Alcor 100G PAM4 for Optical Module Applications

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<th>Part No.</th>
<th>Alcor</th>
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<td><strong>Product Type</strong></td>
<td>100G PAM DSP</td>
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<td><strong>Market Segments</strong></td>
<td>Inside Data Centers</td>
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| **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 100Gbs 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.