

# Alcor 100G PAM4 for Optical Module Applications

**Part No.**

Alcor

**Product Type**

100G PAM DSP

**Market Segments**

Inside Data Centers

**Applications**

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

**Features**

- NRZ Variant: 4x25G NRZ PCS to 1x100G KP/KR-FEC encoded PAM4
- PAM4 Variant: 2x50G PAM4 to 1x100G KP/KR-FEC encoded PAM4
- Host interfaces with full 4-tap Tx FIR with eye1/2 control
- Line interfaces support 3-tap Tx FIR with eye1/2 control
- Line Tx variants
  - 3Vp-p differential MZM driver output
  - 1.5Vp-p single-ended, EML drive
- Full DSP Line Receiver for maximum performance over complex optical links
- Hardware supported KP FEC statistics monitor that can be used on Egress or Ingress

**Description**

The Marvell Alcor PAM4 DSP is a next generation solution for cloud data center, high-performance computing, and AI optical transceivers. Alcor supports multiple industry standard protocols up to 100Gbps for both single mode and multi-mode applications. It is equipped with an industry leading PAM4 digital core for optimal performance across a range of applications. Alcor includes several performance monitoring features including SNR, histogram, FFE-tap view for line side interface. Both host and side interface support shallow loopback and PRBS generation/checking for diagnostic operations. Additionally, Alcor has a hardware assisted KP FEC statistics monitor that can report counts for correctable code-words uncorrectable code-words and the full FEC 'histogram' for errors from 1/code-word, up to 15/code-word.