



1.85mm by 3.70mm (.073" by .146") Pitch I-Trac™ Backplane Connector System 7, 11 and 15 Row

The I-Trac system is a broad-side coupled, skew-equalized design that handles speeds up to 12.5 Gbps, providing superior impedance control and lower cross-talk for traditional and orthogonal backplane applications

The I-Trac backplane system effectively balances electrical performance, differential-pair density, mechanical robustness and cost savings to meet customer application needs. It is designed to support the telecommunications, data networking and storage markets.

At 12.5 Gbps data rates, the I-Trac broadside-coupled, skew equalized design provides multiple benefits, including superior impedance control, lower cross-talk and lower insertion loss versus other open pin-field or metal shielded-backplane products. Molex's I-Trac contact technology allows customers to use as few as 2.75 contacts per differential channel versus competitors' 3 contacts per channel. This reduces the number of pins required for high-speed channels, thus lowering the total cost of the connector solution.

I-Trac's open pin-field design allows customers the flexibility to assign high-speed differential pairs, low-speed signals, power and ground contacts anywhere within the pin-field. The broadside-coupling design allows the entire pinfield to be utilized for high-speed signals. I-Trac is designed for both standard backplane architectures, as well as orthogonal backplane

architectures, using the same connector part numbers. I-Trac is a press-fit, flexible, mono-block based system with integrated guidance, power and signals that can be stacked end-to-end to meet customer pin-count requirements.

The I-Trac standard backplane system offers the following options*:

- The 7-row backplane product is available in 4, 6 or 10 column (56, 84 or 140 circuits)
- The 11-row backplane product is available in 5, 6, 8 or 10 column (110, 132, 176 or 220 circuits)
- The 15-row backplane product is available in 8, 9 or 10 column (240, 270 or 300 circuits)

***Note:**

A 5-row version is planned for release in the near future. Please contact i-trac@molex.com for additional information. Standalone Power Module options planned for release in the near future. Please contact i-trac@molex.com for additional information.

Co-Planar, Mezzanine, Reverse Gender options planned for release in the near future. Please contact i-trac@molex.com for additional information.

76015 7-Row Backplane Signal Modules

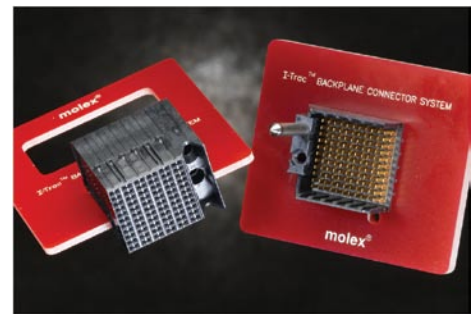
76020 7-Row Daughtercard Signal Modules

75705 11-Row Backplane Signal Modules

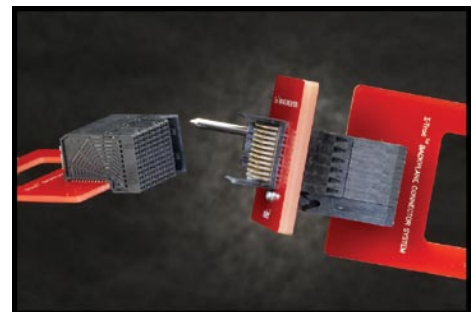
75710 11-Row Daughtercard Signal Modules

76035 15-Row Backplane Signal Modules

76040 15-Row Daughtercard Signal Modules



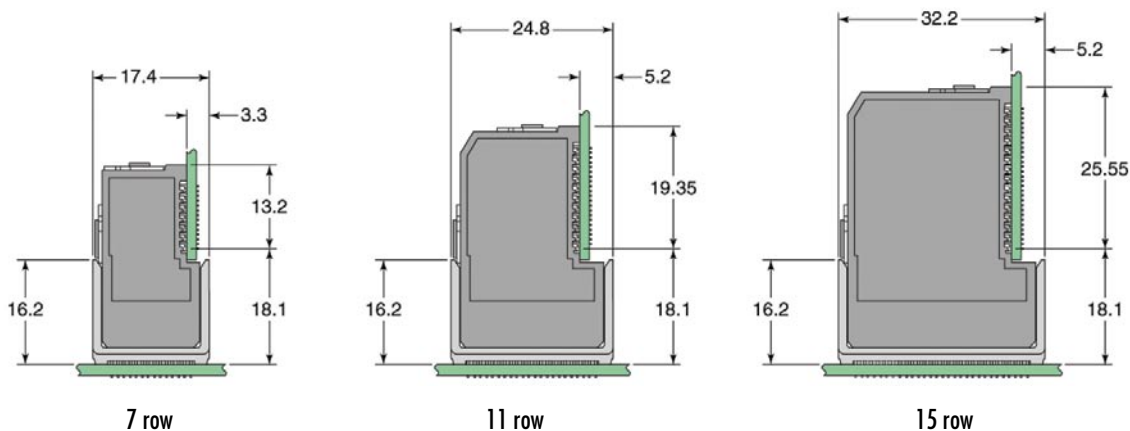
I-Trac Standard Backplane Interconnect



I-Trac Orthogonal Backplane Interconnect (same parts as Standard Backplane Interconnect)

Product Family Overview

	Slot Width	Pairs/Inch	Ortho Pairs/Node
7-Row I-Trac	17.4mm	34	16 (4x4)
11-Row I-Trac	24.8mm	55	36 (6x6)
15-Row I-Trac	32.2mm	69	64 (8x8)



SPECIFICATIONS



1.85mm by 3.70mm (.073" by .146") Pitch I-Trac™ Backplane Connector System 7, 11 and 15 Row

Features and Benefits

- Data rates of 12.5 Gbps or higher support future system performance upgrades
- Broadside-coupled, skew-equalized, differential pair system offers superior impedance control, low cross-talk, and low insertion loss
- Differential pair density up to 69 pairs per linear inch using open pin-field design provides high-density, high-bandwidth connection with pin-by-assignment flexibility
- Allows standard and orthogonal connections using the same parts allows design flexibility, connector and PCB cost savings
- Quad PCB routing capability reduces PCB layers required to route high-speed lines, reducing PCB cost
- Integrated guidance gives superior mating performance
- Bifurcated contact beams in daughtercard interface provides greater reliability with 2 points of contact to the header pin

*Reference Information

Packaging:

Daughtercard Assemblies — Trays

Headers —

11 and 15 row — Trays

7 row — Tube

UL File No.: E29179

CSA File No.: Pending

Designed In: Millimeters

Electrical

Signal Contact Current Rating: 1.0A

Contact to Plated Through-Hole Resistance:
1.0 milliohm max.

Dielectric Withstanding Voltage: 750V RMS

Insulation Resistance: 1,000 Megaohms min.

Mechanical

Contact Insertion Force: 35.6N (8.0 lb) max. per contact

Contact Retention Force: 4.45N (1.0 lb) min. per contact

Mating Force: 0.69N (0.15 lb) max. per contact

Durability: 200 cycles

Physical

Housing: Liquid Crystal Polymer, UL 94V-0

Contact: High Performance Copper (Cu) Alloy

Plating:

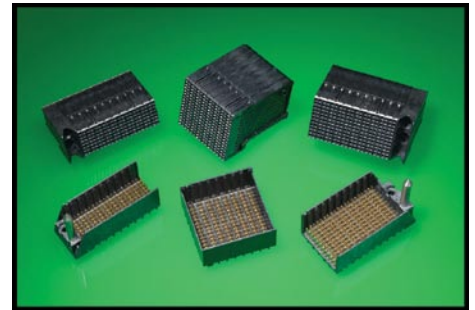
Contact Area — 0.76 μ m (30 μ in) Gold (Au) min.

Solder Tail Area — Tin (Sn) or Tin/Lead (Sn/Pb)

Underplating — Nickel (Ni)

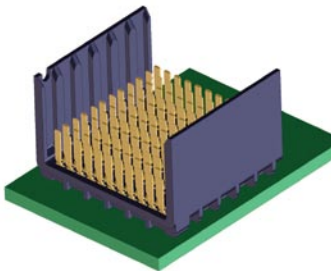
PCB Thickness: 1.60mm (.062in) min.

Operating Temperature: -55 to +85°C

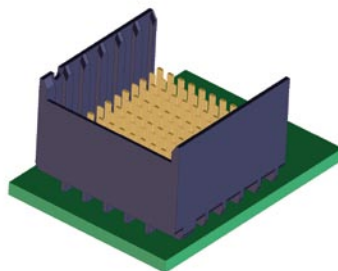


*For complete electrical and mechanical test reports, contact i-trac@molex.com

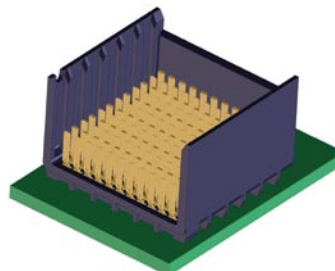
Backplane Signal Modules



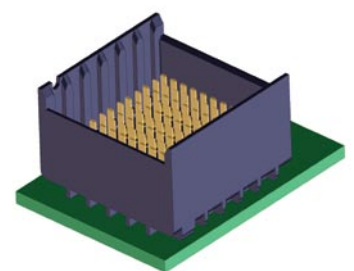
Open



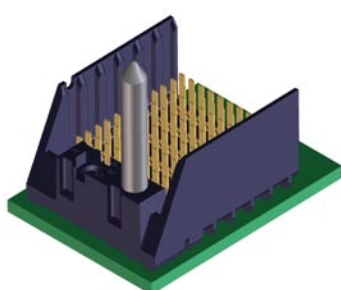
Left endwall, right open



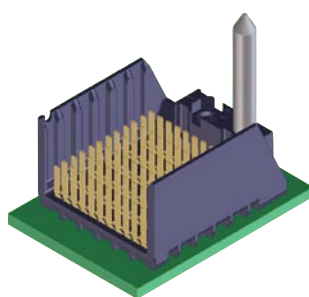
Right endwall, left open



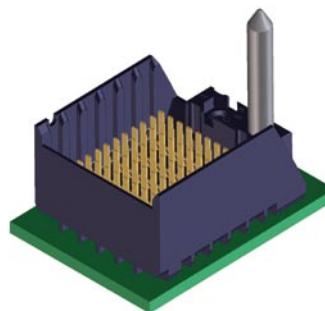
Dual endwall



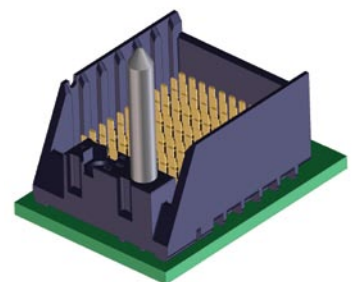
Left guide, right open



Left open, right guide



Left endwall, right guide



Left guide, right endwall

ORDERING INFORMATION



**1.85mm by 3.70mm
(.073" by .146") Pitch I-Trac™
Backplane Connector System
7, 11 and 15 Row**

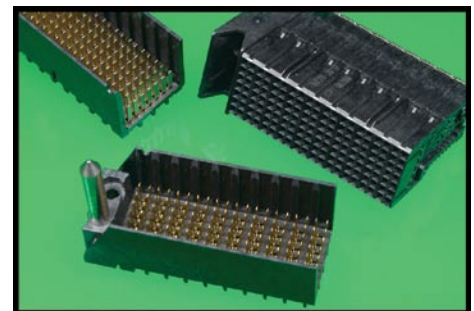
7-Row Backplane Signal Modules

Order Number	Column	Circuits	Module Type						
			Left Guide	Right Guide	Left Endwall	Right Endwall	Left Open	Right Open	
76015-1403	4	56					X	X	
76015-1413					X				X
76015-1433								X	
76015-1423							X	X	
76015-3403					X				X
76015-5403						X			X
76015-7403					X			X	
76015-9403						X	X		
76015-1603			6	84					X
76015-1613					X				X
76015-1633								X	X
76015-1623							X	X	
76015-3603					X				X
76015-5603						X			X
76015-7603					X			X	
76015-9603						X	X		
76015-1103	10	140							X
76015-1113					X				X
76015-1133								X	X
76015-1123							X	X	
76015-3103					X				X
76015-5103						X			X
76015-7103					X			X	
76015-9103						X	X		

Note:
 - Part numbers listed above are tin plated and RoHS compliant
 - For Tin/Lead plating order numbers, please contact i-trac@molex.com
 - To view all pin contact lengths and keying options, please contact i-trac@molex.com

7-Row Daughtercard Signal Modules

Order Number	Column	Circuits	Module Type		
			Left Guide	Right Guide	Open
76020-1004	4	56			X
76020-3004			X		
76020-5004				X	
76020-1006	6	84			X
76020-3006			X		
76020-5006				X	
76020-1010	10	140			X
76020-3010			X		
76020-5010				X	





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11-Row Backplane Signal Modules

Order Number	Column	Circuits	Module Type						
			Left Guide	Right Guide	Left Endwall	Right Endwall	Left Open	Right Open	
75705-1503	5	110					X	X	
75705-1513					X				X
75705-1533							X	X	
75705-1523							X	X	
75705-3503					X				X
75705-5503						X			X
75705-7503					X			X	
75705-9503						X	X		
75705-1603			6	132					X
75705-1613					X				X
75705-1633								X	
75705-1623							X	X	
75705-3603					X				X
75705-5603						X			X
75705-7603					X			X	
75705-9603						X	X		
75705-1103	8	176					X	X	
75705-1813					X				X
75705-1833								X	
75705-1823							X	X	
75705-3803					X				X
75705-5803						X			X
75705-7803					X			X	
75705-9803						X	X		
75705-1103	10	220					X	X	
75705-1113					X				X
75705-1133								X	
75705-1123							X	X	
75705-3103					X				X
75705-5103						X			X
75705-7103					X			X	
75705-9103						X	X		

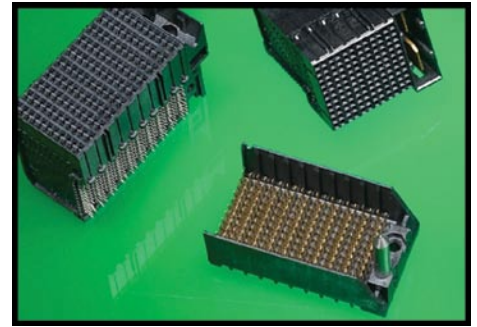
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11-Row Daughtercard Signal Modules

Order Number	Columns	Circuits	Module Type		
			Left Guide	Right Guide	Open
75710-1005	5	110			X
75710-3005			X		
75710-5005				X	
75710-1006	6	132			X
75710-3006			X		
75710-5006				X	
75710-1008	8	176			X
75710-3008			X		
75710-5008				X	
75710-1010	10	220			X
75710-3010			X		
75710-5010				X	



15-Row Backplane Signal Modules

Order Number	Column	Circuits	Module Type						
			Left Guide	Right Guide	Left Endwall	Right Endwall	Left Open	Right Open	
76035-1803	8	240					X	X	
76035-1813					X			X	
76035-1833							X	X	
76035-1823							X	X	
76035-3803					X				X
76035-5803						X			X
76035-7803					X			X	
76035-9803						X	X		
76035-1903			9	270					X
76035-1913					X			X	
76035-1933							X	X	
76035-1923							X	X	
76035-3903					X				X
76035-5903						X			X
76035-7903					X			X	
76035-9903						X	X		
76035-1103	10	300							X
76035-1113					X			X	
76035-1133							X	X	
76035-1123							X	X	
76035-3103					X				X
76035-5103						X			X
76035-7103					X			X	
76035-9103						X	X		

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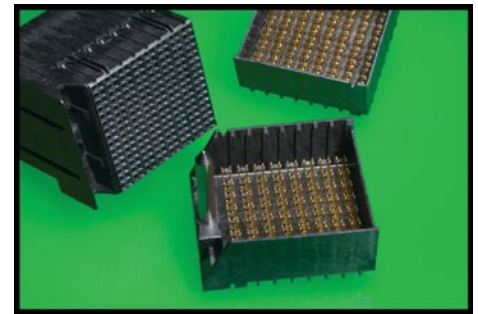
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15-Row Daughtercard Signal Modules

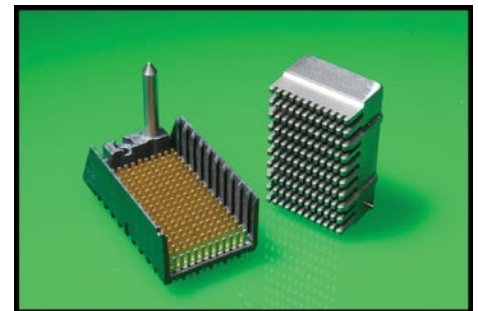
Order Number	Column	Circuits	Module Type		
			Left Guide	Right Guide	Open
76040-1008	8	240			X
76040-3008			X		
76040-5008				X	
76040-1009	9	270			X
76040-3009			X		
76040-5009				X	
76040-1010	10	300			X
76040-3010			X		
76040-5010				X	



TOOLING INFORMATION

Backplane Signal Module Press-In Tooling

Header type	Number of columns	Insertion tool part number
7 row	4	62201-8607
	6	62201-8608
	10	62201-8609
11 row	5	62201-8601
	6	62201-8602
	8	62201-8617
	10	62201-8603
15 row	8	62201-8619
	9	62201-8620
	10	62201-8621



Daughtercard Signal Module Press-In Tooling

Receptacle type	Number of columns	Insertion tool part number
7 row	4	62201-8610
	6	62201-8611
	10	62201-8612
11 row	5	62201-8604
	6	62201-8605
	8	62201-8618
	10	62201-8606
15 row	8	62201-8622
	9	62201-8623
	10	62201-8624

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