

Optical Receiver Module Products



AI Overview

Optical receiver modules are high-speed photodetector systems designed to convert optical signals into electrical signals, available in various bandwidths, packaging, and fiber-coupled configurations for telecommunications, industrial, and scientific applications.

Overview of Optical Receiver Modules

Optical receiver modules are essential components in fiber-optic communication and sensing systems. They typically combine a photodiode (PIN or APD) with a transimpedance amplifier to detect and convert light signals into electrical signals. These modules are used in telecommunications, data communications, biomedical sensing, aerospace, and defense applications.

Key Product Types and Features

- High-Speed Photoreceivers:** Modules with bandwidths ranging from 10 GHz to 70 GHz, suitable for high-speed data transmission and RF-over-Fiber systems. They are available in butterfly, ROSA, or custom packages.
- Fiber-Coupled Modules:** Designed for precise optical input, these modules feature pigtailed fiber inputs and are ideal for telecommunication wavelengths and industrial sensing applications.
- Compact Modules:** Some modules, like those from Optocom, offer small form factors (e.g., 33x16 mm) with pigtailed fibers and standard connectors (ST, SC, FC), supporting gigabit Ethernet, SONET/SDH, ATM, and fiber channel applications.
- OEM and Custom Options:** Many manufacturers provide customizable modules to meet specific system requirements, including bandwidth, photodiode type, and packaging.

Applications

- Telecommunications:** High-speed data transmission over fiber networks, including SFP, SFP+, XFP, and CFP modules.
- Industrial and Biomedical Sensing:** Optical sensors for monitoring, measurement, and detection in industrial or medical environments.
- Aerospace and Defense:** RF-over-Fiber and free-space optical systems requiring high sensitivity and broad wavelength coverage.
- Test and Measurement:** Laboratory and field instruments requiring precise optical signal detection.

Design Considerations

When...

Article Content

Optical module design resources | TI

View the TI Optical module block diagram, product recommendations, reference designs and start designing.

Optic Modules Datasheet

Features and Benefits The following table lists the different pluggable optic modules and supported platforms, along with the technical specifications for each.

High Speed Photoreceivers

High Speed Photoreceivers MACOM offers 40G and 50G amplified PIN photoreceivers with high responsivity PIN photodiodes usable from 1200 – 1650 nm. These products are available in butterfly

High-Speed Photoreceiver Modules, Fiber Coupled,

These high-speed photoreceiver modules are ESD sensitive, so observe proper storage and handling procedures (see the Operation tab for details). The

optical devices and wireless devices | Sumitomo Electric

The portfolio includes semiconductor lasers and photodiodes for optical transceiver modules and board level design, as well as wavelength-tunable lasers and

Optical Module: A Comprehensive Analysis from Source

An optical module containing one laser and one receiver for single-channel transmission. For example, a 10G chip can be used with NRZ

Optical Receiver Selection Guide

With a wide variety of standard, custom, and OEM versions, we have the broadest selection of plug-&-play photoreceivers and photodetectors available anywhere.

Cisco 40GBASE QSFP Modules Data Sheet

Product overview The Cisco ® 40GBASE QSFP (Quad Small Form-Factor Pluggable) portfolio offers customers a wide variety of high-density and low-power 40 Gigabit Ethernet

10G APD Photoreceivers

MACOM offers high-sensitivity avalanche photodiode (APD) based photoreceivers in a variety of packages, including ROSA, OEM module and instrument-style. A wide range of 10G solutions are

Small Form-factor Pluggable

Small Form-factor Pluggable Small Form-factor Pluggable connected to a pair of fiber-optic cables Small Form-factor Pluggable (SFP) is a compact, hot-pluggable network interface module format used for

High Speed Optical Receiver Modules

MACOM serves customers with a broad product portfolio that incorporates RF, Microwave, Analog and Mixed Signal and Optical semiconductor technologies.

Cisco SFP and SFP+ Transceiver Module Installation Notes

This installation note provides the installation instructions for the Cisco small form-factor pluggable (SFP) and SFP+ transceiver modules. These transceiver modules are hot-swappable

The Most Comprehensive Guide Of Optical Modules

Explore the ultimate guide to optical modules. Learn types, functions, performance metrics & how to choose the right module for your fiber network.

10G PIN Photoreceivers

MACOM offers PIN photodiode based photoreceivers in a variety of packages, including OEM module and instrument-style. A wide range of 10G solutions are available for applications up to 15 Gb/s

Receiver Modules Fiber Optic Transmitters, Receivers, Transceivers

Mouser offers inventory, pricing, & datasheets for Receiver Modules Fiber Optic Transmitters, Receivers, Transceivers.

High Speed Photodetectors

MACOM offers photodetectors from 20 – 70 GHz for ultra-clean, high-speed performance that enable precise characterization of ultrafast optical signals. These products are available in with different

Understanding Optical Modules: Working Principles, Structures, and ...

Explore the working principles, structures, and performance metrics of optical modules, essential components of optical fiber communication systems. Learn about key indicators such as

Everything You Need to Know About Optical Modules

What is an Optical Module? Optical modules are electronic devices that convert electrical signals into optical signals for transmitting data over an optical fiber. These modules typically consist

Fiber optic receiver module

Types of Fiber Optic Receiver Modules A fiber optic receiver module is a critical component in optical communication systems that converts incoming light signals into electrical signals for data

Cisco Optics | Transform Your Network

Get the highest quality, performance-leading optical transceivers for any network architecture. Find the transceiver model to fit your network.

Ultrafast Fiber Optic Photoreceivers

While single mode receivers are intended for use with single mode fiber patch cables, our multimode receivers are designed to accept input from multimode or

FS Transceivers | Premium Optical Transceivers

FS Transceivers offers high-performance optical transceivers, fiber optic modules, and data center connectivity solutions. Compatible with Cisco, Arista, Juniper.

Optocom | Optical Receivers Modules

Our high performance optical receiver modules are uniquely designed to support high-speed transmission signals and protect from electromagnetic interference (EMI).

Contact Us

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