







HANDHELD

SPECIFIC APPLICATION:

- Multimeter
- Protocol Analyzer
- Power Meter
- Network Test Equipment
- Interference Test Equipment

Product	Features	Benefits	Product Family
Board to Board			
0.5, 0.6, 0.8 mm Free Height	Allows for high pin counts in a small footprint to save PC board real estate Available in 220, 240, and 440 position configurations Offered in a variety of stacking heights, ranging from 5mm to 8mm Available on tape-and-reel packaging for lead protection and automated placement Intel qualified for COM Express	Allows for high pin counts in a small footprint to save PC board real estate Offered in a variety of stacking heights, ranging from 5mm to 8mm Available on tape-and-reel packaging for lead protection and automated placement Compatible with standard pick-and-place vacuum nozzles Available with UL and RoHS compliant parts	<u>Board-To-Board</u> <u>Connectors</u>
MICTOR (12G) Connectors	2-piece connector accommodates a variety of printed circuit board thicknesses, provides controlled impedance Single beam and hybrid connector, with dedicated ground bar used for low crosstalk or as power pin; each power pin carries 9.5 A 12 Gbps high speed date rates 0.8 mm pitch surface mount tail Various stack heights between 5mm - 30mm; Available stacking heights are: 5, 8, 11, 14, 16, 19, 22, 25, and 30 Positions from 28 to 200; fully loaded positions: 40, 80, 120, 160, and 200; not fully loaded positions: 28, 56, 84, 112, and 140	Reliable signal integrity and excellent signal speed Free pin assignment with a wide range of choices for customers' system design and package Robust and smart housing design Competitive pricing, shorter lead time and faster response	Board-To-Board Connectors
M.2	O.5mm pitch with 67 positions Designed for both single- and double-sided modules Available in various keying options for module cards Support PCI Express 3.0, USB 3.0, and SATA 3.0 Choice in height, position, design, and keying option Available in various heights	The M.2 Next Generation Form Factor (NGFF) product line is a natural transition from the mini card and half-mini card to a smaller form factor in both size and volume. WiFi, Bluetooth, global navigation satellite systems, near field communication, hybrid digital radio, Wireless Gigabit Alliance (WiGig), wireless Wide Area Network, and solid-state storage devices It also adds functionality to PCle Gen 3, SATA 3, SATA I/O, and USB 3.0. The new, smaller form factor is suitable for applications in new thin platforms	PCB Connectors
RF / Shielding / Grounding			
BNC, SMA, N, SMB, MHF	Bayonet lock coupling for quick connect/disconnect Various connectors available in 50 and 75 ohm versions Fully intermateable with comparable BNC UG/U connectors Full range of Hex Crimp and O Crimp Products for common coaxial cables. Low VSWR	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	RF Coax Connectors
Board Level Shielding (BLS)	Two-piece solution (minimum 0.85mm height) One-piece solution (minimum 0.7mm height) Standardized materials and thicknesses Use of standardized features includes: corner shape, carrier attachment, SMT (castellations), bending radii, pick and place features, through holes, locking holes, locking and contact dimples	EMI shields that minimize crosstalk in complex devices without affecting system speed	EMI Filters
Spring Fingers	Extensive off-the-shelf offering of spring fingers/ grounding products Available in heights as low as 0.4mm and up to 7.0mm Type: standard, side-protected, preloaded, ultra low-profile The preload function nearly doubles the working area of a common spring finger and increases contact force by 0.2N	Tiny, scalable, surface mountable contacts allow designers to fit grounding solutions almost anywhere	Board-To-Board Connectors

Product	Features	Benefits	Product Family
Input/Output			
Amplimite	Provide the highest resistance to flammability with UL94V-O rated thermoplastic housing High density D type interface 20 through 100 contact positions Excellent EMI/RFI protection Protect your system with shields that mate before contacts, with ground mating fi rst and breaking last Squeeze-to-release latches or jackscrew hardware available to fit your needs	Enable comprehensive design options to meet virtually any system need with cable and right-angle or straight PCB mounted configurations Support maximum design freedom with a large variety of termination options such as (wave) soldering, crimping, IDC, ribbon cable and action pin Utilize for harsh environments with a rugged design Help improve durability with front metal, full metal and plastic shell offerings Reduce overall header volume by 48% and PC board area by 38% with stacked headers to allow more space for other components Adapt to specific applications with a large portfolio of kits and accessories Offer an optional contact shield for additional EMI/ RFI protection Comply with SCSI or VESA industry standards Allow for easy assembly of connectors to PCBs with integral board locks or female screw locks	<u>D-Shaped</u> <u>Connectors</u>
USB A/C	Supports USB 2.0, USB 3.1 Gen 1 and USB 3.1 Gen 2 types Deliver power up to 100W at 20V IPX8 waterproof and IPX4 splash proof options available Available in one of the smallest dual row SMT footprints, saving valuable board real-estate	Provide one interconnect solution for data, power, and A/V Designed with a flippable and reversible mating interface Backward compatible to other USB connectors using converter cables or adaptors Distinctive design on the back of the receptacle shell for industry leading EMI performance Enhanced board retention features for added durability	USB Connectors
RJ45	30u inch gold plating LCP materials Industrial temperature range -45 up to +85°C Reflow solderable 3 wire choke 10/100Mbps and 1Gbps data rates 1x1, 2x1 and 1x2 form factors with LED option available PoE, PoE+ and PoE++ supported	Improved reliability through high current temperature of magnetics, high temp materials (LCP), and 3uinch gold contact plating Corrosion proof through to gold plated contacts Industrial temperature range for applications on factory floor not regulated from a temperature point of view Excellent signal integrity and minimum saturation providing less transmission errors by use of three wire choke (no interference between PoE and signals) Improved processability through a single solder process needed for equipment production Optimized packaging for customers production situation through T&R and Tray packaging available	Connectors
Wire To Board			
EPC (.4 BtB or ZIF or LIF)	Pitch: 0.25 to 1.25 pitch Pin counts: 3 to 60 pins Slant FPC insertion option to maximize PCB layout area Low profile (less than 1mm) economical product offerings Wide portfolio enabling high design flexibility with proven quality & reliability	Can accommodate FPC/FFC cable Available in ZIF and non-ZIF styles Variety of centerline spacing options Available in SMT and T/H PCB termination Requires no tooling Available in right-angle and vertical mounting orientations Right-angle version available with top, bottom or dual contact Solder pads and kinked legs for PCB retention Locking feature provides high retention force	FFC, FPC & Ribbon Connectors

Product	Features	Benefits	Product Family
Wire To Board			
High Performance Interconnects (HPI)	Centerline: 1.0mm - 2.5mm Positions: 2 - 32 Square-peg technology enables product compatibility with industry standard products Broad portfolio that can be used anywhere a signal or low power needs to be routed through a device	High performance and high reliability Square-peg style enables interchangeability with competitors Header + COSI (crimp on snap in) connectors Polarized Positive latching with audible click feedback when mating Different colors available for system color coding AWG 30-24	<u>Wire-To-Board</u> <u>Connectors</u>
CT, Mini CT, Micro	Two termination methods: IDC, Crimp IDC AWG 26-28 Crimp AWG 24-28 Circuits range from 2-20 single row and 20-40 dual row Kinked leg options for self-retention on boards Drawer and lattice series Panel mount configuration available RoHS compliant Component Program of Underwriters Laboratories Inc., File No. E28476 Canadian Standards Association, File No. LR 7189-133	Similar to the standard AMP CT connector series that has proven performance in harness-making capability Variety of harness-making machines are available, ranging from hand tools for low volume production to automatic crimping machines Two types of housings are available, including crimp and mass terminated (MT), which are preloaded with insulation disp displacement contacts	Wire-to-Board Connectors
Power			
Micro USB Connectors	Reliability-optimized design, provides a stable connection even after thousands of insertions Cost savings achieved by the integration of power and data transportation within one connector Our large portfolio and highly customizable product provides the best possible design flexibility	Small size connector High design freedom Increased robustness and superior durability Cost-efficient solution	Audio & Video Connectors
DC Jack (Battery, Barrel)	Small size that allows easy integration Snap features to lock DC jack in the cover Double spring ground contact enhances plug force extraction Laser marking for identification purposes	Widespread market acceptance Low costs and easy application Easy handling for end customer and commonly - accepted connection	Battery Connectors & Holders
Card and Sockets			
Mini SD	Different connector configuration sizes: Standard and Micro High-speed data transfer rate Designed for ease of customer use with available push/push and push/pull mating Manufactured to meet existing SD memory card standards Available in top and bottom mounting configurations	Designed for ease of customer use with available push/push and push/pull mating Manufactured to meet existing SD memory card standards Available in top and bottom mounting configurations	Memory Card Connectors

Product	Features	Benefits	Product Family
Relays			
AXICOM IM Relays	Slim line 10x6mm, low profile 5.65mm and min. board-space 60mm² Switching current 2/5A, switching power 60W/62.5VA and switching voltage 220VDC/250VAC High dielectric and surge capability up to 2500Vrms between open contacts and 2500Vrms between coil and contacts. Low coil power consumption, 140mW standard, 100mW for high sensitive version, 50mW for ultra high sensitive version and 100mW for bistable version High contact reliability up to 10.000.000 operations Very low and stable contact resistance THT, SMT design for reflow soldering + providing a smaller footprint option High mechanical shock resistance up to 50g functional	Small electromechanical relay fitting in many continuously shrinking customer applications Contact structure options available (1 form A, 2 form A, 1 form C, 2 form C) which is often not provided without a large cost impact as seen in alternative technologies as solid state relays Switches signal and low power Support battery powered applications through a bi-stable solution that is not consuming constant power	Axicom Relays
Switches			
Tactile Switches	Switches provide tactile feedback to users on contact with the control panel Available in a range of sizes and actuator styles LED capable	TE offers a large selection of tactile switches, ranging from miniature surface mount switches to IP rated tactile switches. TE's tactile switches can come in different actuator lengths that add a custom feature to fit in every design application	<u>Switches</u>
DIP Switches	Wide portfolio of surface mount and through-hole DIP switches Variety of actuator styles and sizes allows for wide range of applications in computrers and peripherals Position size ranges from 1 to 12	TE offers a large selection of tactile switches, ranging from miniature surface mount switches to IP rated tactile switches. TE's tactile switches can come in different actuator lengths that add a custom feature to fit in every design application. We also offer SIP switches that can package multiple resistors and RAM chips with a common pin	<u>Switches</u>
Slide Switches	Available in multiple configurations and sizes Switches come surface mounted or through-hole mounted and are available in different angles to provide ease of use	Its sizes are subminiature, miniature, and standard. There are many terminal types for slide switches, including feed-through style, wire leads, solder terminals, screw terminals, quick connect or blade terminals, surface mount technology, and panel mount switches	<u>Switches</u>
Micro/Snap-Action Switches	Available in a range of actuator styles and mounting options Snap product offering ranges from miniature styles to IP-rated switches and standard products	Large array of options including block, tray, and combo connectors	<u>Switches</u>
Power Entry Module			
Filtered Inlets	Multiple filtered performance levels Snap-in & flange-mounted versions available C-13, C-14, C-18 inlets rated up to 15A C-20 inlets rated up to 20A	Low leakage is ideal for medical applications Multiple mounting options provide flexibility for installation needs	EMI Filters

Product	Features	Benefits	Product Family
Sensors			
NTC thermistor assembly	Standard 400 series resistance response	Accurate	
	Standard ¼" phone plug connector	Easy to use	
	Reuse after cleaning	Reliable	NITO The amoral about
	Pressed disk ceramic sensor		NTC Thermistors
	High sensitivity to temperature change		
	316 Stainless Steel tube		
RTD platinum thin film elements	Accurate and stable temperature sensing over a broad range of temperatures	Ideal for lab calibration equipment Optimal solution for fast and precise feedback	
	Conforms to DIN EN 60751	control systems	
	Very low drift over lifetime		RTD Temperature
	Fast response time due to low thermal mass		Sensors
	Variety of outline dimensions available to fit a wide range of space requirements		
	Global interchangeability		
Micro thermocouple	Junction Types, Single and Dual: J, K, T, E	Good for tight spaces	
	Sheath Diameters: 0.188"	Self-powered	
* State	Sheath Styles: Stainless Steel, Isolated Stainless Steel, Insulated Epoxy Glass, Copper Tip		Temperature Sensors
	Leadwire/Cable Options		
	Single and Dual Junctions		
	Custom Designs		
Analog Infrared Thermopile	Non contact	Contactless	
Sensor	Good accuracy	Good for handheld devices	
	Broad temperature range		<u>Thermpoile Infrared</u> - IR Sensors
	-40°C to +300°C measurement range		
	Infrared filter window		
TSYSOx digital sensors	Miniature digital temperature sensor	Easy to interface	
	Adjustment of high accuracy temperature range on request	Good accuracy and suitable for battery powered applications	Digital Temperature
	Low Supply Current		Sensors
	Easily adapt to the space available on a PC board		
*	Low thermal mass		

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05/21 Original