

Article Overview

High-speed, energy-efficient backplane connectors are available from TE Connectivity, Amphenol, Molex, Samtec, and distributors like Mouser, supporting worldwide shipping and data rates up to 224 Gbps.

Key Features

High-Speed Performance: Modern backplane connectors support data rates from 6.25 Gbps up to 224 Gbps, enabling efficient high-bandwidth transmission for data centers, networking, and industrial applications (TE Connectivity, Molex, Samtec) . **Energy Efficiency:** These connectors are designed to minimize insertion loss and signal rise, reducing power consumption while maintaining signal integrity. Systems like TE's STRADA Whisper and Z-PACK UHD optimize energy use without compromising performance . **Form Factors and Flexibility:** Options include right-angle, co-planar, mezzanine, Eurocard, and micro-rugged designs. Samtec's ExaMAX(R) and XCede(R) HD systems offer modularity and small form factors for space-constrained applications, while Molex provides hermaphroditic and high-density designs for scalable AI and high-bandwidth upgrades . **Signal Integrity and Reliability:** Advanced designs ensure low skew, high-density differential pairs, and robust mechanical support, suitable for harsh environments in aerospace, defense, and industrial controls . **Global Availability:** Distributors like Mouser Electronics stock connectors from TE Connectivity, Amphenol, Molex, Samtec, and others, offering same-day shipping and worldwide delivery, making it easy to source connectors for international projects .

Recommended Manufacturers and Solutions

- o TE Connectivity: STRADA Whisper (up to 112 Gbps), Z-PACK UHD (high-density, low-power) .
- o Amphenol CS: High-speed, high-density backplane connectors optimized for cost and performance trade-offs .
- o Molex: Impulse Backplane Connector System (up to 112 Gbps), GbX I-Trac (12.5 Gbps, high-density) .
- o Samtec: ExaMAX(R) (56 Gbps PAM4), XCede(R) HD (modular, small form factor), NovaRay(R) Micro Rugged (up to 128 Gbps PAM4) .
- o Mouser Electronics: Authorized distributor offering global shipping and datasheets for all major backplane connector brands .

Conclusion

For energy-efficient, high-speed backplane connectors with worldwide shipping, TE Connectivity, Amphenol, Molex, and Samtec provide a wide range of solutions. Distributors like Mouser Electronics ensure global availability, fast delivery, and access to datasheets, enabling designers to select connectors that balance performance, energy efficiency, and form factor for modern high-bandwidth systems.



Energy-efficient backplane connector shipped worldwide

Our backplane connectors are meticulously engineered to facilitate multi-gigabit data transfer rates, minimize crosstalk, and ensure

Industrial Backplane Connector Solutions The Amphenol industrial backplane connector range is one of

Our portfolio of backplane connectors features high-performance right angle, co-planar, and mezzanine interconnects, used for

Understanding Backplane PCBs A backplane PCB is a big circuit board made to accommodate and link several

Backplane connectors play a vital role in supporting high-density server configurations and ensuring efficient data flow within these

Shop DigiKey's large in-stock selection of Backplane Connectors. View inventory, pricing and order now for same day shipping!

Backplane Connectors market growth is driven by rising demand in telecom, industrial, and automotive sectors.

Accommodating a broad spectrum of speeds up to 20 Gbps, TE Connectivity's Z-PACK Slim UHD backplane

Backplane Connector Market Size, Share & Trends Analysis Report 2025-2034 - Global market valued at \$2.8 billion

TE Connectivity's Z-PACK connectors are the densest connector with the smallest footprint, which helps save PCB

Our backplane connectors provide reliable high-speed connectivity and signal integrity, while our backplane modules facilitate power

Samtec's backplane connectors include ExaMAX[®] for high-speed 56 Gbps PAM4 performance and

The global server backplane connector market is booming, projected to reach \$3.8 billion by 2033 with a 6.7% CAGR.

Amphenol CS is the leader in high-speed, high-density connection systems, designing and manufacturing the



Energy-efficient backplane connector shipped worldwide

industry"s

Backplane Connectors are in stock with same-day shipping at Mouser Electronics from industry leading manufacturers. Mouser is an

Backplane Connectors Market Overview The global Backplane Connectors Market is forecast to expand from USD

Web: <https://www.millstraining.co.za>

