



Solutions for Ground Defense



EVERY CONNECTION COUNTS

Lightening the Load, Enabling Mission Readiness

Nothing is more important on or off the battlefield than reliable systems. The electronic content of soldier systems and ground defense equipment expands dramatically—and space remains at a premium. As systems grow more sophisticated in capabilities, trust TE for advanced solutions to support the mission.

Our experience in supporting military readiness extends for more than 50 years. Today we are still helping ground defense equipment achieve a decisive edge in capabilities, reliability, and mission readiness.

Solving Tough Problems

Soldier systems must be wearable, flexible, and ready to withstand the stresses of use. They also need to be lightweight and compact so they enhance capabilities rather than encumber mobility and endurance.

Typical Applications

- Night vision
- Target acquisition and sighting
- Weapons
- Core computers

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

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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.

CONNECT WITH MISSION-CRITICAL RELIABILITY



Solutions for Soldier Systems

- Compact High-Speed Connectors
- Composite Connectors
- Microminiature/Nanominiature Connectors
- High-Performance Wire and Cable
- Field-Deployable Cable Assemblies
- Heat-Shrink Harnessing Components
- Composite Enclosures
- Embedded Antennas
- Signal-Level Relays
- Terminals and Splices



WILDCAT MICRO CONNECTORS



D-MAX CONNECTORS



HIGH-DENSITY CONNECTORS



HIGH-SPEED COPPER CABLES



COMPOSITE ENCLOSURES AND ANTENNAS

Wildcat connectors provide higher densities in familiar circular formats. Wildcat 38999 connectors offer nearly twice the contact density than comparable 38999 Series III connectors. For size- and weight-critical applications, Wildcat Micro connectors offer between 3 and 9 contacts. Both types withstand extreme temperatures and resist vibration and corrosion.

Available in both 38999 and ARINC 809 styles, D-MAX connectors handle speeds of 10 Gb/s and more, making them the ideal choice for 10G Ethernet, IEEE 1394, USB 3.0 and other high-speed protocols. The termination and assembly is fast and straightforward, including the ability to field terminate and repair in as little as 5 minutes.

Our nanominiature and microminiature connectors offer interconnect solutions for a broad range of applications. From standard to MIL -Spec configurations to custom designs, we have the nano-, micro-, sub-, and ultra-miniature connectors to meet your needs.

With a rugged construction to meet the hazards of ground vehicles, our high-speed copper cables are available to support the full range of fast protocols, including Gigabit Ethernet, USB 3.0, Fibre Channel, DVI, and IEEE 1394. The cables combine uniform electrical properties with a range of jacketing materials to meet any need.

Engineered polymers, microencapsulants, molded-in antennas, selective traces, EMI, and thermal management are crucial in any enclosure. We have the capability to design rugged, lightweight enclosures with our expertise in materials, manufacturing, engineering, and modeling.

Simplifying Systems, Advancing Capabilities

Maximum mobility, enhanced situational awareness, and precise target acquisition and firing solutions all require new levels of sophisticated processing and control of systems ranging from laser range finders to turret positioning. They require efficient use of space without sacrificing reliability, adding unnecessary weight, or compromising mission effectiveness.

As the complexity of weapons systems increases, we help simplify interconnections, increase performance, and enhance reliability to achieve greater accuracy, faster response, and better communications.

Typical Applications

- Remote weapon systems (RWS)
- Masts
- Thermal imager sights
- IED defeat

FORCE READINESS BEGINS WITH DEPENDABILITY



Solutions for Weapons Systems

- Connectors and Backshells (MIL-SPEC)
- High-Performance Wire and Cable
- Filter and Hermetic Connectors
- Power Cables
- Power Distribution Boxes
- High-Performance Relays and Contactors
- Heat-Shrink Harness Components
- Molded Parts
- Wire/Harness Identification
- Networking Products
- Rugged Optics
- Maintenance and Repair Kits
- Terminals and Splices



MULTICONDUCTOR CABLES



AFD SERIES CONNECTORS



SEALED HARNESS ASSEMBLIES



EVOMAX EMI FILTER CONNECTORS



MAINTENANCE AND REPAIR KITS

Our expertise in advanced materials yields wire and cable that's smaller, lighter, and tougher than traditional counterparts, with wide temperature ranges, resistance to fuels and contaminants, and options for EMI/EMP shielding. They also offer the flexibility to route through tight spaces and sharp turns.

With 9 shell sizes and 27 various insert arrangements, AFD series connectors supply complete environmental sealing against challenging environments in a MIL-DTL-26482G Series 2 bayonet-coupling connector with a temperature range from -55°C to 200°C. The connectors are designed with simplified assembly procedures to reduce assembly and rework costs.

With all the components and integration expertise, we can design, prototype, and produce sealed harness assemblies to provide you a ready-to-use solution that means reliability in the harshest environments.

The next evolution of the MIL-DTL-38999 Series III EMI filter connectors, EvoMax connectors combines what have been custom designs into a standardized design capable of accommodating popular options. With composite or metal shells, EvoMax connectors give the flexibility of custom with the lower costs and faster lead times of standard products. Our range of other EMI filter and transient protection solutions will meet your most demanding requirements.

Maintenance and repair kits designed for field or depot use are custom configured to meet the needs of specific platforms and provide all the necessary tools and parts to speed repairs. Kits are packaged in rugged, lightweight cases for easy transport and convenient storage and can be provisioned with a wide range of wire, connectors, tooling, and accessories required for specific applications.

Improving Battlefield Connectivity for a Tactical Edge

Integrated communications is central to modern military operations—networking all units to provide maximum situation awareness and effective deployment. Not only do communication systems require higher bandwidth, they must maintain signal integrity under demanding mechanical and environmental conditions within an often hostile EMI environment.

We give you more options in high-density packaging, high-frequency performance, and modularity to achieve maximum performance in minimum space.

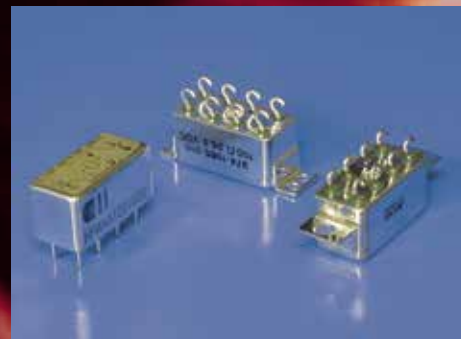
Typical Applications

- Antenna tuners
- Tactical data communication systems
- Single-board computers

PROVIDE MORE SPEED IN NETWORK-CENTRIC WARFARE

Solutions for Communications

- High-Speed I/O Connectors
- High-Speed Backplane Connectors
- VITA 46/LRU Products
- Advanced Optical Modules
- Optical Connectors with Expanded Beam, Ceramic Ferrule, or MT Interfaces
- RF Connectors and Assemblies
- Circular Connectors
- Rack and Panel Connectors
- Rectangular Connectors
- Controlled Electrical Cables
- Filterline Cable
- Microminiature/Nanominiature Connectors
- Signal Relays
- Solid-State Relays



CRYSTAL CAN RELAYS



RF CABLE AND CONNECTORS



MC5 SERIES OPTICAL CONNECTORS



RUGGED OPTICAL ASSEMBLIES



MULTIGIG RT 2-R CONNECTORS

With numerous mounting options, our mid-range crystal can relays handle t5 to 50 A in compact or standard cases. Terminal styles include socket pins, solder pins, and hook solder terminals. The balanced force design with permanent magnet drive increases reliability in harsh environments.

As a leading manufacturer of RF connectors, cable, cable assemblies, and application tooling, we provide a wide range of coaxial connectors for the ground defense industry including military-qualified SMA, BNC, and TNC connectors along with a portfolio of small form factor high-frequency connectors.

Using compact 1.25 mm precision zirconia ceramic ferrules, these high-density connectors offer sustained performance over a wide range of environmental conditions. The extensive range includes 1, 2, 4, 6, 8, 10, and 30 positions, with a simple termination process and tooling. TE offers a wide range of other optical and hybrid electro-optical connectors and cable harness solutions.

Optical technology saves weight and space and offers inherent EMI immunity. For high-density applications, our MTC high-performance modular rectangular connectors save space compared to circular connectors and accept standard ARINC 801 optical terminations in a compact, lightweight design. We also offer ruggedized assemblies and expanded-beam connectors that give unmatched performance in harsh, dirty, and mechanically challenging environments.

The standard connector for VITA 46 applications, the MULTIGIG RT 2 connector has been redesigned to be even more rugged. Pass the extreme test requirements of VITA 72, the new MULTIGIG RT 2-R offer quad redundant contact for reliable connections and is drop-in backwards compatible with the original design.

Providing Reliable, Responsive, Efficient Performance

TE makes power distribution efficient and manageable. We offer relays and contacts with make/break current ratings up to 2000 A, current ratings up to 1000 A at 28 VDC and 500 A at 900 VDC, and hermetic sealing for reliability. Our relays offer an industry-leading combination of high current switching in compact, lightweight packages.

Our power solutions combat the potential hazards of ground defense vehicles, withstanding the heat of the engine compartment, resisting harsh oils, fuel, and other solvents, and maintaining efficient power distribution under tough conditions of vibration and shock.

Typical Applications

- Turret power drives
- Main power management systems
- Powered doors
- Powered entry ramps

TAP POWERFUL SOLUTIONS



Solutions for Power Distribution

- Power Cables
- Power Connectors
- Power Distribution Units
- Lightweight AC/DC Relays and Contactors
- Mid-Range Relays



RELAYS AND CONTACTORS



DTS SERIES 38999 CONNECTORS



DTS-HC SERIES POWER CONNECTORS



CUSTOM POWER DISTRIBUTION UNITS



POWER CABLES

From power systems and driver displays to turret and firing controls, our relays and contactors are available in compact, lightweight designs, covering a full range of requirements from low-level signals to high-power needs.

Our range of MIL-DTL-38999 and 38999-style connectors gives you more choice in shell sizes and materials, inserts for power, signal, and optical needs, filtering and EMI protection, hermetics and other special environmental sealing—if you need 38999, talk to TE.

Ideally suited for high-power interconnections in harsh environments, the connector's power contacts are rated to 300 A and are suitable for terminating conductors up to 70 mm². Based on proven military standard 38999 housings, the connectors provide the reliability and performance required for the most demanding aerospace applications.

Count on us not only for all the components, but also the expertise to integrate them into end-to-end solutions that are lighter, smaller, and easier to install. Our custom power distribution units consolidate multiple contactors, circuit-breakers, sensing and protective devices, and related components into modular packages.

Flexible power cables are insulated and jacketed with materials that provide improved performance over other materials. Offering particular advantages for specific applications, cables are available in single- and multi-conductor constructions and shielded and jacketed versions. Our cables offer size and weight savings, good resistance to abrasion and cut-through, and the ability to operate in difficult environments.

Integrating Vehicle Electronics with Advanced Intelligence

Future combat systems rely on vetronics to create a single web connecting both the vehicle's subsystems and the overall command and control structure—linking all units down to the individual soldier. As subsystems become networked, with sensors providing information on everything from fuel consumption and power management to external threats, the data processing requirements go far beyond the capabilities of traditional interconnection systems.

Typical Applications

- Command and control bus
- CANbus systems
- MIL-STD-1553 systems
- Signal processing systems
- Data control and distribution
- Computer resources
- Crew control and displays
- Power generation and management

SMARTER CONNECTIVITY FOR ENHANCED CAPABILITIES



Solutions for Vetronics

- High-Speed I/O Connectors
- High-Speed PCB Connectors
- Networking Solutions
- High-Performance Wire and Cable
- J1939 CANbus Wire
- Hook-Up Wire and Cable
- Custom Harness Assemblies
- Tubing and Molded Shapes
- Backshells
- Rugged Optics
- Signal Relays



RECTANGULAR CONNECTORS



HIGH-VOLTAGE CONTACTORS



NETWORKING SOLUTIONS



HARNESSING SOLUTIONS



RAYCHEM SPIN LOCK ADAPTERS

A full line of rack-and-panel connectors support power, signals, RF, and optics in modular high-density rectangular connectors for easier “black-box” installation and removal of LRUs and similar equipment.

TE delivers the switching performance demanded by aerospace and defense applications with our lightweight contactors, which offer continuous current ratings up to 500 A at 900 VDC in very compact sealed packages. Custom-designed, fully qualified main power and high-voltage distribution assemblies are also available.

We support major vetronics network protocols with connectors, cable, and assemblies. By partnering with us, we help you not only to meet the needs for high-performance networking of sophisticated subsystems, but also to satisfy the critical demands to conserve space, weight, and power consumption.

From heat-shrink tubing, molded shapes, and adhesives to backshells for EMI protection and strain relief, you will find the full range of products to build high-performance harnesses. Our harnessing products are designed as system solutions, with a range of choices to satisfy the full range of mechanical and environmental needs.

Raychem spin lock variable-angle backshells allow a single part to accommodate a wide range of needs. Providing straight, 45°, and 90° cable terminations, the backshell's swivel body rotates around the axis of the cable bundle, thereby minimizing stress on the wire bundle and providing better strain relief.

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