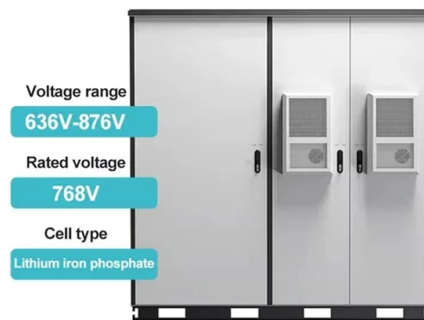


Egypt Exports Co-packaged Photonics QSFP-DD



AI Overview

QSFP-DD co-packaged photonics modules are advanced optical transceivers increasingly adopted in high-speed data centers, with Egypt positioned to participate in regional exports as demand for 400G and 800G solutions grows.

Overview of QSFP-DD and Co-Packaged Optics

QSFP-DD (Quad Small Form-Factor Pluggable Double Density) modules are high-performance optical transceivers designed for 400G and 800G data rates, widely used in data centers, cloud computing, and large-scale networks. Co-packaged optics (CPO) integrates the photonic engines—laser diodes, modulators, and detectors—directly into the switch package, reducing electrical path lengths, power consumption, and heat generation compared to traditional pluggable modules. This integration allows high-speed SerDes signals to travel millimeters instead of centimeters, improving efficiency and signal integrity.

Technical Features

Modern QSFP-DD modules, including co-packaged designs, often feature:

- External Laser Sources (ELS) with uncooled multi-channel TOSAs for high fiber-coupled power and low power consumption.
- High data rates: 400GBASE-FR4, 400GBASE-DR4, and emerging 800G standards.
- Power efficiency: Typical 400G modules consume 7–12 W per port, while 800G modules consume 16–18 W.
- Advanced packaging: Silicon photonics engines or chiplet-based integration for low-latency, high-bandwidth performance.

Market Trends and Regional Adoption

The QSFP-DD market is projected to reach \$15.44 billion by 2025, with a CAGR of 11.1% from 2025 to 2033, driven by AI, machine learning, and 5G infrastructure. In the Middle East & Africa, including North Africa, demand is rising for high-speed optical solutions in hyperscale data centers and cloud networks. Key global players like Broadcom, Arista, and Cisco are leading innovation, which indirectly supports regional exports...

Article Content

BRKOPT-2699

Silicon photonics technology allows to share laser sources, reducing the number of active components, and enhancing overall reliability compared to more discrete designs

Egyptian semiconductor startup InfiniLink raises \$10m seed funding

The company has developed groundbreaking Silicon Photonics integrated optical transceiver chiplets (iOTC) technology that addresses these challenges by enabling low-power

Co-Packaged Optics at the IPEC

External Light Source Common mechanical arrangements. (QSFP-DD/OSFP) Blind mate connector, with one ferrule. Stackable implementation Spring loaded host ferrule to prevents damage from high

QSFP-DD Packaged Optical Module Market by Data Rate,

Converging innovations in silicon photonics, signaling, thermal design, and systems architecture that are reshaping pluggable optics and deployment strategies The optical transceiver

Egypt's InfiniLink Raises \$10M From MediaTek For AI Data Centers

Launched in 2022, InfiniLink developed groundbreaking Silicon Photonics integrated optical transceiver chiplets (iOTC) technology which enables low-power pluggable transceiver

Implementation Agreement for a 3.2Tb/s Co-Packaged (CPO) Module

ABSTRACT: This Implementation Agreement specifies key aspects and electro-optical-mechanical details of a 3.2Tb/s Co-Packaged Module encompassing optical and copper cable attach

Optical transceivers: co-packaged optics and Chinese

Power consumption is another challenge. The largest contributor is the electrical interface between the switch ASIC and optical module, particularly for QSFP-DD

QSFP-DD Optical Transceivers – MapYourTech

Silicon Photonics Integration: The adoption of silicon photonics technology has improved QSFP-DD power efficiency and manufacturing

QSFP-DD Linear Pluggable Optics (LPO)

Amphenol's QSFP-DD Linear Pluggable Optical (LPO) Transceiver delivers low-latency, high-bandwidth PCIe ® Gen 5.0 over optical link, enabling

Egypt's InfiniLink raises \$10 million to advance optical chip ...

The company's innovative integrated optical transceiver chiplet (iOTC) technology enables low-power pluggable transceiver modules and high-bandwidth-density co-packaged optical engines

A Record Energy Efficient QSFP ELS for Co-Packaged Optics

The CPO collaboration ELS guidance document describes that an ELS is placed at a front panel by using a small form factor (SFF) where QSFP-DD, OSFP and OBO, which have been standardized

Albanian Consulting Co-packaged Photonics QSFP-DD

Co-packaged optics: higher data rates increase Co-packaged optics use silicon photonics, which moves light on a device, further shortening the distance that electrical signals must travel.

Egypt Co-Packaged Optics Market (2025-2031) | Forecast & Share

Historical Data and Forecast of Egypt Co-Packaged Optics Market Revenues & Volume By High-Performance Computing (HPC) for the Period 2021- 2031 Historical Data and Forecast of Egypt Co

Understanding Co-Packaged Optics: Revolutionizing

Recently, Broadcom officially launched its third-generation silicon photonics co-packaged optics (CPO) technology, capable of achieving ultra-high

Ranovus launches its single chip ODIN™ silicon

Ranovus a provider of multi-terabit interconnect solutions for data center and communications networks announced the launch of its ODIN™

Beyond Chips: Unveiling the Future of the Global Silicon

For silicon photonics applications, hybrid bonding allows photonic integrated circuits (PICs) and electronic integrated circuits (EICs) to be

Egypt (EGY) Exports, Imports, and Trade Partners | The

This visualization shows the participation rate of a country in the global export market for each product it exports. It highlights the extent to which the country is

Egypt Co-Packaged Optics Market (2025-2031) | Forecast & Share

6Wresearch actively monitors the Egypt Co-Packaged Optics Market and publishes its comprehensive annual report, highlighting emerging trends, growth drivers, revenue analysis, and forecast outlook.

Co-packaged optics (CPO): status, challenges, and solutions

Co-packaged optics (CPO) is a disruptive approach to increasing the interconnecting bandwidth density and energy efficiency by dramatically shortening the electrical link length through advanced

Selection Guide for Co-packaged Photonics QSFP-DD for Wind

Quad Small Form-factor Pluggable Double Density (QSFP-DD) solution that fits into high-density switch and router client ports for optical interconnect links Powered by Greylock and Delphi DSP ASICs,

Egypt (EGY) Exports, Imports, and Trade Partners | The

Explore Egypt's trade data, including exports, imports, and economic complexity insights with dynamic visualizations and statistics.

Co-Packaging Interoperability: Enabling Next

The OIF's co-packaging framework project was initiated to explore the next generation industry needs for co-packaged solutions and forge an

GlobalFoundries buys optical chipmaker InfiniLink

GlobalFoundries (GF) added another deal under its belt with the acquisition of semiconductor startup InfiniLink. Based in New Cairo, Egypt, InfiniLink designs optical transceiver

Co-Packaged Optics Move Toward Reality as High

Co-packaged optics are enabling designers to mount dissimilar chips directly on a common substrate, saving power and expanding bandwidth.

Contact Us

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