ALPHAWAVE SEMI

O-Wave™ AW100-G PAM4 Optical DSP for 400G Optical Transceiver Applications

8x50G<>4x100G PAM4 Optical Gearbox/Retimer DSP
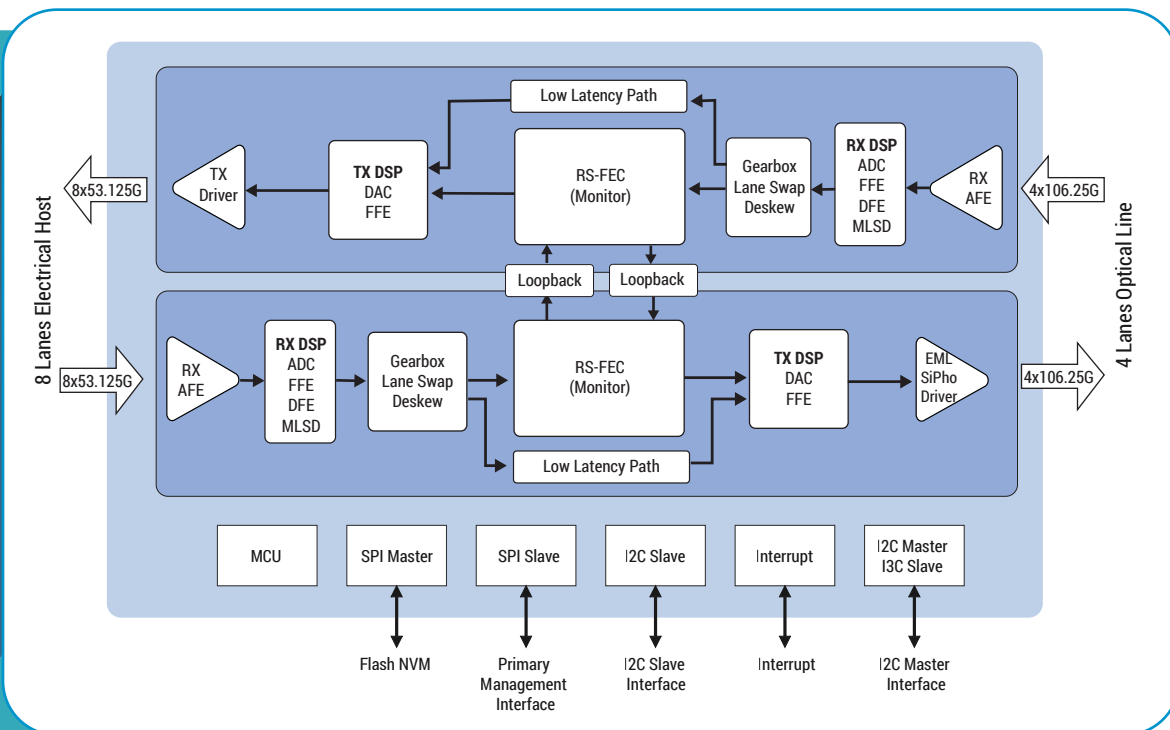
Overview

The AW100-G is a Gearbox/Retimer Digital Signal Processor (DSP) for PAM4 optical applications. The gearbox features an 8x50G interface on the host side and a 4x100G interface on the line side. The device can also operate as a 4x100G optical retimer. The line side interface features optional laser drivers on the transmit side with DSP based, fully adaptive receivers on the line input. The AW100-G is fabricated in an advanced 4nm CMOS technology node and is offered as a Known Good Die (KGD).
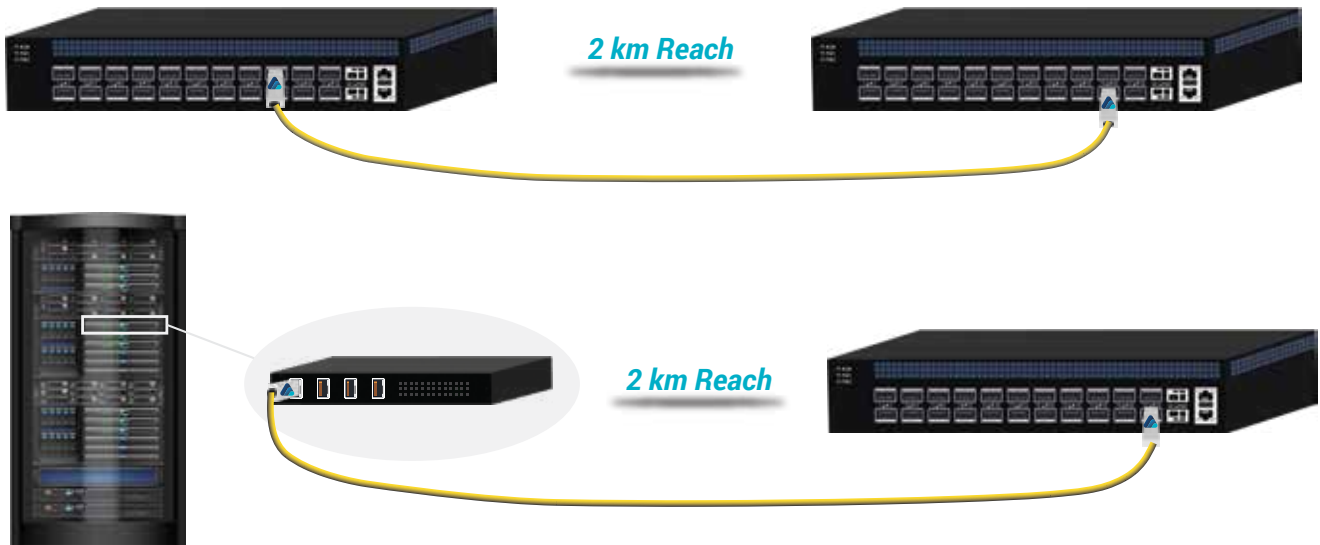
Features

- WidEye™ DSP technology
- EyeQ™ diagnostic and monitoring capabilities
- Integrated Laser Driver support for EML & SiPho
- Independent clocking per lane for breakout mode support
- Full XBAR to ease layout

Figure1: O-Wave AW100-G Functional Block Diagram

Applications

2 km Reach

2 km Reach

Technical Specifications

EyeQ™ diagnostic and monitoring: FEC error, EYE, SNR, Host/Line Loopback

Compliant with IEEE 802.3ck and IEEE 802.3df

PRBS gen/checker

400GbE, 4x100GbE applications

Available as Know Good Die (KGD)

For more technical details, please contact our sales at info@awavesemi.com.

ALPHAWAVE SEMI

Alphawave Semi™ is a global leader in high-speed connectivity for the world's technology infrastructure. Our IP and custom silicon solutions meet the needs of worldwide tier-one customers in data centers, compute, networking, AI, 5G, autonomous vehicles, and storage.

To find out more about Alphawave Semi™, visit: www.awavesemi.com