Spica 400G/800G PAM4 DSP for Optical Module Applications

Part No.

Spica

Product Type

100G PAM DSP

Market Segments

Inside Data Centers

Applications

- Single-Mode Fibre Transceivers
- Multi-Mode Fibre Transceivers
- Active Optical Cables

Features

- 4x100Gbs PAM4 Retimer
- All lanes independent to support breakout applications
- Full data & clock cross-bars on Egress and Ingress for ease of system layout
- Lanes can be configured in 4x100, 2x200 or 1x400 bundles
- Host interfaces with full 4-tap Tx FIR with eye1/2 control
- Line interfaces support 4-tap/7-tap Tx FIR with eye1/2 control
- Line Tx variants
  - 1Vp-p differential output
  - 1.6Vp-p single-ended, single bias-T EML drive
  - 2.6Vp-p differential output for SiPho applications
- 8x100Gbs PAM4 Retimer variant supported by dual-die package

Description

The Marvell Spica PAM4 DSP is a next generation solution for cloud data center, high-performance computing, and AI optical transceivers. Spica supports multiple industry standard protocols up to 100Gbs for both single mode and multi-mode applications. Spica is equipped with an industry leading PAM4 digital core for optimal performance across a range of applications. Spica includes several performance monitoring features including SNR, histogram, FFE-tap view for both line and host side interfaces. Additionally, both host and side interface support shallow loopback and PRBS generator/checker for diagnostic operations.

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