

200G Industrial Ethernet Vertical Cavity Surface Emitting Laser Solution



Overview

The Broadcom® BCM85834-DIE is the industry's first 200G/lane PAM-4 PHY with integrated VCSEL laser driver to enable 1.6T MMF pluggable transceivers for next-generation AI/ML clusters and Ethernet networking of hyperscale data centers. This paper is an extended version of our conference paper "200Gb/s PAM4 oxide VCSEL development progress at Broadcom," presented at the Vertical-Cavity Surface-Emitting Lasers XXIX, 1138402 (2025), San Francisco, CA, USA, 29–30 January 2025. The connectivity demands of high-performance computing. The VIS product line is focused on high-speed optical and electrical components and subassemblies for optical networks, including high-speed 850 nm VCSEL chips and arrays for 100G/200G-class PAM-4 and NRZ optical links. VIS provides design and production services for devices operating in the. Keysight Technologies, Inc. (NYSE: KEYS) and Coherent Corp. collaborated on a 200G multimode technology demonstration that will be showcased for the first time at OFC, in San Francisco, California. The 200G per lane vertical-cavity surface-emitting laser (VCSEL) technology provides higher data. PicoJool Inc of Palo Alto, CA, USA (which is developing optical chips and modules for high-bandwidth, low-cost connectivity in hyperscale AI data centers) is introducing its 200G vertical-cavity surface-emitting laser (VCSEL) products, with a bandwidth exceeding 37GHz. The firm will begin sampling. SAXONBURG, PA, April 1, 2025 (GLOBE NEWSWIRE) – Coherent Corp.

Article Content

BCM85834-DIE 5-nm CMOS 800G (4:4) PAM-4 Transceiver PHY

Key Features Integrated laser driver to directly drive 200G per lane vertical-cavity surface-emitting laser (VCSEL)

Products

200G-class multi-aperture single-mode VCSEL chips for high-speed PAM-4 datacom links, available as engineering samples in 850,

200Gb/s PAM4 oxide VCSEL development progress at Broadcom

This paper will discuss the vertical cavity surface emitting laser (VCSEL) bandwidth and noise performance needed to

FS Community

Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

Study of fabrication and characterization of high power 850 nm vertical ...

Abstract In this paper, we investigated high power selectively oxidation-confined Al x Ga 1-xAs/GaAs 850 nm vertical

Keysight and Coherent Revolutionize Data Transfer and Network ...

The 200G per lane vertical-cavity surface-emitting laser (VCSEL) technology provides higher data transfer rates and

Link Bandwidth and Transmission Capability of Single-Mode Multi

Single-mode (SM) vertical-cavity surface-emitting lasers (VCSELs) have often been demonstrated with an unusually

2.3 Vertical Cavity Surface Emitting Lasers in Data Networks and ...

Abstract Vertical Cavity Surface Emitting Lasers (VCSELs) were first commercialized in 1996 by Honeywell and were primarily

Efficient vertical-cavity surface-emitting lasers for infrared ...

Vertical-cavity surface-emitting lasers (VCSELs) are an attractive candidate for IR illumination applications as they offer

Broadcom shows 200-Gbps per lane optical interconnects

Ahead of this month's #OFC24 in San Diego, Broadcom is announcing an expanded portfolio of optical interconnect

VCSELs + 200G Wall In AI Datacenters?

VCSELs were a significant improvement over edge-emitting lasers in reliability, speed, cost, power efficiency, and

PicoJool introduces 200G VCSELs for scale-up AI data centers

16 June 2026 PicoJool introduces 200G VCSELs for scale-up AI data centers PicoJool Inc of Palo Alto, CA, USA (which is

200Gb/s VCSEL transmission using 60m OM4 MMF and

It utilizes standardized PAM-4 signaling and achieves performance below the Ethernet KP4 FEC for 30m and 60m OM4 MMF

Vertical Cavity Surface Emitting Laser Performance Maturing through ...

High-brightness, high-speed, and narrow spectral-light-source-based channels are considered low-cost and optimum

(PDF) Vertical-cavity surface-emitting lasers for data

Abstract and Figures Vertical-cavity surface-emitting lasers (VCSELs) are the ideal optical

Coherent Demonstrates 1.6T Optical Transceivers Based on 200G

Coherent will demonstrate a 1.6T-SR8 optical transceiver at OFC 2025. This transceiver incorporates advanced 200G

Antireflective vertical-cavity surface-emitting laser for LiDAR

Then we propose the antireflective vertical-cavity surface-emitting laser (AR-VCSEL) and demonstrate multijunction

200G VCSEL Development and Proposal of Using

This paper discusses the vertical cavity surface emitting laser (VCSEL) bandwidth and

Intrinsic Modulation Response and Electrical Parasitics in Oxide ...

Small aperture ($\sim 2 \mu\text{m}$) oxide-confined single-mode (SM) Vertical-Cavity Surface-Emitting Lasers (VCSELs) are

850-nm VCSEL-Based Single-Lane 200-Gbps PAM-4 Transmission

A demonstration of an 850-nm vertical cavity surface emitting laser (VCSEL) based 200-Gb/s PAM-4 transmission

VCSELs + 200G Wall In AI Datacenters?

Coherent has lately been talking about parallel-pathing the light source for 1.6T transceivers, developing solutions

Multi-junction cascaded vertical-cavity surface-emitting laser with a ...

This paper demonstrates the advantages of multi-junction cascaded vertical-cavity surface-emitting lasers (multi

Harnessing the capabilities of VCSELs: unlocking the potential for ...

Vertical cavity surface emitting lasers (VCSELs) have emerged as a versatile and promising platform for developing

Vertical Cavity Surface Emitting Lasers as Sources for Optical ...

Vertical Cavity Surface Emitting Lasers (VCSELs) having those attractive qualities has shown results to meet the next

Eoptolink Demonstrating Industry 1st 200G VCSEL Based Optical ...

Vertical Cavity Surface Emitting Lasers (VCSELs) operating at 850nm are the dominant optical laser technology for

Latest advances in VCSEL technology for next-generation data center ...

Directly modulated vertical-cavity surface-emitting lasers (VCSELs) have long dominated the data center optical intercon-nect

1550 nm Range High-Speed Single-Mode Vertical-Cavity Surface-Emitting ...

Abstract The results of complex studies of static and dynamic performance of 1550 nm range VCSELs, which were

Keysight and Coherent Showcase 200G per Lane Multimode VCSELs

Keysight Technologies and Coherent Corp. are showcasing a 200G per lane multimode VCSEL (vertical-cavity

Contact Us

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