

# OEM Core Switch PAM4



## Overview

8 × 56 Gb/s PAM-4 Pass-Through mode PHY. It supports Retimer, Forward, and Reverse Gearbox modes. 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. Jennifer Bernal, Kumarpal Mandoth Clocks and Timing Solutions ABSTRACT Hyperscale data centers and telecommunication market sectors are currently driving the need for high speed serial links using 112G and 224G Pulse Amplitude Modulation with 4-Levels Serializer and Deserializer (PAM4 SerDes). The 4-level PAM (PAM4) multilevel signaling is an evolution from the traditional two state non-return-to-zero (NRZ) modulation. PAM4 effectively doubles the data rate for a link bandwidth at the expense of reduced signal to noise ratio (SNR). PAM4 is used in 400GE, 800GE, and 1. New Ethernet-only 400GbE (100G-PAM4-based) transceivers are offered (legacy part numbers with “-T” at the end).



## Article Content

Feb 27, 2026

Avago unveils 56G PAM4 SerDes core | Fibre Systems

Avago Technologies has demonstrated what it claims is the industry's first 56Gbps pulse-amplitude modulation (PAM)4 SerDes across copper backplanes and optical interconnects, targeting next

Jun 18, 2026

Spec Sheet

400G PAM4 OSFP Straight Throughs and Breakouts Regional Availability — Global Siemon's 400G (50G per lane) PAM4 Ethernet or InfiniBand™ OSFP-FT (Finned Top) passive copper cable DAC1

May 07, 2026

400G PAM4 High-Speed Client-Side Interface

Multiple electrical and optical lanes are used to increase transceivers' data rates to 100 Gbps (either multi-fiber or single-fiber WDM). To break the 200 and 400 Gbps barrier an amplitude modulation

Feb 18, 2026

BCM87400: 7-nm 400GbE PAM-4 PHY (8:4) Product Brief

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

Nov 05, 2025

Core Switches: LANCOM Systems GmbH

The LANCOM core switch is the centerpiece of a network and offers enormous switch capacity, 100% reliability, and scalability for the entire campus LAN. As the

Mar 26, 2026

PAM4: Pulse Amplitude Modulation Explained | Keysight

Pulse amplitude modulation builds upon this concept by encoding data across multiple voltage levels. PAM4 uses four levels. A PAM4 signal can

Dec 24, 2025

50G PAM4 Technical White Paper

Building on the 50G PAM4 per lane technology, 400GE/200GE/ 50GE interfaces can meet the cost and performance requirements of 5G mobile networks to construct an optimal solution covering the

Nov 15, 2025

PAM-4 Automation Components, Inc.

PAM-4 - Relay For Sensors, Transmitters from Automation Components, Inc.. View datasheets, pricing and availability from DigiKey now!

Apr 09, 2026

PAM2 vs. PAM4 Signaling: A Simple Guide | SI

Learn the differences between PAM2 and PAM4 signaling explained simply, including their applications and advantages in data transmission.

Aug 19, 2025

Pulse Amplitude Modulation (PAM) | Keysight

The 400 gigabit Ethernet (GE) standards define 4-level PAM (PAM4) multilevel signaling as a recommended to implement serial 400GE data center interfaces.

Dec 03, 2025

PAM4 Basics: Modulation, Signaling and Encoding

Explore The Fundamentals of PAM4 Modulation, Signaling and Encoding. Plus, Compare PAM4 to NRZ and Find Helpful Eye Diagrams. Visit To

Jul 01, 2025

BCM81724 Data Sheet

8 × 56 Gb/s PAM-4 Pass-Through mode PHY. It supports both the PAM-4 and NRZ data formats. It supports Retimer, Forward, and Reverse Gearbox modes. It also supports 1G, 10G, 25G, 40G, 50G,

Oct 21, 2025

Safely Scale Customized OEM/ODM Transceiver Branding

Master customized OEM/ODM transceiver branding for 400G/800G networks. Avoid CMIS lockouts, optimize PAM4 DSPs, and eliminate thermal link failures.

Feb 08, 2026

Virtex UltraScale+ 58G PAM4 FPGA

OVERVIEW The Virtex® UltraScale+™ 58G PAM4 FPGA implements the latest 50G/100G/200G/400G optics and protocols with superior port density and performance-per-watt while minimizing system

Aug 02, 2025

400Gb/s 8x50G PAM4 WDM 2km SMF PMD Baseline Specifications

Adopting 8x50G PAM4 WDM 2km PMD based on existing technology will provide a cost effective solution for majority of core routing applications and result in a solid standard

Jun 05, 2026

An Introduction to 224G System Architecture

Emerging applications are stressing the infrastructures of today's most advanced data centers and are demanding new architectures built for 224G. Explore this

Jan 07, 2026

What Is PAM4? What Are the Advantages of PAM4?

Four-level pulse amplitude modulation (PAM4) uses four different signal levels for signal transmission, doubling the signal transmission efficiency compared with the traditional non-return-to

Dec 08, 2025

PAM4 vs. NRZ: Why PAM4 is the Core of 400G & 800G Ethernet

PAM4 technology is the core enabler for the commercialization of 400G Ethernet, demonstrating critical importance across three dimensions: speed breakthroughs, cost control, and

Jul 07, 2025

What is a 224 Gpbs-PAM4 connector?

Designing 224 Gigabits per second four-level pulse amplitude modulation (224 Gbps-PAM4) interconnects is challenging. But it's required to

Sep 19, 2025

Marvell Alaska A 400G PAM4 DSP for Active Electrical Cable (AEC)

Overview The Marvell Alaska A MV-CHA140C0C 400G is a PAM4 DSP retimer for 400G/800G Active Electrical Cable (AEC) application, optimized for Switch to Switch and Switch to Server connectivity

Dec 30, 2025

BCM87400: 7-nm 400GbE PAM-4 PHY (8:4) Product Brief

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

Oct 25, 2025

PAM4 Modulation | How is Transforming Optical

Short-distance 400G networking is made possible by PAM4 modulation scheme, which is set to revolutionize optical networking.

May 11, 2026

112G and 224G PAM-4 SerDes Clocking for Rapid Data Center

For more details on PAM4 SerDes applications, refer to Understanding Clocking Needs for High-Speed 56G PAM4 Serial Links. The 800G high-speed switches are engineered to meet increasing data

Sep 20, 2025

MPR Article Template

As with Tomahawk 4 isn't Broadcom's first 7nm switch chip— that honor goes to Trident 4, which sampled in 2Q19 (see MPR 6/24/19, “Broadcom Samples Trident 4 Switch”). Although Trident 4

Nov 10, 2025

VIETNAM+AVAILABLE+PAM4+CORE+SWITCH Price & Stock

VIETNAM+AVAILABLE+PAM4+CORE+SWITCH Price,  
VIETNAM+AVAILABLE+PAM4+CORE+SWITCH Stock, Buy

Sep 14, 2025

NVIDIA LinkX 400GbE+NDR Combo Main Portfolio (100G-PAM4)

800G OSFP Switch-to-400G BlueField-3 + ConnectX-7 with QSFP112 LinkX cables, transceivers, ConnectX-7 and BlueField-3 DPUs contain both InfiniBand and Ethernet protocols.

Oct 30, 2025

Designing for 224G PAM4: Signal, Power, and Layout at

designing 224G PAM4 PCBs with a focus on signal integrity, power delivery, co-packaging, simulation, and future-ready high-density interconnect

Jul 06, 2025

A Guide to Ethernet Switch and PHY Chips

For data centers, most PHY development now focuses on 100GbE retimer chips using 25Gbps serdes technology, with 50Gbps PAM4 on the horizon. The large

Dec 15, 2025

### Marvell Ara PAM4 Optical DSP

The Marvell Ara PAM4 DSP is a next generation solution for GenAI and cloud datacenter interconnects utilizing pluggable transceivers. Ara features eight 200Gbps/channel PAM4 host electrical interfaces,

Sep 21, 2025

### Optical Transceiver Market Price Trends 2026: TCO & Risks

This creates a severe cross-layer impact. At the physical layer, if the switch fans cannot evacuate the concentrated heat from the optical cage, the transceiver's internal temperature crosses

## Contact Us

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