Perseus Optical PAM4 DSP for 400G/800Gbps Optical Module Applications

Part No.

MV-CD422

Product Type

100G PAM4 DSP with integrated TIA and optical module drivers

Market Segments

Inside Data Centers

Applications

400G QSFP112

800G QSFP-DD/OSFP

Single-mode/Multi-mode optical transceivers

Features

- Quad / Octal 100 Gbps/channel optical PAM4 DSP retimer
- Support for both 400G and 800G optical module applications
- 5nm low power
- Integrated TIA
- Integrated linear driver (VCSEL and SiPho PIC)
- CMIS compliant with advanced diagnostic features
- Support for independent lane operation

Description

The Marvell Perseus 100 Gbps/channel optical PAM4 DSP is built on generations of Marvell PAM4 DSP leadership and the strength of the industry's most widely deployed Porrima™ and Spica™ DSP.

Perseus is ideal for artificial intelligence/machine learning, cloud data center, and high-performance computing optical transceivers.

Perseus is the industry's first 5nm PAM4 DSP to integrate both a transimpedance amplifier (TIA) and linear driver (VCSEL/SiPho PIC). The highly integrated Perseus family of products minimize the components in the optical transceiver module and reduce overall system cost.

Perseus is a Quad / Octal 100 Gbps/channel PAM4 DSP retimer that supports both 400G and 800G optical module applications.

The direct drive capabilities of the Perseus DSP combined with an integrated TIA make Perseus ideal for 400G AOC / Single-mode / Multi-mode QSFP112 and 800G AOC / Single-mode / Multi-mode QSFP-DD/OSFP optical modules.

Perseus is manufactured with advanced 5nm process technology that delivers industry-leading power efficiency.

Perseus also integrates advanced diagnostic features that make testing and building modules easy.

Fully interoperable and compliant with the latest IEEE and CMIS standards, Perseus is optimized for high-volume deployment within the data center.