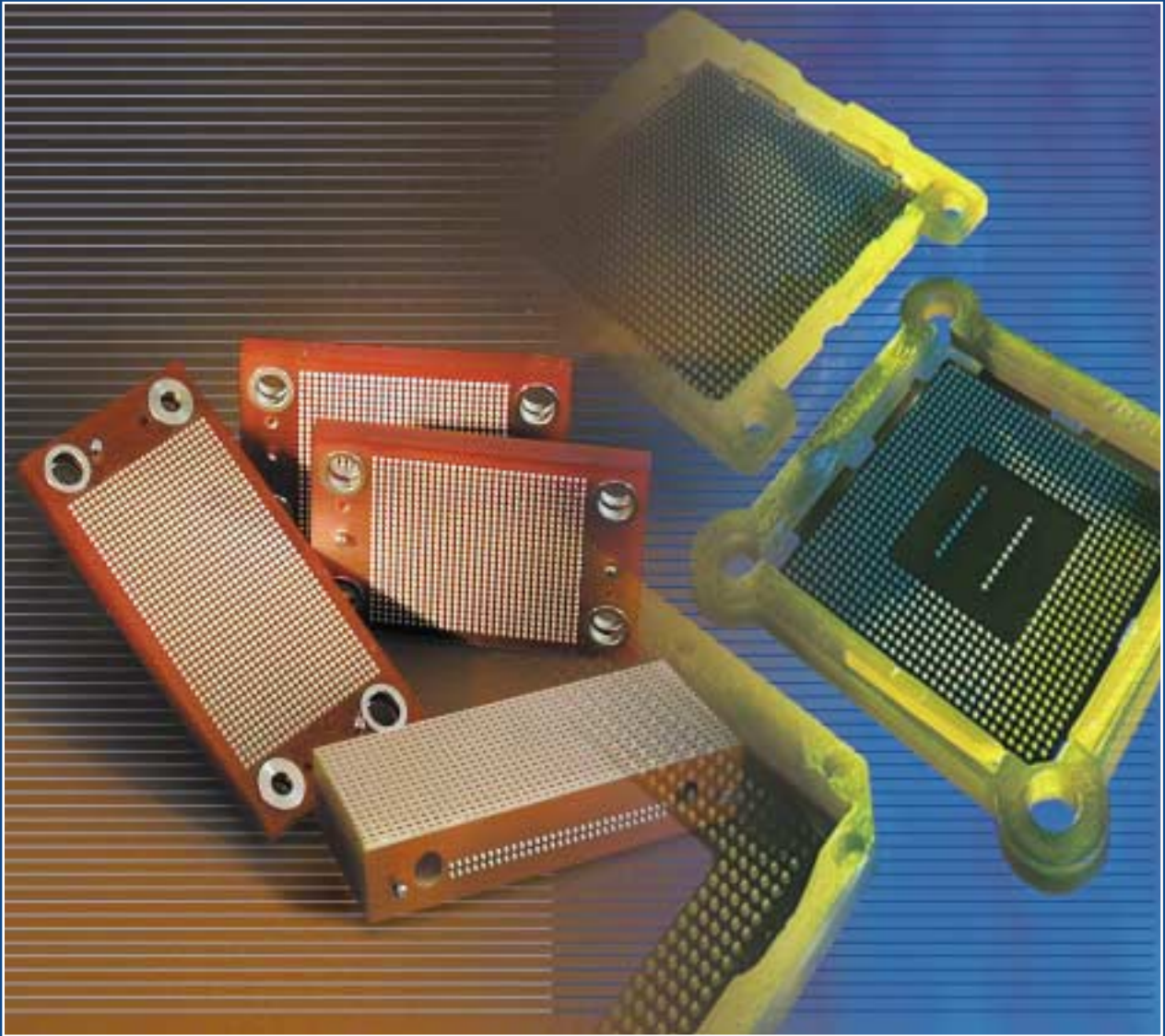




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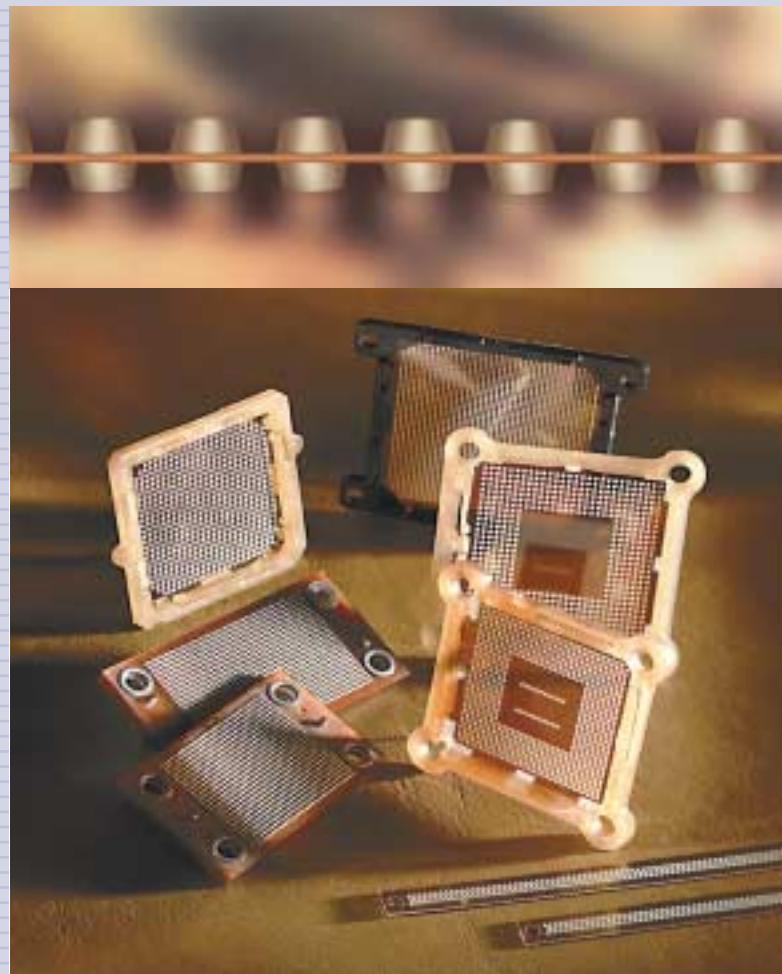
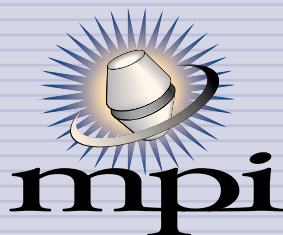
Metallized Particle Interconnect

*A simple solution for high-speed,
high-bandwidth applications*

The MPI Material Advantage

Advantages:

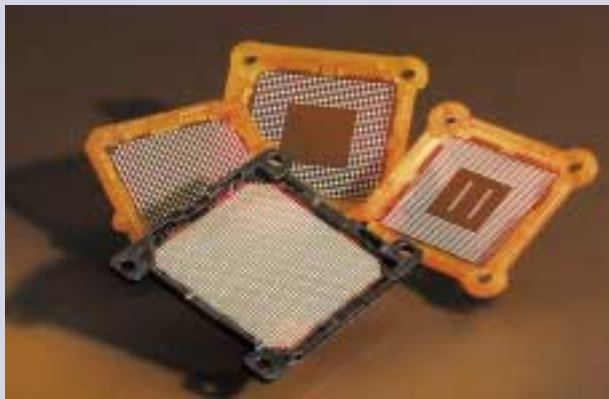
High-Density	- Scalable Pitches down to 0,8 mm pitch possible - Scalable Pin Counts of 24 to 5,000
Low-Profile	- 1,00 mm up to 6,00 mm
Ease of Assembly	- Solderless !!
Environmentally Friendly	- Solderless !!
Removable & Re-usable	- Solderless !!
Ease of Routing	- Can use direct 'Via-in Pad' design
High-Performance Capabilities	- Inductance (self & mutual) of less than 0,3 nH @ 2.05 GHz 100 ps rise time - < 20 milliohms Contact Resistance (end of life)
Excellent Power Management	- Up to 4 A per I/O Efficient heat transfer



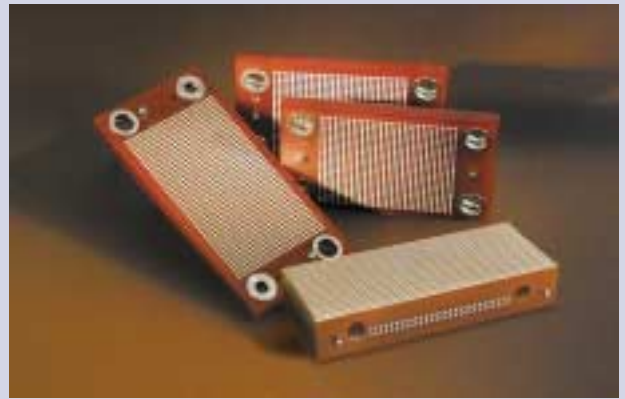
Applications

Applications utilizing MPI can vary dramatically from case to case. Examples include:

- LGA Sockets
- Board-to-Board connectors
- Flex Cable-to-Board connectors
- Hi-Speed Backplane connectors 15 Gb/s
- Assembly Hardware



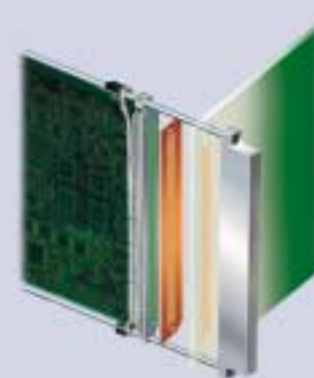
LGA Sockets



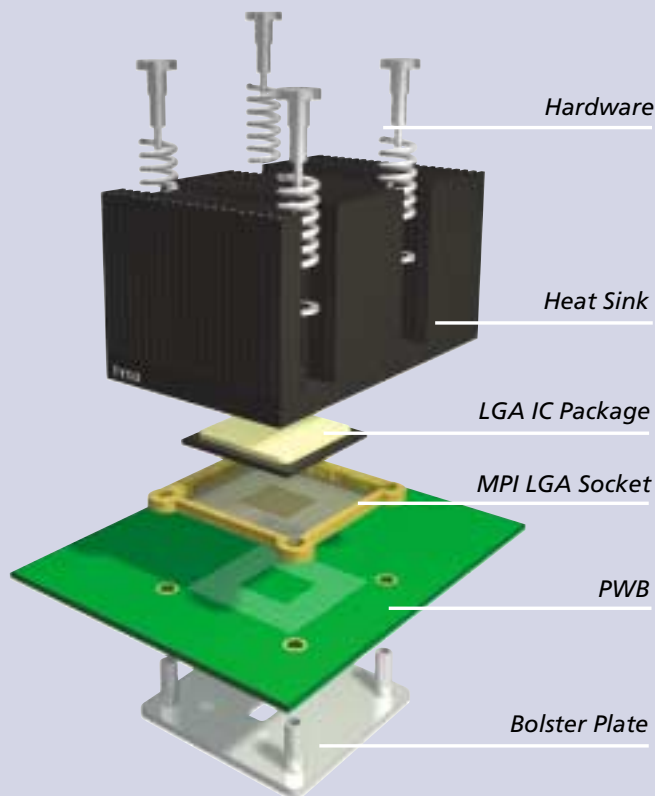
Board-to-Board



Assembly Hardware

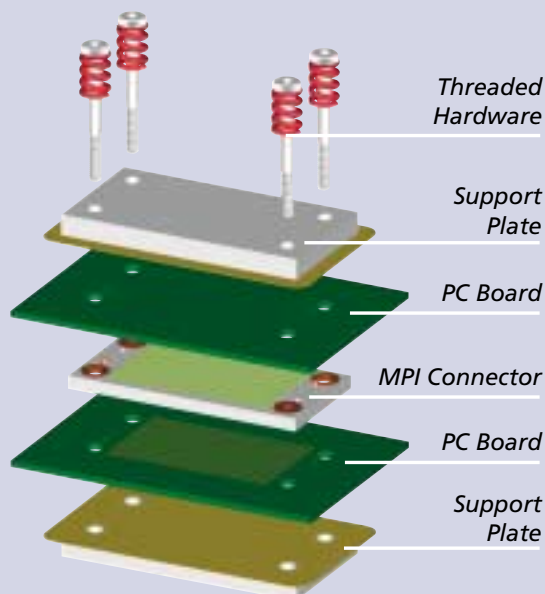


Side Interface 15 Gb/s



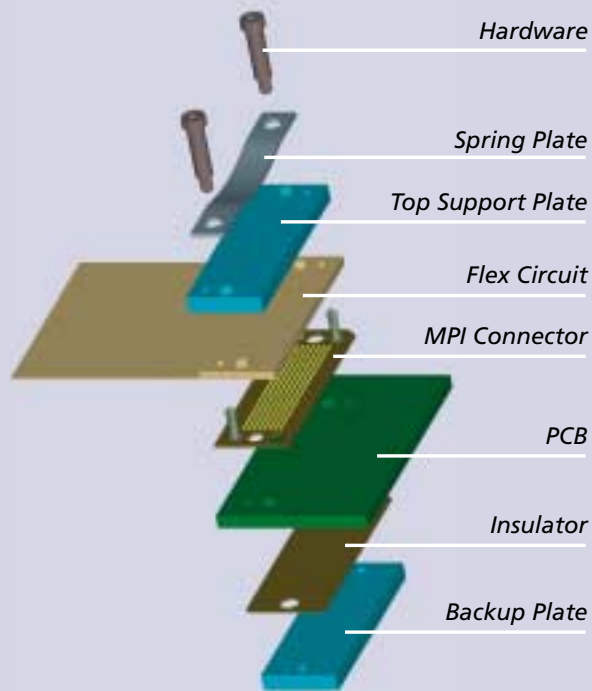
Chip-to-Board MPI/LGA Socket

Tyco Electronics MPI (Metallized Particle Interconnect) system solves the challenge of connecting high I/O microprocessors and ASICs to PC boards. MPI LGA Sockets utilize solderless, compression mount technology. Force must be applied to each column for it to achieve its superior electrical performance. Threaded hardware connects to the studs of the bolster plate which pass through the PC board, socket and heatsink. Tightening the hardware creates a load on the heatsink, which is generated by the springs. This causes the LGA package to compress the MPI conductive columns to the board. The bolster plate provides support behind the PC board as the columns are compressed.



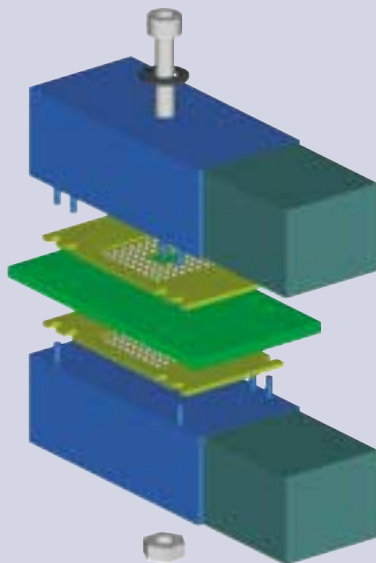
Board-to-Board MPI Connector

Employed as a connector for board-to-board or module-to-board interconnects, Tyco Electronics' MPI system provides superior mechanical, electrical and thermal performance to any currently available connector technology. With contact spacing as low as 1,0 mm and stacking heights from 1,0 mm to 4,0 mm, the MPI connector provides a high density, low profile interconnect. Compression technology allows easy, solderless assembly.



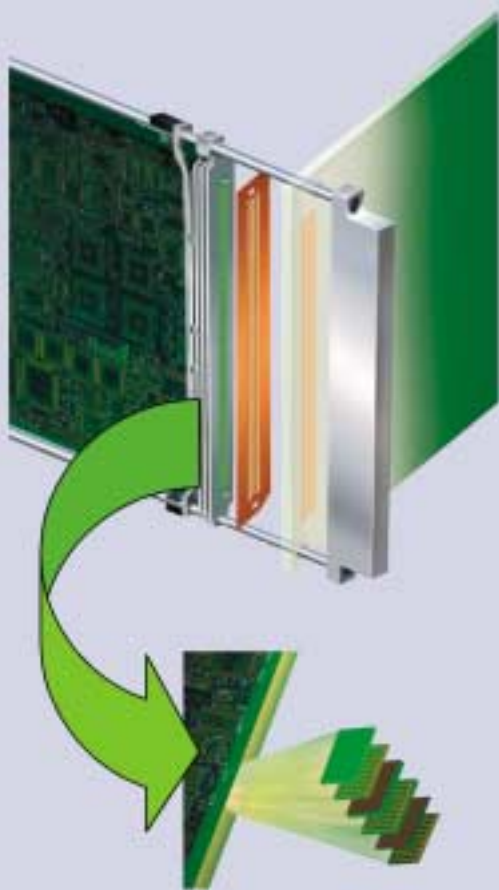
Flex-to-Board MPI/LGA Socket

Tyco Electronics brings MPI's superior electrical performance to the advantages of flex circuitry. This combination of MPI columns and flexible circuits has allowed many difficult applications to be addressed. Backplane-to-Backplane, as well as parallel PCB's, have benefited from the low profile and high density applications. Due to the geometry of the column, minimum real estate is required. Simple hardware assures low profile solutions to many limited z-axis targets. Solderless assembly provides easy field upgrade and repair.



Optical Module Interconnect

Tyco's MPI Fiber Optic Transceiver Socket provides a highly flexible interconnect for today's Electronic Optical Modules. This socket can serve a variety of fiber optic applications. The low profile columns eliminate any electrical degradation to the signal transmission. This socket allows the customer to upgrade or replace a module quickly. Use of this socket will stop any heat from damaging the EOM, as seen during solder operations. Both single sided and back to back designs are available.



Side Interface - 15 Gb/s

In years past, low frequency transmissions could absorb the difference between the connector parameters and the PCB. As data transfers and rise times push into the gigabit range, signal ringing, jitter and edge rate profiles break down the signal quality to unacceptable levels. MPI>SI refers to a revolutionary PCB technology. SI allows the inner layers to exit through the actual side of the PCB (represented by the thickness dimension). This provides a flat mating surface for the MPI contact. The advantage of this technology is that you keep the signal within the PCB for a greater period of time. By staying within the 'Controlled Impedance Environment' longer, there is less disturbance to the signal. This short inter-connect distance eliminates the large electrical interruption one would see in traditional two piece connectors.

- Passed Bellcore requirements
- SPICE model available
- Signal analysis

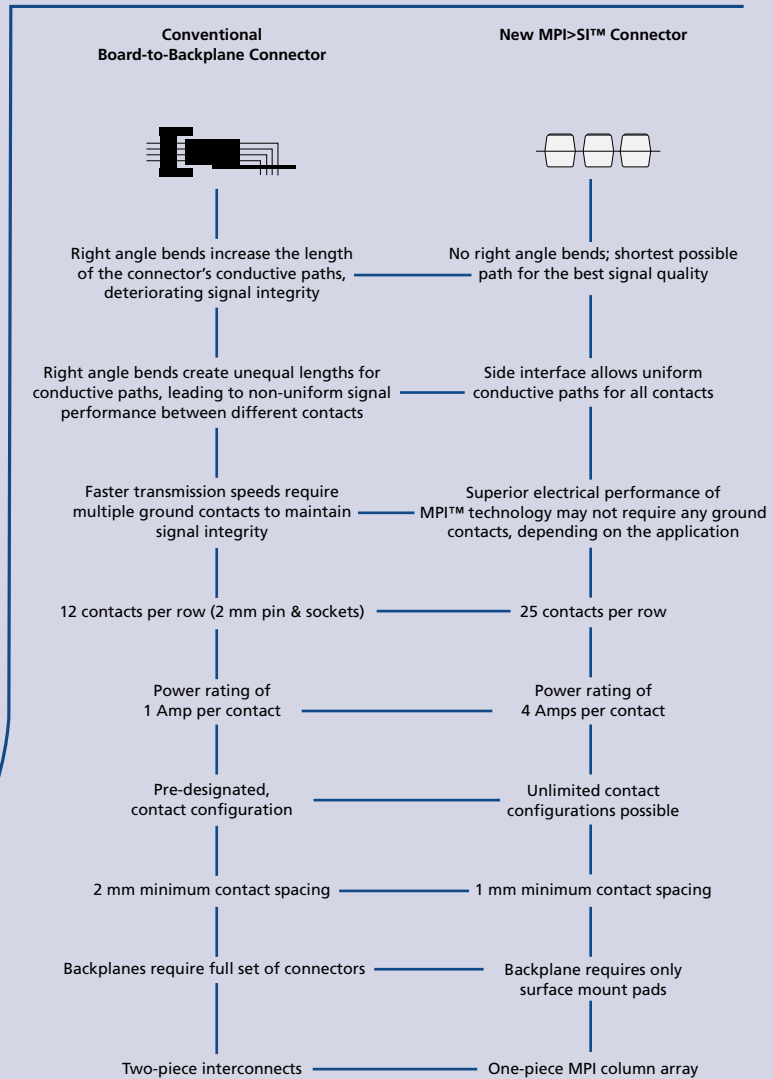
SIMPLY



The new MPI>SI™ side interface technology

REVOLUTIONARY

Connector Comparison



Hardware

A properly designed hardware system is critical to the performance of the MPI material system. Tyco Electronics offers a complete hardware solution for each interconnect, specific to the customer's application.

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