



# BACKPLANE CONNECTOR

**Molex Impulse Orthogonal Direct Backplane Connector provides data center architects with a connector system that meets today's needs while preparing the data center for inevitable expansion in the future.**

## BUSINESS CHALLENGE

**High-density data center customers are in need of a dense, scalable network solution to meet today's transmission rates and density, as well as continue to meet demand in the future. Insertion loss and ICR margin become bigger issues as data speeds increase, so customers need a more reliable connector system that offers a very low IL and low noise levels.**

One of the key considerations in modern data center reliability is the need to support transmission rates of 56 Gbps NRZ and 112 Gbps PAM-4 without compromising signal integrity. Having a connector system that can support these higher speeds, while also maintaining signal quality and integrity is of paramount importance.

The other key consideration for data center architects is the ability to expand the center capacity without having to rewire or reconfigure the basic network. Therefore, any solution that meets the higher network speeds and provides greater reliability must also be compatible with and capable of future uses.

## SOLUTION

To meet these complex and interconnected needs, Molex has developed the Impulse connector system, which supports data rates of 56 Gbps NRZ and 112 Gbps PAM-4 with superior signal integrity. Designed with an innovative contact interface, all signal contacts are positioned and protected in individual slots. Robust guiding features ensure proper connector alignment and mating and the U-shaped ground blades provide mechanical isolation between signal pins.

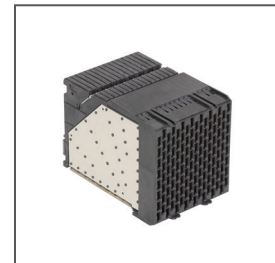
Molex has also met the demands of today's data center architects by designing the Impulse Orthogonal Direct Backplane Connectors to be forward compatible and meet future data rate needs without having to replace infrastructure. The Impulse connector features an innovative signal interface that improves insertion loss when compared with traditional beams.

The Molex Impulse connector is an addition to the orthogonal direct portfolio of backplane connectors. These include

the Impact (sub 25 Gbps) and Impact zX2 (28 Gbps), Impel (40 Gbps) and Impel Plus (56 Gbps), and Impulse (56/112 Gbps). All of these scalable solutions deliver a stable channel impedance and help decrease system-level applied costs by eliminating the chassis midplane.

## BENEFITS

- 2.00mm column-to-column pitch delivers high-speed connectivity in a compact size
- Innovative signal interface improves insertion loss over traditional in-line interface
- Guiding features ensure proper connector alignment and mating
- Direct orthogonal connector eliminates the need for midplane connections
- Scalable solution offers stable channel impedance



To learn more [www.molex.com/link/impulse.html](http://www.molex.com/link/impulse.html)

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