

CIF Price of Upgraded Data Center Interconnect Optical Circulator

Article Overview

The CIF price of an upgraded DCI optical circulator typically ranges from USD 5,000 to USD 25,000 per unit, depending on capacity, vendor, and deployment distance.

Market Context

Upgraded optical circulators for data center interconnects are part of coherent optical modules used in high-speed DCI networks, supporting 100G, 400G, and 800G links over distances from tens to thousands of kilometers . These devices are increasingly deployed in hyperscale and AI-driven data centers to reduce latency, power consumption, and footprint while enabling high-bandwidth, low-latency interconnections . The global DCI market is projected to grow from USD 11.9 billion in 2025 to USD 35.9 billion by 2034, reflecting strong demand for advanced optical components .

Pricing Factors

The CIF price of an upgraded optical circulator depends on several factors:

- o Bandwidth and Modulation: Higher-capacity modules (400G-800G) with advanced coherent optics cost more than standard 100G modules .
- o Distance and Reach: Long-haul circulators capable of supporting 1,000 km or more require higher-grade components, increasing cost .
- o Vendor and Brand: Leading suppliers like Cisco, Fujitsu, Ciena, and Juniper offer premium modules with integrated telemetry and energy-efficient designs, which can raise the CIF price .
- o Supply Chain and Shipping: CIF pricing includes shipping, insurance, and handling, which varies by origin, destination, and logistics provider. North America and Asia-Pacific are major production and deployment regions, affecting freight costs .

Estimated CIF Price Range

Based on current market trends and vendor offerings:

- o Entry-level upgraded circulators (100G-200G): USD 5,000-10,000 per unit CIF.
- o Mid-range modules (400G): USD 10,000-15,000 per unit CIF.
- o High-end modules (800G or long-haul coherent optics): USD 15,000-25,000 per unit CIF. These estimates reflect premium coherent optical circulators suitable for modern DCI deployments with energy-efficient, high-bandwidth capabilities .



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Recommendations

- o Contact authorized vendors (Cisco, Fujitsu, Ciena, Juniper) for exact CIF quotes, as prices fluctuate with order volume, shipping terms, and component availability.
- o Consider bulk procurement or long-term supply agreements to reduce per-unit CIF costs.
- o Evaluate technical specifications carefully, including supported data rates, reach, and integration with existing DCI infrastructure, to ensure cost-effectiveness. By understanding these factors, organizations can plan for accurate budgeting and procurement of upgraded optical circulators for high-performance data center interconnects.

The Optical Interconnect Market is witnessing rapid expansion as global data traffic surges, hyperscale data centers scale

Key Takeaways: Optical Circulator Market Global market valued at \$447.5 million in 2025 Expected to reach \$874.6 million by 2034

In recent years, investments by cloud companies in mega data centers and associated network infrastructure has created a very

The Cisco Advantage Cisco offers a vertically integrated solution from the optical interconnects to data center

Data Center Interconnect Market Size The global data center interconnect market was estimated at USD 11.8 billion in 2025. The

-- Coherent-lite optics. This technology delivers cost-effective, lower-power coherent transmission for shorter reaches--such as data

The Data Center Interconnect Market, valued at USD 10.7B in 2024, is projected to reach USD 35.9B by 2034, growing at a 13.1%

Although optics has been used in data centers for decades, it is now reaching further and

The data center interconnect market is segmented by type, application, and end-user, with demand concentrated in high

Optical transport bounce-back- 2024 was a tough year for optical transport, but AI data center interconnect will bolster

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Data center interconnect (DCI) refers to a technology that links multiple data centers over varying distances, from short to long,

Optical interconnect refers to a communication technology that transmits data between components or systems using light signals

In the data center interconnect market matrix, Ciena Corporation leads with a robust market presence, advanced optical networking

Data Center Interconnect (DCI) Market will witness a robust CAGR of 12.6%, valued at \$8.5 billion in 2024, expected to appreciate

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

Blog Fiber optics for data centers: the state of the art in 2025 The datacom optical component market will grow over

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