



# Future Proof HPE Server I/O

## 10/25GbE adapters provide VMware® vSAN™ compatibility and scalability for hyperconverged infrastructure

Protect customers HPE ProLiant server investment by using 10/25GbE connectivity options from HPE and Marvell®

- VMware vSAN certified
- High performance
- 10/25GbE investment protection
- 25GbE is recommended for NVMe

### Elevator pitch

Many customers are considering VMware vSAN for hyperconverged software defined storage access. As VM density data growth increases, I/O becomes a critical to delivering storage performance. •

HPE and Marvell have a full suite of 10GbE and 10/25GbE adapters optimized to support virtual server environments with a variety of intelligent offloads and low latency RDMA that are fully certified by VMware for use in vSAN configurations.

### The 10GbE and 10/25GbE opportunity

Driven by the advent of NVMe, VM density and storage requirements continue to grow. Deploying vSANs maximize storage availability and performance. vSAN ReadyNode recipes are available to optimize various HPE solutions. Soon, VMware will be supporting low-latency RDMA connectivity. HPE provides vSAN certified adapter options with RoCE & iWARP RDMA protocols for vSAN solutions available in the near future.

### Marvell HPE value proposition/differentiation

When you are baking a cake, at times you substitute in different ingredients to make the result better. The same can be done with VMware vSAN ReadyNode configurations or recipes. Some changes to the documented configurations can make the end solution much more flexible and scalable, while retaining full compatibility and support.

VMware allows certain elements within a vSAN ReadyNode bill of materials (BOM) to be substituted. In this [VMware BLOG](#), the author outlines that server elements in the BOM can change including the CPU, memory, boot device and the network adapter or NIC.

Changes can only be made with devices that are certified as supported by VMware. The list of certified I/O devices can be found in [VMware vSAN Compatibility Guide](#). To maximize performance, server HPE adapters should be considered in vSAN configurations such as the HPE Ethernet 10/25GbE 621SFP28 Adapter

and HPE Ethernet 10/25Gb 622FLR-SFP28 CNA.

A vSAN Ready Node configuration can be upgraded by replacing a standard NIC with an HPE Ethernet 10/25Gb 621SFP+ Adapter or HPE Ethernet 10/25Gb 622FLR-SFP28 CNA which support up to 25GbE bandwidth as well as both RoCE and iWARP RDMA. Including these full-featured adapters in the vSAN ReadyNode configuration, allows the customer to gain performance benefits and will support low latency RDMA when added to the VMware vSAN in the future.

### Solution positioning in HPE portfolio

Expand the conversation to include the customers' networking environment when upgrading servers.

- 10GBASE-T adapters reducing connectivity costs
- Adapters supporting storage offloads and auto negotiating between 10GbE and 25GbE with a technology called SmartAN™.

## Quick reference card

For HPE and Channel Partner

## Resources

[www.hpe.com/servers/proliantnics](http://www.hpe.com/servers/proliantnics)

[www.marvell.com/hpe](http://www.marvell.com/hpe)

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## What do I sell?

### **HPE Ethernet 10/25GbE Adapters with universal RDMA and SmartAN technology**

- HPE Ethernet 10/25Gb 621SFP28 (867328-B21)
  - 10/25GbE PCIe adapter for HPE ProLiant DL and HPE Apollo servers with RDMA and SmartAN
- HPE Ethernet 10/25Gb 622FLR-SFP28 (867334-B21)
  - 10/25GbE FlexibleLOM for HPE ProLiant DL and HPE Apollo servers with RDMA and SmartAN

### **HPE Ethernet 10GbE Adapters**

- HPE Ethernet 10Gb 524SFP+ (P08446-B21)
  - 10Gb PCIe adapter with RDMA for HPE ProLiant DL and Apollo Servers
- HPE Ethernet 10Gb 530SFP+ (625503-B21)
  - 10Gb PCIe adapter for HPE ProLiant DL and HPE Apollo servers
- HPE Ethernet 10Gb 534FLR-SFP+ (700751-B21)
  - 10Gb PCIe Flexible LOM for HPE ProLiant DL and HPE Apollo servers

### **HPE Ethernet and HPE FlexFabric 10GBASE-T Adapters**

- HPE FlexFabric 533FLR-T (700759-B21)
  - 10GBASE-T 2-port FlexibleLOM for HPE ProLiant DL and HPE Apollo servers
- HPE FlexFabric 536FLR-T (764302-B21)
  - 10GBASE-T 4-port FlexibleLOM for HPE ProLiant DL and HPE Apollo servers
- HPE Ethernet 530T (656596-B21)
  - 10GBASE-T 2-port PCIe adapter for HPE ProLiant DL and HPE Apollo servers
- HPE Ethernet 521T (867707-B21)
  - 10GBASE-T 2-port FlexibleLOM with RDMA for HPE ProLiant DL and HPE Apollo servers

## Qualifying/discovery questions

### **Q1: Are you deploying an all-flash or NVMe solution for vSAN?**

*A1: Consider higher performance 25GbE and low*

*latency RDMA for best performance.*

### **Q2: What issues are you having with network access to storage or connectivity/capacity/management today?**

*A2: Offload technology can reduce CPU utilization and 10GBASE-T can reduce connectivity costs*

### **Q3: What type of application performance benefits would you expect to see if you had more bandwidth from your server to the network?**

*A3: Consider 10/25GbE adapters with high bandwidth and low latency RDMA.*

### **Q4: What are your plans relating to network upgrades in the future?**

*A4: Adapters with SmartAN allow for deploying 10GbE today and will automatically connect to 25GbE in the future, with no changes required.*

### **Q5: What kind of network cabling infrastructure do you use today (Fiber optic with SFP+, DAC or CAT 5/6 copper cabling)?**

*A5: Consider 10GBASE-T for low cost.*

## Reasons to substitute I/O adapters in your vSAN **Need highest performance/lowest latency**

10/25GbE adapters with universal RDMA provide high performance, can reduce latency by 25-50% for vSAN connectivity when RDMA enabled in VMware.

### **Looking for even more VM scalability per server**

Future-proofing with 10/25GbE provides necessary bandwidth for virtualized environments. SmartAN provides seamless transition from 10Gb to 25Gb at the adapter level..

### **Need for improved TCO**

Using 10GBASE-T adapters can reduce cabling costs as much as 90% and using 25GbE reduces port count by 2.5X compared to 10GbE.