



CONNECTIVITY SOLUTION GUIDE FOR SMART HEALTH

The engineering of smart health monitoring devices presents design challenges in miniaturization, component integration and durability. This is where we come in. As a global leader in antennas, connectors and sensors, TE Connectivity (TE) delivers notable wireless connectivity that helps to enable your devices to operate in harsh, life-saving environments.

LEARN MORE AT
www.te.com/smarthealth



CONNECTIVITY DESIGN REQUIREMENTS FOR SMART HEALTH



Rugged Design

Products that can withstand the daily wear and tear of consumer and user life (water, shock, high heat, etc.)



Miniaturization

High-performance, well grounded miniaturized components that can help save space for improved functionality within the device



Improved Data Connectivity

Quality omni-directional and high-performance wireless transmission in a wide variety of frequencies including Bluetooth, WLAN, cellular bands



Operational Efficiency

Products protect important functionalities for increased operating efficiency



Integrated Solution Offerings

Helps to reduce complexity, helps improve cost-efficiency, improve performance, and provides reliability

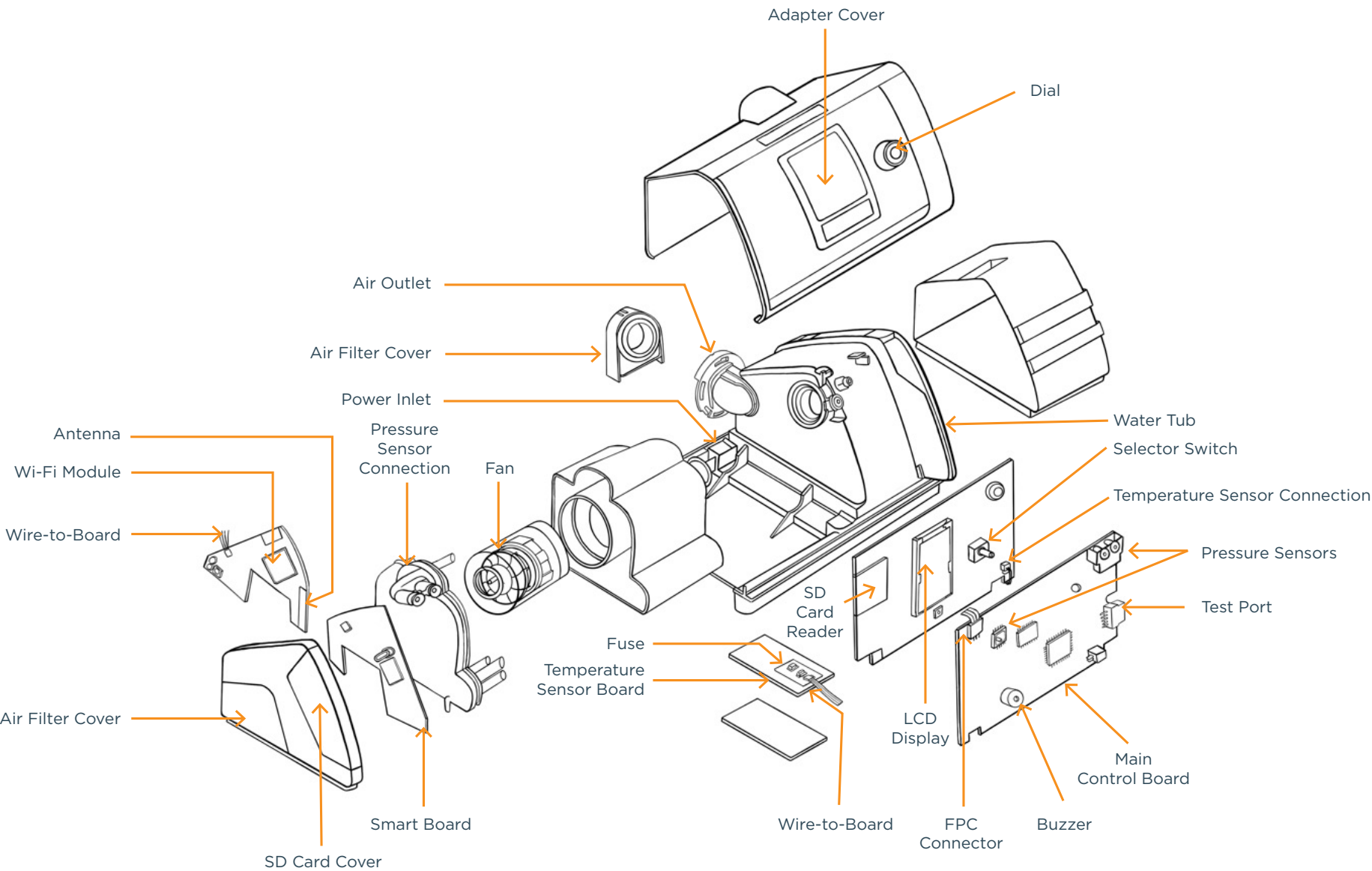


Minimized Fault Tolerance













Using simpler, faster, and more secure products to enable operating capability

A DEEPER LOOK INSIDE A SMART HEALTH MONITORING DEVICE

360° VIEW



LEARN MORE ABOUT CONNECTIVITY SOLUTIONS FOR SMART HEALTH

| ANTENNAS | WIRE-TO-BOARD | RF CONNECTORS | BOARD-TO-BOARD |
|---|---|--|---|
|  <p>Standard and Custom Antennas Our antenna solutions provide high-quality transmissions in wireless devices in a wide variety of frequencies, including Bluetooth, WLAN, cellular, and Zigbee, etc.</p> |  <p>AMP CT Interconnect TE's AMP CT connector system consists of an extensive product offering and broad industry usage.</p> |  <p>RF/Microwave Interconnect An RF connector is an electrical connector that is engineered to work at radio frequencies ranging from a few MHz to over 100 GHz. RF connectors are designed to perform in rugged, challenging environments, while maintaining low insertion losses, superb voltage standing wave ratio, and other mechanical and electrical functions.</p> |  <p>Spring Fingers Spring fingers can be used for antenna feeds, low voltage electrical connections, or for grounding to prevent EMI noise and static caused by a speaker, motor, microphone, or any other vibration within an application.</p> |
|  <p>Flexible Printed Circuit Connectors As the market trends towards miniaturization, FPC connectors have been developed to address the challenges of this expanding market, which often demands smaller centerline or pitch spacing, lower profile heights, and lighter interconnect solutions.</p> |  <p>AMP Mini CT Interconnect TE's 1.5mm AMP Mini CT connectors are miniature wire-to-board interconnect solutions.</p> |  <p>SMA/SSMA Connectors RF coax connectors transmit analog signals while minimizing RF (radio frequency) signal losses. These devices are designed to work at the multi-megahertz range of radio frequency.</p> |  <p>Eurocard Connectors Our Eurocard connector line is available in board-to-board, wire-to-board, ribbon cable-to-board and high-current connectors.</p> |
|  <p>Board-to-Board/to-FPC Connectors Our broad portfolio of signal and power interconnects include a wide variety of high-density, high-speed board-to-board, cable-to-board, or cable-to-cable connectors designed for automated assembly. Our Flexible Printed Cable (FPC) is suitable for when small centerline spacing makes larger wire-to-board interconnects impractical.</p> |  <p>Wire-to-Board Housings Specifically designed to mate with our headers and receptacles, we offer a variety of wire housings.</p> |  <p>Micro Coax Connectors and Cables With a rugged, compact design, our space-saving micro-miniature coax connectors are engineered for high-performance microwave systems.</p> |  <p>PC Power Connectors Our battery interconnects for PCs come with five-position headers and our five-position receptacle connectors easily mate and unmate.</p> |

BATTERY CONNECTORS



Mobile Battery Connectors

Our mobile battery interconnects include low profile battery connectors, leaf battery connectors, and floating battery interconnection systems.



Mating Part

We collaborate with customers to provide battery jack interconnection systems and holding solutions for today's slim, portable products.

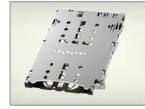
MODULAR JACKS



Standard Modular Jack

With TE's modular jacks and plugs, you can improve EMI performance and expand system bandwidth capabilities with solutions manufactured to operate reliably in the harshest environments.

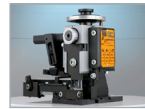
MEMORY CARD CONNECTORS



SIM Card Connectors

SIM card is widely used in a variety of mobile applications, including, billing, security and number storage purposes in mobile devices. Currently SIM card connectors are widely used in IoT related applications. We offer a variety of SIM card connectors to meet different.

TOOLING



Crimp Applicators

Designed to crimp an array of terminals from TE and other manufacturers, our OCEAN 2.0 applicators are engineered from high grade tool steels and processed through advanced CNC equipment for tight tolerances to deliver high repeatability and fast throughput.



Bench Top Terminators

Our extensive line of bench top wire crimping machines can provide flexibility, performance, and reliability to address low to medium volume wire processing.



SDE Crimp Commercial Tool System

SDE Crimp minimizes the need for multiple types of hand tools thanks to its Standard Die Envelope (SDE) die sets, which are easily interchangeable from manual to power-assisted tools depending on your needs. An enhanced tool frame also delivers greater operator comfort, efficiency and crimping quality.

VITAL SIGNS SENSORS



Photo Optic Sensors

From patient monitoring in hospitals to wearables and home healthcare applications, TE offers photo optic sensors and components for non-invasively measuring blood oxygenation level.



Piezo Sensors

Our piezoelectric sensors provide durable vibration, accelerometer, or dynamic switch elements for a wide range of markets and applications.

USB CONNECTORS



USB Type-C Connectors

As the next generation solution for current and future USB applications, our USB Type-C connectors are designed to an industry standard that provides a sleek, slim design small enough for handheld devices and small home appliances and robust enough for industrial applications.

TEMPERATURE SENSORS



Thermopile Sensors

Our thermopile infrared sensors provide improved non-contact temperature measurement solutions.



Digital Temperature Sensors

Our digital temperature sensors provide industry leading 0.1°C accuracy. The temperature system sensors (TSYS) are available in miniature packages designed specifically for tight spaces and respond quickly to changes in process temperature.

PRESSURE SENSORS



Board Mount Pressure Sensors

TE offers PCB mountable pressure sensors for gage, differential and absolute pressure measurements for various applications i.e., air flow, gas flow and barometric air pressure.

CONNECTORS



VAL-U-LOK Connectors

The VAL-U-LOK product line features 4.20mm pitch wire-to-wire, wire-to-board, and panel mount connectors developed to help achieve manufacturing savings without sacrificing performance. With a 9A maximum current rating, standard VAL-U-LOK connectors are used in lower power applications, including small appliances, control systems, and lighting. For higher power systems, such as industrial machinery, major home appliances, and building equipment, TE offers VAL-U-LOK high current connectors with a 13A maximum current rating. For wire-to-board applications, PCB headers are available in right-angle or vertical configurations with optional drain holes and polarization pegs. Additional features include optional terminal position assurance (TPA) devices and blind mate connectors.



Economy Power 2.5 Connectors

Compact Economy Power 2.5 (EP 2.5) connectors are designed for easier assembly of space limited low power and signal systems. The connectors feature polarization tabs to prevent post misalignment, audible positive latching to ensure complete mating, and low insertion force (LIF) contacts for ergonomic assembly. Additional EP 2.5 product options further simplify the assembly process, including packaging to support automated board assembly and terminal position assurance (TPA) devices to secure contacts in a mated position. The EP 2.5 connector family supports wire-to-wire and wire-to-board systems with both single row and dual row configurations and is designed to be intermateable with similar 2.5mm pitch connectors for retrofit applications.



2.0mm Signal GRACE INERTIA Connectors

The compact 2.0mm Signal GRACE INERTIA connectors help improve manufacturing efficiency with features to prevent assembly errors and to support automated production. To reduce assembly errors, these connectors feature an inertia locking mechanism for reliability, an anti-sag latch to prevent breakage due to tangled wires, and color and keyed connector options to avoid mis-mating. To support automatic assembly, connectors are available with insulation displacement contacts (IDC) for mass wire termination and in a surface mount wire-to-board configuration for automatic pick-and-place assembly. Common uses for 2.0mm Signal GRACE INERTIA connectors include small home appliances, transportation, and lighting.



AMP-IN Connectors

The miniature AMP-IN terminal is designed not as an electrical terminal but as a mechanical holding device to enhance soldering of hookup wires to printed circuit boards. The combination of terminal and application tooling eliminates costly manual preparation of wires prior to soldering, and positions the wire to achieve reliable solder joints. Movement of the wire during soldering is restricted, allowing for proper solder flow. Low-profile miniature AMP-IN connectors provide an easy means of gang inserting leads into printed circuit boards. A compact low-profile housing is available to provide insulation between contacts and to prevent short-circuits. The connector system features housings for 2 through 20 positions and contacts for 30-22 AWG wires.

TERMINALS



FASTON Terminals: Receptacles and Tabs

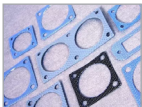
FASTON terminals have been a leader in the appliance and automotive industries for over 60 years. TE continues to reinvent the FASTON product line to meet the changing trends in these and other industries. In recent years, the product line has been expanded to address the need for lower insertion forces, higher performance and higher temperature ratings. FASTON receptacles are available in both straight and flag configurations and come in a variety of sizes, materials, and crimp types.



MAG-MATE Terminals

TE offers a full selection of Standard MAG-MATE insulation displacement contact (IDC) terminals for magnet wire terminations. MAG-MATE terminals are available in poke-in, poke-in tab, splice, crimp wire barrel, solder post, quick connect tab, pin and receptacle styles. Standard MAG-MATE products terminate magnet wire ranging from 34-12 AWG [0.16 -2.05 mm]. Each IDC slot size terminates a range of up to four consecutive magnet wire sizes. Two magnet wires with the same diameter can be terminated in one terminal except as noted. Nano MAG-MATE terminals, offer a space-saving 1.5mm pitch and accommodate single or double wire 30-40 AWG (0.08-0.25mm dia.) copper magnet wires.

ELECTROMAGNETIC INTERFERENCE (EMI) SHIELDING MATERIALS



Connector Gasket

Offering a wide range of standard MIL connector gaskets. Different materials are available to meet the demands of EMI shielding, environmental sealing, galvanic compatibility and fuel/oil resistance.



Conductive Elastomers

Conductive Elastomers are fully cured silicones or fluorosilicone loaded with electrically conductive particles providing superior EMI/RFI shielding performance combined with excellent environmental sealing. The various conductive fillers are designed to ensure galvanic compatibility whilst providing low contact resistance between mating surfaces.

**EVERY CONNECTION.
EVERY BEAT.
ENABLING BETTER HEALTH.**



SHOP ONLINE ORDER SAMPLES



CONTACT US



**Extensive
Product Breadth**



**End-to-End
Partnership**



**State-of-the-Art
Antenna Laboratories and
In-house Testing**



**Scalability in
Manufacturing**



**One Stop Shop for Antennas
+
3D Printed Electronics
+
Capability to Mount Components**

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10/23 Original