



## HP Network Adapters for ProLiant DL and ML Servers

Family data sheet

**Increased demands placed on your network for reliability, bandwidth and security will only accelerate further while imposing added pressure for infrastructure simplification and reduced costs. From entry-level adapters to options for multiple applications, our line of network products provides a complete assortment for ProLiant servers.**

### Building network reliability

HP ProLiant server adapters provide up to four Gigabit ports on a single card, allowing multiple connections to devices and/or redundant switches. One or more ports on a single adapter or across multiple adapters can be teamed for simple failover to more advanced teaming capabilities.

### Simplifying the infrastructure

HP offers several multi-function adapters for ProLiant servers that combine accelerated networking, storage networking and clustering – all in a single, high-performance network adapter. They support TCP/IP Offload Engine (TOE) for Windows® and accelerated Internet Small Computer System Interface (iSCSI). Today, the typical server environment requires separate connectivity products for networking and storage. Not so with HP multi-function network adapters. The adapters present a single connection supporting multiple functions, thereby allowing IT professionals to manage their entire infrastructure as a single, unified fabric. A unified fabric infrastructure can dramatically reduce costs, increase flexibility in business solution deployment, allow sharing of resources for improved efficiencies and greatly simplify infrastructure management.

### Managing effectively

ProLiant network adapters ship with drivers and agents that can be managed from HP Systems Insight Manager (SIM), as well as any other management application that supports SNMP. SIM can recognise the adapters individually or in teams, and can collect and report SNMP statistics on adapter events. Integrated Management Log (IML) support is provided by the adapters for critical event logging on ProLiant servers. The adapters ship with a set of utilities that allow the user to enable initial diagnostics and configure adapter teaming.

This includes a patented teaming GUI for Microsoft® Windows operating systems. Additionally, support for scripted installations of teams in a Microsoft Windows environment allows for unattended operating system installations.

### Networking with confidence

Tested and proven to meet demanding HP standards, our adapters undergo an extensive level of ProLiant server compatibility and systems inter-operability testing. We validate the adapters over a wide variety of both 32-bit and 64-bit operating systems. This approach provides a robust and reliable networking solution while providing IT administrators with a single point of contact for both their servers and server network adapters.

### HP NC100 Series Network Adapters

#### HP NC112T PCI Express Gigabit Server Adapter

The NC112T is a single-lane (x1) PCI Express Gigabit server adapter offering performance at a very modest price. It offers first-rate price/performance compared to other NC-series Gigabit Ethernet adapters. The option kit ships with two brackets, allowing the adapter to be used in either low-profile or standard-height server I/O slots.

### HP NC300 Series Network Adapters

#### HP NC360T PCI Express Dual-Port Gigabit Server Adapter

The NC360T is an x4 PCI Express adapter featuring two 10/100/1000 ports on a single card, saving valuable server I/O slots for other purposes. The option kit ships with two brackets, allowing the adapter to be used in either low-profile or standard-height server I/O slots.



### **HP NC365T 4-Port Ethernet Server Adapter**

The HP NC365T is a four-lane (x4) PCI Express (PCIe) high-performing single-chip, low-power quad-port adapter that offers the highest port density among all ProLiant networking options.

The NC365T is a PCIe Gen 2.0 compliant adapter that supports TCP checksum and segmentation, Large Send and Receive offload capability, Message Signal Interrupt Extension (MSI-X), IEEE 1588, Receive Side Scaling (RSS), VLAN tagging, 9.5 KB jumbo frames and IPv6. The NC365T ships with support for an advanced server virtualisation feature called Virtual Machine Device queue (VMDq), which improves I/O performance by reducing I/O overhead in a virtualised environment.

### **HP NC373F and NC373T Single-Port Multifunction Gigabit Server Adapters**

The NC373F (x4 PCI Express, 1000SX) and NC373T (x4 PCI Express, 1000T) are high-performance, single-port PCI Express multi-function adapters that support TCP/IP Offload for Windows and accelerated iSCSI, all on a single card. These adapters enhance server performance and improve network efficiency by redirecting TCP/IP processing from the server CPU to the network adapter. With accelerated networking and storage networking combined in one adapter, system flexibility is increased while allowing an organisation to consolidate ports, converge functions and centralise IT management.

### **HP NC375T Quad-Port Gigabit Server Adapter**

The NC375T is designed to achieve performance scalability for consolidated server environments at a competitive price. It conserves server I/O slots by offering four ports on a single card with support for both standard and low-profile slots.

### **HP NC382T PCI Express Dual-Port Multifunction Gigabit Server Adapter**

The NC382T 10/100/1000T adapter shares the same common TOE for Windows and accelerated iSCSI multi-function feature set as NC373F and NC373T. The NC382T provides two Gigabit ports, thereby saving valuable PCI Express slots. Like the NC373x adapters, the NC382T can be used in either standard or low-profile slots.

## **HP NC500 Series Network Adapters**

### **HP NC523SFP Dual-Port 10 Gigabit Server Adapter**

The NC523SFP is an x8 PCI Express Gen 2 adapter that ships with two Small Form-Factor Pluggable Plus (SFP+) cages suitable for connecting the adapter to Direct Attach Cable (DAC) or fibre modules to support SM fibre optic cabling. Both low-profile and standard-height PCI Express slots are supported with the brackets included in the option kit.

## **HP Services**

### **NIC Service Support Options**

HP Care Pack Services deliver specialised networking expertise to complement your in-house capabilities. Cover your NIC options with a single convenient server support package. HP Care Pack Services for HP ProLiant servers and HP BladeSystems provide support for all HP-branded hardware options that are qualified for inclusion with your server at the time of or after purchase, at no extra charge.

### **Server and Software Installation and Startup HP Care Pack Services**

Take advantage of complete installation and implementation support – to get your IT solutions up and running rapidly, with minimal business disruption.

### **HP Care Pack Services Hardware Support**

HP Care Pack Services help increase uptime and productivity with rapid same day 4-hour response on a 24x7 or 13x5 basis. In addition, HP Services offer 24x7, 24-hour and 6-hour call-to-repair where downtime needs to be kept to a minimum.

### **Customer benefits**

- Speedy server implementation
- Improve the performance and reliability of your server
- Knowledge transfer helping to enhance expertise of your in-house IT staff

### **For more information, visit:**

[www.hp.com/services/proliant](http://www.hp.com/services/proliant)  
[www.hp.com/go/proliant/carepack](http://www.hp.com/go/proliant/carepack)

### **HP NC550SFP Dual-Port 10GbE Server Adapter**

The NC550SFP is an x8 PCI Express Gen 2 adapter that ships with two SFP+ cages; it supports both standard and low-profile slots. With a theoretical maximum throughput of 40 Gbps, it is ideal for virtualisation, clustering and servers experiencing very heavy loads.

## **Accelerated iSCSI Pack**

The ProLiant iSCSI Acceleration Software Pack enables accelerated iSCSI capability on ProLiant server embedded multi-function network adapters. Accelerated iSCSI allows the network controller to function as both a NIC and an HBA over a single connection. Additionally, it offloads the iSCSI software to the multi-function adapter for improved performance.

The following servers ship with Accelerated iSCSI as a standard feature, at no additional charge:

**HP ProLiant DL360 G6**

**HP ProLiant DL380 G6**

**HP ProLiant DL385 G6**

For details about HP iSCSI services, go to:

[www.hp.com/go/iscsi](http://www.hp.com/go/iscsi)

## **HP Financial Services**

HP Financial Services provides innovative financing and financial asset management programmes to help customers cost-effectively acquire, manage and ultimately retire their HP solutions. For more information on these services, please visit:

[www.hp.com/go/hpfinancialservices](http://www.hp.com/go/hpfinancialservices)

## Technical specifications

	NC112T	NC360T	NC365T	NC373F
<b>Hardware features</b>				
Part number	503746-B21	412648-B21	593722-B21	394793-B21
Port speed and media	10/100/1000T	10/100/1000T	10/100/1000T	1000SX
Number of adapter ports	1	2	4	1
Port connector	RJ-45	RJ-45	RJ-45	Low profile LC
Bus type	PCI Express	PCI Express	PCI Express	PCI Express
Data path	x1	x4	x4	x4
Brackets	Standard and low profile	Standard and low profile	Standard and low profile	Standard and low profile
Network controller	Intel® 82574L	Intel 82571EB	Intel 82580EB	Broadcom 5708
<b>Software features</b>				
Accelerated iSCSI capable				•
TOE for Windows				•
Receive Side Scaling (RSS)	•	•	•	•
ProLiant heterogeneous teaming driver	•	•	•	•
Pre-boot execution environment (PXE)	•	•	•	•
Wake-on-LAN (WOL)	•	•		
Jumbo frames	•	•	•	•
Checksum offload	•	•	•	•
802.1Q VLAN tagging support	•	•	•	•
802.3p Quality of service	•	•	•	•
802.3x Flow control	•	•	•	•
802.3ad Link aggregation	•	•	•	•
IEEE 1588			•	
VMDq			•	

Supported features may vary by server operating system; for details, please visit: [www.hp.com/go/ProLiantNICs](http://www.hp.com/go/ProLiantNICs)

<b>Accelerated iSCSI Pack</b>	Part number
Single licence	452679-B21
Flexible licence	452680-B21
<b>Electronic software delivery licence</b>	TC295AAE
	Microsoft Windows Server 2003 Microsoft Windows Server 2008 Linux Red Hat 5.x Linux SLES 10-SP1

## Technical specifications

	NC373T	NC375T	NC382T	NC523SFP	NC550SFP
<b>Hardware features</b>					
<b>Part number</b>	394791-B21	538696-B21	458492-B21	593717-B21	518201-B21
<b>Port speed and media</b>	10/100/1000T	10/100/1000T	10/100/1000T	10,000 SFP	10,000 SFP
<b>Number of adapter ports</b>	1	4	2	2	2
<b>Port connector</b>	RJ-45	RJ-45	RJ-45	SFP for DAC and SM	SFP for DAC and SM
<b>Bus type</b>	PCI Express	PCI Express	PCI Express	PCI Express	PCI Express v. 2.0
<b>Data path</b>	x4	x4	x4	x8	x8
<b>Brackets</b>	Standard and low profile	Standard and low profile	Standard and low profile	Standard and low profile	Standard and low profile
<b>Network controller</b>	Broadcom 5708	NetXen NX3031	Broadcom 5709	QLogic cLQM8214	ServerEngines BE4210
<b>Software features</b>					
<b>Accelerated iSCSI capable</b>	•		•		
<b>TOE for Windows</b>	•		•		
<b>Receive Side Scaling (RSS)</b>	•	•	•		
<b>ProLiant heterogeneous teaming driver</b>	•	•	•		
<b>Pre-boot execution environment (PXE)</b>	•	•	•		
<b>Wake-on-LAN (WOL)</b>	•		•		
<b>Jumbo frames</b>	•	•	•		
<b>Checksum offload</b>	•	•	•		
<b>802.1Q VLAN tagging support</b>	•	•	•	•	•
<b>802.3p Quality of service</b>	•	•	•	•	•
<b>802.3x Flow control</b>	•	•	•	•	•
<b>802.3ad Link aggregation</b>	•	•	•	•	•

Supported features may vary by server operating system; for details, please visit: [www.hp.com/go/ProLiantNICs](http://www.hp.com/go/ProLiantNICs)

To understand how HP Network Adapters can build network reliability, accelerate networking for ProLiant servers and simplify your infrastructure, please visit: [www.hp.com/go/ProLiantNICs](http://www.hp.com/go/ProLiantNICs), [www.hp.com/go/NC523SFP](http://www.hp.com/go/NC523SFP)

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