



UNMANNED VEHICLES

ADVANCED SYSTEMS AND COMPONENTS FOR LIGHTER, TOUGHER,
MORE CAPABLE UNMANNED VEHICLES

Land, Sea, or Air . . .

End-To-End Connectivity Solutions That Reduce Weight, Save Space, and Boost Capability

Doing More with Less

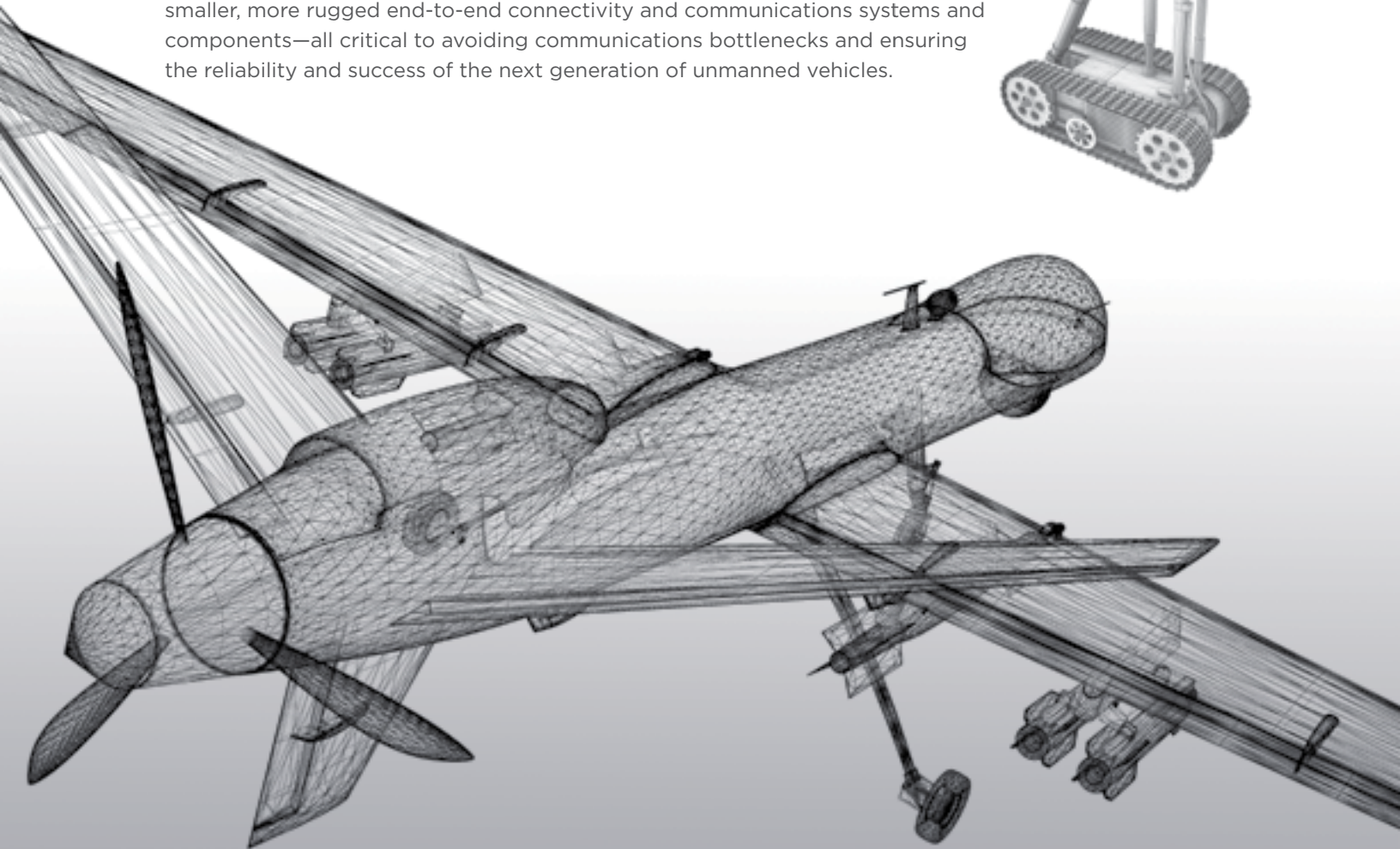
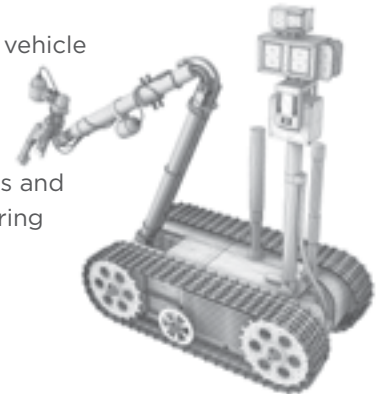
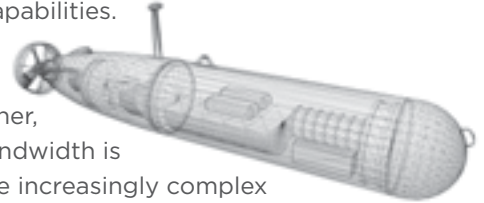
Unmanned vehicles have become an important mainstay in modern battle spaces, and next-generation systems will continue to be required to do more with less size, weight, and power consumption (SWaP). Reducing SWaP is vital to longer mission deployments, greater fuel efficiency, and the ability to add additional surveillance and combat capabilities.

SWaP

Lower component weight and size is important in taking missions further, faster, and to manage more complex payloads along the way. More bandwidth is required from these smaller, lighter components and systems to handle increasingly complex high-speed communications requirements and the need for greater functionality. And whether smaller or lighter, or both, all elements of unmanned vehicles need to be rugged enough to handle the rigors of battle.

Increasing Performance on Land, Sea, and Air

Unmanned aerial vehicles (UAVs), ground vehicles (UGVs), and underwater vehicle (UUVs) have different performance needs to meet specific mission requirements and withstand various harsh environments. TE Connectivity (TE) has been and remains a valuable partner in developing lighter, smaller, more rugged end-to-end connectivity and communications systems and components—all critical to avoiding communications bottlenecks and ensuring the reliability and success of the next generation of unmanned vehicles.





POWER CONNECTORS



Unmanned Power Connector

High-Performance

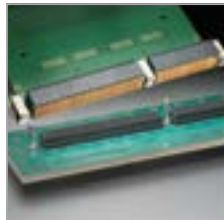
- 8 AWG to 14 AWG power
- 22 AWG to 24 AWG signal
- Mixed signal and power available in 3 positions
- 2 and 3 position wire to wire and wire to board configurations in power only

- Available pigtailed use high-grade flexible silicone bend wire
- #### Efficient
- 80 AMPS per contact continuous (power pins)
 - 4 AMPS per contact continuous (signal pins)

Reliable

- Contact locks for vibration resistance
- IP67 sealing boot option available
- Removable/replaceable/repairable contacts
- Optional latching available

CONNECTORS



MULTIGIG RT Connectors

High Speed

- Data transfer rates up to 25+ Gb/s

High-Density Modular Design

- Modular design with backward interoperability

Ultra-Rugged

- Ruggedized multipoint contact system meets VITA vibration standards



RF Modules (VITA 67)

High Performance

- 4 or 8 SMPM contacts
- High channel-to-channel isolation
- Float-mounted jack maintains positive RF ground

Easy to Use

- Blind mate



Fortis Zd Connectors

High Speed

- 12+ Gb/s data rates

Rugged

- Extreme mechanical and electrical performance

Versatile Application

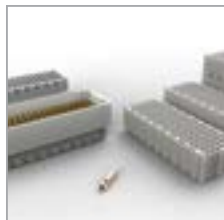
- Modular, with plastic, shielded, and machined metal shells



DEUTSCH DTS 38999 Connectors

Reliable

- Withstands severe vibration, corrosive, and high-temperature environments
- Overtravel system
- Anti-fire locking system
- Wide choices in shell sizes, materials, inserts, filtering and EMI protection, and environmental sealing



Mezalok Mezzanine Connectors (VITA 61)

Compatible

- 114-position, compatible with XMC footprint
- 60-position, half-size versions

Reliable

- Mini-box contacts provide 4 points of contact
- LCP plastic housings for excellent thermal stability



CeeLok FAS-X Connectors

High Speed

- Supports 10G Ethernet and beyond
- One or four 10G Ethernet channels in Size 11 or 25 shells

Compatible

- AS39029 contacts
- Fast field termination and repair, using standard tools
- Available with aluminum or composite shells



DEUTSCH Wildcat 38999 Connectors

High Density

- Nearly double the density of equivalent 38999 Series III connectors
- Four housing sizes, 11 to 64 contacts

Reliability

- Robust, triple-start threaded coupling
- Extreme temperature, vibration, and corrosion resistance



DEUTSCH Wildcat Micro Connectors

For Size- and Weight-Critical Applications

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

Rugged

- Environmentally sealed with rear-removable contacts
- Cable EMI shield and boot termination

Unmanned Vehicles

CONNECTORS



DEUTSCH Stores Interface Connectors

Dependable

- Connector systems enable a high-reliability interface with mission stores equipment

Versatile

- Meets MIL-STD-1760 and MIL-DTL-38999 standards
- Type 1 available in aluminum and composite versions for drop launch



DEUTSCH DBAS Series Connectors

High Reliability

- Easy and secure locking with a circular push/pull coupling ring for 100% mating
- Rated from -55°C to +200°C

Versatile

- Hermetic, rackable, lanyard, EMI shielded, dead-face, cryogenic, and custom configurations



POLAMCO Rugged COTS Connectors

Versatile

- RJ45 Cat 6A, up to 10 Gb/s
- USB 2.0, A, B, and Mini styles

Rugged

- IP68 sealing
- 360° EMI and mechanical protection
- Aluminum, marine bronze, stainless steel, titanium, or composite shells



Micro D Connectors

Space and Weight Savings

- High-density microminiature connector
- Aluminum shells plated in nickel or cadmium

Flexible

- Available prewired or with separate crimp contacts for customization



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

Robust

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



DEUTSCH EMI Filter Connectors

Smaller, Lighter

- Save space, weight, and system cost

More Options

- Filter options range from a few kilohertz to several gigahertz
- Custom filtered boxes available
- EMI filtering and transient protection



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

Safer

- Aerospace-grade low-smoke and low toxicity materials

WIRE AND CABLE



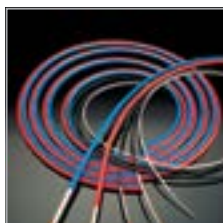
High-Speed Copper Cable

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.



Cheminax Series Raychem Coaxial Cable

High Performance

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

Adaptable

- Suitable for demanding video and RF applications

Unmanned Vehicles

WIRE AND CABLE



SPEC 55 Series Raychem Wire and Cable

Versatile

- Wide range of conductor materials, platings, and sizes
- Variety of shielding options

High Temperature

- -55°C to +200°C



Raychem SHF-60 Power Cable

Extremely Flexible

- High flex 6x bend radius
- Tight routing bends without jacket wrinkling or cracking

High Temperature

- +260°C

Robust

- Chemical and fluid resistance
- Corona and arc track resistant

RUGGED FIBER OPTICS



Fiber-Optic Modules (VITA 66)

Full Range of Choices

- ARINC 801, expanded beam, or MT termini
- MT ferrule: extreme density with up to 48 fibers/module
- ARINC 801: excellent single-mode performance
- Expanded beam: noncontacting interface for frequent matings/unmatings



PRO BEAM Expanded-Beam Connectors

Robust

- Physically noncontacting mating of single-mode and multimode fibers

Versatile

- Three sizes: Senior, Junior, and Mini
- Size 16 termini also available



DEUTSCH MC Series Physical Contact Connectors

Sustained High Performance

- Helps withstand a wide range of environmental conditions
- Compact 1.25-mm precision zirconia ceramic ferrules
- Extensive range with dimple termination process and tooling



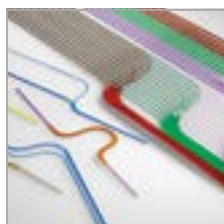
SuperChassis Platform

Modular

- 2U chassis with 20 powered slots
- 5 and 10-slot options available

Flexible Choice of Modules

- 3G, HD-SDI, and HDMI video
- Gigabit Ethernet
- CWDM multiplexing
- Single mode-to-multimode wavelength conversion



Optical Flex Circuits

Versatile

- Symmetrical and asymmetrical designs
- Tight bend radii
- Very low insertion loss over a broad temperature range

Highly Customizable

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

Unmanned Vehicles

HARNESSES



Raychem Sealed Harnesses

Lightweight and Tough

- Small, lightweight, rugged, and environmentally sealed

Customized

- Designs are customer specific, tailored to help meet your strictest requirements

NBCC Compliant Versions

- Withstands repeated decontamination with nuclear, biological, and chemical cleaning agents



RF Connectors, Cable, and Cable Assemblies

More Choice, More Performance

- Standard, subminiature, and microminiature interfaces and frequencies
- Flexible and semi-rigid cable
- Qualified to MIL-PRF-39012, MIL-DTL-83517, MIL-PRF-55339



POLAMCO Backshells

Full Range

- Unshielded, shielded, and rugged conduit systems
- Rectangular and circular configurations
- Straight, 45, or 90-degree options

Rugged

- Versions to match many harsh environments



HexaShield Series Raychem EMI Adapters

High Performance

- 360° shield termination system for shielded wires and cables
- Excellent mechanical and environmental resistance
- Efficient strain relief

Versatile and Flexible

- Aluminum, stainless steel, and composite versions available
- Simple installation and easy re-entry

RELAYS, CONTACTORS, SENSORS, AND POWER DISTRIBUTION



AC and DC Relays and Contactors

More Choice

- TE offers one of the largest QPL offerings in the industry
- Broad range of relays and contactors

Capable

- Switching power from signal level to hundreds of kilowatts
- Superior reliability
- Among the smallest, lightest weight packages in the industry



Sensors

Rugged Reliability

- Packaged to help withstand harsh environments
- High accuracy and high reliability sensing
- Options include wired or wireless high-speed telemetry and integration into value-added assemblies

SWaP

- Low weight
- Compact size
- Low power requirements



Power Distribution Units

Smaller, Lighter

- Optimize floor space weight savings over discrete installations

Customized

- Accommodate the bill of material and point-to-point layout the application requires
- Decades of experience designing custom panel assemblies



HARTMAN Lightweight K Series Contactors

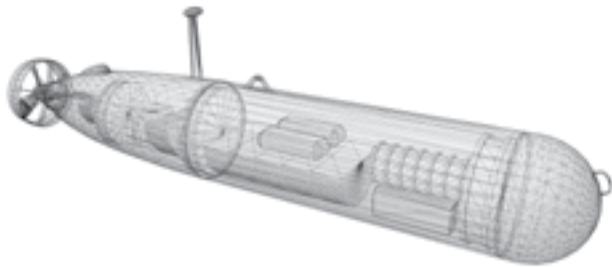
Smaller, Lighter

- Among the smallest, lightest contactors available
- Meet critical SWaP requirements

Capable

- Switching capabilities of up to 1000 A at 28 VDC

Solutions for Underwater Applications



SEACON OPTI-CON Connectors

Optical and Hybrid Configurations

- 5 shell sizes
- Up to 20 contacts

Capable

- Rated to 7500 psi
- Up to 4 A, 600 VDC



SEACON MINI-CON Connectors

Versatile

- 13 shell sizes
- Up to 203 contacts including coax

Capable

- Rated to 16,000 psi
- Up to 23 A, 5000 VDC



DEUTSCH MSD Connectors

Rugged

- Withstand mechanical stresses and polluted environments
- Explosion proof
- Rated to 2030 psi

Capable

- Quick connect/disconnect
- Size 12 contacts, 12 or 13 positions



DEUTSCH 9316 Series Connectors

Deepwater Capable

- 7500 meter depths

Rugged

- Withstands mechanical stresses and polluted environments
- Explosion proof

Flexible

- Signal, optical, control, and power



SEACON Proximity Switches

Compact Modular Design

- Single-pole, double-throw magnetic switches

Capable

- Hermetically sealed
- Pressure proof
- Rated to 10,000 psi



SEACON Cable Assemblies

Versatile

- Signal, optical, control, and power
- Customized for application requirements
- Pressure proof



Fiber Optic Penetrators

Space Saving

- Up to 24 fibers
- Ultraminiature packaging 1.5 to 20 mm diameter

Reliable

- Hermetic glass sealing technology
- Rated up to 20,000 psi



Single-Fiber Hybrid Penetrator

Cost Efficient

- Compact stainless steel design
- Three positions: two electrical and one fiber
- Single mode or multimode fiber

Reliable

- 10,000 psi
- -10°C to +60°C operating temperature range

Empower Engineers to Solve Problems, Moving the World Forward.

AMP | AGASTAT | CII | DEUTSCH | DRI | HARTMAN | KILOVAC
MICRODOT | NANONICS | POLAMCO | Raychem | Rochester | SEACON

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](#)

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1-1773853-9 02/22

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TE Connectivity
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