



SOLDIER SYSTEM SOLUTIONS

SOLUTIONS FOR END-TO-END CONNECTIVITY

Electrical Interconnects Made Smaller, Lighter, More Flexible for Modular, Mission-Specific Configurations

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GIVE FIGHTERS THE TACTICAL EDGE IN MILITARY OPERATIONS

Equipping soldiers for modern missions means providing the technological edge they need for mission success. Personal networks, sensors, and C4 communications need to be fully integrated with the power to manage each system. All soldier systems must be connected in a reliable and easy-to-use manner.

Connectivity for Adaptable Soldier Systems

As a leader in connectivity, TE Connectivity (TE) can help you create soldier systems with the features you need and the durability and adaptability that today's digitized battlefields demand.

Modularity

- Compatible modules and components allow for easy integration of different subsystems
- Permit multiple mission-specific configurations
- Balance loads for easier wearing

Weight and Space Savings

- Advanced cables and composite components help reduce weight
- Compact connectors and embedded antennas save space

Rugged and Flexible

- Provide the flexibility needed for mobility
- Able to withstand the hazards and environmental conditions of the modern battlespace

Enabling Human-Centric Ergonomics in Soldier Accessories

Performing in challenging operating environments requires soldier systems that are rugged but also easy to use and maintain. TE offers a broad range of cables, assemblies, and connectors that are easy to engage and disengage, offer rugged reliability, and save space and weight where every ounce counts. In short, we can help you create soldier systems that are wearable and bearable.

Building Better Boxes

TE is a leader in composites, with a wide selection of corrosion-resistant, molded enclosures that are stronger, lighter, and smaller than metal enclosures while also permitting cost-effective integration of conductors, shielding, antennas, and other features.

Get the Innovation Edge

Compact Connectors. Micro- and nanominiature connectors with robust designs and easy handling.

Advanced Cable Materials. Cross-linked polymers for thinner, lighter, tougher insulation and jackets.

Composites. Carbon- and glass-filled composites custom tailored to achieve the right weight, strength, and electrical characteristics.

Embedded Antennas. Zero-profile designs for the radio needs of the soldier.



SOLDIER CONNECTIVITY

- Composite Enclosures
- Embedded Antennas
- Compact Connectors
- Wire and Cable
- RF Connectors
- RF Cable
- Harnessing Components
- Harnesses
- Rugged Optics

COMPACT CONNECTORS



DEUTSCH D-CATS Connectors

Based on NATO Soldier System Requirements

- Silent and quick connect push-pull coupling
- Single-handed mating with gloved hand
- Easy cleaning and/or repair on the battlefield

Capable

- Water-, sand-, snow-, and mud-resistant
- Mated or unmated
- EMI shielded for signal integrity
- Durable: >5000 mating cycles



CeeLok FAS-T Connectors

Compact 10 GbE Performance

- Compact space- and weight-saving size 8 shell

Rugged

- Excellent shock, vibration, temperature, and sealing performance

Convenient

- Field terminable with EMI protection and integral backshell for low-cost, low-weight strain relief

COMPACT CONNECTORS



CeeLok FAS-X Connectors

Fast and Quiet

- Supports 10G Ethernet and beyond
- Design optimized for signal integrity
- Each pair carries shield through the connector to provide excellent impedance matching and to eliminate crosstalk

Compatible

- Uses standard crimp AS39029 contacts
- Allows fast field termination and repair



Military QPL Circular Connectors

Extensive Range

- 38999, 26482, 5015, etc.
- Weight-saving aluminum and composite options

Compatible

- Standardized contacts, tooling, and accessories



Metal-Shell Microcircular Connectors

Compatible

- USB 2.0 signal compatible

Versatile

- Bayonet, push-pull, or threaded coupling styles
- Signal only and hybrid signal/power versions

Reliable

- IP67 sealing



DEUTSCH Wildcat Micro Connectors

Size and Weight Demands

- 3, 5, or 9 contacts in two shell sizes
- Lightweight aluminum shells
- Bayonet and threaded coupling

Rugged Reliability

- Environmentally sealed with rear-removable contacts
- Cable EMI shield and boot termination
- Small, lightweight reliability



CeeLok FAS-T Nano Connectors

Extreme Space and Weight Savings

- 0.30" diameter
- Push-pull or threaded coupling

Fast

- 10G Ethernet-capable 8-position connector
- Improved signal integrity: innovative T-shaped contact pattern reduces crosstalk



Nanominiature Connectors

Extreme Weight and Space Savings

- Rectangular, coax, and sealed circular configurations

Rugged Reliability

- Excellent shock and vibration resistance
- Wide temperature range (-200°C to +200°C)



Circular HD Connectors

Easy to mate

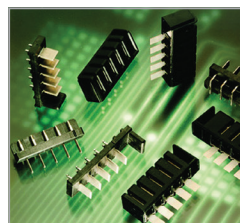
- Push-pull self-locking interface
- Scoop-proof blindmating

Rugged Reliability

- IP68 sealing
- 1000 mating cycles

Versatile

- 5 shell sizes ranging from 14 mm to 27 mm in diameter
- 2 to 40 contacts



Battery Connectors

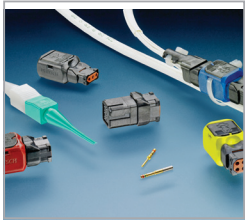
Compact

- Significant space savings with enough contact area to secure the connection
- 2 to 10 positions
- 2.5, 3.0, and 5.0 mm contact pitch

High Performance

- Gold-plated, high-conductivity, copper alloy contacts
- High-cycle-life durability

COMPACT CONNECTORS



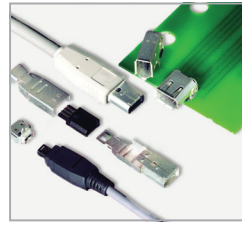
369 Series Connectors

Low-Cost, Space-Saving Design

- Lightweight composite shells
- 3, 6, or 9 positions

Rugged Reliability

- Fully sealed cable and mating interface
- Positive button latching with audible click

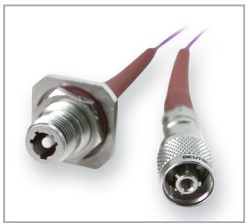


COTS Connectors

Extensive Range

- USB, IEEE 1394, RJ-45 . . .
- Standard and ruggedized versions

FIBER OPTIC CONNECTORS



DEUTSCH RSC Optical Connectors

Ruggedized Single-Channel Connectors

- Manufactured from Arcap alloy for lightweight corrosion resistance
- Anti-vibration coupling mechanism

Convenient

- Common ferrule carriers for the plug and receptacle
- Easily accessible fiber faces for cleaning purposes

RF CONNECTORS AND CABLE



Subminiature RF Connectors

SMA Connectors

- Threaded couplings

QMA Connectors

- Quick-lock couplings

SMB Coupling

- Snap-on couplings



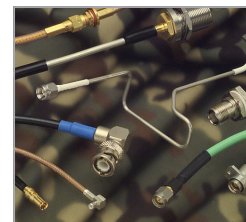
PRO BEAM Mini Connectors

Space and Weight Savings

- Compact design
- Lightweight aluminum shells
- 2 or 4 positions

Convenient

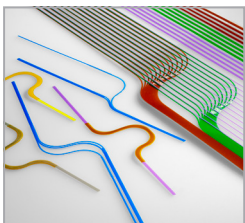
- Expanded beam interface designed to help withstand shock and vibration
- 3000-mating-cycle durability
- Single mode or multimode fiber



RF Connectors

Extensive Range

- MIL-PRF-39012 and MIL-DTL-83517 qualified
- Miniature, subminiature, and microminiature types
- Bayonet, threaded, and push-on couplings



Optical Flex Circuits

Versatile

- Symmetrical and asymmetrical designs
- Tight bend radii

Highly Customizable

- Up to 6 levels of fiber crossings in a single layer
- Up to 12 layers
- Range of packaging options for environmental conditions

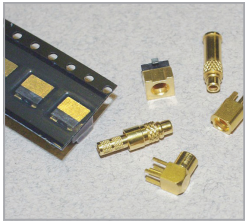


Microminiature RF Connectors

SMP/SMPM Connectors

- Push-on coupling
- DESC standard interface

RF CONNECTORS AND CABLE



MMCX Microminiature RF Connectors

Space Saving Design

- 30% smaller than MCX
- Minimum dimensions for space-constrained applications
- Straight and right-angle versions for cable and board mounting

High Performance

- 6 GHz bandwidth
- 500 mating cycles
- Reliable snap-on coupling



High-Performance Coaxial Cable

Extreme Performance

- Very low insertion loss
- Very high velocity of signal propagation: 83+%
- >90 dB shielding effectiveness

Versatile

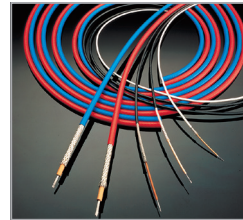
- DC to 65 GHz
- Up to 1500 W at 5 GHz
- Very low weight



RF Cable Assemblies

Extensive Range

- Wide range of standard, subminiature, and microminiature interfaces and frequencies
- Ergonomic designs for easy connection/disconnection
- Qualified to MIL-PRF-39012, MIL-DTL-83517, MIL-PRF-55339



Cheminax Coaxial Cable

High Performance

- Lightweight, small size
- Low capacitance and attenuation
- High velocity of propagation

Adaptable

- Suitable for demanding video and RF applications
- Highly flexible

WIRE AND CABLE



High-Performance Wire and Cable

Space and Weight Savings

- Radiation cross-linked designs for reduced insulation and jacket wall thicknesses

Versatile

- Range of materials to meet temperature, fluid and chemical resistance, and mechanical requirements

Adaptable

- Highly flexible: to help support soldier's motion



High-Speed Cable

Rugged Choices

- Material choices to match application requirements
- Shielded and unshielded
- Low-smoke, zero-halogen versions for increased safety

High-Speed Protocols

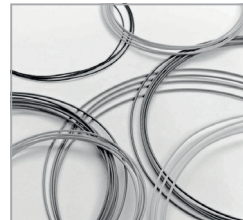
- Configurations to support various Ethernet, Quadrx, IEEE 1394, USB, etc.



Digital Cable Assemblies

More Speed, Less Weight

- Support for high-speed protocols
- Compact, lightweight designs
- Fully tested and characterized by TE



Hook-Up Wire

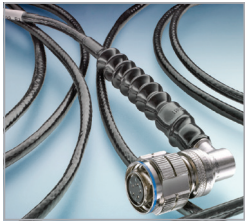
Rugged Reliability

- Dual-wall construction
- Resistant to most solvents, fuels and lubricants
- Abrasion and cut-through resistant
- Excellent Flexibility

Extensive Range

- SPEC 44 PAPVDF (AS27500)
- SPEC 55 XL-ETFE Wire (AS22759)
- FlexLine XL-ETFE Wire

HARNESSING PRODUCTS



Harnessing

Hazard Matched

- Complete product suites matched to application needs
- NBCCS-compliant products
- Flame-retarded, flame-resistant, and low-smoke zero-halogen (LSZH) solutions

Space and Weight Savings

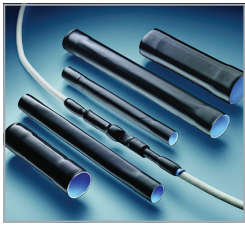
- Thin-wall insulation and composite materials



Micromolded Parts

Small Size

- Adhesive-lined options
- Strain relief
- Available in a range of different cross-linked polymeric materials



Heat-Shrink Tubing

Extensive Range

- Available in many sizes, constructions, lengths, and colors
- Dependable insulation, mechanical protection, and strain relief
- Single-wall, dual-wall, heavy-duty and special-purpose versions with radiation cross-linked fluoropolymers, fluoroelastomers, and elastomers



AS85049 Backshell Adapters and Bandstraps

Rugged Reliability

- Self-coupling locking nut for high reliability under vibration
- Side entry for easier installation and repair
- Corrosion-resistant steel bands with cadmium or electroless nickel plating

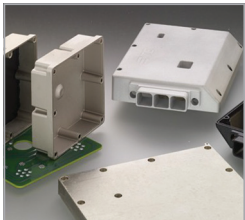
Flexible Choices

- Available flat or pre-coiled
- Three strap widths
- Straight, 45°, and 90° adapters

Compliant

- Meets AS85049 NAVAIR standards

ADDITIONAL SOLDIER SYSTEM SOLUTIONS



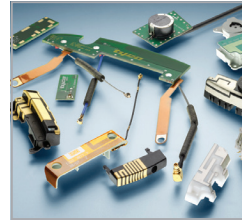
Composite Enclosures

Weight-Saving Rugged Performance

- Up to 50% lighter than aluminum
- Extremely rugged and corrosion resistant

Customizable

- Conductive composites and plating options for grounding/EMI shielding
- Highly customizable with fully integrated wire traces, antennas, and connectors



Embedded Antennas

Low-Profile, Form-Fitting Conformal Designs

- Multiband and wideband antennas and arrays
- Rugged embedded antennas in engineered composite enclosures

Cost Effective

- Customized designs with integrated RF and DC traces, cables, and connectors



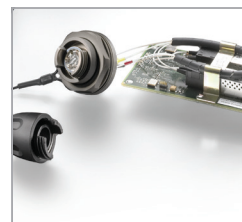
Solder Sleeve Grounding Terminations

Adaptable

- Environmentally sealed, insulated, and encapsulated solder connection
- Wide range of temperature ratings, as wide as -65°C to 200°C
- Splash- and immersion-resistant versions

Easy Installation

- Prefluxed solder preform provides a controlled soldering process
- One-piece design
- Optional preinstalled ground leads



Integrated Solutions

Application-Specific Designs

- Meet the demanding requirements for lighter, faster, more capable systems
- Shorten the design cycle
- Increase reliability

Reduce Risk

- Engineered for rugged environments
- Factory tested plug-and-play solutions
- Custom tailored to your needs

CONNECT WITH US

We make it easy to connect with our experts and are ready to provide all the support you need. Visit te.com/support to chat with a Product Information Specialist.

QUALITY STARTS WITH THE RIGHT APPLICATION TOOLING

Creating a quality crimp connection is essential to delivering high performance and reliability in extreme environments. From low to high volume wire processing, TE has you covered with a full range of application tooling and a global field service team.

- [View all application tooling](#)
- [Connect with our experts to find the right tool for your application](#)

te.com/defense

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