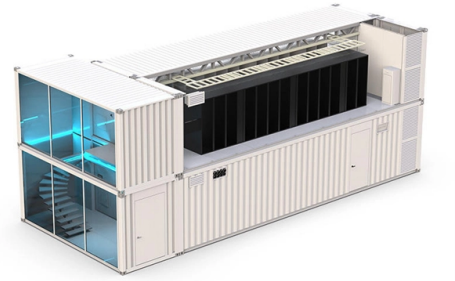
Offshore Price Active Optical Module PAM4



Overview

This report analyses the market for semiconductor IC chipsets used in optical transceivers, active cables, and related products.

Key Takeaways

The offshore price of PAM4 active optical modules varies widely by bandwidth, form factor, and supplier, typically ranging from several hundred to several thousand USD per module, with higher-speed modules (400G–1. 6T) commanding premium prices. Pricing OverviewPAM4 active optical modules (AOMs) are used in high-speed data center, AI, and telecom networks, supporting 100G, 200G, 400G, 800G, and 1.

6T transmission rates. Prices depend on several factors: Bandwidth and Form Factor: QSFP28 100G PAM4 modules are generally the most cost-effective, while QSFP-DD or OSFP modules for 400G–1. 6T are significantly more expensive due to higher complexity and DSP requirements.

DSP and I

C Components: Modules using advanced PAM4 DSPs from Marvell, Credo, or other vendors include high-performance silicon for low-latency, high-bandwidth operation, which increases cost. Distance and Reach: Short-reach modules (SR) are cheaper than long-reach (LR) or DWDM-enabled modules, which require precise laser tuning and additional optical components. Market Dynamics: Global demand for AI, cloud, and 5G infrastructure drives pricing.

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According to Light

Counting, PAM4 and coherent DSP ICs have seen strong growth from 2019–2024, with continued expansion forecasted through 2030, influencing module prices. Typical Offshore Price Ranges (Estimates)100G PAM4 QSFP28: $300–$600 per module offshore, depending on reach and vendor. 200G–400G PAM4 QSFP-DD: $800–$1,500 per module, with short-reach versions at the lower end.

800G PAM4 OSFP/QSFP-DD: $2,000–$4,000 per module, often used in hyperscale data centers. 1. 6T PAM4 modules: $5,000+ per module, reflecting cutting-edge DSP technology and high lane counts.

Key Considerations for Offshore Procurement

Supplier Selection: Leading vendors include Marvell, Credo, and FS, each offering modules optimized for Ethernet, InfiniBand, or AI workloads. Module Type: Active optical cables (AOCs) may offer cost savings for short distances compared to pluggable transceivers with separate fiber. Volume Discounts: Large-scale purchases for data centers or telecom operators can reduce per-unit cost.

Shipping and Customs: Offshore pricing may vary due to import duties, logistics, and regional supply chain constraints.

Conclusion

The offshore price of PAM4 active optical modules is highly variable, influenced by speed, reach, form factor, and vendor. For budgeting purposes, 100G modules start around a few hundred USD, while cutting-edge 1. 6T modules can exceed $5,000 per unit.

Market trends indicate continued demand growth, particularly for AI and hyperscale cloud networks, which may sustain premium pricing for high-speed PAM4 modules.

Article Content

Worldwide PAM4 Optical Transceiver Market 2026 – PW Consulting

Worldwide PAM4 Optical Transceiver Market 2026 Global PAM4 Optical Transceiver Market Size, Share & Industry Analysis, By Data Rate (800G Transceivers, 400G Transceivers), By

PAM4 and Coherent DSPs

This report analyses the market for semiconductor IC chipsets used in optical transceivers, active cables, and related products. The chipsets include laser drivers, TIAs and in

200G/400G/800G Optical Transceiver Modules | FiberMall

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200G/400G/800G optical module features up to 40km transmission distances using QSFP56/QSFP-DD footprints for data center interconnect applications - FiberMall

PAM4 Optical DSPs | Enabling high-bandwidth optical ...

The Perseus 400G/800G PAM4 DSP with integrated TIAs and laser drivers, enables 400G/800G optical transceiver modules and optimizes for short-reach interconnect within hyperscale data center and AI

February 2024 PAM4 and Coherent DSPs (updated April 2024)

This report analyses the market for semiconductor IC chipsets used in optical transceivers and related products. The chipsets include laser drivers, CDRs, TIAs and in some cases FEC, PAM4 and

50G PAM4 Optical Module Market Research Report 2033

The 50G PAM4 technology, with its advanced pulse amplitude modulation, enables higher bandwidth efficiency and supports the scaling of network capacities without a proportional rise in cost or power

PAM4 DSP Chip Market Research Report 2034

Major European carriers including Deutsche Telekom, Orange, BT Group, and Telefonica are actively deploying PAM4-based optical links in their network modernization programs, particularly for 5G

AI infrastructure drives PAM4 DSP market

In 2024, hyperscalers'' massive investments in AI infrastructure drove huge growth in 400G and 800G Ethernet transceiver shipments, in turn creating demand for PAM4 chipsets (DSPs,

50G PAM4 Technical White Paper

The 50GE PAM4 optical module uses the QSFP28 encapsulation mode, LC optical interfaces, and single-mode optical fibers. The transmission distance is 10/40 km, and the maximum power

Marvell Ara PAM4 Optical DSP

Ara is manufactured with advanced 3nm process technology that delivers improved power efficiency while doubling the total bandwidth of the module to 1.6Tbps utilizing established OSFP/QSFP-DD

400G Optical Module Selection Guide: QSFP-DD vs.

Compare QSFP-DD, QSFP28, and OSFP form factors. Learn about compatibility, power constraints, migration TCO, and data center selection

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100G Optical Module: How to Choose Between SR4,

Continuing our discussion on 100G optical modules, let''s explore the essential 100G transmission standards—SR4, DR1, DR4, BiDi SR, LR4,

Offshore Price Active Optical Equipment 800G

Cisco OSFP-800G-DR8 Compatible 800GBASE-DR8 (2x 400G DR4) Twin-port OSFP IHS/Closed Finned Top PAM4 1310nm 100m Dual MPO-12/APC DDM SMF Optical Transceiver Module for ...

PAM4 DSP Chip Market Research Report 2034

Standalone PAM4 DSP chips are discrete semiconductor devices designed specifically for PAM4 modulation, equalization, FEC, and signal processing within pluggable optical transceiver modules

The Ultimate Guide to SFP Modules (2026): Types, Speeds

Confused by SFP vs SFP+? Read the definitive 2026 guide on SFP modules. We explain Single Mode vs Multimode, DDM diagnostics, and how to choose the right transceiver for Cisco, Juniper, and more.

Optical Module Technology Explanation: PAM4 Technology Overview

For the PAM4 signal generator, it can provide excellent signal integrity because there is no external various passive or active equipment and signal degradation caused by cable matching and

PAM4 Optical Modulation: Meeting the Demands of Increasing

Consequently, the industry has turned to PAM4 modulation to realize ultra-high-bandwidth network architectures. PAM4 is an optical modulation technique that allows for higher data rates and

QSFP28 PAM4 DWDM: How to Extend 100G/400G Links Without

Learn how QSFP28 PAM4 DWDM technology can extend 100G/400G network links without performance loss. Discover practical strategies, deployment tips, and key considerations for

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