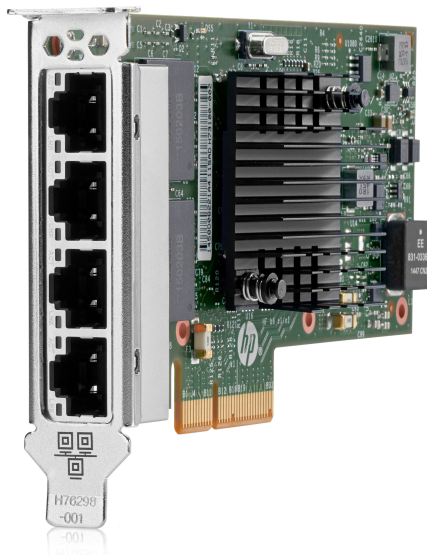


QuickSpecs

HPE Ethernet 1Gb 4-port 366T Adapter

Overview



HPE Ethernet 1Gb 4-port 366T Adapter, with half-height bracket

Platform Information

Models

HP Ethernet 1Gb 4-port 366T Adapter	811546-B21
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Kit Contents

HP Ethernet 1Gb 4-port 366T #Adapter
Quick install card
NOTE: Includes instructions on changing to the half-height bracket (if needed).
Product warranty statement

Compatibility - Supported Servers

HPE ProLiant DL20 Gen9 Server
HPE ProLiant DL60 Gen9 Server
HPE ProLiant DL80 Gen9 Server
HPE ProLiant DL120 Gen9 Server
HPE ProLiant DL160 Gen9 Server
HPE ProLiant DL180 Gen9 Server
HPE ProLiant DL360 Gen9 Server
HPE ProLiant DL360 Gen10 Server
HPE ProLiant DL380 Gen9 Server
HPE ProLiant DL380 Gen10 Server
HPE ProLiant DL385 Gen10 Server
HPE ProLiant DL560 Gen9 Server
HPE ProLiant DL580 Gen9 Server
HPE ProLiant ML30 Gen9 Server
HPE ProLiant ML110 Gen9 Server
HPE ProLiant ML150 Gen9 Server
HPE ProLiant ML350 Gen9 Server
HPE Apollo 2000 - XL1x0r Gen9 Server
HPE Apollo 4500 - XL450 Gen9 Server
HPE Apollo 6500 - XL270d Gen9 Server
NOTE: This is a list of supported servers. Some may be discontinued.

Standard Features

Throughput-Theoretical Bandwidth	<p>This adapter delivers 8 Gb/s bi-directional Ethernet transfer rate per port (32 Gb/s per adapter), providing the network performance needed to improve response times and alleviate bottlenecks.</p> <p>NOTE: Port enumeration on this adapter is from the bottom up, i.e. the port near the top of the adapter is port #4 and the port closest to the gold finger is port #1.</p>
10/100/1000T Twisted Pair Networks	<p>In addition to Gigabit Ethernet, this adapter supports both 10 Mbps and 100 Mbps providing compatibility with Ethernet and Fast Ethernet twisted pair networks.</p>
802.1p QoS Tagging	<p>IEEE quality of service (QoS) 802.1p tagging allows the adapter to mark or tag frames with a priority level across a QoS-aware network for improved traffic flow.</p>
802.1Q VLANs	<p>IEEE 802.1Q virtual local area network (VLAN) protocol allows each physical port of this adapter to be separated into multiple virtual NICs for added network segmentation and enhanced security and performance. VLANs increase security by isolating traffic between users. Limiting the broadcast traffic to within the same VLAN domain also improves performance.</p>
Active Health System	<p>Supports HPE Active Health System - monitors and records changes in the server hardware and configuration enabling customers to have accurate information that will assist in diagnosing problems and delivering rapid resolution when server failures occur.</p>
Auto-negotiation	<p>This adapter automatically senses the speed of the device to which it is attached. It also automatically configures for half or full duplex, depending on the duplex mode of the switch, hub, or router connected to the adapter.</p>
Energy Efficient Ethernet	<p>Compliant with IEEE 802.3az, featuring advanced power savings features throttles power usage with network load activity.</p>
HPE Sea Of Sensors 3D	<p>Support for the HPE Sea of Sensors which is a collection of 32 sensors that automatically track thermal activity - heat - across the server. When temperatures get too high, sensors can initiate fans and make other adjustments to reduce energy usage. A significant improvement lies in the ability to apply fan speed increases only to the portion of the system that is rising in temperature, rather than all six fans in unison, which reduces the amount of energy used for cooling.</p>
Jumbo Frames	<p>This adapter supports Jumbo Frames (also known as extended frames), permitting up to a 9,500 byte (KB) transmission unit (MTU) when running Ethernet I/O traffic. This is over six times the size of a standard 1500-byte Ethernet frame. With Jumbo Frames, networks can achieve higher throughput performance and greater CPU utilization. These attributes are particularly useful for database transfer and tape backup operations.</p>
LED Indicators	<p>LED indicators show link integrity and network activity for easy troubleshooting.</p>

Standard Features

Management Support	This adapter ships with agents that can be managed from HPE Systems Insight Manager or other management application that support SNMP.
Message Signaled Interrupt (Extended) (MSI-X)	Message Signaled Interrupt (Extended) provides performance benefits for multi-core servers by load balancing interrupts between CPUs/cores.
Network Adapter Teaming	This adapter support for NIC teaming helps IT administrators increase network fault tolerance and increased network bandwidth, the team of adapters can work together as a single virtual adapter, providing support for several different types of teaming enabling IT administrators to optimize availability, improve performance and help reduce costs.
Optimized for Virtualization	I/O Virtualization support for VMware NetQueue and Microsoft VMQ helps meet the performance demands of consolidated virtual workloads.
PCI Express Interface	The x4 PCI Express interface on this adapter is compatible with x4, x8, and x16 PCI slots. If installed in a x8 or x16 slot, the adapter will operate at the x4 speed.
Preboot eXecution Environment (PXE)	Support for PXE enables automatic deployment of computing resources remotely from anywhere. It allows a new or existing server to boot over the network and download software, including the operating system, from a management/ deployment server at another location on the network. Additionally, PXE enables decentralized software distribution and remote troubleshooting and repairs.
Server Integration	<p>This adapter is a validated, tested, and qualified solution that is optimized for HPE ProLiant servers. Hewlett Packard Enterprise validates a wide variety of major operating systems drivers with the full suite of web-based enterprise management utilities including HPE Intelligent Provisioning and HPE Systems Insight Manager that simplify network management.</p> <p>This approach provides a more robust and reliable networking solution than offerings from other vendors and provides users with a single point of contact for both their servers and their network adapters.</p>
TCP/UDP/IP	For overall improved system response, this adapter supports standard TCP/IP offloading techniques including: TCP/IP, UDP checksum offload (TCO) moves the TCP and IP checksum offloading from the CPU to the network adapter. Large send offload (LSO) or TCP segmentation offload (TSO) allows the TCP segmentation to be handled by the adapter rather than the CPU.
Precision Time Protocol (IEEE 1588 PTP)	Synchronization of system clocks throughout a network, achieving clock accuracy in the sub-microsecond range, making it suitable for measurement and control systems.
Warranty	Maximum: The remaining warranty of the HPE product in which it is installed (to a maximum three-year, limited warranty).

Standard Features

Minimum: One year limited warranty.

NOTE: Additional information regarding worldwide limited warranty and technical support is available at: <http://h17007.www1.hpe.com/us/en/enterprise/servers/warranty/index.aspx#.V4e3tPkrJhE>

Service and Support

Service and Support	<p>NOTE: This adapter is covered under HPE Support Services/ Service Contract applied to the HPE ProLiant Server or enclosure. No separate HPE Support Services# need to be purchased.</p> <p>Most HPE branded options sourced from HPE that are compatible with your product will be covered under your main product support at the same level of coverage, allowing you to upgrade freely. Additional support is required on select workload accelerators, switches, racks and UPS options 12KVA and over. Coverage of the UPS battery is not included under HPE support services; standard warranty terms and conditions apply.</p>
Warranty and Support Services	<p>Warranty and Support Services will extend to include HPE options configured with your server or storage device. The price of support service is not impacted by configuration details. HPE sourced options that are compatible with your product will be covered under your server support at the same level of coverage allowing you to upgrade freely. Installation for HPE options is available as needed. To keep support costs low for everyone, some high value options will require additional support. Additional support is only required on select high value workload accelerators, fibre switches, InfiniBand and UPS options 12KVA and over. Coverage of the UPS battery is not included under TS support services; standard warranty terms and conditions apply.</p>
Protect your business beyond warranty with HPE Support Services	<p>HPE Technology Services delivers confidence, reduces risk and helps customers realize agility and stability. Connect to HPE to help prevent problems and solve issues faster. HPE Support Services enable you to choose the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement to the support you need for your IT and business.</p> <p>Protect your product, beyond warranty.</p>
Parts and Materials	<p>Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements. Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services. The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.</p>
For more information	<p>Visit the Hewlett Packard Enterprise Service and Support website.</p>

Technical Specifications

System Unit	Dimensions (L x W)	13.46 x 6.86 cm 5.3 x 2.7 in NOTE: Without bracket
General Specifications	Network Processor Data Rate Data Path Onboard Memory Form Factor IEEE Compliance Connector Wiring Cable Distance	Intel® Ethernet Controller I350 Four 1GbE ports, each at 2 Gb/s bi-directional; 8 Gb/s aggregate bi-directional theoretical bandwidth. 10/100/1000 Mbps, Full-duplex. Four lane (x4) PCI Express compatible with x1, x4, x8, and x16 PCI Express slots PCI Express 2.0 (Gen2.1 x4) Low profile card with both full height (pre-installed) and half height brackets included in kit. 802.3, 802.3ab, 802.3u, 802.3x, 802.3ad, 802.1q, 802.3az, 1588, 802.1as RJ-45 (Four) Category 5 (CAT-5) or better twisted-pair cabling Up to 328 ft (100 m)
Power and Environmental Specifications	Power Temperature - Operating Temperature - Non-Operating Humidity - Operating Humidity - Non-operating Emissions Classification Agency Approvals RoHS Compliance Safety	5.5W maximum 0° to 55°C (32° to 131°F) -65° to 85° C (-85° to 185° F) 10% to 90% non-condensing 5% to 95% non-condensing Class A USA: FCC Part 15 Class A Canada: ICES-003, Issue 4 Japan: VCCI V3 (2010.04) Class A International: EN55022:2006 + A1:2007 Class A; EN55024:1998+A1:2011+A2; EN61000-3-2:2006, EN61000-3-3:2008 Taiwan: BSMI, CNS13438 (2006) Class A Australia/New Zealand (AS/NZS): EN55022:2006+A12007 class A Korea: KN22 Class A, KN24 6 of 6 UL Mark (USA and Canada) CE Mark EN 60590
Operating System and Virtualization Support	The Operating Systems supported by this adapter are based on the server OS support. Please refer to the OS Support Matrix at https://www.hpe.com/us/en/servers/server-operating-systems.html .	
Environment-friendly Products and Approach - End-of-life Management and Recycling	Hewlett Packard Enterprise offers end-of-life product return, trade-in, and recycling programs , in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner. The EU WEEE Directive (2012/19/EU) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard Enterprise web site . These instructions may be used by recyclers and other WEEE	

Technical Specifications

treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

Summary of Changes

Date	Version History	Action	Description of Change
07-May-2018	Version 8	Changed	Compatibility section was updated
05-Feb-2018	Version 7	Changed	Overview section was updated
18-Dec-2017	Version 6	Changed	Product Information- Compatibility was updated
06-Nov-2017	Version 5	Changed	Technical Specification-OS and Virtualization Support section was updated.
16-Oct-2017	Version 4	Changed	Overview and Technical Specification-OS were updated.
11-Jul-2017	Version 3	Changed	Compatibility section was updated.
26-Oct-2016	Version 2	Changed	Re-branding edition.
01-Jun-2015	Version 1	New	Initial version.



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