



SOLDIER SYSTEMS

SOLUTIONS FOR END-TO-END CONNECTIVITY

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

SOLDIER SYSTEMS

Give fighters the tactical edge

Equipping soldiers for modern missions means giving them the technological edge to succeed. You need to integrate personal networks, sensors, C4 communications, and the power to manage the systems. And you need to connect all the systems in a reliable and easy to use manner.

Connectivity for Flexible Systems

As a leader in connectivity, TE Connectivity (TE) can help you create soldier systems with the features you need.

Modularity

- Allow modularity for easy integration of different subsystems
- Permit multiple mission-specific configurations
- Balance loads for easier wearing

Weight and Space Savings

- Reduce weight with advanced cables and composite components
- Save space with compact connectors and embedded antennas

Rugged and Flexible

- Provide the flexibility needed for mobility
- Help withstand the hazards of the modern battlespace

Enabling Human-Centric Ergonomics

Operating in trying conditions requires systems that are not only rugged but also easy to use. We offer a range of 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 systems that are wearable and bearable.

Building Better Boxes

We are a leader in composites, allowing you to create molded enclosures that are stronger, lighter, and smaller—and permit 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.



TE Components . . . TE Technology . . . TE Know-how . . .

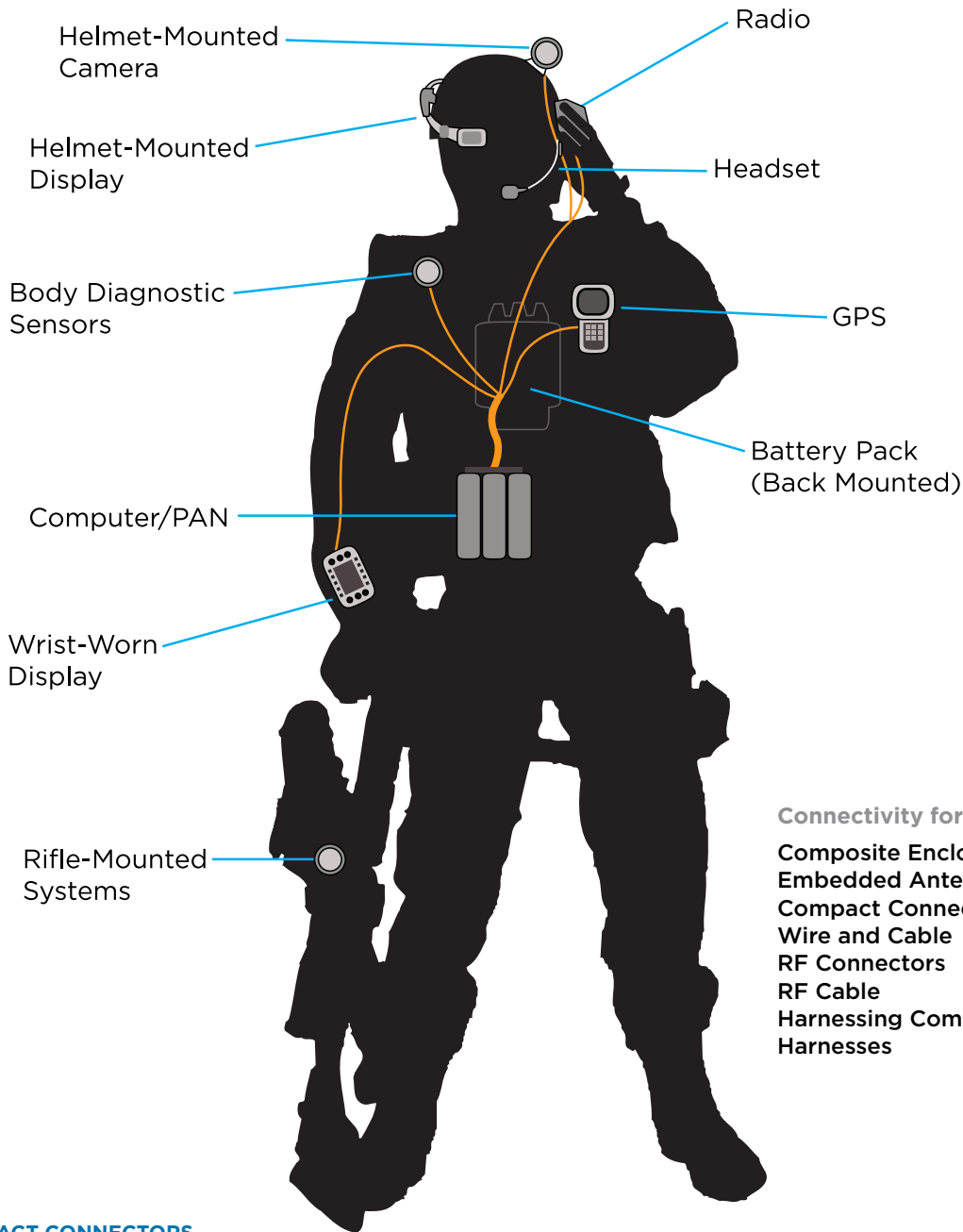
AMP | Agastat | CII | Hartman | Kilovac | Microdot | Nanonics | Raychem | Rochester | DEUTSCH

Get your product to market faster with a smarter, better solution.

Go to: DesignSmarterFaster.com.

Your best place to get started, today!

Here you can get connected to the inner circle of TE AD&M's best thinkers. Working together early in your design review process, we can help you reach a better connectivity solution.



Connectivity for the Soldier

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

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 Size 8 shell for space and weight savings

Rugged

- Excellent shock, vibration, temperature, and sealing performance

Convenient

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



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

More Choice from an Extensive Range

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

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

For Size- and Weight-Critical Applications

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

Rugged

- 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

- .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

- 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

- 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



DEUTSCH 369 Series Connectors
Low-Cost, Space-Saving Design
 • Lightweight composite shells
 • 3, 6, or 9 positions
Reliable
 • Fully sealed cable and mating interface
 • Positive button latching with audible click



COTS Connectors
Full Range of Data Connectors
 • USB, IEEE 1394, RJ-45 . . .
 • Standard and ruggedized versions

FIBER-OPTIC PRODUCTS



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



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 AND CABLE



RF Connectors
Wide Range of Rugged Connectors
 • MIL-PRF-39012 and MIL-DTL-83517 qualified
 • Miniature, subminiature, and microminiature types
 • Bayonet, threaded, and push-on couplings



Miniature RF Connectors
BNC Connectors
 • Bayonet coupling
50- and 75-ohm TNC Connectors
 • Threaded coupling
Mini-BNC Connectors
 • 40% smaller than standard BNC



Subminiature RF Connectors
SMA Connectors
 • Threaded coupling
QMA Connectors
 • Quick-lock coupling
SMB Coupling
 • Snap-on coupling



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

High Performance

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

High Performance

- Straight and right-angle versions for cable and board mounting



Alpen 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

Comprehensive Selection

- 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

Lightweight and Space-Saving

- 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

Flexible

- 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

SPEC 44 PA/PVDF Wire (AS27500)

- Dual-wall construction
- Resistant to most solvents, fuels and lubricants

SPEC 55 XL-ETFE Wire (AS22759)

- Excellent abrasion and cut-through resistance
- Excellent flexibility

Flexline XL-ETFE Wire

- Excellent abrasion and cut-through resistance
- Extreme flexibility



HARNESSING PRODUCTS



Harnessing Products

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

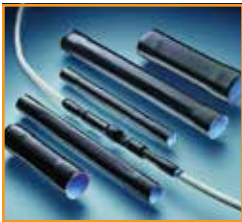
- Thin-wall insulation and composite materials



Micromolded Parts

Small Size

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



Heat-Shrink Tubing

Full Range of Choices

- 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 SOLUTIONS



Composite Enclosures

Weight-Saving Rugged Performance

- Light weight — up to 50% lighter than aluminum
- Extremely rugged and corrosion resistant

Customizable

- Conductive composites and plating options for grounding/EMI shielding
- Highly customizable with 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

Flexible

- 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

- Prefluxe 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

For More Information

TE Technical Support Center

North America	+1 800 522 6752
Asia Pacific	+86 0 400 820 6015
Austria	+43 1 905 601 228
Baltic Regions	+46 8 5072 5000
Benelux	+31 73 6246 999
Czech Republic	+420 800 701 462
France	+33 1 34 20 86 86
Germany	+49 6251 133 1999
Hungary	+36 809 874 04
Italy	+39 011 401 2632
Nordic	+46 8 5072 5000
Poland	+48 800 702 309

Russia	+7495 790 790 2
Spain/Portugal	+34 93 2910366
Switzerland	+41 52 633 66 26
United Kingdom	+44 800 267 666

Follow us on Twitter for all the latest product news @TEConnectivity, and on Facebook, TEConnectivity.

Connect with one of our Subject Matter Experts at www.DesignSmarterFaster.com

RUGGED SOLUTIONS FOR THE HARSHEST ENVIRONMENTS



te.com/adm

te.com/adm

© 2014 TE Connectivity Ltd. family of companies. All Rights Reserved.

1-1773837-1 ADM/RRD 1M 07/2014

AMP, Agastat, Alpen, CeeLok FAS-T, CeeLok FAS-X, Cheminax, CII, DEUTSCH, Flexline, Hartman, Kilovac, Microdot, Nanonics, PRO-BEAM, Raychem, Rochester, SPEC 44, SPEC 55, SPEC 80, SolderSleeve, Wildcat, TE Connectivity and the TE connectivity (logo) are trademarks of the TE Connectivity Ltd. family of companies.

Other products, logos, and company names mentioned herein may be trademarks of their respective owners.

While TE has made every reasonable effort to ensure the accuracy of the information herein, nothing herein constitutes any guarantee that such information is error-free, or any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. The TE entity issuing this publication reserves the right to make any adjustments to the information contained herein at any time without notice. All implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose are expressly disclaimed. The dimensions herein are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice.

Consult TE for the latest dimensions and design specifications.