

# 100G Optical DSP



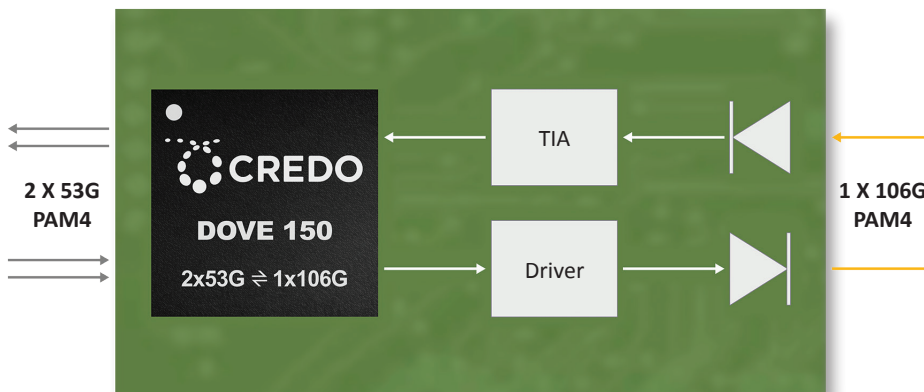
## Dove 150

2 x 53G PAM4 ⇌ 1 x 106G PAM4

Dove 150 (**CFD30501**) is used in the next generation low power, high performance QSFP28 optical modules that support 100GbE DR, FR and LR applications. It accepts two lanes of 53.125Gbps (26.5625Gbaud) PAM4 on the client (host) interface and sends the traffic to one lane of 106.25Gbps (53.125Gbaud) PAM4 signal on the optical (line) interface.

Dove 150 integrates high-performance DSP technology and equalization techniques to compensate for optical impairments while achieving good BER performance and maintaining low power dissipation. This unique architecture is optimized for die size and mainstream silicon process technology, enabling low cost of ownership and accelerating 100GbE market adoption for PAM4 based applications.

Dove 150 includes a full suite of integrated test and diagnostic features to simplify lab and manufacturing testing.



## Applications

- Hyperscale data centers
- Cloud networks
- 100GbE optical transceivers

## Key Parameters

Host Side	2 x 53G PAM4
Line Side	1 x 106G PAM4
Package Size	7mm x 7mm
Operating Temp	0° to 85°C
Communication Interface	MDIO / I <sup>2</sup> C
Process	CMOS

## Key Features

- DSP with industry-leading performance
  - Adaptive CTLE and multi-tap DFE and FFE on line and host side receivers
  - Multi-tap FIR filter on line and host side transmitters
  - LOS and LOL detection
  - Diagnostic features including pattern generators and checkers, eye monitor and loopbacks
  - Optimized, compact firmware
  - Low power dissipation enables 3.5W QSFP28 optical transceivers
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## Supported Standards and Interfaces

- IEEE 802.3 100GBASE-DR/FR
- IEEE 802.3 100GAUI-2
- 100G Lambda MSA 100G-FR and 100G-LR

For more information please visit [www.credosemi.com](http://www.credosemi.com) or email [sales@credosemi.com](mailto:sales@credosemi.com).