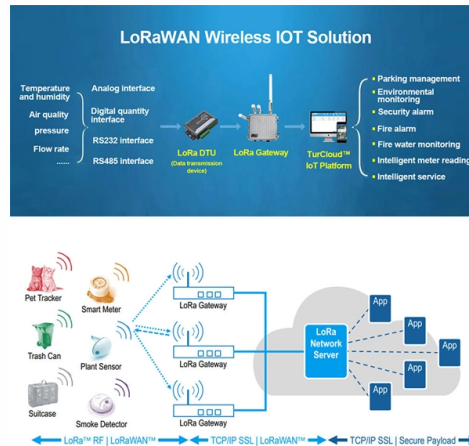


Optical Module DSP Brands



AI Overview

Major DSP brands for optical modules include Broadcom, Marvell, and NTT, offering high-performance solutions for PAM4 and coherent optical transceivers. Leading DSP Manufacturers Broadcom is a key player in the optical module DSP market, providing high-performance PAM4 DSPs such as the Taurus™ BCM83640 3 nm optical DSP. These DSPs support 400 G per lane and are optimized for 1.6 T optical modules, widely used in AI cloud communications and hyperscale data centers. Broadcom DSPs are compatible with IEEE and OIF standards and are central to 400G, 800G, and emerging 1.6 T QSFP-DD and OSFP modules, offering high bandwidth density and low power consumption. Marvell offers both PAM4 and coherent DSP solutions, including the Orion™, Canopus™, and Deneb™ platforms. Orion™ is the first 800 Gbps coherent DSP for pluggable modules, produced on 5 nm technology, supporting metro, long-haul, and data center interconnects. Canopus is a 7 nm coherent DSP enabling 400G ZR/ZR+ pluggable modules, while Deneb extends support for ITU/OpenROADM and open ZR+ standards, targeting 5G access backhaul and multi-rate networks. Marvell DSPs are widely adopted in hyperscale and telecom networks for low-power, high-performance optical transmission. NTT provides the ExaSPEED series of coherent DSPs, including Gen4 single-chip 100–400G solutions with ultra-low power consumption. These DSPs support OIF 400ZR, OpenZR+, and OpenROADM MSA standards, and are designed for QSFP-DD and CFP2-DCO modules. NTT's DSPs offer high performance with reduced power consumption and include software development kits and evaluation boards for rapid integration.

Market Overview The global optical module DSP chip market is growing steadily, with a market size of USD 341 million in 2023, projected to reach USD 616.45 million by 2032. North America alone accounted for USD 99.51 million in 2023, reflecting strong demand in data centers, telecom, and AI cloud networks.

Summary For high-speed optical communic...

Article Content

NVIDIA/Mellanox MMS4A00-XM-FLT/MMS4C10-XM

Built-in Broadcom 3nm DSP (Sian3 BCM83628). Maximum power consumption $\leq 25W$. 8x200G-PAM4 electrical modulation. Compliant with OSFP MSA, IEEE

800G Data Center Interconnect Guide: DAC, AEC, AOC & Optical

Linear Pluggable Optics: The Near-Term Power Win While AEC is the breakout story for copper, LPO (Linear Pluggable Optics) is the emerging story for optics. LPO removes the DSP from

Global Optical Module DSP Chip Market Outlook, In-Depth Analysis ...

This definitive report equips CEOs, marketing directors, and investors with a 360° view of the global Optical Module DSP Chip market, seamlessly integrating production capacity and sales performance

QSFP-DD Product Family » Acacia

Quad Small Form-factor Pluggable Double Density (QSFP-DD) solution that fits into high-density switch and router client ports for optical interconnect links

Marvell Ushers In the 1.6T Era with Expanded Optical DSP Platform ...

Ara T, the first 8x200G transmit-retimed optics (TRO) DSP, delivers improved power efficiency and reduced total cost of ownership in network deployments. Ara X, the first 1.6T DSP with

Global Optical Module DSP Chip Market 2025 by Manufacturers,

Chapter 2, to profile the top manufacturers of Optical Module DSP Chip, with price, sales quantity, revenue, and global market share of Optical Module DSP Chip from 2020 to 2025.

Global Optical Module DSP Chip Market 2024 by Manufacturers,

The global Optical Module DSP Chip market size is expected to reach \$ 585 million by 2031, rising at a market growth of 6.6% CAGR during the forecast period (2025-2031).

Global Optical Module DSP Chip Market 2025

Q: Who are the top players in the global Optical Module DSP Chip market? A: Key players in the market include Inphi, Broadcom, Marvell, NTT Electronics, Citrus Technology, and Credo, all of which play a

Global Optical Module DSP Chip Market Research Report 2025

The major global manufacturers of Optical Module DSP Chip include Inphi, Broadcom, Marvell, NTT Electronics, Citrus Technology, Credo, etc. In 2024, the world's top three vendors accounted for

100G to 1.6T Optical Module PHY Product Selection Guide

100G to 1.6T Optical Module PHY Product Selection Guide Broadcom's Optical Module PHY portfolio spans multiple technology nodes — 16nm, 7nm and now 5nm, with data rates from 100 Gbs to 1.6

NVIDIA/Mellanox Compatible 800G SR8 OSFP PAM4

NVIDIA/Mellanox Compatible 800GBASE-SR8 OSFP IHS/Finned Top 8x100G PAM4
Coherent VCSEL & Broadcom DSP 850nm 100m MMF DOM MPO

Optical Transceiver Manufacturer | 1G-800G Optics | Wolon

Source premium optical transceivers (1G to 800G) direct from our Wuhan factories. 100% brand compatible, OEM custom options, and rigorous quality testing.

Optical DSP

Credo's low-power optical DSPs enable 50G 1.6T PAM4 transceivers and active optical cables for cloud-scale data centers and AI networks.

Arista QDD-400G-DR4 Compatible 400GBASE-DR4 QSFP-DD 500m

Description Arista QDD-400G-DR4 Compatible 400GbE QSFP-DD DR4 1310nm 500m
FEC SMF Optical Transceiver Module (PAM4, MTP/MPO, DDM, Commercial Temp)
NADDOD Arista QDD

4-3-2 Global Optical Module Dominant Players: Marvell, Lumentum,

Currently, the global high-end optical communication DSP market is virtually monopolized by a duopoly: Marvell (after acquiring Inphi) and Broadcom.

10 companies in the optical transceiver industry chain 2024

To help you choose the best partner, this article will analyze and introduce 10 companies in the optical transceiver industry chain for you.

Global Optical Module DSP Chip Market Research Report 2026

This report will assist Optical Module DSP Chip manufacturers, new entrants, and companies across the industry value chain with information on revenues, production, and average

NewPhotonics optical IC chips for the AI scale data center

The DSP Optical Module Laser Integrated PICs simplify volume production and reliability for LRO optics in DSP interconnect scale-out. DSP Designs

Manufacturers of DSP chips for optical modules | Weyland

Legacy companies like Inphi Corporation (now part of Marvell) historically developed major DSP architectures, including Polaris, Porrima, and Spica series, used for PAM4 and coherent optical

OSFP Product Family » Acacia

Octal Small Form-factor Pluggable (OSFP) solution that fits into high-density switch and router client ports for optical interconnect links Powered by Greylock and Delphi DSP ASICs, and silicon photonic

Optical Chips: The Critical Bottleneck Restricting the Expansion of the ...

As the iteration of optical modules continues to accelerate, the upper limit of manufacturers' delivery is no longer determined by the back-end assembly capacity, but restricted by the yield,

Coherent DSP | Critical enablers for efficient transmission ...

Coherent DSPs for pluggable modules The Marvell coherent DSP portfolio, including Orion™, Canopus™ and Deneb™ platforms, empower the optical module ecosystem with low-power, high

GIGALIGHT Secures Two More Patents Related to AI Optical

In general, LRO optical modules share a similar design philosophy with standard FRO optical modules. In contrast, the Hybrid architecture adopts a fundamentally different component

1.6T 2xDR4 TRO OSFP Transceiver Module | Lumentum

Lumentum's 1.6T 2xDR4 TRO OSFP transceiver delivers ultra-high-speed optical connectivity for AI and cloud data centers requiring the highest density and

NVIDIA/Mellanox MMS4A00-XM/MMS4C10-XM (980-9IAH1

The 1.6T OSFP 2xDR4 transceiver integrates two independent 4-lane optical engines, each terminated with an MPO-12/APC connector, providing a total of eight parallel optical lanes. This architecture is

Tracking the Coherent DSP Supply Chain - 2026

Growth in the coherent optical market has moved to pluggables, which now dominate the number of modules shipped. The cost of developing newer high speed performance modules is

NADDOD NVIDIA/Mellanox MMS4C11 (980-9IAU1-00XM01)

NVIDIA/Mellanox MMS4C11 (980-9IAU1-00XM01) Compatible 1.6TBASE-2xDR4 OSFP224 IHS/Closed Finned Top 8x200G PAM4 Broadcom 3nm DSP (Sian3 | BCM83628) 1310nm 500m SMF DOM Dual

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