

Broadcom BCM957414A4142CC Datasheet



Broadcom BCM957414A4142CC P225P Dual-Port 25 Gb/s SFP28 Ethernet PCIe 3.0 x8 Network Interface Card

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Based on Broadcom's scalable 10/25/50/100/200G Ethernet controller architecture, the P225P 2x25G PCIe NIC is designed to build highly-scalable, feature-rich networking solutions in servers for enterprise and cloud-scale networking and storage applications, including high-performance computing, telco, machine learning, storage disaggregation, and data analytics.

The P225P 2x25G PCIe NIC builds upon the success of the widely-deployed Broadcom architecture by combining a high-bandwidth Ethernet controller with a unique set of highly-optimized hardware acceleration engines to enhance network performance and improve server efficiency.

Driven by the growing need for higher server bandwidth and storage capacity to support new and emerging applications, enterprises, telcos and cloud providers are modernizing their data centers by adopting latest networking technologies, such as server virtualization and

NVMe-oF™. The resulting expansion in data volumes increases server-to-server traffic and CPU loads for networking tasks.

With its market-leading hardware acceleration technologies, the P225P 2x25G PCIe NIC addresses these performance and service demands of mega-scale data center networks with high throughput and advanced flow processing. Features

such as TruFlow™ increase VM density up to 50 percent, freeing more CPU cycles for additional virtual machines. On-chip tunneling protocol processing for Geneve, VXLAN, and NVGRE provides up to a 5X throughput increase while lowering CPU utilization up to 90 percent compared to software-only solutions. These solutions also support advanced networking technologies such as RoCE, SDN and NFV, to facilitate the management of data networks and to enable service provider solutions.

Features

- Standards-compliant 25/10G dual-port SFP28 PCIe NIC with line-rate, full-duplex throughput
- NIC partitioning supporting 16 physical functions (PFs)
- TruFlow™ engine for intelligent flow processing to increase server VM density and accelerate vSwitch processing
- Industry's most secure PCIe NIC solution leveraging Broadcom's BroadSAFE® technology to provide unparalleled platform security via Silicon Root of Trust
- New end-to-end congestion avoidance and management to anticipate and eliminate congestion before it happens
- Support for advanced networking technologies including RoCE, SDN, NFV and virtualization
- TruManage™ enhances server manageability and security for data center deployments

Applications

- Cloud and Web2.0 data center servers
- Enterprise data center servers
- Private Cloud
- Machine Learning (ML) clusters
- High-Performance Computing (HPC) clusters
- Multi-node container platforms
- NVMe storage disaggregation (NVMe-oF)
- Database servers

Specifications

- Adapter Type: PCIe NIC
- ASIC: BCM57414

- Connectors: SFP28
- OS Support: CentOS, Debian, Microsoft Windows, Oracle Linux, Oracle Solaris, Red Hat Enterprise Linux, SUSE Linux Enterprise Server, Ubuntu, VMware, VMware ESX, VMware vSphere, Windows Hyper-V, Windows Server
- Host Connector: PCIe 3.0 x8
- Link-Speeds: 25/10/1GbE
- Multi-Host: No
- NPAR: Yes
- Ordering Part #: BCM957414A4142CC
- Ports: 2
- RoCEv2: Yes
- TruFlow™: Yes
- TruManage™: Yes

For more information of this Broadcom BCM957414A4142CC P225P, please visit Broadcom website:

<https://www.broadcom.com/products/ethernet-connectivity/network-adapters/p225p>

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