

Molex Flexible Printed Circuit Technology is the answer to your most challenging interconnect applications. We are your total solution for Flexible Printed Circuitry because we design and manufacture both the flex and the connectors. A Flexible Printed Circuit (FPC or Flex) is an ultra-reliable technology. An FPC can be the best solution for creating products which are complex, small, lightweight or have harsh environmental conditions. Flex can be designed to meet a wide range of temperature and environmental extremes.

Flex circuits are excellent for designs with high-density circuitry, and are more suited for dynamic applications such as hinge and drawer applications.

Most commonly, flex acts as an interconnect device. Flex circuits make electronic interconnection both simpler and more reliable. FPC interconnects are often used in applications where high signal speed, heat, flexibility, or space savings are issues.

This custom solution has a variety of applications. An FPC can replace a traditional printed circuit board.

	Product	Features	Flex Construction	Standard Interconnects
	High Speed Rigid Flex	 Surface mount on both sides Stronger barrels Press-fit connector capability 	■ Rigid flex	Plateau HS Mezz™, SlimStack™, 0.50mm (.020″) stacking systems, VHDM®
	High Speed Flex Assemblies	 Typically 3 or more layers Large number of interconnect options High conductive routing area 	Multi-layer	Plateau HS Mezz, SlimStack, 0.50mm (.020") stacking systems, VHDM, C-Grid®, Milli-Grid™, EBBI™
	Flex Backplanes	 High signal frequency Controlled impedance Improves airflow within the system 	 Multi-layer Rigid flex 	VHDM, VHDM-HSD™, MZP™, PCI Express, SATA, SAS, MFB™, Omnigrid®
	High Density Flex	 Typically 2 or more layers Tight line and space widths Reduces weight Better thermal characteristics than standard rigid board constructions 	 Double sided Multi-layer 	C-Grid, Milli-Grid, SlimStack, 1.00 to .030mm (.039 to .012") board-to- board systems
the second secon	Flex Interconnect Assemblies	 Virtually unlimited variety of interconnect options Reduces assembly time Excellent thermal management 	 Single sided Single sided dual access Double sided Multi-layer 	C-Grid, Milli-Grid, SlimStack, 1.00 to .030mm (.039 to .012") board-to- board systems, MicroCross™ DVI, RJ-11, RJ-45, Mini-Fit [®] , Micro-Fit 3.0™, EBBI™, CradleCon™, LFH™, HDMI, USB
	Flex Jumpers	 Eliminates wire harnesses Reduces package size At least one ZIF end connection 	 Single sided Single sided dual access Double sided 	1.27 to 0.50mm (.050 to .020") ZIF systems

* VHDM-HSD is a trademark of Amphenol, Corp.

† VHDM is a trademark or registered trademark of Amphenol, Corp.



Flex Construction	Description	Applications
Single Sided	One conductive layer	 Jumpers (board-to-board interconnect) Print head cables Wire harness replacements Power control modulators Low cost jumpers
S2 - Single Sided Dual Access	One conductive layer, access from both sides	 Jumpers (board-to-board interconnect) Disk drives Consumer electronics Automotive controls and sensors
Double Sided	Two conductive layers	 Digital displays for consumer and hand-held items Industrial electronic controls LED panels for military and medical devices Digital cameras
Multi-Layer	More than two conductive layers	 Servers and high-end computers Laptop computers Computer storage Telecom base stations, hubs and routers Mobile phones
Rigid Flex	Combination of traditional PCB and Flex created into one continuous piece	 Military electronics Flex applications requiring SMT components on both sides Flex applications that need press-fit connectors Mobile medical equipment High temperature and harsh environment applications