

PCIe to Optical Transmission Module



Overview

The device adopts the OSFP-XD pluggable form factor and enables high-capacity optical data transmission between processors, accelerators and other PCIe devices. The module supports the PCIe 6.0 x16 communication standard, delivering data rates of 64 gigatransfers per second per lane. Kyocera Corporation (President: Hideo Tanimoto, hereinafter "Kyocera") is pleased to announce the development of a pluggable optoelectronic module (OSFP-XD*1) supporting the PCIe®*2 6. As a key player in the PCI Special Interest Group (PCI-SIG), Synopsys is deeply involved in actively helping develop a new standard. The wheels of change are in motion for the Peripheral Component. Linear pluggable optics and sophisticated SerDes offer a path to higher bandwidth, lower power consumption, and reduced latency data transfer. This is a cost-effective way get an. Samtec's PCUO Series runs PCIe® 3.0 (16 GTps) physical layer signals via our patented optical FireFly™ system. PCUO supports CXL® and PCIe® protocols, enabling high data throughput, coherency and low latency in data center, edge. Data centers are currently grappling with the escalating need to boost bandwidth capacities. This is primarily driven by the emergence of new technologies, particularly the growing demand for AI/ML applications.



Article Content

Hot

Pluggable PCIe 6.0 Optical Module Targets Data Centers

The device adopts the OSFP-XD pluggable form factor and enables high-capacity optical data transmission between processors, accelerators and other PCIe devices.

Oct 16, 2025 Hot

Development of PCIE | FiberMall

In fact, it can be seen here that in PCIE GEN2-GEN4, there is no obvious bottleneck in the transmission rate, and the traditional SFP module is still

Jul 15, 2025 Hot

OFC 2026: new launches round-up, part II

Here, below, optics reviews a selection of new launches and announcements from this week's expo. Related news: OFC 2026 showcases high-speed optical networking and

May 07, 2026 Hot

Kyocera Develops Pluggable Optoelectronic Module

Kyocera has been developing onboard-type optoelectronic modules that support PCIe® 5.0 and convert electrical signals from CPUs, GPUs, and

Dec 15, 2025 Hot

PCIe Over Optics Explained: PCIe 7.0 & Beyond

Learn how we're working with PCI-SIG to transition PCIe to optical interfaces and explore our demo of the PCIe 7.0 standard over fiber optics with

Jun 05, 2026 Hot

The Core Components of Optical Modules: Lasers,

Explore how lasers, modulators, and photodiodes form the core of optical transceivers, enabling high-speed, low-latency data transmission across

Mar 21, 2026 Hot

Anritsu and KYOCERA Complete World's First

Anritsu Corporation and KYOCERA Corporation have completed a successful PCI Express ®*1, *D 5.0 (PCIe ® 5.0) optical transmission test using

Aug 17, 2025 Hot

PCIe OVER FIBER GUIDE

These Active Optical Cables are plug-compatible, replacements for passive or active copper cables. optical transceiver is located inside the housing and performs the electrical-to-optical signal

Apr 26, 2026 Hot

Anritsu, KYOCERA Complete First PCI Express® 5.0

Anritsu Corporation and KYOCERA Corporation completed a successful PCI Express®* 1 5.0 (PCIe®5.0) optical transmission test. Specifically, the test

Jan 06, 2026 Hot

PCI-SIG Announces PCIe Optical Interconnect Solution:

PCI-SIG today announced a new optical interconnect specification revision to enable higher PCI Express (PCIe) technology performance.

Apr 12, 2026 Hot

Optical PCIe 7.0 connection hits a blazing 128 GT/s

Cadence demonstrated its proprietary optical connectivity solution for PCIe 7.0 at the PCI-SIG DevCon 2024 earlier this month. The world's first

Dec 21, 2025 Hot

Optical Communication Industry Trends 2026: AI, 800G/1.6T Optical ...

Explore optical communication industry trends in 2026, driven by AI infrastructure, 800G and 1.6T optical modules, silicon photonics, and next-generation data center connectivity solutions.

Jul 21, 2025 Hot

PCIe Over Optical: Transforming High-Speed Data

By taking advantage of technologies like LPOs and sophisticated SerDes, PCIe over Optical offers a path to higher bandwidth, lower power

Oct 22, 2025 Hot

PCIe Over Optics: Ushering In A New Era Of AI

In short, the emergence of "PCIe over optics" technology provides a new solution for data transmission within the data center. It not only improves the

Aug 18, 2025 Hot

PCI Express Over Fiber Optic Extensions

PCI Express over fiber optic extension allows standard PCI Express cards to operate remotely from the host computer. No additional programming or drivers are required.

May 07, 2026 Hot

Optical PCIe 7.0 connection hits a blazing 128 GT/s

During the event, Cadence demonstrated its 128 GT/s PCIe 7.0 IP's transmission and reception capabilities using a real-world, low-latency, non

Jun 13, 2026 Hot

PCIe Over Optical: Transforming High-Speed Data Transmission

PCIe over Optical is set to play a key role in enabling the growth of AI and here we examine some of the intricacies of PCIe over Optical to explore its implementation, challenges, and

Feb 19, 2026 Hot

QSFP-DD Linear Pluggable Optics (LPO)

QSFP-DD LPO TRANSCEIVER DESIGNED FOR PCIE® GEN 5.0 DATA RATES Amphenol's QSFP-DD Linear Pluggable Optical (LPO) Transceiver

May 25, 2026 Hot

Understanding PCIe over Optics — Synopsys Technical

This technical bulletin will delve into the realm of PCIe over Optics, a promising solution for escalating bandwidth demands in data centers. We'll

Aug 18, 2025 Hot

A Multi-Channel Millimeter-Wave Imaging High-Speed Data

This paper describes a high-speed data acquisition and transmission system for millimeter-wave imaging based on optical fibre and PCIe interfaces, which includes a multi-channel analog-to-digital

Jul 04, 2025 Hot

Successful PCI express 5.0 optical signal transmission test ...

Anritsu Corporation and KYOCERA Corporation have completed a successful PCI Express 5.0 (PCIe5.0) optical transmission test using Anritsu's Signal Quality Analyser-R MP1900A

Feb 23, 2026 Hot

PCIe OVER FIBER GUIDE

Unlike other optical based solutions, these Active Optical Cables are truly interchangeable with existing copper cables as they support PCIe® auxiliary signals (CPWRON, CPERST#, CPRSNT# and

May 12, 2026 Hot

PCI Express over optical cabling: Performance, simplicity, efficiency

Optical solutions can be a key enabler for network architects who see value in using PCI Express (PCIe) as an I/O technology for data center connectivity. Using PCIe to natively connect

Apr 06, 2026 Hot

PCI Express Over 100 Meters Of Optical Cable

PCUO is designed to transmit and receive native PCI Express data over optics, at distances of 100+ meters, and includes support for PCIe sideband

Jul 30, 2025 Hot

PCIe®-Over-Fiber, FireFly™ Optical Cable Assembly

Samtec's PCUO Series runs PCIe® 3.0 (8 GTps) and 4.0 (16 GTps) physical layer signals via our patented optical FireFly™ system. PCIe® 5.0 (32 GTps) solutions are in development.

Jul 22, 2025 Hot

PCIe Over Optical: Transforming High-Speed Data Transmission

As the data landscape continues to evolve, the role of PCIe over Optical in enabling efficient, high-speed data transfer will become increasingly vital. PCIe 7.0 and faster rates have little

Sep 09, 2025 Hot

PCIe Over Optical: Transforming High-Speed Data Transmission

With the rise in AI requiring new computing models and enhanced data transmission methods to cope, the necessity for innovative, high-performance, and low-latency connectivity

Nov 27, 2025 Hot

FireFly | fiber optic |PCIe Gen3 Adapter | PXH842

Dolphin Express PXH842 provides a 128 Gigabit/s PCI Express cable link to IO systems. The adapter card uses the Samtec PCIe FireFly fiber optic engine.

Jan 30, 2026

Contact Us

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