

400G Optical Transceivers: -- Markets Reach \$22.6 Billion By 2023

LEXINGTON, Massachusetts (July 14, 2017) – WinterGreen Research announces that it has published a new study *Optical Transceivers: Market Shares, Strategy, and Forecasts, Worldwide, 2016 to 2022*. The 2016 study has 525 pages, 121 tables and figures. The vendors in the 400G optical transceivers industry have invested in high-quality technology and processes to develop leading edge broadband network capability a being implemented in the mega data centers.

400G optical transceivers market driving forces relate primarily to the implementation of networks within the mega data centers and the interconnects between the data centers.

High-speed serial transceivers form the backbone of networks. Communications, servers and many other electronic systems depend on high-speed serial transceivers. Global adoption of the Internet is driving rapid growth of the mega datacenter. Data centers support online commerce, streaming video, social networking, and cloud services. Software as a Service (SaaS) is a primary offering.

Figure 1. 400G Optical Transceivers Market Driving Forces

- Global adoption of the Internet
- Driving rapid growth of the mega datacenter
- Data centers support Internet applications
- Online commerce
- Streaming video
- Social networking
- Cloud services
- Software as a Service (SaaS)

Source: Wintergreen Research, Inc.

400G Transmitter / Transceivers

Leading vendors offer a broad product selection. They are positioned with innovative technology. Optical module manufacturers address the needs of all major networking equipment vendors worldwide. Leading vendors have taken a leading role in transforming the data communications and tele-communications equipment market.



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The shift has been away from utilizing discrete optical components to leveraging the design and pay-as-you-grow flexibility offered by pluggable modules. 400G Optical transceiver products are compliant with Ethernet, Fibre Channel, SONET/SDH/OTN and PON standards. They generally operate at data rates of 400 Gb/s and higher.

400G Transmitter / Transceivers are capable of distances ranging from very short reach within a datacenter to campus, access, metro, and long-haul reaches. They feature outstanding performance. Units work over extended voltage and temperature ranges. They are positioned to minimize jitter, electromagnetic interference (EMI) and power dissipation.

Mega Datacenter Online Commerce, Streaming Video, Social Networking, And Cloud Services are key to operations of mega data centers.

Global adoption of online commerce, streaming video, social networking, and cloud services such as Software as a Service (SaaS) is driving rapid growth of the mega datacenter. The storage and computing requirements supported by the datacenters present new challenges to connectivity within the datacenter in terms of bandwidth, transmission distance, power consumption, and cost.

The product portfolio offered by vendors for telecom and datacenter and cloud applications effectively addresses these requirements and challenges.

Covering data rates up to 400Gb/s in compact form factors, vendor products enable green field deployments and the upgrade of existing datacenters in a cost-effective manner. WAN telco applications

Internet, enterprise augmented reality, and IoT Drive optical network adoption as the mega data centers are poised for significant growth to support trillion-dollar app markets. Global adoption of the Internet is driving rapid growth of the mega datacenter and the need for very high speed network transmission. Optical transceivers are used to upgrade telecommunications networks and launch very large mega data centers. The development of innovative products is essential to keeping and growing market share.



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A 400G optical transceiver is a single, packaged device that works as a transmitter and receiver. An optical transceiver is used in an optical network to convert electrical signals to optical signals and optical signals to electrical signals. Optical transceivers are widely deployed in optical networking for broadband. Optical transceiver manufacturers test to ensure that their optical transceivers have compliance with the defined specifications. Testing of key optical parameters: transmitter optical power and receiver sensitivity is a big deal.

According to Susan Eustis, leader of the team that prepared the research, “400G Optical transceiver markets are driven by the use of mega data centers that implement broadband networks in cloud computing environments. Video, Internet adoption, and tablets drive demand for broadband mega data centers. Markets are influenced by apps, augmented reality. IoT, the move to cloud computing and the adoption of smart phones by 9.5 billion people by 2020. Mega data centers that support online commerce, streaming video, social networking, and cloud services for every industry are expected to adopt 400G optical transceivers as a fundamental technology. Software as a Service (SaaS) is a primary offering that will leverage 400 G optical transceivers in the mega data center.”

High-speed serial transceivers form the backbone of networks. Communications, servers and many other electronic systems depend on high-speed serial transceivers. Global adoption of the Internet is driving rapid growth of the mega datacenter. Data centers support online commerce, streaming video, social networking, and cloud services.

Leading vendors offer a broad product selection. They are positioned with innovative technology. 400 G optical module manufacturers address the needs of major networking interconnect equipment vendors and companies building mega data centers. Leading vendors have taken a leading role in transforming the data communications and tele-communications equipment market.



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The global 400 G optical transceiver market is expected to be at \$22.6 billion in 2023 driven by the availability and cost effectiveness of 100 Gbps, and 400 Gbps devices. Next generation optical transceiver devices use less power, are less expensive, and are smarter and smaller. The adoption of widespread use of the 100 Gbps devices, followed by 400 Gbps devices and the vast increases in Internet traffic are core to helping manage change in the large mega data center and communications interconnect and infrastructure markets.

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