



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Maximize next-generation high-speed system performance and density with the Impact™ Plus 85-Ohm Backplane Connector System, supporting PCIe Gen 3 and Intel QPI protocols and for data rates up to 25 Gbps

The Impact™ Plus 85-Ohm Backplane Connector System leverages the field-proven Impact mating interface and compliant-pin technologies, providing customers flexibility to optimize their designs for superior mechanical and electrical performance.

The Impact™ Plus 85-Ohm Backplane Connector System is available in 3- through 6-pair configurations in conventional, coplanar and mezzanine configurations.

Features and Benefits

85-Ohm impedance design	Supports PCIe Generation (Gen) 3.0 and Intel QuickPath Interconnect (QPI) requirements for next-generation I/O and memory signaling
Common-ground structure enables enhanced “Plus” signal integrity	Reduces low-frequency resonances and improves far-end crosstalk (FEXT) and insertion loss deviation (ILD)
Data rates scalable up to 25 Gbps	Support future system performance upgrades
Differential-pair density up to 80 pairs per linear inch (when using 6-pair configurations)	Supports high bandwidth needs while minimizing board and system real estate usage
Broad-edge-coupled, differential-pair system	Superior density, low cross-talk, low insertion loss and minimal performance variation across all high-speed channels
IEEE 10GBASE-KR and Optical Internetworking Forum (OIF) Stat Eye Compliant channel performance	Ensures end-to-end reliability
Inline staggered interface	Reduces mating forces
Bifurcated contact beams on the daughtercard connector	Two points of contact for long-term reliability
Easy-to-manage compliant-pin PC tails on 1.90 by 1.35mm grid	Reduces PCB routing complexity and cots
Same density and footprint as Impact™ 100-Ohm Backplane Connector System	Provides design flexibility by leveraging common footprint across the Impact™ product line. Keyed and polarized 85-Ohm will not mate with 100-Ohm

Impact™ Plus 85-Ohm Backplane Connector System

Backplane Headers (Vertical)

- 170525** 3-Pair
- 170335** 4-Pair
- 170475** 5-Pair
- 170535** 6-Pair

Coplanar Headers (Right-Angle)

- 170510** 3-Pair
- 76495** 4-Pair

Daughtercard Receptacles (Right-Angle)

- 170530** 3-Pair
- 170340** 4-Pair
- 170480** 5-Pair
- 170540** 6-Pair

Orthogonal Headers (Vertical)

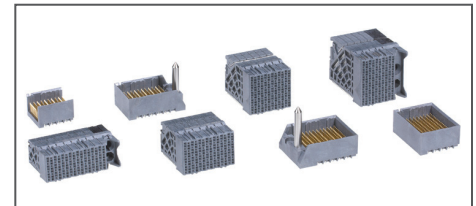
- 171415** 6-Pair

Orthogonal Receptacles (Right-Angle)

- 171420** 6-Pair

Mezzanine Receptacles (Vertical)

- 170390** 4-Pair



Impact™ Plus 85-Ohm Product Family 3- through 6-Pair Configurations



Specifications

Reference Information

Packaging: Tray
UL File No.: E28179
Mates With:
 Numerous options, reference
 Ordering Information Charts
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes

Electrical

Voltage (max.): 30V AC max.
Current (max.): 0.75A per pin
Contact Resistance:
 mated, 100mA max.
Dielectric Withstanding Voltage:
 unmated, 500V AC
Insulation Resistance:
 1,000 Megohms min.

Mechanical

Contact Retention to Housing:
 3.56N per compliant pin average min.
Insertion Force to PCB:
 Backplane: 26.70N
 Daughter card: 17.80N
Mating Force: 40g max.
Unmating Force: 15g per pin min.
Durability (min.):
 200 cycles (mating cycles max.)

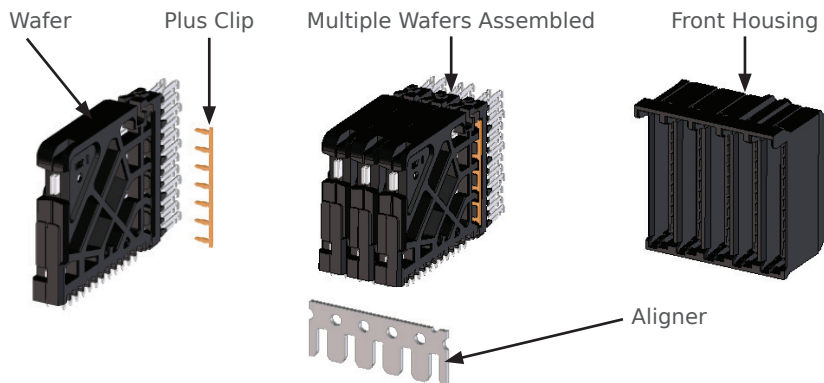
Physical

Housing:
 Liquid Crystal Polymer, UL 94V-0
Contact:
 High Performance Copper (Cu) Alloy
Plating:
 Contact Area — 0.76 μ m (30 μ "")
 Gold (Au) min.
 Solder Tail Area — Tin (Sn) or
 Tin/Lead (Sn/Pb)
 Underplating — Nickel (Ni)
PCB Thickness: 1.60mm typical
Operating Temperature:
 -55 to +85 $^{\circ}$ C max.

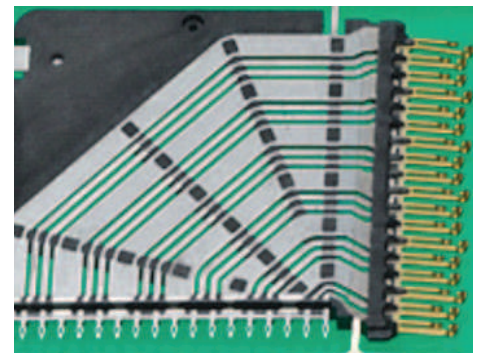
Impact™ Plus 85-Ohm Backplane Connector System

Additional Product Features


Plus Clip feature enables improved electrical performance




The Impact™ Plus 85-Ohm Backplane Connector System inherently provides customers with Plus technology with the use of a common ground clip in the daughtercard. Electrical characteristics and performance are improved by reducing Insertion Loss Deviation (ILD) and cross-talk performance is improved by enabling use of longer channels.



Plus 85-Ohm Daughtercard - Right Angle Receptacle


	Part Number and Description	Column Sizes
	170530-ABCD = 3 pair	8, 10, 16
	170340-ABCD = 4 pair	8, 10, 12, 14, 16
	170480-ABCD = 5 pair	10, 12, 16
	170540-ABCD = 6 pair	10, 16
A - Module Type	B - Guided Key Position	CD - Module Size (PTH)
1 = Unguided (Lead-Free)	0 = No Keying	06 = 6 Column (PTH = 0.46)
3 = Guide Left (Lead-Free)	1 = A	36 = 6 Column (PTH = 0.39)
5 = Guide Right (Lead-Free)	2 = B	08 = 8 Column (PTH = 0.46)
	3 = C	38 = 8 Column (PTH = 0.39)
	4 = D	10 = 10 Column (PTH = 0.46)
	5 = E	20 = 10 Column (PTH = 0.39)
	6 = F	12 = 12 Column (PTH = 0.46)
	7 = G	22 = 12 Column (PTH = 0.39)
	8 = H	14 = 14 Column (PTH = 0.46)
		24 = 14 Column (PTH = 0.39)
		16 = 16 Column (PTH = 0.46)
		26 = 16 Column (PTH = 0.39)

Plus 85-Ohm Backplane - Vertical Header


	Part Number and Description		Column Sizes
	170525-ABCD = 3 pair		8, 10, 16
	170335-ABCD = 4 pair		8, 10, 16
	170475-ABCD = 5 pair		10, 12, 16
	170535-ABCD = 6 pair		10, 16
A - Module Type	B - Module Size	C - Unguided Wall Options or Guided Key Position	D - Mating Pin Length (PTH)
1 = Unguided (Lead-Free)	8 = 8 Column	0 = Open ends or no keying	3 = 4.50mm (PTH = 0.46)
3 = Guide Left, Open Right (Lead-Free)	1 = 10 Column	1 = Left end wall or A	4 = 4.90mm (PTH = 0.46)
5 = Guide Right, Open Left (Lead-Free)	2 = 12 Column	2 = Dual end wall or B	5 = 5.50mm (PTH = 0.46)
7 = Guide Left, End Wall Right (Lead-Free)	6 = 16 Column	3 = Right end wall or C	6 = 4.50mm (PTH = 0.39)
9 = Guide Right, End Wall Left (Lead-Free)	4 = 14 Column	4 = D	7 = 4.90mm (PTH = 0.39)
		5 = E	8 = 5.50mm (PTH = 0.39)
		6 = F	
		7 = G	
		8 = H	

Note: Custom header pin layouts using standard pin lengths fall under separate series numbers. Contact Molex for details.


Plus 85-Ohm Coplanar- Right Angle Header (RAM)

	Part Number and Description		Column Sizes
	170510-ABCD = 3 pair		8, 10, 12, 14, 16
	76495-ABCD = 4 pair		
A - Module Type	B - Module Size	C - Unguided Wall Options or Guided Key Position	D - Mating Pin Length (PTH)
1 = Unguided (Lead-Free)	8 = 8 Column	0 = Open ends or no keying	7 = 4.90mm (PTH = 0.39)
3 = Guide Left, Open Right (Lead-Free)	1 = 10 Column	1 = Left end wall or A	8 = 5.50mm (PTH = 0.39)
5 = Guide Right, Open Left (Lead-Free)	2 = 12 Column	2 = Dual end wall or B	
7 = Guide Left, End Wall Right (Lead-Free)	6 = 16 Column	3 = Right end wall or C	
9 = Guide Right, End Wall Left (Lead-Free)	7 = 14 Column	4 = D	
		5 = E	
		6 = F	
		7 = G	
		8 = H	


Plus 85-Ohm Mezzanine Vertical Receptacle

	Part Number and Description		Column Sizes
	170390-ABCD = 4 pair		6, 8, 10, 12, 14, 16
A - Module Type	B - Guided Key Position	C - Stack Height	D - Module Size (PTH)
1 = Unguided (Lead-Free)	0 = No Keying	0 = 18mm	8 = 8 Column (PTH = 0.39)
3 = Guide Left (Lead-Free)	1 = A	2 = 25mm	0 = 10 Column (PTH = 0.39)
5 = Guide Right (Lead-Free)	2 = B	3 = 37mm	2 = 12 Column (PTH = 0.39)
	3 = C		7 = 14 Column (PTH = 0.39)
	4 = D		6 = 16 Column (PTH = 0.39)
	5 = E		
	6 = F		
	7 = G		
	8 = H		

Plus 85-Ohm Orthogonal - Mid Plane Header

	Part Number and Description		Column Sizes
	171415-ABCD = 6 pair		10, 12
A - Module Type	B - Module Size	C - Unguided Wall Options or Guided Key Position	D - Mating Pin Length (PTH)
1 = Unguided (Lead-Free)	1 = 10 Column	0 = Open ends	4 = 4.90mm (PTH = 0.46)
3 = Guide Left (Lead-Free)	2 = 12 Column	2 = Dual end wall	5 = 5.50mm (PTH = 0.46)
5 = Guide Right (Lead-Free)			7 = 4.90mm (PTH = 0.39)
7 = Guide Left Endwall (Lead-Free)			8 = 5.50mm (PTH = 0.39)
9 = Guide Right Endwall (Lead-Free)			

Plus 85-Ohm Orthogonal Daughtercard - Right Angle Receptacle

	Part Number and Description		Column Sizes
	171420-ABCD = 6 pair		10, 12
A - Module Type	B - Guided Key Position	C/D - Module Size (PTH)	
1 = Unguided (Lead-Free)	0 = No Keying	10 = 10 Column (PTH = 0.46)	
3 = Guide Left (Lead-Free)		20 = 10 Column (PTH = 0.39)	
5 = Guide Right (Lead-Free)		12 = 12 Column (PTH = 0.46)	
		22 = 12 Column (PTH = 0.39)	

Applications

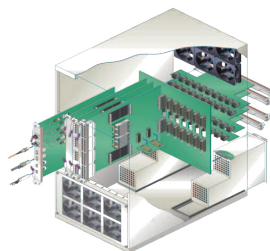
Data and computing equipment

- Servers
- Storage

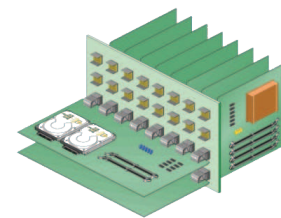
Telecommunication and networking equipment

- Hubs, switches, routers
- Central office, cellular infrastructure and multi-platform service (DSL, Cable Data)

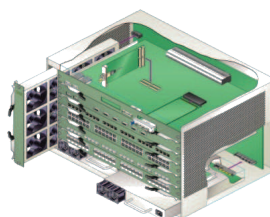
Test and measurement equipment



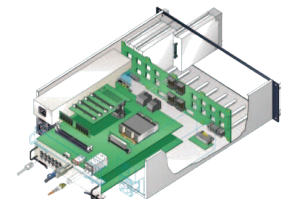
Data Networking



Server Platforms



Telecom Infrastructure



Storage Appliance

Conventional (Right-Angle to Vertical) Headers and Receptacles

Number of Pairs	Guide	Header Series No.	Molex Sales Drawing	Receptacle Series No.	Molex Sales Drawing
3	Unguided	170525	SD-170525-0001	170530	SD-170530-0001
	Left		SD-170525-0002		SD-170530-0002
	Right		SD-170525-0003		SD-170530-0004
4	Unguided	170335	SD-170335-0001	170340	SD-170340-0001
	Left		SD-170335-0002		SD-170340-0002
	Right		SD-170335-0003		SD-170340-0004
5	Unguided	170475	SD-170475-0001	170480	SD-170480-0001
	Left		SD-170475-0002		SD-170480-0002
	Right		SD-170475-0003		SD-170480-0004
6	Unguided	170535	SD-170535-0001	170540	SD-170540-0001
	Left		SD-170535-0002		SD-170540-0002
	Right		SD-170535-0003		SD-170540-0004

Note: Mating header and receptacle information is provided in the same row

Orthogonal (Right-Angle to Vertical) Headers and Receptacles

Number of Pairs	Guide (Header Receptacle)	Header Series No.	Molex Sales Drawing	Receptacle Series No.	Molex Sales Drawing
6	Unguided	171415	SD-171415-001	171420	SD-171420-0001
	Left Right		SD-171415-002		SD-171420-0002
	Right Left		SD-171415-003		SD-171420-0003

Note: Mating header and receptacle information is provided in the same row

Coplanar (Right-Angle to Right-Angle) Headers and Receptacles

Number of Pairs	Guide (Header Receptacle)	Header Series No.	Molex Sales Drawing	Receptacle Series No.	Molex Sales Drawing
3	Unguided	170510	SD-170510-001	170530	SD-170530-0001
	Left Right		SD-170510-002		SD-170530-0004
	Right Left		SD-170510-003		SD-170530-0002
4	Unguided	76495	SD-76495-001	170340	SD-170340-0001
	Left Right		SD-76495-002		SD-170340-0004
	Right Left		SD-76495-003		SD-170340-0002

Note: Mating header and receptacle information is provided in the same row Right-angle male headers mate to opposite guide right-angle female headers; for example: right guide header (Series 76495) mates to left guide receptacle (Series 170340)

Mezzanine (Right-Angle to Vertical) Headers and Receptacles

Number of Pairs	Stack Height	Guide	Header Series No.	Molex Sales Drawing	Receptacle Series No.	Molex Sales Drawing
4	18	Unguided	170335	SD-170335-0001	170390	SD-170390-0118
		Left		SD-170335-0002		SD-170390-0218
		Right		SD-170335-0003		SD-170390-0418
	25	Unguided		SD-170335-0001		SD-170390-0125
		Left		SD-170335-0002		SD-170390-0225
		Right		SD-170335-0003		SD-170390-0425
	37	Unguided		SD-170335-0001		SD-170390-0137
		Left		SD-170335-0002		SD-170390-0237
		Right		SD-170335-0003		SD-170390-0437

Note: Mating header and receptacle information is provided in the same row