



Amphenol

CONNECTING PEOPLE + TECHNOLOGY.



PRODUCT OVERVIEW

Chairman's Note



Since 1932 Amphenol has been the interconnect technology provider of choice to industry leading companies throughout the world. With a broad and diverse product portfolio, Amphenol is able to develop the right solutions for our customers across the diverse segments of the rapidly expanding electronics market.

With more than 33,000 dedicated employees working at over 85 facilities in more than 30 countries, Amphenol has the unique advantage of having both diversified global reach while still being a focused organization. Our focus comes from our entrepreneurial management teams dedicated to specific markets and regions.

Amphenol's management is extremely proud of our financial and market performance throughout various economic cycles. Due to our culture of cost control and our operating discipline, Amphenol is ready to prosper in any market condition.

This catalog details Amphenol's primary markets, our comprehensive product portfolio, our geographic presence, our financial strength, as well as some highlights of the interesting projects we have participated in. This cross-section of our offering will help you understand Amphenol's capabilities to develop performance-enhancing interconnect solutions that enable your organization to achieve its high-tech goals.

A handwritten signature in black ink that reads "Martin H. Loeffler". The signature is written in a cursive, flowing style.

MARTIN H. LOEFFLER
CHAIRMAN, AMPHENOL CORPORATION

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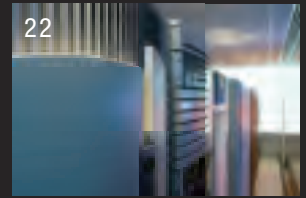
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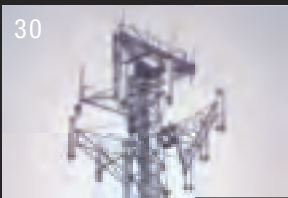
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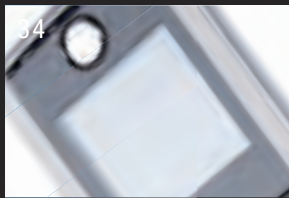
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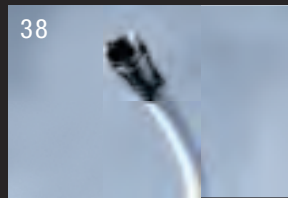
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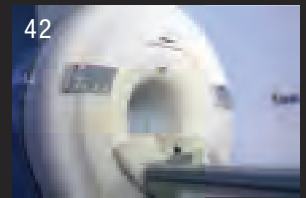
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MEDICAL

Amphenol is one of the world's largest interconnect manufacturers. Founded in 1932, Amphenol designs, manufactures, and markets electrical, electronic, and fiber optic connectors, interconnect systems, and coaxial and specialty cable.

Amphenol was founded in 1932 as the American Phenolic Corporation by entrepreneur Arthur J. Schmitt. From Schmitt's initial innovation, the first mass-produced radio tube socket, Amphenol has focused on creative leading edge interconnect technologies that enhance the performance of our customers' products. We provide interconnect solutions for customers in the automotive, broadband, industrial, information technology and data communications, military and aerospace, mobile devices, and mobile networks markets.

Whether producing billions of connectors for mobile phones or a single connector for the International Space Station, Amphenol has become the interconnect technology partner of choice to its customers. The timeline below provides highlights of Amphenol's evolution into the global organization it is today.

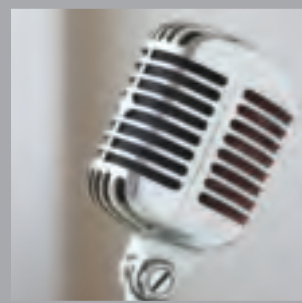
1932:



1st Product:

Amphenol founder Arthur J. Schmitt creates the first mass-produced vacuum tube socket. Amphenol is born.

Late 1930's:



Broadcasting:

Amphenol releases the 75 series uniform microphone connector and lock-in socket. The revolutionary lock-in socket greatly simplifies manufacturing radios. Both become the industry standard.

WWII:



Military & Aerospace:

Amphenol invents the 5015 AN (Army/Navy) series connector, which becomes known as the "Amphenol Connector" by B-29 Super Fortress maintenance crews. Each B-29 Super Fortress has over 1600 Amphenol connectors.

Postwar:



Data & Telecommunications:

Amphenol's blue ribbon cable becomes the Bell Systems standard.

Commercial Air:

The Amphenol 26500 connector helps Boeing's 707 take to the air.

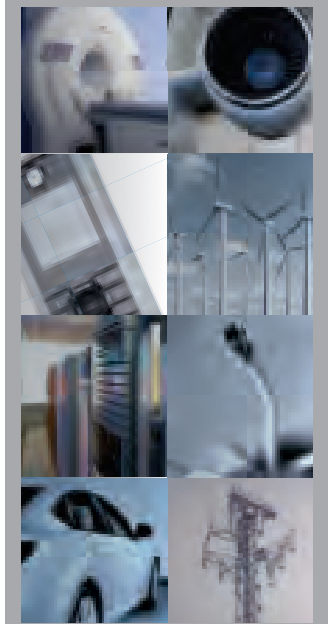
Industrial:

Amphenol's harsh environment industrial connectors are used in European rail mass transit, factory floors, and heavy machinery.

GEOGRAPHIC EXPANSION:

- 1957 – 1st international acquisition: Amphenol LTD in the UK
- 1963 – 1st Asian acquisition: Interest in Dai-Ichi Denshi Koggo (DDK)
- 1964 – Mexico
- 1964 – Canada
- 1966 – Germany

The Future:



Amphenol will continue its market focused and geographic expansion to serve the needs of customers worldwide. Amphenol is pursuing growth in exciting new markets including alternative energies, hybrid and electric automobiles, and next generation data and communications networks to name a few.

1990's & 2000's



Military & Aerospace:

Amphenol's Zero-G Astronaut Handle Operated Connector is used in exterior applications on the International Space Station. Amphenol connectors are also used in the Mars Rovers: Spirit and Opportunity.

Mobile Networks & Devices:

Amphenol expands its presence in cable, cable assemblies, antennas, hinges, bezels, and interconnects for the networking equipment that powers mobile networks as well as the mobile devices themselves.

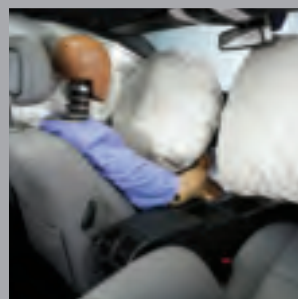
Medical:

Amphenol Medical Solutions is created to bring together Amphenol's broad capabilities in the medical market.

IT & Data communications:

Amphenol's XCede® connector platform surpasses 20 Gbps, enabling high-speed computing and networking applications throughout the world.

1980's:



Automotive:

Mercedes-Benz works with Amphenol to produce the first airbag connector.

Broadband:

Amphenol delivers the high-quality cables required by the rapidly expanding broadband communications market.

1970's



IT:

Amphenol connectors and cables enable mainframe computers and the emergence of the PC.

Military & Aerospace:

Amphenol connectors reach the moon - high-performance Amphenol connectors are used on the Apollo missions and on the Lunar Rover.

Mobile Devices:

Amphenol connectors are chosen for Motorola's first hand-held cell phone.

GEOGRAPHIC EXPANSION:

1971 – India

GEOGRAPHIC EXPANSION:

1981 – Hong Kong sales office established

1985 – France

1985 – Italy

1985 – Hong Kong manufacturing established

GEOGRAPHIC EXPANSION:

1990 – Rapid Asian expansion begins

1994 – Mexico City

1995 – Australia

1997 – Brazil

1998 – Sweden

1998 – Argentina

1999 – South Africa

2000 – Czech Republic

2004 – Tunisia

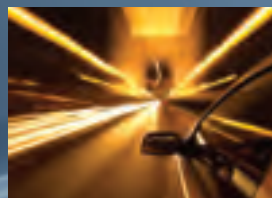
2004 – Turkey

2005 – Russia

PRODUCTS

Automotive

Amphenol is a leading supplier of interconnect systems for automotive safety devices. As the inventor of airbag and seatbelt pretensioner interconnect systems, Amphenol has defined the standards in this industry and continues its innovation leadership. In addition, Amphenol provides advanced interconnect solutions for the expanding electronics in automobiles including entertainment, communication, navigation, and telematic modules. For selected applications such as engine control, sensors, actuators, and auxiliary motors, Amphenol provides wiring components, custom overmolded devices, and harness assemblies. Amphenol's automotive core competencies include application-specific automotive interconnect solutions requiring a high degree of engineering and system integration.



One Amphenol hybrid car connector handles as much electrical power as a small town house complex. Bringing this power safely to the road requires complete water tightness, vibration protection and shielding, and a promise of reliability for more than 15 years. Amphenol is one of the leading providers for next-generation hybrid power train interconnections.

Automotive

Amphenol Industrial Operations
United States

Amphenol RF
United States

Amphenol Technical Products International
Canada

Amphenol Filec, S.A.S.
France

Konfektion E Elektronik GmbH
Germany

Amphenol Tuchel Electronic GmbH
Germany

Amphenol Limited
United Kingdom

Amphenol RF Asia
China

Amphenol Technology (Shenzhen) Co. Ltd.
China

Amphenol Tuchel Electronics - China
China

Amphenol Mobile Consumer Products Group
Hong Kong





High-Power Automotive RADSOK® Connectors and Cable Assemblies The RADSOK® product family includes four contact sizes and standard housings for “wire to wire” as well as “wire to board/lead-frame” connections. Many features such as TPA, CPA, water protection, and coding are implemented in the housings which can be adapted for customized solutions. RADSOK® is approved by vehicle manufacturers and already used in mass production.



Overmolded RADSOK® Cable Assemblies Amphenol has developed a unique overmolded RADSOK® cable assembly system for high-power automotive applications. Our cable assemblies feature an environmentally sealed connection system. This new design creates a more robust system and can broaden the scope of applications for RADSOK® technology in harsh environment applications.



RADSOK® PCB Series The RADSOK® Advantage brings more power to the board with three high-amperage products: PowerBlok™, RADSSERT™, and PGY™. RADSOK® solutions offer many options for high-current single-point connections to printed circuit boards. The compact footprint can supply up to 120 Amps to the board; preserving surface area and providing more flexibility in board design. RADSOK® PCB products are designed to eliminate the need for additional wires and/or special crimp tools.



Car Kit Coupling Antenna Amphenol's car kit coupling antenna is used to enable the seamless integration of mobile devices within automobiles. This car kit has been ALT tested with iDen Band of 806 Mhz – 941 Mhz. Amphenol will work with the customer to design specialized antennas to meet the needs of new car designs.



GPS Antenna Amphenol's GPS Antennas are widely used in navigation systems. We have a range of active GPS antennas or Quad Band GSM Antennas. These GPS Antennas are magnetic or glue mounted with an SMA connector lead out. Our GPS range operates from 824Mhz – 960Mhz/1575MHz/1710-1990 MHz.



Single Position PCB FAKRA Amphenol's single position PCB FAKRA is an edge mount “pin in paste” connector featuring all-metal construction. This connector's all-metal construction makes for a far more robust connector which passes all USCAR and FAKRA standards.



High-Density Dual-Position FAKRA The German and American automotive industries have standardized a high-performing, cost-effective RF connector based on the FAKRA and USCAR standards for automotive telematics. This connector utilizes a standard metal SMB connector embedded within a plastic housing that features multiple color codes for easy identification. FAKRA connectors are designed to perform up to 4GHz and meet the particular mechanical and environmental requirements of the automobile industry.



Hybrid Dual-Position FAKRA Amphenol's Hybrid Dual-Position FAKRA connectors contain one RF port and one DC power port. This connector is used for applications where both RF and power is needed such as amplified antennas for telematics systems. This version differs from the high-density hybrid dual-position FAKRA connector due to its larger case size.



Hybrid High-Density Dual-Position FAKRA Amphenol's Hybrid High-Density Dual-Position FAKRA connectors contain one RF port and one DC power port. This connector is used for applications where both RF and power is needed such as amplified antennas for telematics systems. This high-density hybrid connector is perfect for applications requiring a small connector package.



Triple-Position FAKRA Amphenol's triple-position FAKRA allows three RF connectors to be placed in a very small package. This connector has a small package size which is perfect for applications where the connector has to pass through small holes in the car's body. This connector may be used in-line or to connect directly to devices such as roof mounted automotive antennas.



IP The Industrial Plastic (IP) range of miniature bayonet locking connectors has both 62IP non-removable solder contacts and 162IP removable crimp contacts. These are fully interchangeable with Amphenol's 62 Series connectors and accessories. The shells, panel nuts, coupling nuts, and accessories are molded from Thermoplastic. This gives a smooth, low-luster black finish that, once molded, does not require any plating or further processes.



MCX The MCX series is a great option where weight and physical space are limited. The MCX provides broadband capability through 6 GHz in a snap-on connector design. A range of connectors are available, including printed circuit board and cable connectors. Typical applications include automotive, wireless LAN, broadband, and wireless infrastructure markets. MCX connectors conform to the European CECC 22000 spec.



Mini-UHF Mini-UHF is a miniature version of the UHF connectors that were developed for use in the radio industry. Mini-UHF connectors are used as coaxial interconnects in cell phones, automotive systems, and similar applications where size, weight, and cost are critical. Mini-UHF connectors terminate to RG-58, RG-58A, RG-58B, RG-58C, and Belden 9258 cables. Crimp-type cable plugs and jacks as well as panel and PCB receptacles are available.



Airbag Electrical Harness Amphenol will work with the customer to design and build airbag electrical harnesses designed for specific needs. Based on the customers' specifications, we will source and assemble airbag connectors with other components such as terminals, housings, clips, tubes, and tape to assure a quality end-product.



Safety Restraint Systems - Connectors and Cable Assemblies Amphenol's safety restraint systems product family consists of the well established 10mm interface and the 11mm solutions AK1 and AK2. Different versions are available with latch, pushbutton, and reversed locking legs. The filter elements are coil, mono-block, and multi-material ferrite.



TNB (Buckle connector) Electrical Harness Amphenol has a long history of products designed specifically for automotive safety systems. Amphenol developed a connector for Seat Belt Detection approved by RENAULT and used by many other Tier-1 automobile manufacturers.



Automotive Cables Amphenol's specialty cable factories in Canada, South Korea, and Brazil support the automotive cable market with numerous cables in the 58, 142, 174, and 316 sizes, as well as many other cables specially made to customer designs and requirements.



Automotive Interior Cable Assemblies Amphenol has the cable assembly solutions you need for vehicle interiors. Whether it be high-speed data systems, LVDS (low-voltage differential signaling) systems, interior mirror systems, or park distance control systems we will partner with you to develop the solution you need.



Defrosting Glass Electrical Harness Amphenol will work with customers to determine the perfect solution for their defrosting glass harness needs. Based on customers' specifications, we will design and overmold connectors. Our defrosting glass harnesses are produced for major automobile manufacturers throughout the world.



Engine Control, Cooling, Shock Absorber, and Exhaust Cable Assemblies Engine cooling, suspension, and exhaust systems are becoming more intelligent each year. To help customers cope with new components, Amphenol creates custom cable assemblies for all aspects of cooling, suspension, and exhaust systems.



Harsh Environment Engine Bay Cable Assemblies Amphenol has the capabilities to create custom solutions for all your harsh environment cable assembly needs within the engine bay. Specializing in motor management wiring, engine cooling, fuel handling devices, and more, Amphenol will create the solutions you need for today's automobiles.



Hybrid Vehicle Systems - Connectors and Cable Assemblies Amphenol will design and build high-performance electrical interface solutions able to withstand the harsh environments found in Hybrid and electric vehicles. We will work with you to create application-specific combinations of construction kit elements supplemented to meet your needs.



Lighting Electrical Harness Amphenol will work with the customer to produce specialized electrical harnesses for vehicle lighting. We will source the necessary parts such as connectors, terminals, housings, clips, tubes, and tape to build the right solution for the customer at the right price. Typically these harnesses are used for headlight applications.



Overmolded Harsh Environment Wiring Harness Amphenol's overmolded harsh environment wiring harnesses are designed for both high and low-temperature applications. Whether it's a connector backshell, grommet, splice joint, or mounting point, we're able to overmold the wiring harness you need. Our assemblies are impervious to high-vibration, high-abrasion, moisture, oil, and corrosive elements. Typical applications include mining and agricultural equipment.



Sensor Electrical Harness Amphenol will work with customers to determine the perfect solution for their power steering electrical harness needs. Based on customers' specifications, we will design and overmold connectors. Such sensor and electric power steering harnesses are produced for automobile manufacturers throughout the world.



Steering Wheel Electrical Harness Amphenol will work with the customer to create a solution for today's increasingly complex steering wheels. Based on the customer's specifications, we will design the harness and overmold the connectors to create a complete solution. We have the capabilities to create harnesses with airbag and speed limit functions built-in.



Wiring Harness for Diesel Engines These harsh environment wire harness and cable assemblies are able to withstand temperatures exceeding 175 degrees Celsius while undergoing high-vibration, high-abrasion, and high-flex. Solutions are available for sealing requirements, chemical resistance, and custom harness securing through innovative overmolding processes and proven designs.

PRODUCTS

Military & Aerospace

Amphenol is the world leader in the design, manufacture, and supply of high-performance interconnect systems for military and commercial aerospace harsh environment applications. Amphenol provides an unparalleled product breadth, from military spec connectors to customized high-speed board level interconnects; from flexible to rigid printed circuit boards; from backplane systems to completely integrated assemblies. Key markets supported are avionics, radar, communications, ordnance, missiles, engines, ground vehicles and tanks, space, and all levels of aviation. Amphenol is a technology innovator that designs to meet customers' needs from program inception.

Military & Aerospace

Amphenol Aerospace Operations
United States

Amphenol Backplane Systems
United States

Amphenol Fiber Systems International
United States

Amphenol InterCon Systems
United States

Amphenol PCD, Inc.
United States

Amphenol Printed Circuits, Inc.
United States

Amphenol Nexus Technology
United States

SV Microwave, Inc.
United States

Amphenol Socapex S.A.S.
France

Amphenol Limited
United Kingdom

Amphenol Canada Corporation
Canada

Amphenol Air LB SAS
France

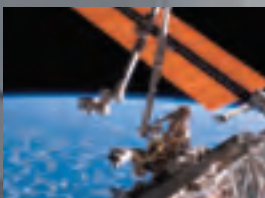
Sefee
France

Amphenol Interconnect India
India

Amphenol PCD (Shenzhen) Co., Ltd.
China

Amphenol RF Asia
China

Guangzhou Amphenol Sincere
Flex Circuits Co. Ltd.
China



Nowhere is high-performance more important than in the extreme conditions of outer space. That's why the International Space Station has relied on Amphenol interconnects since 1998. Developed to allow suited astronauts to connect lunar modules during spacewalks, Amphenol's Zero-G series connectors tolerate temperature fluctuations between -170 and 280 degrees, and can withstand over 175,000 thermal cycles.





1760 Weapons Release The 1760 Weapons Release connector is a low-profile version MIL-STD-1760 connector and overmolded cable system for aircraft interconnection applications such as munitions and weapon rack stores. With a lower, flatter design, this is an ideal connector for tight-fitting aircraft and ordnance applications.



MIL-DTL-38999 Series I LJT, Series II JT The LJT Series I has a longer shell to provide 100% scoop-proof protection for recessed pins. The JT Series II connector has a low-profile shell for maximum weight and space savings. Both series incorporate three point bayonet mating/unmating and five-key/keyway polarization. The LJT and the JT series feature crimp termination and rear-release contacts.



MIL-DTL-38999 Series III TV Tri-Start Amphenol MIL-DTL-38999 Series III connectors offer the highest performance capabilities for general duty and severe environment applications. Completely mates and self-locks in a 360-degree turn of the coupling nut (no lockwire needed). Five key/keyway polarization eliminates mismatching and universal mounting holes for front or rear mounting aid in blindmating. Available options include PC Tail, Hermetic, Filter, Fail Safe Lanyard Release, Clutch-Lok (vibration resistant), Flex, Fiber Optics, and High-Speed Contacts.



HF38999 High-Frequency Contacts Amphenol now offers DC to 40 GHz size 8 coaxial contacts for the D38999 housing and standard inserts. These contacts can be terminated to many cable types depending on the application. By using standard interfaces that are based on MIL-STD-348 and can be installed in any D38999 size 8 insert, Amphenol has transformed the circular connector industry.



MIL-DTL-38999 with MT (Multi-terminal) Ferrule Termini MT Ferrule Termini are designed for use in Amphenol MIL-DTL-38999 circular connectors and for rectangular products including printed circuit board interconnects, LRM, VME64, and VITA46 interconnects. MT Ferrule Termini are available in male and female ferrules in either multi-mode or single-mode designs. In circular connectors, very high-density can be achieved.



38999 High-Density Amphenol has developed a full range of high-density inserts to fit in MIL-DTL-38999 shells or derived products. These inserts allow a contact density increase of 45% versus a standard MIL-DTL-38999 connector equipped with size 22D contacts. These high-density inserts can accept MIL-Spec crimp contacts, as well as contacts with PC tails. These inserts are compatible with all the derived product ranges.



38999 PowerSafe Amphenol's PowerSafe connector is directly derived from the MIL-DTL-38999 Series III. The connector series can accommodate power platforms from 13 to 100A per contact and is equipped with "First Mate Last Break" contacts connected to the shell. The grounded FMLB contact will stay in the right position even if the insulator of the connector is destroyed by fire.



Zero-G Astronaut Handle-Operated Connectors The Zero-G Astronaut connector is a high-performance environmental MIL-DTL-38999 Series III type connector designed for use in a manned spacecraft environment. The connector meets qualifications of MIL-DTL-38999 and is listed on NASA specification SSSQ-21635. The unique lever-operated engaging system was developed to allow the EVA-suited astronaut to mate and unmate the connector in zero gravity.



62IN 62IN series connectors are general-purpose, environment-resistant, miniature circular connectors with three-point bayonet coupling and five-key polarization. Designed to meet the requirements of MIL-C-26482 Series I solder type, these connectors are widely used in military and industrial applications.



83538 Weapons Release The 83538 Weapons Release Connector was designed for use on aircraft that carry rail launch missiles such as AMRAAM. With buffer plug and missile receptacles, the connector is designed for blindmating of stores on rail launch applications. Used on F-18, B- 52, B-2, and SRAM II programs. The 83538 meets the applicable specifications of MIL-STD-1760 Stores Management.



Amphenol Press Fit Connectors Amphenol manufactures a complete series of MIL-DTL-38999 Series I, II, and III connectors with Press Fit compliant pin contacts for solderless mounting on printed circuit boards. Both pin and socket contacts are available in any MIL-DTL-38999 series I, II, or III insert pattern having contact size 16, 20, or 22D. Press Fit connectors allow for simplified board assembly while eliminating problems inherent in soldering connectors to boards.



ARINC 801 Termini Insert for 38999 Series III Connector Amphenol now offers multi-channel cylindrical connectors that comply with the ARINC specification. This connector is available in straight-plug and wall-mount receptacle, using the ARINC 801 ceramic termini. ARINC 801 connector features include precision ARINC 801 fiber optic termini (typical multi-mode insertion loss is less than 0.15 dB), removable alignment sleeve insert for easy cleaning of fiber optic termini, and three stages of alignment: shell-to-shell keys, guide pins, and ceramic alignment sleeves.



Backshells for Circular Connectors Amphenol provides a complete range of backshells for all circular connectors. These backshells are QPL certified to the AS85049 standard and any variants of the same could be supported in short lead-time. We will work with you to create exactly the variety of backshell you need.



Hermetic/Sealed Connectors Amphenol's Hermetic connectors are designed for environmental moisture sealing with fused compression glass sealed inserts. Available in all the basic cylindrical connector families: MIL-DTL-38999, MIL-C-26482, MIL-C-83723, MIL-C-5015. Hermetic connectors are also available in rectangular rack and panel connectors. Connector mating is accomplished in the normal fashion of the connector series.



HTC Amphenol's HTC connector range has been engineered to exceed the MIL-DTL-87323 performance requirements for the latest generation of airplane engines. The connectors feature a new, robust anti-decoupling mechanism and new insert designs and materials. These connectors are specially designed to meet Rolls-Royce's latest ESC15 & ESC16 KV Class high-frequency vibration specification as well as European EN2997 & SBAC ESC10 specifications.



RNJ Low-Profile RNJ Low-Profile rack and panel connectors are designed to connect electrical devices between a moving unit (rack) and a fixed unit (panel). The locking of the mating pair is ensured by a mechanical device on the rack. The RNJLP design allows a short distance between the two panels. This is a big benefit for systems where space is an issue.



SCE Series The SCE series is part of Amphenol's established product offering for the C4I market. Intended for harsh environment applications and used extensively in soldier communications, the SCE is a miniature circular push-pull connector. Designed to a custom specification, the SCE has been selected for its superior EMC performance and rugged shell design. Multiple shell sizes are available with an optional locking mechanism.



MIL-Spec Circulars Amphenol offers many other MIL-Spec connectors to fit your needs both in military and commercial applications including: MIL-DTL-27599 Series I, II Solder, Pyle MIL-DTL-26500, Matrix MIL-DTL-5015, Matrix MIL-DTL-26482 Series II, Matrix MIL-DTL-83723, Series III, and Pyle MIL-DTL-83723 Series III.



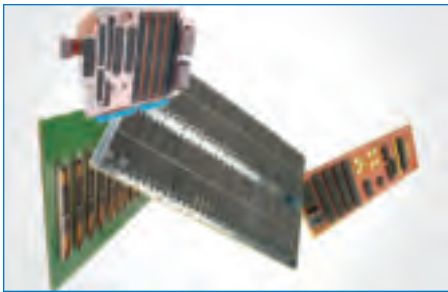
83733 Connectors, Filter and non-Filter Amphenol's R58 Series is a harsh environment rectangular connector designed to exceed the requirements of MIL-DTL-83733. This connector is well suited for hostile military and commercial avionics environments where shielding effectiveness and corrosion resistance is mandatory. This series is available both filtered and non-filtered. Filtering is achieved using stress isolated capacitor technology. Applications include blindmate, cable to cable, and cable to box connections in military avionics, targeting PODS and wing pylons.



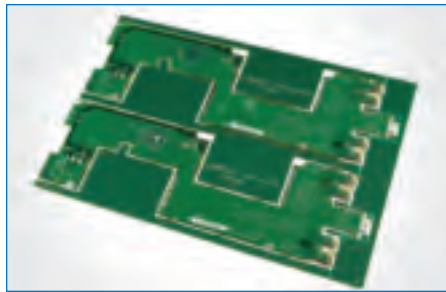
ARINC & Filter ARINC Style Rack & Panel Connectors Amphenol's ARINC products are rack & panel, blindmate, rugged connectors designed for commercial and military avionics systems. These connectors are available in standard and custom configurations with a mix of contact types including: power, signal, RF, and fiber optics. Customized ARINC products can fit into any size or shape of electronics box while integrated EMI and/or EMP filtering offers weight and space savings.



ASR Connectors Amphenol's ASR connector is a new concept and design for a compact and easy to use interconnect where space and weight-saving is a prime requirement. The ASR series features a snap-locking mechanism, making connecting and disconnecting easy. The ASR series is perfectly suited for in-seat systems, cabin service systems, and in-flight entertainment systems.



Backplanes Amphenol Backplanes are required to perform in the most demanding environments, such as commercial airliners, Army helicopters, Navy and Air Force fighters, C4I electronics, missiles, ground vehicles, and Navy warships. Our Backplanes are used on programs such as the F-35 Joint Strike Fighter, F-22 Raptor, F-18 Super Hornet, Theater High-Altitude Air Defense Radar, AH-64 Apache, RAH-66 Comanche, and AEGIS radars used on U.S. Navy warships.



Daughter Cards Daughter Cards are at the heart of many state of the art electronics systems. Amphenol's Daughter Cards are precisely crafted solutions for the most demanding applications. Pictured above is an 18 layer Daughter Card. It features three sequential laminations for blind and buried via's and via-fill with a dozen 100Ω differential pairs meeting stringent electrical test requirements.



GIGASTAK The GIGASTAK is designed with the same modular format as the standard LRM product. This design flexibility allows for the use of standard off the shelf components in a custom configuration to meet specific application needs. The GIGASTAK 6.25 Gbps high-speed inserts can be combined with low-speed digital, power, coax, and/or fiber optic termini. Features include vibration resistance, ESD protection, robust structural support, and design flexibility.



HDB3 High-Density Rectangular This new connector series incorporates a higher-density contact pattern and lower mated height. HDB3 utilizes the high-performance brush contact system for reliability in harsh environments. The mounting hardware, keys, and guide pins have been combined to occupy less board space.



HiLinx With our HiLinx family, we offer engineers a modular solution allowing the mixing of all types of signals: low-level, power, fiber optics, coaxial lines, and differential pairs, while retaining compatibility with the well-known M55302 standard. This system of stainless steel skirts, fittings, and stackable modules, brings flexibility where compromises are not allowed.



NAFI Interconnect Amphenol's NAFI daughter card and backplane connectors are another board level interconnect solution. They provide a wide range of medium contact density patterns and meet MIL-C-28754 standards. Daughter card termination is through-hole, using nickel/gold solder-plated contacts. The mating interface is a blade contact that can be either parallel or perpendicular to the daughter card.



Rectangular Amphenol has long been the leader in providing high-performance rectangular connectors and systems. Our rectangular connectors feature many contact varieties including low-mating force brush contacts. The brush contact has proven durability and long contact life with up to 100,000 mating cycles. Hybrid low-mating force connectors can be designed with combinations of brush and coax, twinax, power contacts, and fiber optic termini.



Rigid Flex Assembly Amphenol's Rigid Flex capabilities are among the best in the world. Mission-critical applications such as this example are among our standard offerings. The part pictured above is in service in many different fixed-wing fighter aircraft. This part has 16-layers with blind and buried via's assembled with six unique filter connectors on which we perform thermal cycling and level-two testing.



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



UHD Interconnect Amphenol's UHD interconnect is a high-reliability packaging solution for airborne, space, shipboard, and ground-based applications. The UHD connector is presently used in all of these environments and meets the requirements of EIA spec IS-753, DESC spec #89065, and IEEE spec 1101.1 to 1101.9.



VIPER Interconnect Viper from Amphenol is a high-density interconnect platform. Featuring: 70 single-ended signals per linear inch, 56 differential pairs per linear inch, and signal integrity to 10 GB/s. Viper is available in standard 3U and 6U configurations and is ruggedized for Avionic Ground and Naval Applications.



1767 PA Modules The 1767 PA module is an innovative junction module based on the classic 1750 module. The PA's "Positive Locking" wiring technology offers a 100% guarantee of properly locked contacts in the cavity. 1767 PA modules are available from 8 contacts size 12 up to 36 contacts size 22, and are produced in hybrid and grounding versions.



High-Density SIM module The #23 High-Density SIM module is an exclusive innovation of Amphenol's. Based on standard EN4165 SIM Modules, the HD modules have thirty size 23 contacts (BACC47)—an increase of more than 50% over #22 modules. HD SIM Modules are available with or without peripheral overmolded sealing and are fully compatible with all SIM connector series.



Junction Module MIL-T-81714 Series I and II and 1765 modules are available in a broad range of standard and custom electronic packages. Diodes, resistors, and other components can be securely packaged within the sealed housings to provide improved system efficiency and density. Track-mounted terminal junction modules are available in a variety of standard sizes from AWG12 through AWG26 with a broad selection of bussing variations.



Relay Socket Amphenol offers the industry's broadest range of pluggable bases for electro-mechanical relays in MIL-PRF-12883, European, and custom configurations. Environmentally sealed for harsh environment applications, these rugged relay sockets will accept standard crimp contacts to MIL-C-39029. High-temperature and aircraft fluid-resistant, these sockets come in many varieties including track-mount, panel-mount, and quick-mount snap-in styles.



SIM Connectors Amphenol's SIM connectors are modular, multi-contact, multi-functional rectangular connectors. They come in metallic or composite versions, shielded or not, and are qualified according to the EN4165 spec. SIM connectors can be a standard or flange-mount receptacle that can be assembled side by side on a panel with standard or rack and panel plugs as well as other options.



SIM2B 20 Monomodule Connectors These rectangular connectors are modular, multi-contact, multi-functional mono-module connectors, for in-flight entertainment and cabin systems interconnects. These light-weight composite products are available in metallic or non-metallic versions. They present a very compact design with a push pull locking system for blindmating and 4 keying positions.



SJS In-Line Junctions Amphenol's SJS family of environmentally-sealed in-line junction splices are developed to bring higher reliability, improved installation ease, and greater flexibility to wiring applications. These in-line junctions consist of compact, cylindrical plug and receptacle housings which lock firmly together with a straight push, and unlock with either a simple "twist and pull" (single contact) or "squeeze and pull" (triple contact) motion.



M28876 M28876 multi-channel fiber optic connectors and backshells are the U.S. Navy standard for mission-critical shipboard applications. These connectors are designed to provide superior optical performance in severe environmental and mechanical operating conditions. Our industry-leading backshells feature the robust, yet simple to use Quickloc cable captivation system. Angled physical contact (APC), custom materials, and custom-plated connectors are also available.



CTOS SM Fiber Optic Amphenol's CTOS SM and CTOL SM is a unique expanded beam single-mode fiber optic connector. These connectors are used in diverse applications such as battlefield, UAV, oil & gas, railway, and broadcast. To make deployment easier, we developed a Compact Carrier Deployable System. This is the lightest and most compact solution available on the market.



HMAtwo HMAtwo Series is a hermafroditic fiber optic lens connector that facilitates the interconnection of multiple identical fiber optic cable assemblies (daisy chaining). This eliminates the need for polarizing assemblies and in-line adapters. Lens technology is less vulnerable to contaminants than the traditional physical contact technology. The Connector is available in 1 to 4-way configurations for multi-mode fibers, dual-wavelength 850/1300nm.



Military Fiber Optic Amphenol's Fiber Optic termini and connectors provide reliable transfer of data signals for communication systems in many applications: military aircraft, ground vehicles, commercial aircraft, radar, missiles, battlefield equipment, medical equipment, and test equipment.



NGConn The MIL-PRF-64266-compliant fiber optic connectors (Next-Generation Connector-"NGConn") combine the best features of industry-standard D38999 (Series III) and M28876 connectors. Designed specifically for both avionics and shipboard fiber optic applications, these innovative connectors include genderless contacts and high-density packaging and are available in a wide variety of materials, shell sizes, insert patterns, and plating finishes.



TFOCA-II 4-Channel Amphenol's TFOCA-II® fiber optic connector series is ideal for military tactical applications as well as other environmentally harsh conditions. The hermafroditic design allows for simple concatenation and the removable insert cap facilitates easy connector maintenance. Designed and patented by Amphenol, the TFOCA-II® is the required connector for the U.S. Army WIN-T (Warfighter Information Network Tactical) program.



Blindmate RF Connectors and Components Blindmate connectors are commonly used in rack-and-panel, module-to-module, and module-to-motherboard applications. Blindmate connectors are also commonly found in applications as varied as satellites, radar and sensor equipment, avionics, missile systems, military electronics, electronic countermeasure systems, and navigation and air traffic control, as well as automated test equipment.



EMI/EMP Filter Products Amphenol's EMI/EMP protection connectors offer the versatility of standard connectors, but with EMI/EMP protection that filters unwanted frequencies for sensitive circuits. By housing EMI/EMP devices internally, you can eliminate costly and bulky exterior discrete protection devices. Available in many sizes, styles, and arrangements, Amphenol filter connectors are inter-mountable and inter-mateable with standard MIL-spec connectors.



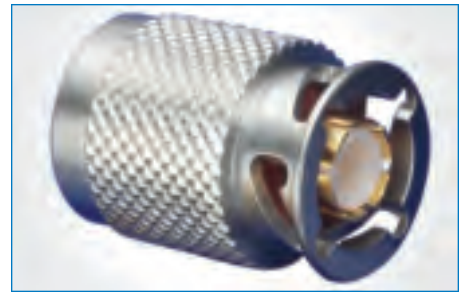
Filter D-sub and Specialty D-sub Connectors Amphenol's Filter D-sub connectors contain integrated EMI filtering, using Amphenol's stress-isolated filter designs. Our connectors are available in all D-sub arrangements including customized insert and shell configurations. These connectors are also offered with IP67 moisture sealing performance and meet or exceed requirements of MIL-DTL-24308.



Resistive Devices Amphenol manufactures a complete line of standard and custom-designed terminations and attenuators, including QPL and high-reliability versions. Terminations are designed to absorb all incident power with minimal reflection, while effectively terminating the line or port impedance. Flange-mount designs are available along with high-power versions to 50 watts. We offer a variety of connector configurations including SMA, blindmate, and ZMA.



Specialty EMI Filter Connectors Amphenol specializes in EMI filter connectors in standard and custom configurations. Tube or planar capacitor technologies are used with a patented solderless design to offer capacitor stress-isolated features. This enables these connectors to give superior performance, even in high-thermal and physical shock environments, custom rectangular filter connectors are available. In addition to standard interfaces such as ARINC, D-Sub, and Micro-D.



ZMA Connectors and Components The ZMA connector is a bayonet coupling connector. The unique design of this connector provides a high coupling force, which is ideal for extreme vibration applications where insufficient room is available for spring-loaded blindmate panels. This connector is designed with electrical performance of 18 GHz, overlapping PTFE dielectrics, and rugged stainless steel body construction appropriate for military applications.



Fairlead Leveraging its 30+ years experience in Clamp Block Technology, Amphenol produces high-quality, low-cost fairlead blocks and prides itself on timely and accurate delivery. Designed for use in airframe, fuel tank, and engine applications, our blocks are offered in multiple materials and can also be customized to help meet specific customer requirements.



P-Clamp The P-clamp is the first fully composite wire and tubing clamp for airframe applications. High-performance P-Clamps and Omega Clamps were specifically designed for Boeing's 787 Dreamliner. Constructed of PEEK polymer, these high-performance clamps are as strong as stainless steel and are completely non-conductive and non-corrosive. Proprietary overmolding technology bonds the cushioning material directly to the plastic, removing the possibility of cushion wear-out.



PEEK Stand-off Designed with PEEK polymer, a durable, lightweight, chemical-resistant material, our high-performance standoffs are designed to replace traditional aluminum standoffs that are heavier and less cost-effective. They come in two standard configurations – straight and right angle.



Bus Bar - Power Distribution Amphenol's bus bars provide a means of power distribution between power generator boxes, terminal blocks, and smaller terminal block interconnects. Bus bars are available in various standard sizes and shapes as well as in custom designs. Bus bars present high mechanical resistance and are resistant to high temperatures.



MIL-Power Heavy-Duty Circular Connectors Originally designed for use by the military, Amphenol's heavy-duty circular connectors have become widely used in aerospace, ground support, and shipboard applications. Some features include quick positive coupling, waterproof-IP67 rated, no lockwiring required, high shock and vibration capabilities, and are available in both crimp and solder terminations.



Brush Contacts The brush contact is made up of multiple strands of high-tensile wire that are bundled together. A reduction in mating/un-mating force of 70% to 90% is achieved over conventional contacts. The brush contact has proven low-resistance, durability, and long contact life. Hybrid low-mating force connectors can be designed with combinations of brush and coax, twinax, power contacts, and fiber optic termini.



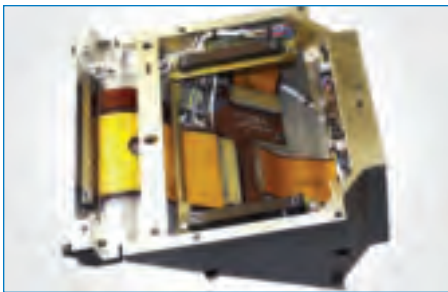
Contacts Amphenol has a very wide range of contacts for both MIL-Spec and many specialty military/commercial connector applications which include the International Space Station, fighter aircraft, battlefield communication networks, and military ground vehicles. Contacts include signal, power, thermocouple, PCB, wire-wrap, coax, triax, twinax, fiber optic, differential pair, and other quadrax.



Flexible Circuits For over 30 years, Amphenol's capabilities are among the world's broadest and most advanced, delivering consistent quality and high-bandwidth systems for mission critical applications. Proven engineering and manufacturing expertise eliminates printed circuit (flexible or rigid) design obstacles.



RJField Range/RJ Switch Amphenol Ethernet switches are designed to provide a robust interconnect solution in extreme conditions. They are built using high-performance electronic components, rugged Ethernet and power supply connectors such as RJField TV, and heavy duty packaging. Amphenol's switches resist vibrations, temperature, oil, and water.



Electronic Packaging The Integrated System Solutions Group at Amphenol provides system-level electronic packaging solutions for the design, fabrication, and assembly of connectors, PWB's, flexis, cable harnesses, and chassis. Amphenol provides a systematic and professional approach to build-to-print or in-house design of board-to-box and box-to-box interconnection solutions for military and commercial avionic LRUs.



Value Added Solutions This equipment, located on the cockpit ceiling, allows the crew to manage and to watch many critical helicopter functions. Due to the functional purpose of this equipment, several OHCP configurations are defined to fit different helicopter configurations. Currently there are more than 20 standard configurations.



Value Added Solutions Amphenol tackles problems such as PWB routing, signal integrity, mechanical robustness, and thermal reliability concurrently rather than independently. Solving complex packaging challenges depends on making sure that environmental, mechanical, and electrical factors are all addressed at the system-level. By taking this system-level perspective and focusing on these factors, we are able to meet your program's most challenging packaging requirements.

PRODUCTS

Industrial

Amphenol is a technological leader in the design, manufacture, and supply of high-performance interconnect systems for a broad range of industrial applications, including medical equipment, factory automation, heavy equipment, instrumentation, motion control, rail mass transportation, and natural resource exploration. Amphenol's core competencies include application specific industrial interconnect solutions utilizing integrated assemblies with flexible printed circuits as well as high-power interconnects requiring a high degree of engineering and system integration. Our innovative solutions facilitate the increasing demands of embedded computing and power distribution.



Lighting the Eiffel Tower was no easy task. The job took 3 months, 20 mountain climbers, 800 strings of lights weighing 44,000 lbs., and some seriously high-performance connectors. The Amphenol connectors selected were guaranteed for 10 years of continuous use in harsh weather conditions.

Industrial

Amphenol Alden Products
United States

Amphenol Fiber Systems International
United States

Amphenol Industrial Operations
United States

Amphenol Interconnect Products Corporation
United States

Amphenol PCD, Inc.
United States

Amphenol Steward Electronic
United States

Amphenol TCS
United States

Sine Systems Corporation
United States

Amphenol Australia Pty Ltd
Australia

Amphenol Air LB SAS
France

Amphenol Socapex S.A.S.
France

Amphenol Tuchel Electronic GmbH
Germany

Amphenol Interconnect India
India

Amphenol Limited
United Kingdom

Amphenol Technology (Shenzhen) Co. Ltd.
China

Amphenol Tuchel Electronics - China
China

Guangzhou Amphenol Electronics
Communications, Co., Ltd.
China

Amphenol DaeShin Elect and Precision Co., Ltd
Korea





Amphe-Power The Amphe-Power® series consists of three of the time-tested and reliable families of Amphenol Industrial Connectors, all of which are MIL-5015 style, medium to heavy-duty cylindricals. This series, enhanced with RADSOK® sockets, can now handle up to 50% higher amperages. Current Amphe-Power® product lines support from 50A to 1000A continuous-duty.



Bus Bar - Power Distribution Amphenol's bus bars provide a means of power distribution between power generator boxes, terminal blocks, and smaller terminal block interconnects. Bus bars are available in various standard sizes and shapes as well as in custom designs. Bus bars present high mechanical resistance and are resistant to high temperatures.



Groundmate With the new Groundmate series, Amphenol is able to replace the now used PE connections, made up of ring terminals in electrical cabinets, with pluggable contacts. By using the well-known and field-proven RADSOK® technology in combination with the clickfit locking device, a high-current carrying capacity is achieved. Owing to different locking parameters, it is possible to connect Groundmate contacts with pins or threads.



P - Series High-Voltage Amphenol offers a wide variety of standard high-voltage connectors rated from 1Kv to 50KvDC. High-voltage, detachable feed throughs are also available for imaging (X-ray) and laser therapy applications. These miniature high-voltage interconnects allow the designer to greatly reduce the size and complexity of oil-filled power supplies and X-ray tubes. Custom hybrid, high-voltage connectors are also available for applications like defibrillation and electro surgery.



POWERLUG Amphenol's POWERLUG cable termination is formed from contiguous copper stranding, eliminating the crimp joint of standard ring terminals. This significantly increases cable termination reliability while reducing the MV drop inherent within a crimp joint. Closer spacing is allowed as the joint diameter does not exceed the diameter of the terminated cable. Available in standard or custom POWERLUG configurations.



Power Bus - Sur-Lok & Hi-Lok Amphenol now features the Sur-Lok compression lug and Hi-Lok semi-permanent high-amperage connector. Sur-Lok is a field-crimpable contact assembly featuring RADSOK® technology. Hi-Lok was invented in response to customer demand for a tool-less but semi-permanent high-amperage connector. Often used as a replacement to the traditional threaded post and ring terminal.



RMT Inter-Car Jumpers Inter-car Jumpers from Amphenol provide electrical connections between all types of rail vehicles and can be supplied for low-voltage and signals, high-voltage, 3-phase, and fiber optic systems. These jumpers are designed to suit a variety of insert arrangements, different currents and voltages, and many different cable sizes and types.



RADSOK® RADSOK's® hyperbolic contact geometry offers many advantages, such as contact coverage of up to 65% and absorption of vibration, as well as a superior durability of the contact element. Amperage capacities of above 300A are achieved while still allowing for a high number of mating cycles.



RMT Junction Boxes Amphenol has designed a wide range of termination boxes allowing customers to terminate different types and sizes of cables on the underside and within rail vehicles. These termination boxes are designed to meet very harsh environmental conditions encountered in the rail mass transit market including: high-voltage bus line boxes, traction motor connection boxes, shore supply connection boxes, DC supply connection boxes, and TPWs connection boxes.



ADG & ADGC Amphenol's ADG Series connectors are used principally in rail mass transit and heavy industry applications. Their main characteristic is the fast and precise coupling of the receptacle and plug connectors. Three bayonet ramps on the receptacle allow for the fast and perfect mating with only a one quarter turn of the coupling nut. They withstand exposure to moisture, oil, and vibration.



AMHTC Amphenol's AMHTC Series (Amphenol High-Tension Connectors) is primarily used for railway vehicle-installable power distribution systems. They offer the ultimate in safety and reliability under the most severe operating conditions. AMHTC is available in two standard varieties, which allow complete hook up through the standard daisy chain principle.



Solar The H4 comes from the innovative family of Amphenol's Helios solar products. Quick and easy snap-lock mating and reliable crimp terminations make this an ideal solution for field installation. The long-term UV and ozone resistance, as well as the low-resistance self-cleaning contact grid, distinguish the H4 as the most efficient and durable solar connector option. The H4 is fully intermateable with industry standards.



Vortex GT The Vortex GT is a GT shell type connector with reverse bayonet coupling RADSOK® technology, designed specifically for delivering high-power from source to load. The plug contact is an 18mm crimp type RADSOK® socket combined with an 8mm RADSOK® pin. The receptacle contact is an 8mm screw type RADSOK® pin combined with an 8mm RADSOK® socket. Uses include electrical generators, fuel cells, load banks, and charging systems.



5015 Amphenol's 5015 Series is a rugged, versatile, and environmental resistant connector with proven electrical capability. 5015 series connectors are medium to heavy-weight cylindrical connectors with 5 shell styles, 19 shell sizes, and 5 service classes. The 5015 offers 286 contact arrangements from 1 to 104 circuits. It is available in solder or crimp contacts, threaded coupling, coaxial and thermocouple contacts, and ROHS compliant versions.



97 Amphenol's 97 Series is the lowest-cost cylindrical interconnect solution in the proven 5015 family connector style. An extremely versatile connector family, the 97 Series offers six shell options, 128 different contact arrangements, 1 to 52 circuits, one of the largest selections of insert patterns on the connector market, and crimp, solder, thermocouple, and PCB (100 suffix) contacts.



ACA-B The ACA-B is designed for commercial and industrial environments requiring a rugged bayonet style connector for heavy duty power and signal applications. A comprehensive selection of insert arrangements and accessory hardware configurations is featured to accommodate heavy-duty commercial wire and cable. ACA-B is manufactured in accordance with MIL-C-5015 and VG95234. The insulators are made of high-quality polychloroprene material and withstand temperatures of -55° C to +125° C.



Amphe-EX™ Amphenol, the worldwide leader in explosion-proof and hazardous-environment interconnects, introduces a new, miniature, explosion-proof threaded connector specifically designed to allow a signal to pass through Zone rated areas using coax, fiber optic, or standard copper cables. The new Amphe-EX™ is complimentary to Amphenol's industry-proven Star-Line EX™. In addition, the rugged Amphe-EX™ connectors are ATEX and IECex approved for Zone 1-rated applications.



Amphe-Lite™ The Amphe-Lite™ connector series is designed for signal, power, RF, or fiber optic interconnect requirements in harsh environments. The Amphe-Lite™ series offers the highest performance capabilities for severe environment applications, yet is cost-effective enough for general-duty and non-environmental applications.



Barracuda The Barracuda range of environmental IP68 sealed connectors is specifically designed for harsh applications where water, dust, oil, or spray is present. These molded connectors are interchangeable with the equivalent Bulgin standard Buccaneer range of connectors, which feature enhanced ergonomics and ruggedized moldings. The Barracuda bodies are molded from glass filled nylon and all have the same outside diameter of 38mm at the largest point.



C091 The C091 connector series is used in automation, test and measurement, medical, sensors, and telecommunications. Their proven design and performance make these connectors a recognized industry standard. They are available with a screw or bayonet locking system. Receptacles are available for front or back-panel mounting and offer a variety of connection possibilities.



C16-3 The C16-3 circular connector series is designed to meet the high-performance requirements of harsh-environment industrial applications. The range includes versions with screw and crimp terminations. A selection of crimp contacts for hand crimp tools and for crimp machines enables a reliable termination resulting in qualitative, technical, and economic advantages. A broad selection of housing styles are available.



Ecolmate Ecolmate is a circular connector featuring easy operation, reduced dimensions, and a more robust design to withstand harsh conditions. The connector's primary applications are factory automation, machining, and medical. The series comprises a large selection of housings and shapes, as well as models with screw, solder, and crimp termination.



ECTA 133 / ECTA 544 The ECTA 133 is ideally suited to industrial applications due to its rugged design, convenient push-pull operation, wide range of contact sizes, and high contact density. ECTA 544 series plastic circular connectors are used for industrial applications such as: robotics, laboratory test equipment, transportation, and tool interconnection. The ECTA 133 & ECTA 544 are designed, produced, and certified according to EN 61984.



Geophysical Connectors Amphenol's geophysical connectors are used in land seismic, transition zone, marine, and down-hole markets. Our capabilities include: land, marsh, and marine geophone, hydrophone, and array connectors; gender and polarity pocket adapters; battery and specialty overmolded connectors; and cable overmolding.



GT The GT Interconnect Family is a high-performance, high-power, rugged, and sealed connector with reverse bayonet coupling. Originally designed for use by the military, the GT has become the preferred connector for mass transit. The heavy duty GT connector is also widely used in commercial, geophysical, aerospace, ground support, and shipboard applications.



M23 Servo Connector MotionGrade™ M23 connectors and cables are designed as a two-piece die-cast backshell that provides outstanding EMI shielding and environmental protection. MotionGrade™ products satisfy all industrial standards including resistance to vibration, shock, temperature cycling, salt water spray, and petroleum derivatives. The M23 connectors and cables are available in various sizes and configurations including static or flex.



PowerBOSS / PowerBOSSlite / ControlBOSS The Advantage Line™ PowerBOSS™, PowerBOSSlite™, and ControlBOSS™ hybrid interconnect systems provide power, control, and communication connectivity on a plug and play basis. The development of modular, crush-resistant, factory-molded connectors has eliminated the need for hardwired or traditional conduit installations.



PRLC The PRLC series uses MIL-C-38999 Series III construction with a Tri-Start mating mechanism, an excellent anti-vibration coupling. The connector has a generic construction throughout, all housed within a shell size 13. Typical applications for PRLC include: oil and gas exploration, and mass transit. The shell material is nickel, aluminum, bronze for marine and mass transit applications and stainless steel for oil field and mining applications.



PT These miniature cylindrical connectors offer twice the number of contacts in half the size of a standard connector. These miniature bayonet connectors are available in several series, each with varying design characteristics and customer options to meet cost considerations and provide maximum design flexibility. There are two styles within the family that are MS approved and qualified to MIL-C-26482 Series 1, as well as several proprietary styles.



Star-Line™/Star-Line™ EX The Amphenol Star-Line™ series connectors are heavy duty environmentally sealed plugs and receptacles used in all types of industrial and aerospace applications. These compact environmental connectors provide outstanding performance in complex ground support cable networks, process control systems, and instrumentation systems. The Star-Line EX® Series is a hybrid form of the parent Starline® product line. Typical uses include: petrochemical refineries, land, and offshore drilling systems.



C146 Heavy Duty Connectors These connectors are designed and produced in conformity with the low-voltage directive (73/23/EWG) respectively Gerätesicherheitsgesetz (German law) and in accordance with the standards DIN EN 61984 (VDE0627); IEC 60664-1 (VDE 0110-1) and IEC 60529. The connectors may be used only within the technical ratings.



Optron Hybrid Connectors Amphenol's Optron connectors are a complete line of circular hybrid connectors designed and qualified to MIL-PRF-28876, Rev. E. They are precision machined and designed to provide superior optical performance in extreme environmental conditions. The Quickloc backshell also allows easy access to maintain or reconfigure termini without altering the captivated aramid fiber.



DeepSight In response to the growing need for fiber optic monitoring systems in oil wells, Amphenol has developed the DeepSight fiber optic connector for use in down-hole applications. DeepSight has the ability to withstand the high pressure, temperatures, and corrosive fluids found in down-hole environments. These connectors are precision-machined and designed to provide superior optical performance in extreme conditions.



DIN Terminal Blocks & Interface Modules Modular DIN rail-mount "inside the box" wire-to-wire terminal blocks come in screw clamp, spring clamp, and bolt wire attachment configurations. Standard and application-specific DIN rail-mount "inside the box" wiring transition and signal conditioning interface modules for systems integration, supplement DIN terminal blocks to reduce installed cost and enclosure size, while increasing wiring reliability.



PCB Terminal Blocks Amphenol's PCB terminal blocks offer a broad range of standard and application-specific fixed and pluggable I/O for wire-to-board. Available in screw clamp, cage clamp, and spring clamp wire attachment in numerous pitches and are UL, CSA, and TUV approved.



A Type The A-type XLR chassis receptacles have been designed and manufactured with the Original Equipment Manufacturer's needs in mind. The compact shell design offers significant space savings over the traditional "D" type shell providing a higher connector density.



EP Connector The EP/AP Series offers consistently superior power-handling capabilities. The EP series incorporates a rugged zinc die-cast shell to give maximum durability when used in demanding situations. The AP Series Shell is manufactured from tough, durable thermoplastic and is ideal for fixed indoor installations. Both the EP and the AP series utilize the same contact and insulator components.



XLR Audio Connector Amphenol has successfully designed, manufactured, and marketed professional XLR audio connectors for the world market since 1955. The patented Insulation Displacement Contact (IDC) audio connector was conceived and designed by our engineers and represents a world's first for the industry.



ArmorLite™ Protected Cables Amphenol's ArmorLite™ protected cables are a cost-effective solution to expensive conventional armored cables. For many years, seismic exploration companies have looked for a solution to keep seismic crews working in conditions where small animal bites have shut them down. Seismic crews using cables protected with ArmorLite™ have seen production in these areas improve tremendously.



Cable Glands Amphenol, the worldwide leader in explosion-proof and hazardous environment interconnects, introduces our broad range of explosion-proof and industrial cable glands. The new Cable Gland product line is designed to perform in the most demanding environments. Amphenol's complete line of EX Zone 1 and 2 rated cable glands offers our customers great flexibility.



Geophone Strings & Products Amphenol provides a wide range of vibration measurement devices called Geophones. Geophones are sophisticated measuring devices and are based on a coil suspended by springs in a magnetic field, within a steel case. The seismic industry today demands tight tolerances to meet the exacting standards of a modern seismic survey. Amphenol's geophones are a cost-effective solution backed by a 3-year warranty.



Telemetry Seismic Cables Amphenol is an independent designer and manufacturer of telemetry seismic cables used with a wide range of seismic data acquisition systems such as I/O, Sercel, Aram, and Fairfield. We specialize in engineering products that perform globally in all climates and conditions such as land (arctic & desert), transition, and marine environments.



Precision RF APC stands for Amphenol Precision Connector and was developed by Amphenol and Hewlett-Packard engineers. The APC is the first instrument-grade coaxial connector series to achieve repeatable TE11 mode resonance-free signal transmission from DC - 50 GHz with a minimum return loss of 26 dB. These 50 Ω connectors are designed for test and measurement equipment where reliable performance is critical for repeated connect/disconnect cycles.



Pulse-Net® - Industrial Ethernet Pulse-Net® is a ruggedized Ethernet connector that offers the convenience and functionality of a standard RJ-45 connector plus push & click, Pulse-Lok® mating action for positive confirmation of engagement, industry standard components and termination tools, and multiple termination options.



Pulse-Plus™ - M12 Thread The Pulse-Plus™ receptacle is backwards compatible and accepts either M12 threaded plugs or quick-mating Pulse-Plus™ plugs. In a fraction of the time it takes to mate one traditional M12 threaded connector, you can mate and unmate several Pulse-Plus™ connectors. Pulse-Plus™ eliminates the frustrations common to threaded connectors such as intermittency, cross threading, misalignment, and difficulty squeezing fingers into small or "blind" locations.

PRODUCTS

Information Technology and Data Communication

Amphenol is a global provider of interconnect solutions to designers and manufacturers of Internet-enabling systems. Amphenol's range of offerings in electrical and optical cable, cable assembly, connector products, and backplane interconnect systems span applications in PCs, servers, storage systems, optical and copper networking equipment, modems, hubs, routers, switches, media display systems, and Internet appliances. With our design creativity and cost-effectiveness, Amphenol leads the way in interconnect development for Internet equipment, infrastructure, enterprise networks, and appliances. Whether industry standard or application-specific designs are required, Amphenol provides customers with products that enable performance at the leading edge of next-generation high-speed technology.

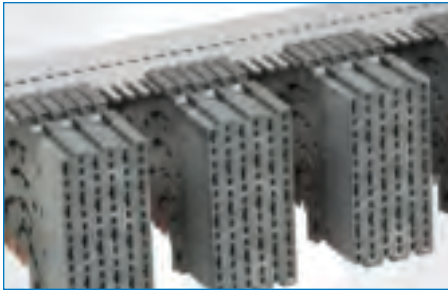
Information Technology and Data Communication

- Amphenol TCS
United States
- Amphenol Cables on Demand
United States
- Amphenol Commercial Products - North America
United States
- Amphenol Fiber Optic Products
United States
- Amphenol InterCon Systems
United States
- Amphenol Interconnect Products Corporation
United States
- Amphenol Printed Circuits, Inc.
United States
- Amphenol RF
United States
- Spectra Strip
United States
- Amphenol Canada Corporation
Canada
- Amphenol TAT Technologies
Canada
- Amphenol Tuchel Electronic GmbH
Germany
- Amphenol AssembleTech (Xiamen) Co., Ltd.
China
- Amphenol East Asia Elect. Tech. Shenzhen Co., Ltd.
China
- Amphenol RF Asia
China
- Amphenol Tuchel Electronics - China
China
- Amphenol East Asia Limited-Taiwan
Taiwan

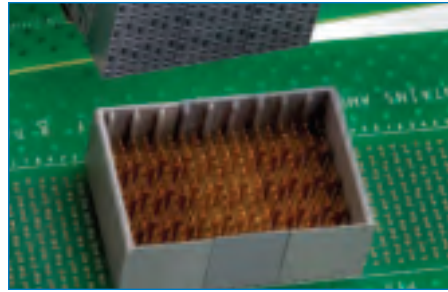


Amphenol knows its way around the corporate datacenter. With expertise in all areas of interconnect solutions for high-speed computing and data storage, virtually all Internet traffic passes through an Amphenol interconnect somewhere along its path.





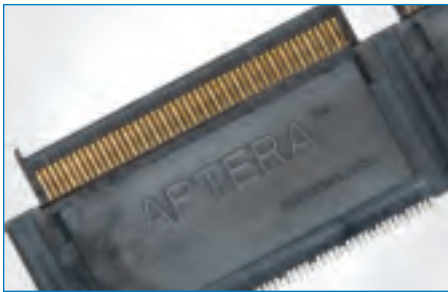
XCede® Designed for 20+ Gbps performance, Amphenol's XCede® connector platform enables the future data rate requirements of datacom, telecom, storage, and wireless equipment. Offering a linear density of 82 differential pairs per inch, the XCede product family meets the true high-density needs of architectures with multiple front or rear fabric slots and blade systems with cooling straight through the backplane. XCede meets the IEEE 802.3ap v3.2 10GBASE-KR standard with margin.



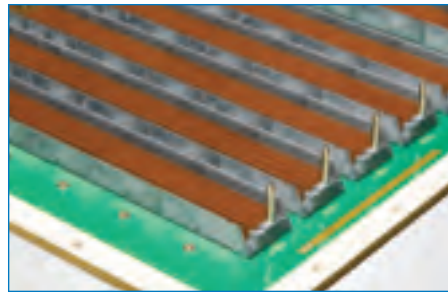
XCede® Stacker The XCede® Stacker enables parallel board-to-board designs with the same high levels of performance and reliability as the XCede backplane system. XCede Stacker is available in a 4-Pair configuration with stacking heights from 15mm to 44mm. Modular construction and guidance options allow optimized connector lengths for each application.



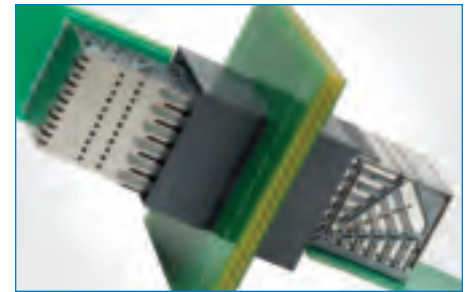
Aptera™ The Aptera™ connector's low-profile design addresses difficult packaging challenges by balancing high-speed interconnect with the need to conserve board space and maximize airflow. Ideal for the space constraints of high-speed memory and card edge applications, Aptera's low-profile construction reduces minimum slot pitch between daughtercards to 10mm (.39").



Aptera Stacker™ Amphenol's Aptera™ Stacker provides a mezzanine solution with the same electrical performance as standard Aptera. The connector is available in 40mm board-to-board stack heights, which mate to the standard Aptera backplane modules.



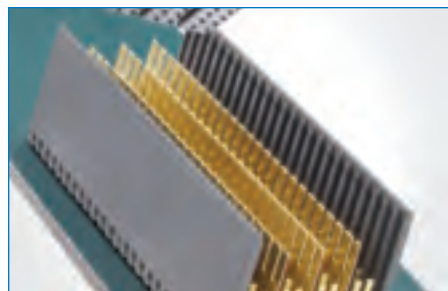
Backplanes & Daughter Cards Amphenol's capabilities are among the world's broadest and most advanced, delivering consistent quality and high-bandwidth systems and mission-critical applications for more than 30 years. Proven engineering and manufacturing expertise eliminates printed circuit (flexible or rigid) design obstacles.



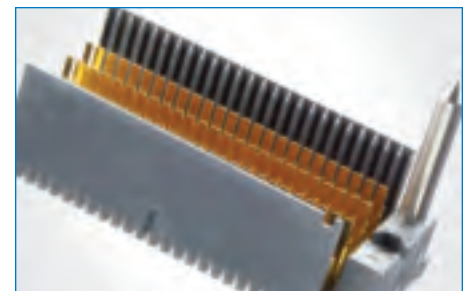
Crossbow™ The Crossbow™ connector system is the first differential connector truly optimized for orthogonal midplane applications. Crossbow is designed so the differential pairs on each side of the midplane share vias, allowing designers to take full advantage of the benefits associated with orthogonal midplane architectures. With 20+ Gbps performance, Crossbow meets the IEEE 802.3ap v3.2 10GBASE-KR standard with margin, ensuring compliance with future 10 Gbps specifications.



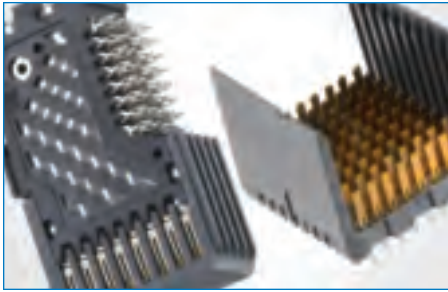
eHSD® Amphenol's eHSD® connector is a shielded, high-density, high-speed press-fit connector system optimized for differential pair architectures. eHSD is designed to support up to 10 Gbps backplane designs. eHSD is fully backwards compatible with VHDM-HSD delivering as much as 10 dB lower crosstalk. A modular design allows all the features and functionality required in a system to be integrated in a single robust connector.



GbX® Amphenol's GbX® connector is a high-density optimized differential connector offering a choice of density configurations. GbX provides increased density, exceptional impedance matching, and low crosstalk. GbX delivers data rates of 5 Gbps and is ideal for 4 x 3.125 XAUI links. The GbX connector provides up to 69 pairs per linear inch (5-Pair configuration) with a choice of configurations (2-, 3-, 4-, and 5-Pair) for higher application flexibility.



GbX® E-Series Amphenol's GbX® E-Series backplane module is a highly optimized differential connector with a choice of density configurations for application flexibility. The backplane module shares the same footprint as standard GbX, providing a drop-in replacement that allows designers to easily scale existing backplane platforms up to 6.25 Gbps data rates without costly redesign.



GbX® L-Series Building on the strength of the GbX® product family, the GbX L-Series connector provides additional flexibility with a cost-performance optimized solution. With the ability to combine GbX and GbX L-Series on the same card edge, designers can achieve specific performance needs with a mix of high- and low-speed connections. Ideal for TTL sense and control and other low-speed data lines.



GbX® Right Angle Male Amphenol's GbX® Right Angle Male (RAM) enables co-planar board-to-board or board-to-cable high-speed interconnections. Currently available in 2-Pair configurations (27 differential pairs per linear inch), with two different heights — standard RAM and extended RAM. A high-speed differential and L-Series version are also available.



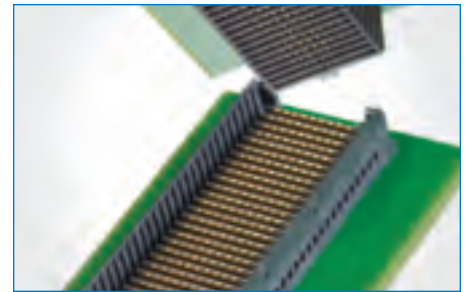
HDM® / HDM PLUS® Amphenol's High-Density Metric (HDM®) and High-Density Metric Plus (HDM PLUS®) connector family is designed for applications that demand a combination of high signal pin density plus high-speed signal integrity. Amphenol's HDM connector family has been chosen for demanding applications in many of the high-performance servers that support the Internet, as well as other telecom and datacom applications.



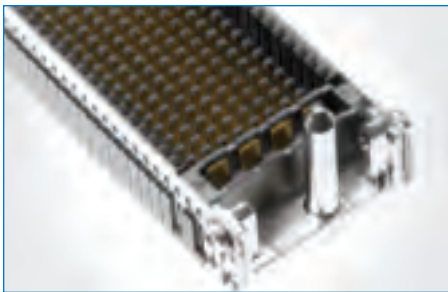
HDM Stacker The HDM Stacker connector optimizes card functionality in a limited space. It can be used in parallel board packaging, mezzanine cards, parallel backplanes, and bridgeboard applications. The connector is available in 72-pin and 144-pin signal modules in solder-tail or press-fit configurations. Stacking heights range from 15mm to 32mm.



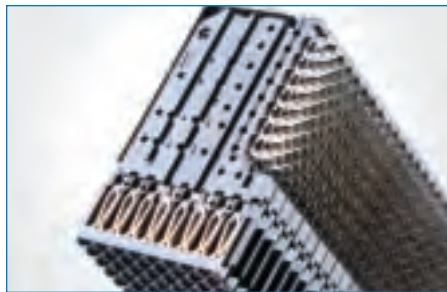
HD-Optyx™ HD-Optyx™ is a blindmate, fiber optic connector, designed for applications where flexibility and card edge density are paramount. The innovative modular architecture facilitates efficient layout solutions and provides a wide array of possibilities during design-ins or system upgrades. Common components may be readily configured for custom applications, eliminating the need for costly tooling and lost time-to-market. The platform combines reliable performance with ferrule protection in one compact, robust package.



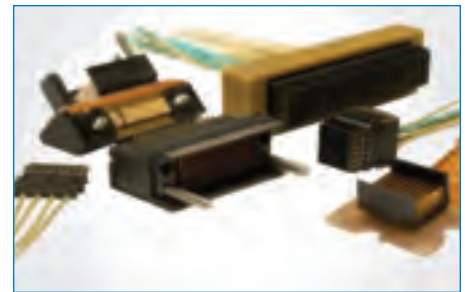
NeXLev® Amphenol's NeXLev® high-density parallel board connector is capable of handling data rates up to 12.5 Gbps, providing a robust solution for your increasing bandwidth demands in mezzanine applications. The connector can be routed to support single-ended or differential architectures and offers 20 stacking heights from 10-33mm. NeXLev uniquely applies BGA attachment technology, widely accepted for its high reliability, making it robust both during manufacturing and in the field.



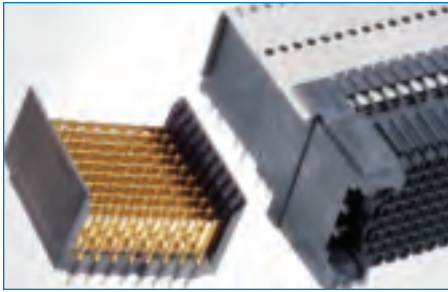
Ventura® The Ventura® platform can deliver data at 6.25 Gbps per signal — the fastest single-ended connector available — and reach speeds of 12 Gbps when driven differentially. With a density of up to 178 pins/inch, Ventura offers the most pins per inch of any connector on the market. Utilizing surface-mount technology to minimize via effects, Ventura is designed for high-performance applications.



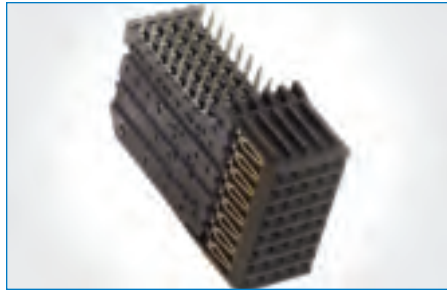
VHDM® The VHDM® connector platform is the industry standard for high-speed backplane applications, with measured performance to 3.125 Gbps and billions of pins installed worldwide. VHDM is available in 6- and 8-Row configurations providing 76 - 101 real signals per linear inch. Stripline shielding allows 100% of the pins to be used for signals.



VHDM® Cable Assemblies Amphenol's VHDM® Cable and Flex Assemblies are the cable solution complement to Amphenol's broad VHDM backplane product family. The VHDM backplane system is a 3.125 Gb/second capable connector system on a 2 mm x 2.25 mm grid. Crosstalk is held to less than 5% through the connector.



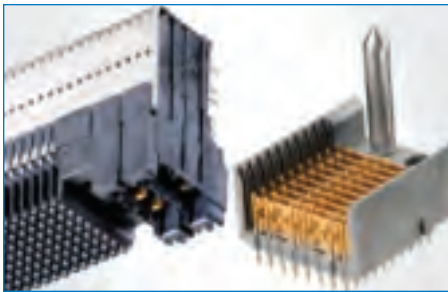
VHDM® H-Series VHDM® H-Series uses an 0.018" (.045mm) PCB hole for improved routability, which can eliminate costly layers in the printed circuit board, reduce impedance discontinuities, and improve the ability to back-drill, reducing via stub effects. Additional shield-compliant pins on the daughtercard wafer improve signal integrity. VHDM H-Series is backwards compatible and can be designed into the same slot as standard VHDM, enabling data rates up to 6.25 Gbps.



VHDM® L-Series Building on the strength of the VHDM® product family, the VHDM L-Series connector provides additional flexibility with a cost-performance optimized solution. With the ability to co-locate any combination of VHDM, VHD M-HSD™ or VHDM L-Series on the same connector, designers can achieve specific performance needs with a mix of high- and low-speed connections. Ideal for TTL sense and control and other low-speed data lines.



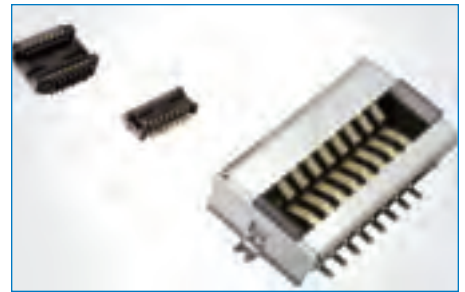
VHDM® Stacker Amphenol's VHDM® Stacker allows the design of parallel board-to-board connections with the high-speed, high-density performance of standard VHDM. The connector utilizes press-fit compliant pins which can be routed single-ended or differentially. Zero and 15 column modules are available with stacking heights from 18mm and up. The VHDM Stacker delivers data rates of 3.125 Gbps with 76-101 real signals per linear inch.



VHDM-HSD™ The VHDM-HSD™ connector is a shielded, high-density, high-speed press-fit connector system optimized for differential pair architectures. A modular design allows all the features and functionality required in a system to be integrated in a single robust connector. VHDM-HSD delivers data rates up to 5 Gbps, scalable to 10 Gbps with backwards-compatible eHSD® connector. Available in 5-, 6-, and 8-Row versions.



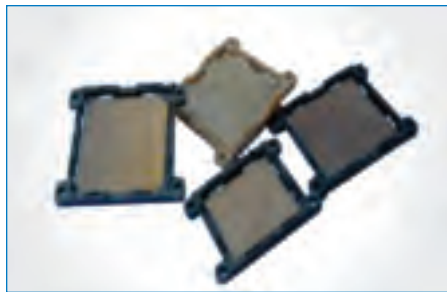
AirMax VS® The AirMax VS® connector utilizes edge-coupling technology to improve electrical impedance control with optimized stagger to minimize signal crosstalk. This innovative combination delivers a cost-effective interconnect for multi-gigabits/s applications. To leapfrog traditional complex Stripline designs, the AirMax VS solution utilizes "Virtual Shields," which eliminate costly metal interleaves between columns. **AirMax VS is a registered trademark of FCI.



BTB Board-to-board connectors are available in plug-socket pairs with pin counts ranging from 8 to 50. Spring-type board-to-board connectors are robust and suitable for use in applications where vibration is common, such as application in a car audio system.



C-Byte™ Compression Connector Amphenol has developed the patented C-Byte™ flex compression connector system, to substantially increase interconnection speed, reduce cost and eliminate the soldering of mating connectors to circuit boards. The C-Byte™ flex compression system combines high-signal integrity, solderless connector termination, and low cost in versatile board mating configurations.



cLGA® Socket Connector Amphenol's cLGA® land grid array socket system brings conventional connector-material construction to a high-performance, low-cost socket design. The cLGA® socket is fully qualified under the EIA-540BOAE and Telcordia GR-1217-CORE specifications. The cLGA product is available in standard .050" and 1 millimeter centerline configurations. A wide array of socket sizes and styles is available.



cStack™ Amphenol's cStack™ flex circuit assemblies combine low-cost termination with high-speed, impedance-controlled interconnection performance. The patented cStack™ stacking connector used to terminate these assemblies provides high signal integrity interconnection technology, because of the connector's low (.048 inch) profile between flex and board. Flex circuitry for all cStack™ flex assemblies can be electrically and mechanically customized to exactly fit system specifications.



E-SATA Receptacle Amphenol's high-performance external SATA receptacle has evolved from internal or inside-the-box SATA interface technology. External SATA brings the same performance and features of external storage solutions such as USB 2.0 and Firewire (IEEE 1394) to the SATA interface.



Filtered Connectors Amphenol's FCC57 series of filtered micro-ribbon connectors provides a very cost-effective solution to combat EMI. The family of connectors is the telephone industry's standard for multiple line connections. Available in 36, 50, and 64 sizes with a variety of termination styles, including: male/female, right angle PCB, vertical, press-fit, and solder cup.



FPC Amphenol Flexprint connectors (C007 series) accommodate 0.3 mm thick flexprint cable with different contact configurations and pitch sizes. The double-sided, pre-stressed contact shape guarantees secure contact between the flexprint circuit and the connector, and allows insertion of the flexprint cable in either upward or downward direction.



Harsh Environment D-Sub: MDB Series Amphenol's rugged D-Subs provide a cost-effective option for harsh environments. These environmentally sealed D-Subs utilize high-performance thermoplastic inserts and metal die cast shells and are supplied with screw machine contacts. These connectors are available in both standard and high-density versions and a variety of termination styles.



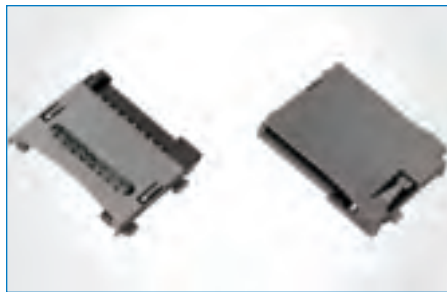
Harsh Environment RJ45: MRJ Series Amphenol's complete range of rugged RJ45 connectors provides an ideal solution for network data transfer in harsh and demanding environments. This family of connectors meets military shock and vibration requirements and are rated for IP67.



Harsh Environment USB: MUSB Series Amphenol's complete range of rugged USB connectors are offered in single and stacked versions with rugged features that provide the ideal solution to data transfer in harsh or demanding environments. This family of connectors meets military shock and vibration requirements and are rated for IP67.



MDR Amphenol's MDR is a high-density shielded I/O connector with a broad range of board-mount, wire-mount, and cabling components. Ribbon contact is on a grid, which provides a small footprint connector, creating a reliable system for repetitive plugging and unplugging in I/O applications.



Memory Card Sockets Amphenol offers a full range of flash memory connectors (including SD, Mini-SD, Micro-SD, xD, CF1 & 2) with numerous features such as low-profile design, normal or reverse mounting, manual or push-push insert style, and a locking feature to prevent the card from dropping out. Available in SMT, straddle mount, or through-hole termination.



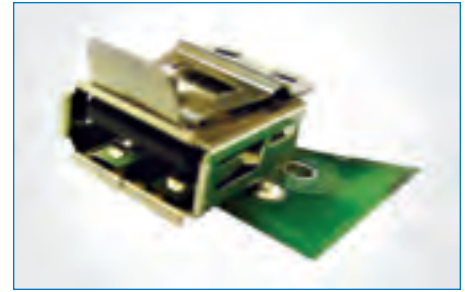
RJ11/45 Amphenol offers high-speed (over 1 Gbps) RJ45 with integrated magnetics. These connectors provide a full spectrum of data speed for RJ45: from 10Mbps to beyond 1 Gbps. Our RJ45 connectors can integrate LEDs into the connector package for easy port identification.



SCA2 (Single Connector Attachment) Amphenol's SCA2 is a type of connector used for internal SCSI cabling systems. "Hot-swapping" allows seamless replacement of failed RAID drives, which greatly simplifies system maintenance procedures. SCA2 features a single plug configuration carrying signal, power, and jumpers together.



Smart Card Connector Smart Card Connectors are integral components of a smart card reader or terminal, and provide electrical contact to the smart card's pads. The connector is not a standalone peripheral device. An additional interface circuit is necessary to be able to read and write to the smart card whether a smart card is a memory only or a microprocessor card.



USB with Positive Locking: LUSB Series Amphenol's USB, Series A with a unique latching mechanism has been developed to address major concerns of unintentional interruption of data transmission. This patented, unique latching mechanism must be intentionally raised in order to remove the plug. An accidental pull on the cable up to 22 lbs force will not separate the connectors.



CX4 / CX4 Active Amphenol's CX4 high-speed active assemblies are ultra-high-performance, cost-effective I/O solutions for gigabit speed applications in data and switched fabric I/O, switches, routers, and computer clusters. Amphenol's assemblies exceed CX4 standard requirements and have been qualified to perform at 5Gb or Double Data Rate (DDR) Infiniband and 10GBASE-CX4. Our active assemblies are cost-effective and provide lower EMI when compared to media converters.



DisplayPort Connectors Amphenol now creates DisplayPort connectors and cable assemblies. DisplayPort is a new digital display interface standard put forth by the Video Electronics Standards Association (VESA). It is a next generation digital interface that is designed to replace LVDS, DVI, and eventually VGA. It covers provisions for high-definition digital audio-video and graphics streaming via the interface through the same cable.



EXD Skewclear Cable Amphenol's EXD (EXtended Distance) cable has been developed to improve basic attenuation in high-data-rate twinaxial copper cables and totally eliminate high-frequency resonances (suckouts) that can severely affect harmonic signal content in these systems. Our EXD cable offers a 10%-20% attenuation improvement, and resonance elimination up to 20GHz. Patent pending.



InfiniBand (4X & 12X) Amphenol's Infiniband (4x & 12x) high-speed assemblies are an ultra-high-performance, cost-effective solution for gigabit-speed applications in data and switched fabric I/O, switches, routers, data storage arrays, and computer clusters. Available in 4 or 12 channels, Amphenol's high-speed assemblies meet and exceed Infiniband standards and requirements and have been tested to work at Double Data Rate (DDR).



Mini SAS Amphenol offers a full range of mini-SAS interconnect systems for both connector and cable assemblies. Our offering includes conversion cables to legacy SFF-8484 4x SAS interfaces and break-out cables to individual SATA or SAS drives. The cable assemblies provide 100 ohm differential impedance with tight skew control and low crosstalk. Multiple cable lengths are offered standard, as well as customized lengths upon request.



QSFP Cable Assemblies Amphenol's QSFP copper cable assemblies are a high-performance, cost-effective interconnect solution supporting Ethernet, Fibre Channel, Infiniband, SAS, and SONET/SDH applications. QSFP copper modules provide a high-density, high-bandwidth solution at very low cost and reduced power budget. Amphenol's high-speed cable assemblies meet and exceed industry standards for performance and reliability.



SAS Cables & Connectors Amphenol's High-Speed Serial Attached SCSI (SAS) Assemblies are ultra-high-performance, cost-effective solutions for high-speed serial buses supporting SAS architectures. Our High-Speed SAS Assemblies meet or exceed SAS-2 standards and requirements.



SATA Connectors & Cables Amphenol offers a complete range of standard and customized Serial ATA (SATA) cable assemblies. SATA provides much higher-speed data transfer than the traditional Parallel ATA standard. SATA cables are also much smaller than that of PATA and provide better airflow within the device box, lowering manufacturing and maintenance costs.



SCSI Amphenol provides a wide range of SCSI-1, 2, and 3 connectors for cable mounts, PCB mounts, and cable assemblies. SCSI (Small Computer System Interface) is a parallel I/O bus system used to connect computers to peripheral devices such as disk drives, tape drives, and printers. The Amphenol wide-SCSI 3-in-1 combo combines the signal, ID, and power together in one connector.



SFP / SFP+ Cable Assemblies & Modules Amphenol's SFP+ cable assemblies are high-performance, cost-effective I/O solutions for 10Gb Ethernet and 10G Fibre Channel applications. SFP+ copper modules allow hardware manufacturers to achieve high port density, configurability, and utilization at a very low cost and reduced power budget. Amphenol's high-speed cable assemblies meet and exceed Gigabit Ethernet and Fibre Channel industry standard requirements for performance and reliability.



SFP w/Limiting Amps An Amphenol-developed solution, SFP with Limiting Amps allows systems to transparently accept copper in place of optical modules. This solution offers a significant cost reduction and is available in lengths up to 20m. The design also uses approximately half the power, reducing ongoing energy costs. This copper solution maintains Tx Disable and LOS.



Twist 'n' Flat Amphenol's .025 pitch Twist 'n' Flat cable is designed for internal interconnection of parallel SCSI drives. Amphenol has long been the industry standard for precision mass termination flat cables. Cables are typically 68 conductor 30 AWG, with either PVC or TPE dielectrics, depending on customer impedance requirements.



USB The Amphenol series of USB receptacles, plugs, and cable assemblies is a complete system of interconnection technology designed in accordance with Universal Serial Bus Specifications Version 2.0. In addition to normal USB Type A and B, Amphenol supplies compact Mini-USB and Micro-USB connectors and cable assemblies.



XCode® Cable Assemblies Amphenol has developed XCode® high-speed cable assemblies. Amphenol now offers the flexibility of a stackable wafer system, allowing for infinite custom connection options, including power, guidance, and multiple differential pair offerings in both VHDM® and XCode® product families. XCode® cables support a 10Gb serial data rate in multi-aggressor configurations.



DVI to LVDS Cable Assembly Amphenol's DVI to LVDS cable assembly is just one example of the customized cable assemblies we can produce for our customers. We have the capabilities to create the custom cable assemblies required by your business. We specialize in creating complex yet cost effective solutions and can easily handle high-mix high-volume product assortments.



FTTx Cable Assemblies FTTx connectors are used to connect multi-port terminals or fiber terminal closures typically located at the street with Optical Network Terminals (ONTs) via drop cables. This system is installed on the external enclosure surface so that connections can be completed without opening the enclosure, essentially creating a "plug-and-go" connection. Amphenol's optical connector and adapter protects against extreme temperature, moisture, and chemical exposure.



LC Cable Assemblies Amphenol's fiber optic LC small form factor connector cable assemblies provide high-density connections for a variety of telecommunications applications. Amphenol utilizes TIA 604-10, IEC 61754-20 compliant one-piece body connectors for assemblies. Connectors are available in 900um, 2mm, or 3mm, and simplex or duplex. Multiple cable constructions are also available.



SC Cable Assemblies Amphenol's fiber optic SC connectors utilize a push pull retention feature enabling easy insertion and removal, making it ideally suited for high-density applications. The GR-326, EIA/TIA 604-3, and IEC 60874-14 compliant SC connectors are available in 900um, 2mm, or 3mm and simplex or duplex. Multiple cable constructions are available.



Battery Harness These cables form an alarm harness in an Uninterruptible Power Supply system. The specially designed D-sub assemblies are tested water-tight at a depth of 3 meters (10 feet). This ensures reliable signal interconnect performance under the severe conditions typically encountered in outside cabinets. Individual assemblies permit substantial variation in length, configuration, and form factor for completed harnesses.



Signal/Power Cable These ruggedized power and signal cable sets have been bolstered with additional metal and nylon braid to significantly increase mechanical strength and add life under extreme usage conditions. Also featured are water-resistant molded inline switches that can be manufactured with any switch form available. The military strain-relieved connectors coupled with environmentally-sealed action buttons and robust cables makes for a very rugged product.



Surge Suppressor Cable This 100-pair assembly serves to protect telecom cabinets from electrical surges caused by lightning strikes. The panel is loaded with individual surge protectors for each and every line. The variable length cables can be terminated with every common interconnect known to the telecom industry. Amphenol has developed an advanced development program for this assembly that can improve the form factor and provide cost reduction.



Backplane Power Amphenol's backplane power series is designed to package high-power availability in a small form factor with customized options. This new range has many unique features to meet or exceed existing competitive products in power density.



Bus Bar Amphenol has expansive capabilities in producing customized bus bar solutions. Amphenol bus bars improve system reliability and power system life by replacing unreliable cabling and wiring harnesses. In addition, Amphenol's custom bus bars allow for denser packaging and are individually engineered to fit a customer's application while minimizing space-taking wiring harnesses and cables — allowing increased airflow.



System Integration Amphenol has over 10 years' experience building complex systems and sub-systems. We combine unparalleled engineering with industry-leading connectors, high-technology printed circuit board and backplane assembly expertise, and systems integration services to deliver total solutions. Technology-focused vertical integration means technology leadership where it matters and focused program management to speed your system to market with the highest possible quality at the lowest possible cost.

PRODUCTS

Mobile Networks

Amphenol is a leading global interconnect solutions provider to the wireless infrastructure market, including applications such as cellular base stations, radio links, mobile switches, wireless routers, wireless local loop and cellsite antenna systems, combiners, transceivers, filters, and amplifiers. Amphenol offers a wide product portfolio for every wireless standard and generation radio technology, including 2.5G, 3G, Wimax, and future IP solutions. The product range includes RF, low-frequency, power and fiber-optic connectors and cable assemblies, antennas, backplane interconnect systems, and power distribution systems.

Mobile Networks

- Amphenol RF
United States
- Amphenol Antel, Inc.
United States
- Amphenol Cables on Demand
United States
- Amphenol Connex Corporation
United States
- Amphenol Fiber Optic Products
United States
- Amphenol Interconnect Products Corporation
United States
- Amphenol TCS
United States
- SV Microwave, Inc.
United States
- Times Fiber Communications, Inc.
United States
- Amphenol ConneXus AEOU
Estonia
- Amphenol Socapex S.A.S.
France
- Amphenol Tuchel Electronic GmbH
Germany
- Amphenol Omniconnect India Private Limited
India
- Amphenol ConneXus AB
Sweden
- Amphenol RF Asia
China
- Amphenol TFC (Changzhou Communications Equipment Co., Ltd.)
China
- Amphenol Tuchel Electronics - China
China
- Guangzhou Amphenol Electronics
Communications Co., Ltd.
China
- Changzhou Amphenol Fuyang
Communication Equip Co., Ltd
China



Amphenol is the only company that can support the entire interconnect requirements of a cellular infrastructure system. From high-speed backplane interconnect solutions to RF, fiber optic, and power products, the vast majority of base stations are enabled by our interconnection technology. And Amphenol provides antennas and tower interconnects as well.





AISG Jumper (C091 Outdoor Cable Assemblies) Amphenol provides C091D cable assemblies conforming to the AISG 2.0 specification for wireless infrastructure applications including tower mounted devices such as remote radio heads. Based upon the proven long term reliability of its AISG products, Amphenol now has a major share in the AISG market. The Ecolmate plastic connector program is in use as a power supply system for indoor and outdoor devices such as WCDMA and Wimax RRH's.



AISG Connector (C091 Outdoor Connectors) Amphenol produces circular connectors conforming to AISG (Antenna Interface Standards Group) requirements. Tightness, temperature resistance, salt mist resistance, and UV-resistance are only a few of the important criteria an AISG connector must fulfill. Our successful realization of the AISG market requirements has made us the worldwide market leader for multipolar circular connectors and assembled wires.



MDR Internal Cable Assembly Amphenol's MDR Internal cable assembly is just one example of the customized cable assemblies we can produce for our customers. We have the capabilities to create the custom cable assemblies required by your business. We specialize in creating complex yet cost-effective solutions and can easily handle high-mix high-volume product assortments.



Jumper Cables Amphenol's jumper cables are designed for mobile networks. They typically come in shorter length jumpers and longer versions. The shorter runs are typically used at the tower-top, connecting the antenna to a tower-mounted device such as an amplifier (TMA). Longer feeders are used to run between that TMA and the base station on the ground. These assemblies handle large amounts of power at high frequency.



D-Sub WCDMA Cable Assembly Amphenol's D-Sub WCDMA cable assembly is just one example of the customized cable assemblies we can produce for our customers. We have the capabilities to create the custom cable assemblies required by your business. We specialize in creating complex yet cost-effective solutions and can easily handle high-mix high-volume product assortments.



1.0/2.3 The compact design of the 1.0/2.3 series permits dense connector packing. They are ideally suited to applications where space saving is critical. Versions are available with threaded coupling mechanisms, which provide positive mating, or a unique push-pull coupling system, which allows quick installation. Amphenol 1.0/2.3 coaxial connectors are 50 Ω units operating from DC-10 GHz. Common applications are amplifiers, base stations, routers, and switching equipment.



7/16 The 7/16 series is named for the metric dimensions of the connector interface: 7mm OD of inner contact, 16 mm ID of outer contact. 7/16 connectors are designed for use in communications systems with power levels of 100 watts per channel. These connectors are typically used in antennas, satellite communications, and base stations.



AMC Amphenol's 50 Ω AMC cable assemblies are ideal for space-constrained board-to-board connections in small devices. Their snap-on interface performs superbly under shock and vibration conditions, making them ideal for wireless handheld devices. The AMC series has a low profile (2.5 mm off the board) and offers an extremely small board footprint (3 mm x 3 mm). This series is compatible with the U.FL interface.



BNC Developed in the late 1940s as a miniature version of the Type C connector, BNC stands for Bayonet Neill Concelman and is named after Amphenol engineer Carl Concelman. The BNC product line is a miniature quick-connect RF connector. It features two bayonet lugs on the female connector. BNCs are ideally suited for termination on miniature and subminiature coaxial cable, including RG-58, 59, RG-179, and RG-316.



High-power Solenoid-activated Switch Amphenol has developed cost-effective coaxial relays that significantly reduce the labor involved with PCB mounting. Amphenol's design can be applied directly to the PCB using the SMT process. Each relay contains several features to withstand environmental conditioning. Highlights include a sealed construction with an IEC 529 rating of IP50 to ensure the RF switching cavity remains clean and particle-free.



Lightning Arrestors Amphenol offers a variety of lightning arrestors to meet your needs. We specialize in gas discharge, quarter wave stub, and hybrid arrestors. Our Gas Discharge Protectors are rated from DC to 2200 MHz and have limited-strike capacity. Our broadband 1/4-Wave Stub is for use from 800 to 2200 MHz in the transmit and receive paths. Our hybrid is the correct choice for shared tower/antenna applications.



MCX The MCX series is a great option where weight and physical space are limited. The MCX provides broadband capability though 6 GHz in a snap-on connector design. A range of connectors are available, including printed circuit board and cable connectors. Typical applications include automotive, wireless LAN, broadband, and wireless infrastructure markets. MCX connectors conform to the European CECC 22000 spec.



MMCX MMCX (also called MicroMate™) is a micro-miniature connector series with a snap-lock mechanism allowing for 360-degree rotation. MMCX connectors conform to the European CECC 22000 specification. The MicroMate family of products is a 6 GHz 50 Ω interconnect. A range of connectors are available, including surface mount, edge card, and cable connectors. Common applications include broadband, instrumentation, and telecommunications.



QMA The QMA is a quick-disconnect version of the SMA connector. The electrical performance of the QMA includes low-loss RF performance up to 18 GHz. The QMA connector offers the same high-power handling capability as the SMA connector it is based on. This gives the series significant advantages over other quick-disconnect connectors. Amphenol is a member of the Quick Lock Formula® Alliance.



QN Amphenol's QN connector is a quick-disconnect version of the N connector with similar internal construction, which enables fast and easy mating in tight spaces. The snap-on interface makes the QN connector 10 times faster than a threaded connector. The QN line is perfect for indoor and outdoor applications, including base stations and cable assemblies.



SMA SMA is an acronym for sub-miniature version A and was developed in the 1960s. It uses a threaded interface. 50 Ω SMA connectors are semi-precision, subminiature units that provide excellent electrical performance from DC to 18 GHz. These high-performance connectors are compact in size and mechanically have outstanding durability. SMA connectors are used in phase array radar, test equipment, ILS landing systems, and other instrumentation.



Type N The Type N connector was developed to satisfy the need for a durable, weatherproof, medium-size RF connector with consistent performance through 18 GHz. There are two families of Type N connectors: Standard N (coaxial cable) and Corrugated N (helical and annular cable). Their primary applications are the termination of medium to miniature size coaxial cable, including RG-8, RG-58, RG-141, and RG-225.



PT/LC Cable Assemblies The Industrial PT/LC leverages the proven MIL-Spec 26482 connector system to provide an environmental seal and mechanical protection for a duplex LC connector. The PT/LC connectors are capable of performing in the toughest environments, making them exceptionally suited for WiMax, wireless, and base station applications. Multiple receptacle configurations and cable types are available.



PT/MPO Cable Assemblies The Industrial PT/MPO leverages the proven MIL-Spec 26482 connector system to provide an environmental seal and mechanical protection for an MPO-style connector. The metal bayonet connector system is quick to deploy, requiring only ¼ turn. The PT/MPO connectors are exceptionally well suited for WiMax, wireless, and base station applications.



Ruggedized Fiber Optic Outdoor Cable Assembly These fiber optic cable assemblies are designed to be used in cellular towers. Resistant to harsh environments, Amphenol's ruggedized outdoor cable assemblies are totally immune to interference, EMI, RFI, and ESD, including lightning. These cable assemblies come in 2 and 4 positions and are fully mateable with industry-standard products.



Bus Bar - Power Distribution Amphenol has expansive capabilities in producing customized bus bar solutions. Amphenol bus bars improve system reliability and power system life by replacing unreliable cabling and wiring harnesses. In addition, Amphenol's custom bus bars allow for denser packaging and are individually engineered to fit a customer's application while minimizing space-taking wiring harnesses and cables — allowing increased airflow.



Backplane Assembly Amphenol's design and applications engineering experts apply knowledge gained from thousands of successful backplane designs to your project delivering an integrated backplane system with superior signal channel performance at an optimized cost. We routinely manufacture backplane systems with data rates up to and beyond 20 Gbps with field-proven mechanical reliability.



AirMax VS® The AirMax VS® connector utilizes edge-coupling technology to improve electrical impedance control with optimized stagger to minimize signal crosstalk. This innovative combination delivers a cost-effective interconnect for multi-gigabits/s applications. To leap frog traditional complex Stripline designs, the AirMax VS solution utilizes "Virtual Shields" which eliminate costly metal interleaves between columns. **AirMax VS is a registered trademark of FCI.



VHDM® The VHDM® connector platform is the industry standard for high-speed backplane applications, with measured performance to 3.125 Gbps and billions of pins installed worldwide. VHDM is available in 6 and 8-row configurations providing 76 - 101 real signals per linear inch. Stripline shielding allows 100% of the pins to be used for signals.



Dual-Polarized Antennas with Adjustable Electrical Downtilt The FlexTilt™ series is a line of antennas featuring adjustable electrical downtilt for both manual and remote applications. FlexTilt™ antenna designs are based on Amphenol's exclusive 3T Technology™, incorporating phase shifters with a 100% mechanical design. A minimal number of moving parts and the use of quality components enhances reliability. Antennas are available in single and dual band.



In-Building Antennas Our in-building MPA antennas provide excellent in-building coverage due to effective electrical performance, compact size, and ease of installation. Each antenna is equipped with two reflector pins that can be used to change the azimuth plane from 360° to 180°, 90°, or an elliptical pattern. The MPA is equipped with 30° electrical downtilt to direct the signal toward the floor where coverage is needed.



Omni-Directional Panel Antennas with Fixed Electrical Downtilt Amphenol offers dual polarized, log periodic dipole, BCD, and vertically polarized directional panel antennas. The unique all mechanical design and patented slotted dipole element of our dual polarized antennas ensures excellent overall performance. Our log periodic dipole antennas feature more active elements than the industry standard. Our BCD antenna is a robust omni-directional antenna ideal for rural coverage or low-capacity applications. Our comprehensive selection of vertically polarized directional panel antennas are light-weight and low-profile and offer upper side lobe suppression and quick horizontal roll-off.

PRODUCTS

Mobile Devices

Amphenol provides a broad range of components with presence on more than 50% of the world's annual mobile phone production. Amphenol manufactures essentially all of the interconnect devices found in mobile phones, PDAs, and other mobile devices. The broad product offering includes antennas, RF switches/plugs, navigation keys/side keys, microphone/speaker/vibra connectors, LCD connectors, board-to-board connectors, SIM/MMC/SD sockets, battery connectors, I/O system connectors, charger (plug and socket) connectors, and electromechanical hinges. Our capability for high-volume production of these technically demanding, miniaturized products, combined with our speed of new product introduction, is a critical factor for our success in this market.

Mobile Devices

Amphenol Mobile Consumer Products Group
Hong Kong

Amphenol InterCon Systems
United States

Amphenol Mechconnect, Inc.
United States

Amphenol RF
United States

Amphenol T&M Antennas, Inc.
United States

Amphenol Tuchel Electronic GmbH
Germany

Amphenol RF Asia
China

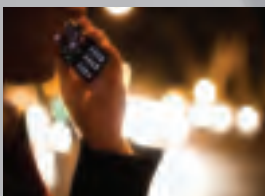
Amphenol Tuchel Electronics - China
China

Shanghai Airwave
China

Amphenol Korea Air Electronics
Korea

Amphenol Phoenix Co. Ltd.
Korea

Amphenol East Asia Limited-Taiwan
Taiwan



There's a good chance an Amphenol component is helping you make that next cell phone call. In 2007, more than half of the world's 1.1 billion mobile phones included at least one Amphenol component.





Mobile Computing Antennas Mobile computing antennas from Amphenol are high-performance, highly integrated antenna modules for laptops, tablets, and other mobile computing devices. The antennas are mounted along the edge of the device and optimized to cover up to 10 frequency bands in one unit. The antennas can be configured as multiple antenna modules with several coaxial feeder cables or as a single feed unit with one cable.



Mobile Phone Blue Tooth Antennas With the increasing advancement in technology, Amphenol recognizes that a Bluetooth antenna is now a requirement in a vast array of mobile products. Amphenol's Bluetooth/WiFi antennas are all RoHS-compliant and ALT-tested for handsets with 2.4GHz ISM. The antennas can be produced with flexfoil with a plastic carrier or a metal stamping.



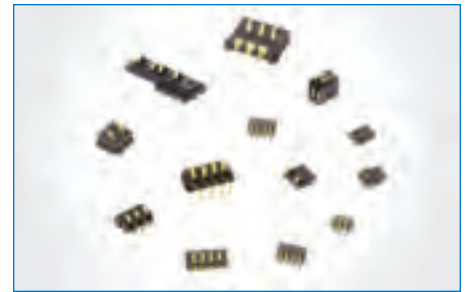
Mobile Phone Internal Antennas Amphenol's internal antennas are customized for optimal handset performance. Amphenol has designed internal antennas for clamshell, bar, and slider platforms from single band up to six operating bands. Our antenna design and manufacturing experience will enable optimal performance and cost efficiency. We have designed antennas for 2G and 3G mobile systems, WiFi, WiMAX, and mobile broadcasting devices.



PC Card Antennas Amphenol's series of miniature data card antennas for 2.5 and 3G applications provide the performance to power high-speed mobile internet connectivity. With volumes less than 1.5cc and a customizable geometry these multiband antennas are easily integrated into miniature data cards. The data card antennas can be combined with diversity antennas in the card to further improve the reception.



AMC Amphenol's 50 Ω AMC cable assemblies are ideal for space-constrained board-to-board connections in small devices. Their snap-on interface performs superbly under shock and vibration conditions, making them ideal for wireless handheld devices. The AMC series has a low profile (2.5 mm off the board) and offers an extremely small board footprint (3 mm x 3 mm). This series is compatible with the U.FL interface.



Battery Connectors Amphenol's comprehensive offering of battery connectors for mobile phones come in single and multi-contact versions with straight and right angle mountings. They are available in a variety of pitches and heights to meet different phone and battery pad requirements. They feature stamp and form beryllium contacts with additional solder tags for high reliability and conductivity.



Contact Pads (Press-on Contacts) Amphenol's contact pads are used in contact areas and as spacers on PCBs. They are pick & place capable and come packed in tape & reel. Durable plating includes a diffusion barrier. The contact pads connect with low resistance over the product's lifetime for use in sensitive connections of antennas, microphones, and carbon PCBs. Available in a wide variety of shapes and sizes. Thickness: scalable ≥ 0.1 mm. SMT solderable.



I/O Connectors Amphenol provides I/O connectors for portable devices, as well as docking I/Os of 0.5mm pitch. Designed with blindmating and locking features, the connectors are highly durable and designed to withstand a high number of mating cycles.



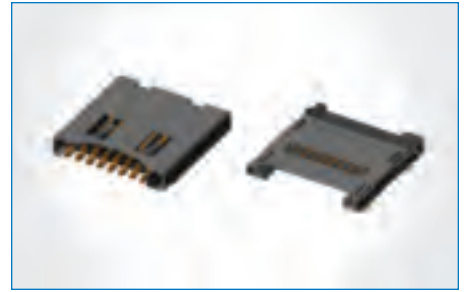
I/O System Compression Amphenol's wide range of compression-style I/O system connectors is widely used in mobile phone applications. I/O system connectors with integrated data, audio, DC jack, battery, and microphone contacts (4-in-1 connector) simplify phone design. Additional metal clips are included for secure mating.



I/O System Shielded Amphenol's full range of standard I/O connectors is designed for the latest mobile phone application technologies. Our comprehensive offering includes 2 to 26 pin shielded sockets, with fine pitch (.5mm) integrated with battery connectors are designed for use in mobile phones but can also be used in many other types of electronic equipment.



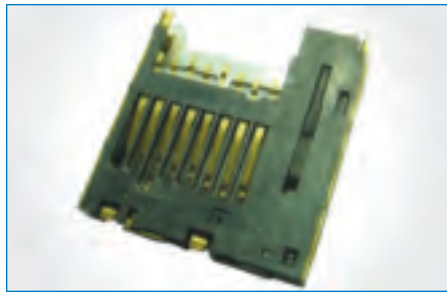
Internal PCB Connectors Amphenol's Internal PCB Connectors consist of interconnects that are soldered onto PCBs for different applications. Clips, pads, spring-loaded contacts, and battery connectors are designed for use in mobile phones but can also be used in many other types of electronic equipment.



Mobile Phone Memory Card Connectors The trend to thinner and lighter phones has led to new memory card formats including Micro-SD and MMCmicro. Different handling mechanisms include push-pull, push-push, and hinge-type SMD solderable. They can be packed in tape & reel and are pick & place capable.



Micro Coax Harness Amphenol is one of the leading providers of MCX cable solutions on the market. The current market demands a more integrated connectivity solution, including integrated hinge/MCX cable assemblies. Our Micro Coax Cable assembly is designed for high-speed transmission, high EMI shielding, and a very small bundle diameter for optimal spacing in tight applications.



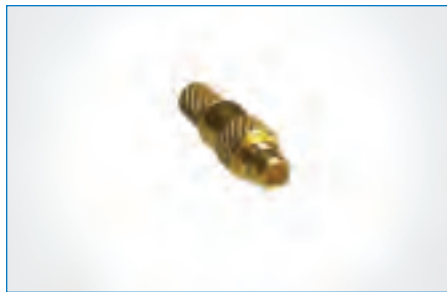
Micro-SD Connector Amphenol produces a wide variety of micro-SD and mini-SD memory card connectors. These connectors come in hinged and non-hinged varieties and are typically used in a wide range of portable electronics devices including mobile phones, smart phones, PDAs, MP3 players, GPS devices, and video game players.



Mini & Micro USB USB has become a popular interface for exchanging data between host, mobile phone, and portable devices. Many devices have become so small that it is impossible to use standard USB connector in the USB 2.0 specification. In early January 2007, USB-IF issued 1.0 specification of the Micro-USB technology. Amphenol's Micro-USB can replace most Mini-USB plugs and receptacles.



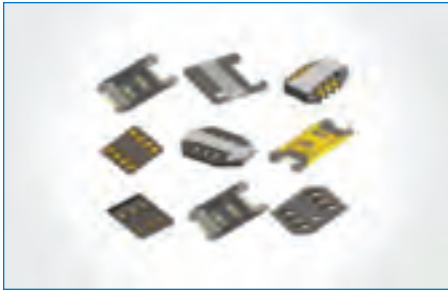
Mini-UHF Mini-UHF is a miniature version of the UHF connectors that were developed for use in the radio industry. Mini-UHF connectors are used as coaxial interconnects in cell phones, automotive systems, and similar applications where size, weight, and cost are critical. Mini-UHF connectors terminate to RG-58, RG-58A, RG-58B, RG-58C, and Belden 9258 cables. Crimp-type cable plugs and jacks are available, as well as panel and PCB receptacles.



MMCX MMCX (also called MicroMate™) is a micro-miniature connector series with a snap-lock mechanism allowing for 360-degree rotation. MMCX connectors conform to the European CECC 22000 specification. The MicroMate Family of products is a 6 GHz 50 Ω interconnect. A range of connectors is available, including surface mount, edge card, and cable connectors. Common applications include broadband, instrumentation, and telecommunications.



RF Switches Amphenol's full range of RF switches come in straight and right angle mountings as well as miniature, low-profile, and lightweight versions for different phone design requirements. Our full mechanical switches provide high reliability for wireless terminal testing and connection to external car antennas of up to 5Ghz.



SIM Card Connectors Amphenol's extensive range of SIM card connectors is available in three types; wing connectors, bridge block connectors, and SIM block connectors. Available in 6- or 8-contact versions, with and without locating pegs for board stability, all are surface mount types. Many are available with detection switches that allow your device to know if a SIM card is present.



SIMLOCK® Amphenol's SIMLOCK® was designed for SIM/SAM card applications. The SIMLOCK features dimensions only slightly larger than the SIM card. The closed system with integrated card guidance assures reliable contacting of the SIM card, meeting critical card tolerances as per GSM 11.11. The polarization notch does not allow incorrect card positioning. Suitable for automatic assembly processes: pick & place, tape & reel packaging, and SMT solderable.



Spring Clips Amphenol's spring clips can be used in the following applications: antennas, metal housing connections, grounding connections, shielding connections, ESD & EMC connections, and LSD connectors, to name a few. They can incorporate a deflection stop to avoid permanent deformation of the clip. Scalable height for platform use. SMT solderable. Packed in tape & reel. Pick & place capable.



Spring-Loaded "Pogo" Pin Connectors Amphenol provides a wide range of products from single to multi-pin, in different heights, pitches, and spring forces to meet all design requirements. Available in POGO or finger type with high durability and a high number of mating cycles. The Spring-Loaded Contact (SLC) series has a wide application range. It fits any kind of connection that requires high reliability, long life, and small surface area on the PCB.



Barrel (Cam) Hinges Amphenol's barrel hinges come in a wide variety of sizes designed for your customized applications. Hinges can be created to match the dimensions of your application and can withstand open/close min. 100,000 cycles.



Rotating (Swivel) Hinges Amphenol produces customized rotating hinges to meet the stringent demands of our customers. Rotating hinges come in a variety of materials and are small and lightweight. They can open in various arcs depending upon customer requirements. Extremely durable, our rotating hinges can withstand 100,000 cycles.



Sliding Hinges Amphenol's sliding hinges come in a wide variety of designs for your customized applications. Hinges can be created to match the dimensions of your application and will withstand open/close min. 150,000 cycles.



Accessories Amphenol provides a wide range of mobile phone accessories, RF test cables, signal test cables, charger cables, data transfer cables, and battery pad contacts. This complete range of products offers design solutions tailored to the latest phone design requirements.



IMD/IML Covers & Sheet Lenses Amphenol has developed the capabilities to create application-specific mobile phone covers and lenses to fit your precise needs. We will work with you to create the attractive design your new mobile phone needs to be successful in the marketplace.

PRODUCTS

Broadband Communications

Amphenol is a world leader in broadband cable television communication products with industry-leading engineering, design, and manufacturing expertise. Amphenol offers a broad range of coaxial cable products to service the growing broadband market, from customer premises cables and interconnect devices to distribution cable and fiber optic components. Amphenol is also a world leader in coaxial connectors, and has products deployed on a wide range of broadband equipment from sophisticated head-end equipment to digital set-top boxes, high-speed cable modems, and DBS interface devices. Amphenol leads the way in broadband communications.

Broadband Communications

Times Fiber Communications, Inc.
United States

Amphenol Cables on Demand
United States

Amphenol Fiber Optic Products
United States

Amphenol RF
United States

Amphenol Tuchel Electronic GmbH
Germany

Amphenol AssembleTech (Xiamen) Co., Ltd.
China

Amphenol East Asia Elect. Tech. Shenzhen Co., Ltd.
China

Amphenol RF Asia
China

Amphenol TFC (Changzhou Communications Equipment Co., Ltd.)
China

Amphenol Tuchel Electronics - China
China

Amphenol East Asia Limited-Taiwan
Taiwan



In one year, Amphenol Times Fiber Communications produces almost enough cable to reach from the earth to the moon and back. While 300ft of cable winds through the walls of the average home, it can take close to 700ft threaded through the body of a car to support the newest automotive electronics systems, including GPS, Bluetooth, satellite, cellular, and a broad array of safety systems.





CATV Drop and Specialty Cables Amphenol's drop and specialty cables for the CATV market range from 59, 6, and 11 series cables used daily in the field to the unique specialty cables used in head-end equipment and other devices that require the unique features and touch that only Amphenol can deliver. Our mini coaxial product line offers many space-saving and performance-enhancing options needed in today's ever-growing markets.



Coaxial and Multi-coaxial Cables for Telecommunications Applications Amphenol is one of the premier manufacturers in Latin America for coaxial cables for the telecommunications industries. Our product profile provides designs for specialized applications needing single coaxial and multi-coaxial cables in various sizes, combinations, and specifications for telecommunications as well as the radio, video, TV, and information industries.



Control and Instrumentation Cables Amphenol's factories in South Korea and Brazil specialize in numerous types of wire and cables used for applications beyond CATV. Our high-quality control and instrumentation control cables are used worldwide for numerous applications and device interconnects.



Semiflex Trunk & Distribution Cable Amphenol's low-D.C. loop resistance of T10 and TX10 cable results in lower installation and annual power costs. These cables are ideal for urban and coastal environments, feeder or underground applications, and are resistant to extensive mechanical abuse and rodent attack. These cables have a specified 1 Ghz bandwidth for all rebuilds, upgrades, or new plants, and allows a system to handle future demands.



Telephony Cables Amphenol's superior telephony cables come in indoor, outdoor, burial, and interconnect varieties in use by telecom operators throughout Brazil and around the world. Requirements for assemblies using our telephony cables can be handled in house with Amphenol connectors from various divisions around the world.



TWB Cable Amphenol's TWB product line is a top choice in the wireless industry for various device interconnects requiring a flexible braided cable for 50 ohm applications. Perfect for cabinets and enclosures at the base of cell towers, our TWB cable is used throughout the world as a companion to other Amphenol connectors and devices.



TX15 Flexible Feeder Cable Amphenol's TX15 Flexible Feeder Cable has the low signal loss of a hardline cable with the high mechanical flexibility of a drop cable. TX15 cables are perfect for multiple dwelling units and any other settings requiring tight bends and severe turns.



Fiber Optic Interconnect Products Amphenol is a premier manufacturer of optical interconnect products. Amphenol's experience in fiber optics dates back more than 20 years when the company developed the first industry standard connector, the SMA. Today we offer a complete line of products, including fiber management systems, attenuators, jumpers, couplers, and service node cables, which all are designed to the most rigorous industry standards.



FTTx Cable Assemblies FTTx connectors are used to connect multi-port terminals or fiber terminal closures typically located at the street with Optical Network Terminals (ONTs) via drop cables. This system is installed on the external enclosure surface so that connections can be completed without opening the enclosure, essentially creating a "plug and go" connection. Amphenol's optical connector and adapter protect against extreme temperature, moisture, and chemical exposure.



CATV Coaxial Jumpers, Assemblies, and Kits Amphenol's cable assemblies, kits, and jumpers can be fully customized and are built to your specifications. We use the highest quality materials and practice world-class workmanship providing guaranteed performance.



HDMI Cables Amphenol creates high-quality HDMI cables for today's high-definition media. Our HDMI cables use Amphenol connectors and can be customized to meet your specific needs. Special configurations may include customized coloring, customized connector configurations, and customized angles.



HDTV Products Amphenol offers a full line of HDTV and A/V cables for home theater applications and a variety of other solutions serving the broadband telecommunications marketplace.



QuickConnect Jumpers Amphenol's QuickConnect connector system is a permanently fixed overmolded coaxial cable assembly for broadband applications. This unique assembly is ideal for broadband self-install kits due to its ergonomic hexagonal shape which is easily gripped and properly tightened without using tools. Since the hexagonal overmolded plastic is permanently fixed to the connector it does not pose a potential choking hazard.



Telecom Cable Assemblies Amphenol's telecom cable assemblies are widespread in the Brazilian market and recognized for their superior quality. These assemblies are utilized by companies such as Alcatel, NEC, ZTE, and Huawei, and various other original equipment manufacturers in the country of Brazil.



Window Jumper Amphenol's Window Jumper is a 12" flat cable assembly designed to allow the easy installation of cable or satellite television or Internet service without having to drill through walls. The cable assembly is extremely durable and was designed to withstand at least 50,000 window opening/closing cycles. It is also resistant to temperature fluctuations from -40° to 80° C and salt spray.



CATV Hardline / Semi-flex Connectors Amphenol offers a full line of CATV Hardline / Semiflex connectors to meet the demanding requirements of HFC broadband infrastructures of CATV multiple system operators and telephone companies worldwide. Our 3-piece connector design ensures high-quality performance, easy maintenance, and durability in the global marketplace.



CATV Splitters, Amplifiers, Couplers, Enclosures, and Premise Hardware Amphenol offers a full line of CATV splitters, amplifiers, couplers, enclosures, and premise hardware to meet all cable installers needs. These products are designed for indoor and outdoor applications. Splitters and couplers are available for mounting in both vertical or horizontal positions and vary in size from 2 to 16 ports.



CMTS Interconnects Amphenol's CMTS cable harnesses cover either internal or external assemblies for Cable Modem Terminations Systems. The external harnesses typically use bundled 75 Ohm cable. Internal cable assemblies typically run no longer than 18", but due to the dense nature of the chassis, special consideration has to be given to the size and flexibility of the cable.



Gangmate Interconnects Amphenol offers two configurations of Gangmate Interconnect: Board-to-board and Input/Output. Board-to-board allows multiple RF connections to be made between two fixed PC boards. Input/Output allows the connection between external cable connectors and Internal PCB connectors. Applications include CMTS, Internet, and telecommunications.



HDMI Connectors Amphenol's HDMI connectors provide an interface between any compatible digital audio/video source and a compatible digital audio and/or video monitor. These connectors support standard, enhanced, or high-definition video, plus multi-channel digital audio on a single cable.



MCX The MCX series is a great option where weight and physical space are limited. The MCX provides broadband capability through 6 GHz in a snap-on connector design. A range of connectors are available, including printed circuit board and cable connectors. Typical applications include automotive, wireless LAN, broadband, and wireless infrastructure markets. MCX connectors conform to the European CECC 22000 spec.



QuickConnect II Amphenol is pleased to announce our newest field-installable compression connector. This connector features an ergonomic integral molded design that cannot be removed. With its hexagonal shape, users can easily attain a high level of torque without the use of a tightening tool. With its narrow design, QuickConnect II is ideal for use in confined spaces such as set-top box rear backplanes.



RJ11/45 Amphenol offers high-speed (over 1 Gbps) RJ45 with integrated magnetics. These connectors provide a full spectrum of data speed for RJ45: from 10Mbps to beyond 1 Gbps. Our RJ45 connectors can integrate LEDs into the connector package for easy port identification.



Smart Card Connector Smart Card Connectors are integral components of a smart card reader or terminal, and provide electrical contact to the smart card's pads. The connector is not a standalone peripheral device. An additional interface circuit is necessary to be able to read and write to the smart card whether a smart card is a memory only or a microprocessor card.



SMB Developed in the 1960s, this sub miniature interface has snap-on coupling. Amphenol's SMB connectors conform to the requirements of MIL-C-39012, and the interface is in compliance with MIL-STD-348. Available in 50 Ω and 75 Ω , the SMB provides broadband capability through 10 GHz with a snap-on connector design and utilizes die cast components in non-critical areas to provide a low-cost solution.



Type F Amphenol knows that low-performance F receptacles could not be used in high-speed cable modems and customer interface units (CIUs). The industry has challenged connector manufacturers to develop high-performance connectors featuring -30 dB return loss at 1 GHz – Amphenol has met this challenge. Our high-performance F-connectors comply with a 3/8-32 thread specification. Primary applications are for cable television (CATV), set-top boxes, and cable modems.



Type G Our Type G connector is a slide-on alternative to the Type F with 15A continuous current rating. The Type G complies with the MIL-STD 202 specification for vibration, shock, thermal shock, moisture resistance, and salt spray. The Type G has an impedance of 75 Ω — ideal for CATV applications. The Type G line consists of Bulkhead Mount Jack Receptacles and PCB Mount Jack Receptacles.

PRODUCTS

Medical

From critical components to complete electronic packages, Amphenol delivers custom and standard medical interconnect solutions. Combining unmatched product breadth, engineering expertise, and global manufacturing, Amphenol provides interconnect solutions where, when, and how its customers need them. In applications ranging from patient monitoring and imaging to therapy delivery, Amphenol Medical Solutions empower leading edge medical devices. Amphenol Medical Solutions is the transformative power of connectivity



The American Heart Association reports that over 1.2 million Americans will suffer a heart attack this year. Working with leading medical device manufacturers, Amphenol provides interconnect solutions to prolong the lives of these millions. Amphenol interconnects are used to detect blocked arteries and to open them, to restart the heart from sudden cardiac arrest, and to keep ailing hearts beating when external assistance is required. When it comes to matters of the heart, Amphenol has it covered.

Medical

Amphenol Medical Solutions
www.amphenolmedicalsolutions.com

Amphenol Alden Products
United States

Amphenol Cables on Demand
United States

Amphenol Commercial Products - North America
United States

Amphenol Fiber Optic Products
United States

Amphenol Industrial Operations
United States

Amphenol InterCon Systems
United States

Amphenol RF
United States

Amphenol TCS
United States

Sine Systems Corporation
United States

Amphenol Tuchel Electronic GmbH
Germany

Amphenol Assembletech Xiamen
China





Custom Electronic Devices Amphenol offers complete design, development, and manufacturing services for producing medical Hand Pieces, Electrode Paddles, and other Electronic Accessories. From "Art to Part," Amphenol can participate at all levels from a custom molded, plastic housing (with integral connections) to a fully functional, turnkey solution. Intelligent cable assemblies are also available.



Medical Cabled Products The demanding operating room environment can test the quality and toughness of a connector/cable assembly like none other. From precision power tools to catheters and probes, these instruments must be able to endure repeated use, mechanical stress, and sterilization. Amphenol's Pulse-Lok® line of auto-coupling connectors and integrated overmolded cable assemblies is engineered to withstand the unique challenges of this demanding environment.



Circular Connectors The Pulse-Lok® family of auto-coupling connectors has been performance engineered to meet the challenges of contemporary instrumentation applications. Pulse-Lok® connectors are typically preferred for their customizability; patented auto-latch mating action that provides audible, visible, and tactile confirmation that connector pairs are fully engaged; and the unmatched list of features and benefits they offer.



Flex Circuits Amphenol's product offering includes Type I through Type V Flex Circuits (single-sided, double-sided, multi-layer, and rigid-flex). Additionally, we offer sculptured and power flex, as well as bus bars. Our state-of-the-art manufacturing facility builds product to IPC-6013 (Class I, II, and III) standards and is ISO 9001:2001 and ISO 14001 certified. Our services include applications assistance, and full in-house design, manufacture, assembly, and test of custom Flex Circuits and Flex Circuit assemblies.



High-Density As the functionality of today's electronic devices becomes ever more complex, the electronic content inside the devices is placing a greater demand on the circuit capacity of the interconnect system outside the devices. Amphenol is meeting these challenges and leading the circular connector class by offering interconnect products like the Pulse-Lok® with up to 78 contact positions in a housing measuring 1" in diameter. At the board level, cStack™ connectors provide up to 127 lines per linear board inch (5 rows on 1 mm).



High-Voltage Cable Assemblies Amphenol offers a wide variety of standard high-voltage connectors rated from 1KV to 50KVDC. High-voltage, detachable feed throughs are also available for imaging (X-Ray) and LASER therapy applications. These miniature high-voltage interconnects allow the designer to greatly reduce the size and complexity of oil-filled power supplies and X-Ray tubes. Custom hybrid, high-voltage connectors are also available for applications like defibrillation and electro surgery.



Hybrid - Custom Connectors Today's applications often require mixed media and embedded intelligence to enable multi-functions and prevent misuse. To facilitate cable management, many functions are combined into a single condensed connector and cable assembly. Amphenol's solutions range from standard modular connectors that are easily configured to meet specific application requirements to custom connectors and cable assemblies. We can combine signal, high-voltage, high-current, RF, light, pneumatics, and fluids into a single connector package to your specifications.



High-Power When it comes to choosing a suitable power connection for your application, Amphenol has the expertise to design a solution that best fits your needs. Features of our Power Distribution Bus Bars include utilization of single- or multiple-layer conductors and significantly less EMI than wiring harnesses. Customized to voltage, current, space restrictions. Available laminated and powder coated. Eliminates complex wiring and reduces heat emissions.



High-Speed Cable Assemblies Amphenol's high-performance interconnects are capable of transferring data with optimization, speed, integrity, and reliability. Products include shielding with low-loss, crosstalk & EMI, high data rate (bandwidth), and low-skew. High-density & efficient space utilization is addressed by these products. Ergonomic user interface is utilized. Types of cables include: Fibre Channel and Gb Ethernet, HSSDC2, SFP, SFP+, Optical: OM3, Transceiver Module and Infiniband, SAS, and CX4.



Build-to-Print Box Build Amphenol manufactures cable assemblies, wire harnesses, patient monitoring cables, and box build applications to customer specifications. Our custom engineered solutions address high-mix, low- to mid-volume applications that encompass high value components. Our cable assemblies consist of multi-conductor, discrete wire and molded products. We offer signal and power harnesses for inside the box. And our box build portfolio includes pneumatic pump assemblies, power sources, mechanical sub assemblies, and patient monitoring assemblies.



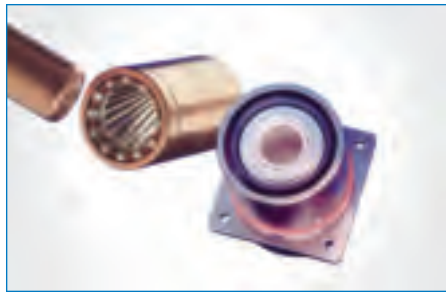
Micro-Miniature Termination, Thermocouples, and Cable Assemblies Expertise in wire management and fine wire termination to connectors, flex circuits, and circuit boards allows us to meet shifting medical marketplace demands. We terminate coax and micro-miniature ribbon cables using wires as small as 46 AWG (.0015) on .0045 centerlines, and offer welded termination of 44 AWG and larger type t, k, or e thermocouple cables. Amphenol's process and design capabilities allow for micro-termination (35 – 44 aWg) with superior reliability. By standardizing equipment, we have successfully developed redundant capability in China, to offer customers a lower cost solution where required.



Brush Contact Connectors Multiple strands of high-tensile-strength wire bundled together to form brush-like contacts provides low mating force, extended service life, and stable electrical performance. Brush contacts provides superior electrical characteristics: redundant current paths, minimized constrictive resistance, uniform current densities stable time/life contact resistance gas tight and electrical contact site integrity, and 20,000 cycles of mating and unmating.



RockSolid Connections With traditional contact system design, failure is inevitable when confronted with continuous frequency vibration, temperature cycling, environmental fluctuations, and corrosion. With a little forward thinking and design, we offer RockSolid, which is a novel hyperbolic contact solution. Some features include immunity to shock and vibration, low contact resistance, low insertion and extraction forces, and longer contact life.



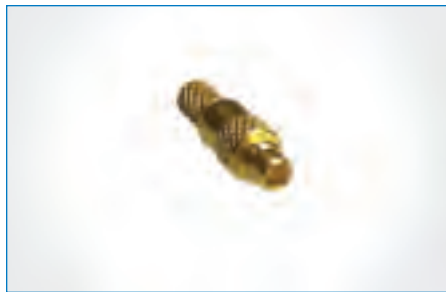
RADSOK® Amphenol can upgrade many core connectors and offer custom connector solutions by adding our patented RADSOK® contact. RADSOK® is a RADial SOcKet that was developed from a flat, stamped grid, twisted into a hyperbolic geometry to form a socket contact with unique characteristics. The hyperbolic grid maintains more current by having a greater conductive surface area. Unique features of RADSOK include high reliability, low-voltage drop, high cycle durability and low insertion force.



RFID Connectors Amphenol has combined the state-of-the-art technology of Radio Frequency Identification (RFID) with their industry-leading SMA and ST connectors. This combination provides our customers with the ability to secure and control their high-power laser delivery systems in a safe manner. The RFID integrated connector allows the OEM to protect their product by securely programming individual serialization and critical data through the read/write capability of the transponder tag.



RF – Coax Non-magnetic coaxial connectors are used for carrying 50 Ω RF signals within the magnetic field of MRI equipment where a high signal-to-noise ratio (SNR) is required. These connectors are manufactured under strict quality procedures throughout the entire production process to ensure that each connector will not produce image artifacts during MRI scans. All products are 100% tested for magnetism prior to shipping and are available in the following interfaces: SMB, MCX, and MMCX. Applications include RF ablation and wireless patient monitoring.



Non-Magnetic Connectors A range of connectors including RF, Coax, Amphenite®, and Pulse-Lok® are now offered in non-magnetic versions to meet the unique needs of MRI and other applications in which magnetic interference poses a challenge. Manufactured using durable, corrosion-resistant non-magnetic composite materials, these connectors will not produce image artifacts in MRI scans and are made for years of use in medical environments.



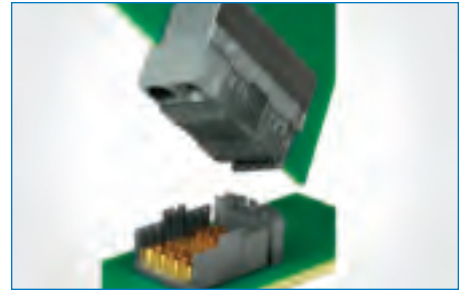
Wireless Monitoring Wireless patient monitoring allows hospitals to monitor patients' vitals without being tethered to their beds. This technology is possible by installing access-points throughout hospitals, which connect to a centralized monitoring station. These access-points are connected via long CAT-5 (data) and 75 Ohm (coax) cable assemblies. Amphenol combined the data/coax into a single fireproof "jacket" that can be installed in a single cable "pull" rather than two individual "pulls."



Board Level & Standard I/O Amphenol's wide range of board level components and I/O connectors include high-speed interconnects, modular jacks, D-sub's, USB, and ribbon connectors designed to meet the demands of today's most sophisticated devices. Customizable and standard shielded and filtered products are available for applications in which EMI must be mitigated to maintain maximum signal integrity.



cStack Amphenol's cStack high-speed solderless interconnect solution provides limitless flexibility for board-to-board mezzanine applications and board-to-board stackable and coplanar applications when terminated to a flex circuit. 1mm – 5mm housing heights provide a solution for any application where space is tight and speed and reliability are required. cStack provides a low-cost, high-speed board-to-board solution for imaging systems and diagnostic systems as well as hand-held devices.



Mezzanine / Backplane Connectors Amphenol's broad range of high-speed and high-density backplane and mezzanine product families allow design engineers to achieve their performance and reliability targets. Amphenol's XCode® connector platform is designed to enable 20+Gbps performance for future data rate requirements. Our experienced team of engineers and online design tools enable key early backplane design and system design decisions.



Custom Connector Blocks Amphenol is dedicated to the development of new products, designed specifically for the medical market. Our broad knowledge base and know-how from many years of experience enables us to offer creative and well thought-out interconnect solutions. Early involvement between Amphenol and our customers guarantees a high degree of quality for newly developed products and a shorter time to market.



Fiber Optics Amphenol's broad product offering includes fiber management systems, cable assemblies, adapters, attenuators, couplers and wavelength division multiplexers for use in virtually any fiber optic application. The SMA FiberGrip® Connector is a simple to use, epoxyless, fiber optic interconnect solution for markets where high-power delivery is required. This two-piece connector is designed as a safe and cost-effective product that allows for efficient ease of use during termination. The connector is available with custom optical fiber hole sizes and ferrule tip configurations. Other standards available including SC, LC, FC, ST, LX.5.



Filtered D-Subs Amphenol's stress isolated filter D-sub product line combines filter elements in a connector, forming one neat, compact interconnect device that can filter unwanted radiated or conducted EMI. This same filter connector will also protect the system from external EMI/RFI noise. Available in all termination styles, both male and female, with high-voltage capabilities and a wide range of filter capacitance values, these compact filter connectors fit standard non-filtered connector footprints.



Connecting Leads Amphenol offers connecting leads with highly flexible 4 or 6 mm² wires and feature plugs with hyperbolic RADSOK® high current contacts insulated for potential equalization according to din 42801. Connector lead cables are equipped with bended plugs and / or customized terminations with assembled or overmolded insulation. Mated parts are available as nickel-plated single pins in four lengths, or equipped receptacles.



Performance-Engineered Cable Assemblies After identifying a cable construction that meets the application's performance criteria, we enhance it by integrating the following: overmolded backshells that seal out the environment and offer enhanced strain, flex, and impulse relief; enhanced material selection and matching techniques for optimal environmental and mechanical performance (flex relief to cable jacket); encapsulated circuits for imbedded cable intelligence; filter and shields for RF immunity; hybrid connector technology to consolidate many cables into one or Electrical / Hydro-Pneumatic / RF / High Current / High Voltage / Fiber Optics.



Conductive Fabric Novonic® and textmate® is stretchable, conductive fabric manufactured by yarn producer Zimmerman. It is ideally suited to carry data, power and heat. From blankets that measure a patient's pulse to the latest cloth-embedded applications, conductive fabric provides a unique and flexible interconnect option. Electrical conductivity and, wash resistance up to 60°C, and featuring a tensility of up to 300% makes conductive fabric a durable solution that will last many years.

The Amphenol logo is displayed in a bold, blue, sans-serif font. It is positioned on the left side of the page, centered vertically within a light yellow rectangular background element. The overall background of the page is a light blue color with abstract, flowing white lines that create a sense of motion and connectivity.

Amphenol

CONNECTING PEOPLE + TECHNOLOGY.





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