

End-to-end connectivity for wearables

SOLUTIONS FOR ALL YOUR WEARABLES DESIGN NEEDS

Medical

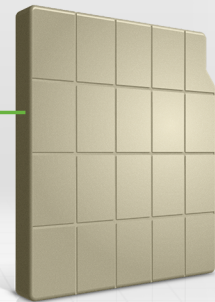
By meeting the challenging demands of medical environments, TE delivers connectors, fine wire and components that support mission-critical systems both in the field and in the hospital.

Multifunction Display



Military

Equipping soldiers for modern missions means giving them the technological edge to succeed by enabling connectivity for flexible systems with modularity, weight and space savings, and rugged features.



Battery Packs

Medical Monitor



Smart Glasses

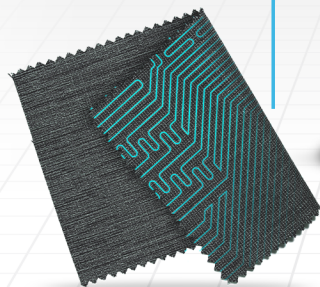


Consumer

When designing wearables, it is important to have maximum functionality in small spaces while maintaining aesthetic appeal. TE components are used in many well-known wearable devices such as wristbands, watches and smartwear.



Watch



Smart Fabrics

DESIGN NAVIGATOR

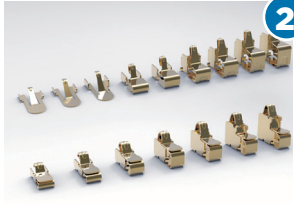
	Durability (Mating Cycles)	Max Voltage Rating (V)	Max Operating Temperature (°C)	IP Sealing Level	High Data Rates (15b/s+)	High Vibration Performance	Durable in Harsh Environments	Ease of Assemble	Space-Saving Design	Protection from EMI/RFI Noise	Low Profile Design	SMT Compatible
1 CIRCUIT/POWER MANAGEMENT												
Button Battery Connectors	5	250	85	N/A		*			*		*	*
Circuit Protection Devices	Refer to the featured products section for product details											
FSMCT Pushbutton Switch	1,000,000	N/A	85	N/A			*	*	*		*	*
Low-Profile Battery Connectors	5000	30	125	N/A							*	*
Magnetically Attached Custom Cable	5000	30	85	IP68				*	*		*	*
2 GROUNDING												
Spring Fingers - PCB Grounding Contacts	10	15	85	N/A		*	*	*	*	*	*	*
Spring Probe Contacts	20,000	N/A	85	N/A			*	*	*	*	*	*
3 INPUT / OUTPUT (I/O)												
AV Jack (3.5 mm Audio)	N/A	N/A	N/A	IP54		*						*
CeeLok FAS-T Connectors	500	500	175	IP67	*	*	*		*	*		
CeeLok FAS-T Nano Connectors	250	500	125	IP68	*	*	*		*	*		
CeeLok FAS-X Connectors	1500	N/A	175	N/A	*	*	*		*	*		
Circular HD Connectors	1000	1000	125	IP68		*	*		*	*		
DC Jack (2 mm DC Power)	6000	30	N/A	N/A		*						*
DEUTSCH 369 Connectors	500	1000	175	IP67		*	*		*	*		
DEUTSCH D-CATS Connectors	5000	N/A	105	N/A		*	*		*	*		
DEUTSCH RSC Optical Connectors	500	N/A	155	IP67	*	*	*		*	*		
DEUTSCH Wildcat Micro Connectors	500	1000	175	IP67	*	*	*		*	*		
High-Speed Multi I/O Connectors	N/A	20	N/A	N/A	*	*	*		*	*	*	*
Metal-Shell Microcircular Connectors	2000	200	150	IP67	*	*	*		*	*		
Micro USB 2.0 Connectors	10,000	30	85	IP54					*	*	*	*
Micro USB 3.0 Connectors	10,000	30	105	N/A	*	*	*		*	*	*	*
Military QPL Circular Connectors	N/A	N/A	N/A	N/A	*	*	*		*	*		
Nanominature Connectors	250	N/A	200	IP68		*	*		*	*		
4 INTERNAL INTERCONNECT												
Connectors for microSD Memory Cards	10,000	30	85	N/A					*	*	*	*
Flexible Printed Circuit (FPC) Connectors	30	50	85	N/A		*	*		*	*	*	*
Free Height (FH) Board-to-Board Connectors	30	50	85	N/A					*	*		*
LCEDI Connectors	30	100	85	N/A								
MicroSLP Connectors	30	10	85	N/A							*	*
Mini CT Wire-to-Board Connectors	50	30	105	N/A				*	*		*	*
One-Piece Compressive B2B Connectors	5	50	85	N/A							*	*
SIM Card Connectors	5000	15	70	N/A				*	*	*	*	*
5 RF												
Antennas	N/A	N/A	N/A	N/A		*	*	*	*	*	*	*
Mini-BNC RF Connectors	500	300	85	N/A			*		*	*		*
MMCX RF Connectors	500	170	155	N/A			*		*	*		*
QMA RF Connectors	100	500	125	N/A		*	*		*	*		*
SMA RF Connectors	500	500	165	N/A		*	*		*	*		*
SMB RF Connectors	500	400	165	N/A			*		*	*		*
SMP/SMPM RF Connectors	100	335	165	N/A		*	*		*	*		*
6 SPECIALTY / CABLE												
Biocompatible Polymers	N/A	N/A	N/A	N/A		*	*	*	*	*	*	*
Board-Level Shielding	N/A	N/A	N/A	N/A		*	*	*	*	*	*	*
Fine-Gauge Cable (30 - 50 AWG)	N/A	N/A	N/A	N/A		*	*	*	*	*	*	*
Heat-Shrink Tubing	N/A	N/A	N/A	IP68		*	*	*	*	*	*	*
High-Speed Cable Assemblies	N/A	N/A	N/A	N/A	*	*	*	*	*	*	*	*
Micro Coaxial Cable (40 - 46 AWG)	N/A	N/A	N/A	N/A					*	*		
Micromolded Parts	N/A	N/A	N/A	N/A								
Molded Interconnect Devices	N/A	N/A	N/A	N/A		*	*	*	*	*	*	*
Sensors	Refer to the featured products section for product details											
Twisted Pair Cable (22 - 42 AWG)	N/A	N/A	N/A	N/A		*	*	*	*	*	*	*

FEATURED PRODUCTS

Circuit Protection Devices

	OVERCURRENT						OVER VOLTAGE	HYBRID DEVICES		
	Chip Fuses			Resettable				PESD	MHP Devices	PolyZen Devices
	Pulse Tolerant Chip Fuses	0603 Very Fast Acting	Fast Acting	Slow Blow	PolySwitch Devices	2410 Very Fast Acting Fuse				
Antennas							*			
Audio Input/Output	*	*	*	*	*	*	*			
Batteries	*			*	*	*		*		
Buttons	*	*			*	*	*			
Displays	*	*	*	*	*	*	*			
LEDs	*	*	*	*	*	*	*			
Ports	*	*	*	*	*	*	*			
Power Input	*	*	*	*	*	*	*		*	

FEATURED PRODUCTS



2

Spring Fingers - PCB Grounding Contacts

- Gain design versatility with small footprint
- Eliminate the cost of specialized equipment with a design utilizing standard equipment for soldering and pick-and-place
- Allow for quick design changes with a common footprint

[Website](#)
[Quick Reference Guide](#)
[Video](#)



3

CeeLok FAS-T I/O Connectors

- Provide EMI protection in a low profile, light-weight strain relief with a backshell integrated plug
- Achieve easy termination and field repairability with crimp-snap 39029-style contacts
- Minimize cross talk with innovative noise-cancelling contact arrangement

[Website](#)
[Catalog](#)
[Presentation](#)
[White Paper](#)



3

DEUTSCH Wildcat Micro Connectors

- Save space and weight with 3, 5 or 9 contacts in two compact aluminum shell sizes
- Choose between bayonet or threaded couplings
- Protect against harsh conditions with environmental sealing and EMI shielding

[Website](#)
[Catalog](#)



3

Micro USB 2.0 and 3.0 Connectors

- Support data transfer rates of standard USB 2.0 or the 10 times faster USB 3.0
- Optimize power efficiencies with improved device interaction and charging time
- Standard and customized styles and orientation

[Website](#)
[Quick Reference Guide](#)
[Video](#)



3

Nanominiature Connectors

- Achieve maximum space efficiency with rectangular, coax and sealed circular configurations
- Resist shock and vibration
- Support 10 Gigabit Ethernet with compact version

[Website](#)

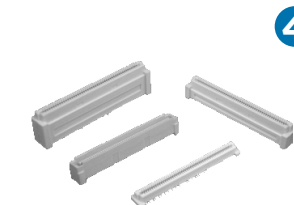


4

Flexible Printed Circuit (FPC) Connectors

- Maximize mating cycles and retention with zero insertion force (ZIF) option
- Support smaller and lighter designs with mixed signal and low power routing
- Maximize board space with aligned insertion design option

[Website](#)
[Quick Reference Guide I](#)
[Quick Reference Guide II](#)
[Virtual Sample Kit](#)



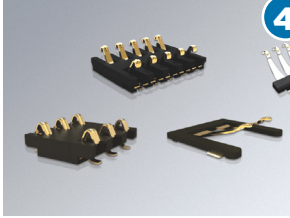
4

Free Height (FH) Board-to-Board Connectors

- Support high reliability with polarized mating
- Provide design flexibility with a variety of stack heights
- Save valuable PCB space with compact connector design

[Website](#)
[Quick Reference Guide](#)

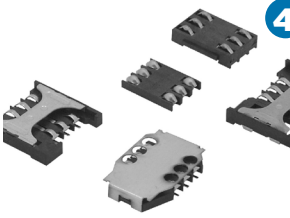
FEATURED PRODUCTS



4 One-Piece Compressive Board-to-Board Connectors

- Provide high reliability with high number of mating cycles
- Reduce costs with a one-piece solution that is scalable in height, pitch and number of pints
- Create reliable connections with preloaded contacts

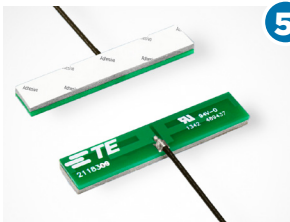
[Website](#)
[Data Sheet](#)



4 SIM Card Connectors

- Meet unique design requirements with large portfolio covering several styles and card sizes
- Improve applied cost with fully-automated processing
- Gain support across all regions with global manufacturing footprint

[Website](#)
[Quick Reference Guide](#)



5 Antenna Solutions

- Accommodate WiFi, Bluetooth, ZigBee and many other frequency bands with broad product offering
- Achieve rapid support with a range of readily available standard antennas

[Website](#)
[Catalog](#)

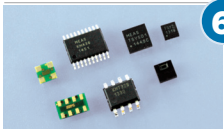


6 Molded Interconnect Devices

- Achieve maximum flexibility with custom-designed engineered polymer or composite solutions
- Integrate embedded antennas, circuit traces and shielding
- Save space and costs through higher integration and reduced assembly needs

[Website](#)
[Catalog](#)

Sensors



	Force	Humidity	Piezo Film	Photo Optics	Position	Pressure	Temperature	Vibration
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CONSUMER								
Allimeter Watch		HTU20D, HTU21D				MS5805-02BA, MS5806-02BA, MS5637	TSYS01, TSYS02, Ni1000SOT	
Multi-Mode Watch						MS5611, MS5607, MS5540C, MS5803		
Diving Watch / Computer						MS5541-30C, MS5803-30BA, MS5535-30C		
Fitness Band		HTU20D, HTU21D				MS5805-02BA, MS5806-02BA, MS5637	TSYS01, TSYS02, Ni1000SOT	
Smart Glasses		HTU20D, HTU21D				MS5805-02BA, MS5806-02BA	TSYS02	
Martial Arts Vest			1005801-1 Piezo cable, Custom Piezo film elements					
Sleeping Monitor_		HTU21D	LDT1-028k, LDT2-028k, LDT4-028k, Custom Piezo film elements	ELM/EPM Series - SpO2		MS5805, MS5806		
MEDICAL								
Skin Temperature							400 Series, 4400 Series, TSYS01, TSYS02, Ni1000SOT	
Blood Pressure Monitor						1620 Series, 1620 Value Add		
Pacemaker			Custom Piezo film elements					
Fall Detection Monitor_			M100 Minisense			MS5805-02BA, MS5806-02BA, MS5637		
Sleep Apnea Treatment		HTU20D, HTU21D	LDT1-028k, LDT2-028k, LDT4-028k, Custom Piezo film elements	ELM/EPM Series - SpO2		1200, MS4400, MS4515, 1210	TSYS01, TSYS02, Ni1000SOT	
Blood Oxygen & Pulse Monitor				ELM/EPM Series - SpO2				
Prosthetics	FX1901, FS-20, FC-22, FC-23		M100 Minisense, Custom Piezo film elements		KMT32B, KMA36			832 Accel, 832M1 Accel
DEFENSE								
Helmet Impact			M100 Minisense, Custom Piezo film elements					832 Accel, 832M1 Accel
Vest Impact			1005801-1 Piezo cable, Custom Piezo film elements					832 Accel, 832M1 Accel
Soldier Alive/Dead/Down			M100 Minisense, Custom Piezo film elements	ELM / EPM Series (SpO2)		MS5805-02BA, MS5806-02BA, MS5637	TSYS01, TSYS02, Ni1000SOT	832 Accel, 832M1 Accel

LET'S CONNECT

The small size and peculiar shapes associated with wearable electronics mean that custom subassemblies typically replace standard off-the-shelf components. Manufacturers of wearables rely on the packaging and integration skills of TE to pack more functionality and connectivity into smaller areas.

Technical Support

te.com/support-center

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Estonia	+37 2677-8673	Lithuania	+37 037426900	Switzerland	+41 71-447-0447
Finland	+46 8-5072-5000	Luxembourg	+31 73-6246999	Taiwan	+86 400-820-6015
France	+33 1-34-20-8686	Netherlands	+31 73-6246999	Turkey	+90 212-282-6053
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