





VSC8248

4 Port 8.5 Gbps to 11.3 Gbps SFI to XFI
CDR w

Status: In Production

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Device Overview

Summary

The VSC8248 is a quad channel clock and data recovery (CDR)

(EDC), programmable input equalization, and KR-compliant output. A versatile CDR and retimer for all 10G Ethernet applications, the VSC8248 device is compliant with IEEE 802.3ae and IEEE 802.3aq physical layer specifications, operating at 8.5G to 11.3G and 1.25G for legacy 1G Ethernet. Also supported are 8G Fibre Channel and 10G QDR Infiniband protocols and rates and related legacy substrates. The VSC8248's flexibility makes it an excellent candidate for upcoming 4x10G and 10x10G CFP module designs. Integrated EDC compensates for signal degradations in both the optical and electrical domains. For optical systems, this includes chromatic dispersion in long-haul single mode fiber systems, and modal dispersion in multi-mode fiber systems. High-performance FFE-DFE EDC technology compensates for fiber signal impairment and PCB-related signal propagation impact. In copper applications, the VSC8248 EDC compensates for intersymbol interference (ISI) caused by signal propagation through interconnections, vias, and stubs in line cards, backplanes, and copper cables. For optimized performance in the optical and electrical domains, the VSC8248 includes an integrated, fully KR-compliant multi-tap output driver, which enables the device to drive VCSEL lasers in low-cost applications, optimize jitter on the optical link, or drive signals across high-loss, low-bandwidth backplanes. All four channels can support the same rate and protocol, or operate independently on a per-channel basis. Integrated BIST functions include pattern generators and error detectors at all supported data rates and client-side and line-side loopbacks.

Additional Features

- GE PHYs
- 10GE PHYs
- Ethernet Software
- Broad application support
- High-performance analog EDC
- Flexible KR output driver



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