

iPass™

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Connector and Cable Assembly Solutions for Higher Density and Increased Speeds

The iPass Interconnect System offers both connectors and cable assemblies that enable flexible speed compatibility for applications ranging from 1.5 to 6.0 Gpbs, with capability up to 10.0 Gpbs, and is an ideal interconnect solution for the growing server storage market.

The iPass products support these industry standards for high-speed, multi-lane internal and external systems:

- **SAS (Serial Attached SCSI)**, also termed Mini-SAS,
- **SATA (Serial ATA International Organization)**, also termed Mini-SATA,
- **SFF (Small Form Factor)**, for Compact MultiLane/CML.
- **External PCI Express (PCIe)**, also termed **PCIe x4, x8, x16**



Selection Matrix (External)



Selection Matrix (Internal)



External iPass Products

- **SMT Host Connector (series 75586)** The SMT design provides placement options on both sides of the PCB, as well as placement stability. With a pitch of 0.8mm (.031"), the design also allows for easy routing. Plus, standoffs allow for easy PCB cleaning after soldering.
- **Integrated 136 Circuit Compliant Pin Assembly (75581 Series)** This low profile (13.13mm) 0.8mm pitch, fully integrated press fit connector assembly with cage, fits standard and low profile PCIe add-in cards, providing up to 32 differential pairs with one step placement to the PCB. The robust die cast design self aligns to the PCB and the screws mount to the PCB in four locations to optimize board retention.
- **4X External Cable Assemblies (series 74546, 74547)** Its high-performance paddle-card design with impedance matching helps reduce crosstalk and provide improved signal integrity. The assembly also features a flexible, low-profile, latch-pull mechanism that is easily accessible in high density applications. An EMI gasket seals the plug interface.
- **EMI Guide Frames (1-by-1, 1-by-2, 1-by-4) (series 74540, 74548)** The guide frame gasket delivers improved EMI performance and the die-cast frame provides a robust cable-to-chassis interface. It also features a screw attachment to the PCB, offering a durable I/O connection for large cable bundles during the cable management process.

Internal iPass Products

- **Right Angle and Vertical Internal Connectors with Hood Kits (75783 and 75784)** These 0.80mm (.031") pitch connectors include hood kits for internal applications. Acting as a disposable pick-and-place cap, the pre-positioning device aligns the connector to the hood during robotic placement. It offers three keying options, as well as tape-and-reel packaging for robotic processing.

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- **Internal Cable Assemblies (79536, 79575, 79576, 79579, 79580)** The internal cable assemblies can support SAS generation I (3.0 Gbps) and II (6.0 Gbps) bandwidths, as well as SATA generation I (1.5 Gbps) and II (3.0 Gbps) bandwidths. Delivering up to four times the port density of the current 4X offering, the assemblies are overmolded and have an attached direct-wire termination. They provide options for active and passive latch versions, transition cables to legacy SFF-8484 4X SAS interfaces, and break-out cables to individual SATA or SAS drives. The cable assemblies provide 100-ohm differential impedance with tight skew control and low cross talk. They also offer multiple cable lengths as a standard, as well as custom lengths upon request.

Available in 26-circuit and 36-circuit assemblies, both versions of internal cable assemblies cover 4X SATA applications and allow customers to populate controller cards with up to four 26-circuit iPass cables, or the equivalent 16 individual interfaces to SATA disk drives. They can be used to interface directly to a SATA backplane with similar port density. In addition, the 36-circuit iPass assembly includes up to eight sidebands to support control lines for SAS applications.

For more information on iPass cable assemblies, please contact highperformancecable@molex.com

Applications

Server storage:

- HBAs (Host Bus Adapters) Servers
- Storage Racks
- Switches
- Routers
- RAID (Redundant Array of Independent Disks)
- JBOD (Just a Bunch of Disks)

Network Equipment

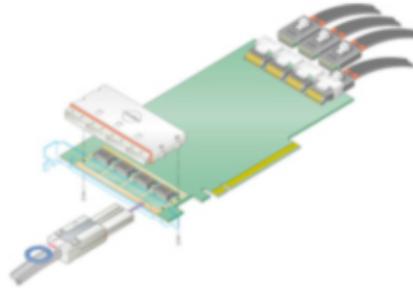
- Base Station
- Enterprise Routers and Switches
- Inverse Mux
- Network Interface Cards

Computer Applications

- Industrial Computers
- Work Stations

Split Systems

- Removable Media Drives
- Memory Modules
- Graphic Subsystems
- Networking



Test Boards:

- High-speed, low-loss material (Nelco)
- (16) compression contact SMA* s (for all 8 pair)
- Electrical length and impedance matched traces
- Cal traces (short, open and load) so the effects of the board can be eliminated

Order No.	Description
73931-2544	External iPass, 26-Circuit, SAS Test Board
73931-2612	Internal iPass, 36-Circuit, SAS Test Board
73931-2642	x4 PCIe iPass Test Board
73931-2652	x8 PCIe iPass Test Board
73931-2662	x16 PCIe iPass Test Board



Industry Standard Specifications

The latest revisions of the SFF specifications are maintained on an SFF Committee Website:

- <http://www.sffcommittee.org/ie/Specifications.html>
- <http://www.pcisig.com/specifications/pcieexpress>
- [Industry Standard Products/Trade Associations](#)

Related Products

- [Serial ATA \(SATA\)](#)
- [LaneLink](#)
- SFF-8086 SMT Host Connector
- SFF-8087 Unshielded (Internal Applications)
- SFF-8088 Shielded (External Applications)
- External PCI Express (PCIe)