



Advantages of Custom Designed Bulk Cable from a Cable Assembly and Harness Manufacturers Perspective



Designed for Tactical Military Applications

Engineers face many challenges in the design of cable and harness assemblies for the tactical military environment especially for soldier worn applications. Weight reduction, durability, exposure to UV light, temperature cycling, transmission speed, EMI / shielding effectiveness, immersion, and cost are all critical issues that must be addressed for soldier worn applications. A custom designed bulk cable, or coil cord unique to the requirements of your application will address these concerns.

The number of conductors in the cable, or coil cord is specific to your application:

If you need seven conductors for your unique requirements, we will construct the cable with seven conductors. You are not forced to purchase an off the shelf bulk cable that is only available in six, or eight conductors for example.

Using the seven-conductor cable will reduce cost, weight, diameter, and improve manufacturability through the elimination of labor associated with trimming back the unused conductor.

The addition of a Kevlar strength member and HSCA conductors can improve durability:

Cable assemblies for soldier worn applications must be durable. We often add a Kevlar strength member and High Strength Copper Alloy (HSCA) conductors to our custom designed bulk cable. The Kevlar strength member can be terminated to the connector on each end of the cable assembly drastically improving cable tensile strength and strain relief. HSCA conductors significantly increase the yield strength of the wires within the cable and reduce the risk of conductor breakage under harsh conditions.

Conductors designed for specific solder, or crimp terminations:

The selection of the conductor can have a significant improvement in manufacturability. For example, we will often specify silver plated copper alloys for solder terminations. This improves quality, and the improvement in manufacturability reduces labor cost.

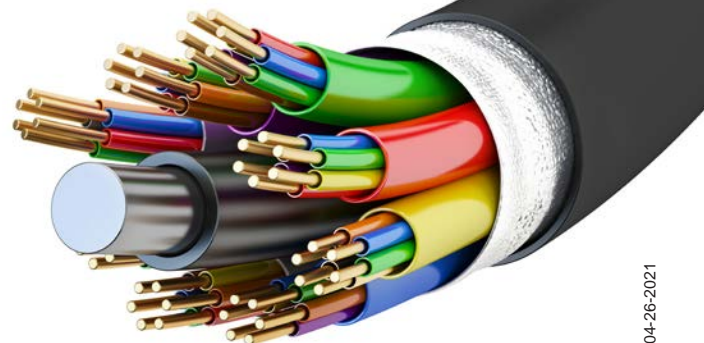
We can custom design the strand count in each conductor and specify a specific wire lay within the cable to maximize flexibility and improve manufacturability for solder or crimp operations.

Ability to mix power and signal conductors within a jacketed cable:

We can design the cable with a mix of power and signal conductors in various wire gauges meeting application requirements, improving manufacturability and reducing cost. Custom twisting, impedance controls and internal shielding of data pairs can be specified to reduce noise, interference, and crosstalk to meet specific communication or data protocols such as USB, CAN, Ethernet, RS232, etc.

EMI and shielding protection designed to your application needs:

Ability to improve EMI and shielding protection often in conjunction with weight savings and improved manufacturability.



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Improved dimensional tolerance control for molding operations:

Our ability to control the circumference of the bulk cable jacket allows for improved bonding of the cable jacket to the mold, improved aesthetics, environmental sealing, and immersion characteristics of the finished cable assembly.

Bulk cable jacket designed to the application:

The jacket of the bulk cable can be designed for the application. UV light exposure, temperature extremes, flex properties, flame retardancy, abrasion and exposure to chemicals. We can also design the jacket characteristics to improve bonding in over-molded cable assembly applications.

Retractable Coil Cords

Retractable coil cords are often used in the tactical military environment. Our engineering team has the hands-on knowledge to assist you in designing a custom retractable coil cord for your application.

Custom Jacket Printing

The jacket of your cable can be enhanced with custom printed nomenclature to include company name, logo, or descriptive technical information that is useful to the end user.

Early Involvement is the Key

Compulink is an industry leader in the development and fabrication of molded cable assemblies for tactical military applications. Involve us early in your project. Our skilled team will assist you in designing a cost-effective, custom bulk cable, or coil cord solution for your unique cable assembly requirement.

**Want to learn more?
Contact us, we are here to help.**

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About Us

COMPULINK: Specializing in Overmolded Cable and Harness Assemblies for the Tactical Military Environment



Located in St. Petersburg, FL, Compulink is an industry leading manufacturer of complex wire harnesses and custom molded cable assemblies. We produce high quality, build-to-print cables and harnesses for commercial and military applications. Compulink serves original equipment manufacturers and military contractors nationwide with excellence in design engineering, prototype fabrication and volume production.

All processes and procedures within our 40,000 square foot facility comply with ISO 9001:2015 and AS9100 quality management system standards.

Learn More At: compulink.com

About Our Sister Divisions

kSARIA INTERCONNECT: Harsh Environment Fiber Optic and Electrical Cable Assemblies



kSARIA manufactures harsh environment fiber optic and electrical cable assemblies and harnesses. The company also offers turnkey installation services of fiber optic and electrical cables for military and aerospace applications, as well as Certified Fiber Optic Training. kSARIA is the corporate office and is in the process of expanding capacity with a relocation to Hudson, New Hampshire.

kSARIA's future 50,000 square foot, AS9100/ISO9001 certified facility offers unmatched advantages for all aspects of Mil/Aero Connectivity Solutions.

Visit www.ksaria.com

CIA&D: Electrical Interconnect and Wire Harness products for Aerospace and Defense



Co-Operative Industries Aerospace & Defense (CIA&D) manufactures electrical wire harnesses, ignition leads and flexible metal conduit for the commercial airline and defense industries. Specializing in precision, multibranch configurations they also offer the added benefit of protective braiding and overmolded connectors for harsh environment applications.

Located in Fort Worth, TX, CIA&D's modern 121,096 square foot, AS9100 registered facility offers efficiencies and improved capacity for long run, large volume harness production.

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