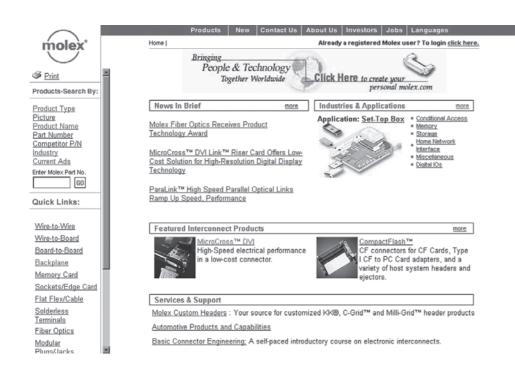




Content	Page
Navigation — www.molex.com	4–5
Power Connectors — Wire-to-Wire/Wire-to-Board/Board-to-Board PowerDock™, Power Edge™, Mini-Fit Sr.™, Sabre™, RAST 5.0/2.5, MLX™, Mini-Fit Jr.™, Mini-Fit HCS™, Mini-Fit BMI™, Mini-Fit SMC™, Mini-Fit CPI™, Micro-Fit 3.0™, Micro-Fit BMI™ and Pin and Socket	6–7
Signal Connectors — Wire-to-Wire/Wire-to-Board PicoBlade™, Mini Mi II™, PanelMate™, Picoflex™, Sherlock™, Milli-Grid™, Mi II™, SPOX™, SPOX™ BMI, KK®, KK® IDT, C-Grid III™, QF-50™	8–9
Signal Connectors — Board-to-Board Compression and Battery Connectors, SlimStack™, Mezzanine IEEE 1386, Detachable, EBBI™, Plateau HS Mezz™	10
FFC/FPC Connectors — FFC Connectors and Cable FFC/FPC (SMT), FFC/FPC (Through-hole), Premo-Flex™	11
I/O Connectors — Modular Jacks Plugs, Right Angle, Vertical and Bottom Entry, Coloured, Compact, Stacked and Ganged, HyperJack™, Rugged RJ-45, Ethernet	12-13
I/O Connectors — Multimedia I/O USB 2.0, USB On-the-Go, IEEE 1394-1995/IEEE 1394a-2000, MicroCross™ DVI, HDMI, HandyLink™, CradleCon™	14-15
I/O Connectors — Datacomm/Networking SCSI, Ultra+™ VHDCI, LFH™, HSSDC2, Lanelink™	16
I/O Connectors — Datacomm and Pluggable I/O Systems TDP™, Emily™, GBIC, SFP	17
I/O Connectors — Pluggable I/O Systems XENPAK, XPAK, X2, XFP, IBPAK	18
Industrial Connectors — Rectangular I/O HMC™, CRC™, MX150L™, Leaf-Contact I/O, Commercial Micro-D	19
Industrial Connectors — Circular I/O Nano-C, Euro-C™, Micro-C™, Mini-C™, PolyPort™ Junction Boxes	20
Industrial Connectors — Terminal Blocks High-Power Blocks, EuroMax™, Eurostyle®, Barrier Terminal Strips	21
Industrial Connectors — Solderless Terminal Products Splice, Quick Disconnects, Ring Tongue Terminals, Battery Cable Lugs, Magnet Wire, Heat Sealable Terminals	22
Memory Card Connectors — Memory Card Systems SIM/Smart Card, Compact Flash, SmartMedia, MultiMediaCard, RS-MMC, SD Card, SD-1/O Card, miniSD, Memory Stick, xD, TransFlash, Combo Memory Card Connectors	23-24
Data Connectors — Internal Memory Sockets SIMM, DIMM, DDR DIMM, DDR-II DIMM, Mini-DIMM	25
Data Connectors — Sockets and Heat Sinks Micro PGA, LGA Sockets, CoolFin™ Heat Sinks	26
Data Connectors — Storage and Edgecard Connectors Serial ATA, SCA-2, iCool™ VRM Connector, PCI Express	27
Backplane Connectors — Backplane Connectors Gbx®, VHDM-HSD™, VHDM®, MFB™, MZP™, DIN 41612	28-29
RF Connectors — RF/Coaxial Connectors MMCX, MCX, SMB, Fakra SMB, SMA, SMP, Type F, BNC, TNC, Type N, DIN 7/16, Other RF Products	30-31
Custom Connectors — Integrated Products Industry Standard Cables, Ribbon Cable Assemblies, FFC/FPC Cable Assemblies, Cable Harnesses, High Performance Cables, Switch Products, Electro-Mechanical	32-33
Navigation — Application Tooling	34–35
Molex Product-Market-Matrix	Supple- ment



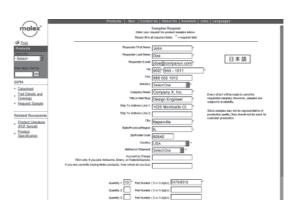
Finding product information on www.molex.com.



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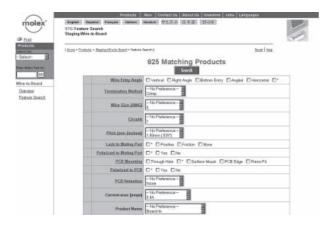
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By Product Feature

Searching by multiple product features such as pitch, mated height, PCB thickness, wire size and current saves time by focusing only on the connectors that have the features you need.

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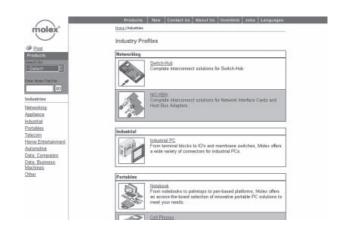
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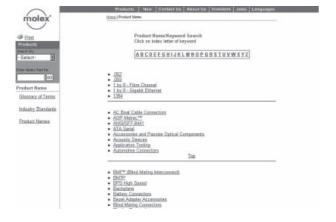
By Industry

You can search by industry such as Networking, Portables or Industrial. For more detailed search once you select the application profile — notebooks, for example — you can select a specific product category such as "memory" or "microprocessors".

By Picture

Find a connector by first choosing a representative picture. A graphical interface lets you search all the way down to the series level.





By Product Name

This keyword search allows you to link to the commercially used name for a connector family or category, such as Mini-Fit™ or IEEE 1394.

By Part Number

Enter an entire or partial Molex part number to get the search results. Or search by competitor part number to find the Molex equivalent.



Power Connectors Wire-to-Wire/Wire-to-Board/Board-to-Board

luuna	Product	Family Description	Product Variations	Features and Benefits	Annliantions
Images	Family Power Dock™	Power Dock is a versatile approach to	Specifications Power Contacts up to 45.0 A Signal Contacts up to 3.0 A	Solder tail or press fit for flexible PCB assembly	Applications Broadcast Equipment Networking
	Duck	custamized board-to- board power delivery. The characteristic design flexibility enables Power Dock to serve a wide variety of power applications mixed in with signalling needs.	Signat Contacts up to 3.0 A Plugs and Receptacles 6 and 24 Circuit Signal Modules Guide Pins and Mounting Ears Solder Tail or Press-fit 250 V and 600 V Modules Right-angle and Vertical Board-to-board Configurations	Power blades and signal pins are available in multiple lengths for sequenced mating Mounting flanges are an option for mechanical attachment to the PCB Rated for current interruption which matches true hot plugging requirements Standard modules can be designed to customer's configuration Guide pins allow for Blind Mating	Telecom Infrastructure Production Equipment Energy and Power High-End Computer Business Machines
(hole)	Power Edge™	Power Edge is a high current connector for direct mating to a customer's 1.58 mm (.062") thick, double-sided card edge PCB or bus bar tab. Power Edge connectors can be combined (stacked end-to-end) to mate with multiple bus bar tabs or card edges up to 8" (203.2 mm) for power distribution applications.	12.90 mm Pitch 2, 3 and 4 Segment Headers Power Contacts up to 40.0 A Signal Contacts up to 3.0 A Solder Tail and Press-fit LCP Liquid Crystal Polymer, Glass-filled Housing	Connector assemblies available with power or signal circuits of 2, 3 and 4 segment configurations for greater flexibility in power distribution applications End-to-end stackable for card edge requirements up to 203.2 mm (8") in length 40 A per contact provides 25% more current per contact than competing headers Isolated segment on opposing contacts provide option for different power current or voltage levels on either side of the board Press-fit or solder tail terminations are compatible with standard PCBs or Backplanes Rated for current interruption which matches true hot plugging capabilities	Broadcast Equipment Networking Telecom Infrastructure Production Equipment Energy and Power High-End Computer Business Machines
	Mini-Fit Sr.™	Molex's Mini-Fit Sr. line is a 10.00 mm (.393") pitch connector handling up to 50.0 A per circuit. This high current system is finding use in applications ranging from computer work stations to power supplies to industrial equipment.	Wire-to-Wire and Wire-to-Board Single Row: 2 to 6 Circuits Dual Row: 6 to 14 Circuits Tin Plating 50.0 A max, 600 V Crimp Termination Through-hole 8 to 16 AWG	 Four points of electrical contact provide high reliability TPA (Terminal Position Assurance) piece attached to housing to prevent terminal backouts Positive latch guards against accidental disengagement of housings Polarized housing assures proper mating Metal fork locks for secure retention to PCB 	Powertrain Safety and Chassis Business Machines High-End Computer Storage Construction and Mining Energy and Power Transportation Equipment Broadcast Equipment Telecom Infrastructure
10000	Sabre™	The Sabre system is a robust power connector supplying up to 18 amperes for high current applications. The 7.50 mm (.295") pitch system was designed to provide enhanced terminal position assurance to prevent terminal backout in high vibration environments.	Wire-to-Wire and Wire-to-Board 2 to 6 Circuits 18.0 A, 600 V Tin Plating Crimp Termination 14 to 18 AWG Through-hole	Patented integral Terminal Position Assurance (TPA) on mated male and female terminals Fully isolated receptacle towers ensures 1000 V rating Polarized housings assure proper mating Positive latch system guards against accidental disengagement of housings	Vending and Gaming White Goods Data (General) Business Machines Construction and Mining Energy and Power Environmental Equipment and Controls
	RAST 5.0/2.5	RAST 5 is designed for power applications and is capable of handling up to 10.0 or 16.0 A depending on the connector series. The product family includes both indirect and direct female parts. RAST 2.5 is designed for signal applications and is rated for either 2.0 or 4.0 A depending operating temperature. The part is offered in both direct-to-PCB and indirect female parts along with a range of headers.	Wire-to-Board Versions 2.50 and 5.00 mm (.098 and .197"), Pitch Vertical and Right Angle Headers 2.0, 4.0, 6.0, 10.0 and 16.0 A Versions 3 to 20 Circuits Tin Plating IDT Termination 22 to 24 AWG Through-hole	Preloaded contacts for easy assembly IDT technology ensures quick termination Only 1 female connector required to mate with male header and PCB edge contacts Fully polarised and coded system Tin plating for ROHS compliance VDE approved	Vending and Gaming White Goods Construction/Mining/ Moterial Handling Energy and Power Environmental Equipment and Controls Production Equipment



Power Connectors Wire-to-Wire/Wire-to-Board/Board-to-Board

	Product	F	Product Variations		Al
Images	Family	Family Description	Specifications	Features and Benefits	Applications
	MLX™	The MLX family is an industry compatible line of 2.13 mm (.084") diameter plug and cap power connections. The MLX family is interchangeable, intermateable and intermountable with industry standard products.	Wire-to-Wire and Wire-to-Board Up to 13.5 A, 600 V 2 to 15 Circuits Tin Plating, Gold Plating Crimp Termination 14 to 20 AWG Through-hole	 Systems are intermateable and interchangeable with industry standard versions Tested to ensure industry compatibility Utilizes Molex and/or industry compatible termination equipment Positive lock ensures connector retention Fully isolated contacts Housing will accept male or female terminals 	Vending and Gaming White Goods Construction/Mining/ Material Handling Energy and Power Environmental Equipment and Controls Production Equipment
	Mini-Fit Jr.™ Mini-Fit HCS™	Mini-Fit Jr. is a 4.20 mm (.165") pitch high-current/high-density power connector offering great design flexibility for wire to-wire and wire-to-board housings. Current carrying capability is up to 9.0 A. Mini-Fit HCS (High Current System) is capable of carrying up to 12.0 A per circuit and fits into all existing Mini-Fit housing configurations.	Wire-to-Wire and Wire-to-Board 2—24 Circuit (Dual Row) 3—5 Circuits (Single Row) Up to 12 A, 600 V Rating Tin and Gold Plating Crimp Termination 16—28 AWG Through-hole, SMC and Press-fit	 Fully isolated terminals Positive housing locks Four point of contact for reliability Capable of 12.0 A per circuit with Mini-Fit HCS Available in UL 94V-2 and UL 94V-0 materials UL, CSA and TÜV approved 	Security and Alarms Vending and Gaming White Goods Low End Computer High End Computer Business Machines, Storage Data Computer Peripherals Energy and Power Environmental Equipment and Controls Production Equipment Broadcast Equipment Telecom Infrastructure
	Mini-Fit BMI™ Mini-Fit SMC™ Mini-Fit CPI™	Mini-Fit BMI (Blind Mate Interface) connectors are designed for applications requiring the blind mating of modules, subassemblies or PCBs. Mini-Fit SMC (Surface Mount Compatible) is made of material that resists high temperatures, which allows it to withstand the IR soldering processes. Mini-Fit CPI (Compliant Pin Interface) offers a unique compliant pin design, which requires no soldering.	Wire-to-wire, wire-to-board, board-to-board versions Available in 4 through 24 circuit housings Up to 12 A, 600 V Rating Tin and Gold Plating Crimp Termination 16—28 AWG Through-hole, SMC and Press-fit UL, CSA, TÜV approved	Broad product range increases design flexibility BMI lead-in simplifies the mating process CPI allows use in Press-Fit applications SMC version can withstand surface mount processes Positive housing locks to mate with Mini-Fit, Jr. Uses low engagement force terminals	Security and Alarms Vending and Gaming White Goods High End Computer Business Machines Storage Energy and Power Environmental Equipment and Controls Production Equipment Broadcast Equipment Telecom Infrastructure
	Micro-Fit 3.0™ Micro-Fit BMI™	The Micro-Fit 3.0 is a unique connector system that incorporates many of the features previously found only on large power connectors. Variations include dual row, single row and blind-mate (BMI) versions.	Micro-Fit 3.0 - Wire-to-Wire and Wire-to-Board Versions - Dual Row: 2 to 24 Circuits - Single Row: 2 to 12 Circuits - Through-hole and SMT Micro-Fit BMI - Wire-to-Wire, Wire-to-Board and Board-to-Board Versions - Dual Row: 4 to 24 Circuits - Through-hole Up to 5.0 A, 250 V Rating Crimp Termination 20 to 30 AWG UL 94V-0, CSA, TÜV approved	 Fully isolated contacts Full polarization, positive locks (Micro-Fit 3.0) Four points of contact BMI Receptacle Floats Surface Mount Compatible (SMC) Black, glass filled nylon housings (Micro-Fit BMI) Black, LCP housings (Micro-Fit 3.0) 	Body Electronics Comfort and Infotainment Brown Goods Medical Multimedia Security and Alarms Vending and Gaming White Goods Business Machines Storage Environmental Equipment and Controls Industrial Instruments Production Equipment Transportation Equipment
	Pin and Socket (Standard .062" and Standard .093" terminals)	Standard .062" diameter terminals are used in 3.68 mm (.145") pitch housings with a maximum rating of 5.0 A. Standard .093" diameter terminals are used in 5.03 mm (.198") pitch housing with a maximum rating of 12.0 A.	Standard .062": - Wire-to-Wire - 2 to 15, 24, 36 Circuits - 5.0 A, 250 V Standard .093": - Wire-to-Wire, Wire to Board - 2 to 15 Circuits - 12.0 A, 600 V Tin, Select Gold or Gold Plating Loose or Reel Packaging	 Panel mount and free hanging Passive lock, polarized housing Female and male terminals can be used in plug and receptacle Positive locks prevent accidental unmating Fully isolated contacts Pull tabs 	Consumer (General) Vending and Gaming White Goods Security and Alarms Energy and Power Environmental Equipment and Controls Industrial Instruments Production Equipment



Signal Connectors Wire-to-Wire/Wire-to-Board

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	PicoBlade™	1.25 mm (.049") pitch Wire-to-Board micro connector system is designed for high-density harness applications.	Wire-to-Wire, Wire-to-Board, Board-In 2 to 15 Circuits, Single Row 0.8 to 1.0 A, 125 V Tin Plating Crimp Termination Through-hole, SMT 26 to 32 AWG	 Flat blade pins for low mating force Two points of contact for high reliability Crimp terminals accept 26 to 32 AWG Shrouded header with friction locks for good retention Metal solder tabs provide PCB hold-down and strain relief for SMT tails Polarized mating geometry 	Brown Goods Medical Multimedia Security and Alarms Computer Peripherals Low-End Computer Environmental Equipment and Controls Industrial Instruments
	Mini Mi II™	The 1.25 mm (.049") pitch Mini Mi II system is offered in Wire-to-Board and Wire-to-Wire options, and enables multi-branch harnessing configurations.	Wire-to-Wire and Wire-to-Board Single Row: 2 to 20 Circuits Dual Row: 10 to 40 Circuits 1.5 A, 100 V Tin Plating IDT Termination Through-hole, SMT 26 to 28 AWG	45 % PCB space savings wrt 2.00 mm (.079") IDT housing allows multi-branch harnessing Staggered 1.25 mm (.049") pitch offers high circuit density Internal positive lock provides secure retention and compatibility with automatic harnessing needs Various application tooling provides cost-effective termination for mass production or small runs	Brown Goods Vending and Gaming White Goods Business Machines Environmental Equipment and Controls Industrial Instruments Production Equipment
	PanelMate™	Molex's 1.25 mm (.049") pitch PanelMate series is an ultra low-profile connector system designed for tight packaging applications. The PanelMate name derives from the original flat-panel LCD display applications for which it was designed.	Wire-to-Board Shielded/Unshielded SMT headers 2 to 30 Circuits, Single Row, 1.0 A, 125 V Crimp Termination Gold Plating 28 to 32 AWG	Ultra-low profile meets slimmer equipment needs Shielded headers offer EMI/RFI protection Spring box contact for protection and stable signal contact Friction lock withstands vibration and shock Gold-plated contacts for smooth wiping action	Body Electronics Comfort and Infotainment Medical Multimedia Computer Peripherals Low-End Computer
	Picoflex™	The 1.27 mm (.050") Picoflex IDT Ribbon Cable System offers designers more options for high-density applications where standard discrete wire and flat flexible connectors are not appropriate.	1.27 mm (.050") Ribbon Cable System Wire-to-Board, Board-In 4 to 26 Circuits, Single Row Standard Cable Assemblies 1.2 A, 250 V Tin or 30 µ" Gold Plating IDT Termination Through-hole, SMT 26 or 28 AWG Ribbon Cable	 Low mating height (6.40 mm (.252")) provides space savings One piece design is easier to inventory Friction lock headers provide excellent retention Expanded operating temperature range Standard cable assemblies available Complete range of application tooling available 	Body Electronics Comfort and Infotainment Brown Goods Medical Multimedia Vending and Gaming Environmental Equipment and Controls Industrial Instruments Production Equipment
	Sherlock™	2.00 mm (.079") pitch positive lock connector system developed for PC monitor applications. It can also be used for other applications that require space savings and secure locking features.	Wire-to-Board, Board-to-Board, Board-In 2 to 20 Circuits, Single Row Positive Lock System Vertical and Right Angle Headers 0.5 to 2.0 A, 125 V Tin Plating Crimp Termination Through-hole 24 to 30 AWG	Low-profile compact design for PCB Space saving Positive locking ribs provide secure mating retention Polarizing guide wall prevents mismating Low-force terminal for easy insertion and extraction Box-style contact design provides good mating reliability Pre-Tin plating gives good solderability and prevents solder-wicking	Brown Goods Security and Alarms Industrial Instruments Production Equipment
	Milli-Grid™	2.00 mm (.079") pitch. Molex's Milli-Grid family of high-density connectors is based on a 2.00 x 2.00 mm grid pattern.	2.00 mm Grid High-Density System Wire-to-Wire, Wire-to-Board, Board-to-Board Dual Row: 4 to 50 Circuits 0.5 to 1.5 A, 125 V Flash, 15 µ", 30 µ" Gold Plating Crimp and IDT Through-hole, SMT 26 to 30 AWG Crimp 28 AWG Ribbon	Designed for 1.00 mm (.039") pitch 28 AWG stranded flat ribbon cable Offers a 40% savings in PCB real estate as compared to the standard 2.54 mm (.100") pitch connector system Optional polarization key and friction locking ramps provide strong retention force to the header Early entry system terminals for long pin wipe Strain relief adds greater retention to cable	Comfort and Infotainment Brown Goods Medical Multimedia Security and Alarms Business Machines Low-End Computer



Signal Connectors Wire-to-Wire/Wire-to-Board

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	Mi II™	2.00 mm (.079") pitch low-profile, low insertion force system with locking features.	Wire-to-Board, Board-to-Board, Board-In Single Row: 2 to 15 Circuits Dual Row: 10 to 60 Circuits 0.5 to 2.0 A, 125 V Tin Plating Crimp and IDT Termination Through-hole, SMT 24 to 30 AWG Crimp 26 to 28 AWG Ribbon	Long tab style male terminal provides low insertion force Housing window provides secure terminal retention IDT receptacle for secure cost-effective termination Clip allows mixing of single/dual row versions Polarisation pegs ensure proper PCB Placement SMT solder tabs provide PCB hold-down and strain-relief	Vending and Gaming Brown Goods Energy and Power Environmental Equipment and Controls Industrial Instruments Production Equipment
	SPOX™ SPOX™ BMI	The 2.50 to 7.92 mm (.098 and .312") pitch SPOX (springbox) contact design Wire-to-Board system ensures reliable contact interfaces. The new 2.50 mm SPOX BMI connectors offer self-aligning features in one of the smallest blind-mate packages available.	Wire-to-Board, Board-to-Board 2 to 20 Circuits. (2.50 mm (.098")) 2 to 12 Circuits (3.96 mm (.156")) 2 to 9 Circuits (5.08 mm (.200")) 3 to 5 Circuits (7.92 mm (.312")) 6, 16 Circuit Blindmate (BMI) Versions 4.0 to 7.0 A, 250 V Tin Plating Crimp Termination Through-hole 18 to 28 AWG	 Top, side and bottom entry versions enable Board-to-Board solutions Box design protects contact surface and eliminates 'fish-hooking' issues Terminals offer 4 points of contact Locking ramps provide retention to friction lock headers Ribs provide side-to-side polarisation Voided version has second circuit blanked for polarisation 	Brown Goods Security and Alarms Vending and Gaming Business Machines Computer Peripherals Energy and Power Industrial Instruments Production Equipment
	KK®	2.50, 2.54, 3.96 and 5.08 mm (.098, .010, .156 and .200") pitch Wire-to-Board and Board-to-Board interconnect systems.	Wire-to-Board, Board-to-Board Vertical and Right Angle Headers 2.5 to 7 A, 250 V 2 to 36 Circuits, Single Row Tin, 15 µ" Gold, Select Gold Plating Crimp and IDT Termination Through-hole 18 to 30 AWG	Double cantilever terminal design Polarisation via insertable keys and pegs Selective gold plating options End-to-end stacking capabilities Locking ramp for improved mated retention with locking headers Accepts KK gas tight crimp terminals IDT option available	Comfort and Infotainment Brown Goods Security and Alarms Vending and Gaming Business Machines Computer Peripherals Energy and Power Industrial Instruments Production Equipment
THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAM	KK® IDT	Designed for use with discrete wire or round conductor flat cable, the Molex standard connectors lend themselves to a variety of applications.	2.54 and 3.96 mm (.100 and .156") IDT Wire-to-Board System 2.5 to 4.0 A, 250 V 2 to 24 Circuits, Single Row Tin, 15 µ" Gold, Select Gold Plating IDT Termination Through-hole 18 to 28 AWG	Single-ended discrete wire harnesses Double-ended discrete wire harnesses Round conductor flat cable daisy chains Termination of both flat cable and discrete wires in a single housing	Brown Goods White Goods Security and Alarms Medical Vending and Gaming Multimedia Business Machines Computer Peripherals Energy and Power Industrial Instruments Production Equipment
	C-Grid III™	2.54 mm (.100") pitch modular system available in 3 standard platings.	Wire-to-Board, Board-to-Board Single Row: 2 to 32 Circuits Dual Row: 6 to 64 Circuits 3.0 A, 350 V Tin, 15 µ" Gold, 30 µ" Gold Crimp Termination Through-hole and SMT 22 to 28 AWG	Complies with DIN 41651 and HE-13/14 Fully intermateable/interchangeable with Molex QF-50™ Three standard plating options available Crimp modules are end-to end stackable Housings have polarisation and friction locks Headers with voids and kinked pins available Fully shrouded headers available to protect pins	Brown Goods Security and Alarms Vending and Gaming Business Machines Computer Peripherals Low-End Computer Industrial Instruments Production Equipment
To the same of the	QF-50 ™	1.27 mm (.050") pitch family that features a variety of products conforming to industry- standard styles, such as DIN 41651, MIL-C-83503 keying, HE-10, etc.	1.27 mm (.050") IDT Ribbon Cable system Wire-to-Board Dual Row: 10 to 64 Circuits 1.0 A, 250 V Tin, Flash, 30 µ" Gold Plating IDT Termination Through-hole 26 to 28 AWG	Available with or without polarisation Complies with DIN 41651, MIL-C-83503 keying, HE-10 Selective gold plating options End-to-end stacking capabilities Eject lever can be used with or without strain relief, which reduces inventory at end customer Low profile headers and strain relief available Headers fully shrouded to protect pins	Data (General) Business Machines Low-End Computer Industrial Instruments Production Equipment



Signal Connectors Board-to-Board

Images	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
2 13 14 15 16 17	Compression and Battery Connectors	Molex's SMT compression connectors offer design flexibility, reduced component counts and a high degree of manufacturability for Multimedia and Handheld Applications.	1.00 mm (.039") to 4.50 mm (.177") Pitch 0.60 mm (.024") to 15.00 mm (.591") Stack Heights Single and Dual Row Vertical and Right Angle 2 to 36 Circuits Through-hole and SMT	 Ultra-low profile meets thin portable equipment needs One-piece design for cost-effective 1-step assembly Open vacuum space enables automated assembly High-temperature material withstands IR reflow 	Medical Multimedia Low-End Computer Mobile Devices
	SlimStack™	SlimStack is the new family name for Molex's broad range of Micro SMT stacking board-to-board connectors. Applications include PDAs, cellular phones, camcord, notebook PCs and other compact equipment.	SlimStack — 0.40 mm (.016") Pitch - Vertical and Right Angle - Single and Dual Row - 7 to 120 Circuits - 0.95 mm to 4.00 mm Stack Heights - 50 V, 0.3 A Max SlimStack — 0.50 mm (.020") Pitch - Vertical and Right Angle - 16 to 140 Circuits - 1.50 mm to 7.00 mm Stack Heights - 50 V, 0.5 A Max SlimStack — 0.635 mm (.025") Pitch - Vertical Plug and Receptacles - 20 to 240 Circuits - 3.00 mm to 16.00 mm Stack Heights - 100 V, 0.5 A Max SlimStack — 1.00 mm (.0395") Pitch - Vertical Plugs and Receptacles - 20 to 140 Circuits - 8.00 mm to 20.00 mm Stack Heights - 100 V, 0.5 A Max	Cantilever-type gold contacts for longterm mating reliability Metal friction lock for secure mating retention LCP housing withstands high-temp SMT processes Shrouded plugs and receptacles have double-wall strength for resistance to shock and vibration Wide-angled mating surface minimizes risk of damage Shroud ramp/window locks and contact to plastic locks provide extra retention between plug and receptacle	Medical Multimedia Security and Alarms Computer Peripherals Low-End Computer Mobile Devices Telecom – Home/Office
	Mezzanine IEEE1386	Molex's IEEE1386 Mezzanine connectors were developed to allow standardized PCI mezzanine cards (PMC) to be added to VMEbus and Multibus host boards in LAN, WAN and Telecom equipment.	64 and 84 Circuit Versions 8.00 to 15.00 mm (.315 to .590") Stacking Height Dual Row SMT 250 V, 1.0 A 30 μ" Gold Plating	 "Leaf" contact design terminal protects pins during mating and handling Low mating forces ensure less stress on PCB and solder joints Gold plating on contact ensure high reliability with 100 cycles durability LCP housing compatible with standard SMT reflow processes Anti-flux intrusion feature 	High-End Computer Industrial Instruments Production Equipment Embedded Systems
	Detachable	Molex offers a variety of spring-loaded board-to-board Panel Detachable and Bezel connectors. These connectors were developed to provide a simple way of detaching the front panel of car radio systems to prevent theft.	1.00 to 1.60 mm (.039 to .062") Pitch 8 to 15 Circuits 125 V, 1.0 A Plating Contact — Gold Plating Tail — Tin Through-hole Up to 20,000 cycles	 Protected contacts prevent damage during mating/unmating Generous misalignment tolerances for Blind mate capability Solder tails pierce through FPC for secure FPC attachment Up to 20,000 mating cycles for high durability 	Automotive (General) Comfort and Infotainment Brown Goods Vending and Gaming
	EBBI™	The 1.27 mm (.050") pitch EBB I leaf-style connectors carry all required signals, power and auxilliary signals within one interface for various mass storage applications.	Wire-to-Board, Board-to-Board Vertical and Right Angle Plugs Vertical, R/A and IDT Receptacles 30—130 Circuits 30 V, 1.0 A Gold, Tin Plating Through-hole, SMT, Press-fit 500 Mating Cycles Minimum	 Polarized D-shape leaf contact for parallel board packaging Leaf-style interface provides high-durability Blind-mate versions available Receptacle mates to standard .062 inch pc card edge Polarized guide posts allow extra lead-in on blind-mate versions 	Consumer (General) Vending and Gaming Business Machines High-End Computer Production Equipment
	Plateau HS Mezz™	Molex utilizes its proprietary Plateau Technology™ to create a high-speed, high- density surface-mounted mezzanine connector system. The shielding properties of the plated housing effectively isolate each differential pair, reducing the total number of terminals needed for grounding.	1.20 mm (.047") Centerline Pitch Vertical Board-to-Board 10.00 to 25.00 mm (.394 to .984") Stack Heights 12, 24, 48 and 72 Circuits 30 V, 1.5 A Contact: 0.76 µm (30 µ") Gold Plating Tail: Tin Plating	 Advanced gold-plated plastic housings with integrated shielding system support high-speed differential signaling in excess of 10 Gbps Contacts arranged in isolated differential pairs for controlled impedance Two points of contact on each signal ensures high reliability Available in 6, 12, 24 and 36 differential pair sizes for a range of applications Molded and plated housing pegs facilitates attachment to PCB ground plane 	High-End Computer Storage Telecom (General) Telecom Infrastructure Networking



FFC/FPC Connectors FFC Connectors and Cable

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	FFC/FPC (SMT)	Molex offers a wide variety of ultra low-profile SMT FFC/FPC connectors for tight packaging applications including connectors with actuators on 0.30, 0.50, 0.650, 1.00 and 1.25 mm pitches.	0.30 mm Pitch - 11 to 51 Circuits - ZIF, Right Angle Versions - Easy-On™ Actuators - 1.30 mm to 1.95 mm Mated Height - Max 0.2 to 0.3 A 0.50 mm Pitch - 4 to 60 Circuits - ZIF and Non-ZIF - Vertical and Right Angle Versions - Easy-On™, BackFlip™ and Pull Type Actuators - 0.90 to 4.05 mm Mated Height - Max 0.2 A to 0.5 A 1.00 mm Pitch - 3 to 30 Circuits - ZIF and Non-ZIF - Vertical and Right Angle Versions - Easy-On™, BackFlip™ and Pull Type Actuators - 0.90 to 4.05 mm Mated Height - Wertical and Right Angle Versions - Easy-On™, BackFlip™ and Pull Type Actuators - 0.90 to 4.05 mm Mated Height - Max 0.2 A to 0.5 A	 Metal solder tabs provide PCB hold-down and strain relief for SMT tails Accommodates industry-standard FFC/FPC Low profile for use in space-sensitive applications Tuning fork contact for stable, low contact resistance Packaged in anti-static standard EIA embossed tape and reel Easy-On™ actuator rotates for easy cable insertion Contact design includes pre-hold cable feature to help facilitate FPC insertion 	Comfort and Infotainment Brown Goods Medical Multimedia Security and Alarms Computer Peripherals Low-End Computer Mobile Devices
	FFC/FPC (Through- hole)	Molex offers a wide variety of through-hole connectors for flat flexible cable (FFC) and flexible printed circuitry (FPC). Applications include Security, Vending and Gaming Machines.	1.00 mm Pitch - 3 to 40 Circuits - ZIF and Non-Zif - Vertical, Right Angle Versions - 3.00 mm to 6.00 mm Mated Height - Max 0.2 to 1.0 A 1.25 mm Pitch - 3 to 40 Circuits - ZIF and Non-ZIF - Bottom-Entry, Vertical and Right Angle Versions - 5.00 to 8.00 mm Mated Height - Max 0.5 A to 1.0 A 2.54 mm Pitch - 1 to 27 Circuits - ZIF, Non-ZIF, Cable Pierce - Vertical and Right Angle Versions - 6.50 to 8.80 mm Mated Height - Max 0.5 A to 3.0 A	 Kinked outer solder tails for PCB retention For 0.30 mm (.012") thick FFC/FPC Tuning forks for stable, low contact resistance Optional cable retention barbs for cable strain relief and full retention of cable Optional polarizing peg for proper orientation to PCB Surface Mount Compatible 	Brown Goods Security and Alarms Vending and Gaming Business Machines Computer Peripherals Industrial Instruments Production Equipment
	Premo-Flex™	The Molex Premo-Flex Flat Flex Cable jumpers are used to connect 2 PC boards and terminate to either ZIF or non-ZIF FFC connectors.	0.50, 1.00 and 1.25 mm Pitches 11 Standard Lengths (30—305 mm) Same and Reverse Contact Options 6 to 50 Circuits 30 V, 0.5 to 1.2 A	 Allow high density wiring solutions Products are available with custom lengths to meet customer demands Available with contacting area on same or opposite sides Can be used in high temperature environment up to 105 °C Jumpers are very suitable for movable extension of Printed Circuit Boards and/or Displays units etc. Jumpers are used in applications where the installed cost is important 	Comfort and Infotainment Brown Goods Medical Multimedia Security and Alarms Computer Peripherals Low-End Computer Mobile Devices



I/O Connectors Modular Jacks

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	Modular Plugs	Molex plugs offer exceptional performance for voice, data and highspeed networking applications. Plugs are available in standard eight-circuit configurations. Our complete offering of hand and production tools help to make termination easy.	Shielded and Unshielded Category 3, 5, 5e and 6 Short Body RJ11, RJ45 and Industrial Flat Oval and Round Cable	 Protective strain relief covers protect wiring Variety of circuit sizes to meet a variety of application requirements 	Brown Goods Multimedia Security and Alarms Vending and Gaming Business Machines Computer Peripherals Low-End Computer Industrial Instruments Medical Telecom Infrastructure Networking Telecom (Home/Office)
	Right Angle Modular Jacks	Offering the industry's largest product breadth of Right Angle Modular Jacks means that Molex has the right jack for your application. Examples include highspeed jacks with Category Se performance for networking and Fast Ethernet applications or magnetic jacks featuring integrated magnetics, capacitors and resistors.	RJ-45 (8/10, 8/8, 8/6, 8/4, 8/2 Loaded) RJ-11 (6/6, 6/4, 6/2, 4/4, 4/2 Loaded) Category 3, 5, 5e Versions Single, Dual, Ganged and Stacked Ganged Options Industrial and HyperJack™ Versions Shielded and Unshielded With or Without Lightpipes 2—8 Port Ganged 8—16 Port Stacked Through-hole or SMT	 High-speed jacks available that meet NEXT requirements of –40 dB at 100 MHz Modular jacks with lightpipes reduce electrical noise SMT modular jacks tape and reel packaging for easy pick-and-place Low Profile versions allows for tight board stacking RJ-11 and RJ-45 offerings provide flexibility for a variety of design applications 50µ" Gold plating option meets FCC 68.5 and is approved for all FCC licensed applications 	Brown Goods Multimedia Security and Alarms Vending and Gaming Industrial Instruments Business Machines Computer Peripherals Low-End Computer High-End Computer Storage Medical Telecom Infrastructure Networking Telecom (Home/Office)
	Vertical and Bottom Entry Modular Jacks	Vertical and bottom entry jacks complete the Molex product offering. The high-speed vertical jacks provide Category 5 performance for networking and Fast Ethernet applications. The low profile version is the lowest available in the market. The bottom entry modular jack saves space in PCB designs.	Vertical and Bottom Entry RJ-45 (8/8, 8/6, 8/4, 8/2 Loaded) RJ-11 (6/6, 6/4, 6/2, 4/4, 4/2 Loaded) Category 3, 5 Versions Shielded and Unshielded Low or Standard Profile Through-hole or SMT	High speed jacks 100% tested to meet NEXT requirements of –40 dB at 100 MHz SMT vertical mounting enables automatic vacuum placement SMT process lowers manufacturing costs Low profile versions allows for tight board stacking RJ11 and RJ45 offerings provide flexibility for a variety of design applications 50p" gold plating option meets FCC 68.5 for all FCC licensed applications	Brown Goods Multimedia Security and Alarms Vending and Gaming Industrial Instruments Business Machines Computer Peripherals Low-End Computer High-End Computer Storage Medical Telecom Infrastructure Networking Telecom (Home/Office)
	Colourful Modular Jacks	Modular jack housings are now available in 5 colours in addition to the standard black material. This provides an opportunity to match the colour of a plug cable to a modular jack to allow for colour keying and to eliminate mismating of cables and jacks.	Ultra Low Profile, Inverted and SMT Options RJ11 and RJ45 Versions 6/2, 6/4, 8/8 Loaded Available in Orange, Green, Blue, Gray and Yellow	Modular jacks can be moulded in a variety of custom colours allowing flexibility and customization of applications Currently available in three different series configurations to meet several different design requirements	Brown Goods Multimedia Security and Alarms Vending and Gaming Industrial Instruments Business Machines Computer Peripherals Low-End Computer High-End Computer Storage Medical Telecom Infrastructure Networking Telecom (Home/Office)



I/O Connectors Modular Jacks

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	Compact Modjacks	Compact Modjacks have a profile of just 9.53mm (.375") from the top of the PCB to the top of the jack which allows for optimal board stacking. The unique design allows the bottom of the modular jack to sit flush with the bottom of the PCB, adhering to the 2.00mm industry specification for creepage and clearance.	1, 2 and 4-port Configurations Snap-fit or Press-fit PCB Retention Shielded or Unshielded Versions 3 Shielding Styles (no tabs, enhanced and bezel grounding tabs)	Enhanced panel grounding tabs on shielded versions offer superior ground paths to the panel or the metal bezel for maximum shielding performance Conforms to Compact PCI, Eurocard and Common Mezzanine Card standards Meets Category 5e performance for Gigabit Ethernet applications High-temperature material allows for surface mount compatibility during solder reflow Each modular jack is 100 % electronically tested to detect possible shorting conditions before the product is shipped Meets FCC 68.5 specification	High-End Computer Storage Medical Telecom Infrastructure Networking
	Stacked and Ganged Modjacks	Molex offers a broad range of Stacked and Ganged Modjacks to serve the needs of customers in the Telecom and Networking industries. Available versions include Standard, Magnetic and Lightpipe versions.	RJ-45 and HyperJack™ Versions Category 5 Versions 8/8 Loaded Shielded and Unshielded With or Without Lightpipes 2—8 Port Ganged 8—16 Port Stacked Through-hole or SMT	Gigabit Ethernet compatible Exceed Category 5 performance Traditional industry pin layout Distinctive lightpipe arrow indicators Lower electrical noise than LED offerings 30 % fewer lead than LED offerings Space saving design	High-End Computer Storage Medical Telecom Infrastructure Networking
	HyperJack™	HyperJack is the trade name for Molex RJ45 jacks that include magnetics. The Molex HyperJack incorporates the magnetics for common mode rejection, DC insulation of cable side versus board side, and transforming of the signal.	Single, Stacked and Ganged Versions Low and Standard Profile Right Angle 2, 8, 12, 14, 16 Ports Stacked 8/8 Loaded Contacts Through-hole PCB mounting	Integrated electrostatic discharger enables the user to connect an electrostatically charged cable during use without damaging the physical layer Integrated magnetics for DC-insulation/common mode rejection Integrated resistors for termination of unused pairs Compliant to IEEE 802.3 10/100 Base T Available in three configurations for design flexibility	High-End Computer Storage Medical Telecom Infrastructure Networking
	Rugged RJ-45 Ethernet	RJ-45 Ethernet/IP Cordsets and Receptacles are ideal for use in environments where EtherNet protocol is used, including manufacturing facilities, water treatment plants and transportation hubs. Designed with one sealing surface, the connectors ensure optimum performance even in harsh environments.	Category 5e Specified Wire Plugs PCB Mount Receptacles Inline and Wire Panel Mount Receptacles Bayonet to Bayonet Cable Assemblies Bayonet to RJ-45 Assemblies Bayonet to Pigtail Assemblies	One sealing surface limits the risk of failure Bayonet style latch receptacle ensures quick and easy connections as well as ensures proper depth when mating IP 67 and NEMA 6P ratings ensure cordsets are water and dust tight for functional integrity Category 5e specified for high datatransmission speeds Overmolded versus field wireable cordsets for faster installation at customer site	Security and Alarms Business Machines High-End Computers Production Equipment Instrumentation Telecom Infrastructure



I/O Connectors Multimedia I/O

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	USB 2.0	Universal Serial Bus (USB) is a low-cost, high performance serial 1/0 interface for data access and transfer that allows device sharing and seamless integration between computers and an expanding range of peripherals.	USB-A, USB-B, versions Vertical, Right Angle, Stacked and Panel Mount Versions Available Cable Assemblies and Pigtails in a Variety of Lengths, Versions and Colours Through-hole and SMT Mounting	480 Mbps data rate, to the USB 2.0 specification Fully-shielded and polarized plugs Friction grip on overmolded body facilitates easy mating/unmating 5 standard cable lengths available Custom design available for complete cable assemblies	Low-End Computer Computer Peripherals Multimedia Mobile Devices
	USB On-the-Go	Molex's new USB On- The-Go (OTG) connectors and cable assemblies help enable mobile devices such as digital cameras, PDAs, audio players, printers and cellular phones to exchange data directly without the need for a host PC.	Options include mini-A, mini-B and mini-AB Receptacles Vertical and Right Angle SMT and Through-hole Cable Assemblies Available in Standard A-to-mini-B and mini-A-to-mini-B in 1.1 and 2.0 Versions	 Compact size for space savings Operates at speeds up to 480 Mbps Fully shielded for EMI/RFI protection 5000 cycles for rugged durability Full range of standard connectors and cables Short-body version for space savings 	Mobile Devices Multimedia
	IEEE 1394- 1995/ IEEE 1394a- 2000	IEEE 1394, also named "Firewire" by Apple, and "i.Link" by Sony, is a standard I/O interface designed to service the demands of the emerging multimedia bus require- ments. IEEE 1394 is a unique interface for data access and transfer of video and audio with assured quality, based on its high bandwidth capabilities.	Both 6-circuit (IEEE 1394) and 4-circuit (IEEE 1394a) Versions SMT and Through-hole Configurations Upright, Vertical and Rugged Industrial Receptacles Cable Assemblies Available in a Variety of Lengths	IEEE 1394-1995 Six circuits for speeds up to 400 Mbps Full metal shielding for ESD protection High-temperature plastic for SMT processing Cable assemblies in several standard lengths Rated at 40 V and 1.5 A IEEE 1394a-2000 Four circuits for speeds up to 400 Mbps SMT and Through-hole in various mating heights Full metal shielding for ESD protection Cable assemblies in three standard lengths Rated at 5.0 V and 0.5 A	Mobile Devices Low-End Computer Multimedia Computer Peripherals Industrial Instruments
	MicroCross™ DVI	The MicroCross DVI Connector family was chosen as the interface for the Digital Display Working Group (DDWG*) Digital Visual Interface (DVI) standard. The system provides a high bandwidth video interface for the host and display devices of today, while addressing the bandwidth requirements of tomorrow.	Vertical and Right Angle Receptacles Single-link & Dual-link Digital (DVI-D) Cables Analogue (DVI-A) and Integrated DVI (DVI-I) Cables Adapters from DVI to VGA, P&D and DFP Riser Cards (ADD2 DVI Card)	 Single and dual-link digital signaling allows high speed digital transmission of 4.95 or 9.9 Gbps Analogue coaxial lines allow high speed analogue transmission of 2.5 GHz Fully shielded for excellent EMI/RFI performance Protruding shield for first-mate/last-break for ESD considerations Rugged LFH™ contact design provides 2 points of contact for optimal signal integrity and reduces insertion force to ensure high reliability Plug-and-play allows a system to be plugged and unplugged without shutting down or reconfiguring 	Mobile Devices Low-End Computer Computer Peripherals Multimedia Medical
	HDMI	HDMI (High-Definition Multimedia Interface) connectors and cable assemblies are designed to help enable an uncompressed all-digital interface between consumer electronics equipment such as DVD players or set-top boxes and audio/video monitors such as digital TVs.	SMT PCB Receptacles HDMI to HDMI Cables HDMI to DVI Cables Adapters to DVI and P&D (M1)	Eliminates the cost and complexity of multiple cables used to connect current A/V systems Up to 5 Gbps of video and multi-channel audio in a single cable Consumer-friendly friction lock design Saves about 40 % PCB space over DVI Backward compatible with MicroCross™ DVI Triad signal layout ensures low impedance mismatch	Low-End Computer Computer Peripherals Multimedia Medical Consumer (General)



I/O Connectors Multimedia I/O

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	HandyLink™	Molex's new 0.80 mm (.031") pitch HandyLink product family of connectors, cable assemblies and accessories offers a perfect solution to any hand-held device design or application. The innovative compressionstyle contact design provides long-term performance and reliability with 20,000 mating cycles.	Wire-to-Board and Board-to-Board SMT Receptacle PCB and Wire Version Plugs Cradle Connector Cables and Accessories Up to 16 Circuits Gold (Au) Plating Max 1.5 A Current	 Receptacles feature a high-temperature thermoplastic housing that withstands lead-free processing Plugs are offered in both PCB and wire termination versions for design flexibility Robust cradle design with parts offered in both perpendicular or parallel mounting to PCB for docking applications Diverse standard product offering of cables and accessories provide an off-the-shelf solution 	Mobile Devices Multimedia Medical Consumer Security Industrial
Service Service	CradleCon™	CradleCon is a miniature 0.50 mm (.020") 1/0 system designed to provide a compact, shielded interface for connecting mobile devices such as docking cradles and digital cameras to each other or to accessories such as earphone cables.	Vertical and Right Angle Receptacles Right Angle Plugs Cable Harnesses 14 to 36 Circuits Up to 0.5 A max and 30 V	 Compact design provides PCB space savings Fully shielded for EMI/RFI protection Both Signal and Power options Up to 10,000 mating cycles for high durability Blind Mating Guides allows use in cradle applications Custom cable overmolding possible 	Mobile Devices Multimedia Medical



I/O Connectors Datacomm/Networking

Images	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	SCSI	Molex's offering of SCSI (Small Computer Systems Interface) 1.27 mm (.050") pitch connector system provides a wide range of board-mount receptacles and cablemount plugs for data-transfer applications. These 50 and 68 circuit connectors are designed for attaching disk drives and other devices internally or externally, supporting the interconnect needs that comply with SCSI-2 and SCSI-3 specifications.	1.27 mm Pitch Wire-to-Board I/O System Vertical and Right Angle Versions Plug, IDT Receptacle, Cable Assemblies Shielded and Unshielded With and Without Latches 50 and 68 Circuits Through-hole and Straddle Mount 3-in-1 Combo Plugs also Available SCSI U320 cable assemblies available in 3 standard lengths (1, 3 and 5 m)	Blanked tuning fork terminal ensures smooth contact and reliability Use with .062" to .125" thick PCB Boards in a range of applications IDT Plug terminates with discrete 28 AWG or flat ribbon cable .025—30 AWG Interface dimensions conform to ANSI SCSI and IEC-48B (SEC) 199 specifications which ensures intermatability with conforming products	Business Machines Computer Peripherals High-End Computer Storage Broadcast Equipment Telecom Infrastructure Networking
	Ultra+™ VHDCI	The Ultra+ VHDCI (Very High Density Cable Interconnect) 0.80 mm (.031") pitch connector system is a leader among the next generation of high-density I/O interconnects. These 68 circuit connectors are designed for high performance memory transfer applications supporting the latest SCSI style interfaces.	0.8 mm Pitch Wire-to-Board I/O System Vertical and Right Angle Receptacles Offset Plug Kits and Cable Assemblies Single and Dual Row Versions Fully Shielded Through-hole and SMT U320 speed VHDCI cable assemblies available in 3 standard lengths (1, 3 and 5 m)	Bullet nose lead-in minimizes stubbing and improves insertion Meets EIA, ANSI/SFF-8441 and SPI-4 specifications to ensure intermatability with conforming products Shielded to protect signal integrity Plug accepts 28 & 30 AWG cable for manufacturing flexibility requirements Offset backshells allows for tighter spacing requirements Manual and Semi-Automatic tooling available	Business Machines Computer Peripherals High-End Computer Storage Broadcast Equipment Telecom Infrastructure Networking
	LFH™	The Low Force Helix (LFH) contact was designed for high pin count signal applications where there is a need for reliability and performance.	1.27 mm (.050") and 1.90 mm (.075") Pitch Shielded I/O Wire-to-Board, Board-to-Board Vertical and Right Angle Board Mounting 60 to 240 Circuits 40 V, 1.0 A Contacts: 30 µ" Gold, Gold Flash Tails: Tin over Nickel Customized cable assemblies available upon request	 High-density contact interface allows more terminals in a smaller package High pin count gives flexibility in many different applications Low mating force aids in the mating of the final product Up to 5000 cycles with standard plating for high reliability External Shielding protects signal integrity Terminal sticks ensure ease of manufacturability and reliability 	Business Machines Computer Peripherals High-End Computer Storage Broadcast Equipment Telecom Infrastructure Networking
	HSSDC2	HSSDC2 is a high performance cable-to-board system with seven high-speed contacts to transfer data rates of 2.5 Gbps for InfiniBand*, Fibre Channel and Gigabit Ethernet applications. The system has enhanced capabilities of up to 5 Gbps for next-generation designs.	1.27 mm (.050") Pitch Shielded I/O Both InfiniBand*, Fibre Channel Versions Single and Dual Row PCB Receptacles Copper Pluggable Cables 7 or 14 Circuits Equalised and Unequalised Cable Assemblies	Offers improved electrical performance compared to the standard HSSDC product The HSSDC2 connector meets either 100-ohm or 150-ohm system requirements Keying design prevents mismating of Fibre Channel and InfiniBand cable assemblies Operates at 2.5 Gbps for current applications and scales to 5.0 Gbps for next-generation designs Supports the next revision of the NCIT's T11 Fibre Channel physical layer specification	Business Machines Computer Peripherals High-End Computer Storage Broadcast Equipment Telecom Infrastructure Networking
	LaneLink™	Molex's new LaneLink 4 lane and 12 lane I/O connectors and cable assemblies incorporate an industry compatible interface compliant with Infiniband*, 10 Gbit Ethernet, Serial ATA requirements. These connectors and cable assemblies are cable-to-board I/O system optimized for differential signaling at 2.5 Gbps per pair.	0.50 mm (.020") Pitch Shielded I/O System Fully Shielded SMT Receptacle PCB Receptacles and Cable Plugs Right Angle and Vertical Versions 24 and 72 Circuits (4x and 12x) Standard Cable Assemblies Jackscrew and Positive Latch Options	 Die cast receptacle with unitary latch posts and screw attach to PCB provides the best available strain relief and isolates cable loads from SMT tails Optional top mount screw attach of die cast frame to chassis for additional strain relief Squeeze-to-release latch levers provide user-friendly, positive-latch Plug with internal strain relief features provides increased reliability All versions comply with industry standards SFF-8470 	Business Machines Computer Peripherals High-End Computer Storage Broadcast Equipment Telecom Infrastructure Networking

 $^{^{\}ast}$ $\,$ InfiniBand is a trademark of the Infiniband Trade Association



I/O Connectors Datacomm and Pluggable I/O Systems

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	TDP™	The innovative TDP (Triad Differential Pair) family uses a "triad" design of differential signal and ground lines to achieve bandwidths up to 5.0 Gbps and beyond.	1.27 mm (.050") Shielded Dual Row I/O System Fully Shielded SMT Receptacle Plug and Plug Cable Kit 18, 28, 38, 48 and 72 Circuits 1.00, 3.00 and 5.00 Meter Cable Assemblies Supports 5.0 Gbps Bandwidth Up to 5000 Cycles	 High cycle LFH™ contact system provides two points of contact for optimal signal integrity Fully shielded for improved EMI/RFI protection Triad contact configuration optimizes bandwidth Standard cable assemblies offer optimized performance for any application Die cast backshell reduces overall labor costs by eliminating internal shielding and overmolding processes 	High-End Computer Storage Broadcast Equipment Telecom Infrastructure Networking Multimedia Consumer (General) Security Business Machines
5 1 2 2 m	EMILY™	EMILY is a new I/O solution designed in cooperation with a major telecom equipment manufacturer for W-CDMA base stations and radio network controllers. The connector combines signal (6x 622 Mbps) rybrid (4 controls plus 2x 5 A) and power (2x 25 A) requirements in one connector system.	Fully Shielded I/O System Right Angle SMT Headers Signal (12 ckt), Hybrid (6 ckt) and Power (2 ckt) Versions Power Contact: Max 20 A, 300 V Signal Contact: Max 0.5 A, 30 V Gold Plated Signal Contact Tin Plated Power Contact Up to 200 Mating Cycles	 Ground springs contact front panel and cable connector hood Cable pull is secured by locking system at front panel Tape and reel packaging allows use in SMT Process Data rates up to 622 Mbps EMI/RFI-proof Polarized mating face Can be unlocked without a tool 	Telecom Infrastructure Networking Broadcast Equipment
	GBIC	Gigabit Interface Converter (GBIC) products meet the needs of networking applications running up to 2 gigabits per second (Gbps). The multi- sourced, industry- standard system, features a common design interface for use with multiple data protocols, including Fibre Channel and Gigabit Ethernet.	20 Circuits Right Angle Receptacle Single Port Guide Frame Stacked Dual Port Assembly Copper GBIC Modules Copper Cable Assemblies Optical Cable Assemblies	 Host Receptacle has staggered first-mate last-break contacts All-metal Guide Frame has tin-plated body for direct solder processing Copper GBIC modules are available in DB-9, HSSDC or 1000 Base-T RJ-45 styles Supports 1.0625 Gbps (Fibre Channel) and 1.25 Gbps (Gigabit Ethernet) data rates Dual Stack Assembly allows two GBIC frames to be stacked in the same real estate as the standard GBIC 	Storage High-End Computer Telecom Infrastructure Networking Broadcast Equipment
	SFP	Small Form-Factor Pluggable (SFP) products are used for attaching copper or fiber optic pluggable transceivers and cable assemblies into host equipment, such as network switches, routers, servers, and storage devices.	20 Circuits Right Angle SMT Connector Solder Post and Press-fit Single Cages and Stacked and Ganged Cages HSSDC2, RJ-45, Co-Ax Pluggable Modules Loop Back Adapters Copper Patch Cable Assembly HSSDC2 Cable Assembly LC Duplex Cable Assemblies Stacked Multi-port Connectors for Increased Port Density	 20-position SMT connector for pick and place mounting on the host PCB Metal cages are available as one-piece kits or as separate covers and bases Both press-fit or solder-post board-termination styles possible Supports the hot-swap of industry standard fiber optic transceivers, copper modules and patch cables Meets Fibre Channel, Gigabit Ethernet, and InfiniBand protocols Stacked and Ganged versions allow design flexibility 	Storage High-End Computer Telecom Infrastructure Networking Broadcast Equipment



I/O Connectors Pluggable I/O Systems

Images	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	XENPAK	XENPAK 10 Gigabit Ethernet CX4 transceiver modules are designed for 10 Gigabit Ethernet applications. The transceiver is based on a 3.125 Gbps XAUI-to-XAUI re-timer with transmit pre-emphasis and receive equalization.	70 Circuits Right Angle SMT Receptacle Copper Transceivers Loopback and Plug Adapters LaneLink™ Cable Assemblies SC Optical Products	Receptacle complies with MSA standards and is suitable for use with XPAK, X2 and XENPAK configurations Data throughput up to 10 Gbps, transmits data up to 15 meters over copper cable Meets the Gigabit Ethernet standards: IEEE 802.3ak CX-4, IEEE 802.3ae XAUI Exceeds performance requirements by 33% at 20 meters with 24 AWG cable Requires no rail system or cage — simply slides onto the PCB Hot swappable	Storage High-End Computer Telecom Infrastructure Networking Broadcast Equipment
	ХРАК	The XPAK MSA was defined to specify a XAUI-based transponder that could be used on a PCI server card, as XENPAK transponders are too large for this application.	70 Circuit Right Angle SMT Receptacle 10 Gbps Guide Rail Copper Transceivers Loopback and Plug Adapters Patch Cable Assemblies LaneLink™ Cable Assemblies SC Optical Products	Host connector used with Z-Axis Pluggable copper or optical transceiver modules and EMI cage Receptacle complies with MSA standards and is suitable for use with XPAK, X2 and XENPAK configurations Press-fit legs on Guide Rail allow for ease of installation Metalized foam gaskets help reduce overall EMI Positive latching function on the rail frame provides proper transceiver retention Supports Fibre Channel, Gigabit Ethernet, and InfiniBand protocols	Storage High-End Computer Telecom Infrastructure Networking Broadcast Equipment
	Х2	The X2 specification supports multiple 10 Gbps applications, providing manufacturers with one platform that addresses several markets. The X2 MSA specifies a module that mounts on the topside of the host PCB and is physically shorter than XENPAK modules.	70 Circuits Right Angle SMT Receptacle Module Guide Rails Pluggable Copper Modules Loopback and Plug Adapters Patch Cable Assemblies LaneLink™ Cable Assemblies SC Duplex Cable Assemblies	Host connector used with Z-Axis Pluggable copper or optical transceiver modules and EMI cage Receptacle complies with MSA standards and is suitable for use with XPAK, X2 and XENPAK configurations Press-fit legs on Guide Rail allow for ease of installation Metalized foam gaskets help reduce overall EMI Positive latching function on the rail frame provides proper transceiver retention Supports Gigabit Ethernet protocols	Storage High-End Computer Telecom Infrastructure Networking Broadcast Equipment
	XFP	The XFP MSA defines a transceiver device supporting Sonet 0C192, 10-Gig Ethernet and 10-Gig Fibre Channel, with a serial 10 Gbps electrical interface called XFI.	30 Circuits Right Angle SMT Receptacle Module Cage Heatsink and Clip Pluggable Copper Modules Loopback and Plug Adapters Patch Cable Assemblies LC Optical Products	 Host connector used with Z-Axis Pluggable copper or optical transceiver modules and EMI cage Compliant with MSA standards and suitable for use with XFP configurations Card entry slot accepts 1.00 mm (.039") thick integrated circuit board The transceiver is hot-pluggable for easy maintenance Clip-on Heat Sinks ensure optimal heat dissipation Supports Fibre Channel, Gigabit Ethernet, and InfiniBand* protocols 	Storage High-End Computer Telecom Infrastructure Networking Broadcast Equipment

 $^{^{}st}$ InfiniBand is a trademark of the Infiniband Trade Association



Industrial Connectors Rectangular I/O

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	НМС™	HMC heavy duty rectangular connectors offer a unique new design and user-friendly features compared to traditional-style heavy duty connectors for robotic and other industrial applications.	Single and Multi-Module Types Wire-to-Wire and Panel-mount Vertical and Right Angle Entry Signal and Power Contacts 6.0, 10.0, 12.0, 20.0 and 40.0 A Options 6 to 76 Circuits	Crescent-shaped metal hood with a rotating lock can be actuated with one hand Easy field removal of housing modules Single module type that enables male or female housings to be loaded on either side Multi-module type that also allows gender interchanging of housings Cable clamp solution that integrates sealed ring and holder into 1-piece cover Sealed to protect against dust and contaminants Agency ratings such as IP65, VDE 0110, TUV, UL, CSA	Construction and Mining Energy and Power Environmental Equipment and Controls Production Equipment Transportation Equipment
	CRC™	The Compact Robotic Connector (CRC) rectangular I/O connector system provides a compact solution for today's small industrial robots and factory automation equipment.	Wire-to-Wire and Panel-mount Signal and Power Versions Male and Female Terminals 12, 20, 30, 50 Circuit Signal 4 and 15 Circuit Power 7.0 A/15.0 A Contacts Sold in Kit Format	 Compact size allows equipment space savings versus circular connectors Front/rear panel-mount for design flexibility Spring locks ensure easy mating/unmating Kit options enable easy ordering Audible "Click" confi rms mating operation Certified by TÜV and VDE 	Industrial (General) Construction and Mining Energy and Power Environmental Equipment and Controls Production Equipment Transportation Equipment
	MX150L™	The MX150L™ sealed connector system is designed to meet the needs for a rugged, environmentally sealed connector system supporting both low-level signal and power applications.	Wire-to-Wire, Wire-to-Board Single and Dual Row 2 to 16 Circuits 18.0 A Max 14 to 22 AWG Pre-tin or Select Gold Plating Terminal Position Assurance Optional Connector Position Assurance	Single Piece housings contain Seals and TPA components to save applied costs Simple crimp, poke and plug application avoid the need to crimp individual wire seals reducing applied costs Integral TPA Locks terminals into housings and prevents terminals from backing out Integral mating and interface seals are tested to IP 67 Easy terminal extraction and insertion quick, low cost field repairs Secondary locking latch (CPA) assures positive mating of connector and prevents accidental disengagement	Transportation Construction and Mining Energy and Power Production Equipment Environmental Equipment Security and Alarms Automotive
	Leaf Contact I/O	Available in various pitch and circuit sizes, Leaf Contact I/O connectors offer rugged durability and protection to pin/ terminal contacts.	0.80 mm, 1.00 mm and 1.27 mm Pitch I/O Wire-to-Board or Panel-mount PCB Receptacles and Cable Plugs Positive Latch or Jackscrews 10 to 68 Circuits Max 2.0 A	 Fully shielded for EMI and RFI protection Termination quick and effective with the use of in-line SMT tails Space/height constraints are countered by low profile Latching feature for stability in rugged environments Up to 2000 mating cycles for high durability Low insertion and withdrawal force 	Multimedia Business Machines Computer Peripherals Environmental Equipment and Controls Industrial Instruments Production Equipment
	Commercial Micro-D	Commercial Micro-D products offer an economical solution for commercial applications that require the density of a micro-miniature connector.	1.27 mm (.050") Pitch I/O 9, 15, 25 Circuit Single Row Receptacles 18, 30, 50 Circuit Stacked PCB-receptacles Vertical or Right Angle Standard Cable Assemblies Crimp and Solder Max Current is 3.0 A Pre-assembled 9, 15, and 25 Circuit Pig-tails and Cable Kits SynqNet-compliant Cable Assemblies	 Dual contact crimp for more reliable tensile strength No cable distortion due to superior strain relief End-user can terminate receptacle for economical assembly solution Molex application tooling available for high quality termination Short lead times for reliable product availability 	Data (General) Business Machines Computer Peripherals Industrial (General) Medical Storage Industrial Instruments Production Equipment



Industrial Connectors Circular I/O

	Product		Product Variations		
lmages	Froduct Family	Family Description	Specifications	Features and Benefits	Applications
	Nano-C (M8)	Nano-C PCB mount receptacles are ideal for use in applications such as medical and consumer electronics where space is a premium and low weight is desired.	PCB Mount Plug and Cable Assemblies 3 and 4 Circuit PCB Plug Vertical or Right Angle 1, 3, 6, 12, 20 Foot Cables Male or Female — Pigtail External/Internal Locking Thread	 IP 67 and NEMA 6P ratings for water and dust tight for functional integrity High-temperature thermoplastic housing withstands lead-free processing Compatible with both coupling ring and snap-lock versions M8 thread size maximizes use of PCB real estate Metal latches plug into PCB reducing strain on PC tails and solder joints 	Industrial (General) Construction and Mining Energy and Power Environmental Equipment and Controls Industrial Instruments Production Equipment Transportation Equipment
	Euro-C™ (M12)	Our molded quick disconnect cables and connectors are offered in the standard safety yellow and are compliant to the UL, CSA, NEMA 6P and IP67 standards.	Cable Assemblies - Euro-C Right Angle to Euro-C Straight - Euro-C Right Angle to Pigtail - Euro-C Straight to Euro-C Right Angle - Euro-C Straight to Euro-C Straight - Euro-C Straight to Pigtail 2, 4, 5, 6, 10 m Lengths 3, 6, 12, 15, 20 ft Lengths Y-Splitters and T-Adapters 3,4 or 5 Circuits; Shielded	 Indicator ring for mating assurance Spring loaded coupling resists vibration Shielded cable 	Industrial (General) Construction and Mining Environmental Equipment and Controls Production Equipment Transportation Equipment
	Micro-C™ (M12)	Mating with all conventional circular brands, these cordsets have added features of large, easy-to-use coupling rings, positive lock indicator rings, hooded sockets, superior strain relief and more.	Cable Assemblies - Straight Plug - Right Angle Plug - Extension Cords - 3, 6, 9, 12, and 20" Lengths - Internal and External Threads Straight Receptacle Automotive Colour Code	Larger coupling ring for ease of mounting Mating assurance indicator Epoxy sealed receptacle shells for positive reliability NEMA 6P rating Compatible with European DIN standard Prox switches Superior strain relief	Industrial (General) Construction and Mining Environmental Equipment and Controls Production Equipment Transportation Equipment
	Mini-C™ (M18/ M22)	Mating with all conventional circular brands, these cordsets have added features of large, easy-to-use coupling rings, positive lock indicator rings, hooded sockets, superior strain relief and more.	Cable Assemblies - Straight Plug - Right Angle Plug - Straight Receptacle - Male or Female - 3, 6, 9, 12, 20" Lengths Right Angle Receptacle Field Attachable Plug Tee Splitter	Interfacial terminal seals complying with ANSI B93 are augmented by a secondary ring seal, eliminating contamination to the interconnect system Machined contacts with insulation support protect against wire damage caused by repeated cord flex or severe angle bends Positive mating is visually assured by a green line, clearly viewable during inspection when the Mini-C connector is properly installed The Mini-C connector's longer coupling ring provides a larger gripping area while adding support to the plug body	Construction and Mining Environmental Equipment and Controls Production Equipment Transportation Equipment
	PolyPort™ Junction Boxes	PolyPort Junction Boxes allow the user to make multiple connections from a single source, thereby reducing the number of cables required for a control system. The user can label each port so that determining the piece of equipment being powered is quick and easy.	Micro-C Distribution Box 4, 6 and 8 Ports 300 VAC Max 7 Amps per Unit Max 5 Amps per Port Max Mini-C Distribution Box 4, 6 and 8 Ports 600 VAC Max 7 Amps per Unit Max 5 Amps per Port Max	IP 68 and NEMA 6P ratings allow junction boxes to be submerged for more than 30 minutes at a depth of eight feet without compromising integrity Gold plated contacts increase mating durability Make first break last contact provided reduces danger of electrical shock Metallic label allows ports to be identified easily, markings may be wiped off and relabeled Two through holes allow the box to be anchored in place	Construction and Mining Environmental Equipment and Controls Production Equipment Transportation Equipment



Industrial Connectors Terminal Blocks

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lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	High Power Blocks	Meet the requirements demanded by high power board connections with the Beau® Eurostyle® 600 V High Power Block family accommodating power requirements from 20.0 A to 115.0 A.	Wire-to-Board Fixed Mount Horizontal Wire Entry Screw Rising Cage Clamp 8.00 mm to 15.00 mm pitch 20 to 115 A Current rating 300 or 600 V Voltage rating 2 to 16 Circuits 1 to 22 AWG	Extended wire entry funnel eliminates exposed wire strands and reduces the chance of shorting Rising cage pressure clamp termination compresses wire evenly providing a secure contact without wire damage or intermittence Combination slotted/posi-drive screw head improves transmission of torque for greater wire retention Multiple PCB terminals distribute power more evenly, reducing "hot spots" High temperature housing material is able to withstand lengthy solder preheat conditions	High-End Computer Construction and Mining Energy and Power Production Equipment Telecom Infrastructure
	EuroMax™	The EuroMax offers the benefits of a 600 V highpower terminal block with the convenience of a pluggable design. EuroMax complements our existing line of fixed mount 600 V high-power terminal blocks by offering users a choice of a pluggable design.	Wire-to-Board Pluggable Plug and Right Angle Header With or Without Retention Screws Horizontal Wire Entry Screw Rising Cage Clamp 12 mm Pitch 2 to 10 Circuits Max 85 A at 600 V 3 to 14 AWG	 Pluggable design for easy servicing or replacement of device in the field Highly redundant parallel contacts provide maximum connection High temperature housing withstands lengthy solder preheat conditions Header blade has three PC board tails ensuring a robust connection to the PCB Copper based alloys provide best thermal match Stamped one-piece terminals improve cost efficiency 	High-End Computer Construction and Mining Energy and Power Production Equipment Telecom Infrastructure
3 2 2 2 2 2 2 2 2 2 2	EuroMate®	EuroMate Pluggable PCB Terminal Blocks offer a higher density PCB connection. It has a large and robust wiring terminal interface with a higher density PCB connection. In addition, the PCB connection is pluggable to allow for ease of factory assembly and field repair service.	Wire-to-Board Dual Row Plug and Header Horizontal Wire Entry 3.81 and 5.08 mm Pitch 2 to 24 Circuits 12 to 15 A, 300 V 12 to 22 AWG	 ■ Single row of female contacts interfaces with industry standard Eurostyle® headers, doubling the pitch at the wiring terminal ■ Staggered and vertically offset wiring terminals ensure easier wiring access ■ Rear barrier prevents over insertion of wire ■ Single piece insulator is a cost efficient solution ■ Mounting flanges with large gussets accommodate panel mounting and prevent bowing or flexure ■ Accepts 6.35 mm (.250") ring and spade wiring terminals and works with 6.35 mm (.250") standard and #2 Philips screwdriver ■ Plug has large smooth ends that are easy to grasp and mate/unmate 	Security and Alarms Production Equipment Environmental Equipment and Controls Energy and Power Industrial Instruments Telecom (General)
	Eurostyle®	Eurostyle terminal blocks from Molex are available in both single- piece fixed, two-piece pluggable and Multi- Level versions.	Fixed (1-Piece) - Wire-to-Board - Single and Multi-level - Horizontal, Vertical and Angled Entry - 3.50 to 15.00 mm Pitch - 8 to 115 A - 150 to 600 V - 2 to 25 Circuits - 1 to 30 AWG Pluggable (2-Piece) - Wire-to-Board - Plug and PCB Header - 3.50 to 12.00 mm Pitch - 10 to 85 A - 150 to 600 V - 2 to 24 Circuits	Rising cage pressure clamp provides a secure, reliable contact without strand damage or intermittence Fixed or pluggable for design flexibility Dovetail feature (on some fixed versions) allows for easy assembly of larger circuits Pluggable styles have a polarization feature to prevent mismating Optional retention screws and inserts secure the plug to the header to prevent accidental disconnection	Security and Alarms Production Equipment Environmental Equipment and Controls Energy and Power Industrial Instruments Telecom (General)
	Barrier Terminal Strips	Molex barrier strips provide the solution to your wiring needs. With the variety of screw, terminal and mounting options available, you can find the barrier strip that best fits your application while reducing assembly costs and improving interconnect performance.	Dual- and Tri-Barrier Style Wire-to-Board and Wire-to-Wire Single and Double Row Feed Through and Horizontal Wire Entry 6.35 to 17.50 mm Pitch 10 to 50 A 150 to 600 V 2 to 32 Circuits 6 to 30 AWG	Accepts bare or terminated wires, with no special tools required for installation for quick and easy field termination Selection of wire-to-board or feed-through wire-to-wire styles for design flexibility Broad range of screw, terminal and mounting options saves on assembly costs and improves interconnect performance Molex terminal strips are robust and durable, so they are ideal for multiple terminations Most strips are molded to exact length to present a finished, more professional look	Security and Alarms Production Equipment Environmental Equipment and Controls Energy and Power Industrial Instruments Telecom (General)



Industrial Connectors Solderless Terminal Products

	Product		Product Variations		
lmages	Family	Family Description	Specifications	Features and Benefits	Applications
	Splices	Splices enable the parallel or end-to-end solderless connection of solid and/or stranded wires.	3 Way, 4 Way, Multi-Lock, Wing Lock Butt — Funnel Entry, Step Down, Window Closed-End Connector Insert Closed-End Insulated, Twist Lock MagKrimp™ (Magnet Wire) Parallel, Parallel Solder Perma-Seal™ 4/0 to 26 AWG Barrel: Avikrimp™ (Nylon Insulation) InsulKrimp™ (PVC Insulation) Krimptite™ Nylakrimp™ (Nylon Insulation) Versakrimp™ (Seamless Barrel)	 High speed crimping provides the lowest applied cost. Easy, safe and clean to use with no soldering required Compression crimp produces a strong and dependable connection Precision crimp tooling provides consistent terminations, greatly reducing down time and human errors Mini Mac applicators fit into industry standard crimp presses 	Automotive (General) Construction and Mining Energy and Power Environmental Equipment and Controls Industrial Instruments Production Equipment Transportation Equipment
	Quick Disconnects	Quick Disconnects are connectors that mate with male tab terminals, tab adapters, terminal blocks fitted with male tabs and other electro- mechanical components like switches and relays.	Straight, Flag, Piggyback Styles PCB Straight Tab, PCB Flag Tab Male, Female 2.79 mm (.110") to 6.35 mm (.250") Tab Width 0.30 mm (.012") to 1.20 mm (.047") Tab Thickness 10 to 26 AWG Barrel Type: Avikrimp® (Nylon Insulation with support sleeves) Expanded Flare InsulKrimp® (PVC Insulation) Krimptite® Open Vibrakrimp®	 The terminal itself is constructed of tinplated brass, per NEMA specifications Quick disconnects can be fully insulated, non-insulated, or partially insulated The insulators are either molded vinyl (PVC), extruded nylon or molded nylon 	Automotive (General) Construction and Mining Energy and Power Environmental Equipment and Controls Industrial Instruments Production Equipment Transportation Equipment
6848	Ring Tongue Terminals	Ring Tongue Terminals are the basic tongue type. They are the safest and most reliable because they cannot be disconnected unless the screw is completely removed.	Ring Spade, Block Spade, Snap Spade, Flanged Spade, Hook Stud Size 3/4" (M18) — 0 (M1.5), AWG UL listed, CSA Certified Barrel: Avikrimp® (Nylon Insulation) Flared InsulKrimp® (PVC Insulation) Krimptite® NiAc™ (Insulation) Nylakrimp® (Nylon Insulation) Nylakrimp® (Nylon Insulation) Nylakrimp® Funnel Entry (Nylon Insulation) Perma-Seal™ (NiAc) Versakrimp™ (Seamless Barrel)	 Crimps in industry standard tooling Seamless barrel design Can be easily crimped Flared barrel entry for easy wire insertion AWG wire size identification on barrel Made of CDA-110 Copper stock offering 100% conductivity 	Automotive (General) Construction and Mining Energy and Power Environmental Equipment and Controls Industrial Instruments Production Equipment Transportation Equipment
TOS	Battery Cable Lugs	Heavy duty ring tongue terminals for 250 MCM to 8 AWG wire sizes and 600 V applications.	Ring Terminals Flared Barrel Stud Size 10 (M5) to 1/2" (M12) 4/0 to 8 AWG	 UL listed, CSA certified Crimps in industry standard tooling Seamless barrel design Can be easily soldered or crimped Flared barrel entry for easy wire insertion AWG wire size identification on barrel Made of CDA-110 Copper stock offering 100% conductivity 	Automotive (General) Construction and Mining Energy and Power Transportation Equipment
	Magnet Wire	Molex offers a complete line of crimp terminals and connectors that provide solutions for splicing and tapping Magnet Wire and aluminum wire. Our taps and splices have an open side that permits easy access to wire and makes internal coil tapping easy.	Ring Terminals, Spade Terminals Taps and Splices Transition Washers 8 through 1/2" Stud Sizes	Terminals and connectors are made from copper alloy, tin-plated and are designed to penetrate magnet wire insulation as they are applied, eliminating the need for stripping, brazing and welding	Automotive (General) Construction and Mining Energy and Power Environmental Equipment and Controls Transportation Equipment
	Heat Sealable Terminals	Perma-Seal™ all-weather Heat Sealable Terminals and splices provide a rugged, environmentally sealed connection for wire sizes 8 to 22 AWG that will insulate, seal and protect wire splices from physical abuse and abrasion, water, salt and other corrosive compounds.	Ring, Spade, Hook Terminals, Butt and Step Down Butt Splices Quick Disconnects Snap Plugs and Receptacles 6 (M3.5) to 3/4" (M18) Stud Size 8 to 22 AWG NiAc™ Insulation	Long-lasting, moisture-proof connections that withstand water, salt, condensation, corrosion and heat, all of which cause serious problems for conventional, unsealed splices Inner seal repels moisture incursion, even during pressure cycling Stands up to some of the most rigorous tests that can be applied to highperformance splices, such as the salt fog test MILT-7928 Wall thickness is significantly thicker than the polyolefin or nylon products, providing excellent durability Shrinks up to 40% faster than polyolefin and nylon products	Automotive (General) Construction and Mining Energy and Power Environmental Equipment and Controls Transportation Equipment Marine



Memory Card Connectors Memory Card Systems

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	SIM/ Smart Card	Molex offers a range of Subscriber Identification Module Card connectors for the Mobile Communi- cations Industry. Available versions include: Landed SMT open switch, landed through hole open switch, friction SMT open switch, friction through hole open switch.	6 and 8 Circuit SIM Connectors - Hinged, Scalable and Dome SIM - Low Profile, With Ejector/Switch - SIM Card Holder 6, 8 and 16 Circuit SmartCard Connectors - Standard or Low Profile Friction Style - Open, Closed Switch - SMT and Through-hole	Surface mount or compression mounting With or without card holder Durability: 200,000 cycles min. Design flexibility Ultra low profile With or without card detection switch Cycle life up to 100,000 card insertions	Multimedia Security and Alarms Computer Peripherals Mobile Devices
	Compact- Flash	Molex offers both Type I and Type II CF card connectors to meet the market needs for both types of systems. Available products include CompactFlash (CF) headers, ejectors, card kits and CF-to-PC card adapters.	1.27 mm Pitch, 50 Circuits Accepts Type I and II Cards SMT Headers and Ejectors Top/Bottom/Vertical Mounting, Left/Right Side Flip Button Left/Right Side Push-Push Type Straddle Mount Receptacle PC Card Adapter Card	Size 50 circuits Short overall width for space savings Unal row 1.27 mm (.050") pitch at card interface and 0.635 mm (.025") pitch in-line SMT tails Integral one-piece frame ground and solder tab Front and rear solder tabs for secure PCB retention 1.65 mm (.065") stand-off	Comfort and Infotainment Consumer (General) Multimedia Security and Alarms Business Machines Computer Peripherals Low-End Computer Industrial Instruments Broadcast Equipment Mobile Devices
	SmartMedia	SmartMedia* is about one-third the size of PC Cards and only 0.76 mm thick, making it an extremely light and thin type of memory card option.	22 Circuits SFFDC Standards 1 A per pin 125 V Up to 1,000 Cycles	 Compact size provides space saving Manual access for card extraction Beveled spring contact design provides secure contact force and mating retention 	Comfort and Infotainment Consumer (General) Brown Goods Multimedia Security and Alarms Computer Peripherals Mobile Devices
	MultiMedia- Card	Molex supports the latest miniature MultiMediaCard applications for use in digital still and video cameras, digital audio players, PDAs and SmartPhones.	2.50 mm (.098") Pitch, 7 Circuits MMC Standard Normal and Reverse Mount With or Without Ejector Unshielded 2.40 to 7.20 mm High 0.5 A Max Up to 10,000 Cycles	Two off-set terminals allow first make/last break Low profile to meet thin portable equipment needs Metal shielding provides ESD Protection Top ledges facilitate card insertion and retention Visible solder tails allow for easy solder inspection Pegs assist in automatic PCB placement	Comfort and Infotainment Consumer (General) Brown Goods Multimedia Computer Peripherals Mobile Devices
	RS-MMC	RS-MMC connectors are used in ultra-small mobile phones and other mobile devices where space savings is a premium. The RS-MMC flash memory format offers the same high performance and functionality as the standard MultiMediaCard format, in approximately half the size.	2.50 mm Pitch, 7 Circuits Standards: MultiMediaCard ver.3.3 or Above Normal Mount Push-Push Ejector 0.5 A 125 V Up to 10,000 cycles	Compact size gives space savings in digital camera applications Push-push ejector type for easy card extraction with tactile feel Metal shielding for ESD protection 12 shell tabs provide additional grounding and pcb retention Probe holes allow electrical testing Gold-plated beveled contacts for secure electrical contact	Consumer (General) Multimedia Security and Alarms Computer Peripherals Mobile Devices
	SD Card and SD I/O Card	SD (Secure Digital) Memory Card technology is an innovative new miniature memory device solution that offers high storage capacity; fast data transfer rates and excellent security for digital data.	2.50 mm (.098") Pitch, 9 Circuits SD and MMC Standard Normal and Reverse Mount Shielded and Unshielded 2.75 to 3.40 mm High 0.5 A Max Up to 10,000 Cycles	 Off-set terminal provides first make/last break functionality Protect switch prevents accidental deletion of data Detect switch identifies existence of card Metal cover offers grounding and ESD protection Beveled spring contact for secure mating Push-push eject mechanism for easy card extraction Keying feature prevents improper card insertion 	Comfort and Infotainment Consumer (General) Brown Goods Multimedia Security and Alarms Computer Peripherals Mobile Devices

 $^{^{}st}$ SmartMedia is a trademark of Toshiba Corporation



Memory Card Connectors Memory Card Systems

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	miniSD	Molex's miniSD card connectors are designed to accept thumbnail size miniSD flash memory cards used in mobile phones to exchange data such as photos, video games and email. The miniSD connector is available in standard and reverse mounts and comes with an adapter to be used with existing SD ports.	1.30 mm Pitch, 11 Circuits Normal and Reverse Mount Shielded SMT Headers Push-Push Ejector Adapter to SD-Card 2.03 to 2.63 mm High Up to 10,000 Cycles	Small form factor gives 60 % overall volume space savings versus standard SD Standard and reverse types for Design flexibility Molded spring for card retention Dual-beam contact ensures secure electrical connection Adapter option enables use with SD port Integral solder tabs provide Hold-down and grounding	Consumer (General) Multimedia Security and Alarms Computer Peripherals Mobile Devices
	Memory Stick and Memory Stick Duo	Molex's Memory Stick Duo* connector provides about 75 % total space savings compared to the original Memory Stick* socket form factor. The Memory Stick format was developed by Sony, but is licensed to a wide variety of makers of portable devices such as PDA's, cell-phones, audio units, digital cameras and more.	1.50 mm Pitch, 10 Circuits Memory Stick and Duo Versions Shielded Normal Mount Push-Push or No Ejector 2.20 to 4.75 mm High Up to 12,000 Cycles	Push-push eject ensures easy card insertion/extraction and secure retention Fully shielded with top window for ESD protection and card visibility Security lock enables read/write capabilities and data security Locking feature increases card retention Card polarization ensures correct card insertion Bevelled spring contacts for secure contact retention	Consumer (General) Multimedia Security and Alarms Computer Peripherals Mobile Devices
	xD-Picture Card	The xD-Picture Card** standard was developed for digital camera storage use. The xD name refers to eXtreme Digital, which relates to the technology's excellent ability to record, store and transport digital images. Molex offers several different types of xD-Picture Card connectors, including push-push and without ejector types in both tape and tray packaging.	1.0 mm Pitch, 19 Contacts Shielded SMT Headers Normal Mount Push-Push or No Ejector Stand-off or No Stand-off 2.70 to 4.50 mm High	Compact size gives space savings for digital camera applications Push-push and without ejector types for design flexibility Metal shielding with shell tabs for ESD protection and grounding support Gold-plated beveled contacts ensures secure electrical contact Internal ESD shield provides aditional shielding and grounding support Stand-offs allow tracing beneath connector	Consumer (General) Multimedia Security and Alarms Computer Peripherals Mobile Devices
	TransFlash	TransFlash*** is the world's smallest memory card storage system. Offering over 70 % volume savings versus miniSD, TransFlash provides ultimate space savings and up to 256 MB of removable memory storage for cellphones and other mobile devices.	1.10 mm Pitch, 8 Circuits TransFlash Standards Hinge and Push-Push Type Normal Mount 0.5 A 100 V (500873), 10 V (500901) Up to 5,000 Cycles (500873), 1,000 Cycles (500901)	Ultra small size gives space savings for mobile applications Hinge and push-push types for design flexibility Metal shielding with shell tabs for ESD protection and grounding support Gold-plated beveled contacts ensure secure electrical contact Wide open area on shells accommodates pick-and-place Solder tails on inside of design give PCB space savings	Consumer (General) Multimedia Security and Alarms Computer Peripherals Mobile Devices
	Combo Memory Card Connectors	Molex offers a wide range of Miniature Memory Card "Combo" connectors to provide the ultimate in design flexibility and space savings. Our range includes Combo versions that include two to six different media.	Unshielded Normal Mount 2-in-1 (MS/xD) 3-in-1 (SSFDC/MS/xD) 3-in-1 (CF/SD/MMC) Shielded Normal Mount 3-in-1 and 4-in-1 (SD/MMC/MS/xD) 3-in-1 and 4-in-1 (SD/SDIO/MMC/MS) 5-in-1 and 6-in-1 (SD/SDIO/MMC/MS, SSFDC, XD) Shielded Reverse Mount 4-in-1, 5-in-1 and 6-in-1 (SD/SDIO/MMC/MS, SSFDC, XD)	Same form factor size accepts various media for space savings Low Profile designs Fully shielded for ESD protection SMT tails provide solder joint protection	Consumer (General) Multimedia Security and Alarms Computer Peripherals Mobile Devices

- Memory Stick and Memory Stick Duo are trademarks and registered trademarks of Sony Corporation
 xD Picture Card is a trademark of Olympus Optical Co. Ltd. and Fuji Photo Film Co., Ltd.
- *** TransFlash is a trademark of San Disk Corporation



Data Connectors Internal Memory Sockets

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
Molex	SIMM	1.27 mm (.050") pitch SIMM (Single Inline Memory Module) products come in a variety of circuit sizes and entry styles. They mate with JEDEC MO-116 modules.	1.27 mm (.050") Pitch 40 to 100 Circuits Vertical, Right Angle, 22.5° Angle, 40° Angle Through-hole or SMT 1.0 A Max JEDEC MO-116 Modules	Zero insertion force contacts improve socket and module contact life and provide for fast on-line assembly Guaranteed 2 points of contact per readout with standard JEDEC module Anti-overstress latch feature provides extra protection during module removal Polarization posts provide orientation for proper loading of socket into printed circuit board Polarization rib properly orients module to socket EIA standard dimensions	Brown Goods Medical Multimedia Data (General) Business Machines Computer Peripherals Low-End Computer High-End Computer Storage Broadcast Equipment Telecom Infrastructure Networking
	DIMM	1.27 mm (.050") pitch DIMM (Dual In-line Memory Module) is an industry standard 8-byte DRAM socket in 168 contact configuration. Mates with JEDEC MO-161 modules.	1.27 mm (.050") Pitch Vertical, Right Angle, 25° Angle 100, 128, 160, 168 and 200 Circuits Through-hole 1.0 A Max JEDEC MO-161 or MO-172 Modules	 Accepts JEDEC M0-161 modules for 100% industry compatibility Dual ejector latches for easy module removal Latches include feature to minimize micro motion Palladium Nickel with Gold flash plating for improved reliability Added contact wipe for improved reliability Optional voltage and function keying 	Brown Goods Medical Multimedia Data (General) Business Machines Computer Peripherals Low-End Computer High-End Computer Storage Broadcast Equipment Telecom Infrastructure Networking
	DDR DIMM	1.27 mm (.050") pitch Double Data Rate DIMM. This 184-circuit DIMM socket is available in vertical and angled versions. Mates with JEDEC MO-206 modules.	1.27 mm (.050") Pitch Vertical, Right Angle, 25° Angle 100, 184 and 200 Circuits Through-hole or Press-fit 1.0 A Max JEDEC MO-161 or MO-172 or MO-206 Modules	Supports double data rate (DDR) architecture Molded-in identification for voltage and pin number 1 Dual ejector latches for easy module removal Module pre-alignment feature prevents mismating Stamped and formed contacts reduce debris at interface Added contact wipe for improved reliability	Brown Goods Medical Business Machines Low-End Computer High-End Computer Storage Broadcast Equipment Telecom Infrastructure Networking
The second secon	DDR-II DIMM	DDR-II is a natural progression from the existing DDR standard, increasing the data bandwidth, by doubling the data fetch rate at the same bus frequency.	1.00 mm (.039") Pitch 240 Circuits Vertical and 25° Angle Through-hole and Press-fit JEDEC MO-237 Modules 0.5 A Max	Accepts JEDEC MO-237 module for 100 % industry compatibility Dual ejector latches for easy module removal with features to minimize micro-motion Beveled metal pins provide PCB retention during and after soldering	Multimedia Data (General) Low-End Computer High-End Computer Storage Telecom Infrastructure Networking
	Mini-DIMM	Mini-DIMM Modules offer a small form factor alternative to existing DDR and DDR-II DIMM memory modules. The 0.6 mm pitch JEDEC MO-244 A modules offer considerable space savings compared to the standard JEDEC modules.	0.60 mm (.024") Pitch Vertical Surface Mount 200 or 244 Circuits 0.5 A Max JEDEC MO-244A Modules	Polarization keys ensure proper module insertion Ergonomic plastic latch provide excellent module retention and easy ejection of module Comes with pick-and-place covers in tray packaging for automatic mounting and processing Center plastic peg ensure good location during placement to PCB Fitting nails at both ends and center of housing will provide additional mechanical strength after soldering Low profile socket will fit into slim enclosures	Multimedia Computer Peripherals Low-End Computer High-End Computer Telecom Infrastructure Networking



Data Connectors Sockets and Heat Sinks

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	Micro PGA	Molex Micro PGA socket offers the lowest profile socketing solution available today. Available products support the latest processors from Intel, AMD and Sun and meet the high density and size constraint requirements of today's light and thin notebooks and PCs.	1.27 mm Pitch Micro PGA Sockets Ball Grid Array (BGA Mount) Zero Insertion Force (ZIF) 478, 479, 604, 754, 959 Circuits 30 µ", 15 µ" and Gold Flash Plating SMT 0.5 to 1.2 A Max	Housing design provides superior thermal performance in an ultra-thin package 45% more pin density versus traditional through-hole PGA grid pattern design Integral contact and lead design Low profile dual-beam contact provides low inductance and conductor resistance Compliant SMT leads ensure good solder joint reliability The ZIF actuation slide cover engages the contacts by simply turning cam mechanism with a screwdriver	Data (General) Business Machines High-End Computer Low-End Computer Storage Telecom Infrastructure Networking
	LGA Sockets	Molex's MCIA™ (Molex Compression Interface Array) product family incorporates our patented LGA (Land Grid Array) technologies.	1.27 mm (.050") Pitch MCIA™ LGA Socket 152, 166, 203 Circuits SMT 30 V DC 0.5 A Max Gold Plating	Reliable LGA contact design ensures true position and coplanarity requirements Molded 1-piece design includes both wafer body and frame Unique packaging plate provides zeroinsertion force for ease of chip assembly and protects contacts during handling Approved drop-in replacement according to TI specifications	Data (General) Business Machines High-End Computer Low-End Computer Storage Telecom Infrastructure
	CoolFin™ Heat Sinks	CoolFin Heat Sinks are made from stamped fins that are linked together and soldered to a base plate. Available products include: Stamped Fin, Skived, Extruded and Integrated Heatpipe versions.	Variations for AMD and Intel 1667 to 3700+ MHz Processors 3000 to 6000 RPM 0.26 to 0.72°C/W 24.0 to 46.0 dB-A	CoolFin™ Stamped Fin Heat Sinks are linked together and soldered to a base plate Skived Heat Sinks solve the demanding thermal requirements of low profile server and telecom chassis space restrictions Molex aluminum extrusion heat sinks are designed to maximize thermal efficiency in a low cost and light weight package Heat pipes raise the average temperature of the fins local to their contact points thus increasing overall heat dissipation	Data (General) Business Machines High-End Computer Low-End Computer Storage Telecom Infrastructure Networking



lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	Serial ATA	Molex's leadership in designing and specifying the standard for interconnect products that support the new Serial ATA platform has helped ensure that customers enjoy leading-edge technology interconnect solutions for desktop and notebook storage.	Signal Plug Right Angle Signal Plug Vertical Standard Height Receptacle Extended Height Receptacle Through-hole/SMT/Pressfit Signal Cable Straight Signal Cable R/A Signal Cable Latching Power Cable Assemblies IDT and Crimp Terminals	Differential pair signaling technology self-cancels interference without the need for twisting wires Combined signal and power interface, with built-in hot-plug capability, is ideal for blind-mating applications Reductions in voltage and pin count enable improved power consumption and management Smaller, easier-to-route cables for improved airflow and thermal dynamics Backward compatible with existing ATA software drivers and runs on standard operating systems without modification Scalability provides significant headroom for future enhancements to the computing platform	Brown Goods Medical Multimedia Data (General) Business Machines High-End Computer Low-End Computer Storage
	SCA-2	Designed for attaching small form factor disk drives to backplane arrays in various storage applications, these SCA-2 receptacles carry all required signals, power and auxiliary signals within a single durable interface.	40 or 80 Circuits Right Angle Through-hole Vertical Press-fit Vertical Through-hole	Conform to Small Form Factor Specifications Backplane receptacles for use with SCSI and Fibre Channel disk drives Rugged blind-mate guide ears with integral ESD grounding contacts Metal board-lock clips for easy PCB mounting Staggered hot plug first-make, last-break contacts Surface Mount Compatible	Data (General) Business Machines High-End Computer Storage Telecom Infrastructure Networking
	iCool™ VRM Connector	Today's high performance microprocessors require highly regulated DC-to-DC power conversion located very near to the processor. Molex's new iCool Low Profile VRM Connector acts as a socket for vertical voltage regulator modules (VRM's) in servers, PCs and workstations.	1.00 mm (.039) Pitch iCool™ Low Profile Voltage Regulator Module Vertical and Right Angle With or without Latches 20/22 Signal Contacts 72/88 Power Contacts Through-hole or SMT	 Open housing allows for airflow to cool the contacts much like a heat sink keeping contacts cool even at high current Unique reverse angle latch notch feature retains the VR module securely during shock testing Four beveled metal pins at each end secure the connector to PCB ensure shock and vibration loads transferred to PCB Through-hole pin field design allows easy routing of signals between processors and chip sets Selectively gold plated contacts provide electrical stability for long reliability life Low loop inductance design is ideal for high slew rates characteristic of today's high performance VR's 	Business Machines Computer Peripherals Low-End Computer High-End Computer
	PCI Express	PCI Express is a new serial I/O technology that is compatible with the current PCI software environment. It provides low-cost, scalable performance for the next generation of computing and communications platforms, while also providing a long-term path to improved I/O slots.	1.00 mm (.039") Pitch Vertical Edgecard 1, 4, 8, 16, 24 Ports 36—230 Circuits Through-hole Tin Plating 1.1 A Max	 Complies with the PCI SIG specification for desktop PCI Express implementation Supports 2.5 Gbps data transfer rate (per pair data bandwidth) Scalable modular design maximizes card interoperability for user flexibility — 1x, 4x, and 8x add-in card can plug into 16x connector Enables hot plug and hot swap Simple Through-hole design supports low-cost board assembly process 	Data (General) Business Machines High-End Computer Low-End Computer Storage Telecom Infrastructure Networking



Backplane Connectors Backplane Connectors

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	GbX®	The GbX* connector system is designed for leading edge backplane applications that require a speed of 6—10 Gbps and high interconnect density. GbX is available in multiple differential pair configurations, integrally shielded with ground planes between both differential pair columns and rows.	1.85 mm (.073") Pitch Spacing 3, 4 and 5 Pair Connector System Custom Daughtercard Modules - Signal Wafers (3, 4 and 5 Pair) - Power Modules - Guide Pins, End Caps Vertical Male Headers - Open End - Guide and Code Left/Right - 7, 10 and 25 Column Right Angle Male Headers - Signal Wafer - Guide or Power Module Backplane Power Standalone Guide Pins	 Up to 6.5 Gbps, 138 circuits per 25 mm Data rate options up to 10.0 Gbps support future daughtercard speed upgrades Bifurcated contact beams in daughtercard receptacle ensure greater reliability with two points of contact to header pin Modular daughtercard components within GbX L-Series available allow creation of custom, cost-effective receptacle assemblies Optimized differential pair contacts for easier board trace routing Up to 69 real differential pairs per linear inch (27 real differential pairs per 10 mm) Robust design with male pins on the daughtercard to accommodate larger, heavier daughtercards 	High-End Computer Storage Telecom (General) Telecom Infrastructure Networking
	VHDM- HSD™	The Very High Density Metric High Speed Differential (VHDM-HSD*) connector system has been designed for differential-pair architecture applications that require very high interconnect density and signal integrity.	2.00 by 2.25 mm (.079 by .089") Pitch 5, 6 and 8 Row Connector System Custom Daughtercard Modules - R/A Signal Wafers (5, 6 and 8 Row) - Power Modules - Guide Pins Vertical Male Headers - Open End - Guide and Code Left/Right - 10 and 25 Column Right Angle Male Headers - Signal Wafers - Guide or Power Module Backplane Power - 2, 3 circuits, 10.0 A Standalone Guide Pins Through-hole and Press-fit	 Up to 5.0 Gbps, 72 circuits per 25 mm 2.00 by 2.25 mm (.079 by .089") pitch provides real signal density of 10 differential pairs for 5-row and 6-row and 15 differential pairs for 8-row Ground planes between signal columns provide tightly controlled impedance for rise times down to 50 picoseconds (10−90%) Ground pins are in the same grid as signal pins, allowing wider channels for PCB routing and traces up to 0.25 mm (.010") wide 6-row or 8-row VHDM-HSD wafers can be applied to the same stiffener as standard VHDM® 6-row or 8-row wafers 	High-End Computer Storage Telecom (General) Telecom Infrastructure Networking
4488	VHDM®	The Very High Density Metric (VHDM*) connector system is designed for board-to- board applications that require very high interconnect density and high-speed signal integrity.	2.00 by 2.25 mm (.079 by .089") Pitch 6 and 8 Row Connector System Custom Daughtercard Modules - R/A Signal Wafers (6 and 8 Row) - Power Modules - Guide Pins Vertical Male Headers and Stackers - Open End - Guide and Code Left/Right - 10 and 25 Column Right Angle Male Headers - Signal Wafers - Guide or Power Module Backplane Power - 2, 3 Circuits, 10.0 A Standalone Guide Pins	 Up to 2.5 Gbps and 100 real signals per 25 mm Internal ground planes control impedance and minimize crosstalk Press-fit right angle receptacle avoids solder related defects Can combine signal, power, and guidance in one connector 10.0 A power blades allow 120.0 A per 25 mm power density Wafer construction permits very accurate location of ground planes relative to the signal contacts 	High-End Computer Storage Telecom (General) Broadcast Equipment Telecom Infrastructure Networking Telecom (Home/Office)
	HDM®	The High Density Metric (HDM*) connector system is designed for applications that require high interconnect density and high-speed signal integrity.	2.00 by 2.00 mm (.079" by .079") Pitch 6-Row Connector System Custom Daughtercard Modules - Right Angle Signal Wafers (6 Row) - Power Modules (15.0 A) - Co-Ax and Fibre Modules Vertical Male Headers and Stackers - Open End - Guide and Code Left/Right - Midplane and Shroud Housings - 72 and 144 circuits Backplane Power - 3 circuits, 15.0 A Through-hole and Press-fit	 Up to 1.5 Gbps, 72 circuits per 25 mm Internal shielding allows sub nanosecond rise times with low crosstalk (see HDMPLUS®) Shielded and unshielded modules mate with the same backplane header (low cost on backplane) Mix and match signal, power and guidance shielded modules to optimize the connector to the application Tail lengths available in 0.50 mm (.020") increments to optimize to PCB thickness Meets Bellcore requirements 	High-End Computer Storage Telecom (General) Broadcast Equipment Telecom Infrastructure Networking Telecom (Home/Office)

 $^{^{\}ast}$ HDM, VDHM, VHDM-HSD, GbX are trademarks and registered trademarks of Teradyne, Inc.



Backplane Connectors Backplane Connectors

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	MFB™	Molex's MFB (Futurebus+) connector system is a modular 2.00 mm (.079") grid system for high-density, board-to-board and cable- to-board applications.	2.00 mm (.079") Pitch System 4 and 5 Row Connectors PCB Headers and Receptacles Shroud Housings and Code Keys Vertical and Right Angle Through-hole and Press-fit Up to 630 Circuits 100 V, Max 3.0 A	User-friendly IDT cable plug saves space, has a strong latch and provides an audible click when mating Tulip-shaped dual contact terminal design provides high normal force and low insertion force	Data (General) High-End Computer Storage Industrial Instruments Telecom (General) Broadcast Equipment Telecom (Home/Office)
	MZP™	Molex's new line of MZP hard metric connectors is IEC 61076-4-101 compliant and includes versions specified for CompactPCI, VMEbus and proprietary applications.	2.00 mm (.079") Pitch System 1, 5, 6 and 7 Rows 11, 19, 22, 25 Columns PCB Headers and Receptacles Shields and Code Keys Vertical and Right Angle A, B, C, CR and M Styles Press-fit Mounting Up to 175 Circuits Max 500 V, 1.0 A	IEC 1076-4-101 compliant Intermateable with other IEC compliant versions for sourcing flexibility Molex press-fit contact design with 4 points of contact and 3 kg of retention Split-beam receptacle contact for smooth insertion and 2 kg of retention Upper and lower shielding options for high-speeds with low cross-talk Multiple pin length for sequenced mating that allows hot swap Special options for non-standard pin loading Code keys with color and numerical ID insures correct mating	Data (General) High-End Computer Storage Industrial Instruments Embedded Systems Telecom (General) Broadcast Equipment Infrastructure Networking
	DIN 41612	The DIN 41612 is a standard for a variety of interconnection applications in telecom markets worldwide. This versatile connector system offers mating options for mother-board-to-daughtercard as well as parallel board-to-board and horizontal board-to-board stacking.	Meets IEC 603-2/DIN41612 Specifications 2, 3 and 4 Row Versions PCB Headers and Receptacles Vertical and Right Angle B, B/2, C, C/2, M Styles Q, Q/2, Q/3, R, R/2, R/3 Styles Through-hole and Press-fit Up to 128 Circuits	 Tulip-shaped contact design provides opposing points of contact PC tails are tapered to ease insertion of connectors into the PCB First-Make Last-Break option allows "Hot Plugability" Fork-style boardlocks can be soldered to the PCB A 12 position coding frame is integrated into the connector body The solder tails are treated with a flux stopping agent 	Data (General) Business Machines Industrial Instruments Production Equipment Telecom (General) Broadcast Equipment Telecom (Home/Office)



RF Connectors RF/Coaxial Connectors

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits		Applications
	MMCX	Molex MMCX connectors are a microminiature connector series designed for applications where densely populated electronic packages demand size and weight limitations while maintaining good RF characteristics.	Straight, R/A Cable Versions Vertical, R/A and Edge PCB Mounted Reverse Polarity Connectors Various Cable Types Beryllium Copper or Brass Contact Gold Plating	 Impedance: Frequency Range: Voltage Rating: Temperature: Locking: Durability 	50 Ohms DC—6 GHz 170 Vrms —55 to +155°C Snap-on Coupling 500 Cycles	Consumer (General) Medical Multimedia Data (General) High-End Computer Storage Industrial Instruments Telecom (General) Broadcast Equipment Telecom Infrastructure Networking Military
	МСХ	Molex MCX connectors are a subminiature snap- on connector offering a stable and durable connection while allowing electronic assemblies to be more densely packaged than other subminiature series.	Straight, R/A Cable Versions Vertical, R/A and Edge PCB Mounted Various Cable Types and Panel Mount Beryllium Copper or Brass Contact Gold Plating	 Impedance: Frequency Range: Voltage Rating: Temperature: Locking: Durability 	50 and 75 Ohms DC—6 GHz 335 Vrms —55 to +85°C Snap-on Coupling 500 Cycles	Consumer (General) Medical Multimedia Data (General) High-End Computer Storage Industrial Instruments Telecom (General) Broadcast Equipment Telecom Infrastructure Networking Military
	SMB	Molex SMB connectors are a subminiature connector series designed for applications operating to 4 GHz.	Straight, R/A Cable Versions Vertical, R/A and Edge PCB Mounted Various Cable Types and Panel Mount Beryllium Copper, Phosphor Bronze or Brass Contact Gold Plating	 Impedance: Frequency Range: Voltage Rating: Temperature: Locking: Durability 	50 and 75 Ohms DC—4 GHz 500 Vrms —65 to +165°C Snap-on Coupling 500 Cycles	Consumer (General) Medical Multimedia Data (General) High-End Computer Storage Industrial Instruments Telecom (General) Broadcast Equipment Telecom Infrastructure Networking Military
	Fakra SMB	Based on the standard SMB interface, this connector includes a keyed and color coded shroud for automotive telematics applications.	Straight, R/A Cable Versions, Vertical and R/A PCB Mounted Cable Types and Panel Mount Cable Assemblies Brass and Phosphor Bronze Contact Gold Plating	Nominal Impedance: Frequency Range: Locking: Durability	50 Ohms DC—4 GHz Bayonet 100 Cycles	Automotive Consumer (General) Multimedia Industrial Instruments
	SMA	Molex SMA connectors are high performance subminiature connectors for microwave frequencies.	Straight, R/A Cable Versions Vertical, R/A and Edge PCB Mounted Various Cable Types, Panel Mount Beryllium Copper or Brass Contact Gold Plating	 Impedance: Frequency Range: Voltage Rating: Temperature: Locking: Durability 	50 Ohms DC—18 GHz 335 Vrms —65 to +165°C Threaded Coupling 500 Cycles	Consumer (General) Medical Multimedia Data (General) High-End Computer Storage Industrial Instruments Telecom (General) Broadcast Equipment Telecom Infrastructure Networking Military
	SMP	Subminiature snap-on connector that operates to 40 GHz. Board-to-Board, blind-mate, cable and panel styles.	Straight, R/A Cable Versions Solder Type Vertical and Edge PCB Mounted Various Cable Types PCB and Cable Versions Beryllium Copper or Brass Contact	 Nominal Impedance: Frequency Range: Locking: Durability 	50 Ohms DC—40 GHz Snap-on Coupling 500 Cycles	Consumer (General) Medical Multimedia Data (General) High-End Computer Storage Industrial Instruments Telecom (General) Broadcast Equipment Telecom Infrastructure Networking Military



RF Connectors RF/Coaxial Connectors

lmages	Product	Family Description	Product Variations	Features and Benefits	Applications
	Family Type F	Miniature series 75 0hm, threaded coupling design meeting SCTE (Society of Cable Telecommunications Engineers — www.scte.org) requirements for broadband communications.	Specifications Straight and Right Angle Cable Versions Vertical and R/A PCB Mounted Various Cable Types Cable Connectors with Centre Pins Beryllium Copper or Brass Contact Gold or Tin Contact Plating	 Impedance: 75 Ohms Frequency Range: DC-1 GHz Locking: Threaded Coupling Voltage rating 500 Vrms Temperature: -55 to +85°C Durability 150 Cycles 	Consumer (General) Medical Multimedia Data (General) High-End Computer Storage Industrial Instruments Telecom (General) Broadcast Equipment Telecom Infrastructure Networking Military
	BNC	Molex BNC connectors are small, lightweight, weatherproof miniature connectors that are the most popular connector series used in a variety of RF applications.	Straight, R/A, Cable Versions Vertical, R/A and Edge PCB Mounted Various Cable Types and Panel Mount Beryllium Copper, Phosphor Bronze or Brass Contact Gold Plating	 Impedance: 50 and 75 0hms Frequency Range: DC—4 GHz Voltage Rating: 500 Vrms Temperature: 65 to +165°C Locking: Bayonet Lock Coupling Durability 500 Cycles 	Consumer (General) Military and Broadcast Equipment Medical Multimedia Data (General) High-End Computer Storage Industrial Instruments Telecom (General)
	TNC	Molex TNC connectors are miniature connectors that are similar to the BNC series, but use a threaded coupling arrangement that can be used up to 11 GHz.	Straight, R/A, Cable Versions Vertical, R/A and Edge PCB Mounted Various Cable Types and Panel Mount Beryllium Copper, Phosphor Bronze or Brass Contact Gold or Silver Contact Plating	 Impedance: 50 or 75 Ohms Frequency Range: DC-11 GHz Voltage Rating: 500 Vrms Temperature: Teflon -65 to 165°C Polypropylene -20 to +70°C Locking: Threaded Coupling Durability 500 Cycles 	Consumer (General) Military Medical Multimedia Data (General) High-End Computer Storage Industrial Instruments Telecom (General)
	Type N	Molex Type N connectors are classified as miniature, but are one of the largest in use. Properly designed Type N connectors provide low loss interconnects to 18 GHz.	Straight, R/A, Cable Versions Vertical, R/A and Edge PCB Mounted Various Cable Types and Panel Mount Beryllium Copper, Phosphor Bronze or Brass Contact Gold, Silver or Tin Contact Plating	■ Impedance: 50 or 75 Ohms ■ Frequency Range: DC—18 GHz ■ Voltage Rating: 500 Vrms ■ Temperature: —65 to +165°C ■ Locking: Threaded Coupling ■ Durability 500 Cycles	Consumer (General) Military Medical Multimedia Data (General) High-End Computer Storage Industrial Instruments Telecom (General) Broadcast Equipment Telecom Infrastructure Networking
	DIN 7/16	Low loss, low IMD, high power series used in broadcast, telecommuni- cations and base station applications.	Straight, R/A Cable Versions, Bulkhead and Panel Mounted Beryllium Copper or Brass Contact	 Impedance: 50 Ohms Frequency range: DC to 7.5 GHz Working Voltage Up to 2.7 kV rms Locking: Threaded Coupling Durability 500 Cycles 	Consumer (General) Military Medical Multimedia Data (General) High-End Computer Storage Industrial Instruments Telecom (General) Broadcast Equipment Telecom Infrastructure Networking
	Other RF Products	The Molex RF division can also support many other RF technoologies and custom designs. Contact your Molex representative for more details.	Available products include: - BMA - BSA (Between Series Adapters) - Co-Ax D-Sub - DIN 1.0 / 2.3 - Ganged RF - Micro Co-Ax - QMA - SSMB - Triax	Additional product information can be found on the Molex website www.molex.com Additional product information can be found on the Molex website www.molex.com	Consumer (General) Medical Multimedia Data (General) High-End Computer Storage Industrial Instruments Telecom (General) Broadcast Equipment Telecom Infrastructure Networking



Custom Connectors Integrated Products

lmages	Product Family	Family Description	Product Variations Specifications		
	Industry Standard Cables	When it comes to Industry Standard cable assemblies, Molex is the leader. Our knowledge of current industry standards is a direct result of our involvement in the design and production of each one of them.	USB, USB On-the-Go IEEE1394, IEEE1394b MicroCross™ DVI DMS-59™, HDMI Serial ATA Infiniband, Lanelink™ SCSI, VHDCI	We have a strong presence and participation in most standards organizations Our innovative product designs have eventually become the standard that others follow Our flexible design and manufacturing capabilities allow us to better provide custom shielded cable solutions for industry standard applications Molex standard products are high-quality products that have superior high frequency performance.	Multimedia Medical Business Machines Storage High-End Computer Low-End Computer Peripherals Instrumentation Infrastructure Networking Broadcast Equipment
The state of the s	Ribbon Cable Assemblies	Molex offers a variety of custom Ribbon Cable assemblies at industry-competitive prices. Quality assurance is guaranteed and production quantities are ready in 4 to 6 weeks.	Single-Ended Double-Ended Daisy-Chain Multi-Connector Assemblies 1.27 to 3.96 mm Pitches	Strip and retain feature available for all pitches Kinked tails, offering improved PCB retention Indication for IDT termination, flex notching Customized versions like prefolded, overmolded and taped are available on request Circuit Voiding and Custom labels are available	White Goods Brown Goods Multimedia Medical Security and Alarms Vending and Gaming Low-End Computer Instrumentation
	FFC/FPC Cable Assemblies	Molex offers both standard and custom length Flat Flexible Cable assemblies FFC/FPC connectors for both Automotive and general market applications. Molex can also design and manufacture customer Flexible Printed Circuits to meet customer's specific design requirements.	0.3 to 2.54 mm standard pitch Custom pitches are optional 11 Standard FFC lengths Custom lengths are also available Shielded or Unshielded versions Various FPC flex thicknesses	Molex offers both FFC cable and connectors, which limits risks and reduces the number of suppliers Standard and custom lengths available for design flexibility Custom designed FPC circuits optimize space savings Cables have high strength and small size Laser Cut Capability	Automotive White Goods Brown Goods Multimedia Medical Security and Alarms Vending and Gaming Low-End Computer Instrumentation Storage High-End Computer Infrastructure Networking Broadcast Equipment
	Cable Harnesses	Molex Harness Capabilities complement its connector offering by providing a total interconnect solution to meet your cost and performance needs. Our production capabilities include laser wire preparation, thermoresistance, ultra-sonic and laser welding, induction reflow or hot bar soldering and insert molding.	Signal Harnesses Signal Harnesses are offered in Wire-To-Board and Wire-To-Wire options and enable multibranch harnessing configurations. A full range of connectors is available, crimp and poke, and IDT Power Harnesses Power Harnesses are a perfect choice when you need compact connectors that carry up to 50.0 A of current Digital/Mixed Harnesses Our superior digital and analog assemblies are the result of Molex leveraging content with expert cable engineering. We can address your needs for higher signal density, higher speeds and power	 Design and engineering services Customized features Point-to-point jumpers Continuity, DC Resistance and Hi-Pot Testing Complete electrical and functional testing UL/CSA/ISO certified manufacturing locations TS 16949 Certified 	White Goods Brown Goods Multimedia Medical Vending and Gaming Energy and Power Industrial Storage High-End Computer Instrumentation Infrastructure Networking Broadcast Equipment Automotive (General)
	High Performance Cables	Molex's High Performance Cable Assemblies Team can design products to meet your exact requirements and to minimize your time-to-market for signal speeds up to and beyond 5 Gbps.	Analog Assemblies Digital/Mixed Assemblies Copper Modules/Cages I/O Cabling Solutions Fibre Channel/Infiniband Solutions Backplane Cabling Solutions RF/Microwave/Co-Ax	Our production capabilities include computer-controlled laser wire preparation, thermo-resistance, ultrasonic or laser welding, induction reflow or hot bar soldering and insert molding The finished products are subjected to Molex's stringent quality control processes, including digital/analog electrical testing Our interactive, person-to-person environment enables Molex to provide faster response to customer inquiries, as well as develop standard or custom solutions more cost-effectively	Storage High-End Computer Instrumentation Infrastructure Networking Broadcast Equipment Telecom

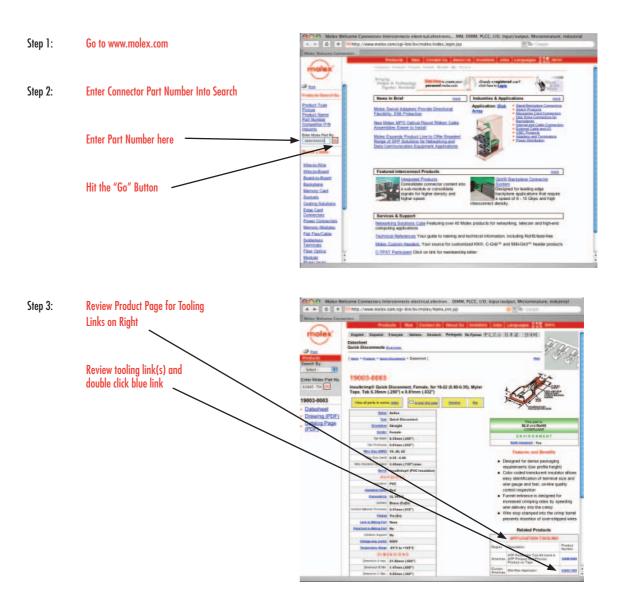


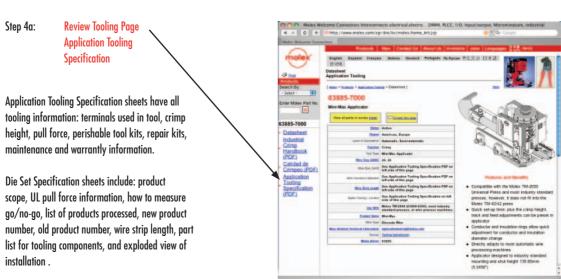
Custom Connectors Integrated Products

lmages	Product Family	Family Description	Product Variations Specifications	Features and Benefits	Applications
	Switch Products	Molex is a leading manufacturer of custom front panels: with products ranging from simple printed flex circuits, to complex control panel assemblies.	Flexible Circuit Assembly Membrane Switch Tactile Membrane Switch Bonded Assembly Hybrid Switch Assembly Control Panel Assembly Electronic Switch Front Panel Assembly	 Molex switch manufacturing capabilities include the ability to conceptualize, design and produce systems in the Americas, Europe, and the Far East Our production printing processes range from semi and fully automated screen-printing, to complex reel-to-reel web printing Secondary assemblies include component bonding with conductive adhesives, PCB and flex circuit assembly, and automated tactile element placement 	Automotive (General) Consumer (General) Data (General) Industrial (General) Telecom (General) Medical
	Electro- Mechanical	Typical Electro- Mechanical assemblies consist of the integration of Molex products such as cables, connectors, flex, switches, PCBA and thermal products with mechanical parts such as sheet metal chassis and injection molded plastic parts.	Printed Circuit Boards Our extensive experience on interconnects solutions includes a wide variety of PCBA capabilities going from strictly interconnect boards all the way up to complete modules or subassemblies Electro-Mechanical Assemblies Molex has developed substantial expertise in sub-assembly production such as card cages, cables assembled to PCBs, and fan trays Backplane/Midplane Assemblies Each solution offers high performance, increased density, and compatibility with industry standard interfaces, and a user-friendly transition between the PC board mounted connector and the backplane/midplane	 Integration of Molex technologies with mechanical parts Global manufacturing and material sourcing capabilities In-house design capabilities to meet 100% customer needs Mechanical and electrical design and development Testing, support and prototype capabilities Connector solution developed to support product line Improved logistics through supplier consolidation Up to 4.25 Gbps PCB design 	Automotive (General) Consumer (General) Data (General) Industrial (General) Telecom (General)



Finding application tooling on www.molex.com.





www.molex.com/product/apptool

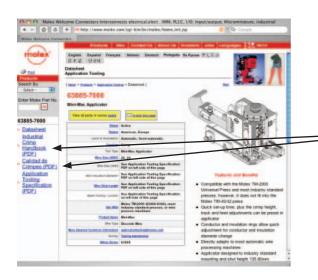


Finding application tooling on www.molex.com.



Step 4b: Review Tooling Page
Tooling Manual

The tooling manual has all of the basic information with regard to the tool. Not all tools have a manual.



Step 5: Review Tooling Page Crimp Quality Handbook

The Crimp Quality Handbook has all of the basic information regarding a proper crimp. Open barrel (CPD) and closed barrel (TBO) have their own quality manuals linked on the web. There are English and Spanish versions of both manuals.



Other Information on Page

Tooling page will show all of the web published terminals that the tool will run.

www.molex.com/product/apptool



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