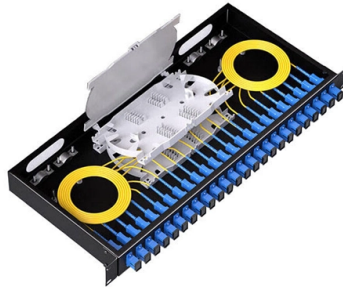


Panama-branded transimpedance amplifier QSFP-DD



AI Overview

A Panama-branded transimpedance amplifier (TIA) for QSFP-DD modules is a high-speed, low-power linear amplifier designed to convert optical signals into electrical signals for 100G–800G optical interconnects. Overview Transimpedance amplifiers (TIAs) in QSFP-DD modules are critical for high-speed optical communication, converting photodiode currents into voltage signals while maintaining signal integrity for PAM4 or NRZ modulation formats. Panama-branded TIAs are expected to support dual-channel operation, variable gain, and low power dissipation, making them suitable for short-reach optical interconnects and silicon photonics applications. Key Features

- Form Factor Compatibility:** Designed for QSFP-DD and OSFP modules, ensuring integration with high-density optical transceivers.
- High-Speed Operation:** Supports data rates from 100G up to 800G, with bandwidths sufficient for 64Gb/s PAM4 signals.
- Variable Gain Amplifier (VGA):** Each channel can be independently controlled, allowing fine-tuning of signal amplitude to optimize receiver performance.
- Low Power Consumption:** Typical power dissipation around 495 mW per dual-channel TIA, enabling dense module designs without excessive thermal load.
- Integrated Output Buffer:** Provides a stable voltage output compatible with downstream digital signal processing (DSP) or ASIC inputs.
- Analog Control and Calibration:** Supports analog pin control for gain adjustment and self-test features, ensuring reliable operation in production environments.

Applications

- High-Speed Data Centers:** Ideal for 400G and 800G QSFP-DD modules in AI/ML and cloud networking environments.
- Silicon Photonics Transceivers:** Compatible with SiPh and InP Mach-Zehnder modulators, enabling coherent and direct-detection optical links.
- Short-Reach Optical Interconnects:** Optimized for low-latency, high-bandwidth connections within racks...

Article Content

Specification – QSFP-DD

July 11, 2019 – QSFP-DD Hardware Specification for QSFP DOUBLE DENSITY 8X PLUGGABLE TRANSCEIVER – Rev 5.0 May 8, 2019 – Common Management Interface

QSFP-DD Fibre Optic Transceiver Technology

The QSFP-DD (Quad Small Form-factor Pluggable – Double Density) form-factor is used for 200G, 400G and 800G applications and is backward compatible with

QSFP-DD Optical Transceivers Unlocking Faster

QSFP-DD Optical Transceivers deliver up to 800Gbps speeds, offering high bandwidth, energy efficiency, and compatibility for modern networks

Cisco QSFP-DD Pluggable Open Line System (QDD

Learn more about the Cisco QSFP-DD Open Line System (QDD OLS), a pluggable optical amplifier module that provides a simple yet powerful

Panama Juniper Networks QDD-400G-DR4 Compatible 400GBASE-DR4 QSFP-DD

Juniper Networks QDD-400G-DR4 Compatible JIAXUN JQD-M31400-DR4C 400GBASE-DR4 QSFP-DD PAM4 Silicon Photonics Transceiver Module (SMF, 1310nm, 500m, MPO-12, DOM) The Juniper

PRO-QSFPDD-EDFA-DUAL-20DB | Proline

This QSFP-DD dual pluggable EDFA booster amplifier offers a optical input range and provides a +20dB nominal gain to a C-Band DWDM link. The dual pluggable EDFA connects to a composite DWDM

QSFP-DD Optical Transceivers Unlocking Faster

The QSFP-DD (Quad Small Form-Factor Pluggable Double Density) optical transceiver is a revolutionary advancement in high-speed data

QSFP-DD – GIGALIGHT

The optical amplifier module developed by GIGALIGHT is designed for long-distance transmission systems in digital optical fiber communication. It is specifically designed to work in conjunction with

Transimpedance Amplifiers with 95GHz Transimpedance Bandwidth

In addition, the receiver power consumption must be minimized since the dissipation in the QSFP-DD form factor must be kept under 25 W for thermal considerations . The block diagram of a coherent

QSFP-DD Optical Transceivers for High-Speed

Cisco's comprehensive portfolio of QSFP-DD modules support 400G and 800G data rates across copper, multimode fiber, and single-mode fiber, and

Cisco 400G QSFP-DD Cable and Transceiver Modules

It provides a QSFP-DD-to-QSFP-DD copper direct-attach solution. QDD-400-CuxM cables are suitable for very short links and offer a cost-effective

Credo Introduces Quad Channel Transimpedance

Credo Introduces Quad Channel Transimpedance Amplifier for Optical Transceivers and Active Optical Cables Impressive Low-Power TIA, combined

QSFP-DD Product Family » Acacia

Powered by Greylock and Delphi DSP ASICs, and silicon photonic integrated circuits (PICs) for an optimized co-packaged design with 3D Siliconization.

Transimpedance amplifiers for 100-800Gbit/s optical comms

Macom has introduced transimpedance amplifiers for optical comms ranging from 100Gbit/s DR1 to 800Gbit/s DR8 and FR8. There are two parts, which come in flip chip and wire

QSFP-DD Hardware

21 DD1600) connector and cage system. QSFP-DD MSA family of modules and cages remain fully backward 22 compatible with the classic QSFP+ formfactor. This document provides a common

QSFP-DD Linear Pluggable Optics (LPO)

Amphenol's QSFP-DD Linear Pluggable Optical (LPO) Transceiver delivers low-latency, high-bandwidth PCIe ® Gen 5.0 over optical link, enabling

Cisco QSFP-DD OLS

The Cisco QSFP-DD amplifier module is a networking device designed to meet the demands of high-speed, long-distance data transmission. With a data transfer

MACOM Extends Transimpedance Amplifier Portfolio Covering 100G

LOWELL, Mass.--(BUSINESS WIRE)--Mar 10, 2020-- MACOM Technology Solutions Inc. ("MACOM"), a leading supplier of semiconductor solutions, today announced availability of two new

QSFP-DD 400GBASE-FR PAM4 1310nm 2km

The unique feature of QSFP-DD ports is that they are mechanically and electrically compatible with QSFP28 and QSFP+. Hence, the same port can be used to support multiple generations of modules

4 channel ELSFP laser driver PI12030 voted for Amplifier / Data ...

Transimpedance amplifiers (TIAs) are included which can be used to maintain the laser bias loop at constant optical power. Features • Four High-efficiency IDACs – 1.25A maximum output

Cisco 400G QSFP-DD High-Power (Bright) Optical

Learn how Cisco 400G QSFP-DD High-Power (Bright) Optical module's small size and low power make it an optimal choice for a wide range of

Key Specifications for Palo Alto Networks Interfaces and

The data interfaces implemented by Palo Alto Networks® are based on industry standards and implementation agreements primarily authored by the fjscaler Inc.

FJS1001 - Dual-Channel 64GBd, Differential Input Linear TIA The FJS1001 is a dual-channel, 64GBd differential linear transimpedance amplifier (TIA). The TIA

Q28qd010c00d000 Datasheet

This QSFP-DD dual pluggable EDFA booster amplifier offers a optical input range and provides a +20dB nominal gain to a C-Band DWDM link. The dual pluggable EDFA connects to a composite DWDM

MACOM: new transimpedance amplifiers covering 100G

MACOM Technology Solutions announced availability two new transimpedance amplifiers (TIAs) optimized for use in optical networking

Offshore Price Transimpedance Amplifier QSFP-DD

This QSFP-DD dual pluggable EDFA booster amplifier offers a optical input range and provides a +20dB nominal gain to a C-Band DWDM link. The 400G QSFP-DD ZR+ coherent transceiver compliant with

Specification – QSFP-DD

August 7, 2020 – QSFP-DD Hardware Specification for QSFP DOUBLE DENSITY 8X PLUGGABLE TRANSCEIVER – Rev 5.1 July 11, 2019 – QSFP-DD Hardware Specification for QSFP

MATA-39134B

Quad Linear 53GBaud PAM4 Transimpedance Amplifier (TIA) The MATA-39134B is a quad 53GBaud linear PAM4 TIA with AGC (automatic gain control) optimized for direct drive, linear module application.

Cisco QSFP-DD Pluggable Open Line System (QSFP-DD OLS)

Product overview The Cisco® QSFP-DD Open Line System (QSFP-DD OLS) is a pluggable optical amplifier module that, together with the channel breakout options (described later), provides a simple

Contact Us

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