# **HPE QW972A Datasheet**



HPE STOREFABRIC SN1000Q 16GB 2-PORT PCIE FIBRE CHANNEL HOST BUS ADAPTER, 699765-001

QW972A

HPE StoreFabric SN1000Q QW972A 16Gbps Dual Port PCI Express Fibre Channel Host Bus Adapter with Both (Low Profile and Hith Profile) Brackets

HPE StoreFabric SN1000Q 16Gb Host Bus Adapters enable more rapid storage and retrieval of critical information when using high bandwidth cloud applications and storage intensive applications such as backup, database transactions and rich media. Designed for greater virtual machine density and bandwidth requirement environments, the SN1000Q 16Gb HBA enables more applications and virtual machines to run on a single server and port, resulting in reduced cabling and higher return on IT investment. The SN1000Q 16Gb HBA is backward compatible with 8 and 4 Gb storage networks and will protect future investments. With the ability to deliver twice the I/O performance of 8 Gb FC HBAs. The SN1000Q takes Storage Networking performance and efficiency to the next level.

The Highest Performing Fibre Channel Host Bus Adapters

The HPE StoreFabric SN1000Q 16Gb Host Bus Adapters deliver twice the I/O performance of 8 Gb Fibre Channel HBAs.

Moving to 16 Gb technology provides the infrastructure required for the more powerful servers and data intensive applications of the future. When using storage intensive applications like backup/restore, database transactions, virtualization and rich media, the improved I/O performance enables faster storage and retrieval of data. Best Fibre

Channel Host Bus Adapters for Virtualization
Ideal for the implementation of virtual servers with the power to drive multiple virtual machines
Allows a single port to acquire multiple N Port IDs, eliminating the need for additional physical ports. Datacenter administrators do not need to concern themselves with multiple requests from the virtualized servers potentially creating conflict. Improves host utilization and enhances application performance.
Next Generation Host Bus Adapters with Improved IOPS Performance per Watt
Power savings result in lower operating expenditure.
Smart SAN Support
Smart SAN is a protocol agnostic application embedded in SAN components that enables the 3PAR to orchestrate configuration, settings and policies in a SAN. HPE Smart SAN's Target Driven Zoning enables you to configure zones accurately in minutes and not in hours and its automatic discovery mechanism creates a powerful platform which would enable real-time diagnostics with self-healing in the near future.
NVMe over Fibre ChannelReady
The SN1200E & SN1100Q 16Gb Fibre Channel Host Bus Adapters are NVMe-enabled to support emerging NVM Express (NVMe) over Fibre Channel storage networks.

Active Health System
All HPE 16Gb Fibre Channel adapters support HPE ProLiant Active Health System integration. This helps administrators
accurately troubleshoot and resolves problem within the server faster.
Secure Firmware download
The SN1200E delivers enhanced security via the new secure firmware update feature which protects and ensures the
authenticity of device firmware.
Forward error correction (FEC)
FEC is enabled and improved at 16Gb as required by the FC Specification, automatically correcting transmission errors
and improving network performance and resiliency.
Class-specific Control (CS_CTL)
QoS capability that enables administrators to prioritize storage traffic to meet the needs of critical VM workloads
Link cable beaconing (LCB)
LED beaconing for ports on both ends of a physical link simplifies cable identification and management.

D-Port Diagnostics
Quickly run automated diagnostic tests in a single step, across multiple adapters, servers, and fabric components to assess connectivity. Optics and cable problems are identified and resolved.
FDMI,FC Ping, FC Trace
Route Quickly check connectivity to SAN devices and query the switch management server for in-depth details on connected devices. Trace Route capability supported on SN1100Q.
Read Diagnostic Parameters (RDP)
Identify the source of network and media errors like cyclic redundancy check (CRC) and loss of sync (LOS) by remotely accessing diagnostic information from anywhere in the fabric.
Fabric-assigned Port Worldwide Name (FA_WWN)
Using SN1100Q &SN1000Q administrators can preconfigure WWN settings at the switch port allowing Fibre Channel adapter to acquire port WWN address from the Gen 5 16Gb or Gen 6 32GFCfabric. This allows SAN administrator to configure SAN zoning without need for servers to be present.
Fabric-based Root LUN (F. RLD)

Allows SN1100Q & SN1000Q to acquire Boot-LUN information directly from Gen 5 16Gb switch, speeding up

deployment of new servers in a SAN environment. Buffer-to-Buffer Credit Recovery (BB\_CR) The SN1100Q enhances performance and resiliency by automatically recovering buffer credits, which can be lost on long distance and lossy connections with the potential to stall I/O or degrade performance. Virtual Machine ID (VMID) The SN1100Q enables System/SAN administrator to monitor FC traffic from VM to LUN. The HPE StoreFabric SN1000Q QW972A 16 Gb PCI Express x4 host bus adapters provide Fibre Channel connectivity to select HPE Servers and well-suited for enterprise network as well as storage device connections. This HPE StoreFabric SN1000Q QW972A 16Gb host bus adapters is a dual port unit with both brackets (low profile and high profile) and has a PCI Express x4 form factor. Specifications • Brand: HPE • MPN: QW972A

• Option Part Number: QW972A

• Spare Part Number: 699765-001

#### General

- Device Type: Host Bus Adapter
- Form Factor: Plug-in Card Both Brackets (Half Height and Full Height)
- Interface (Bus) Type: PCI Express x4

### Networking

- Ports: 2 x 16Gb Fibre Channel
- Connectivity Technology: Wired
- Data Link Protocol: 16Gb Fibre Channel (SW)
- Media: Multi-mode Optic (SFP+)
- Auto-negotiation: 16/8/4 Gbps
- Features: Dual Channel Auto-negotiation

### **Expansion & Connectivity**

- Interfaces: 2 x 16Gb Fibre Channel (Short Wave) LC multi-mode x 2
- Slot Type Supported: PCI Express 3.0 to Fibre Channel
- Connector: Short wave laser with LC type connector
- PCIe Connector: PCIe 3.0 x8
- Brackets: Shipped with both half-height and full-height brackets

### **Product Dimensions**

• Width: 0.63 inch

• Depth: 6.63 inch

• Height: 4.70 inch

#### **Environmental Parameters**

- Min Operating Temperature: 32 °F
- Max Operating Temperature: 131 °F
- Humidity Range Operating: 10 90% (non-condensing)

## **Operating System Compatibility**

• Compatible Operating Systems: Microsoft Windows, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), VMware, Microsoft Windows Hyper-V.

### Compatibility

- HPE ProLiant DL Series: DL360e Gen8, DL360e Gen8 Base, DL360e Gen8 Entry, DL360e Gen8 Performance,
   DL360e Gen8 Special Server, DL360p Gen8, DL360p Gen8 Base, DL360p Gen8 CMS, DL360p Gen8 Entry, DL360p
   Gen8 High Performance, DL380 Gen7, DL380 Gen7 Base, DL380 Gen7 Efficiency, DL380 Gen7 Entry, DL380 Gen7
   Performance, DL380 Gen7 Special Server, DL380e Gen8, DL380e Gen8 Base, DL380e Gen8 Entry, DL380e Gen8
   High Performance, DL380e Gen8 Storage, DL380p Gen8, DL380p Gen8 Base, DL380p Gen8 Entry, DL380p Gen8
   High Performance, DL380p Gen8 Special, DL385 Gen7, DL385 Gen7 Base, DL385 Gen7 Entry, DL385 Gen7 HE,
   DL385 Gen7 Performance, DL385p Gen8, DL385p Gen8 Dedicated Workload, DL385p Gen8 Entry, DL385p Gen8
   Maximized Consolidation, DL385p Gen8 Storage, DL385p Gen8 Storage Centric, DL580 Gen7, DL580 Gen7 Base,
   DL580 Gen7 High Performance Servers
- HPE ProLiant ML Series: ML350p Gen8, ML350p Gen8 Base, ML350p Gen8 Entry, ML350p Gen8 Performance Servers
- HPE Modular Smart Array 2040 SAS Dual Controller LFF Storage
- HPE StoreEasy 3850 Gateway Single Node and 3850 Gateway Storage