48-channel parallel optical module



Overview

The POB48 series parallel optical transceiver module is designed for defense communication command systems and subsystems, enabling bidirectional conversion between multi-channel electrical and optical signals. The module adopts a hermetically sealed micro-socket package structure, featuring a. 48 channels, with possible other options. These cost-eff ective, high-capacity data “pipe” solutions are ideal for board to board, shelf to shelf and. We report here on the design, fabrication and characterization of 48-channel parallel optical transceivers demonstrating terabit/sec data transfer rate. 48 Tb/s receive throughput was achieved using a second-generation single-chip holey CMOS transceiver IC. Parallel optics are widely used in HPC data centers, including MMF series and SMF series.



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Article Content

Mar 06, 2026

A 36-channel parallel optical interconnect module based on ...

We describe the packaging and testing of a two-dimensional array parallel-optics module with 36 channels with each channel operating up to 3.3 Gb/s. This represents the first commercial module

Jan 12, 2026

POB48 Series Parallel Optical Transceiver Module

The POB48 series parallel optical transceiver module is designed for defense communication command systems and subsystems, enabling bidirectional conversion between multi-channel electrical and

Feb 03, 2026

Parallel Optical Transceivers & AOC – CablesTEC

Note: Parallel high-speed optical modules are transmitted through multiple parallel optical fibers, each optical fiber independently carries a single-channel optical

Sep 09, 2025

Multi-channel parallel optical receiving device

The optical signals are divided into multi-channel optical signals in parallel. The top surface of an output end of the arrayed waveguide grating is at a predetermined angle, causing the multi-channel optical

Jun 11, 2026

Terabit/sec 48-channel fiber-coupled optical module based on holey

Abstract A compact optical transceiver module providing 0.48 Tb/s transmitter plus 0.48 Tb/s receiver throughput has been demonstrated using a second-generation single-chip holey CMOS

Apr 20, 2026

Packaging for a 40-channel parallel optical interconnection module

NTT is currently working on developing a high-throughput interconnection module that is both compact and cost effective. The technology being developed is called "parallel inter-board optical

Sep 24, 2025

Parallel Optic Technology

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Parallel optic transmission technology spatially multiplexes or divides a high-data-rate signal among several fibers that are simultaneously transmitted and received. MTP® connectivity is used

Jun 11, 2026

Packaging and assembly of 12-channel parallel optical transceiver module

The fabrication process of a 12-channel parallel optical transceiver module developed in our group is presented in this paper. The module is composed of a VCSEL array, a PIN PD array, a VCSEL driver

Apr 11, 2026

DIGICOMM DWDM OPTICAL MULTIPLEXER/DEMULTIPLEXERS

Digicomm''s family of 48 Wavelength Channel Plan compatible DWDM Optical Muxes/Demuxes are designed to maximize the capacity of existing fiber optic networks, which greatly reduces the need to

Jan 09, 2026

POB Series of Optical Modules

It is divided into digital optical monitoring and digital state monitoring, both of which are realized through I 2 C bus. Digital optical monitoring: The output optical power of the laser is monitored in real time

Jul 04, 2025

Parallel Optic Modules

Designed to operate on multimode fi ber systems at a nominal wavelength of 850 nm, the Par-allel Fiber-Optic Modules feature high-performance, highly reliable, short wavelength optical devices, coupled

Nov 11, 2025

Designing with Agilent''s SFF LC OC-48 Fiber Optic Transceiver

Interoperability of Agilent''s OC 48 SFF Fiber Optic Transceiver with AMCC S3055 For more detailed information on this reference design, please read the Application Note available from Agilent

Feb 11, 2026

Terabit/sec VCSEL-based parallel optical module based on holey

Terabit/sec VCSEL-based parallel optical module based on holey CMOS transceiver IC for OFC 2012 by Fuad E. Doany et al.

Jan 06, 2026

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Terabit/Sec VCSEL-Based 48-Channel Optical Module Based on

We report here on the design, fabrication and characterization of 48-channel parallel optical transceivers demonstrating terabit/sec data transfer rate. The 0.48 Tb/s transmit plus 0.48 Tb/s receive

Jan 09, 2026

Four-channel Parallel to Duplex Optical Connectivity Solutions ...

AEN 152, Revision: 1 This Application Engineering Note will discuss the different Corning Optical Communications components that are available to provide fiber optic connectivity between parallel

Jul 22, 2025

Parallel Optical Transceivers & AOC – CablesTEC

CablesTEC''s parallel high-speed optical modules use mature optical components and manufacturing processes, and have great low-cost advantages compared

Aug 14, 2025

InterBOARDTM 40 Gbps SNAP 12 Parallel Fiber Optic Transmitter

As shown in Figure 1, a complete 12 channel parallel point-to-point optical link consists of a transmitter module, a 12-fiber optical ribbon cable, and a receiver module. The transmitter module consists of an

Jun 21, 2026

Parallel Optics and WDM Optics Subassemblies for High-speed Optical ...

PSM4 (Parallel Single Mode 4 Channels) is the DR short distance (less than 500 meters) optical module, which adopts 1310nm wavelength and Single Mode Parallel technology.

Sep 19, 2025

Parallel optical interface

A parallel optical interface is a form of fiber-optic technology aimed primarily at communications and networking over relatively short distances (less than 300 meters), and at high bandwidths.

Jan 02, 2026

4-transmit 4-receive LCC48 SMD parallel transceiver module

This series of products adopts a compact LCC48 package design and realizes efficient data transmission in multi-rate scenarios through a collaborative architecture of 4 parallel transmitting and

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Jun 18, 2026

Understanding SNAP12: What You Need to Know

Learn about SNAP12, a unique 12-channel pluggable parallel optical module for high-speed data transmission. Understand its features & application.

Aug 26, 2025

Parallel Optics

A multi-fiber connector such as MTP®/MPO is used throughout the parallel optic link and interfaces into the transceiver module. There are three common forms of commercially available products for POIs.

Nov 29, 2025

POB Series Single-Mode 4-Channel Parallel Optical

The POB series single-mode parallel optical transceiver module is designed for long-distance high-speed data communication and parallel optical interconnects in

Contact Us

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