



SOLDIER-WORN SOLUTIONS

Amphenol Military & Aerospace Product Guide



SOLDIER-WORN SOLUTIONS

Typical soldier kit has evolved beyond the standard uniform and weapon. The modern soldier is now equipped with a variety of soldier-worn devices such as power and data distribution systems to increase their capabilities in the field. Amphenol offers a broad portfolio of military circular connectors that provide a range of interconnect solutions for the soldier. With multiple different mating styles, shell types, and insert configurations, there are various options to send signal, power and high speeds across the entire soldier-worn platform.

Amphenol has been innovating and providing circular connector solutions for more than 70 years with qualifications for every major military specification. With extensive design experience in custom and special designs for applications both big and small. Included in this catalog are some examples of Amphenol Military and Aerospace soldier-worn solutions.



Power



Power / Data



Data



Audio



USB-3



Magnetic



Blind Mate



Breakaway



360 Connection

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Stingray

Compact, low profile, metal-shelled connectors that withstand exposure to moisture, dust, dirt and chemicals typically encountered by first responders, security and military personnel.



Power



Power / Data



Magnetic



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Breakaway



360 Connection

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



Gladiator

Small, lightweight, ultra-flat connector designed for soldier-worn applications, including data sharing, battery charging, and peripheral connectivity. Plugs and receptacles fit through MOLLE pack straps. Receptacles are designed for panel mounting, clipped into MOLLE, or sewn into place.



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Breakaway

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Terrapin

Intended for harsh environment applications and used extensively in soldier communications. Terrapin is a miniature series of circular push-pull connectors with a rugged shell design that offers superior EMI performance and high environmental sealing to IP68.



Power



Power / Data

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µCom/ TVµCom

µCom-Series is a new range of connectors designed to address the latest trends in the industry: miniaturization and high speed, with the highest resistance for use in the harshest environments. µCom is IP68, has a max external diameter of 15 mm, and exceeds Cat6A performance operating faster than 10 Gbps.



Data

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RJF/ RJFTV

RJF/ RJFTV allows you to use an Ethernet Category 5E/6/6A connection for 10 BaseT, 100 BaseTx, 1000 BaseT or 10G BaseT up to 500 MHz networks in harsh environments. With the patented RJStop system you can use a standard RJ45 cordset in a metallic plug which will protect it from shocks, dust and fluids. No hazardous on-field cabling and grounding. Cat. 5E/6/6A cable is offered.



Data

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USBFTV

With USB Field, you can insert a standard USB 2.0/3.0 cordset into a metallic plug which will protect it from shocks, dust and fluids. No hazardous on-field cabling and grounding. This metallic plug is connected into a receptacle, using a Tri-Start thread coupling mechanism (MIL-DTL-38999 series III type) with anti-decoupling device for high vibrations.



Power / Data



USB-3

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RES-SCE-8MG (Mini-Switch)

Amphenol's RES-SCE-8MG miniature switch is a MIL-STD rugged, managed military-grade Ethernet switch, offering 8 Gigabit Ethernet 10/100/1000 Ports. The portable rugged Ethernet switch is intended for unmanned vehicles or man packable command post. Developed for SWaP (Size Weight and Power) and mobile portable military applications, the RES-SCE-8MG features mechanical packaging enhancements designed for MIL-STD-810F airborne and ground environmental compliance and high reliability.



Power / Data

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Cat5e, Cat6, Cat6A, and Cat7 RJ45 Tactical Contacts

1Gb Cat5e & Cat6 and 10Gb Cat6A & Cat7 RJ45 Tactical Cordsets are offered at Amphenol. These are double-shielded, halogen-free cables that are reinforced with a PUR jacket and designed for use in harsh environments. Also available in cable reels of 100 meters and 300 meters.

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

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Warrior Grip

Amphenol's Warrior Grip series is the only Nett Warrior-style connector to bring fast-charging 10-amp capability directly to the warfighter. When paired with our 10-amp Warrior Grip Socket Contact system, you can get even more power out of your application in the same lightweight package. Designed to push the size #23 contact to new limits without the downside of excessive heat rise, the Warrior Grip socket contact system is fully backwards compatible with existing size #23 pin designs. The system yields an average 26% improvement in heat rise when compared to the competition, and meets all applicable MIL-STD-1472 temperature exposure limits.*



Power



Power / Data

Contact: Product Tech • aaotech@amphenol-aao.com • 1-800-678-0141



2M Micro38999 Series

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

Contact: Peter Cook • pcook@amphenol-aao.com • (607) 563-5519



Series Five

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

Contact: Product Tech • aaotech@amphenol-aao.com • 1-800-678-0141

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Telephone Plugs and Jacks

Amphenol NEXUS Technologies is a longtime manufacturer and qualified military supplier of airborne audio connectors, see MIL-DTL-9177. Our special ruggedized design has been the industry standard on military and commercial helmets and headsets for many years. We offer a number of connector options for different mounting styles, switch functions, and soldier attachments.



Audio



Blind Mate



360 Connection

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



Breakaway

Amphenol NEXUS Technologies is the leader in watertight, breakaway connectors designed to meet severe environmental conditions. They are watertight, with wiping-action contacts that self clean. Shielded versions are available and termination is either solder or insulation-piercing, which is field installable. Miniature versions are also available.



Audio



Blind Mate



Breakaway

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



Microphone

Longtime supplier of microphone plugs and jacks used in military and commercial helmets and headsets. They are rugged and high quality. Two or three pin configurations available with locking mechanism. Switching and combination options are available.



Audio

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SOLDIER-WORN SOLUTIONS



M55116 Audio

Amphenol NEXUS Technologies manufactures the complete line of qualified MIL-DTL-55116 audio connectors that are used throughout military and commercial radio systems and intercom systems for ground, vehicle, airborne, and naval communications. Custom M55116-type connectors with options such as: PCB contacts, grounded and shielded connections and right-angle plug connections.



Audio

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



TAC

TAC Connectors are designed and manufactured to the exacting specifications of MIL-DTL-55116 requirements at half the size of the standard connectors. They are the ideal choice to reduce size and weight and still maintain many of the same performance benefits wherever a M55116 connector is needed on a newly designed system.



Audio

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



Ranger

A lightweight pin and socket connection designed for future solder requirements. Capable of USB 3.0, push-pull or breakaway mating and IP-68 rated.



Data



Audio



USB-3



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Breakaway

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Switches

Amphenol NEXUS Technologies offers a wide variety of momentary and push-pull switches. Switches can be combined with other connector options. The switches are qualified to MIL-S8805/3 or MS25089 specification. Custom switches are available including our IP-68 Hydro Switch.

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ICON LEGEND



Power

—— The connector is designed to facilitate power supply connection to the device.



Data

—— The connector is designed to facilitate data supply connection to the device.



Power / Data

—— The connector is designed to facilitate both power supply connection and data supply connection to the device.



Audio

—— The connector is designed to facilitate audio connection to the device.



USB-3

—— The connector is designed to accept a USB 2.0/3.0 cordset.



Magnetic

—— The connector is designed to self-align via magnetic coupling.



Blind Mate

—— The connector is designed to be self-aligning and connect to another component without the operator being able to see or visually align them directly.



Breakaway

—— The connector is designed to decouple under relatively low force if certain conditions are met.



360 Connection

—— The connector is designed to be mated in any orientation.