COLORZ® 100G DWDM Optical Platform for Data Center Interconnects

Part No.

IN-Q2AY2-XX

Product Type

COLORZ

Market Segments

Between Data Centers

Applications

High bandwidth connectivity for data center interconnects
100G Ethernet metro-access over DWDM
Campus and enterprise links

Features

- QSFP28 form factor supporting 100G Ethernet per SFF-8665
- 80 km reach over duplex single mode fiber
- Enables 4 Tb/s capacity over a single fiber
- PAM4 modulation format on 100G ITU DWDM wavelength grid compatible (2 wavelength super channel)
- Standard CAUI4 electrical interface
- Compatible with SFF-8636 management interface with advanced monitoring features
- DSP Engine with a unique mixed-mode DSP architecture for high performance, low power applications needing adaptability and configurability
- Integrated high gain FEC for increased performance
- Numerous self-test and loopback modes that allow diagnostic monitoring of channel and system parameters

Description

The COLORZ® reference design is the industry's first Silicon Photonics 100G PAM4 DWDM platform solution for Data Center Interconnects (DCI) in a QSFP28 form factor. COLORZ allows multiple regional data centers to be connected and act like a single virtual one. COLORZ provides the missing link that enables end-to-end 100G connectivity throughout the Cloud.

Leveraging our leadership in PAM DSP technology, Linear Drivers and TIAs, the COLORZ reference design was optimized for low power. The hot-swappable device plugs into any QSFP28 100G Ethernet port of any standard switch or router and also offers enhanced monitoring and link diagnostic capabilities. Ultimately, COLORZ enables enterprise, service providers, and cloud operators to provide scalable and easy-to-deploy 100G Ethernet services in their networks.

Electrical signals are transmitted and received from the host via a standard, 38-pin connector described in the QSFP28 MSA (SFF-8679). The electrical interface is CAUI-4 compliant (IEEE P802.3bm Annex 83E), splitting the 100 Gb/s signals into four, parallel, 25 Gb/s NRZ streams. COLORZ combines the CAUI4 electrical signal into a 2 wavelength PAM4 modulation resulting in a 100G DWDM super channel compatible to a 100 GHz ITU Grid. This enables to use standard passive network multiplexing equipment for the line side transmission.