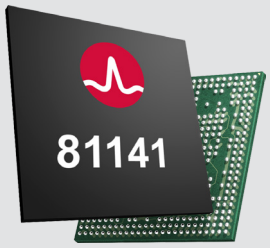
BROADCOM®

Product Brief

BCM81141

16-nm 200GbE PAM-4 PHY (4:4)



Key Features

- Single-chip 4× 50G PHY drives 200GbE over optics
  - Client side: 4× 50G PAM-4
  - Line side: 4× 50G PAM-4
- Supports 200GbE modes per IEEE 802.3bs draft 1.4 standards:
  - Single 200GbE mode: 4× 50G PAM-4 to 4× 50G PAM-4
- Supports two independent 100G PCS streams
- Client-side interface is compliant to the CEI-28G/56G MR specification supporting medium reach (MR) channels
- Supports various reach/media types:
  - MMF
  - SMF
- Low-power 16-nm CMOS design

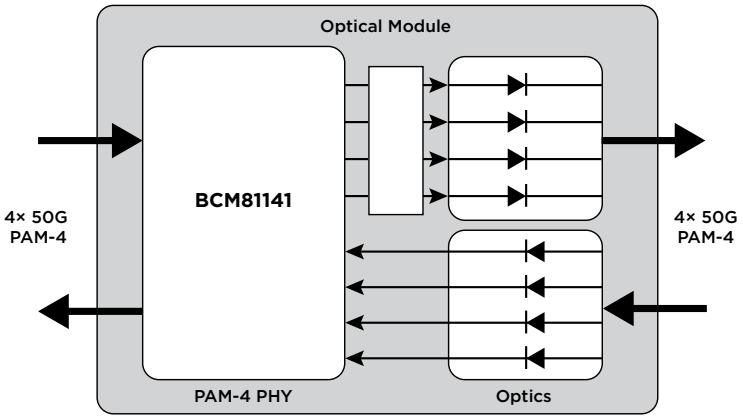
Description

The Broadcom® BCM81141 is a single-chip, low-power, low-latency PAM-4 PHY that integrates retimer and equalizer functions to support 200GbE applications. In 200GbE mode, the BCM81141 retimes, adds FEC (optional), and equalizes 4× 50G PAM-4 host-side signals into 4× 50G PAM-4 line-side signals, which drive optical PAM-4 links inside next-generation modules, including QSFP56. The BCM81141 also provides 2× 100G applications with two 100G PCS streams. The BCM81141 is compliant to IEEE standards with KP4 FEC and FEC bypass capability. On-chip clock synthesis is performed by a low-cost 156.25 MHz reference clock via high-frequency, low-jitter phase-locked loops (PLLs). The BCM81141 is fabricated in advanced low-power, 16-nm CMOS technology and is available in a RoHS-compliant package.

Applications

- 200GbE optical 4× 50G PAM-4 links for MMF/SMF
- 200GbE QSFP56 module form factors

Figure 1: BCM81141 Block Diagram



Ordering Information	
16-nm 200GbE PAM-4 PHY (4:4)	BCM81141A0KRFBG

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