

ADP optical receiver module



AI Overview

The ADP optical receiver module CPAC-TR-25SR-ADP is a 25GBASE-SR SFP28 transceiver designed for duplex multimode fiber networks, supporting 25.78 Gbps data rates with 850 nm VCSEL transmitter and PIN photodiode receiver.

OverviewThe CPAC-TR-25SR-ADP is a dual-fiber SFP28 optical transceiver compatible with Check Point hardware and other multi-vendor platforms . It is designed for 25GBASE Ethernet networks, providing high-speed optical data transmission over OM4 multimode fiber up to 100 meters and OM3 up to 70 meters . The module supports full-duplex communication and is compliant with SFP28 Multi-Source Agreement (MSA) and IEEE 802.3by standards.

Key Features

- Data Rate:** 25.78125 Gbps for 25GBASE-SR; backward compatible with 10GBASE-SR at 10.3125 Gbps .
- Optical Interface:** Duplex LC connector with 850 nm wavelength VCSEL transmitter and PIN photodiode receiver .
- Digital Diagnostics:** Supports DDM/DOM via 2-wire (TWI/I2C) interface for real-time monitoring of temperature, voltage, TX/RX power, and bias .
- Power Consumption:** Approximately 0.3 W, hot-swappable, operating temperature range 0-70°C commercial .
- Compatibility:** Works with Check Point Maestro Hyperscale Orchestrator MHO-140 and MHO-175 (R81.20 and later) and CPAC-2-100/25F-B NICs; not supported on CPAC-2-40/100F-C NIC .
- Adapter Variant (-ADP):** Includes a QSFP28-to-SFP28 mechanical adapter for use in 100G QSFP28 cages, enabling flexible deployment in multi-rate systems .

ApplicationsThe module is suitable for high-speed data centers, switches, routers, storage systems, and load balancers, providing reliable optical interconnects for ADP systems and network infrastructure . Its pre-selected high-quality components from manufacturers like Broadcom, Lumentum, Mindspeed, and Analog Devices ensure long service life exceeding 10 years .

Technical NotesThe module integrates a receiver optical subassembly (ROSA) for signal detection and a transmitter optical subassembly (TOSA) for signal emission, c...

Article Content

APDs in Optical Transceivers: Technology

In fiber optic communication systems, transceivers play a vital role. The transmitter converts electrical pulses to light and on the receiver side, a

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.

Avalanche photodiode arrays (APD arrays)

First Sensor offers these arrays both as component level devices and as hybrid modules simplifying the integration and evaluation into your system.

What chips are used in optical modules? | Weyland

Optical modules are not isolated chips. Instead, they are complex systems composed of multiple high-speed electrical ICs, optoelectronic devices, and control chips.

10G-SFP+ LRM-1-ADP Brocade Compatible 10G SFP+ module

10G-SFP+ LRM-1-ADP Brocade Compatible 10G SFP+ Transceiver, 220M over MMF. Explore our portfolio of Brocade compatibles - covering price, datasheet & specs.

Infrared Receiver Module | A Leader in LED Industry | EVERLIGHT

Infrared Receiver Module This product range features multiple communication protocols and anti-interference capability for clients to choose. This product line is widely used in IR remote controls,

Optical Receiver Design | Springer Nature Link

In this chapter we consider issues related to the design of optical receivers. As signals travel in a fiber, they are attenuated and distorted, and it is the function of the receiver circuit at the

Si Avalanche Photodiode Receiver

The APD is coupled to a GaAs FET input trans-impedance amplifier in a 12-lead TO-8 package. The amplifier has an overload input protection circuit which sustains high optical power exposure with a

High Response Silicon Avalanche Photodiode Receiver

High Response Silicon Avalanche Photodiode Receiver CMC Electronics' 264-339829 series use a Silicon APD with a built-in preamplifier, enabling optimum signal-to-noise performance. The APD is

Avalanche photodiodes (APDs) | Hamamatsu Photonics

Our modules take the complexity out of operating an APD with a low-noise amplifier circuit, high voltage power supply, and temperature compensation circuit integrated into a compact solution.

PIN vs. APD: Different Sensitivity, Different Applications

PIN and APD receivers are used to facilitate fiber optic networks. Often, they provide extremely high-speed internet access or receive telephone and digital television

Optical Receiver Selection Guide

Receiver or Detector? Both types of modules employ a photodiode to convert optical signals to electrical signals. With photoreceivers, the photodiode is followed by a

1550 nm Optical Receivers | AMI | InGaAs APD

Optical Receivers The Models 7511B and 7510 are high gain low noise APD-preamp optical receivers. The compact construction (modified TO-8 header) and PCB

Combat Network Congestion with AddOn's SFP Dual

AddOn's Dual Optical Receiver module offers MSOs a solution to augment existing digital return infrastructure effectively. AddOn offers a SFP

HIGH SENSITIVITY APD OPTICAL RECEIVER

MODEL 7511A HIGH SENSITIVITY APD OPTICAL RECEIVER APPLICATION NOTE

INTRODUCTION The Model 7511A is a high gain, low

Check Point CPAC-TR-25SR-ADP SFP28 25GBASE-SR Multimode

The CPAC-TR-25SR-ADP 25GBASE-SR LC Duplex SFP28 compatible with Check Point has a receiving function (receiver with 850nm) and a transmitting function (transmitter with 850nm) for the

Optical module

An optical module is a typically hot-pluggable optical transceiver used in high-bandwidth data communications applications. Optical modules typically have an electrical interface on the side that

ADPD1080/ADPD1081 (Rev. C)

The ADPD1080/ADPD1081 operate as a complete optical transceiver stimulating up to three LEDs and measuring the return signal on up to two separate current inputs.

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

10G-SFPP-LRM-1-ADP Brocade Compatible 10G SFP+ module

Our Brocade 10G-SFPP-LRM-1-ADP compatible transceiver uses a high-quality FP Laser transmitter operating at 1310 nm nominal wavelength and a 1310 nm PIN Photodiode receiver. This module

Hybrid Optical APD Receiver Modules

The Excelitas Hybrid Optical APD Receiver Modules are comprised of a photodetector (PIN or APD) and a transimpedance amplifier in the same

High Speed Photoreceivers

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

Unit-5 Fiber Optical Receiver

The MEMS optical switch can realize the comprehensive remote control of the all-optical network, and has the main advantages of high integration, low power consumption and low cost.

ADPD144RI (Rev. A)

OPTICAL COMPONENTS The ADPD144RI is a highly integrated, optical module designed for reflective PPG measurements. The module combines red and infrared LED emitters, a four segment optical

Avalanche photodiodes (APDs) | Hamamatsu Photonics

APDs are photodiodes with internal gain produced by the application of a reverse voltage. They have a higher signal-to-noise ratio (SNR) than PIN photodiodes,

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