

RIVO MULTITRADE OPTICAL SYSTEMS

Price List for New Passive Optical Networks for Data Center Interconnection



Overview

The main components of 100 G passive optical network (PON) are optical line terminal, optical network unit, transceivers, splitters.

Key Takeaways

New Passive Optical Network solutions for data center interconnects range from \$35 for short-reach QSFP28 modules to several thousand dollars for long-reach coherent optics, with market growth driven by 50G-PON/NG-PON2 and high-speed DCI deployments. Component-Level Pricing

- QSFP28 Modules: Short-reach (SR4) 100G modules can cost as low as \$35, delivering 100G connectivity at approximately \$0.35 per Gbps, while long-reach LR4 or ZR4 modules can reach several thousand dollars depending on OEM branding, warranty, and platform compatibility .
- SFP+ Modules: 10G modules are typically around \$20, equating to \$2 per Gbps, making higher-speed QSFP28 modules more cost-efficient for large-scale deployments .



- Coherent Pluggable Optics: For DCI, Cisco and other vendors offer coherent pluggable modules capable of 400G transport over 40 km to 1,000+ km, reducing the need for standalone transponders and lowering power, cooling, and footprint costs by over 80% .

PON Equipment Market Trends

- The Passive Optical Network equipment market is projected to grow from \$38.71 billion in 2026 to \$61.49 billion by 2031, at a CAGR of 9.7% .
- 50G-PON and NG-PON2 platforms are expanding rapidly, with a projected CAGR of 10.55% through 2031, driven by fiber upgrades, 5G transport, and enterprise adoption .
- OLT systems accounted for 46.05% of the market in 2025, while ONT units are growing at a CAGR of 10.88%, reflecting increasing demand for high-speed access and interconnectivity .

Data Center Interconnect Considerations

- High-speed optics: 800G and 1.6 Tbps transceivers are becoming mainstream, with InP-based EML designs critical for long-haul and high-capacity links .
- Supply constraints: Production of leading-edge optics is concentrated among a few global players, with yields ranging from 15% to 50% for high-speed designs, potentially affecting pricing .
- Operational savings: Deploying pluggable coherent optics in DCI reduces equipment complexity, energy consumption, and operational costs compared to traditional transponders .

Summary

For data center interconnects using PON technology, short-reach QSFP28 modules offer highly cost-effective 100G connectivity, while long-reach coherent optics are significantly more expensive but essential for multi-kilometer links. The market is expanding rapidly due to 50G-PON/NG-PON2 adoption, 5G transport needs, and enterprise interest in passive optical LANs. Buyers should consider cost per Gbps, vendor support, and platform compatibility when selecting modules, balancing upfront costs with operational efficiency and scalability .

Article Content

Price list for new optical line terminals for data center interconnection

Over the past several years, data center network architectures have come a long way with several optical and electro-optical

Price list for new optical line terminals for data center interconnection

Modern OLTs support various technologies including GPON, XG-PON, and NG-PON2, with prices varying based on port density,

Price list for low-loss passive optical networks for data center ...

Price list for low-loss passive optical networks for data center interconnection The high-density, modular design and 16-, 8-, 12- and

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As a worldwide provider of high-performance network products and solutions, FS offers switches, optical transceivers, cabling

100G Passive Optical Network (PON) Market Report 2026

The main components of 100 G passive optical network (PON) are optical line terminal, optical network unit, transceivers, splitters.

PODCA: a passive optical data center network architecture

PODCA: a passive optical data center network architecture Abstract: Optical interconnects have gained great attention

Reliable and Cost Efficient Passive Optical Interconnects for Data Centers

Passive optical devices, characterized by low cost, zero energy consumption, and high reliability, are essential building

Optical interconnection networks for data centers

The rise of cloud computing and other emerging web applications has increased significantly the network traffic inside the data

Passive Optical Network Market

The Passive Optical Network Equipment market benefits directly because each new fiber location requires both central

Optical Interconnect Market Size, Share & Trends

Optical interconnects are crucial for high-speed, high-capacity data transmission within and between data centers and

Optical Interconnects for Next Generation Data Centers

Optical networks offering ultra-high capacity and requiring low energy consumption are considered as a good option to address these

(PDF) Optical Networks and Interconnects

This chapter gives an overview of different optical data center network architectures as well as some expected

The Future of Data Centers How Passive Optical Networks (PON) Are ...

To meet these demands, data centers must evolve their infrastructure to ensure seamless, high-speed communication

Data Center Optical Interconnection | High-Bandwidth Transmission ...

In short, high-bandwidth, low-latency, and high-reliability networks are now required for Data Center Interconnect (DCI). Turn to

Research of Optical Interconnection Technology in Datacenter Networks

To address the sustainability, scalability, and reliability problems that data centers are currently facing, we propose

Flexible and Scalable Optical Interconnects for Data Centers: Trends ...

On the other hand, the rapid growth of training data, model size, and computing requirements has led to an ever

Key innovation in Passive Optical Network (PON) technology

With its winning mix of low cost, easy scalability, and simple design, passive optical networking is powering everything

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