

**System design teams can use the Molex I-Trac Reference Backplane to quickly and accurately evaluate the following:**

- Silicon signal recovery:
  - Verified error free, 10.3 Gbps, 1m (3.28') channel performance using: Phyworks 1066, AMCC QT2055 10G BASE-KR and Xilinx Vertex 2 pro chip sets
- Various real world channel lengths:
  - 0.20m (.656'): SFI applications
  - 0.38m (1.246'): Typical Customer application
  - 0.535m (1.755'): Typical ATCA reach
  - 0.6m (1.968'): Typical intermediate-reach customer application, OIF CEI-11G MR target
  - 1m (3.280'): Typical long-reach customer application OIF CEI-11G LR, IEEE 802.3ap target
- PCB channel designs:
  - Two signal-to-ground patterns for nominal and very high-speed signal layouts
  - Various trace widths: 5/5/5 tightly coupled, 6/7/6 medium coupled, 7/9/7 loosely coupled
  - Antipad and pinfield routing
  - Via stub variations
- Board construction:
  - Available in Isola™ FR408 and Nelco™ 4000-12 with a Nelco 4000-12SI high performance channel
  - Backplane dimensions: 40x60cm, 6.2mm (244 mil) thick, 28 Layers
  - Daughtercard dimensions: 13x18cm, 2.4mm thick
- Includes loopback card and TRL cal kit (loopback card effectively doubles channel lengths)
- Easy-to-read quick setup documentation
- An extended range of channel solutions are available through our signal integrity team



I-Trac 11 row Reference Backplane



Daughtercard



TRL Cal-Kit



Loopback



## I-Trac Reference Backplane and Scalable 12+ Gbps Connector System

**Minimize cross talk, achieve superior impedance control and higher-bandwidth connections with the Molex I-Trac™ Backplane Connector System**

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.

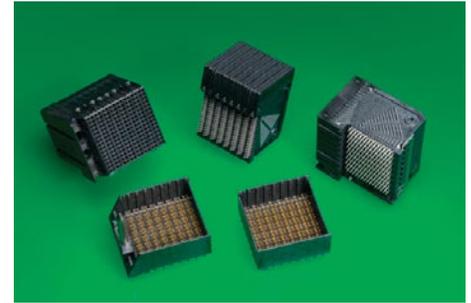
Scalable data rates from 2 Gbps to over 12.5 Gbps, the I-Trac broadside-coupled, skew equalized design provides multiple benefits, including superior impedance control, lower cross-talk and lower insertion loss versus other open pin-field or metal shielded-backplane products.

The I-Trac 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 that can be stacked end-to-end to meet customer pin-count requirements.

The I-Trac backplane system is offered in the following options:

- 7-row product is available in 4, 6 or 10 column (56, 84 or 140 circuits)
- 11-row product is available in 5, 6, 8 or 10 column (110, 132, 176 or 220 circuits)
- 15-row product is available in 8, 9 or 10 column (240, 270 or 300 circuits)
- A 5-row version is planned for release in the near future.

For additional information please contact [i-trac@molex.com](mailto:i-trac@molex.com)



I-Trac Standard and Orthogonal Backplane Interconnect System available in 7, 11 and 15 row configurations

### Product Family Overview

	Slot Width	Pairs/Inch	Orthogonal Pairs Per 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)

### Features and Benefits

- High speed data rates scalable from 2 Gbps to beyond 12.5 Gbps support future system performance upgrades without requiring platform re-design
- Broadside-coupled, skew equalized, differential pair system provides superior impedance control, low cross-talk, and improved insertion loss performance
- Differential pair density up to 69 pairs per linear inch using open-pin field design offers high-density, high-bandwidth connection with pin-by-assignment flexibility
- Allows standard and orthogonal architectures using the same header part numbers allows design flexibility, connector and PCB cost savings
- Quad PCB routing capability between columns reduces PCB layers required to route high speed lines, reducing PCB cost
- Integrated guidance and keying allows for superior mating performance and linecard protection

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**Americas Headquarters**  
Lisle, Illinois 60532 U.S.A.  
1-800-78MOLEX  
[amerinfo@molex.com](mailto:amerinfo@molex.com)

**Asia Pacific North Headquarters**  
Yamato, Kanagawa, Japan  
81-46-265-2324  
[feninfo@molex.com](mailto:feninfo@molex.com)

**Asia Pacific South Headquarters**  
Jurong, Singapore  
65-6268-6868  
[fesinfo@molex.com](mailto:fesinfo@molex.com)

**European Headquarters**  
Munich, Germany  
49-89-413092-0  
[eurinfo@molex.com](mailto:eurinfo@molex.com)

**Corporate Headquarters**  
2222 Wellington Ct.  
Lisle, IL 60532 U.S.A.  
630-969-4550  
Fax: 630-969-1352