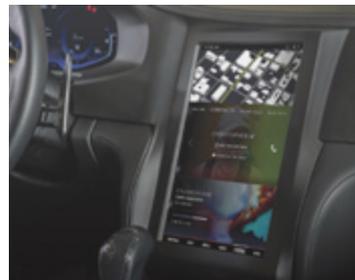# Amphenol
Connecting People & Technology
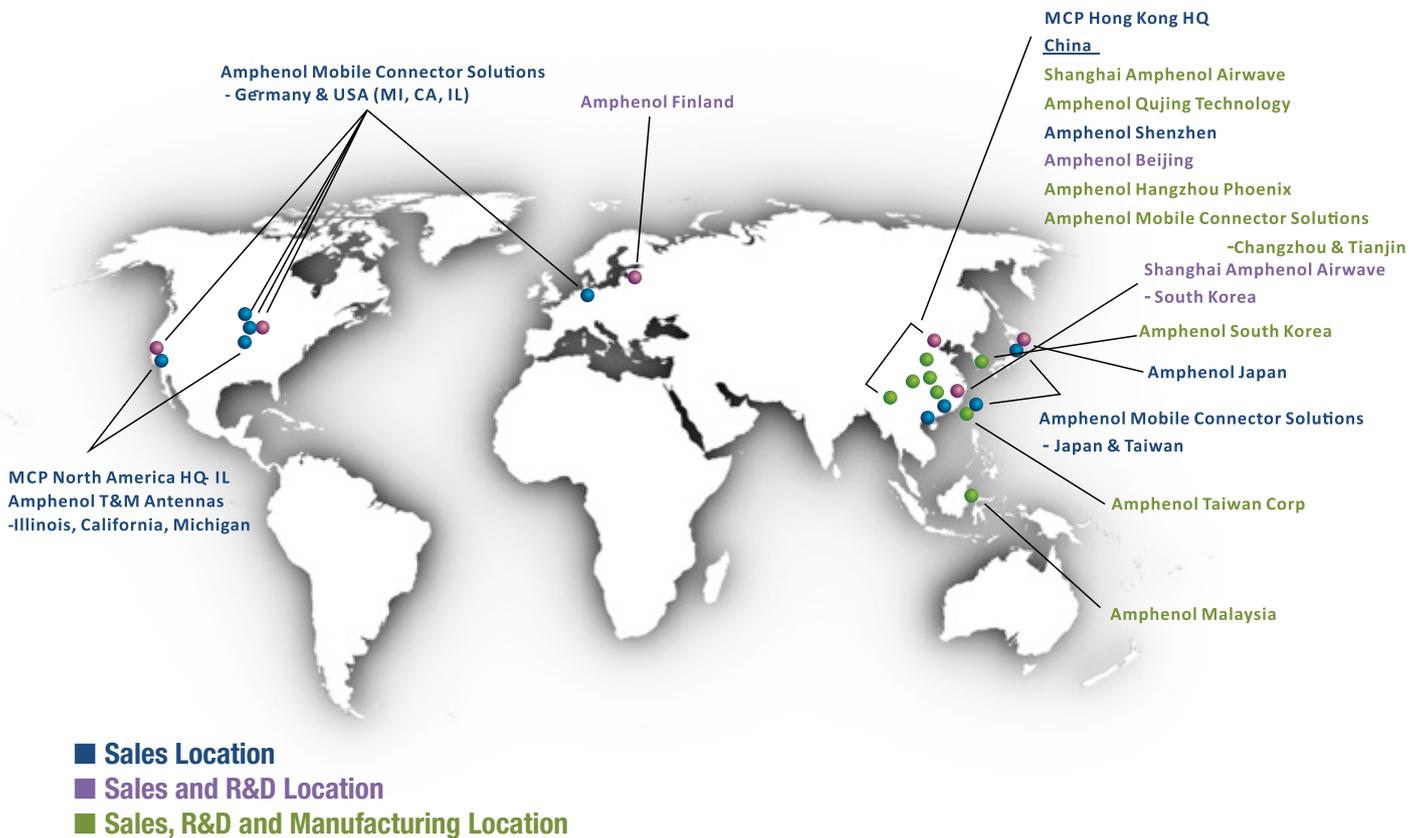
Mobile Consumer Products

CONSUMER ELECTRONICS

Mobile Devices

Amphenol Mobile Consumer Products (MCP) provides a broad range of components with content on the majority of the world's mobile devices produced each year. Amphenol MCP designs and manufactures a full range of electro -mechanical interconnect products and antennas found in mobile phones, tablets, wearables and other mobile devices. Our broad product offering includes antennas, RF cables, RF switches, internal and external connectors, LCD connectors, board-to-board connectors, cord sockets, battery connectors, input -output connectors, charger connectors, metal and ceramic injection molded components, touch panels and electromechanical hinges. Our capability for high -volume production of these technically demanding, miniaturized products, combined with our industry-leading ability to react quickly to frequently changing customer requirements together with our speed of new product introduction are the critical factors for our success in this market.

Amphenol MCP Locations

MCP Hong Kong HQ
China
Shanghai Amphenol Airwave
Amphenol Qujing Technology
Amphenol Shenzhen
Amphenol Beijing
Amphenol Hangzhou Phoenix
Amphenol Mobile Connector Solutions
-Changzhou & Tianjin
Shanghai Amphenol Airwave
- South Korea
Amphenol South Korea
Amphenol Japan
Amphenol Mobile Connector Solutions
- Japan & Taiwan
Amphenol Taiwan Corp
Amphenol Malaysia

Amphenol Mobile Connector Solutions
- Germany & USA (MI, CA, IL)

Amphenol Finland

MCP North America HQ- IL
Amphenol T&M Antennas
-Illinois, California, Michigan

■ **Sales Location**
■ **Sales and R&D Location**
■ **Sales, R&D and Manufacturing Location**

Legend:
- ■ Sales Location (blue)
- ■ Sales and R&D Location (purple)
- ■ Sales, R&D and Manufacturing Location (green)

	Antennas	Moving Mechanisms	MIM (Metal Injection Molding)	CIM (Ceramic Injection Molding)	Touch Panels	Acrylic Sheet Lens (IMD)	Sapphire Glass	Mobile Connectors	Cables Assemblies
MCP Hong Kong HQ	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales
MCP USA HQ (IL)	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales
Shanghai Amphenol Airwave	Sales, R&D & Mfg								Sales, R&D & Mfg
Amphenol USA (IL, CA, MI)	Sales							Sales & R&D	Sales & R&D
Amphenol Finland	Sales & R&D	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales
Amphenol Qujing Tekhnology	Sales, R&D & Mfg	Sales, R&D & Mfg	Sales, R&D & Mfg						Sales, R&D & Mfg
Amphenol Shanzhen	Sales							Sales	
Amphenol Beijing	Sales & R&D	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales
Amphenol Hangzhou Phoenix		Sales, R&D & Mfg	Sales, R&D & Mfg	Sales, R&D & Mfg	Sales, R&D & Mfg	Sales, R&D & Mfg	Sales, R&D & Mfg		
Amphenol Tianjin								Sales, R&D & Mfg	Sales, R&D & Mfg
Amphenol Changzhou								Sales, R&D & Mfg	Sales, R&D & Mfg
Amphenol Japan	Sales	Sales	Sales	Sales	Sales	Sales	Sales	Sales & R&D	Sales & R&D
Amphenol South Korea	Sales & R&D		Sales, R&D & Mfg	Sales, R&D & Mfg					
Amphenol Taiwan	Sales, R&D & Mfg	Sales	Sales	Sales	Sales	Sales	Sales	Sales	
Amphenol Malaysia	Sales, R&D & Mfg	Sales, R&D & Mfg							

Amphenol Türkiye&MiddleEast

Amphenol MCP uses state of the art technology to consistently produce high quality components for mobile applications. Our team offers market leading expertise in the design and production of all your mobile component needs.

Our factories operate with ISO 9001:2000, ISO 9002 and ISO 14001:1996 certifications as well as Sony Green Partner.

Antenna Capabilities:

Amphenol MCP's Antenna testing equipment includes the DASY-4, SAR, 2-D Chambers, SATIMO SG64 and STARLAB all capable of doing active testing efficiency measurements. Our areas of expertise are antennas for mobile phones, laptop, point-of-sale, mobile computing, PC-cards, fixed wireless terminals, indoor antennas, telematics and GPS.

Touch Panel Capabilities:

Our Touch Panel Testing Center uses the following machinery to assist with optics and functional testing.

- Optics Testing Machine: Spectrophotometer, Haze Measuring Machine, Electron Microscope
- Functional Testing Machine: Activation Force Measuring Machine, Surface Hardness Tester, Writing Durability Tester, Point Durability Tester, Line Writing Durability Tester, Line Writing Single Tester, Ball Drop Tester, Squeeze Tester, Z-Resistance Auto Measuring Machine
- Weathering Testing Machine: Salt Mist Chamber, Thermal Shock Chamber, Thermal Chamber, Vacuum Chamber

Micro Coax Cable Capabilities:

Amphenol MCP's micro coax cable R&D department is committed to the development of high quality cable assemblies for mobile communication products including mobile phones, tablets, laptops, servers and other internal and external digital products.

The following electrical, mechanical and environmental test equipment are used to ensure the highest performing products.

- Electrical testing equipment: Time Domain Reflector (TDR), Network Analyzer (NA), Resistance Tester
- Mechanical testing equipment: Strength Tester, Cable Bending Life Tester
- Environmental testing equipment: Salt Mist Chamber, Thermal Chamber, Temperature Humidity Chamber

Moving Mechanism Capabilities:

Amphenol MCP designs and manufactures a variety of mechanical components for consumer electronic products including mobile phones, ultra-books, notebooks, etc. Moving Mechanism R&D excels in the design and development of mechanical components including sliding mechanisms, folding mechanisms, modem mechanisms, shielding cans, mechanical components for antennas, and plugs for battery chargers.

Our R&D concept team provides support from the initial concept to the detailed product design and prototype builds.

Our mechanism testing lab can quickly create test and measurement platforms to ensure product quality and customer requirements are met. Our simulation team manages concept design evaluation and test failure analysis in the early phases. Our mechanical engineer team engages in engineering optimization for smooth mass production.

Acrylic Sheet Lens / IMD Capabilities:

Amphenol MCP's acrylic sheet lens/IMD R&D focuses on display screens (2D&3D) for portable electronics including mobile phones, notebooks, E-book, PSP, GPS, and more. We also have the ability to produce in-mold decoration design.

Our Lens Testing Center has the following machinery to ensure the highest performing products.

- Optics Testing Machine: Spectrophotometer, Haze Measuring Machine, Electron Microscope
- Functional Testing Machine: Pencil Hardness Tester, Ball Drop Tester, Material Tester, RCA Paper Wearing Machine, Vibratory Wear Machine
- Weathering Testing Machine: Salt Mist Chamber, Thermal Shock Chamber, Thermal Chamber, QUV Accelerated Weathering Tester

**Metal Injection Molding (MIM) and Ceramic Injection Molding (CIM) Capabilities:**

Amphenol MCP has in-house tooling for MIM and CIM production with a capacity of 20-24 sets per month. MIM and CIM are used in the decoration of mobile product keys, audio rings, tablet brackets, camera badges, dental brackets, industrial equipment, auto body plates, and more.

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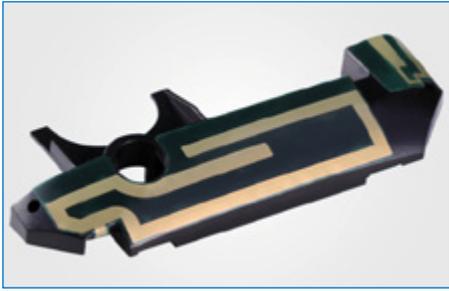
LDS Antennas Laser Direct Structuring (LDS) has lead to vast opportunities in innovative design. The laser activation technology produces thinner lines and smaller features than previously made possible by other molded interconnect device processes without compromising consistency and repeatability. Surface mounting components on LDS antennas is also possible.
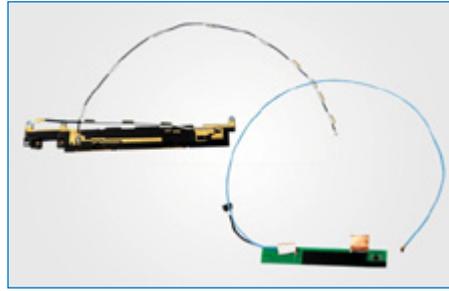
Tablet Antennas Amphenol's high performance tablet antennas are integrated into laptops, tablets, ebook readers and other mobile computing devices. Generally mounted along the edges of the device, these antennas enable connectivity of up to 10 frequency bands in one unit. They can be configured as multiple antenna modules with several coaxial feeder cables or as a single feed unit with one cable.
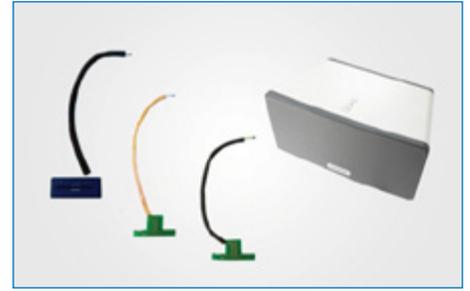
Entertainment Antennas Amphenol's high performance WIFI antenna solutions for entertainment systems such as PlayStation, TV, and wireless sound systems enable excellent connectivity and high speeds. Multi-antennas for the MIMO system allow better reception and data rates.

Distribution Network Antennas Amphenol's series of miniature data cards and USB dongle antennas for 3G, 3.5G, and 4G LTE 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 are often combined with diversity antennas in the card to further improve the reception and data rates.

Mobile Device Antennas Amphenol offers market leading expertise in the design and production of antennas for wireless devices. Our single and multi-band solutions cover all wireless bands: USGSM, GSM, PCS, DCS, UMTS, GPS, CDMA, DVB-H, Bluetooth, WLAN, WiMAX, and 802.11a, and 802.11b/g.

FPC Antennas Amphenol designs and manufactures custom FPC antennas. The FPC antenna can come with adhesive backing, on plastic carrier, or with wire termination. FPC antennas are commonly used in smartphones, smartwatches, tablets, laptops, set top boxes, and other devices requiring 4G, 3G, diversity, NFC, Bluetooth, and GPS frequency bands.

Mid Frame Antennas Amphenol designs and manufactures plastic mid-frames for smart devices utilizing custom insert molding for metal battery compartments, acoustic chambers, and other mechanical components. Two-shot LDS can be utilized for increasing mechanical strength of the frame yet create a unique LDS antenna geometry.

Over-Molded Whip and Stubby Antennas Amphenol manufactures various whip and stubby antennas utilizing in-house single/dual shot injection molding and insert molding processes for single and multiband frequencies. Various connector interfaces can be selected for custom applications.

Automotive Antenna Solutions Amphenol's automotive antennas and RF cable assemblies are integrated into car doors, window glass, and infotainment systems; and assembled onto vehicle roofs. From shark fin antennas to coaxial assemblies, Amphenol can provide solutions for GPS, SDARS, WiFi, Bluetooth, 3G, 4G LTE, and AM/FM.

AMC Connectors, Jumpers and Adapters Amphenol Micro Coaxial (AMC) connectors, jumpers and adapters are ultra-low profile (2.5mm mating height) RF connectors with a small footprint (3mm x 3mm). The AMC series offers easy snap-on/off mating, 50Ω impedance, and DC - 6 GHz frequency range. The series is also 100% compatible with the U.FL interface.

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.

Mobile Cable Assemblies Amphenol's cable assemblies are widespread in the market for wearable products. These cable assemblies are used for data transfer and power charging.

Metal Injection Molding (MIM) Amphenol produces high quality parts with over 90% metal density through our metal injection molding (MIM) process. The MIM process provides greater flexibility in design complexity, prevents corrosion, and provides a resistant polish. It allows us to produce large runs with a very low material waste. The MIM process is used on components of various applications including mobile phones, laptops, and industrial and automotive platforms.

Ceramic Injection Molding (CIM) Amphenol's CIM process uses ceramic zirconium to provide a scratch and wear resistant surface to components such as mobile phone camera decoration and side keys. The CIM material provides additional durability and strength in your products.
We have applied our Metal Injection Molding (MIM) experience of large volume runs to CIM to create a hi-tech material process and provide various MIM/CIM solutions to mobile consumer product customer.

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.

Sapphire Glass Sapphire glass has excellent mechanical properties including its hardness and anti-abrasive characteristics. Sizes range from a small camera lens aperture to a smart device cover window.

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

Moving Mechanisms Amphenol's moving mechanisms are designed for your customized applications and match your required dimensions. Various types are as follows: Slide, Folding, Automatic, Friction, and more.

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.

SIM Card Connectors Amphenol's extensive range of SIM card connectors is available in five types: wing connectors, bridge block connectors, SIM block connectors, ultra flat SIM card connectors, and bioplast SIM card connectors. Furthermore, they come in 2FF, 3FF, and 4FF styles. They are available in 6 or 8 contact versions, with or without locating pegs for board stability, and are suitable for automatic assembly processes. 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.

Mini UICC (Micro SIM) Connectors Amphenol's series of mini UICC connectors is designed to accept micro SIM cards for optimized printed wiring board area consumption. The mini UICC connector series features prevention of improper micro SIM card insertion or SIM card slide out. Different card handling possibilities include push-pull types, push lift / cover hinged types, bridge block or drawer versions.

Waterproof Micro USB Amphenol's breakthrough innovation in waterproof micro USB receptacles allows high speed data transmission for your wearable device. With an IPx8 rating, this light waterproof connector is a great fit for all of your mobile computing applications.
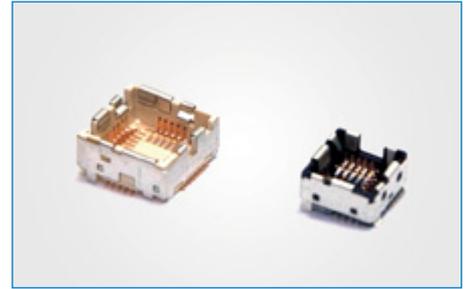
Camera Sockets Amphenol provides 20 & 24 contacts camera module sockets for mounting on PCBs allowing mobile camera installation without any additional devices or processes.

Mini HDMI Connectors Amphenol's HDMI and Mini HDMI connectors provide an interface between any compatible digital audio and/or video devices. These connectors are available in different sizes and configurations and support HD-video plus multi-channel digital audio on a single cable.

Micro USB Connectors Amphenol creates high quality Micro USB connectors for today's high definition media. These connectors can be customized to meet your specific needs. Special modifications may include customized configurations and customized mounting options.


Micro-SD Connector Amphenol produces a wide variety of micro-SD and mini-SD memory card connectors. These connectors are available in hinged and non-hinged varieties as well as in a push-push version. They are typically used in a wide range of portable electronic devices including mobile phones, smart phones, PDAs, MP3 players, GPS devices and video game systems.

Portable Device Connectors

Portable Devices

Amphenol's Portable Devices series offers a wide range of connector products for portable consumer electronics such as MP3 players, PDAs, Portable Media Players and Handsets The series includes Memory Card and SIM Card connectors, Battery and POGO connectors, FPC, BTB, Mini-USB, Phone Jacks, I/O Sockets, Mini Displayport, Mini HDMI, Micro HDMI, USB3.0 and Docking Station Connectors.
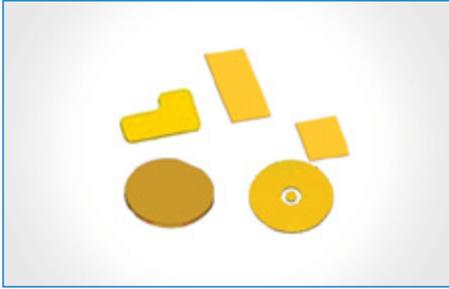
Contact Pads (Press-on Contacts) Amphenol's contact pads are used in contact areas and as spacers on PCBs. Durable plating includes a diffusion barrier. The contact pads connect with low resistance over the product's lifetime for use in sensitive connections of antennas, microphones, and carbon PCBs. They are available in a wide variety of shapes and sizes. Thickness: scalable ≥ 0.1 mm. Contact Pads are suitable for automatic assembly processes: pick & place, tape & reel and SMT solderable.


Spring Clips Amphenol's spring clips are very versatile and can be used in many applications including: antennas, metal housing connections, grounding connections, shielding connections, ESD & EMC connections, and LSD connectors. They can incorporate a deflection stop to avoid permanent deformation of the clip. Scalable height for platform use. Spring Clips are suitable for automatic assembly processes: pick & place, tape & reel packaging and SMT solderable.
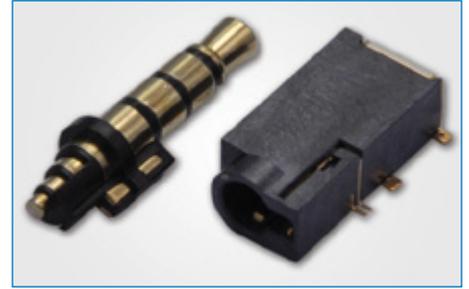

Audio Jacks and Plugs Amphenol's range of Audio Jacks and Plugs are widely used in mobile phone applications. These connectors are available in different configurations, e.g. compressed type or for SMT soldering versions.
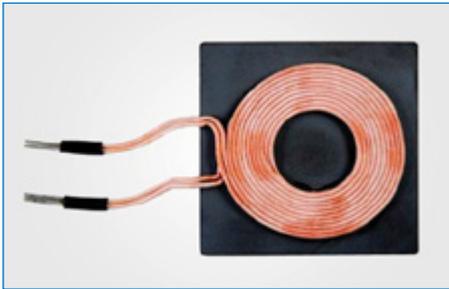

Inductive Charging Amphenol is a member of the Qi Wireless Power Consortium.Amphenol offers Qi standard transmitter coil solutions as well as custom receiver coil and FPCB solutions. Wireless charging can now be found in many applications such as smartphones, smartwatches, digital cameras, MP3 players, and wearable patient monitoring devices.
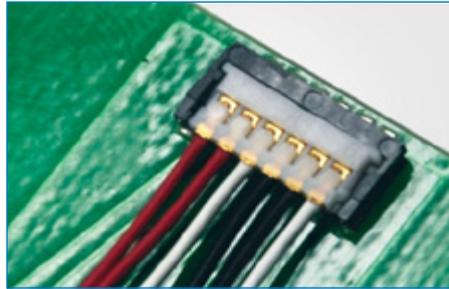
Wire to Board Connectors Amphenol's wire to board connectors are widely used in mobile applications. These connectors guarantee a robust connection and a stable withdrawal force with protection against wrong insertion.
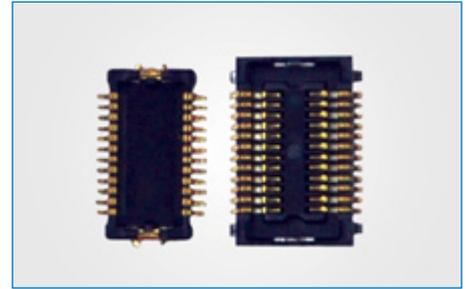
Board to Board Connectors Amphenol's board to board connectors are an integral components of mobile devices. They combine low profile with stable contact/mating force and with secured transmission reliability.
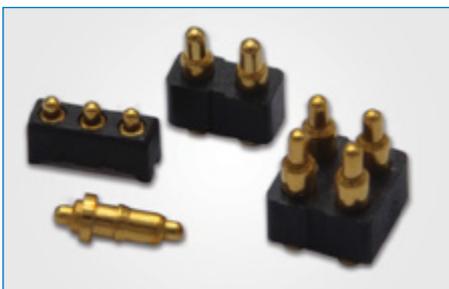

Spring Loaded Connectors Amphenol offers a wide product range of spring loaded connectors. These connectors have a large working range and high contact force allowing safe data transmission. They can be used on mobile applications in the automotive industry.

Double Push Connector Amphenol's double push connectors prevent unintended card extraction by a safe locking mechanism. The tray is released without using any tool.

Embedded Flexprint Connector Amphenol's flexprint connector is the result of innovative engineering. This flexible, space saving solution has a high reliability and opens up new opportunities for mobile application design.
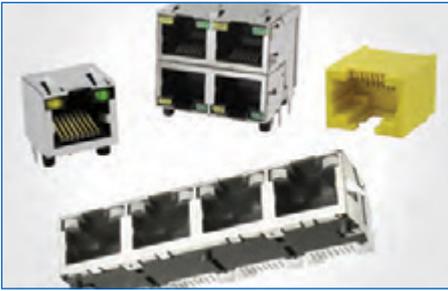
Standard Modular Jacks Amphenol offers an extensive variety of modular jacks suitable for many applications with varying performance requirements. Optional features include color keying, shielding, and LEDS. RJ11/45 types are available in single, multiport, and stacked configurations. Select series have filtering capabilities for superior EMC performance using a high resistivity ferrite block.

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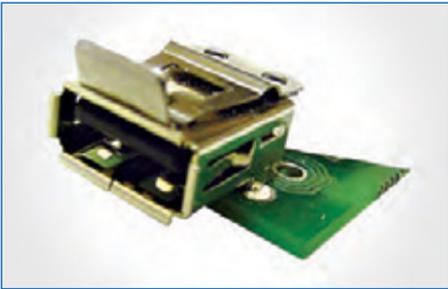
USB with Positive Locking: LUSB Series Amphenol's USB, Series A with a unique latching mechanism has been developed to address major concerns of unintentional interruption of data transmission. This patented, unique latching mechanism must be intentionally raised in order to remove the plug. An accidental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


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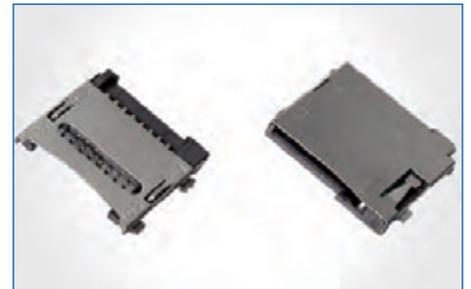
Memory Card Sockets Amphenol offers a full range of flash memory connectors (including SD, Mini-SD, Micro-SD, xD, CF1 & 2) with numerous features such as low-profile design, normal or reverse mounting, manual or push-push insert style, and a locking feature to prevent the card from dropping out. Available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

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.
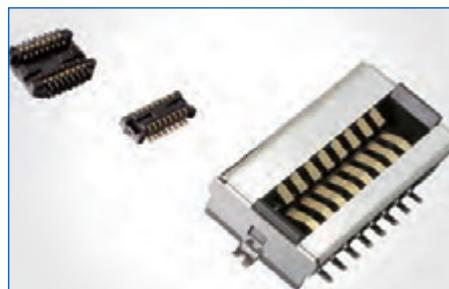

BTB Board-to-board connectors are available in plug-socket pairs with pin counts ranging from 8 to 50. Spring-type board-to-board connectors are robust and suitable for use in data center applications where there is the potential for external vibration.

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.

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.
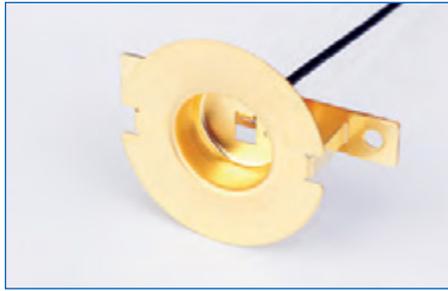
RF Products Amphenol's jumper and antenna cables cover a wide range of RF applications for mobile devices. These products are widespread in mobile applications for receiving, transferring, or switching RF signals.

HDMI, Mini HDMI, and Micro HDMI Amphenol creates high-quality HDMI, Mini HDMI, and Micro HDMI cables for today's high definition media. Our HDMI 2.0 cable family is built to support 3D formats and 4K resolutions up to 60 frames per second. Our HDMI family product offering is customizable to fit customer specific configurations such as coloring, connector configuration (types A, C, & D) as well as customized angles.

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.

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 an upward or downward direction.

Infinity Connectors The Infinity series of receptacles is compliant with SFF-8470 specifications, and is available in both 4x and 12x configurations. Lanyard latching mating styles are available for use with CX4 and InfiniBand applications, as well as Screwlock mating styles for use with SAS, Fibre Channel and 10Gb Ethernet applications.

External I/O
D-Subminiature Connectors

Amphenol's complete range of D-Subminiature connectors are part of an industry standard for applications requiring reliable, rugged connectors. These connectors are designed to accommodate rack and panel, cable to panel and cable to cable applications. D-Subminiature connectors are pin and socket devices that employ contacts encased in a molded dielectric insert surrounded by a "D" shaped shell for polarization. We offer a broad selection of dielectric materials, contact styles and, configurations to meet all our clients' design requirements.

RS232 and Rs449 per EIA standards
Inserts are flame-retardant thermoplastic
Automatic and manual tooling are available for both crimp and IDC versions
Accessories for all applications are available including strain reliefs, cable clamps, shielded backshells, mating hardware and, connector to board mounting hardware
All products meet the EU initiative for RoHS compliance

Headend Cables and Connectors Modern head-ends require compact, high-performance cables and components to maximize performance and bandwidth demands. Amphenol has developed several varieties of single and bundled Mini and RG59 cables in dozens of color combinations and number counts. Complete, ready-to-install, 100% tested assemblies reduce the installation costs by 50-60% for these critical areas of a broadband communications system. Amphenol's mini cables are combined with Amphenol connectors and easy-to-use installation tools to complete the package.

HD BNC HD BNC delivers true 75 ohm performance in a footprint 51% smaller than traditional BNC connectors, allowing four times the density. Engineered to enhance electrical and mechanical performance, the HD BNC connector features the trusted, push and turn interface of traditional BNC, providing tactile feedback and a positive lock for quick and guaranteed mating.

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.

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.

SMB Amphenol's SMB connectors conform to the requirements of Mil-C-39012, and the interface is in compliance with MIL-STD-348. Available in 50Ω and 75Ω, 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.

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.
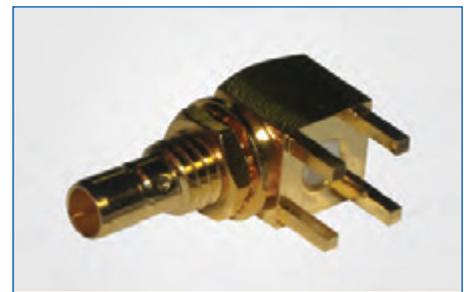
Mini-SMB Amphenol's Mini 75Ω SMB provies broadband capability through 2 GHz. Its snap-on design utilizes die cast components on non-critical areas to provide a low cost solution. The Mini 75Ω SMB offers snap-fit mating for quick connect/disconnect. The reduced housing allows circuit miniaturization and efficient space utilization. Built in accordance with requirements of Mil-C-39012, the interface is in compliance with Mil-STD 348 and is interchangeable with Industry Standards for Miniture 75Ω SMBs.

AFI The AFI connector interface is a solution for board-to-board RF applications. It utilizes a proprietary configuration that allows for industry leading "float" to compensate for the axial and radial misalignment due to packaging tolerances. This industry-leading float results in a maximum misalignment allowed by the system of .030" (0,8 mm) radial and .040" (1,0 mm) axial.

SC-Type Amphenol SC coaxial connectors are medium sized and offer constant 50 Ω impedance. They operate from 0-11 GHz and are manufactured to meet MIL-C-39012 specification. The connector mating is a .687-24 UNEF screw thread and the plug coupling nut has safety wire holes. Such qualifications make the SC interface ideal for military, instrumentations and testing applications.

SSMA The SSMA connector is designed to be a space-saving alternative to the standard SMA originally designed for use with .085 semi-rigid cable. The male contact was designed to be the same size as the cable conductor so that it could be used as the mating pin for optimized VSWR. This interface is available with 50 Ohm options and gold plating is standard.

TNC The TNC connector series features a miniature, threaded weatherproof interface with a constant 50 Ω impedance and operates from 0 - 11 GHz. The TNC is available in standard and reverse polarity configurations. Reverse polarity is a keying system accomplished with a reverse interface, and ensures that reverse polarity interface connectors do not mate with standard interface connectors.

SMP Amphenol offers a solution for high frequency, high data rate applications in the SMP line of RF connectors. The SMP connector features a subminiature with a frequency range of DC to 40 GHz. It is commonly used in miniaturized high frequency coaxial modules and is offered in both push-on and snap-on mating styles for quick installation.

Quarterback The Quarterback® product line utilizes a high frequency miniature RF interface (up to 65 GHz) with a rugged bayonet coupling mechanism. The reduced withdrawal forces are well-suited for reliably mating cable assemblies to delicately soldered board mount connectors, minimizing potential PCB damage. Ideal for bench-top testing, high vibration environments, and high mating cycle applications.

RF Coaxial Cable Assemblies Amphenol offers a full line of pre-assembled, fixed-length coaxial cable assemblies. Fixed length assemblies are for use in a variety of commercial and industrial applications that require standard configurations or lengths. Cables are available with popular connector series such as BNC, AMC, TNC, SMA and Type N.

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.

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.

1.6/5.6 Amphenol 1.6/5.6 coaxial connectors are miniature 75 Ω units operating from 0-1 GHz. The compact design of the 1.6/5.6 series permits dense connector packing, making these connectors ideally suited to applications where space limitation is a factor. Common applications include base stations, routers, and switching equipment.

4.1/9.5 Connectors and Adapters Amphenol offers a full range of 4.1/9.5 connectors and adapters. These products are ideal for applications requiring consistent electrical performance, low return loss, and low intermodulation distortion. This series has been engineered to exceed wireless industry performance standards and to match the physical performance expectations of the 7/16 series.

UHF Invented for use in the radio industry in the 1930's, UHF stands for Ultra High Frequency. While at the time 300 MHz was considered high frequency, these are now general purpose connectors for low frequency systems from 0.6 - 300 MHz. UHF connectors feature optional reducing adapters which accommodate a wide range of popular coaxial cables.

Valox Amphenol RF BNC Valox Connectors are isolated from the panel via a Valox housing to provide high performance in RF and microwave communications. BNC Valox Connectors feature a proven, easy-to-use interlocking interface that integrates seamlessly into any 50-ohm or 75-ohm RF system. These connectors are well-suited for instrumentation, broadcasting, and network applications.

SMC The SMC connecter features a medium-sized 50 Ω threaded interface designed to meet of MIL-STD-348 standards as generated by the US Air Force. It utilizes die cast components on non-critical areas to provide a low cost solution. The series offers a 10-32 screw-on (threaded) coupling mechanism, allowing performance to 10GHz with low reflection.

Mini-BNC The Mini-BNC is designed for wireless applications for higher connector densities while preserving the positive characteristics of the Amphenol full-size BNC's for 75 Ω systems., allowing 40% more interconnects in the same area. The Mini-BNC connector interface offers a 75 Ω impedance with acceptable return loss up through 1 GHz and a positive bayonet locking coupling mechanism.

M.2 Connector Amphenol's M.2 connector is a cost effective and space efficient design that can support storage SSD and wireless applications. It can replace PCIe, Micro SATA, SAS, USB, display ports, and other critical connections at data speeds up to 8 Gbps.

SATA Connectors & Cables Amphenol offers a complete range of standard and customized Serial ATA (SATA) connectors and cable assemblies. In addition to traditional designs, Amphenol supplies Micros and slim SATA connectors enabling transfer speeds up to 6.0 Gbps depending on how the assembly is configured.

SAS Cables & Connectors Amphenol high speed assemblies are an ultra-high performance, cost effective I/O solution for high speed applications such as data storage, switches, routers and computer clusters. Amphenol's MiniSAS HD assemblies meet and exceed the standard requirements and have been tested to perform at emerging 12G per channel speeds. Our MiniSAS HD 4X & 8X assemblies offer a solution to MiniSAS, Sata, SAS and other high speed I/O interfaces.

DDR4 Amphenol's DDR4 DIMM connector was developed to replace the DDR3 standard in the high-end server memory market. The DDR4 connector complies with the interface standard JEDEC POD12 allowing for data transfer rates of 1.6 Gbps– 3.2 Gbps.

Dsub Connectors Amphenol offer a full range of Dsub connectors from stamped and formed pins to screw machine pins with more than 6000+ standard items available. Amphenol's Dsub TW Hybrid series permits a mix of contacts including signal, high voltage power, and coaxial in the same housing with up to 18 different contact arrangements.

RJ 45 (ODVA) Amphenol's new ODVA-Compliant RJ45 series connectors meet the Ethernet/IP RJ45 requirements and standards. With an IP67 rating these connectors are suitable for Industrial Automation, BWA , and Smart Grid markets.

DisplayPort Cables and Dongles Amphenol provides a full range of DisplayPort and Mini DisplayPort configurations to support the growing adoption of digital display technology within the PC and CE industries. DisplayPort is an industry standard which consolidates internal and external connection methods to reduce device complexity while supporting next generation displays that feature higher color depths, refresh rates, and display resolutions. Product configurations include: DP/Mini DP to DP, DP/Mini DP to VGA, DP/Mini DP to HDMI & DP/Mini DP to DVI.

USB Amphenol has developed the Super Speed USB in compliance with the next generation USB Standard, USB 3.0 (Super Speed USB), and is downward compatible to USB 2.0 and USB 1.1 products. Our USB 3.0 product will deliver 10x the data transfer rate of USB 2.0 and has a max transmission speed of 4.8Gbps. Our USB 3.0 product also has improved power efficiency at 900mA as compared to 500mA on USB 2.0. Standard Configurations include: Type A to A, Type A to B & Type A to Micro B.

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.

Amphenol
Consumer Products

Antennas

Moving Machanisms

Touch Panels

Connectors

Sheet Lens

Ceramic Injection Molding (MIM)

Metal Injection Molding (MIM)

Minature Coax Cables

WPC KIT

High charging efficiency wireless charger kit

- Universal for any type of handset

- Very attractive look with many color choices

- Slim design makes it easy to carry and use

- 70% high charging efficiency
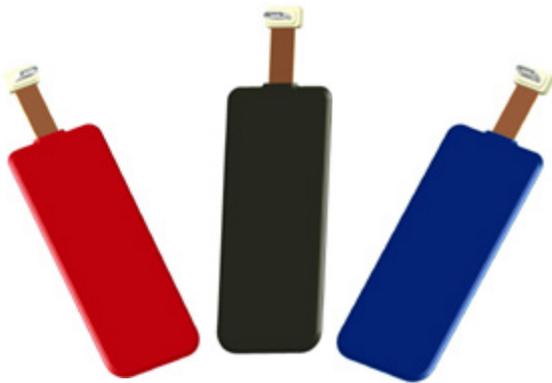
RX

TX

- Input 19V / Output 5V

- 5W Power

- 800 mA Charging Current

- High Efficiency and Sensitivity

- RX dimension : 80x30x2.0 (mm³)

- TX dimension : 88x70x14.0(mm³)

- Connector variants available with Micro USB, Mini USB , I-phone connector

- Qi compatible for TX module

Amphenol
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Mobile Consumer Products

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