# Broadcom Extends AI Workload Scale with Industry-First PCI Express Gen5/Gen6 Retimers

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**Industry's first end-to-end PCIe connectivity portfolio offers lowest power solutions and unparalleled efficiency to interconnect AI infrastructure**

PALO ALTO, Calif., March 06, 2024 (GLOBE NEWSWIRE) -- Broadcom Inc. (NASDAQ: AVGO), the worldwide leader in PCIe, SerDes, and connectivity technology, today announced the availability of the world's first 5nm PCIe Gen 5.0/CXL2.0 and PCIe Gen 6.0/CXL3.1 retimers. Broadcom retimers, in combination with its PEX series switches, constitute the industry's first end-to-end PCIe portfolio and provide benefits including extended reach, lower power dissipation, simplified interop, and end-to-end management.

As the demands on AI servers continue to increase, cloud and enterprise data center providers require higher bandwidth, lower latency, lower power, and an open standard-based fabric to interconnect compute, accelerators, networking and storage devices. Broadcom's investment and deployment scale, along with deep SerDes, protocol and software expertise, are the foundation for industry-leading PCIe switches and retimers.

"PCIe is one of the most critical and widely-adopted protocols for interconnecting CPUs, AI accelerators, NICs and storage devices. Broadcom's market-leading PCIe portfolio allows our customers to architect efficient data center solutions with the lowest power and maximum reach," said Vijay Janapaty, vice president and general manager of the Physical Layer Products Division at Broadcom. "Our PCIe Gen5/Gen6 retimers with CXL support, together with our PEX switches, enable an open, flexible and industry standard based ecosystem for next-generation AI server fabric."

"Generative AI and high-performance computing applications have driven a surge in server deployments across the globe," said Patrick Moorhead, CEO & chief analyst at Moor Insights and Strategy. "An ecosystem of open, standards based PCIe host solutions that interconnect the compute engines inside a server is critical for the AI data centers to scale. Broadcom's industry-leading PCIe Gen 5/Gen 6 retimers - a testament to their connectivity experience and their rich technology heritage - will enable rapid productization for their customers with a unique end-to-end play."

Broadcom's market leading PCIe Gen 5.0 switches are broadly deployed for interconnecting AI infrastructure today and ably complement the Gen 5.0 retimers. In addition, Broadcom's PCIe Gen 6.0/CXL3.1 switches will sample later this year to deliver an end-to-end PCIe 6.0 portfolio. Broadcom is also committed to accelerate the open AI ecosystem further with PCIe Gen7 based solutions in the near future.

Broadcom's wide spanning PCIe portfolio with industry-first Gen5/Gen6 end-to-end solutions include the following features and benefits:

- Broadcom In-house SerDes: 40% greater SerDes reach and highest lane count switches in the industry enable customers to build systems with larger fanout; Built-in hardware interoperability ensures reliable signal integrity.
- Broadcom Architecture: 50% lower power and form factor flexibility with midplane/backplane/cables enable customers to create advanced AI sub-systems.
- Broadcom Advanced Diagnostics: LINKCAT™ and embedded logic analyzers drastically reduce the system design and validation cycle.
- Broadcom Software: Integrated software suite substantially eases NPI cycle and accelerates time to market.

Broadcom is currently sampling its Gen5 and Gen6 PCIe/CXL retimer devices to its early access customers and partners. Please contact your local Broadcom sales representative for samples and pricing.

Further information on the retimer devices can be found online at:
https://www.broadcom.com/products/pcie-switches-retimers/expressfabric/gen6/bcm85667
https://www.broadcom.com/products/pcie-switches-retimers/expressfabric/gen6/bcm85668
https://www.broadcom.com/products/pcie-switches-retimers/expressfabric/gen5/bcm85657
https://www.broadcom.com/products/pcie-switches-retimers/expressfabric/gen5/bcm85658

**Partner Quotes**

"AMD and Broadcom share a commitment to delivering open, standards-based networking and connectivity solutions that deliver highly-performant options for the enterprise," said Raghu Nambiar, Corporate Vice President, Data Center Ecosystems and Solutions, AMD. "As AI becomes increasingly pervasive, data center operators face an unprecedented demand for performance and energy efficiency. Our joint work with Broadcom pushes the boundaries of PCIe technologies to deliver next-gen, highly-performant interconnect solutions for computationally intensive AI and business critical applications."

"With increasing demands for high-performing interconnect technology, the latest 5nm PCIe retimers and switches from Broadcom allow us to provide our customers with an end-to-end solution with our Dell PowerEdge AI servers," said Travis Vigil, Senior Vice President, Product Management, Infrastructure Solutions Group, Dell Technologies. "We value Broadcom's deep commitment to the PCIe ecosystem support to help accelerate future generations of data centers."

"As a leader and expert in delivering the world's fastest supercomputers that power complex, compute-intensive AI and simulation workloads, Hewlett Packard Enterprise values the essential role high-speed interfaces play in large scale AI systems architecture which is core to advancing the goals of our customers," said Trish Damkroger, Senior Vice President and General Manager, HPC & AI Infrastructure Solutions, Hewlett Packard Enterprise.

“PCIe plays a critical role in enabling purpose-built interconnect to support large-scale systems and we are pleased to see Broadcom invest in 5nm technology to enable further improvements to future AI and compute-intensive scaling needs.”

“Quanta looks to market-leading innovators like Broadcom to help us meet the data center workload challenges for our customers demand,” said Mike Yang, Senior Vice President and General Manager, Quanta Computer Inc. “The Broadcom end-to-end portfolio of PCIe Gen 5.0 and 6.0 solutions not only allow the AI ecosystem to scale but also deliver the lowest power and extended reach to be available in the market.”

“Broadcom’s new PCIe solutions provide the lowest power and data center efficiency that our Green Computing initiative requires,” said Charles Liang, President and CEO, Supermicro. “Broadcom new retimer and switch solutions allow us to capture the demand our customers require for building complete end-to-end solutions for AI and high performance applications.”

“Wiwynn is pleased to support Broadcom’s continued commitment to extending its PCIe portfolio to allow data centers and cloud service providers to deliver a complete, interoperable solution for servers,” said Steven Lu, Executive Vice President, Wiwynn. “The Broadcom retimer IC and PCIe switch are essential components to solve today’s high performance computing challenges in AI and server clustering solutions.”

**About Broadcom**
Broadcom Inc. (NASDAQ: AVGO) is a global technology leader that designs, develops, and supplies a broad range of semiconductor, enterprise software and security solutions. Broadcom's category-leading product portfolio serves critical markets including cloud, data center, networking, broadband, wireless, storage, industrial, and enterprise software. Our solutions include service provider and enterprise networking and storage, mobile device and broadband connectivity, mainframe, cybersecurity, and private and hybrid cloud infrastructure. Broadcom is a Delaware corporation headquartered in Palo Alto, CA. For more information, go to www.broadcom.com.

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