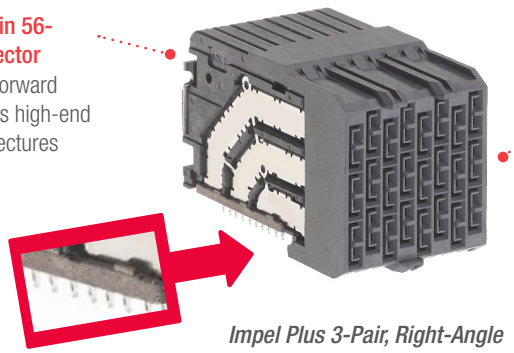
Impel Plus Backplane Connectors and Cable Assemblies

molex

Features and Benefits

Compact, compliant-pin 56-Gbps backplane connector
Enables backward and forward compatibility with various high-end copper and cable architectures



Impel Plus 3-Pair, Right-Angle Daughtercard, 1.90mm Pitch

Innovative signal beam interface
Improves insertion loss compared to in-line signal beams. Pushes interface resonance frequency past 30 GHz

Impel Plus 3-Pair, Right-Angle Daughtercard, 1.90mm Pitch

Option for short compliant pin allowing 0.65mm backdrill and access to top layers for high-speed routing
Offers better signal integrity performance due to shallow PCB hole. Lowers PCB costs by reducing layers

Small compliant pin (0.31mm ± -0.05)
Reduces crosstalk by enabling optimized routing or use of pinning via

Grounding tail aligner for lead frames and wafer shields closer to daughtercard launch to improve ground return path
Minimizes impedance discontinuities. Reduces crosstalk

IEEE 10GBASE-KR and Optical Internetworking Forum (OIF) Stat Eye Compliant Channel
Demonstrates end-to-end channel performance compliance

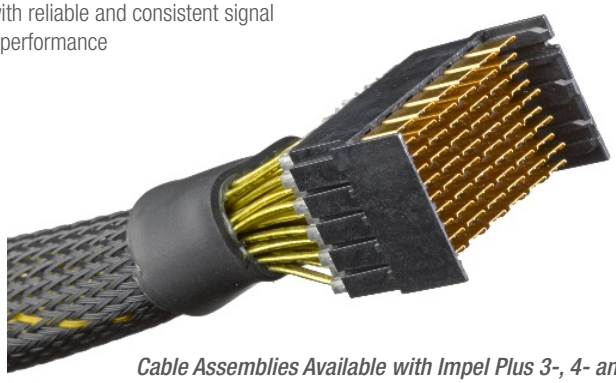
92 Ohms nominal impendence
Minimizes impedance discontinuities in the channel

Molex patent-pending Impel Connector technology with tightly coupled differential-pair structure
Provides optimal signal integrity and mechanical isolation through the connector system

3-, 4- and 6-pair daughtercards available with a range of column sizes
Delivers design flexibility

Impel Plus 4-Pair, Right-Angle Daughtercard, 1.90mm Pitch

High-speed automation line is available for high-volume production of cable
Controlled manufacturing process provides cables with reliable and consistent signal integrity performance



Cable Assemblies Available with Impel Plus 3-, 4- and 6-Pair Daughtercards and Impel Cables (Assembly with Impel 6-Pair Daughtercard pictured)

Complete mechanical, electrical and testing capabilities available to deliver a complete backplane solution
Offers value-added cable trays

Assemblies with Impel Cables up to 3.0m long can be configured with 3-, 4- and 6-pair Impel Plus Daughtercards
Supports design flexibility to maximize density of differential pairs with cables

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Applications

Telecommunications/Networking

- Servers
- Switches
- Routers

Data Center Solutions

- Servers
- Storage Systems

Medical

- Patient monitoring

High-End Server

Specifications

REFERENCE INFORMATION
Packaging: Tray
UL File No.:
Mates With: Impel Vertical Backplane Headers (see other available Impel header options)
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes

ELECTRICAL
Electrical
Voltage (max):150V AC RMS
Current (max): 0.75A
Contact Resistance: 100mA; 20mV
Dielectric Withstanding Voltage: 500V AC
Insulation Resistance: 500V

MECHANICAL
Insertion Force to PCB (max.): 26.69N per tail
Mating Force: 60g per signal; 80g per shield
Unmating Force (min.): 60g
Durability (min.): 200 Cycles

PHYSICAL
Housing: LCP
Contact: Copper Alloy
Plating:
Contact Area — 0.76 µm (30µ") Gold (Au)
Solder Tail Area — select Matte Tin (Sn)
Underplating — Nickel (Ni)
PCB Thickness (min.): 1.00mm
Operating Temperature: -55˚ to +85°C

Ordering Information

Series No.	Component	Pitch (mm)	Number of Pairs
172730	Daughtercard	1.9	3
204066		1.9	4

Series No.	Component	Pitch (mm)	Number of Pairs
Contact Molex	Daughtercard	3	4
		1.9	6

Custom Product	Description
Contact Molex	Assemblies with Impel Plus Daughtercard and Impel Cables

www.molex.com/link/impel.html

Order No. 987651-4041 Rev. 1 USA/0k/GF/2017.12