satellite**



**UAV**



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# Amphenol

# Amphenol

Amphenol Corporation is one of the world's largest interconnect and added value manufacturers. Amphenol designs, manufactures and markets electrical, electronic and fiber optic connectors, interconnect systems and coaxial and specialty cables.

Amphenol products are engineered and manufactured in Europe, the Americas, Asia and sold by a worldwide sales and marketing organization.

**Learn how Amphenol interconnect solutions will enable your organization to succeed. Our entire organization is at your service.**

**Amphenol Military & Aerospace** is the world leader in the design, manufacture and supply of high-performance interconnect systems for military and commercial aerospace, especially for harsh environment applications.

Amphenol provides an unparalleled product breadth, from MilAerospace specification connectors to customized high-speed board level interconnects; from flexible to rigid printed circuit boards; from backplane systems to completely integrated assemblies.

Key applications supported are civil and military aircrafts, business jets, hybrid/electrical aircrafts, eVTOLs, radars, missiles, UAVs or space applications, from launchers to satellites. Amphenol is a technology innovator that designs to **meet customers' needs from program inception.**

## KEY APPLICATIONS WE SUPPORT:



- Civil Aircraft
- Military Aircraft
- Business Jet
- Civil Helicopter
- Military Helicopter
- Missile
- UAV
- Satellite & Launcher
- Radar & Surveillance
- eVTOL
- Hybrid / Electric Aircraft

## KEY SOLUTIONS WE PROVIDE:



- Connectors
- Sensors
- Attachment Systems
- Cable Harnesses
- Cable Assemblies
- PCB / Flex & Rigid Flex
- Contacts & Lugs
- Wires & Cables
- Electronic Packaging / Equipment
- Switches & Mediaconverters
- Power / HVDC / MEA Solutions
- Optics / High Speed
- Structures
- Radomes / Aircraft Connectivity Systems

140+  
Operations  
worldwide

Global  
Partner

Added  
Value



## Who we are

Presence  
in 40+  
countries

Technologies

Focused  
& Visionary

Innovation

Components



History & Commitment

Connectors

Cable  
Assemblies

Structures

RF /  
Microwave

Media  
converters



## What we do

And more on [www.amphenol.com](http://www.amphenol.com)

Contacts

Wires  
& Cables

PCBs  
& Flex

Sensors

Optical  
Solutions

Electronic  
Packaging &  
Equipment

Complex  
Cable  
Harnesses

Attachment  
Systems

Aircraft  
Connectivity  
Systems

Antennas

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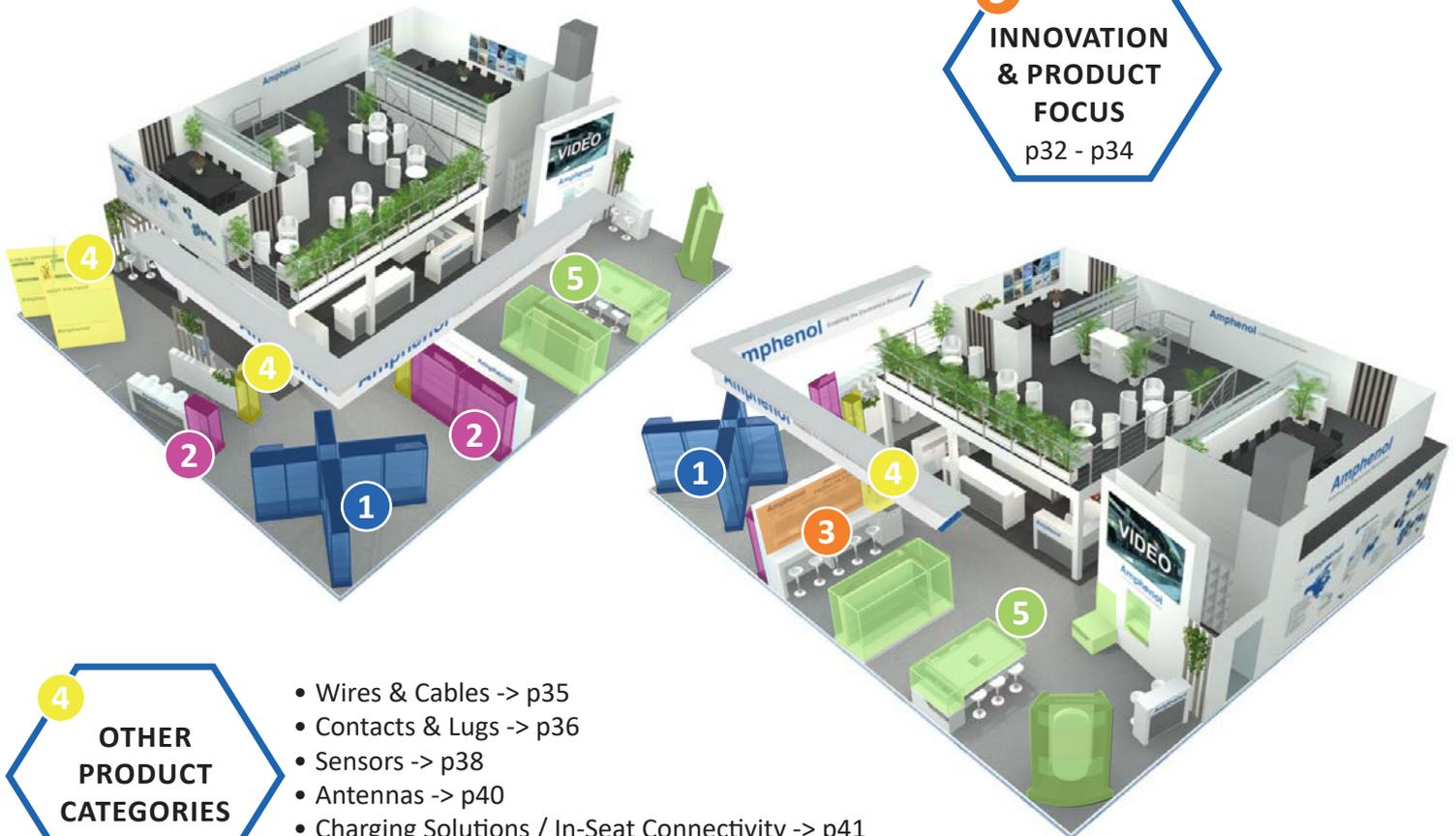
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## + Commercial Aerospace



**TV-SIM / CTV-SIM**

- Modular thread locking connector for Signal, Data and Power transmission
- Combines a circular MIL-DTL-38999 III shell with EN4165 (VG96513/SIM) inserts
- EMI protected, shock & vibration proof
- 1 - 48 contacts per connector, compatible with contacts for electrical or fiber optical transmission: AWG crimp, RJ45, Coax, Quadrax, Octomax, Arinc801, Lumiere, MPO, MTP, USB... and 90° angled PCB contacts

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**Duallok**

- High vibration connector with affirmative locking system which prevents unmating without user input
- Tested beyond mil-specifications vibration requirements
- Mates with standard D38999 receptacles and utilizes all standard D38999 contacts and accessories

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**EN4165 / SIM  
Connectors & Modules**

- Space efficient & modular design offering versatility of mixing & matching
- Shielding, sealing, polarization and 36 keying positions
- Shells in metal or composite versions, in 1, 2 or 4 bays
- Modules in overmold technology, fitted with standard crimp or PCB contacts (size 23/22/20/16/12/8), as well as RF, Quadrax, Coax contacts, Fiber optics or RJ45
- Operating temperature: -55°C to +175°C

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**ARINC 600**

- Low insertion force contacts
- Environmental versions
- Front removable keying posts
- Field replaceable inserts
- Crimp, coaxial, power, printed circuit and wire wrap contacts

Amphenol Canada Corporation



**SIM Gigabit Module**

- Allows Cat5E Ethernet links as well as power supply in one single EN4165 form factor insert
- Configurations 6 contacts size 16 + 2 contacts size 22 + 8 contacts size 26
- Available for crimped contacts, with straight PCB contacts or with angled PCB contacts
- Operating temperature: -55°C to +175°C

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**HV38999**

- Insert design optimized for >1000Vac operation partial discharge free at altitude
- Designed to meet applicable MIL-DTL-38999 mechanical and environmental performance
- Safety interlock circuitry utilizes last mate, first break sequence
- Utilizes existing AS39029 type silver plated power contacts with crimp, busbar and threaded termination options

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Amphenol Aerospace Operations



**Luminus**

- Bayonet and push-pull style circular connectors supporting signal
- Interfacial and Triple-Barrier seal for IP67 sealing
- Multiple keying positions for proper connectivity with blind-mate connection for easy assembly

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**1750 Distribution  
Junction Modules**

- Cable harness optimization: cable linear meters, weight and space saved
- Compact design and very high contact density for low space applications
- Overmold Technology offering excellent sealing performances (IP66)
- Clip mounting and versatility of mixing on metallic or composite rails
- Use of EN3155 standard socket contacts
- Operating temperature: -55°C to +175°C

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**ARINC 801**

- Qualified to the ARINC 801 Specification
- Precision alignment and components provide excellent optical performances
- Supports APC termini for RF-over-fiber and other applications requiring low back reflection
- Supports standard suite of 38999 backshells and accessories
- Removable ASR facilitates termini cleaning and maintenance
- High-density arrangements up to 32 channels

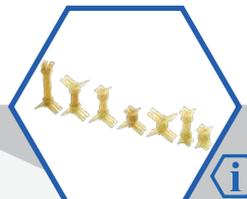
Amphenol Fiber Systems International



**SIM Module 30R23  
Reversed Gender**

- High contact density: 30 contacts size 23
- Reversed gender offering enhanced pin protection
- Module to be used with the whole range of EN4165 / SIM connectors

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**ABS1144 / 3308 Separators**

- Spacers to maintain the required distance between two parallel or crossing cable bundles
- Qualified to Airbus standard ABS1144, available in 3 distances: 25, 50 or 75mm
- Lightweight and envirometally resistant thermoplastic
- Operating temperature: -55°C +130°C
- Shocks & Vibrations: according to DO160D sec. 7 & 8
- Easy installation for cable diameter up to 45 mm with cable ties

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**Octomax 1G26**

- The right choice for Ethernet Cat 5e and AFDX application
- One Octomax 1G26 is equivalent to two Quadrax
- Fits in a standard size 8 Quadrax cavity
- Available in crimp and PC Tail version

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# + Commercial Aerospace



### Solaris

- Low profile rectangular connector
- Easy-to-use slide latch, FOD free, tool-less mating
- IP67 performance and polyetherimide housings for high temperature and chemical resistance

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### 1758 / 1174 Grounded Modules Series

- Distribution modules for grounding applications
- Very compact design and high contact density
- Overmolding technology offering excellent sealing performances
- Rectangular and circular versions
- Rectangular modules available from 36 contacts size 22 to 8 contacts size 12
- Circular modules available for 10 or 12 contacts size 20

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### EPC Series / ASNE0237 / ABS1145 / DHS715-113

- D-SUB connector qualified to ASNE0237 / ABS1145 / DHS715-113
- Temperature-resistant & space saving shells: Operating temperature -65°C to +150°C / 9 - 50 contacts per connector
- Max. 7.5A current rating, suitable for M39029 / EN3155 size 20 crimp contacts, AWG 24-18
- Interfacial-seal and grommet for IP67

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### SIM Quick Release

- Specific design derived from EN4165 modular connectors
- Suited for direct Board to Harness Connection
- «Quick release» locking system for ease of use and time saving
- Compatible with the whole range of standard EN4165 / SIM modules
- Operating temperature: -55°C to +175°C

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### Lightning Protection Connectors

- Combine traditional environmental protections with transient voltage protection
- Can be couple with additional filtering components
- Weight and space saving
- Nanosecond transient clamping response time

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### 1900SIM Connectors

- Overmolding technology: second to none dielectric and sealing performances
- Lightweight and robust thermoplastic
- Metallized for shielding
- Versatility of mixing & matching Signal & Power, RF (Quadrx, Triax, Twinax and Coax) or Fiber Optic
- Many accessories and backshells available
- EN4165 qualified
- With modules from 30 contacts #23 (5 Amps) up to 1 contact #8 (up to 80 Amps)

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### AlumaLite

- 100% aluminum backshell with up to 50% weight savings
- Exceeds Mil-standards and is more durable than composites with superior EMI performance
- Offered in Environmental, Strain Relief / EMI RFI and Band Lock / EMI RFI

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### SIM Module 3022

- High contact density: 30 contacts size 22
- Use of standard size 22 contacts
- Module to be used with the whole range of EN4165 / SIM connectors

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### SIM Module HVDC Size 8

- Partial Discharge (DP) resistant design: PDIV:
  - 3100 Vac peak at 30Kft
  - 2500 Vac peak at 45Kft
  - 1050 Vac peak at 98Kft
- Up to 80A per contact
- Operating temperature: -65°C to +200°C
- Suitable for crimp contact or threaded contact for bus bar connection

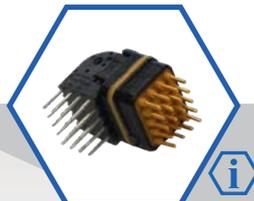
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### MPO Field

- Transform a standard MPO / MTP patch-cord into an environmental connector
- Number of channels: multiples of 12
- Shock, vibration and waterproof (IP68)
- Based on EN3645 / 38999 shell size 13
- Available from stock from our distribution network

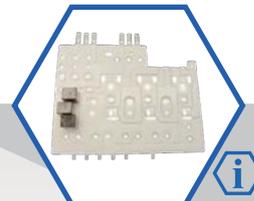
Amphenol Socapex



### SIM OPLF Modules for PCB Mounting

- Low profile alternative to standard SIM modules fitted with angled PCB contacts
- Contact strips are encapsulated in overmolded LCP composite shell and assembled in an EN4165 shaped module
- Modular, for easier maintenance
- Perfectly suited for automatic assembly
- To be used with shortened SIM receptacles offering overall size optimization on the PCB

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### Custom DC-Link Busbar for HV Power Conversion Application

- HV application, designed to avoid partial discharges in altitude
- Interconnect inductance level optimization, validation through multiphysics simulation
- Lightweight, compactness, optimized heat transfer, high temperature

Amphenol Auxel

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## + Commercial Aerospace



**SP MAX**

- Precision machined shell, available in three lengths; options provide EMI / RFI protection
- Combines multiple contact sizes into a single connector; includes #12, #16, #18 & #22
- Performance compatibility to EN4165, ESA / ESCC-3401 and DO-160; low outgassing per ASTM E595
- Quick Lock System (QLS) with audible "click" to reliably mate connectors

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**Relay Sockets**

- Adaptation device between a Relay and a Cable harness
- Overmold technology
- Lightweight composite & Compact design
- For 8, 14 or 16 cts size 20 / 16 (crimp contacts)
- Contacts as per NFC 93422 model HE310A contacts / Contacts as per ASNE standard
- Polarization provided by specific contact configuration or polarized

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**Composite Backshells**

- Lightweight, high performing backshell ideally suited for the commercial air market
- Provides strain relief and weight saving
- Withstands severe corrosive environments

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**EN4165 / SIMTac 03**

- SIM module for 2 MTAC connectors with strain relief
- Protective shroud aiming recessed MT ferrule and "Finger-Touch-Proof"
- Boot for Round or Ribbon Fiber
- Multi-mode and Single mode

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**DUAL SCFF  
2TX+2RX 50 Gbps**

- Dual SCFF (Small Cubic Form Factor) in a 26-pin edge adapter card for streamlined integration
- 2x25Gbps NRZ
- Rugged, MIL-STD-883 shock & vibrate qualified
- Works from -40°C to +85°C
- No pigtail, off-the-shelf LC connectors
- Redundant, designed for IFE

Amphenol Active Optics Products



**Electronic Splices**

- Performs to M81714 electrical and mechanical standards
- 22, 20 & 16 awg wire support
- Offered as diodes, resistors, fuses, capacitors, thyristors and inductors

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**ABS1152 / 3559 Series  
Push-Pull Connectors**

- Lightweight and robust thermoplastic
- Modular design, compatible with the whole range of EN4165 / SIM modules
- SIM modules in overmold technology offering excellent sealing performances (IP66)
- Feed-thru and 3-pin quick install versions
- Push-Pull quick lock system
- Operating temperature: -55°C to +175°C

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**CapLock / PlugLock**

- CapLock allows to lock a cap onto a EN3645 / 38999 Power receptacle which may be under load
- PlugLock allows to lock a 38999 Power plug onto a receptacle which may be under load

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**HPAC 2 or 3 Contacts Size 0**

- Innovative and easy-to-use locking system offering a perfect connection security
- 2 mixed arrangements available:
  - 3 cts #0 + 4 Interlock #20
  - 2 cts #0 + 2 Interlock #20
- Contacts #0: 150 or 240 Amps versions
- Quick connect, no tools needed (lever)
- Secured connection thanks to a CPA
- Overmolding suited for HVDC application
- Sealing IP67, shielding 360°
- Operating temperature: -65°C to +200°C
- Specifications according to EN4165

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**TVOP / RNJOP**

- Butt joint technology
- Fiber optic connector design with 38999 Series III shell
- Optimized insert for butt joint termin diameter 2.5 mm
- Designed for Multimode and Singlemode PC or APC version for high return loss
- Up to 8 channels

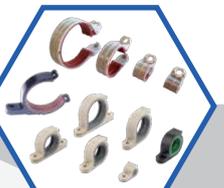
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**Air-Tight Lightweight Hermetic**

- 35% weight savings across all shell sizes vs. standard stainless steel hermetic
- Full hermetic 10x-7 sealing using our epoxy technology
- Operating temperature: -65°C to +200°C

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**Composite Cable Clamps**

- Clamps meet or exceed aerospace standards, such as AS21919, M23190, MIL-DTL-85052, RTCA DO-160 and ABS1916
- Pre-mount and pre-lock clamp styles available, making for easier installation and removal, with additional quick turn custom solutions
- Supporting multiple grommet sizes and materials to suit wire, hydraulic and fuel system needs

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**SIM Module 42R26 Reversed Gender**

- Very high contact density: 42 contacts size 26
- Reversed gender offering enhanced pin protection
- Module to be used with the whole range of EN4165 / SIM connectors

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**EN3645**

- Similar to MIL-DTL-38999 Series III with additional requirements
- Higher lightning strike resistance
- Higher fluid resistance

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**ASR Connectors**

- Snap in locking system
- Lightweight composite
- Shielding (Bright Nickel)
- Sealing
- D-shape polarization and 3 keying positions
- Available for cable-to-cable or cable-to-PCB applications
- Standard crimp contacts (size 22 / 20)
- Operating temperature: -55°C to +175°C

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**UVAC**

- Based on D-Sub design: Standard and High density, Combo-D
- Hermeticity realized with resin approved by ESA and NASA
- Outgassing materials according to ESA and NASA requirements
- Helium leak Rate <5.10-9 mbar.l.s-1
- 100% tested before shipment (hermeticity and electrical)

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**Bayonet HV38999**

- Insert design optimized for >1000Vac operation partial discharge free at altitude
- Designed to meet applicable MIL-DTL-38999 mechanical and environmental performance
- Safety interlock circuitry utilizes last mate, first break sequence

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**1119 Splices**

- Compact, thin and easy to use
- Suited in a cable harness to easily and quickly repair a damaged wire
- Overmold technology offering excellent sealing performances
- In Line or Component carrier (fuse, resistor, diode) versions
- From 1 to 4 contacts (size 20 / 16)
- Use of EN3155 standard socket contacts
- Operating temperature: -55°C to +175°C

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**Voltarius High Power**

- Voltage rating: 1000 VDC at sea level
- Sealing: IP67 (unmated) & IP69K (mated)
- Temperature range: -40°C to +125°C
- Single-pole or multi-pole arrangements
- Full 360° shielding with integral shield termination
- Safety interlock circuitry utilizes last mate, first break sequence
- Busbar and threaded termination standard with the receptacle
- Plugs available in straight or right-angle orientations

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**Ground Blocks**

- Light weight, high density grounding solution
- Wired connections are environmentally-sealed, providing protection from moisture, spray and debris
- Plastic retention clip - made with VICTREX® PEEK Polymer: simplifies construction, uses 1 plastic piece vs 6 individual metal pieces

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**Quick Release Connector**

- Based on EN4165 / SIM standard
- Space saving / High density
- Best-in-class dielectric and sealing performances
- Quick disconnection
- Using standard EN4165 modules
- For Power & Signal contacts

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**Microphone Plugs & Jacks**

- Amphenol NEXUS Technologies is a leading manufacturer of connectors used in communication devices
- These products are designed and developed to be superior in quality that adheres to industrial standards

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**M85049 DustCaps**

- Protect interface and provide sealing when connector is not in use.

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**EN4165 / SIM MPO**

- Custom design SIM module accommodating MT ferrule-type based & standard MTP / MPO multi-fiber connectors
- MTP / MPO directly plugs / locks into the SIM module; easily removed for repair
- From 12 to 48 fibers; Multi-mode and Single mode type

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Click on to learn more.



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### Junction Modules (Series I, Series II)

- Qualified to MIL-T-81714
- Full SAE-AS81714 range of configurations
- Series I and II accommodate 12-26 AWG wires

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### EN4165 / SIM Luxcis

- Module as per EN4830 fitted with 6 standard ARINC 801 / EN4639 contacts (Multi-mode and Single mode)
- Guiding pins for alignment prior to mating into sleeve holder
- Only 1 insert, gender is defined by which side is fitted with sleeve holder; Interfacial, extended sealing grommet

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### 250A Right Angle Voltarius

- Right angle single, double, & triple pole aluminum shells available with typical military / aerospace finishes
- Insulator design optimized for >1000Vac operation partial discharge free at altitude
- 250 A Rated contact compatible with 6 awg to 2/0 awg
- Last mate, first break interlock modules available with ethernet configuration

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### Apex - ARINC 810

- High density, rectangular, modular connection system designed for use in avionics systems conforming to the EN4644 technical specification
- Single piece plug and receptacle housings with high-grade aluminum construction
- Housings are available in panel, rack or cable-to-cable mounting styles
- Housings accommodate a wide range of modules

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### ABS1019 / 3357 Series Push-Pull Connectors

- Lightweight and robust thermoplastic
- 3-pin quick install or PCB versions
- Push-Pull quick lock system
- Operating temperature: -55°C to +175°C

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### Series Five

- The world's most advanced connector
- Up to 20% smaller than 38999 Series III
- Increased voltage capability
- High vibration resistance

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### M85049 Backshells

- Provide strain relief, environmental protection and EMI / RFI shielding at the termination area of virtually any circular connector

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### EN4165 / SIM Elio

- Modules as per EN4701 fitted with 4 hermetic contacts (EN 4531-101)
- Standard 2.5mm ST type ferrule interface allows the use of standard termination procedures & readily available tools
- Simple access to optical termini facilitates cleaning
- Options available for single mode & multi-mode fiber
- Full-proof option allows the use of the terminus in a connector without backshell
- Supports tight or loose structured cable

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### Engine Backshells

- Ideal for high vibration and shock applications including engine controls
- Meets Aerospace Defense Security (ADS) Standard, ESC 75, 76, 77
- Electron beam welding technology allows for high integrity joints with minimal distortion

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### EN4165 / SIM Monomodule Connectors

- Rectangular, Modular, Push-Pull
- Shielding, sealing, polarization and 7 coupling versions (mechanical and color)
- Lightweight and robust composite
- Suited for the whole range of EN4165 / SIM modules
- Modules in overmold technology, fitted with standard crimp or PCB contacts (size 23/22/20/16/12/8), as well as RF, Quadax, Coax contacts, Fiber optics or RJ45
- Operating temperature: -55°C to +175°C

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### Telephone Plugs & Jacks

- Amphenol NEXUS Technologies is a leading manufacturer of phone jacks and plugs used in various industries for multiple applications
- We develop and design our products using our cutting-edge equipment and technology, enabling us to bring you innovative creations that can improve your projects and processes

Amphenol Nexus Technologies



### Adhesive Solutions

- Adhesive cable and pipe supports to mount wires where drilling is not allowed
- Ensures a strong and secure hold for wires, and are resistant to moisture, heat, vibration and chemicals
- Offering adhesive anchor supports, standoffs for elevation or clamps to immediately secure wires

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### 1765 Modules Series

- Derived from 1750 Series
- Components carrier modules that can be fitted with diodes, resistors, fuses...
- To be used in a cable harness to easily insert a component
- Sealing (IP66 / IP 68 & IP69K)
- Space and weight saving
- Mounting on composite or metallic tracks

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### 2M805

- Micro-miniature circular connector
- Tri-Start fast coupling
- Dedicated to harsh environment applications
- More than 45 contacts arrangements, from 1 to 130 contacts
- Excellent EMI shielding

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### Velok

- Rectangular connector designed for low and medium power applications
- Spring-loaded latch makes mating / unmating simple with a pushing to lock / unlock connection
- Push lock provides convenient single-handed and tool-less mating

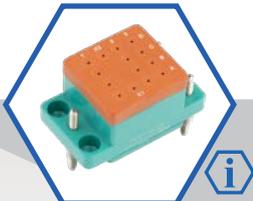
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### Socket for Light

- Adaptation device between a lighting device and a cable harness
- Lightweight composite
- 18 contacts size 22 (EN3155)
- Fire / Smoke conform to ABD0031 and FAR 25853

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### Relay Sockets

- Qualified to MIL-PRF-12883 specifications
- Amp range between 2 and 25
- Quick-Mount Relay Sockets snap into standard aircraft panel cutouts eliminating the need of mounting hardware

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### Press Fit 22/23F OPLF SIM Module

- Overmolded Plated Lead Frame (OPLF) technology
- Press Fit contacts: quick mount on PCB
- Alternative to modules fitted with machined angled PCB contacts
- Suited for automatic assembly on PCB

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### 62/602GB

- PT Series and 62GB Series offered under 26482 Series I specifications, with temperature range from -55°C to 125°C
- 602GB Series offered under 26482 Series II specifications, with temperature range from -65°C to 200°C
- Shell style for both series available: Square flange, Jam Nut or Solder Mount, also available as bespoke design flange
- Contact terminations available: Eyelet, Solder bucket, other non-standard pin termination also available at request

Amphenol Martec



### SIM Module Size 04 Power

- For power transmission up to 125 Amp
- For crimped contacts size 04, AWG 04
- Suited for AS39029 or Temper Grip contacts
- No tool required to insert contact inside the module
- Compliant with EN4165 specifications and beyond
- Operating temperature: -65°C to +200°C

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### SIM Splice Series

- Space efficient & modular design
- Compatible with the whole range of EN4165 / SIM modules
- SIM modules in overmolding technology
- Fire / Smoke / Toxicity conform to ABD0031 and FAR 25853

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### ABS 1547

- RJ45 & USB human machine interface
- Bayonet multipin EN3646 output
- Cockpit interfaces

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### TSN Connectors - 6 Contacts

- Receptacle 6 pin contacts size 22, for 90° angled PCB + Plug 6 socket contacts (according to EN3155-003)
- Low form factor: weight and place savings
- Overmolded technology: excellent sealing performances
- Push-Pull locking system: no tools required
- Operating temperature: -55°C to +175°C

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### OmniLite

- 3 profile options straight, 45° or 90° per SKU per shell size
- Octagonal locking arm system provides superior strength
- Up to 50% weight savings over metal alternatives
- Separate strain relief & EMI / RFI shielding mechanisms

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Click on to learn more.



## + Advanced Air Mobility



**Composite HV38999**

- Insert design optimized for >1000Vac operation partial discharge free at altitude
- Designed to meet applicable MIL-DTL-38999 mechanical and environmental performance
- Safety interlock circuitry utilizes last mate, first break sequence

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**Rigid & Flex Bus Bars & Distribution Bars**

- Aluminum bars
- Available in various standard sizes and shapes (custom design)
- High mechanical resistance
- Up to 200 Amp
- Operating temperature: -55°C to +150°C

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**Nimbus**

- Up to 30% lighter than Stainless Steel
- Proprietary pin and socket contact
- Receptacles derived from MIL-DTL-38999 Series III (NON-QPL)
- Solder cup contacts available
- Coupling method – Anti vibration Tri Start thread
- Box mount and bulkhead mount available
- Operating temperature: -55°C to 125°C
- Hermetically sealed receptacle ensures complete component protection

Amphenol Martec



**HPAC 2 or 3 Contacts Size 0**

- Innovative and easy-to-use locking system offering a perfect connection security
- 2 mixed arrangements available:
  - 3 cts #0 + 4 Interlock #20
  - 2 cts #0 + 2 Interlock #20
- Contacts #0: 150 or 240 Amps versions
- Quick connect, no tools needed (lever)
- Secured connection thanks to a CPA
- Overmolding suited for HVDC application
- Sealing IP67, shielding 360°
- Operating temperature: -65°C to +200°C
- Specifications according to EN4165

Amphenol Air LB France



**EN4165 / SIM Connectors & Modules**

- Space efficient & modular design offering versatility of mixing & matching
- Shielding, sealing, polarization and 36 keying positions
- Shells in metal or composite versions, in 1, 2 or 4 bays
- Modules in overmold technology, fitted with standard crimp or PCB contacts (size 23/22/20/16/12/8), as well as RF, Quadax, Coax contacts, Fiber optics or RJ45
- Operating temperature: -55°C to +175°C

Amphenol Air LB France



**D38999**

- Offer the highest performance capabilities for both general duty and severe environment applications
- Hermetic connectors available in a wide variety of Mil-Spec configurations

Amphenol Martec



**Battery Energy Storage System - Pack Interconnect**

- Lightweight, compactness, optimized heat management
- HV application, designed to avoid partial discharges in altitude
- Multiphysics simulation (inductance, thermal, skin effect, PDIV...)
- Integrated shielding system (in option)

Amphenol Auxel



**Adhesive Solutions**

- Adhesive cable and pipe supports to mount wires where drilling is not allowed
- Ensures a strong and secure hold for wires, and are resistant to moisture, heat, vibration and chemicals
- Offering adhesive anchor supports, standoffs for elevation or clamps to immediately secure wires

Amphenol PCD



**2M801**

- Micro-miniature circular connector
- Heavy Dual-Start ACME thread
- More than 40 contacts arrangements, from 1 to 130 contacts
- Two plug styles: Ratcheting and Anti-Decoupling

Amphenol Socapex



**Voltarius High Power**

- Voltage rating: 1000 VDC at sea level
- Sealing: IP67 (unmated) & IP69K (mated)
- Temperature range: -40°C to +125°C
- Single-pole or multi-pole arrangements
- Full 360° shielding with integral shield termination
- Safety interlock circuitry utilizes last mate, first break sequence
- Busbar and threaded termination standard with the receptacle
- Plugs available in straight or right-angle orientations

Amphenol Commercial Air Division



**VG96929 / GCE Series**

- Single pole bayonet locking connector for High Power at Low Voltage (Up to 900A / 50VAC / 75VDC)
- Qualified to VG96929, RoHS & REACH Version J
- Environmental resistant: IPX8 (1bar/16h)
- Operating temperature: -55°C to +150°C
- Contact sizes for 25mm<sup>2</sup> to 240mm<sup>2</sup>

Amphenol Air LB Germany



**High Voltage Jumper**

- Simplified push / pull connector design prioritizing size and weight reductions
- Design scalable for application specific voltage and current
- Lightweight composite body & titanium firewall configurations available
- Overmolded plug assembly optimized for high voltage

Amphenol Commercial Air Division

Click on to learn more.



# **+** Advanced Air Mobility

APPLICATIONS



### **SIM Module Size 04 Power**

- For power transmission up to 125 Amp
- For crimped contacts size 04, AWG 04
- Suited for AS39029 or Temper Grip contacts
- No tool required to insert contact inside the module
- Compliant with EN4165 specifications and beyond
- Operating temperature: -65°C to +200°C

Amphenol Air LB France



### **HV38999**

- Insert design optimized for >1000Vdc operation partial discharge free at altitude
- Designed to meet applicable MIL-DTL-38999 mechanical and environmental performance
- Safety interlock circuitry utilizes last mate, first break sequence
- Utilizes existing AS39029 type silver plated power contacts with crimp, busbar and threaded termination options

Amphenol Commercial Air Division  
Amphenol Aerospace Operations



### **Composite Cable Clamps**

- Clamps meet or exceed aerospace standards, such as AS21919, M23190, MIL-DTL-85052, RTCA DO-160 and ABS1916
- Pre-mount and pre-lock clamp styles available, making for easier installation and removal, with additional quick turn custom solutions
- Supporting multiple grommet sizes and materials to suit wire, hydraulic and fuel system needs

Amphenol Air LB France  
Amphenol PCD



### **USB Amplifiers**

- USB2 amplifier based on EN3645 / 38999 - Shell size 15
- For applications where the USB2 cable length must be longer than 4.8 m which is the limit of USB2 specification
- Extension cord of 4.8 m (15.7 ft), 4 time stackable in order to reach 19.2 m (63ft)
- Self-powered
- USB3, USB3 Type C & HDMI amplifiers in development

Amphenol Socapex



### **MMA**

- Blind Mate Low Mating Force Modular Connector
- Based on ARINC 600 standard
- Composite shells and backshells available

Amphenol Canada Corporation



### **Micro HDAS**

- High density: 1.27mm [.050] pitch
- Smaller & lighter rugged PCB connector
- Now available with SMT contacts to save space on boards
- Meet & exceed MIL-DTL-55302G & 83513G

Amphenol Socapex



### **Scorpion**

- Reduce the volume allocated to the connector
- Reduce the weight
- Increase the density of the system with a million arrangement without any NRE
- Most versatile modular power / signal connectors on the markets
- Standard profile connectors of 14,60 mm height

Amphenol Positronic Industries



### **Velok**

- Rectangular connector designed for low and medium power applications
- Spring-loaded latch makes mating / unmating simple with a pushing to lock / unlock connection
- Push lock provides convenient single-handed and tool-less mating

Amphenol PCD



### **RNJ Rack & Panel**

- Realignment capabilities & floatability on 3 axis
- Quick and easy connection, 100% scoop proof design
- Available in reduced flange, low profile, fiber optics and power versions

Amphenol Socapex



### **Relay Sockets**

- Qualified to MIL-PRF-12883 specifications
- Amp range between 2 and 25
- Quick-Mount Relay Sockets snap into standard aircraft panel cutouts eliminating the need of mounting hardware

Amphenol PCD



### **HDAS**

- High density: 1,905 mm [.075] staggered grid
- 12 sizes from 11 to 253 contacts on 3, 4 or 5 rows
- Hybrid possibilities: RF and / or power contact
- Now available with crimp contacts to create harnesses
- Robust technology designed for severe environments

Amphenol Socapex



### **Luminus**

- Bayonet and push-pull style circular connectors supporting signal
- Interfacial and Triple-Barrier seal for IP67 sealing
- Multiple keying positions for proper connectivity with blind-mate connection for easy assembly

Amphenol PCD

Click on to learn more.



## + Military Aerospace



**Centaur**

- Fiber speeds with copper durability (up to 56 GBps)
- Connect to several protocols from one connector (HDMI, USB, QSFP, RJ45...)
- Is plug and play (unlike competition - requires insert / removal tool)
- Available as connector, cable assembly, PC tail...

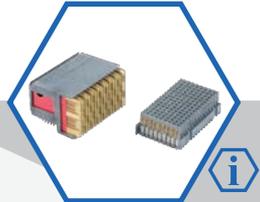
Amphenol Military High Speed



**MMA**

- Blind Mate Low Mating Force Modular Connector
- Based on ARINC 600 standard
- Composite shells and backshells available

Amphenol Canada Corporation



**R-VPX**

- Up to 32 Gb/s performance
- Ruggedized VITA 46 connectors
- Fully intermountable & intermateable to existing VITA 46 connectors
- Modular COTS light weight connector system

Amphenol Socapex  
Amphenol Aerospace Operations



**SIM Custom Plates**

- Custom design derived from EN4165 standard, perfectly suited to comply with space, shape or environmental constraints
- Also suited for the connectorization of boxes or structures aiming to save parts and simplify the supply chain
- Highly modular design offering versatility of mixing & matching
- Suited with the whole range of EN4165 / SIM modules

Amphenol Air LB France



**HDAS**

- High density: 1,905 mm [.075] staggered grid
- 12 sizes from 11 to 253 contacts on 3, 4 or 5 rows
- Hybrid possibilities: RF and / or power contact
- Now available with crimp contacts to create harnesses
- Robust technology designed for severe environments

Amphenol Socapex



**1119 Splices**

- Compact, thin and easy to use
- Suited in a cable harness to easily and quickly repair a damaged wire
- Overmold technology offering excellent sealing performances
- In Line or Component carrier (fuse, resistor, diode) versions
- From 1 to 4 contacts (size 20 / 16)
- Use of EN3155 standard socket contacts
- Operating temperature: -55°C to +175°C

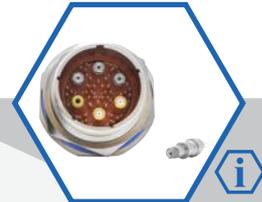
Amphenol Air LB France



**NGCON**

- In accordance to MIL-PRF-64266
- Precision alignment and components provide excellent optical performances
- Supports APC termini for RF-over-fiber & applications requiring low back reflection
- Removable ASR facilitates termini cleaning and maintenance
- O-ring seals on each termini... no rear grommet. Cable independent
- Positive engagement release tool minimizes potential damage to fiber
- HD: up to 4 fiber in size 11 & 36 in size 23

Amphenol Fiber Systems International



**FiberQuad Ruggedized Quadrax Contact**

- Speeds up to 10.3 GBps
- Operating temperature: -40°C to +85°C
- Transmit or receive
- Supports many wavelengths, modes and protocols

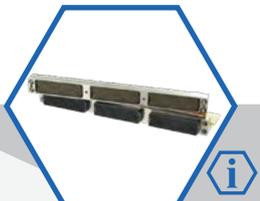
Amphenol Military High Speed



**Series Five**

- Up to 20% smaller and 50% lighter vs. D38999 series 3
- High voltage capabilities
- Utilized D38999 qualified insulator and EMI spring

Amphenol Aerospace Operations



**SMASH**

- High density, robust and modular PCB connector
- High-pin count: up to 450 contacts
- Robust technology designed for severe environments

Amphenol Socapex



**EN4165 / SIM RJ45**

- Compatible with the SIM / EN4165 connector shells
- RJ45 - 10 Gb
- Cat6a (TIA 568C2)
- Ea class (ISO 11801)
- Versions cable-to-cable and cable-to-PCB

Amphenol Air LB France



**R398 Series**

- Compact D-Sub variant
- Features size 23 contacts for compact arrangements
- Supports combo arrangements
- Rugged mating
- High-temperature capable

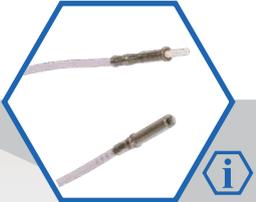
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Click on to learn more.



# **+** Military Aerospace

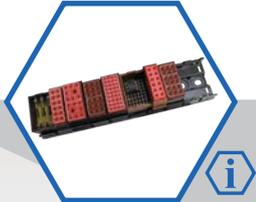
APPLICATIONS



### LuxBeam

- Expanded Beam Termini EN4869
- Beam section expanded 140 times
- Contactless optical connection
- For size 16 standard contact cavity for Series III of MIL-DTL-38999 / EN3645 / EN4165

Amphenol Socapex



### 1750 Distribution Junction Modules

- Cable harness optimization: cable linear meters, weight and space saved
- Compact design and very high contact density for low space applications
- Overmold Technology offering excellent sealing performances (IP66)
- Clip mounting and versatility of mixing on metallic or composite rails
- Use of EN3155 standard socket contacts
- Operating temperature: -55°C to +175°C

Amphenol Air LB France



### 3U VPX 48-Channel Rugged Ethernet Switch

- Up to 48 Channels of 10GbE
- Operating temperature: -40°C to +85°C
- Configurable ports between 10GBase-T, 10GBase-KR
- Ports work at 100Mb, 1G and 10G

Amphenol Military High Speed



### MilTech® Cable Assemblies - MilTech® Light and MilTech® Rugged (armor)

- Hermetically sealed, flexible cable assemblies with superior phase stability
- Fully vapor sealed, optimized and qualified for commercial and military avionics applications
- Available in a variety of diameters from 4,3 mm to 12,2 mm

Amphenol Times Microwave Systems



### Compact Power Distribution Busbar System

- Lightweight, compactness, optimized heat management
- Flexible interfaces, reduced mechanical stress
- HV application, designed to avoid partial discharges in altitude

Amphenol Auxel



### Circular Filter Connectors

- Provide critical protection for sensitive systems
- Utilized on all standard and Mil-spec circular connectors
- Durable, versatile EMI and RFI protection

Amphenol Aerospace Operations



### M29505/4 & 5 Termini

- Qualified to MIL-STD-29504 / 04 & / 05 Rev. D
- Precision fiber optic ceramic ferrules
- Accurate ferrule / split sleeve alignment system
- Only qualified Single Mode Supplier
- Low insertion loss
- Widely available

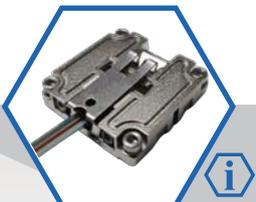
Amphenol Fiber Systems International



### MicroPlus

- Alternate ultra compact solderless format meeting M83513 performance
- Mezzanine or stacker options available
- NanoPlus M32139 alternate in development

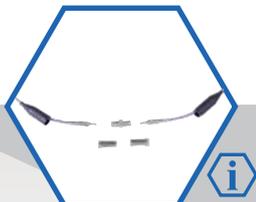
Amphenol Canada Corporation



### LEAP OBT 12TX+12RX 192 Gbps

- The world's fastest and smallest 12TRX rugged onboard optical module
- 12x16Gbps NRZ
- Rugged, MIL-STD-883 shock & vibrate qualified
- Works from -40°C to +85°C
- Excellent signal integrity, saves 10 dB link Budget
- No pigtail, ease to use, replace and escalate

Amphenol Active Optics Products



### PROMI / REMI

- In line miniature optical adaptor and miniature optical receptacle
- ARINC 801 standard termini
- Eases installation & maintenance of big FO harnesses into the aircrafts
- Available from stock from our distribution network

Amphenol Socapex



### SP MAX

- Precision machined shell, available in three lengths; options provide EMI / RFI protection
- Combines multiple contact sizes into a single connector; includes #12, #16, #18 & #22
- Performance compatibility to EN4165, ESA / ESCC-3401 and DO-160; low outgassing per ASTM E595
- Quick Lock System (QLS) with audible "click" to reliably mate connectors

Amphenol Positronic Industries



### EN4165 / SIM Connectors & Modules

- Space efficient & modular design offering versatility of mixing & matching
- Shielding, sealing, polarization and 36 keying positions
- Shells in metal or composite versions, in 1, 2 or 4 bays
- Modules in overmold technology, fitted with standard crimp or PCB contacts (size 23/22/20/16/12/8), as well as RF, QuadraX, Coax contacts, Fiber optics or RJ45
- Operating temperature: -55°C to +175°C

Amphenol Air LB France

Click on to learn more.



## + Military Aerospace



### USB Amplifiers

- USB2 amplifier based on EN3645 / 38999 - Shell size 15
- For applications where the USB2 cable length must be longer than 4.8 m which is the limit of USB2 specification
- Extension cord of 4.8 m (15,7 ft), 4 time stackable in order to reach 19.2 m (63ft)
- Self-powered
- USB3, USB3 Type C & HDMI amplifiers in development

Amphenol Socapex



### MACH-D

- Aluminum or Stainless Steel rugged machined shell
- QPL listed to MIL-M24308, low outgassing per ASTM E595
- Interchangeable with D-Sub connectors - Options include EMI grounding strips, keying, IP67, alternative materials and finishes, high and mixed density
- Twinax and HV contacts available
- Standard, High and Combo densities available
- NEW! Just passed 1500g shock!

Amphenol Positronic Industries



### SIM Module 30R23 Reversed Gender

- Module to be used with the whole range of EN4165 / SIM connectors
- High contact density: 30 contacts size 23
- Reversed gender (male module fitted with socket contacts, female module fitted with pin contacts) offering a high contact robustness

Amphenol Air LB France



### VG96912 / SJT Series

- Robust bayonet locking scoop proof connector for signal, data and power transmission (max. 13A current rating, up to 10 Gbit/s)
- Qualified to VG96912, RoHS & REACH Version J
- 2 - 128 contacts per connector, AWG 22D, 20, 16 and 12, crimp, PCB and wire wrap
- EMI protected, shock & vibration proof, IP68 (0,2bar/48h)
- Operating temperature: -65°C to +175°C

Amphenol Air LB Germany



### Multiport Connectors & Mini-Multiport

- Lightweight aluminum construction
- Advanced Reach / ROHS compliant conductive platings and well shielded structure
- Allows for blind mating connections for ease of installation

Amphenol Times Microwave Systems



### THDM

- 5 configurations: 1, 2, 3, 4 & 8 MT ferrules for up to 192 fiber channels
- Ratcheting coupling nut for high vibration environments (derived from M28876)
- IP 68 sealing
- Removable and replaceable MT ferrules
- Expanded beam capable
- Operating temperature: -54°C to +65°C
- 500 cycles mating durability
- Vibrations per MIL-STD-1344 method 2005
- Available in Cd & Ni plated aluminum, stainless steel, PTFE & black anodize

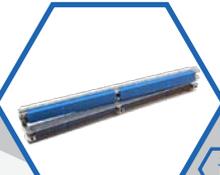
Amphenol Fiber Systems International



### Terrapin - USB-C

- Ruggedized standard USB-C cable
- Miniature
- Quick Release
- Military / Aerospace connector

Amphenol Limited Ltd



### SIAL

- High-Pin count: up to 392 contacts
- Hybrid possibilities mixing signal and RF
- Contact technology allowing lateral displacement  $\pm 0,25$  mm
- Robust technology designed for severe environments

Amphenol Socapex



### TVuCom Multipin USB3

- Based on EN3645 / 38999 - Shell size 11
- Hotplug USB3 with multipin insert using crimp screw machined contacts
- 4 pairs totally insulated throughout the connector - No cross-talk between the four pairs
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant

Amphenol Socapex



### VG95328 / PT Series

- Miniature bayonet locking connector for signal and power transmission (max. 13A/40A current rating)
- Qualified to VG95328, RoHS & REACH Version J
- 2 - 61 contacts per connector (AWG 16 & 20 crimp, PCB or Wire wrap)
- EMI protected, shock & vibration proof, IP68 (0,2 Bar/ 48h)
- Operating temperature: -55°C to +125°C

Amphenol Air LB Germany



### QEPT 4TX+4RX 100 Gbps

- The world's first fiber removable and hot-pluggable 4TRX onboard optical module
- 4x25Gbps NRZ
- Rugged, MIL-STD-883 shock & vibrate qualified
- Works from -40°C to +85°C
- Excellent signal integrity, saves 10 dB link Budget
- Hot-pluggable and pigtail-free, easy maintenance, quick replacement and simplified scalability

Amphenol Active Optics Products



### UVAC

- Based on D-Sub design: Standard and High density, Combo-D
- Hermeticity realized with resin approved by ESA and NASA
- Outgassing materials according to ESA and NASA requirements
- Helium leak Rate <5.10-9 mbar.l.s-1
- 100% tested before shipment (hermeticity and electrical)

Amphenol Positronic Industries

Click on to learn more.



# **+** Military Aerospace

APPLICATIONS



**TACBeam**

- Hermaphroditic coupling
- IP 68 sealing
- Expanded Beam Technology highly resistant to contamination
- 1,2,4,8 and 12 fiber in one compact shell
- Ideal for high frequency mating applications
- MIL-DTL-83526 and VG qualified
- 3000 cycles mating durability
- Available in Cd & Ni plated aluminum, stainless steel, PTFE & black anodize

Amphenol Fiber Systems International



**Scorpion**

- Reduce the volume allocated to the connector
- Reduce the weight
- Increase the density of the system with a million arrangement without any NRE
- Most versatile modular power / signal connectors on the markets
- Standard profile connectors of 14,60 mm height

Amphenol Positronic Industries



**VG95234 / GCB-B Series**

- Robust bayonet locking connector for signal and power transmission (max. 245A current rating)
- Qualified to VG95234, RoHS & REACH Version J
- 2 - 61 contacts per connector and a wide range of designs, styles, backshells, contacts, and pin configurations
- EMI protected, shock & vibration proof, IP 67 (1bar/16h)
- Operating temperature: -55°C to +125°C

Amphenol Air LB Germany



**TVCom 10 Gb Ethernet**

- Based on EN3645 / 38999 - Shell size 11
- 10 Gbit Ethernet: Cat.6A Ethernet Class Ea per ISO / IEC 11801
- Crimp screw machined contacts
- 4 pairs totally insulated throughout the connector - No cross-talk between the four pairs
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant

Amphenol Socapex



**RNJ Rack & Panel**

- Realignment capabilities & floatability on 3 axis
- Quick and easy connection, 100% scoop proof design
- Available in reduced flange, low profile, fiber optics and power versions

Amphenol Socapex



**ACE-L**

- Positive lock for ultra high vibration environments
- IP 68 Sealing
- Angle polish capable for sensing applications
- Small form factor
- Wide operating temperature range
- Multiple keys
- Pull-Proof design

Amphenol Fiber Systems International



**SCFF**

**1TX+1RX 25 Gbps**

- SCFF (Small Cubic Form Factor) optical module supporting 10G or 25G NRZ data rates
- 1x25Gbps NRZ
- Rugged, MIL-STD-883 shock & vibrate qualified
- Works from -40°C to +85°C
- Excellent signal integrity, saves 10 dB link Budget
- No pigtail, off-the-shelf LC connectors

Amphenol Active Optics Products



**387TV**

- Smallest 38999 size on the market (size 7)
- High speed, multipin and fiber optic versions
- Where size & weight are critical
- Several contacts terminations available

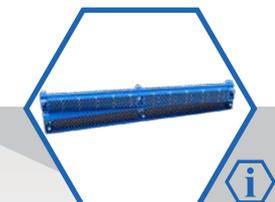
Amphenol Socapex



**TFlex 402 & 405 with Size 12 Contacts & BMA**

- Lighter-weight, flexible alternative to semi-rigid coaxial cable assemblies
- Its durable external jacket provides excellent protection in corrosive environments
- Its flexible construction eliminates the need for hand or precision machine bending

Amphenol Times Microwave Systems



**SIHD**

- High-Pin count: up to 256 contacts
- Monolithic connector for reduced weight
- Contact technology allowing lateral displacement ± 0,25 mm
- Robust technology designed for severe environments

Amphenol Socapex



**A Series & E Series Backshells**

- Aluminum machined shell
- Fully customizable
- Options include jackscrews or slide lock and multiple grounding points. Available with alternative material and finish options
- Banded Entry for large cable bundles
- NEW! One-hand latch aluminum backshell
- NEW! Angular aluminum backshell in development

Amphenol Positronic Industries



**EN4165 / SIM MPO**

- Custom design SIM module accommodating MT ferrule-type based & standard MTP / MPO multi-fiber connectors
- MTP / MPO directly plugs / locks into the SIM module; easily removed for repair
- From 12 to 48 fibers; Multi-mode and Single mode type

Amphenol Air LB France

Click on to learn more.

# APPLICATIONS WE SUPPORT



## + Military Aerospace



**Pegasus**

- EMI shielding from ambient noise transients
- Bayonet and push-pull style circular connectors supporting signal
- Interfacial and Triple-Barrier Seal for IP67 sealing
- Multiple keying positions for proper connectivity with blind-mate connection for easy assembly

Amphenol PCD



**127 / HE8**

- HE801 - HE804 - HE807 standardized connectors
- Fully compatible with all the standard HE8 connectors on the market
- Proven, reliable and robust connectors
- Hybrid possibilities: RF and / or power contact

Amphenol Socapex



**VG96934 / GCC Series**

- Durable 10 pin circular bayonet locking connector for audio transmission in harsh conditions
- VG96934 approval in progress, RoHS & REACH Version J
- Hard gold-plated spring contacts: excellent contact resistance and efficient self-cleaning
- 5000 mating cycles reverse bayonet locking

Amphenol Air LB Germany



**Rugged USB3 Memory Keys**

- Memory: 32, 64, 128 & 256Gb. Up to 1T on demand
- MTBF: >3 000 000 hours
- USB3.2 Gen1 max transfer rate: 5 Gb/s
- Compatible with USB3FTV or USBFTV receptacles
- Based on EN3645 / 38999 - Size 15 shell

Amphenol Socapex



**ARINC 801**

- Butt joint technology
- Fiber optic connector design with 38999 Series III shell with insert for ARINC 801 optical termini
- Design for Multimode and Singlemode PC or APC version for high return loss
- Up to 32 fibers

Amphenol Socapex



**Stingray 7 (Panel Mount)**

- Magnetic
- Blindmate
- 360 Degree
- 7 contacts
- Equipment mount interconnect

Amphenol Limited Ltd



**MIL-HD2**

- Next generation VITA and SOSA-aligned connector series
- Designed to achieve 56G PAM4 data rate requirements with higher density

Amphenol Aerospace Operations



**RF IMA Subsystems**

- High Performance Switch Filter Subsystems - 0.5-18 GHz switch filter banks used in high-performance applications
- Integrated Products
- Hermetic Combine Filters
- Multiplexing
- Hybrid-Ready Filters: we optimize the design and inputs for compatibility with microelectronic assemblies

Amphenol Q Microwave



**VG95319-1016 / TV Series**

- Robust thread locking scoop proof connector for signal, data and power transmission (max. 100A current rating, Up to 10 Gbit/s)
- Qualified to VG95319-1016, RoHS & REACH Version J
- 1 - 187 cts per connector, AWG 23, 22, 20, 16, 12, 10, 8, 4, crimp, PCB, coax, Twinax, Quadax, Octomax FO termini, MPO
- EMI protected, shock & vibration proof, IP 67
- Operating temperature: -65°C to +175°C

Amphenol Air LB Germany



**SC39**

- Quick disconnect spring release connector derived from MIL-DTL-38999 Series III
- Standard shell sizes from 9 to 17 (larger sizes available upon requests)
- Easy connection & disconnection, 100% scoop-proof design
- Ruggedized product with a high resistance to shocks & vibrations

Amphenol Socapex



**Vita 87**

- Interates with legacy supplier's products
- High-reliability, high-density, ruggedized, harsh-environment MT connector in MIL-DTL-38999 connector packaging
- 3 levels of alignment provide for precision fiber-to-fiber interface and repeatability
- Supports physical contact MT (PC-MT) and expanded beam MT (EB-MT)
- Rear ferrule insert. /removal with std tools
- Houses up to 192 fibers within a compact size 15 shell with 4 MTs
- Compatible with D39888 Series III access.

Amphenol Fiber Systems International



**2M804**

- Micro-miniature circular connector
- Push-pull / Quick-Disconnect coupling
- Excellent EMI shielding
- More than 35 contacts arrangements, from 1 to 85 contacts

Amphenol Socapex

Click on to learn more.

# **Military Aerospace**

**NEW**



**Micro HDAS**

- High density: 1.27mm [.050] pitch
- Smaller & lighter rugged PCB connector
- Now available with SMT contacts to save space on boards
- Meet & exceed MIL-DTL-55302G & 83513G

Amphenol Socapex



**RF Filters**

- Q Microwave's are categorized by topology (lumped element, combine, or ceramic resonator) and then again by filter function (bandpass, lowpass, or highpass)
- Custom (with your desired specifications) or standard parts numbers & specifications
- Integrated Filter Packaging
- Hi-Rel Product Line
- High Frequency LC Filters: up to 18 GHz
- Military-Grade Ceramic Filters
- Hermetic Combine Filters
- Multiplexing

Amphenol Q Microwave



**Terrapin**

- Miniature
- Quick Release
- Rugged
- Military / Aerospace connector

Amphenol Limited Ltd

**NEW**



**HPAS**

- 10 sized power contact, up to 60 A / contact
- From 2 to 8 power contacts
- Hybrid possibilities mixing signal and power
- Robust technology designed for severe environments

Amphenol Socapex



**250A Voltarius**

- Insulator design optimized for >1000Vac operation partial discharge free at altitude
- 250 A rated contact compatible with 6 awg to 2/0 awg
- Single, double & triple pole aluminum shells available with typical military / aerospace finishes
- Last mate, first break interlock modules available with ethernet configuration

Amphenol Commercial Air Division

**NEW**



**High Performance Enhanced Sealing**

- Air leakage < 1.10-6 cm<sup>3</sup>/s (under 1 bar differential pressure)
- Thermal shocks resistant: -55°C to +125°C, 500 cycles
- Available with Solder Cup & PCB contacts
- High speed contacts compatible

Amphenol Socapex



**Relay Sockets**

- Qualified to MIL-PRF-12883 specifications
- Amp range between 2 and 25
- Quick-Mount Relay Sockets snap into standard aircraft panel cutouts eliminating the need of mounting hardware

Amphenol PCD



**387 TV MT**

- Derived from MIL-DTL-38999 Series III
- The smallest circular connector which includes standard MT ferrule
- With 12 or 24 fibers the 387TV MT is the most dense circular connector
- With the STD MT ferrule in MM or SM, the process to assemble, cleaning or inspection is similar than a MPO

Amphenol Socapex



**LC Field**

- Sealed against fluids and dust (IP68)
- Shock, vibration proof
- Number of channels: 2
- Typical Insertion Loss: 0,5 dB in MM and SM
- Durability 500 mating / unmating cycles (changes for <0,2 dB)

Amphenol Socapex



**EN4165 / SIMTac 03**

- SIM module for 2 MTAC connectors with strain relief
- Protective shroud aiming recessed MT ferrule and "Finger-Touch-Proof"
- Boot for Round or Ribbon Fiber
- Multi-mode and Single mode

Amphenol Air LB France



**VG95319-1011 / BVG Series**

- Backshells suitable for VG95319-1016 / MIL-DTL-38999 Series III connectors are available in various designs
- Band connection, Braid clamping cone (SQ), for shrink-boots
- Straight or angled
- Zinc-tin, cadmium, stainless steel or Marine Bronze

Amphenol Air LB Germany

**NEW**



**MT Ferrule Optical Connector**

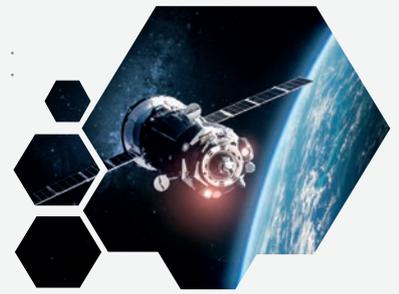
- Stainless steel connector fitted with MT ferrule
- Space saving: compact design
- Weight saving on harnesses: no metallic braid needed
- Ruggedized
- Versatile: 24 or 48 FO channels
- No adverse effect of EMI

Amphenol Air LB France

Click on  to learn more.

# APPLICATIONS WE SUPPORT

## + Space



### Air-Tight Lightweight Hermetic

- 35% weight savings across all shell sizes vs. standard stainless steel hermetic
- Full hermetic 10x-7 sealing using our epoxy technology
- Operating temperature: -65°C to +200°C

Amphenol Aerospace Operations



### R39 Series

- Rectangular space savings
- High density 127 position inserts or mixed inserts with power, RF or fiber optic available
- Uses same contacts as standard 38999
- Blind mate
- Rugged

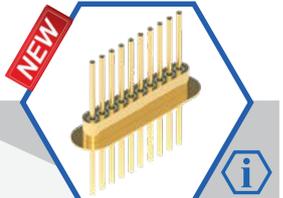
Amphenol Canada Corporation



### MT Ferrule Optical Connector

- Stainless steel connector fitted with MT ferrule
- Space saving: compact design
- Weight saving on harnesses: no metallic braid needed
- Ruggedized
- Versatile: 24 or 48 FO channels
- No adverse effect of EMI

Amphenol Air LB France



### Julius

- High-density pin count for high performance applications
- Superior hermetic sealing ensures complete component protection
- High-pressure tolerance for extreme air and sea environments
- High conductivity and low resistance enable high-capacity transfer
- Operating temperature: -55°C to +250°C with functionality up to 250°C

Amphenol Martec



### RNJ Cryo

- Operating temperature: -195°C to 175°C
- Realignment capabilities & floatability on 3 axis
- Quick and easy connection, 100% scoop proof design

Amphenol Socapex



### Space Grade D-SUBS / High Performance

- ESA qualified acc. to ESCC3401
- Brass shell and hardware
- Non-magnetic options
- Gold over copper plate
- QPL listed to MIL-DTL-24308 Class M and NASA - Goddard GSFC-311
- Non-outgassing
- Standard, High and Combo densities available
- PCB mount or crimp options

Amphenol Positronic Industries



### QEPT Space 4TX+4RX 100 Gbps

- The world's first fiber removable and hot-pluggable 4TRX onboard optical module
- 4x25Gbps NRZ RAD
- Rugged, MIL-STD-883 shock & vibrate qualified
- Works from -40°C to +85°C
- 1.1W of power consumption, 10 dB link Budget
- Radiation resistant

Amphenol Active Optics Products



### EN4165 / SIM Connectors & Modules

- Space efficient & modular design offering versatility of mixing & matching
- Shielding, sealing, polarization and 36 keying positions
- Shells in metal or composite versions, in 1, 2 or 4 bays
- Modules in overmold technology, fitted with standard crimp or PCB contacts (size 23/22/20/16/12/8), as well as RF, Quadrad, Coax contacts, Fiber optics or RJ45
- Operating temperature: -55°C to +175°C

Amphenol Air LB France



### InstaBend® Space Assemblies

- Flexible, can be bent very closely behind the connector
- Optimized for lowest attenuation
- Ultra stable performance with flexure

Amphenol Times Microwave Systems



### 317, 282 & 244 Pin Umbilical Connectors

- Dead face mechanism on receptacle fixed connector side
- Separation load by lanyard cable
- Ball locking mechanism
- Capable for Accommodating standard (61 Pin) & High density (128 Pin) insert layout & J7(97-2) insert layout

Amphenol Interconnect India



### Z Series Micro-D

- Micro-D qualified to MIL-DTL-83513
- Drop-in for NASA Level 1 qualified parts
- Ready for ESA qualification
- Precision stamped / twist pin options

Amphenol Canada Corporation



### UVAC

- Based on D-Sub design: Standard and High density, Combo-D
- Hermeticity realized with resin approved by ESA and NASA
- Outgassing materials according to ESA and NASA requirements
- Helium leak rate <5.10-9 mbar.l.s-1
- 100% tested before shipment (hermeticity and electrical)

Amphenol Positronic Industries

Click on to learn more.



# + Space

APPLICATIONS



**Micro-C**

- "Compression termination" technology
- Solderless installation
- Compact footprint and height while meeting M83513 performance
- Ready for high speed applications and ESA qualification
- Precision stamped / twist pin options available

Amphenol Canada Corporation



**PhaseTrack® 047**

- Standard phase-stable coax assembly features a proprietary fluorocarbon dielectric, TF4®, eliminating the PTFE change phase occurring around 19°C
- Has the same triple-shield construction used in our popular SF®, SFT®, SilverLine® and MilTech® cables
- Ideal for applications demanding stable phase over temperature

Amphenol Times Microwave Systems



**Laminated Busbar Demokits**

- Wide range of interconnect solutions
- Multiphysics simulation (inductance, thermal, skin effect, PDIV...)
- High temperature insulation systems (130°C - 150°C - 180°C)
- 100% of the manufactured products are tested and visually inspected

Amphenol Auxel



**SP MAX**

- Precision machined shell, available in three lengths; options provide EMI / RFI protection
- Combines multiple contact sizes into a single connector; includes #12, #16, #18 & #22
- Performance compatibility to EN4165, ESA / ESCC-3401 and DO-160; low outgassing per ASTM E595
- Quick Lock System (QLS) with audible "click" to reliably mate connectors

Amphenol Positronic Industries



**InstaBend® PhaseStable Space Assemblies**

- Foam core eliminates PTFE phase change occurring around 19°C
- Triple-shield construction
- Low loss, highly flexible micro coaxial cable assemblies

Amphenol Times Microwave Systems



**Series Five**

- Up to 20% smaller and 50% lighter vs. D38999 Series 3
- High voltage capabilities
- Utilized D38999 qualified insulator and EMI spring

Amphenol Aerospace Operations



**Push Pull Series Connectors**

- MIL-DTL-38999 layouts & contacts
- MIL-DTL-38999 Series electric performance
- Push Pull plug lanyard release, Push Pull plug non lanyard release
- Blind mating provision
- Small envelope

Amphenol Interconnect India



**Hermetic Cryogenic & Vacuum Interconnects**

- Hermetic cryogenic connectors and feedthroughs are designed and built to withstand extremely low temperatures
- Suitable for applications within Quantum Computing, Medical, Science and Research, Space and Aerospace industries

Amphenol Martec



**Deep Space 38999**

- Intermateable and interchangeable with standard connectors
- Retains grommet-to-wire and contact-to-contact sealing
- Rubber will not take a compression set when stretched or compressed due to regular connector operations
- Temperature cycling tested between -195°C to +200°C
- Tooled in most insert arrangements
- Perfect for space and cryogenic applications

Amphenol Aerospace Operations



**POGO Pin Connectors**

- Alternative solution to FLEX
- Cost neutral on solution vs. FLEX
- Savings on board to board assembly
- Wave solder termination to board
- Provides dynamic solution to board to board
- Great for high vibratory applications

Amphenol Nexus Technology

Click on to learn more.

## + Power Solutions



**HV38999**

- Insert design optimized for >1000Vac operation partial discharge free at altitude
- Designed to meet applicable MIL-DTL-38999 mechanical and environmental performance
- Safety interlock circuitry utilizes last mate, first break sequence
- Utilizes existing AS39029 type silver plated power contacts with crimp, busbar and threaded termination options

Amphenol Commercial Air Division  
Amphenol Aerospace Operations



**High Power 5015**

- 40-50% increased current capability vs. standard 5015
- Contact termination methods include crimp, male & female threaded termination, solder, PCB and bus-bars
- Over 25 tooled insert arrangements for current carrying capacity from 50 to 1200 Amps

Amphenol Aerospace Operations



**High Temperature Connector**

- Under development - MIL-AERO connector using Ceramics insert
- Withstands very high temperature exposure
- Standard 38999 performances @200°C

Amphenol Socapex



**1900SIM Connectors with Size 8 / 4 Power Contacts**

- Overmolding technology: second to none dielectric and sealing performances
- Lightweight and robust thermoplastic
- Metallized for shielding
- Many accessories and backshells available
- EN4165 qualified
- Fitted with overmolded SIM modules
- Up to 240 Amps with size 8 contacts / 375 Amps with size 4 contacts

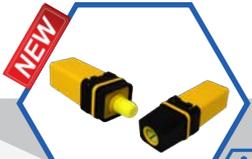
Amphenol Air LB France



**38999 Tin Zinc**

- Dark non reflective RoHS & Reach plating
- Excellent electrical conductivity
- More than 500 hours salt spray exposure
- New: MIL-DTL-38999 Class V QPL

Amphenol Socapex



**SIM Module Size 04 Power**

- For power transmission up to 125 Amp
- For crimped contacts size 04, AWG 04
- Suited for AS39029 or Temper Grip contacts
- No tool required to insert contact inside the module
- Compliant with EN4165 specifications and beyond
- Operating temperature: -65°C to +200°C

Amphenol Air LB France



**HV Power Conversion Application - Custom Motor / Inverter Interface Busbar**

- Custom design, optimized thanks to electromagnetic and thermal simulation, improved heat management, high power density, high operating temperature
- High voltage applications, high Partial Discharges Inception Level (PDIV), limitation of skin effects
- In option: hot pluggability, protection devices, shielding, interlocking

Amphenol Auxel



**Temper Grip Contacts**

- Napkin ring technology on socket contacts
- High current pin
- Limited heat rise and up to 40% ampacity increase
- Fits in standard size 8 or 4 cavities of MIL-DTL-38999 or EN3645 connectors

Amphenol Socapex



**R39 Series**

- Rectangular space savings
- High density 127 position inserts or mixed inserts with power, RF or fiber optic available
- Uses same contacts as standard 38999
- Blind mate
- Rugged

Amphenol Canada Corporation



**High Voltage Feedthrough**

- Composite insulator / shell combination prioritizes reduction of overall size and weight
- Voltage and amperage tailored to application requirements
- Materials available for use in pressurized and / or firewall rated housings

Amphenol Commercial Air Division



**Ground Power Receptacle**

- Power feed receptacle suited for powering the aircraft while docked at the gate
- Robust thermoplastic with glass fiber
- Operating temperature: -55°C to +125°C
- Associated products: shield cover and LPU

Amphenol Air LB France



**Scorpion**

- Connector equipped with high conductivity contacts
- Reduce the volume allocated to the connector
- Reduce the weight
- Increase the density of the system with a million arrangement without any NRE
- Most versatile modular power/signal connectors on the markets
- Standard profile connectors of 14.60 mm height

Amphenol Positronic Industries

Click on to learn more.

# Power Solutions



**CapLock / PlugLock**

- CapLock allows to lock a cap onto a EN3645 / 38999 Power receptacle which may be under load
- PlugLock allows to lock a 38999 Power plug onto a receptacle which may be under load

Amphenol Socapex



**Rigid & Flex Bus Bars & Distribution Bars**

- Aluminum or copper bars
- Possible in various standard sizes and shapes: Build to Print or Build to Spec
- High mechanical resistance
- From 80 to 1200 Amps, alternating or continuous
- Operating temperature: -55°C to +150°C

Amphenol Air LB France



**Ram-Lock**

- Push-pull coupling with positive lock
- Prevents accidental unmating
- Full environmental sealing and EMI protection
- Lower mate / unmate forces compared to 2M804

Amphenol Aerospace Operations



**SIM Module HVDC Size 8**

- Partial Discharge (DP) resistant design: PDIV:
  - 3100 Vac peak at 30Kft
  - 2500 Vac peak at 45Kft
  - 1050 Vac peak at 98Kft
- Up to 80A per contact
- Operating temperature: -65°C to +200°C
- Suitable for crimp contact or threaded contact for bus bar connection

Amphenol Air LB France



**Warrior Grip**

- Mates with existing Nett Warrior connectors
- Provide 10 Amp capability in a size #23 contact
- Unmating force of 13 +/- 3LBS

Amphenol Aerospace Operations



**SP MAX**

- Connector equipped with high conductivity contacts
- Precision machined shell, available in three lengths; options provide EMI / RFI protection
- Combines multiple contact sizes into a single connector; includes #12, 16, 18 & 22
- Performance compatibility to EN4165, ESA / ESCC-3401 and DO-160; low outgassing per ASTM E595
- Quick Lock System (QLS) with audible "click" to reliably mate connectors

Amphenol Positronic Industries



**Busbar / Cable Support**

- Lightweight composite clamp
- Suited for busbar or cable fixing on structure
- Interchangeable grommets to cope with the cable diameters or busbar size
- To be mounted on ABS2225 fixing brackets. Or direct mounting on structure (with screws)
- Locking system to secure the closing

Amphenol Air LB France



**HPAS**

- 10 sized Power contact, up to 60A / contact
- From 2 to 8 power contacts
- Hybrid possibilities mixing signal and power
- Robust technology designed for severe environments

Amphenol Socapex



**450A Voltarius**

- Insulator design optimized for >1000Vac operation partial discharge free at altitude
- 450A rated contact compatible with 2/0 awg to 4/0 awg
- Single, double & triple pole aluminum shells available with typical military / aerospace finishes
- Last mate, first break interlock modules available with ethernet configuration

Amphenol Commercial Air Division



**3240 / 3242 Series Monoblock Assemblies**

- Distribution device for copper or aluminum cable connections
- Available with individual or shunted terminals, from 1 to 12 terminals, in different diameters
- Protective cover fixing, and mounting on structure by pillar bolts
- Up to 350 A permanent
- Operating temperature: -60°C to +230°C

Amphenol Air LB France



**SMC Series**

- Stackable Modular Connector
- Low-profile, stackable composite shell
- Modular, environmentally sealed insert assemblies
- Supports quarter-turn mating hardware & backshells
- Rugged applications: Military avionics: engine & flight controls, HUDs, FADECs

Amphenol Canada Corporation



**38999 Connectors + Power Contacts**

- Ensure reliability of contact system with Temper-Grip, far beyond the maximum temperature of the connector
- Upgrade ampacity 20-30% by changing your pin contacts to HCP, available in all sizes
- Reduce mating force with RADSOK®
- European-style size 8 pin to mate with RADSOK® & other hyperbolic contacts

Amphenol Aerospace Operations

Click on to learn more.

## + Power Solutions



### SIM Serie 2 Connectors with Size 8 / 4 Power Contacts

- Overmolding technology: second to none dielectric and sealing performances
- Lightweight and robust thermoplastic
- Metallized for shielding
- EN4165 qualified, comparable to U.S. MIL-STD-810 in performance
- Comes in 1, 2 or 4 modules for respectively 80 Amps, 160 Amps or 320 Amps (with size 8 contacts) or 125 Amps, 250 Amps or 500 Amps (with size 4 contacts)

Amphenol Air LB France



### Raptor

- High temperature TALON contacts - up to 200°C
- 6 shell sizes 15 to 25 (4 to 4/0 AWG)
- Designed for high operating voltages at aircraft altitudes for electrified propulsion system
- Operating voltage 850V ACrms / 1.2KV DC @ 35,000 ft
- Up to 800 A current carrying capability (Size 25 4/0 AWG)
- Screened cable termination

Amphenol Limited Ltd



### 38999 Press Fit

- Press fit contacts receptacles
- Solderless technology
- Double flange for easy PCB integration
- Same inserts as 38999 Series III
- Available with contacts size 23 and 22D

Amphenol Socapex



### Thermocouple Contacts

- Thermocouple contact type K, T or E

Amphenol Positronic Industries



### MMA

- Blind Mate Low Mating Force Modular Connector
- Based on ARINC 600 standard
- Composite shells and backshells available

Amphenol Canada Corporation



### VG96929 / GCE Series

- Single pole bayonet locking connector for High Power at Low Voltage (Up to 900A / 50VAC / 75VDC)
- Qualified to VG96929, RoHS & REACH Version J
- Environmental resistant: IPX8 (1bar / 16h)
- Operating temperature: -55°C to +150°C
- Contact sizes for 25 mm<sup>2</sup> to 240 mm<sup>2</sup>

Amphenol Air LB Germany



### RNJ Low Profile

- Shorter distance between panels, derived from RNJ - HE308 Rack & Panel connector
- 8 shell sizes from 11 to 25
- Realignment capabilities & floatability on 3 axis
- Quick and easy connection, 100% scoop proof design
- MIL-DTL-38999 Series III inserts, contacts and accessory threads

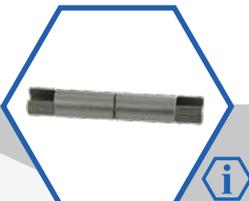
Amphenol Socapex



### HPAC 2 or 3 Contacts Size 0

- Innovative and easy-to-use locking system offering a perfect connection security
- 2 mixed arrangements available:
  - 3 cts #0 + 4 Interlock #20
  - 2 cts #0 + 2 Interlock #20
- Contacts #0: 150 or 240 Amps versions
- Quick connect, no tools needed (lever)
- Secured connection thanks to a CPA
- Overmolding suited for HVDC application
- Sealing IP67, shielding 360°
- Operating temperature: -65°C to +200°C
- Specifications according to EN4165

Amphenol Air LB France



### PROMI

- In line miniature optical adaptor
- ARINC 801 standard termini
- Eases installation & maintenance of big FO harnesses into the aircrafts

Amphenol Socapex



### Pressfit Contacts

- Process without any heat or cleaning
- Avoid of high reflow heat, minimizing thermal stress on the PCB and damaging plastic connector body and adjacent components
- Control reduced avoiding X-rays i.e.

Amphenol Positronic Industries



### 38999 Extended Ranges

- Adapted 38999 for easy mounting or space / weight savings
- Reduced flange, stand-off shells, clinch nuts or integrated backshell feature
- Performances according to MIL-DTL-38999 standard

Amphenol Socapex

Click on to learn more.

# + RF / Microwave



### RF Bandpass Filters

- Integrated Filter Packaging
- Hi-Rel Product Line
- High Frequency LC Filters: up to 18 GHz
- Military-Grade Ceramic Filters
- Hermetic Comblaine Filters available
- Multiplexing: our design capabilities include high-performance contiguous or non-contiguous multiplexers with narrow or wide passbands

Amphenol Q Microwave



### SMT RF Bandpass Filters

- Surface mountable bandpass filter
- Custom form factors
- Hi-Rel packaging

Amphenol Q Microwave



### MilTech® Cable Assemblies - MilTech® Light and MilTech® Rugged (armor)

- Hermetically sealed, flexible cable assemblies with superior phase stability
- Fully vapor sealed, optimized and qualified for commercial and military avionics applications
- Available in a variety of diameters from 4,3 mm to 12,2 mm

Amphenol Times Microwave Systems



### Multiport Connectors & Mini-Multiport

- Lightweight aluminum construction
- Advanced Reach / ROHS compliant conductive platings and well shielded structure
- Allows for blind mating connections for ease of installation

Amphenol Times Microwave Systems



### TFlex 402 & 405 with Size 12 Contacts & BMA

- Lighter-weight, flexible alternative to semi-rigid coaxial cable assemblies
- Its durable external jacket provides excellent protection in corrosive environments
- Its flexible construction eliminates the need for hand or precision machine bending

Amphenol Times Microwave Systems



### InstaBend® Space Assemblies

- Flexible, can be bent very closely behind the connector
- Optimized for lowest attenuation
- Ultra stable performance with flexure

Amphenol Times Microwave Systems



### PhaseTrack® 047

- Standard phase-stable coax assembly features a proprietary fluorocarbon dielectric, TF4®, eliminating the PTFE change phase occurring around 19°C
- Has the same triple-shield construction used in our popular SF®, SFT®, SilverLine® and MilTech® cables
- Ideal for applications demanding stable phase over temperature

Amphenol Times Microwave Systems



### InstaBend® PhaseStable Space Assemblies

- Foam core eliminates PTFE phase change occurring around 19°C
- Triple-shield construction
- Low loss, highly flexible micro coaxial cable assemblies

Amphenol Times Microwave Systems



### RF Filters

- Q Microwave's are categorized by topology (lumped element, combline, or ceramic resonator) and then again by filter function (bandpass, lowpass, or highpass)
- Custom (with your desired specifications) or standard parts numbers & specifications
- Integrated Filter Packaging
- Hi-Rel Product Line
- High Frequency LC Filters: up to 18 GHz
- Military-Grade Ceramic Filters
- Hermetic Comblaine Filters
- Multiplexing

Amphenol Q Microwave



### RF IMA Subsystems

- High Performance Switch Filter Subsystems - 0.5-18 GHz switch filter banks used in high-performance applications
- Integrated Products
- Hermetic Comblaine Filters
- Multiplexing
- Hybrid-Ready Filters: we optimize the design and inputs for compatibility with microelectronic assemblies

Amphenol Q Microwave

Click on to learn more.

## Optics / High Speed Solutions



**QEPT Space  
4TX + 4RX 100 Gbps**

- The world's first fiber removable and hot-pluggable 4TRX onboard optical module
- 4 x 25 Gbps NRZ RAD
- Rugged, MIL-STD-883 shock & vibrate qualified
- Works from -40°C to +85°C
- 1.1 W of power consumption, 10 dB link Budget
- Radiation resistant

Amphenol Active Optics Products



**3U VPX 48-Channel  
Rugged Ethernet Switch**

- Up to 48 channels of 10GbE
- Operating temperature: -40°C to +85°C
- Configurable ports between 10GBase-T, 10GBase-KR
- Ports work at 100Mb, 1G and 10G

Amphenol Military High Speed



**EN4165 / SIM MPO**

- Custom design SIM module accommodating MT ferrule-type based & standard MTP / MPO multi-fiber connectors
- MTP / MPO directly plugs / locks into the SIM module; easily removed for repair
- From 12 to 48 fibers; Multi-mode and Single mode type

Amphenol Air LB France



**High Density - Hermetic**

- Ultra High Density 1mm sealed terminations
- Multimode, single mode and hybrid constructions
- Temperature range: -55°C to +95°C
- <1.0x10<sup>-7</sup> He leak rates
- Removable for easy and long service life
- Available in Circular, Rectangular or D-Sub configurations
- Ideal for bulk head and pressurized sensor applications

Amphenol Fiber Systems International



**GCB-M**

- Modular bayonet locking connector for Signal, Data and Power transmission
- Combines the advantages of a circular connector (VG95234) with four EN4165 (VG96513 / SIM) inserts
- Compatible with a wide variety of modules for electrical or fiber optical transmission: Power, Signal, Data, RJ45, Coax, Quadrad, Arinc801, Lumiere, MPO, MTP, USB
- 1 - 120 contacts per connector and more than 230,000 different insert arrangement configurations

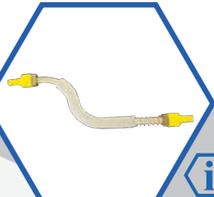
Amphenol Air LB Germany



**USB3 Type C Field**

- Based on EN3645 / 38999 - Shell size 11
- Ruggedized solution for USB3 Type-C standard connectors
- Data & Power in the same connector
- Reversibility on both plug and receptacle
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant

Amphenol Socapex



**Encapsulated Cables**

- Custom 2D and 3D routings
- Allows for very compact fiber routing
- Resistant to a variety of fluids
- Temperature range: -55°C to +95°C
- Ideal for dense EO application where liquid cooling is essential

Amphenol Fiber Systems International



**RJFTV Cat6A 10 Gb Ethernet**

- Based on EN3645 / 38999 - Shell size 19
- 10 Gbit Ethernet: Cat.6A Ethernet Class Ea per ISO / IEC 11801
- No cabling operation in field and no tools required
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant

Amphenol Socapex



**EN4165 / SIM Luxcis**

- Module as per EN4830 fitted with 6 standard ARINC 801 / EN4639 contacts (Multi-mode and Single mode)
- Guiding pins for alignment prior to mating into sleeve holder
- Only 1 insert, gender is defined by which side is fitted with sleeve holder; Interfacial, extended sealing grommet

Amphenol Air LB France



**USB Amplifiers**

- USB2 amplifier based on EN 3645 / 38999 - Shell size 15
- For applications where the USB2 cable length must be longer than 4,8 meters which is the limit of USB2 specification
- Extension cord of 4,8 m (15,7 ft), 4 time stackable in order to reach 19,2 m (63ft)
- Self-powered
- USB3, USB3 Type C & HDMI amplifiers in development

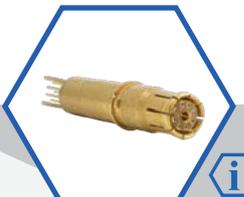
Amphenol Socapex



**LEAP OBT  
12TX + 12RX 192 Gbps**

- The world's fastest and smallest 12TRX rugged onboard optical module
- 12 x 16 Gbps NRZ
- Rugged, MIL-STD-883 shock & vibrate qualified
- Works from -40°C to +85°C
- Excellent signal integrity, saves 10 dB link Budget
- No pigtail, ease to use, replace and escalate

Amphenol Active Optics Products



**Octonet**

- For MIL-DTL-38999 Series III connectors
- 8 spaced inner contacts that form four 100 Ω matched impedance differential pairs
- Available in size 8 crimp termination style
- Also available in PC Tails
- Can be installed in existing size 8 Quadrad cavities
- Meets specifications of CAT-6A cable
- 10G Ethernet compliant
- Higher bandwidth than standard CAT5E Quadrad-supports up to 4.0 Gbps per pair
- Enhanced crosstalk performance

Amphenol Aerospace Operations

Click on to learn more.

# Optics / High Speed Solutions



**R-VPX Evolution 2.0**

- 25+ Gb/s performance
- Module and backplane connectors utilize smaller compliant contacts for increase Si performance
- Intermateable with existing / legacy VITA 46 connectors
- Qualified to VITA 46 spec
- Ruggedized 4-point contact system

Amphenol Aerospace Operations



**TV-SIM**

- Modular thread locking connector for Signal, Data and Power transmission
- Combines a circular MIL-DTL-38999 III shell with EN4165 (VG96513/SIM) inserts
- EMI protected, shock & vibration proof
- 1 - 48 contacts per connector, compatible with contacts for electrical or fiber optical transmission: AWG crimp, RJ45, Coax, Quadrax, Octomax, Arinc801, Lumiere, MPO, MTP, USB... and 90° angled PCB contacts

Amphenol Air LB Germany



**Centaur**

- Fiber speeds with copper durability (up to 56 GBps)
- Connect to several protocols from one connector (HDMI, USB, QSFP, RJ45...)
- Is plug and play (unlike competition - requires insert / removal tool)
- Available as connector, cable assembly, PC tail...

Amphenol Military High Speed



**EN4165 / SIMTac 03**

- SIM module for 2 MTAC connectors with strain relief
- Protective shroud aiming recessed MT ferrule and "Finger-Touch-Proof"
- Boot for Round or Ribbon Fiber
- Multi-mode and Single mode

Amphenol Air LB France



**ARINC 600**

- Low insertion force contacts
- Environmental versions
- Front removable keying posts
- Field replaceable inserts
- Crimp, coaxial, power, printed circuit and wire wrap contacts

Amphenol Canada Corporation



**HD750hms**

- Contact size 8
- One channel for 4K or Ultra-HD quality - Meet 12G-SDI
- Unique float mount technology to allow consistent microwave performance
- Available for MIL-DTL-38999, EN3645, EN4165 and ARINC600
- Available in crimp and PC tails versions

Amphenol Socapex



**1900 Elio Connectors**

- Derived from EN3545 connectors
- Lightweight Composite
- For 7 Elio® Optical termini
- Polarization 36 positions

Amphenol Air LB France



**R-VPX**

- Up to 32 Gb/s performance
- Ruggedized VITA 46 connectors
- Fully intermountable & intermateable to existing VITA 46 connectors
- Modular COTS light weight connector system

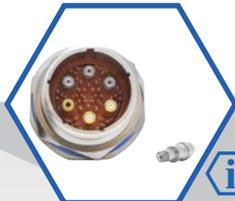
Amphenol Socapex



**750hms**

- Contact sizes 16, 12, 8 and 6
- Available for MIL-DTL-38999, EN3645, EN4165 and ARINC600
- Available in crimp and PC Tails versions

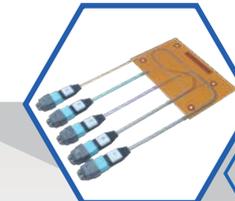
Amphenol Socapex



**FiberQuad Ruggedized Quadrax Contact**

- Speeds up to 10.3 GBps
- Operating temperature: -40°C to +85°C
- Transmit or receive
- Supports many wavelengths, modes and protocols

Amphenol Military High Speed



**FO Flex Planes**

- Flame resistant substrate
- Multimode, single mode and hybrid constructions
- Temperature range: -55°C to +95°C
- Diverse substrate size, shape & packaging
- Available in virtually any routing scheme
- Compatible with multi-channel and discrete fiber terminations
- Compatible with standard MT ferrules
- Entire circuit 100% IL & continuity tested
- Direct and fusion splice termination available

Amphenol Fiber Systems International



**R398 Series**

- Compact D-Sub variant
- Features size 23 contacts for compact arrangements
- Supports combo arrangements
- Rugged mating
- High-temperature capable

Amphenol Canada Corporation

Click on to learn more.

## Optics / High Speed Solutions



**EN4165 / SIM Elio**

- Modules as per EN4701 fitted with 4 hermaphroditic contacts (EN 4531-101)
- Standard 2.5mm ST type ferrule interface allows the use of standard termination procedures & readily available tools
- Simple access to optical termini facilitates cleaning
- Options available for single mode & multi-mode fiber
- Full-proof option allows the use of the terminus in a connector without backshell
- Supports tight or loose structured cable

Amphenol Air LB France



**TVµCom 10 Gb Ethernet**

- Based on EN3645 / 38999 - Shell size 11
- 10 Gbit Ethernet: Cat.6A Ethernet Class Ea per ISO / IEC 11801
- Crimp screw machined contacts
- 4 pairs totally insulated throughout the connector - No cross-talk between the four pairs
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant

Amphenol Socapex



**Blind Mate Pressured Hybrids**

- Blind mate and pressure withstanding
- Multimode, single mode and power
- Temperature range: -55°C to +95°C
- <math><1.0 \times 10^{-6}</math> He leak rates
- 30 Bar immersion
- Removable for easy and long service life
- Ideal for remote sensor pods that require power, high speed data and nitrogen sealing

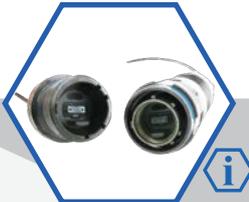
Amphenol Fiber Systems International



**RJSMLAC-8MG-CAPS  
8x Gigabit Managed Switch**

- Rugged Managed Ethernet switch
- MIL-STD-461
- MIL-STD-810

Amphenol Socapex



**MPO Field**

- Transform a standard MPO / MTP patchcord into an environmental connector
- Number of channels: multiples of 12
- Shock, vibration and water proof (IP68)
- Based on EN3645/38999 shell size 13

Amphenol Socapex



**SCFF**

**1TX + 1RX 25 Gbps**

- SCFF (Small Cubic Form Factor) optical module supporting 10G or 25G NRZ data rates
- 1 x 25 Gbps NRZ
- Rugged, MIL-STD-883 shock & vibrate qualified
- Works from -40°C to +85°C
- Excellent signal integrity, saves 10 dB link Budget
- No pigtail, off-the-shelf LC connectors

Amphenol Active Optics Products



**TVµCom Multipin USB3**

- Based on EN3645 / 38999 - Shell size 11
- Hotplug USB3 with multipin insert using crimp screw machined contacts
- 4 pairs totally insulated throughout the connector - No cross-talk between the four pairs
- Sealed against fluids and dusts (IP68)
- Shock, vibration and traction resistant

Amphenol Socapex

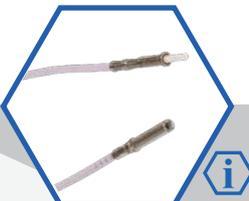


**QEPT**

**4TX + 4RX 100 Gbps**

- The world's first fiber removable and hot-pluggable 4TRX onboard optical module
- 4 x 25 Gbps NRZ
- Rugged, MIL-STD-883 shock & vibrate qualified
- Works from -40°C to +85°C
- Excellent signal integrity, saves 10 dB link Budget
- Hot-pluggable and pigtail-free, easy maintenance, quick replacement and simplified scalability

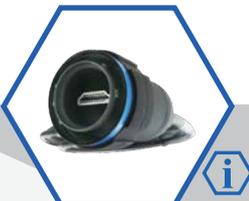
Amphenol Active Optics Products



**LuxBeam**

- Single Expanded Beam Termini
- Beam section expanded 140 times
- Contactless optical connection
- For Size 16 standard contact cavity for Series III of MIL-DTL-38999 / EN3645 / EN4165

Amphenol Socapex



**HDMI Field**

- Based on EN3645 / 38999 Shell size 17
- No cabling operation in field and no tools required
- Data transmission:
  - HDMI 2.0 protocol
  - Bandwidth: 18 Gbit/s with 6 Gbit/s per lane
  - Can support 4K UHD (3840 x 2160) at 60 Hz

Amphenol Socapex



**Ranger**

- Push-Pull, Breakaway or Screw-Lock
- Data transmission: USB 2.0 (480 Mbit/s) + Power, USB 3.2 Gen 1x1 (5 Gbit/s), HDMI 1.3 (8.13 Gbit/s), USB 2.0 (480 Mbit/s) + Power
- Degree of protection: IP6K8 / IP6K9Kv
- Size: 0, 1

Amphenol Nexus Technologies



**Miniature 8x Gigabit Managed Switch 350 grams**

- Rugged Managed Ethernet switch
- MIL-STD-461
- MIL-STD-810

Amphenol Socapex

Click on to learn more.

# Optics / High Speed Solutions



**Miniature 8x Gigabit Unmanaged Switch 140 Grams**

- Rugged Unmanaged Ethernet switch
- MIL-STD-461
- MIL-STD-810

Amphenol Socapex



**Agnostic Embedded Rugged Media Converters**

- Utilize MIL-DTL-38999 connectors and receive data over a Samtec HQDP ribbon for attachment into a subsystem
- Output to a MIL-DTL-38999 connector embedded with high performance contacts
- Can be configured with any plating, shell rotation, HQDP ribbon length and HQDP connector type
- 3.3V Power
- Agnostic to encoded data protocols
- 850 nm multi-mode technology

Amphenol Aerospace Operations



**RESMLAC-8MG-CAPS-POE**

- Rugged Managed Ethernet switch with Power Over Ethernet
- MIL-STD-461
- MIL-STD-810

Amphenol Socapex



**MT Ferrule Optical Connector**

- Stainless steel connector fitted with MT ferrule
- Space saving: compact design
- Weight saving on harnesses: no metallic braid needed
- Ruggedized
- Versatile: 24 or 48 FO channels
- No adverse effect of EMI

Amphenol Air LB France



**USB Hub**

- USB2 amplifier based on EN 3645 / 38999 Shell size 15
- 1 upstream port
- 2 downstream ports

Amphenol Socapex



**Single Pair Ethernet Twinax**

- Contact size 12
- Available for MIL-DTL-38999, EN3645
- Available in Crimp and PC Tails versions
- Meets 1000BASE-T1

Amphenol Socapex



**DUAL SCFF 2TX + 2RX 50 Gbps**

- Dual SCFF (Small Cubic Form Factor) in a 26-pin edge adapter card for streamlined integration
- 2 x 25 Gbps NRZ
- Rugged, MIL-STD-883 shock & vibrate qualified
- Works from -40°C to +85°C
- No pigtail, off-the-shelf LC connectors
- Redundant, designed for IFE

Amphenol Active Optics Products



**Rugged Fiber Optic Converter**

- Rugged Fiber Optic Ethernet converter
- MIL-STD-461
- MIL-STD-810

Amphenol Socapex

## + High Voltage



**Ultra-Flexible High-Voltage Shielded Composite Wire**

- High-voltage performance of 1000 V
- Shielded construction for EMI protection
- 6x minimum bend radius
- Lightweight and small diameter PTFE composite tape wrapped composite insulation
- Seamless™ jacket construction for smooth appearance and installation characteristics of an extrusion

Amphenol Cable & Interconnect Technologies



**HV38999**

- Designed to meet and / or exceed the specifications of MIL-DTL-38999
- Dual interlock circuitry
- Utilizes existing mil-qualified 39029 cts
- Amphenol Dualok Plugs available for increased shock and vibration performance
- Amphenol high-performance contacts can be used for increased amperage rating (modification code B65)
- Shells are standard MIL-DTL-D38999 & will accommodate standard MIL-DTL-D38999 accessories

Amphenol Commercial Air Division  
Amphenol Aerospace Operations



**HPAC & Smart HPAC**

- According to MIL-DTL-38999 spec.
- 360° shielding
- Temperature: -65°C to +200°C
- Overmolding techno. for HVDC application
- HVIL techno. (High Voltage Interlock Loop)
- Quick connection / Lever lock assistance
- CPA function (Connector Position Assurance)
- High mechanical conception: metallic shape
- Quick install accessories

Amphenol Air LB France



**Raptor**

- High temperature TALON contacts - up to 200°C
- 6 shell sizes 15 to 25 (4 to 4/0 AWG)
- Designed for high operating voltages at aircraft altitudes for electrified propulsion systems
- Operating voltage 850V ACrms / 1.2KV DC @ 35,000 ft
- Up to 800A current carrying capability (size 25 4/0 AWG)
- Screened cable termination

Amphenol Limited Ltd



**38999/5015**

- High Power 38999 meets applicable requirements of MIL-DTL-D38999 Series III and features a current carrying capability up to 1000 amps
- High Power 5015 features 40-50% increased current carrying capability over standard 5015 connector

Amphenol Aerospace Operations



**CCS1**

- High power DC fast charging inlet assemblies
- CCS1, CCS2 & NACS, 80 A to 500 A, 1000 VDC
- DC wired pigtails or busbar contacts
- With or without LED's
- E-Lock assemblies, 12 V or 24 V
- Offer complete custom cable assembly, plug n play solution
- Over 300 A charging recommend liquid cooled charging gun

Amphenol PCD



**Busbars**

- Powder Coated Busbars
  - Multiple powder coating available
  - Limited tooling required
- Over-molded Busbars
  - Excellent sealing to surface of conductor
  - Possible with integral sealing
- Laminated Busbars
  - Range of lamination materials for different temperature requirements, fluids...
  - Best performing at high voltages & altitude, including partial discharge mitigation
  - Shielded busbars possible

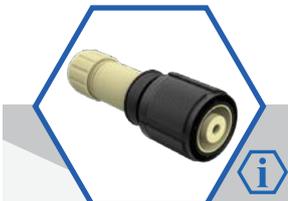
Amphenol Commercial Air Division  
Amphenol Auxel



**TVHV**

- Optimized and lightweight high voltage connector
- MIL-DTL-38999 Series III / EN3645 perf.
- Al, Composite, Stainless Steel shells
- Electrical perf. at 50 000ft (Vac Perf):
  - 1000 V operating voltage
  - 1900 V PDIV - 1550 PDEV
  - 3000 V dielectric withstanding voltage
- AS39029, EN3155, Temper Grip power cts
- Interlock last mate first break EN3155 cts
- Blind mate, bayonet and breakaway versions upon request

Amphenol Socapex



**Rhino Series**

- Hyperbolic contact design
- Touch-protected contacts
- Safe mating design
- MIL-DTL-38999 Series III design features
- MIL-DTL-38999 panel cut-outs
- MIL-DTL-38999 Black Zinc Nickel plating RoHS compliant
- Sealed to IP68 (mated)

Amphenol Limited Ltd



**3x Bend Radius High-Voltage Shielded Aluminum Cable**

- High-voltage performance of 1000 V
- Shielded construction for EMI protection
- 3x minimum bend radius
- Saves 50% - 60% on weight vs equivalent copper construction

Amphenol Cable & Interconnect Technologies



**EN4165 Connectors**

- Overmolding technology
- Space efficient & modular design
- Versatility of mixing & matching Signal & Power: RF (Quadax, Triax, Twinax and Coax), Fiber Optic or power size 8 / 80 Amp contacts
- Suited for crimp or PCB contacts
- Shielding for EMI / EMC applications
- D shape polarization + locking / coding accessories

Amphenol Air LB France



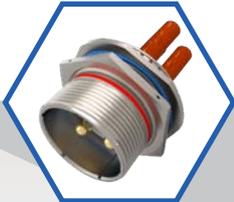
**Voltarius**

- Voltage rating: 1000 VDC at sea level
- Sealing: IP67 (unmated) & IP69K (mated)
- Temperature range: -40°C to +125°C
- Single-pole or multi-pole arrangements
- Full 360° shielding with integral shield termination
- Safety interlock circuitry utilizes last mate, first break sequence
- Busbar and threaded termination standard with the receptacle
- Plugs available in straight or right-angle orientations

Amphenol Commercial Air Division

Click on to learn more.

# + High Voltage



### PowerUp kV Connectors

- HV connector multipole type, 2 or 4 cts
- Max Voltage 900 VDC, Average Current 100 Amps, Peak Current 300 Amps
- Cable Size / Gauge 0, 2, 4, 6, 8
- Designed to Aerospace standards for Power Network and Loadshare Networks
- High voltage and temperature range in 38999 style shell
- Optimized PowerUP™ connector with ACIT 1000 V cables and Terminal blocks for end-to-end cable solutions

Amphenol Cable & Interconnect Technologies



### Raptor Feedthrough

- For termination of screened power cables
- Jam Nut or Square Flange style
- Shell sizes 13 to 21 (2 to 2/0 AWG)
- Busbar termination, through hole, unit busbar or lug
- Harness side crimp terminal, bolted & heatshrink boot termination facility
- Double O-ring internal sealing
- 1 KV ACrms operating voltage @25,000 ft
- 625 V ACrms operating voltage @35,000 ft
- 440 A continuous current carrying capability (size 21 2/0 AWG)

Amphenol Limited Ltd



### HV38999 Dualok

- Vibration resistant plug prevents unintended disengagement during operation

Amphenol Commercial Air Division



### Silicone Insulated 2-Conductor High-Voltage Copper Cable for Tilt Rotor Applications

- High-voltage performance of 1000 V
- Shielded construction for EMI protection
- Engineered for applications requiring repeated flexing such as advanced air mobility (AAM) tilt rotor applications

Amphenol Cable & Interconnect Technologies



### High Voltage Feedthrough

- Composite insulator / shell combination prioritizes reduction of overall size and weight
- Multiple styles: bolted termination, push-pull termination, wire passthrough
- Voltage and amperage can be tailored to application requirements
- Materials available for use in pressurized and / or firewall rated housings
- Provisions for insulating terminations available

Amphenol Commercial Air Division

# INNOVATION & PRODUCT FOCUS



**450A Voltarius**

- Composite insulator / shell combination prioritizes reduction of overall size and weight
- Voltage and amperage tailored to application requirements
- Materials available for use in pressurized and / or firewall rated housings

Amphenol Commercial Air Division



**MIL-HD2**

- Next generation VITA and SOSA-aligned connector series
- Designed to achieve 56G PAM4 data rate requirements with higher density

Amphenol Aerospace Operations



**Ranger**

- Push-Pull, Breakaway or Screw-Lock
- Data transmission: USB 2.0 (480 Mbit/s) + Power, USB 3.2 Gen 1x1 (5 Gbit/s), HDMI 1.3 (8.13 Gbit/s), USB 2.0 (480 Mbit/s) + Power
- Degree of protection: IP6K8 / IP6K9Kv
- Size: 0, 1

Amphenol Nexus Technologies



**SIM Module 3022**

- High contact density: 30 contacts size 22
- Use of standard size 22 contacts
- Module to be used with the whole range of EN4165 / SIM connectors

Amphenol Air LB France



**HPAC & Smart HPAC**

- According to MIL-DTL-38999 spec.
- 360° shielding
- Temperature: -65°C to +200°C
- Overmolding techno. for HVDC application
- HVIL techno. (High Voltage Interlock Loop)
- Quick connection / Lever lock assistance
- CPA function (Connector Position Assurance)
- High mechanical conception: metallic shape
- Quick install accessories

Amphenol Air LB France



**Qi2 Wireless Charging**

- Cable free charging, using a single coil with magnetic alignment
- Small, light, efficient charging surface
- Delivers up to 15 W of power

Amphenol PCD



**TVHV**

- Optimized and lightweight high voltage connector
- MIL-DTL-38999 Series III / EN3645 perf.
- Al, Composite, Stainless Steel shells
- Electrical perf. at 50 000ft (Vac Peak):
  - 1000 V operating voltage
  - 1900 V PDIV - 1550 PDEV
  - 3000 V dielectric withstanding voltage
- AS39029, EN3155, Temper Grip power cts
- Interlock last mate first break EN3155 cts
- Blind mate, bayonet and breakaway versions upon request

Amphenol Socapex



**Deep Space 38999**

- Interchangeable and interchangeable with standard connectors
- Retains grommet-to-wire and contact-to-contact sealing
- Rubber will not take a compression set when stretched or compressed due to regular connector operations
- Temperature cycling tested between -195°C to +200°C
- Toolled in most insert arrangements
- Perfect for space and cryogenic applications

Amphenol Aerospace Operations



**Quick Quadrax**

- Patented Quadrax innovation
- Repairable
- Reversible
- Supports ARINC 600 and D38999
- All existing cable types
- Drop in for all existing contact arrangements

Amphenol Canada Corporation



**Raptor**

- High temperature TALON contacts - up to 200°C
- 6 shell sizes 15 to 25 (4 to 4/0 AWG)
- Designed for high operating voltages at aircraft altitudes for electrified propulsion systems
- Operating voltage 850 V ACrms / 1.2 KV DC @ 35,000 ft
- Up to 800 A current carrying capability (Size 25 4/0 AWG)
- Screened cable termination

Amphenol Limited Ltd



**Bracket Sensors**

- Wireless communication
- Integrated temperature sensor
- Cordless, battery-free power supply
- Attractive reading distance (up to +3 m)

Amphenol Air LB France



**LEAP OBT  
12TX+12RX 192 Gbps**

- The world's fastest and smallest 12TRX rugged onboard optical module
- 12x16Gbps NRZ
- Rugged, MIL-STD-883 shock & vibrate qualified
- Works from -40°C to +85°C
- Excellent signal integrity, saves 10 dB link Budget
- No pigtail, ease to use, replace and escalate

Amphenol Active Optics Products

Click on to learn more.



**RaptorLink**

- SOSA-aligned & features VITA-91 connectivity, offering double density for speeds of up to 50G per lane on the backplane
- Operates with 64 individual channels, supporting speeds of 1G, 10G & 25G in NRZ mode and 50G in PAM-4 mode
- Supports multiple ganged protocols, including 40Gx4, 50Gx2 & 100Gx4 in NRZ mode and up to 400Gx8 in PAM-4 mode
- Suited for future backplane architectures
- All boards are built with MIL-HD2 SOSA / VITA 91 and / or R-VPX Evolution Series

Amphenol Aerospace Operations



**Spin Tact**

- Highly customizable
- Can have High current (up to 1200 Amps), High Speed data signals, FO, RF...
- Hybrid solutions
- High service life
- Patented designs

Amphenol Interconnect India



**SIM Module 30R23 Reversed Gender**

- High contact density: 30 contacts size 23
- Reversed gender offering enhanced pin protection
- Module to be used with the whole range of EN4165 / SIM connectors

Amphenol Air LB France



**VG96934 / GCC Series**

- Durable 10 pin circular bayonet locking connector for audio transmission in harsh conditions
- VG96934 approval in progress, RoHS & REACH Version J
- Hard gold-plated spring contacts: excellent contact resistance and efficient self-cleaning
- 5000 mating cycles reverse bayonet locking

Amphenol Air LB Germany



**Stingray 7 (Panel Mount)**

- Magnetic
- Blindmate
- 360 Degree
- 7 contacts
- Equipment mount interconnect

Amphenol Limited Ltd



**MTC-HD**

- Next generation of circular connectors with high-density MT ferrules introducing the MTC-HD
- Increases the density for rugged environments including military aerospace, commercial aircraft, ground-based radar, or industrial applications
- Offers an additional six insert arrangements and up to 48F or even 72F ferrules
- At 25 Gbps per channel in the largest shell size can support a throughput of up to 10.8 Tbps

Amphenol Aerospace Operations



**OmniLite**

- 3 profile options straight, 45° or 90° per SKU per shell size
- Octagonal locking arm system provides superior strength
- Up to 50% weight savings over metal alternatives
- Separate strain relief & EMI / RFI shielding mechanisms

Amphenol PCD



**Raptor Feedthrough**

- TALON high temperature contacts
- Shell sizes 15 to 25
- Improved insulation geometry for HV electric fields
- Designed for increased operating voltages at aircraft altitudes

Amphenol Limited Ltd



**HPAS**

- 10 sized Power contact, up to 60 A / contact
- From 2 to 8 power contacts
- Hybrid possibilities mixing signal and power
- Robust technology designed for severe environments

Amphenol Socapex



**SIM Module Size 04 Power**

- For power transmission up to 125 Amp
- For crimped contacts size 04, AWG 04
- Suited for AS39029 or Temper Grip contacts
- No tool required to insert contact inside the module
- Compliant with EN4165 specifications and beyond
- Operating temperature: -65°C to +200°C

Amphenol Air LB France



**Phoenix**

- Operating temperature: -55°C to 450°C
- Hermetically sealed receptacle ensures complete component protection
- Mating plug with ceramic inserts
- MIL-DTL-38999 style mating interface and keyways

Amphenol Martec



**HD 50G/400G PAM-4 Capable Ruggedized Ethernet Switch**

- Liquid cooled
- Configurable for system connectivity, speeds, port types and interoperation with various high-speed media converters and connectors for system interfacing
- Manufactured using derivatives of MIL-DTL-38999 Series connectors
- Standard AS39029 qualified cts used for power inputs & management functions
- 48 F MT Ferrule Fiber Optic ct assemblies used for fiber optic Ethernet ports

Amphenol Aerospace Operations

Click on to learn more.



**387 TV MT**

- Derived from MIL-DTL-38999 Series III
- The smallest circular connector which includes standard MT ferrule
- With 12 or 24 fiber the 387TV MT is the most dense circular connector
- With the STD MT ferrule in MM or SM, the process to assemble, cleaning or inspection is similar than a MPO

Amphenol Socapex



**QEPT  
4TX+4RX 100 Gbps**

- The world's first fiber removable and hot-pluggable 4TRX onboard optical module
- 4x25Gbps NRZ
- Rugged, MIL-STD-883 shock & vibrate qualified
- Works from -40°C to +85°C
- Excellent signal integrity, saves 10 dB link Budget
- Hot-pluggable and pigtail-free, easy maintenance, quick replacement and simplified scalability

Amphenol Active Optics Products



**SIM Module 42R26  
Reversed Gender**

- Very high contact density: 42 contacts size 26
- Reversed gender offering enhanced pin protection
- Module to be used with the whole range of EN4165 / SIM connectors

Amphenol Air LB France



**Pressfit Interposer**

- Miniaturization of the Press-Fit technology
- High density contact layout
- ARINC 600 standard interface
- New design for signal and power contacts

Amphenol Positronic Industries

Click on to learn more.

# OTHER PRODUCT CATEGORIES



## + Wires & Cables

OTHER PRODUCT CATEGORIES



**Composite General Purpose Wire & Cable**

- Excellent temperature performance (150°C, 175°C, 200°C & 260°C)
- Superior flammability & smoke generation properties
- Superior resistance to wet & dry arc propagation
- Lighter weight & smaller diameter than equivalent XL-ETFE constructions
- Excellent flexibility & flex life
- Superior abrasion resistance & cut-through performance

Amphenol Cable & Interconnect Technologies



**Firezone Wire & Cable**

- Minimum operation of 15 minutes at 1100°C
- Meets MIL-DTL-25038 & BSS7324 Shake & Bake Test, as appropriate
- Designed for use with MIL-DTL-38999 connectors
- Non-asbestos construction

Amphenol Cable & Interconnect Technologies



**SWAMP Wire & Cable**

- Designed for use in Severe Weather and Moisture Prone (SWAMP) areas on an aircraft (Wheel housings, Wings, Engine)
- Excellent resistance to fuels, hydraulic fuel and petroleum and ester based oils
- Superior flammability & smoke generation properties
- Operating temperature: -75°C to +260°C

Amphenol Cable & Interconnect Technologies



**High Speed Digital Data Cables**

- Exceptional electrical and mechanical performance
- -55°C to +200°C operating performance
- Multiple configurations to meet the needs of almost any application
- Lightweight versions to address weight and space requirements (New Product)
- Advanced technologies such as bonded pairs & an innovative X-Web reduces crosstalk and ensures installable performance
- Meet FAR 25.853 flammability and Boeing / Airbus smoke and toxicity requirements

Amphenol Cable & Interconnect Technologies



**Specialty & Custom Cables**

- Exceptional electrical and mechanical performance
- -55°C to +260°C operating performance
- Multiple configurations to meet the needs of almost any application
- Able to provide custom solutions combining Power and Data within single construction

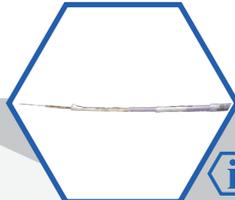
Amphenol Cable & Interconnect Technologies



**ECS & ECS Lightning Avionics RF Cables**

- Half the diameter of RG cables
- Up to 75% lighter than MIL-C-17 std cables
- Small bend radii - increased flexibility for routing during installation
- High protection from EMI/RFI interference
- Meets or exceeds FAR Part 25 Burn / Smoke requirements
- Meets / exceeds industry toxicity requirements. SKYDROL® & other fluids resistant
- New Lightning Coax cables provide up to 50% savings over standard ECS Coax cables

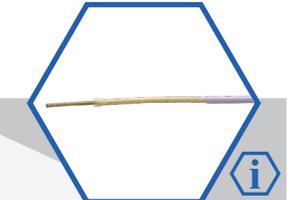
Amphenol Cable & Interconnect Technologies



**LITEflight EP Fiber Optic Cable**

- Most widely deployed fiber optic cables in aerospace and other harsh environment applications
- Industry leading environmental, mechanical and optical performance
- Universally compatible with all standard contact and connector types
- Available with any standard fiber type (multimode OM1-OM4 and singlemode OS1, OS2) as well as exotic fiber types (large core, radiation tolerant, polarization maintaining...)

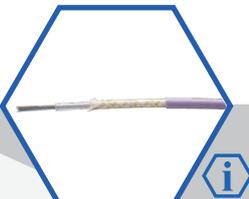
Amphenol Cable & Interconnect Technologies



**LITEflight TS Fiber Optic Cable**

- Highest performance tight structured fiber optic cable for Aerospace and other harsh environment applications
- Industry leading environmental, mechanical and optical performance
- Compatible with all contacts / connectors designed for tight-structure cable (EN4531, ARINC 801...)
- Available with all standard fiber types (multimode OM1-OM4 & singlemode OS1, OS2) and exotic fiber types (large core, radiation tolerant, polarization maintaining...)

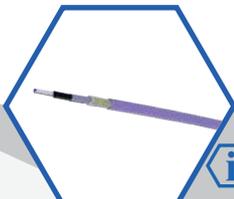
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**LITEflight HD Fiber Optic Cable**

- Only MT-compatible multi-fiber cable deployed globally in commercial aerospace and related applications
- Industry leading environmental, mechanical and optical performance
- Compatible with all standard MTP / MPO-derivative contact and connector systems
- Available in fiber counts from 8 to 24 and with any standard fiber type (multimode OM1-OM4 and singlemode OS1, OS2) as well as radiation hardened versions

Amphenol Cable & Interconnect Technologies



**LITEflight POF (Plastic Optical Fiber) Fiber Optic Cable**

- Only POF cable approved & deployed globally in commercial aerospace applications
- Industry leading environmental, mechanical and optical performance
- Compatible with POF contact solutions incorporating 1mm POF elements (includes leading ARINC801-derivative, M29504-style, TOSLINK, MOST network...)
- Available in solid & multi-core, multimode fiber types supporting transmission in IR-Visible Spectrum wavelengths

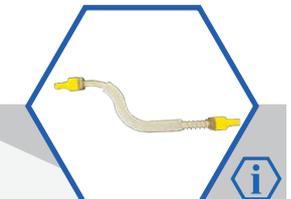
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**Fiber Optic Breakout Device**

- Allows "hybrid" FO interconnects adapting MTP/MPO-derivative connected systems to discrete, single-fiber contact systems
- Provides network designers and systems engineers significant advantage designing optical interconnect
- True "aerospace grade" solution compared to typical breakout methods utilizing heat shrink or similar cable adaptations for multi-fiber to single fiber interconnects
- Compatible with LITEflight HD and similar multi-fiber cable solutions

Amphenol Cable & Interconnect Technologies



**Encapsulated Cables**

- Custom 2D and 3D routings
- Allows for very compact fiber routing
- Resistant to a variety of fluids
- Temperature range: -55°C to +95°C
- Ideal for dense EO application where liquid cooling is essential

Amphenol Fiber Systems International

Click on to learn more.



## + Contacts & Lugs



**AS39029 Signal & Power Contacts**

- Qualified per AS39029, Type A
- Crimp terminations in size range 22D to 0
- Class A max. operating temp. +125°C
- Class B max. operating temp. +200°C
- Used in connector families MIL-DTL-24308, MIL-DTL-26482, MIL-DTL-28840, MIL-DTL-38999, AS50151, MIL-DTL-55302, AS81511, AS51659, AS81703, MIL-DTL-83723, MIL-DTL-83733 & more

Amphenol Cable & Interconnect Technologies



**AS39029 Thermocouple Contacts**

- Qualified per AS39029, Type C
- Crimp terminations in size range 22D to 12
- Temperature sensing applications upto 400°C depending upon alloy combinations used
- Used in Connector families MIL-DTL-24308, MIL-DTL-26482, MIL-DTL-26500, MIL-DTL-26518, MIL-DTL-38999, AS50151, AS81703, MIL-DTL-83723 & MIL-DTL-83733

Amphenol Cable & Interconnect Technologies



**AS39029 Shielded Contacts**

- Qualified per AS39029, Type D
- Size range 16 to 08
- Class A max. operating temp. +125°C
- Class B max. operating temp. +200°C
- Used in connector families MIL-DTL-26482, MIL-DTL-26500, MIL-DTL-26518, MIL-DTL-28748, MIL-DTL-38999, MIL-DTL-83527, MIL-DTL-83723 & MIL-DTL-83733

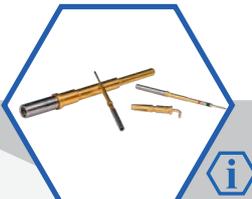
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**EN3155 Contacts**

- For harsh environments, qualified per EN3155, Type A, Classes P, R & S
- Withstand vibrations at highest temperatures and additional temperature exposures & variations
- Class P max. operating temp. +125°C
- Class R max. operating temp. +150°C
- Class S max. operating temp. +200°C
- QPL offering: Signal, Power, Twinax, Quadrx
- Used in connector families EN3545, EN3645-001, EN3682-001 & EN4165

Amphenol Cable & Interconnect Technologies / Amphenol Socapex



**PC Tail Contacts**

- Tri-Star has designed and manufactured thousands of Printed Circuit Tail contacts for all of the major connector families

Amphenol Cable & Interconnect Technologies



**Coaxial Contacts**

- Coaxial contacts for Mil-C-38999, ARINC or many other connector families are available from Tri-Star
- Our coaxial contacts are used in critical communication systems, commercial & military satellites, telecom, as well as navigation and integrated avionic applications

Amphenol Cable & Interconnect Technologies



**Solder Cup & Wire Wrap**

- We provide both. Whether you are prototyping or wiring up a test application, we can provide you with the solder cup or wire wrap contacts you need

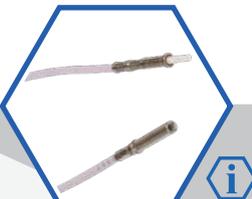
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**Octomax 1G26**

- The right choice for Ethernet Cat 5e and AFDX application
- One Octomax 1G26 is equivalent to two quadrx
- Fits in a standard size 8 quadrx cavity
- Available in crimp and PC Tail version

Amphenol Socapex



**LuxBeam**

- Expanded Beam Termini EN4869
- Beam section expanded 140 times
- Contactless optical connection
- For size 16 standard contact cavity for Series III of MIL-DTL-38999 / EN3645 / EN4165

Amphenol Socapex



**M29505/4 & /5 Termini**

- Qualified to MIL-STD-29504 / 04 & / 05 Rev. D
- Precision fiber optic ceramic ferrules
- Accurate ferrule / split sleeve alignment system
- Only qualified Single Mode Supplier
- Low insertion loss
- Widely available

Amphenol Fiber Systems International



**Temper Grip Contacts**

- Napkin ring technology on socket contacts
- High current pin
- Limited heat rise and up to 40% ampacity increase
- Fits in standard size 8 or 4 cavities of MIL-DTL-38999 or EN3645 connectors

Amphenol Socapex



**Thermocouple Contacts**

- Thermocouple contact type K, T or E

Amphenol Positronic Industries

Click on to learn more.

# + Contacts & Lugs



## Pressfit Contacts

- Process without any heat or cleaning
- Avoid of high reflow heat, minimizing thermal stress on the PCB and damaging plastic connector body and adjacent components
- Control reduced avoiding X-rays i.e.

Amphenol Positronic Industries



## HD750hms

- Contact size 8
- One channel for 4K or Ultra-HD quality - Meet 12G-SDI
- Unique float mount technology to allow consistent microwave performance
- Available for MIL-DTL-38999, EN3645, EN4165 and ARINC600
- Available in crimp and PC tails versions

Amphenol Socapex



## Octonet

- For MIL-DTL-38999 Series III connectors
- 8 spaced inner contacts that form four 100  $\Omega$  matched impedance differential pairs
- Available in size 8 crimp termination style
- Also available in PC Tails
- Can be installed in existing size 8 Quadrax cavities
- Meets specifications of CAT-6A cable
- 10G Ethernet compliant
- Higher bandwidth than standard CAT5E Quadrax-supports up to 4.0 Gbps per pair
- Enhanced crosstalk performance

Amphenol Aerospace Operations



## 750hms

- Contact sizes 16, 12, 8 and 6
- Available for MIL-DTL-38999, EN3645, EN4165 and ARINC600
- Available in crimp and PC Tails versions

Amphenol Socapex



## Single Pair Ethernet Twinax

- Contact size 12
- Available for MIL-DTL-38999, EN3645
- Available in Crimp and PC Tails versions
- Meets 1000BASE-T1

Amphenol Socapex



## Sealed Terminal Lugs & Splices

- Barrel seals on cable insulation to provide improved corrosion resistance over unsealed terminal lugs
- Available in copper for applications up to 260°C and in aluminum for up to a 65% weight saving
- Modified hex crimp design produces no burrs, eliminating the cost of secondary operations, minimizing plating damage and providing superior corrosion resistance in a single-stage crimp
- Patented integral oxide breaker improves conductivity while eliminating need for messy anti-oxidant grease

Amphenol Cable & Interconnect Technologies

# OTHER PRODUCT CATEGORIES

## + Sensors

Amphenol provides leading edge technology for today's Aerospace applications. From critical sensors for flight instrumentation to cabin comfort and convenience applications, we offer an array of standard and customized sensing solutions to provide the most reliable and accurate performing solutions for the most stringent of Aerospace applications.

Part of our product portfolio: Temperature Sensors, Pressure Sensors, Air Quality Sensors ...



**PSCI - Inductive eMotor Rotor Position Sensor**

- Alternative to conventional resolvers
- Up to 600,000 (el) rpm speed
- Low weight and compact dimensions
- Robust to tilt, misalignment & air gaps
- True power-on sensor: excellent accuracy and precision
- No shielding required
- End-of-shaft sensor for metallic target
- Std version available for 6, 8, and 12 poles
- Suitable for harsh environments (fully sealed, shock, vibration)

Amphenol Piher Sensing Systems



**NPI**

- Pressure sensor housed in a fluid filled cavity and isolated from the measured media by a stainless-steel diaphragm and body
- Designed to operate in hostile environments while providing outstanding sensitivity, linearity and hysteresis

Amphenol NovaSensor



**MTS360 - Miniature Hall-Effect Through-Shaft Rotary Position Sensor**

- Through-hole design
- Low weight and compact dimensions
- Life: up to 50M cycles
- Sensor + PCB + connector combo package available
- Switch function with programmable position

Amphenol Piher Sensing Systems



**Cryogenic Pressure Sensors**

- Operating temperature: -320°F to +112°F (-196°C to +100°C)
- Safety wire holes
- Ground isolation

Amphenol PCB Piezotronics



**Cryogenic Vibration Sensors**

- The use of specialized, built-in, cryogenic circuitry and quartz shear sensing technology promote survivability in demanding environments such as liquid nitrogen
- Each sensor is hermetically sealed and individually tested to determine the thermal coefficient of sensitivity at -320°F (-196°C) ensuring reliable operation and accurate measurements
- These sensors have been successfully used in the presence of liquid helium during structural testing of rocket boosters

Amphenol PCB Piezotronics



**PS2P LIN,CON - Touchless Two-Piece Sensor**

- Selectable output: analogue (ratiometric), PWM, SPI and CAN
- Programmable measuring range
- Immunity to magnet's misalignment that negatively impacts operational performance
- LVDT and RVDT replacement

Amphenol Piher Sensing Systems



**MH-Series COMPACT (MS)**

- The MH-Series COMPACT (MS) magnetostrictive position sensor is designed for direct stroke measurement in hydraulic cylinders with bore diameters of 28 mm or greater
- The proprietary M12 connector system enables IP69K
- Outputs: Analog, CANbus

Amphenol Temposonics



**HUMS Vibration Sensors**

- Accelerometers tailored for:
  - Mechanical Diagnostics
  - Rotor Track & Balance (RTB)
  - Engine Vibration Monitoring (EVM)
  - Electric Vertical TakeOff & Landing (eVTOL)
  - Urban Air Mobility
  - Hybrid & Electric Aircraft Engine Testing
- Case isolated to reduce EMI & ground loop interference
- Can be qualified to RTCA/DO-160 & MIL-STD-810

Amphenol PCB Piezotronics



**High Temperature Vibration & Pressure Sensors**

- Technical advantages of PCB's high-temperature UHT-12™ sensors
- Absence of pyroelectric noise spikes up to 1400°F (760°C)
- Sensitivity that remains more consistent over a wide temperature change
- Proprietary shear mode crystal technology comes sealed in a hermetic package, isolated from base strain & transverse measurement errors

Amphenol PCB Piezotronics



**PST-360**

- Selectable output: analogue (ratiometric), PWM, SPI and CAN
- Hollow shaft design
- Resistant to vibration and extreme temperatures
- Absolute position over 360°
- Life: up to 50M cycles
- Full redundancy available

Amphenol Piher Sensing Systems

Click on  to learn more.

# + Sensors



### Low Outgassing Vibration Sensors

- Vibration measurements in Thermal Vacuum or Space environment
- Welded hermetic accelerometer designs have low outgassing qualities
- Materials selected using NASA guidelines

Amphenol PCB Piezotronics



### Hermetic Sensor Headers

- Landing gear
- Vibration sensors
- Temperature sensors
- Level monitoring
- Gas analysers
- Pressure sensors
- Proximity sensors

Amphenol Martec



### IPT

- Pressure ranges from 1 to 10,000 psi
- Accuracy 0.25% FSO - 0.5% FSO
- Compensated temperature: -20°C to +85°C
- IP65 - IP67, model dependent
- Response time < 1 mS
- Multiple pressure port options
- Multiple electrical connection options
- Multiple electrical output options
- Change threading, o-ring port

Amphenol NovaSensor



### Radiation Hardened Vibration Sensors

- Hermetically sealed and Ground isolated
- Temperature compensated to +288°C
- Radiation environment up to 108 rads

Amphenol PCB Piezotronics



### PS2P-ARC - Play Resistant Arc Position Sensor

- Unlimited mechanical life
- True touchless operation
- IP69K sealing, high operating temperature range, shock and vibration resistance
- Immune to radial and axial play
- Compact and low profile package
- Standard magnets available
- Custom mechanical design, programmable transfer function and switch outputs as well as different output protocols and redundancy levels available

Amphenol Piher Sensing Systems

# OTHER PRODUCT CATEGORIES

## + Antennas

Amphenol's world-leading antenna, DAS, and combiner and filter solutions are the only way to meet your customers' uncompromising standards for reliable network performance.

Through several decades of developing industry leading products for private and mission critical wireless networks, Amphenol has built a very comprehensive product line that contains more than 7,000 products within 38 product types.

Our products are known for their high reliability as they undergo rigorous testing procedures before market release. Our test panel includes: temperature testing; pressure testing; vibration testing; performance testing - including PIM testing, dust and water testing, bend-testing, wind load testing and lightning testing.



**Air-Ground-Air Antenna  
QHA 450-RH**

- Circularly polarized quadrifilar helix antenna for fixed installation
- Right-hand circularly polarized antenna
- Ideal for master/main antenna for air-ground-air (AGA) communication
- Has a hemispherical coverage that is also ideal for AGA communications
- A sturdy glass-reinforced plastic shroud ensures effective protection against the weather

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**Active Receiving Antenna for the  
GPS, GLONASS, BEIDOU  
& GALILEO (GNSS 2020)**

- Full hemispherical coverage for the GNSS
- Built-in high gain, low noise amplifier
- Input filter for thorough RF-overload protection
- Right-hand circular polarization (RHCP)
- 3 V - 15 V supply voltage
- DC supply via RF-connector
- Total design carried out to make the antenna withstand tough environments

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**Wideband Ground-Air dipole, 0 dBd,  
108 - 175 MHz, F190 Base Mount  
(470.01.05.00-F190)**

- The 470 Series of glassfibre omni antennas are designed for ground-to-air wide band applications and can also be used in military scenarios
- These antennas cater to the most stringent physical and environmental requirements and they've been crafted to provide optimal performance across a wide bandwidth

Amphenol Procom



**Band-Pass Filters for the 130 MHz  
Band (BPF 3/...-125)**

- High power base station band-pass filters for the 116 - 146 MHz range
- The use of large  $\phi 125$  mm cavities gives a high Q, resulting in a very narrow passband
- The large dimensions also mean a high power rating
- Unloaded Q of a single cavity is approx. 4500
- High frequency stability on temperature and power
- Mounted on 19" brackets

Amphenol Procom



**$\frac{1}{4} \lambda$  Steel-Band Antenna for  
Portable Equipment in the 3 m  
International Aircraft Band  
(SB 3-1/2/118-136 MHz-N)**

- Rugged, flexible steel-band antenna whip
- Curved sectional area to help keeping the antenna erect
- Delivered factory tuned and tested to ensure minimum VSWR and optimum performance
- Provided with N-male connector
- Matching unit built-in

Amphenol Procom

Click on  to learn more.

# Charging Solutions / In-Seat Connectivity

This refers to all Audio & Charging solutions, USB power, bluetooth connectivity and Wireless charging for commercial Aerospace applications.

Amphenol is the world's leading supplier of electronic innovations in noise cancellation, audio enhancement and other electronic touch points in the aircraft cabin.

Amphenol's proprietary active noise-cancellation technology is now specified by major airlines and sourced by all of the major manufacturers of in-flight entertainment systems.



**Bluetooth Jack**

- Add or extend wireless connectivity of IFE and media systems
- Allows data and audio streaming to passenger headphones and headsets via Bluetooth 5.0

Amphenol PCD



**Magjack**

- Pair with proprietary active noise cancelling technology
- High durability magnetic interface
- Compatible with standard 3,5 mm jacks

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**SmartPIM**

- Patented modular system that can be installed in the seatback, armrest or as a remote application
- Each module can be installed in any opening, allowing the customer to completely customize the chassis to fit different requirements

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**High Power USB**

- Integrate PED charging into any IFE system
- Multiple configurations available including USB-C 60 Watts (X2) for high power or 30 Watts (X2)
- Features dynamic load sharing

Amphenol PCD



**Dual Port MagJack**

- Incorporates high durability magnetic interfacing jack with a USB charging port in a small, lightweight package
- Built with proprietary Active Noise Cancelling technology within the jack
- Compatible with standard 3,5 mm jacks and comes with an LED light pipe illuminating the charging port for low light environments

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**Qi2 Wireless Charging**

- Cable free charging, using a single coil with magnetic alignment
- Small, light, efficient charging surface
- Delivers up to 15 W of power

Amphenol PCD



**Smartjack**

- Standard obround, square and triangle cutout audio jacks with proprietary active noise cancelling technology
- Pair any standard 3,5 mm audio device and enjoy reduced noise for a more convenient flight

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Click on  to learn more.

# OTHER PRODUCT CATEGORIES

## + Attachment Systems



Amphenol provides a wide range of composite cable and pipe management solutions including clamps, cable supports, brackets, standoffs or raceways.

Amphenol Cable Harnesses and System Attachments feature ruggedized products that protect critical components in severe or harsh environments.



**CC5516 Light / ABS2195 Light Cable Clamps**

- Derived from CC5516 composite clamps
- Available in 10 sizes for cable or pipe diameters from 5 to 25,4 mm
- Weight saving up to 24% compared to legacy CC5516 composite clamps and up to 73% compared to metallic clamps
- Closing and fixing in one step by screw
- Pre-locking mechanism
- Suited for stacking mount
- Protection from vibration by overmolded elastomer

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**86P Clamp**

- One-for-one replacement to outperform industry standard metal clamps (i.e. AS21919)
- Separate locking and mounting locations
- Reduces weight and installation time

Amphenol PCD



**75P Clamp**

- One-for-one replacement to outperform industry standard metal clamps (i.e. AS21919)
- Butterfly stacking & locking features
- Reduces weight and installation time

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**Fixing Brackets ABS1424**

- Brackets for cable harnesses fixing
- Full lightweight thermoplastic
- Suited for different structure thicknesses
- 2 functions in 1:
  - Fixing on structure
  - Cable clamps are fixed by screw
- Operating temperature: -55°C to +85°C mini
- Conform to ABD0031 and FAR 25853

Amphenol Air LB France



**Adhesive Snap 'N Post**

- One-for-one replacement to the ring posts
- Posts are pre-installed to the structure while the adapter heads have already been installed to the wire harness
- Reduces installation time from ~30+ sec to less than 5 sec

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**ABS14XX Monoblock Pipe Clamps**

- Hydraulic pipes fixing on structure
- For Standard or Fuel zone
- Lightweight (composite + silicone)
- Pipes protected from vibration by overmolded elastomer
- Closing and fixing on structure by screw
- Available from 1 to 5 holes / various and mixed diameters (from 6.3 to 19 mm)
- Operating temperature: -55°C to +150°C

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**Adhesive Standoff**

- Material options of PEEK 150GL30 or GF Ultem
- Offering VHB Tape options for applications where wet process is unnecessary saving install time due to cure
- Each standoff uses 10-32 insert making it compatible with APH Clamps; metric option available

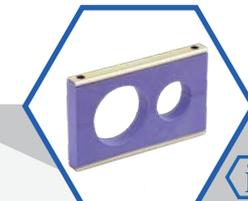
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**Wiring Accessories**

- Lightweight and Durable: simplifies wire bundle installation & maintenance
- Variety of sizes and shapes: accommodates different cable routing requirements
- Cable harness maintained by cable tie
- Fixing on structure (by screw), on shaped supports or bended supports
- Operating temperature: -55°C to +135°C

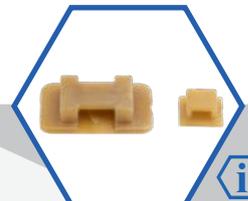
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**Fairlead Blocks**

- Customizable, provide stability against surges and vibration
- Ensures pipes and tubes are properly secured throughout the entire length of the aircraft
- Designed with cored out geometry to help reduce weight by up to 20% from traditional rubber blocks
- Multiple high performance materials available, EPR, Nitrile, Fluorosilicone, all designed for different applications

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**Adhesive Tie Mounts**

- Adhered using either VHB tape or wet processes epoxy
- Rectangular cable tie mounts or smaller square tie mounts
- Used with any standard MS3367 or equivalent tie down strap

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Click on to learn more.

# + Attachment Systems



## Modular Brackets

- Suited for cable fixing on structure
- Modular design
- Adjustable design to cope with cable orientation (45° / 90° / 135° and 180°)
- Lightweight composite
- Wide range of sizes and standoff versions

Amphenol Air LB France



## Adhesive U-Snap Clamps

- Versatile base geometry for VHB tape per 5958FR or wet process
- Color coded grommets for each size
- Housing bonded & mounted versions available

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## CC1339 Light / ABS1339 Light Cable Clamps

- Suited for cable harness fixing on structure
- Light versions derived from standard ABS1339 clamps: 18% weight saved
- 100% composite and silicone
- Electrical bundle protected from shocks & vibrations by overmolded elastomer
- Fixing by screw, closing by cable tie
- Available in 8 sizes for cable diameters from 5 to 48 mm
- Operating temperature: -55°C to +150°C

Amphenol Air LB France



## CRN Bracket

- Custom made to hold the "Current Return Network" in place inside a composite aircraft
- Easy to install with a bolt, the CRN system is fixed in place by hand with an integrated snap system on the bracket
- Different configurations are available per customer requirements

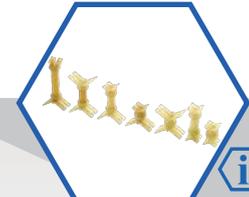
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## Conduits

- Nylon material protects wires from abrasion and / or harsh environment
- Customization available as customer requirements vary in harness DIA and length
- Conduits 2-piece design requires P-Clamp to secure part assembly

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## ABS1144 / 3308 Separators

- Spacers to maintain the required distance between two parallel or crossing cable bundles
- Qualified to Airbus standard ABS1144, available in 3 distances: 25, 50 or 75mm
- Lightweight and environmentally resistant thermoplastic
- Operating temperature: -55°C +130°C
- Shocks & Vibrations: according to DO160D sec. 7 & 8
- Easy installation for cable diameter up to 45 mm with cable ties

Amphenol Air LB Germany



## Power Feeder Spacers

- Provide constant spacing between the power feeder harnesses withstanding high temperatures
- Ultem material allows for a slight degree rotation on the power feeder bundle
- Secure up to seven bundle positions with split spacer or use smaller spacers for non power feeder harnesses
- Lightweight, used with Amphenol PCD clamps and non-conductive and non-corrosive

Amphenol PCD



## Bus bar / Cable Support

- Lightweight composite clamp
- Suited for bus bar or cable fixing on structure
- Interchangeable grommets to cope with the cable diameters or busbar size
- To be mounted on ABS2225 fixing brackets. Or direct mounting on structure (with screws)
- Locking system to secure the closing

Amphenol Air LB France



## Fixing Brackets ABS2225

- Full lightweight thermoplastic
- Wide range of track length (1 up to 24 parts)
- 4 mounting positions on structure (0° / 90° / 180° / 270°)
- Cable accessories can be fixed on 3 sides of tracks
- Operating temperature: -55°C to +85°C
- Conform to ABD0031 and FAR 25853

Amphenol Air LB France



## PEEK Standoffs

- Designed with strength, stability and weight reduction in mind to replace standard metal parts
- Made with 30% Glass Filled PEEK this provides users with a strong, lightweight, non-conductive and non-corrosive solution
- Standoffs come with a locking feature in the insert for extra security and designed with ribs to provide additional load bearing strength

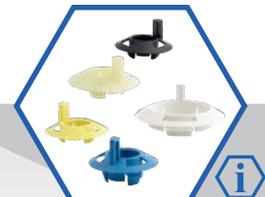
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## Fixing Brackets ABS1694 / ABS1695

- Designed to help guide and maintain ventilation conduits on structure
- Full lightweight thermoplastic
- Suited for different structure thicknesses
- 2 functions in 1 depending on the PN:
  - Fixing on structure
  - Pipe maintaining with locking system
- Operating temperature: -55°C to +85°C
- Conform to ABD0031 and FAR 25853

Amphenol Air LB France



## QuickSNAP Lightning Hole Bushing

- Guide wired bundles through the aircraft's frame and stringers
- Reduces installation time from 10 minutes to 5 seconds
- Limits the need for hardware, lowering the risk of foreign object debris (FOD)
- Smooth edges reduce wire chaffing

Amphenol PCD

Click on to learn more.



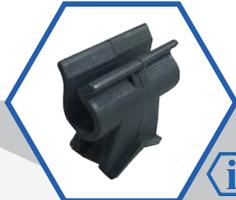
## + Attachment Systems



**Wire Separator**

- Provide constant spacing between the power feeder harnesses withstanding high temperatures
- Ultem material allows for a slight degree rotation on the power feeder bundle
- Secure up to seven bundle positions with split spacer or use smaller spacers for non power feeder harnesses

Amphenol PCD



**Cable Supports**

- Fix on an aircraft's airframe, helping to secure and manage cable harnesses as they run throughout the aircraft body
- Offered in nylon, ultem and PEEK and available in various standard configurations and sizes
- Customizable

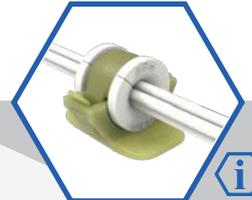
Amphenol PCD



**Fixing Brackets ABS1688**

- Brackets to maintain Cable harnesses or hydraulic pipes on structure
- Full lightweight thermoplastic
- Suited for different structure thicknesses
- 3 functions in 1 depending on the PN:
  - Fixing on structure without tool
  - Pipe maintaining with locking system
  - Ensure the required centre-to-centre distance between pipes
- Operating temperature: -55°C to +85°C
- Conform to ABD0031 and FAR 25853

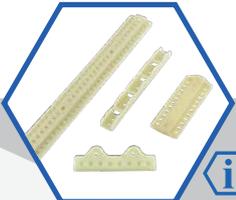
Amphenol Air LB France



**81X Clamp**

- Pre-mountable clamp for faster installation times offered in adhesive or screw mount options
- Non-conductive and non-corrosive grommets and clamps provide security against potential arcing
- Lightweight nylon or ultem quick latching clamps for easy wire harness routing
- 13 interchangeable grommets across 3 clamp sizes provide flexibility for any wire bundle diameter

Amphenol PCD



**Raceways**

- Single piece, lightweight design with multiple fixing points to make wire bundle installation and maintenance easy

Amphenol PCD

## + Structures

With a unique ability to design, build, test and certify numerous types of interconnect structural items, Amphenol CIT has the leading edge in end-to-end manufacturing.

ACIT focuses on building the highest-quality products with the best materials available, offering a wide range of precision structures to meet the most demanding standards and specifications: Aero Structures, Trays, Racks, Enclosures, ARINC 836A miniature modules, ...

ADDED VALUE



**ABS1876 Tray**

- Developed for the Airbus A350 aircraft but can also be used on all Airbus A3xx aircraft
- Provide a 20% reduction in weight compared to our standard ABS1699 trays
- Meet ARINC 600 standards & ABS1773 requirements specific to these aircraft platforms

Amphenol Cable & Interconnect Technologies



**ARINC 836A Miniature Module Tray**

- A small form-factor avionics mounting solution that enables quick and easy field installation/replacement of LRUs
- Much like the ARINC 404 and ARINC 600 solutions in place today, this ARINC 836A-compliant design offers interchangeability between manufacturers and standard mounting
- A tray that mounts to the aircraft
- An enclosure that holds the electronics
- A locking latch to allow quick and easy installation of the enclosure to the tray

Amphenol Cable & Interconnect Technologies



**ARINC 404A Tray**

- All ARINC trays are designed and fabricated in our state-of-the-art manufacturing facility using top-quality aircraft-grade materials to meet or exceed ARINC specifications, as well as all civil and military aircraft application criteria
- Our special designs stand up to the most rigorous environmental hazards for in-flight and on-the-ground operations
- Each tray is fully warrantied, ensuring that your avionics systems equipment will not only fit securely but operate safely

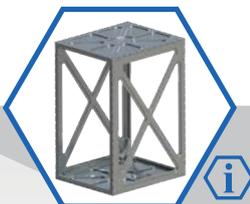
Amphenol Cable & Interconnect Technologies



**ABS1699 Tray**

- Standard equipment on all Airbus A3xx aircraft
- Meet ARINC 600 & ABS1773 standards specific to these aircraft platforms
- Integrated side seals to speed installation on cooled equipment shelves
- Cooling holes standardized to accept NSA939511-03 plugs
- Advanced thumbscrew hold-downs standard

Amphenol Cable & Interconnect Technologies



**19" Equipment Rack**

- The lightweight, ruggedized construction takes advantage of innovative design: offers a significant weight reduction
- Conform to Rack Standards EIA / ECA-310-E, Universal Rack Mounting Flange and available in standard "U" heights
- Designed for all aircraft types and can be customized to meet special mission needs
- Standard mounting hole patterns are available for 24" & 27" depth rack config.
- Custom depth and mounting hole patterns are available per request

Amphenol Cable & Interconnect Technologies



**Custom Tray**

- Our engineering staff is available to solve your installation challenges
- Vibration isolation mounts
- Grounding springs or studs
- Terminal blocks or strips
- Cooling fans & plenums
- Drip shields and hoods
- Full EMI enclosures behind the connector
- Multiple trays or mounts collected into a stacked, side-by-side, or other configuration

Amphenol Cable & Interconnect Technologies



**Retractable Pin and J Hooks**

- Retractable pins for ARINC 404A and ARINC 600 trays
- J Hooks designed for use with all ARINC specifications

Amphenol Cable & Interconnect Technologies



**Retractable Pins**

- Retractable pins for ARINC 404A and ARINC 600 trays

Amphenol Cable & Interconnect Technologies



**Avionics Enclosures**

- We use top-quality aircraft-grade materials to meet or exceed ARINC 600 specifications, as well as all civil and military aircraft application criteria
- Our special designs stand up to the most rigorous environmental hazards for in-flight and on-the-ground operations
- Each enclosure is fully warrantied, ensuring that your avionics systems equipment will not only fit securely but operate safely
- Optional plenum chamber & fan for positive pressure air cooling system

Amphenol Cable & Interconnect Technologies



**ARINC 600 Tray**

- All ARINC trays are designed and fabricated in our state-of-the-art manufacturing facility using top-quality aircraft-grade materials to meet or exceed ARINC specifications, as well as all civil and military aircraft application criteria
- Our special designs stand up to the most rigorous environmental hazards for in-flight and on-the-ground operations
- Each tray is fully warrantied, ensuring that your avionics systems equipment will not only fit securely but operate safely

Amphenol Cable & Interconnect Technologies

# ADDED VALUE

## + Structures



### Insertion / Extraction Hold-Down

- Force limiting clutch
- Jammed mechanism release per ARINC 600
- 7/8" socket drive body
- Minimum 1/2" extraction of LRU

Amphenol Cable & Interconnect Technologies



### Military Style Hold-Down

- Secure ratcheting locking mechanism
- Easy engagement / disengagement
- Meets MS14108, MIL-F-85371 standard
- Hold 1000 lbs of static load applied at 45 degree angle

Amphenol Cable & Interconnect Technologies



### Alternate Advanced Thumbscrew Hold-Down

- Resists vibration and shock even when not fully engaged
- Features secure ratcheting locking mechanism
- Features easy engagement and disengagement

Amphenol Cable & Interconnect Technologies

## + Radomes / Aircraft Connectivity Systems

Avionics equipment is made even better with the best installation components.

Amphenol CIT provides kits and components with varying levels of factory-completed integration to fit the needs of any installation program.

Engineering teams are ready to create the perfect package, including custom structures, harness assemblies, fiber optics, RF cables, and other critical components.



### Ka1717 OAE Installation Kit

- Complete turnkey Satcom integration package
- Low profile, minimum footprint provides optimum aerodynamic performance and minimizes operator operational costs
- Adapter plate and skirt design enhancements from legacy installation packages significantly reduce installation time and improve maintainability
- Fittings integrated into adapter plate structure - fewer parts, less complex, lower cost
- Simple OAE installation sequence - no special tools, no shimming, no match-drilling

Amphenol Cable & Interconnect Technologies



### G-ESA OAE Installation Kit

- The new G-EASA OAE Installation Kit from Amphenol-CIT features a minimized profile, reducing installation size and enhancing aerodynamic performance with lower drag compared to competitors
- Its single-piece adapter plate supports multiple payloads and fuselage diameters while optimizing thermal transfer and reducing weight through integrated fittings
- A simplified slip bearing design ensures stability by accommodating fuselage movement
- The integrated aluminum skirt provides efficient heat dissipation for on-ground operation and adapts easily to various airframe types
- With a fully integrated package, the kit installation time is significantly reduced, requiring only standard hand tools and including bulkhead feed-throughs for seamless system interconnectivity

Amphenol Cable & Interconnect Technologies

Click on to learn more.

## CABLE HARNESES



Amphenol Sefee / Amphenol Ionix Systems Ltd

Cable harnesses are the link between mechanical controls and accessories, electronic components and software on complex and demanding systems in aerospace, ground vehicles, and electronic applications, specifically engines and power distribution applications.

Build to specification and/or build to print requirements can be addressed from Digital Mock-Up data (DMU) to form boards of electrical harnesses in all aerospace applications. This will include wiring diagrams, product change management, configuration management and electrical testing. An EWIS responsibility (Electrical Wiring Interconnect Systems) can be proposed to customers, including aircraft certification support, integration into the aircraft when requested, obsolescence management, maintenance and technical assistance over the total program flying period.

Contact us to know more about our worldwide offset capabilities.

ADDED VALUE

At Amphenol, we understand that high reliability electronics requires state-of-the-art equipment, experienced and passionate people, and rigorous process validation. We work closely with our customers to ensure that products meet or exceed all requirements and expectations right from the very start of the project.

Amphenol can design, develop, qualify and manufacture any specified requirements from a customer for control and monitoring data in all aerospace applications. Hardware and software development will follow Validation & Verification process cycles, managed by special project management teams. Outcomes may include functional test equipment, maintenance documentation and obsolescence management.

## ELECTRONIC PACKAGING & EQUIPMENT



Amphenol Sefee / Amphenol Borisch Technologies / Amphenol Socapex / Amphenol Interconnect India

Amphenol's cable assemblies include simple point-to-point cables, custom high-power and high-speed data cable assemblies.

Our cable assemblies include the latest industry innovations in radio frequency (RF), fiber optics, high-power requirements and high-speed data transfer for the newest systems and applications.

In addition, our broad portfolio of cable connectors and accessories can be used in our cable assemblies to provide a complete solution.

Our commitment to technical excellence makes us an industry leader in providing sophisticated solutions and professional technical assistance.

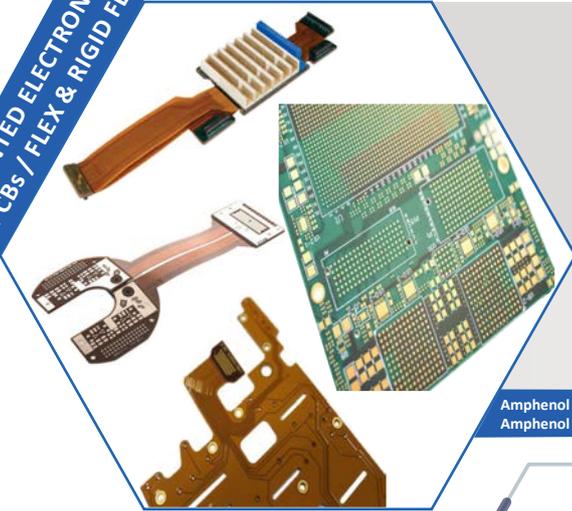
## CABLE ASSEMBLIES



# ADDED VALUE



PRINTED ELECTRONICS  
(PCBs / FLEX & RIGID FLEX)



Amphenol is a world leader in the printed circuit industry for Military and Commercial markets, building PCBs, Backplanes, Flex and Rigid-Flex products to meet our customers' demanding needs.

PCBs: With production capabilities well beyond the industry standard for panel size, thickness, speed and technology, Amphenol provides solutions to the most rigorous system demands. Collaborative relationships with suppliers assure Amphenol's ability to offer the experience necessary to remain current with laminates, processes and equipment while defining the path to the future.

FLEX: Amphenol has developed extensive manufacturing experience, product knowledge and technical expertise in the fields of flex and rigid flex: single-sided flex, double-sided flex, multi-layer flex and rigid flex of any length (patented process innovation).

Amphenol Invotec / Amphenol Printed Circuits /  
Amphenol Trackwise

## MEDIA CONVERTERS / TRANS-CEIVERS / OPTICAL SWITCHES



Amphenol Socapex / Amphenol Active Optical Product

The switches are the center of Network Solutions. Amphenol provides network solutions for use in harsh environments, where reliability and resistance to outside influences, such as temperature, shock, vibration, water, dust, etc. are paramount. Its rugged and durable solutions give you the assurance of a continuous and secure data transmission between all your communication equipments in the harshest environments.

Amphenol capabilities in networks solutions include: Network design, Network evaluation, Network gateways and converters, Measurement equipment. Based on its expertise in harsh environment, Amphenol provides high demanding markets with both the interconnection products and the network design.

ADDED VALUE

Connectorization refers to the principle of «integrating connectors onto structural elements», aiming to reduce part numbers and integration time while optimizing space and simplifying the supply chain (one part, one supplier to track).

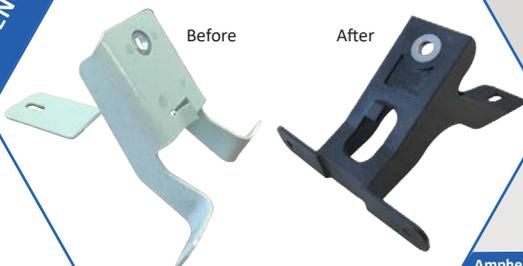
Our commitment to technical excellence in the fields of interconnects and value added systems makes us an industry leader in providing custom design solutions for your needs regarding connectorization of structural elements.

## CONNECTORIZATION



Amphenol Air LB France

## REENGINEERING



Amphenol Air LB France

Reengineering consists of a method aiming to redesign and reproduce an obsolete component or improve the performances of an existing product.

Especially suited when the component is part of a complex system, Reengineering might be a solution to avoid a time consuming and expansive redesign and qualification of the whole system.

Application: All connectors and attachment systems for demanding applications.

# Amphenol

## Amphenol Active Optics Products

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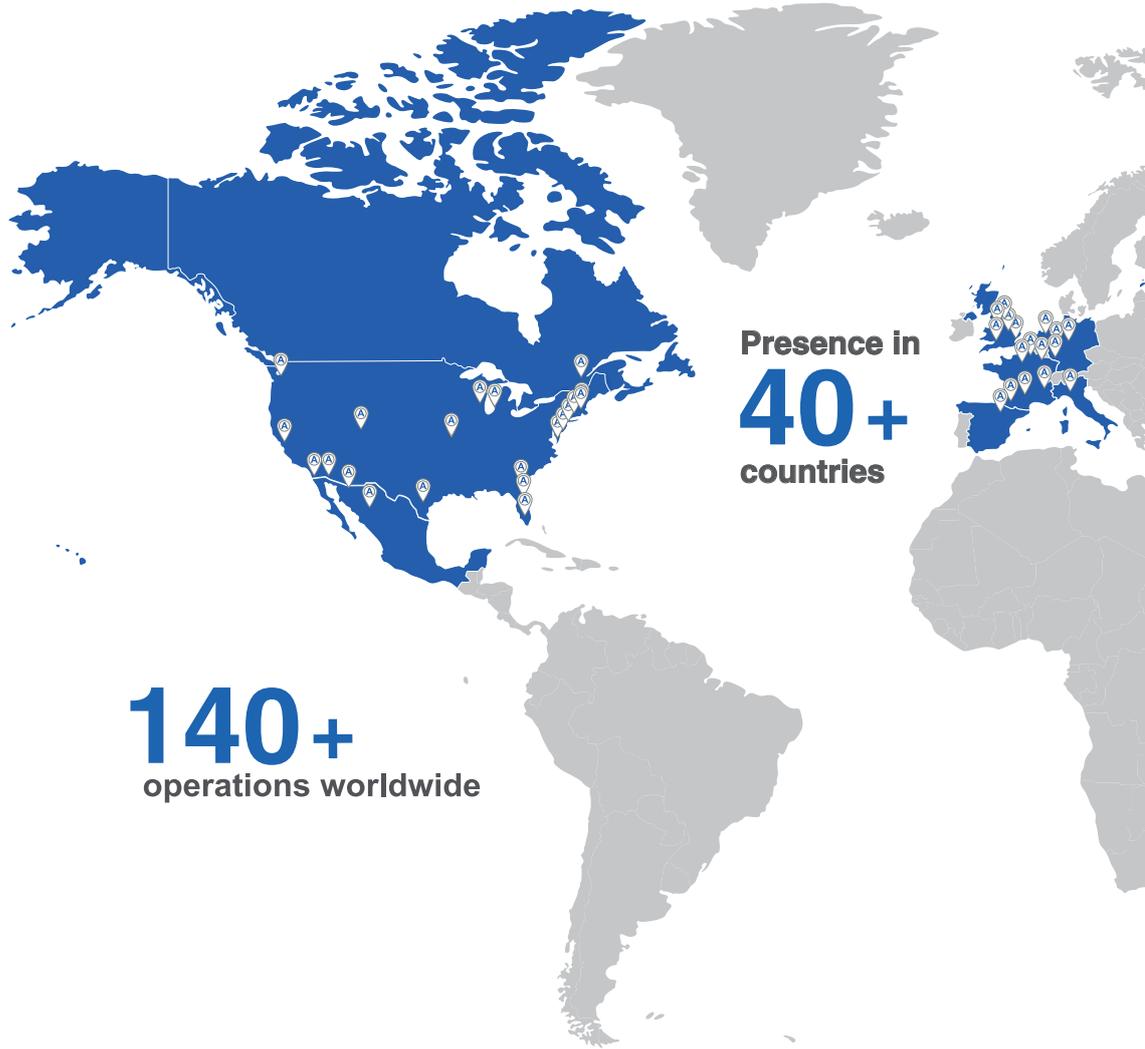
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Presence in  
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**140+**  
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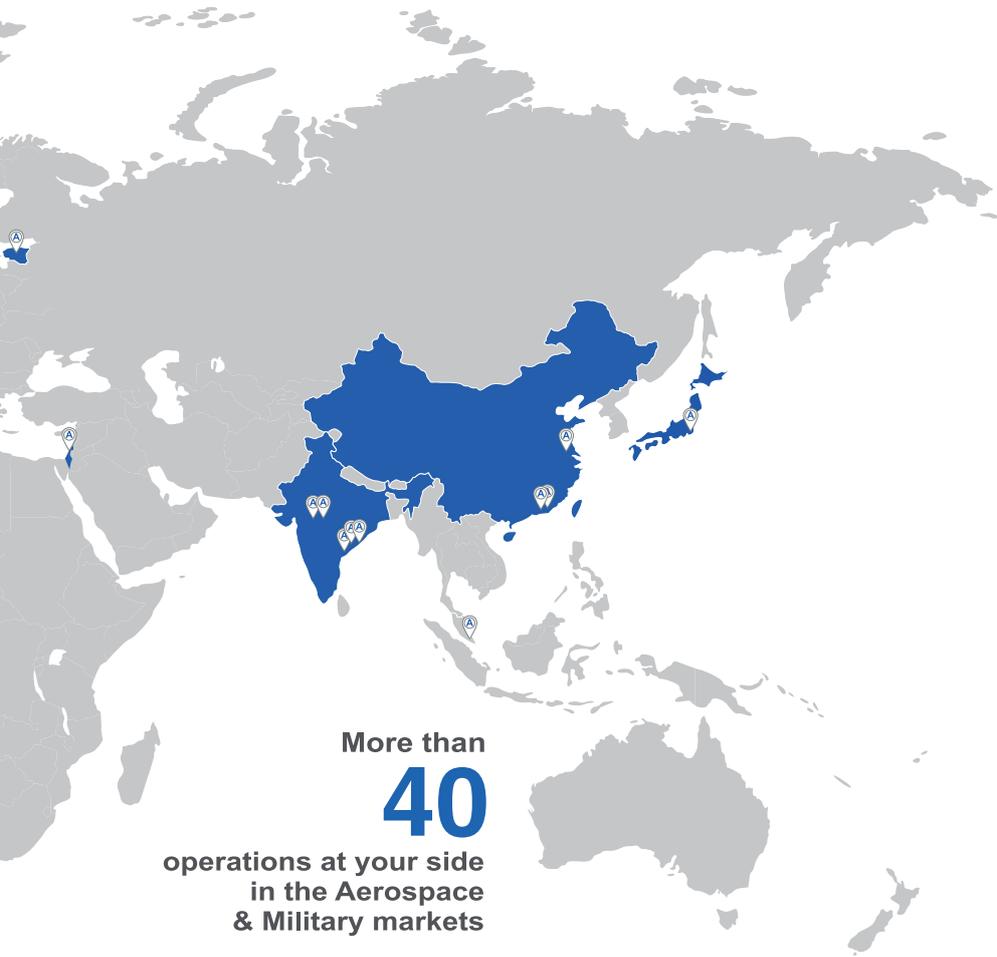
## Amphenol Nexus Technologies

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# WHERE WE ARE



More than  
**40**

operations at your side  
in the Aerospace  
& Military markets

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