

Article Overview

PAM4 core switches, supporting 50G to 1.6T optical interconnects, are available in Vietnam through international vendors like Marvell and Prospettiva Cyber Systems.

Overview of PAM4 Technology

PAM4 (Pulse-Amplitude Modulation 4-Level) is a high-speed signaling technology that encodes two bits per symbol using four voltage levels, effectively doubling the data rate compared to traditional NRZ (PAM2) signaling at the same baud rate . It is widely used in 50G, 100G, 400G, 800G, and 1.6T optical modules for data center and AI network applications . PAM4 enables high bandwidth efficiency, lower cost per bit, and support for cloud-scale interconnects.

Vendors and Products

- o Marvell Technology: Offers a comprehensive portfolio of network switches and PAM4 optical DSPs suitable for hyperscale data centers, AI infrastructure, and enterprise networks. Their PAM4-enabled platforms support high-speed interconnects and are designed for global deployment, including Vietnam .
- o Prospettiva Cyber Systems (PCS): Supplies industrial Ethernet switches, PoE switches, and PAM4 optical modules. Their low-power optical DSPs support 50G to 1.6T PAM4 transceivers and active optical cables, optimized for cloud-scale and AI networks. PCS modules use QSFP28 or higher form factors with single-mode fiber interfaces .
- o Huawei: Provides 50G PAM4-based switches and optical modules for 400GE, 200GE, and 50GE interfaces. Their PAM4 technology improves bandwidth utilization and is suitable for core, aggregation, and access networks in enterprise and telecom deployments .

Local Availability in Vietnam

While specific Vietnam-based distributors are not explicitly listed in the sources, international vendors like Marvell, Huawei, and PCS typically supply PAM4 switches and modules to Vietnam through authorized resellers, system integrators, or direct enterprise sales channels. Companies deploying data centers, AI infrastructure, or cloud networks in Vietnam can procure these PAM4-enabled switches and optical modules through local partners or regional offices.

Key Considerations

- o Data Rate: PAM4 switches support 50G, 100G, 400G, 800G, and 1.6T per lane, depending on the module and switch platform .
- o Form Factor: QSFP28, QSFP-DD, and other pluggable modules are commonly used.

Vietnam Core Switch PAM4

- o Power Efficiency: Low-power PAM4 DSPs reduce energy consumption in high-density deployments .
- o Compatibility: Ensure the switch supports the required optical modules and network protocols for your data center or AI workloads. For deployment in Vietnam, contacting authorized resellers or regional offices of Marvell, Huawei, or PCS is recommended to confirm availability, pricing, and technical support.

The BCM87400 leverages Broadcom's market-leading PAM-4 PHY technology platform and represents the industry's first 400-Gb/s

Although PAM4 doubles the bit bearing efficiency compared with NRZ, PAM4 has noise, linearity, and sensitivity issues. This section

Designed for your current needs and future ambitions, Marvell delivers the data infrastructure technology

Since CTLEs are passive filters, they're no different in PAM4 systems than in PAM2-NRZ systems, but with four symbol levels, the

PAM4 is the better and preferred modulation choice for 200GEL for the following reasons: Backward compatible with legacy speeds

Four-level pulse amplitude modulation (PAM4) uses four different signal levels for signal transmission, doubling the

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OIF CEI-112G Development Application Space PAM4 modulation scheme becomes dominant in OIF CEI-112 Gbps interface IA One

Learn what IEEE 802.3cd defines for 50G, 100G and 200G Ethernet. Explore PAM4 technology, key PMDs,

You can use our pluggable optics in any switch and router with standardized pluggable ports. Known in the transceiver

800G switches have made significant leaps forward in data networking by leveraging 112G and 224G PAM4 SerDes technology. The

The six new chips are: NVIDIA Vera CPU: 88 NVIDIA custom-designed Olympus cores optimized for the next

An advanced technical examination of how electrical bandwidth limits are reshaping switch design, the silicon

Abstract and Figures In this work, we propose to use four-level pulse amplitude modulation (PAM4) and multi-core

Samtec tests its 224 Gbps PAM4 interconnect solutions against channel models from industry standards groups such as IEEE 802.3.

PAM4 Block Termination PAM4 block termination symbol every 32 PAM4 symbols For efficiency, each PAM4 termination symbol

Web: <https://www.kremgroup.co.za>

