

### HP Converged Network Adapters

The HP Dual Port Converged Network Adapters (CNAs) are dual port adapters that provide Ethernet, iSCSI, and Fibre Channel (FC) connectivity over 10GbE using both Fibre Channel over Ethernet (FCoE) and Converged Enhanced Ethernet (CEE) standards. By consolidating Ethernet, iSCSI, and Fibre Channel onto a converged network adapter, HP CNAs reduce the number of separate adapters and cables required for your datacenter and also reduce operational, power and cooling costs while preserving existing Ethernet and Fibre Channel infrastructure. HP CNAs have been thoroughly tested with HP ProLiant servers and HP Top of Rack (ToR) and End of Row (EoR) switches to ensure an optimal HP FCoE solution for your datacenter.

### What's New

- CN1100R HP StoreFabric Dual Port Converged Network Adapters

### Key Features and Benefits

**Converged Infrastructure** Ethernet, iSCSI, and Fibre Channel in one adapter

- Combines the functionality of a NIC (Ethernet), iSCSI, and Fibre Channel onto a single converged network adapter reducing the number of adapters and cables and reducing acquisition and operational costs

**Reliability**

Converged Enhanced Ethernet reliability standards

- Sends Fibre Channel data packets via Fibre Channel over Ethernet (FCoE) using Converged Enhanced Ethernet (CEE) standards ensuring high standards of data integrity and lossless Ethernet.

**Provides HP ProLiant Connectivity to Storage and Networks**

Robust interoperability testing

- Provides an HP-branded CNA solution which has undergone extensive HP interoperability testing for connecting HP ProLiant servers into storage and networking environments.
- Optimal for connecting to HP's Top of Rack (ToR) 5820X, B-series and C-series FCoE Converged Network Switches. **NOTE: CN1100R does not support 5820X.**

**Flexible Connect**

Optical or direct attach copper cables

- Choose between SFP+ SR (optical) or direct attach copper cable connectivity allowing maximum flexibility in connecting to HP FCoE Converged Network Switches.

### Models

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	Description	Part Number
<b>CN1100E</b>	HP CN1100E Dual Port Converged Network Adapter	BK835A
<b>CN1000E</b>	HP CN1000E Dual Port Converged Network Adapter	AW520B
<b>CN1000Q</b>	HP CN1000Q Dual Port Converged Network Adapter	BS668A
<b>CN1100R</b>	HP StoreFabric CN1100R Dual Port Converged Network Adapter	QW990A

**NOTE:** A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.

**NOTE:** Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately.

### Copper Cables and SFP+ Ethernet Optical Modules (SR)

#### SFP+ Active Copper Cables for HP B-series FCoE Converged Network Switches

Description	Part Number
HP 1m B-series Active Copper SFP+ Cable	AP818A
HP 3m B-series Active Copper SFP+ Cable	AP819A
HP 5m B-series Active Copper SFP+ Cable	AP820A

#### SFP+ Copper Cables for HP C-series FCoE Converged Network Switches

Description	Part Number
HP 3m C-series Passive Copper SFP+ Cable	AP784A
HP 5m C-series Passive Copper SFP+ Cable	AP785A
HP 7m C-series Active Copper SFP+ Cable	QK701A
HP 10m C-series Active Copper SFP+ Cable	QK702A

#### SFP+ Copper Cables for HP 5820X SFP+ Switch

Description	Part Number
HP X240 SFP+ SFP+ 0.65 m Direct Attach Cable	JD095C
HP X240 SFP+ SFP+ 1.2 m Direct Attach Cable	JD096C
HP X240 SFP+ SFP+ 3 m Direct Attach Cable	JD097C
HP X240 SFP+ SFP+ 5 m Direct Attach Cable	JG081C

#### 10Gb SFP+ Ethernet Optical Modules (SR)

Description	Part Number
HP 10Gb SR SFP+	455883-B21

#### Optical Cables

**NOTE:** Refer to product release notes for more information regarding support of specific cables.

#### Premier Flex OM4 type cables

HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A
HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable	QK737A

#### OM3 LC-LC type cables

### Models

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.5 m LC-LC Multi-Mode OM3 Fibre Channel Cable	AJ833A
1 m LC-LC Multi-Mode OM3 Fibre Channel Cable	AJ834A
2 m LC-LC Multi-Mode OM3 Fibre Channel Cable	AJ835A
5 m LC-LC Multi-Mode OM3 Fibre Channel Cable	AJ836A
15 m LC-LC Multi-Mode OM3 Fibre Channel Cable	AJ837A
30 m LC-LC Multi-Mode OM3 Fibre Channel Cable	AJ838A
50 m LC-LC Multi-Mode OM3 Fibre Channel Cable	AJ839A

## Warranty

3-0-0 Three-year parts exchange warranty. Additional warranty protection can be purchased.

HP Global Services provides a three-year, limited warranty, fully supported by a worldwide network of resellers and service providers toll-free 7 x 24 hardware technical phone support for the duration of the warranty. In addition, available service offerings include a full range of HP Care Pack packaged hardware and software services.

**NOTE:** Certain restrictions and exclusions apply. Consult the [HP Customer Support Center for details](#).

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**HP Care Pack Services:** Packaged server and storage services for increased uptime, productivity and ROI

When you buy HP server and storage products and solutions, it's also a good time to think about what levels of support you may need. Our portfolio of service options reduce deployment and management worries while helping you get the most out of your server and storage investments. We take a holistic approach to your environment, bridging servers, blades, storage, software and network infrastructures with our packaged HP Care Pack Services for servers and storage.

Protect your business beyond warranty

When it comes to robustness and reliability, standard computing equipment warranties have matured along with technology. Good news that can also create problems stemming from depending on standard warranties designed to only protect against product defects and some downtime causes. Using a standard approach to warranty uplifts, such as HP Care Pack Services, helps reduce downtime risks and provides operational consistency for mission-critical and standard business computing.

**HP Care Pack Services:** Upgrading or extending standard server and storage warranties cost effectively

HP Care Pack Services offer a standard reactive hardware and software support services suite sold separately, or combined with our Support Plus and Support Plus 24 services. The portfolio also provides a combination of integrated proactive and reactive services, such as Proactive 24 Service and Critical Service. In addition with HP Proactive Select, you can acquire the specific proactive constancy and technical services. HP Proactive Select menu offers a broad set of service options that you can mix and match depending on your specific requirements. Proactive service options include offers for server, storage, network, SAN device, software, environment and education services.

HP server and storage lifecycle support services offers a full spectrum of customer care-from technology support to complex migrations to complete managed services. HP Factory Express provides customization, integration and deployment services for turnkey solutions. HP Education Services offer flexible, comprehensive training on to help your IT staff get the most out of your server and storage investments. HP Financial solutions extend innovative financing and cost-effective asset management programs-from purchase to equipment retirement.

Learn more: [www.hp.com/services/servers](http://www.hp.com/services/servers) and [www.hp.com/services/storage](http://www.hp.com/services/storage)

**NOTE:** Care Pack Services availability may vary by product and country.

HP Care Pack Services are sold by HP and HP Authorized Service Partners:

- Services for customers purchasing from HP or an enterprise reseller are quoted using HP order configuration tools.
- Customers purchasing from a commercial reseller can find HP Care Pack Services at <http://www.hp.com/go/lookuptool>

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## Recommended HP Care Pack Services for optimal satisfaction with your HP product.

### HP Foundation Care 24x7 Service

HP Foundation Care 24x7 connects you to HP 24 hours a day, seven days a week for assistance on resolving issues - hardware onsite response within four hours and software call back within two hours after opening your case. Three years' coverage recommended with HP Care Pack Service.

### Service and Support, HP Care Pack and Warranty Information

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**HP Installation Service** Installation is included with the HP Server install if purchased together. If HBA or CNA is ordered as an add-on to an existing HP Server or for installation into a non-HP Server, HP Installation Service is recommended.

- Allows your IT resources to stay focused on their core tasks and priorities
- Reduces implementation time, impact and risk to your storage environment

<http://h71028.www7.hp.com/ERC/downloads/5981-9356EN.pdf>

**eSupport** HP eSupport is a portfolio of technology-based services that assist you with managing your business environment - from the desktop to the data center.

#### Support Portal

The HP support portal provides one-stop access to the information, tools and services you need to manage the daily operations of your IT environment.

Features include:

- Access to self-solve tools (including search technical knowledge base)
- Efficient logging and tracking of support cases
- Collaboration with other business and IT professionals
- Download of patches and drivers
- Access to diagnostic tools
- Proactive notification of relevant information

Access to certain features of the support portal requires an HP service agreement. To access the support portal, visit: <http://www.hp.com/support>

HP Insight Remote Support software delivers secure remote monitoring and support for your HP Servers and Storage, 24 X 7, so you can spend less time solving problems and more time focused on your business. You can have your systems remotely monitored for hardware failure using secure technology that's been proven at thousands of companies around the world. In many cases, you can avoid problems before they occur.

### Customer Technical Training

#### HP Education Services

In today's cost-conscious business environment, IT professionals, developers, consultants and users face an interesting challenge: how to keep up with the latest technologies and expand important skills while delivering profitable results on current projects. To help address this challenge, HP offers innovative training solutions that help keep you up-to-date on virtualization, server, storage, Insight Control, Citrix, Microsoft® and open source/Linux-related topics-while spending less time away from business-critical activities.

### HP Services Awards

HP Technology Services continues to be recognized for service and support excellence by customers, partners, industry organizations and publications around the world. Recent honors and award reflect our services team's dedications, technical expertise, professionalism and uncompromising commitment to customer satisfaction.

### Additional Services Information

To learn more on HP ProLiant servers, HP BladeSystem servers and HP storage products, please contact your HP sales representative or HP Authorized Channel Partner. Or visit

Service and Support, HP Care Pack and Warranty Information

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[www.hp.com/services/proliant](http://www.hp.com/services/proliant) or [www.hp.com/services/bladesystem](http://www.hp.com/services/bladesystem) or  
<http://www.hp.com/services/storage>

	CN1100E	CN1000E	CN1000Q	CN1100R
<b>Number of channels</b>	Dual	Dual	Dual	Dual
<b>Port Speed</b>	10GbE	10GbE	10GbE	10GbE
<b>Slot type supported</b>	x8 PCIe 2.0	x8 PCIe 2.0	x8 PCIe 2.0	x8 PCIe 2.0
<b>OS Supported</b>	<b>NOTE:</b> Always refer to the <a href="http://www.hp.com/storage/spock">HP Single Point of Connectivity Knowledge for HP Storage Products at: www.hp.com/storage/spock</a> for specific product support information.			
Windows Server	x86, x64	x86, x64	x86, x64	x86, x64
Windows Server Hyper-V	x86, x64	x86, x64	x86, x64	x86, x64
VMware	x86, x64	x86, x64	x64	x86, x64
RHEL	x86, x64	x86, x64	X86, x64	x86, x64
SLES	x86, x64	x86, x64	x86, x64	x86, x64
<b>Servers Supported</b>	Select HP ProLiant servers <b>NOTE:</b> Refer to server QuickSpecs for details regarding supported options.			
<b>Array Platforms Supported</b>	Refer to <a href="http://www.hp.com/storage/spock">www.hp.com/storage/spock</a> for specific product support information.			
<b>FCoE Converged Network Switches Supported</b> <i>*No direct support for FC switches</i>	HP 5820X-14XG-SFP+ Switch w/FCoE Module HP 2408 Converged Network Switches HP Nexus 5000 Converged Network Switches HP 10/24 FCoE Blade for DC SAN Directors HP 5900CP-48XG-4QSFP+ Switch	HP 5820X-14XG-SFP+ Switch w/FCoE Module HP 2408 Converged Network Switches HP Nexus 5000 Converged Network Switches HP 10/24 FCoE Blade for DC SAN Directors HP 5900CP-48XG-4QSFP+ Switch	HP 5820X-14XG-SFP+ Switch w/FCoE Module HP 2408 Converged Network Switches HP Nexus 5000 Converged Network Switches HP 10/24 FCoE Blade for DC SAN Directors HP 5900CP-48XG-4QSFP+ Switch	HP 2408 Converged Network Switches HP Nexus 5000 Converged Network Switches HP 10/24 FCoE Blade for DC SAN Directors HP 5900CP-48XG-4QSFP+ Switch
<b>Protocols Supported</b>	FCoE, Ethernet, iSCSI	FCoE, Ethernet, iSCSI	FCoE, Ethernet, iSCSI	FCoE, Ethernet, iSCSI
<b>What's Included in the Box?</b>	CNA, low-profile bracket	CNA, low-profile bracket	CNA, low-profile bracket	CNA, low-profile bracket
<b>Compliance</b>	IEEE802.3x, IEEE802.3ad, IEEE802.1p, IEEE802.1q, IEEE802.3az, IEEE802.3ae, IEEE802.3ap, IEEE802.1qau, P802.1Qaz(ETS), P802.1Qbb(PFC), P802.1Qaz(DCBX)	IEEE802.3x, IEEE802.3ad, IEEE802.1p, IEEE802.1q, IEEE802.3az, IEEE802.3ae, IEEE802.3ap, IEEE802.1qau, P802.1Qaz(ETS), P802.1Qbb(PFC), P802.1Qaz(DCBX)	IEEE: 802.3ae (10Gb Ethernet), 802.1q (VLAN), 802.3ad (Link Aggregation), 802.1p (Priority Encoding), 802.3x (Flow Control), IPv4 (RFQ 791), IPv6 (RFC 2460), SCSI-3 Fibre Channel Protocol (SCSI-FCP), Fibre Channel Tape (FC-TAPE) Profile, SCSI Fibre Channel Protocol-2 (FCP-2), Second Generation	IEEE: 802.3x, 802.3ad/802.1ax, 802.3ae, 802.1q, 802.1as/1588 (Precision Time Protocol), 802.1Qaz, 802.1Qbb, 802.1Qbg, 802.1Qbh

### Technical Specifications

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			FC Generic Services (FC-GS-2), Third Generation FC Generic Services (FC-GS-3), FCoE & FIP (FC-BB-5)	
<b>Environmental - Operating Temperature</b>	32°F to 131°F (0° to 55°C), 150 LFM	32° to 113° F (0° to 45° C)	32° to 131°F (0° to 55°C)	32°F to 131°F (0°C to 55°C)
<b>Environmental - Storage Temperature</b>	-40° F to 158° F (-40° to 70° C), Storage	-40° F to 158° F (-40° to 70° C)	-4° F to 158° F (-20° to 70° C)	-40°F to 149°F (-40°C to 65°C)
<b>Environmental - Relative Humidity - Operating</b>	5% to 95% (storage), non condensing, 22° C wet bulb 10% to 90% (operating), non condensing, 22° C wet bulb	15% to 80% (relative, non-condensing)	10% to 90% (relative, non-condensing)	5% to 95% noncondensing PCIe Low Profile
<b>Product Dimensions (W x D x H)</b>	10.4 x 7.7 x 2.4 (265 x 195 x 60 mm)	10.3 x 7.5 x 2.3 in. (262 x 190 x 58 mm)	12.25 x 8.75 x 2.5 in. (311 x 222 x 63 mm)	10.0 x 8.0 x 3.0 in. (254 x 203.3 x 76.2 mm)
<b>Media</b>	10Gb SFP+ Ethernet Optical Modules (SR) or SFP+ direct attach active and passive copper cable	10Gb SFP+ Ethernet Optical Modules (SR) or SFP+ direct attach active and passive copper cable	10Gb SFP+ Ethernet Optical Modules (SR) or SFP+ direct attach active and passive copper cable	10Gb SFP+ Ethernet Optical Modules (SR) or SFP+ direct attach active and passive copper cable
<b>PCIe Connector</b>	PCIe x8 Gen2	PCIe x8 Gen2	PCIe x8 Gen2	PCIe x8 Gen2
<b>Brackets</b>	Shipped with both ½ height and full-height brackets	Shipped with both ½ height and full-height brackets	Shipped with both ½ height and full-height brackets	Shipped with both ½ height and full-height brackets

### Summary of Changes

RETIRED

Date	Version History	Action	Description of Change:
17-Oct-2014	From Version 17 to 18	Retired	This QS is <b>RETIRED</b> , c04394253 is its replacement.
09-May-2014	From Version 16 to 17	Changed	Recommended HP Care Pack Services was revised.
17-Mar-2014	From Version 15 to 16	Added	Added new switches under FCoE Converged Network Switches Supported in the Technical Specifications section.
11-Sep-2013	From Version 14 to 15	Changed/Added	Change What New to: CN1100R HP StoreFabric Dual Port Converged Network Adapters  Added CN1100R to the Models and Technical Specifications sections.
10-Jun-2013	From Version 12 to 14	Added	OM4 cables were added.
19-Oct-2012	From Version 11 to 12	Changed	Change made to URL in Service and Support, HP Care Pack, and Warranty Information section.
13-Aug-2012	From Version 10 to 11	Changed	Changes made throughout the QuickSpec.
21-May-2012	From Version 9 to 10	Changed	Updated the following: Models - Copper Cables and SFP+ Ethernet Optical Modules (SR) - added HP X240 SFP+ SFP+ 5m Direct Attach Cable to the A5820 Switch; Technical Specs - Servers Supported - added ProLiant Gen8; FCoE Converged Network Switches Supported - fixed typo for A5820X-14XG
09-Dec-2011	From Version 8 to 9	Changed	Reverted back to previous version.
02-Dec-2011	From Version 6 to 8	Changed	FCoE Converged Network Switches Supported was revised in Technical Specifications.
30-Aug-2011	From Version 5 to 6	Changed	Changes were made throughout the QuickSpec.
08-Jun-2011	From Version 4 to 5	Added	Mentions of StorageWorks were removed.
09-May-2011	From Version 3 to 4	Added	HP 7m and 10m C-series Active Copper SFP+ Cables were added to SFP+ Copper Cables for HP C-series FCoE Converged Network Switches and Protocols Supported was added to Technical Specifications.
18-Mar-2011	From Version 2 to 3	Added	Notes were added to Models.
10-Jan-2011	From Version 1 to 2	Changed	Changes were made throughout the QuickSpec.

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