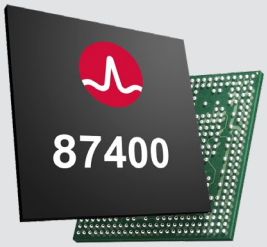
BROADCOM®

Product Brief

BCM87400

7-nm 400GbE PAM-4 PHY (8:4)



Applications

- Hyperscale data center and cloud networks
- 400GbE network infrastructure
- 400-Gb/s QSFP-DD/OSFP modules

Overview

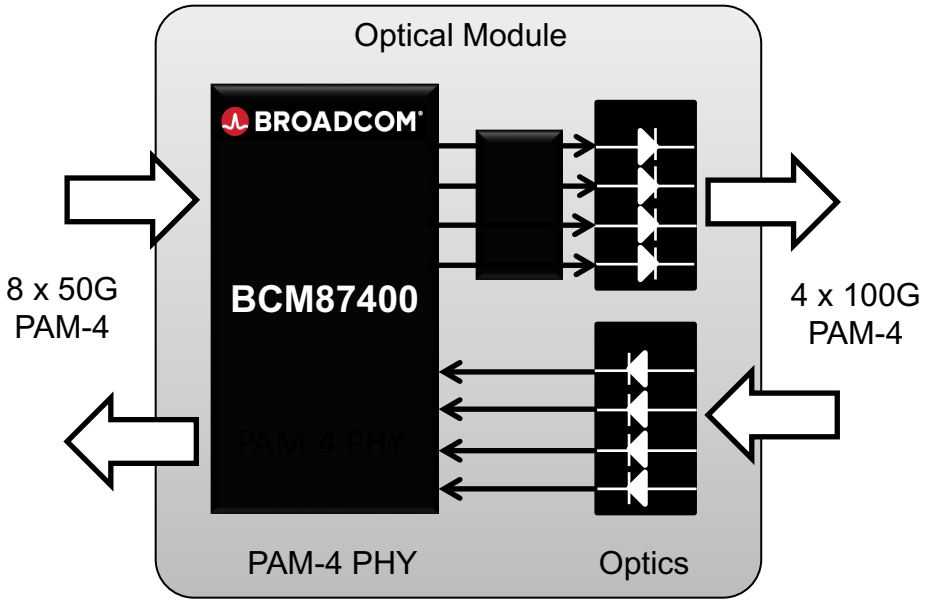
The Broadcom® BCM87400 series of devices are the industry's highest performance and lowest power single-chip 400GbE PAM-4 PHY transceiver platform capable of driving four lanes of 112-Gb/s PAM-4 at 56 Gbaud, while supporting DR4/FR4/LR4 optical links. In 400GbE mode, the BCM87400 converts eight lanes of 53 Gb/s (at 26-Gbaud PAM-4) from the system side into four lanes of 106 Gb/s (at 53-Gbaud PAM-4).

The BCM87400 leverages Broadcom's market-leading PAM-4 PHY technology platform and represents the industry's first 400-Gb/s PAM-4 PHY transceiver available in 7-nm CMOS. Compared to the existing 16-nm PHYs, Broadcom's advanced DSP technology and equalization techniques compensate for optical impairments while maintaining the world's lowest power, delivering significant power savings to enable sub-8W optical modules.

Features

- Industry-leading DSP performance and power efficiency enabling DR4/FR4 optical modules to meet IEEE standards and MSA specifications
- DSP platform supporting DR/FR optical modules for legacy switch applications
- Client-side interface compliance to CEI-28G/56G LR specification supporting medium reach (LR) channels
- IEEE 802.3bs standard-compliant KP4 and end-to-end FEC bypass operation
- Proven PAM-4 architecture supporting multiple optics front-ends including EML, DML, and silicon photonics
- Optimized design and proven interoperability with Broadcom switch ASICs and ASSPs using 28-Gbaud PAM-4 and NRZ SerDes architecture

Functional Block Diagram



For more product information: broadcom.com

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