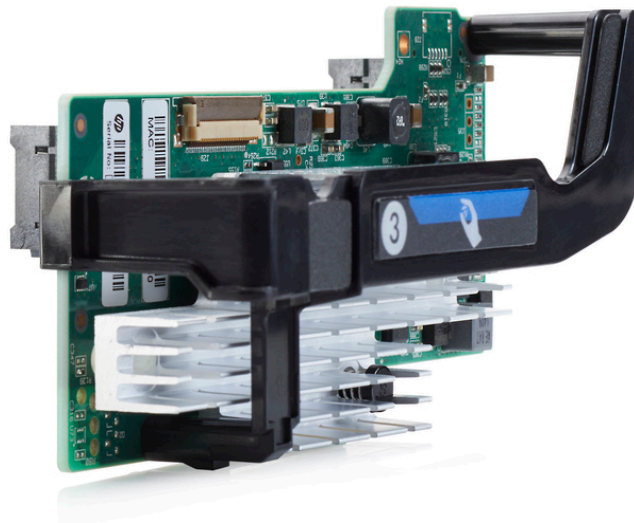# QuickSpecs

Overview

HPE Ethernet 10Gb 2-port 570FLB Adapter

The HPE Ethernet 10Gb 2-port 570FLB Onload server adapter is based on Solarflare's next generation 10GbE controller, Solarflare™ SFC9120, and delivers unmatched message rates with low latency and jitter over standard Ethernet along with the lowest CPU utilization and power consumption, enabling the industry's best performance and scalability for financial services and other enterprise data centers.

The HPE 570FLB supports enterprise class features such as VLAN tagging, adaptive interrupt coalescing, MSI-X, NIC teaming (bonding), Wake-on-LAN, Receive Side Scaling (RSS), jumbo frames, EEE 1588, PXE boot.

HPE Ethernet 10Gb 2-port 570FLB Adapter

Models

HPE Ethernet 10Gb 2-port 570FLB Adapter	718939-B21
HPE Ethernet 10Gb 2-port 570FLB FIO Adapter	718940-B21

NOTE: The HPE 570FLB on each server blade connects to a 10Gb interconnect in bays 1-2 (HPE BladeSystem c7000 Enclosure) or bay 1 (HPE BladeSystem c3000 Enclosure).
NOTE: The 570FLB requires a minimum of 2 GB of server memory.
NOTE: The 570FLB supports linking at 1000Mbps or 10000Mbps when not connected to a Flex-10 device.
NOTE: The 570FLB will only support 1000Mbps when connected to a 1Gb Ethernet interconnect.

Kit contents	• HPE Ethernet 10Gb 2-port 570FLB Adapter
	• Quick install card
	• Product warranty statement

Hewlett Packard Enterprise

Standard Features

Product Features	- Dual-port 10GbE FlexibleLOM network adapter that provides the flexibility to choose the type of LOM to meet growing infrastructure needs - Industry-leading throughput and latency performance - Up to 40Gb/s bi-directional near line rate throughput - Hardware and software acceleration and offloads for stateless TCP/IP - Supports Wake-on-LAN (at 1 Gb)

Dual-port 10GbE FlexibleLOM network adapter that provides the flexibility to choose the type of LOM to meet growing infrastructure needs
Industry-leading throughput and latency performance
Up to 40Gb/s bi-directional near line rate throughput
Hardware and software acceleration and offloads for stateless TCP/IP
Supports Wake-on-LAN (at 1 Gb)
NOTE: Wake-on-LAN is supported only on Port1 from system power state S5.
Improved small packet performance
" Interrupt Coalescing
Support for Preboot eXecution Environment (PXE)
Integrated PHY and MAC
Uses an x8 PCI Express 2.0 compliant compatible Bus Interface

Dual-port 10 Gigabit Ethernet Throughput (theoretical bandwidth)

The HPE 570FLB adapter delivers 20,000 Mbps full duplex Ethernet transfer rate per port (40 Gbps aggregate full duplex), providing the network performance needed to improve response times and alleviate bottlenecks. 10Gb Ethernet bandwidth is ideal for high performance computing, database clusters.

Jumbo Frames

The HPE 570FLB adapter supports jumbo frames (also known as extended frames), permitting up to a 9K byte (KB) transmission unit (MTU) when running Ethernet I/O traffic. This is over 5X 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.

MSI and MSI-X

Message Signaled Interrupt (Extended) provides performance benefits for multi-core servers by load balancing interrupts between CPUs/cores

Interrupt Coalescence

Interrupt coalescing (interrupt moderation) groups multiple packets, thereby reducing the number of interrupts sent to the host. This process optimizes host efficiency, leaving the CPU available for other duties.

802.1p QoS Tagging

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.

802.1Q VLANs

IEEE 802.1Q virtual local area network (VLAN) protocol allows each physical port of the HPE 570FLB 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.

TCP/IP Stateless Offloading

TCP, IP, UDP checksum offload, Large Send Offload (LSO), TCP, Segmentation Offload (TSO). These features optimize host efficiency, leaving the CPU available for other duties.

Optimized for Virtualization

I/O Virtualization support for VMware NetQueue , Microsoft's VMQ and Intel's VMDq technologies help meet the performance demands of consolidated virtual workloads.

Compliant with Single-Root I/O Virtualization (SR-IOV), accommodating multiple Virtual Machines (VMs) to

Standard Features

share single PCIe resources. The device is capable of SR-IOV, and requires Firmware, Software and OS support.

IEEE 1588 & 802.1AS	Support hardware-enabled IEEE 1588, a standard that defines PTP (Precision Time Protocol), a high-precision time protocol for clock synchronization used in measurement and control systems.
RDMA	Not Supported
iSCSI	The HPE 570FLB does not support accelerated iSCSI or iSCSI boot.

Ease of Deployment and Management

PXE Boot Support	Supports the Preboot eXecution Environment (PXE) allows the server to boot over the network and download software residing in the network.
FlexibleLOM slot Compatibility	Compatible with HPE FlexibleLOM slot for c-Class Gen8 blade servers
Network Adapter Teaming	The HPE 570FLB adapter support for NIC teaming helps IT administrators increase network fault tolerance and improve workload balance. These capabilities optimize availability, improve performance and help reduce costs
Management Support	The HPE 570FLB adapter can be administered from HPE Systems Insight Manager (SIM). The adapters can be managed individually or in teams, providing SNMP based statistics for reporting purposes. The 570FLB adapter can also be managed by other applications with SNMP support.
HPE Sea of Sensors 3D	Support for HPE's 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 kick on fans and make other adjustments to reduce energy usage. What makes it better is the upgrade from all six fans kicking on at one time to a new system where only one kicks on - the one in proximity of the area that started heating up - thus reducing the amount of energy used for cooling.
Warranty	Hewlett Packard Enterprise branded hardware options qualified for BladeSystem c-Class and p-Class servers are covered by a global limited warranty and supported by HPE Services and a worldwide network of Hewlett Packard Enterprise Authorized Channel Partners. The Hewlett Packard Enterprise branded hardware option diagnostic support and repair is available for one year from date of purchase, or the length of the server they are attached to, whichever is greater. Support for software and initial setup is available for 90 days from date of purchase. Additional support may be covered under the warranty or available for an additional fee. Enhancements to warranty services are available through HPE Care Pack services or customized service agreements. 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**

Compatibility

HPE ProLiant Server Support

- HPE ProLiant BL460c Gen8

Supported Interconnect Modules

- HPE 6120XG Blade Switch
- HPE 6120G/XG Blade Switch
- HPE 1:10Gb Ethernet BL-c Switch
- Cisco Catalyst 3120G Blade Switch for HPE
- Cisco Catalyst 3120X Blade Switch for HPE
- Cisco Catalyst 3020 Blade Switch
- Cisco Fabric Extender B22HP for HPE
- HPE GbE2c Layer 2/3 Ethernet Blade Switch
- HPE 1GbE Pass Thru Module
- 10GbE Ethernet Pass-Thru Module
- HPE 6125G Ethernet Blade Switch
- HPE 6125G/XG Ethernet Blade Switch

NOTE: Except for the HPE 6120XG and the Cisco B22 Fabric Extender, all other supported interconnects are limited to 1Gb per port connection.

Service and Support

Service and Support

HPE Technology Services
HPE Technology Services offers you consultants and support experts to solve your most complex infrastructure problems. We help keep your business running, boost availability and avoid downtime.

Protect your business beyond warranty with HPE Care Pack Services
When you buy HPE Options, it's also a good time to think about what level of service you may need. HPE Care Pack services provide total care and support expertise with committed response choices designed to meet your IT and business need.

HPE Foundation Care services deliver scalable support-packages for Hewlett Packard Enterprise industry-standard servers and software. You can choose the type and level of service that is most suitable for your business needs. New to this portfolio is HPE Collaborative Support. If you are running business critical environments, Hewlett Packard Enterprise offers Proactive Care or Critical Advantage. These services help you deliver high levels of application availability through proactive service management and advanced technical response.

Here is the support service recommendation from the Foundation Care and Proactive Care portfolio. For customized support service solution, Hewlett Packard Enterprise can work with you to tailor a service solution for your unique support requirements using broader services portfolio of Foundation Care and Proactive Care.

Recommended Services

Recommended HPE Care Pack Services for optimal satisfaction with your HPE product
3-Year HPE 24x7 4 hour Response, Hardware Support Onsite Service
Provides you with rapid remote support and if required an Hewlett Packard Enterprise Authorized representative who will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged.
http://h20566.www2.hpe.com/portal/site/hpsc?ac.admitted=1467740454177.125225703.1938120508

OR
3-Year HPE 24x7 4 hour Response, HPE Collaborative Support
Offers customers a single point of contact for server problem diagnosis, hardware problem resolution, and basic software problem diagnosis, fault isolation, and resolution if available to HPE. If the problem is with HPE HW, the representative will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged. In case, the issue is with HPE or supported third-party software product and cannot be resolved by applying known fixes, Hewlett Packard Enterprise will contact the third-party vendor and create a problem incident on your behalf.

HPE ProLiant Server Hardware Installation
Provides for the basic hardware installation of Hewlett Packard Enterprise branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.
https://www.hpe.com/h20195/v2/GetDocument.aspx?docname=5981-9356EN

Related Services

Related HPE Care Pack Services to enhance your HPE product experience
3-Year HPE 24x7 4 hour Response, Proactive Care or Critical Advantage
Helps optimize your systems and delivers high levels of application availability through proactive service management and advanced technical response. A skilled Technical Manager will own your query or issue end to end until resolved, delivering a single point of contact for you.
http://h20566.www2.hpe.com/portal/site/hpsc?ac.admitted=1467740454177.125225703.1

OR
3-Year HPE 6-hour Onsite Call-to-Repair, HPE Collaborative Support

Service and Support

Offers customers a single point of contact for server problem diagnosis, hardware problem resolution to return the hardware in operating condition within 6 hours of the initial service request to the HPE Global Solution Center, and basic software problem diagnosis, fault isolation, and resolution if available to HPE. In case, the issue is with HPE or supported third-party software product and cannot be resolved by applying known fixes, Hewlett Packard Enterprise will contact the third-party vendor and create a problem incident on your behalf.

HPE Proactive Select Service
Provides a flexible way to purchase HPE best-in-class consultancy and technical services. You can buy Proactive Select Service Credits when you purchase your hardware and then use the credits over the next 12 months. **http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-3842ENN.pdf**

Insight Remote Support

Provides 24 X 7 remote monitoring, proactive notifications, and problem resolution. Learn more **http://h20564.www2.hpe.com/hpsc/doc/public/display?docId=c04844073**

Related Options

Additional c-Class BladeSystem Gen8 Adapters	**Flexible LOM Adapters**	
	HP FlexFabric 10Gb 2-port 534FLB Adapter	700741-B21
	HP FlexFabric 10Gb 2-port 554FLB Adapter	647586-B21
	HP Flex-10 10Gb 2-port 530FLB Adapter	656590-B21
	HP Ethernet 10Gb 2-port 560FLB Adapter	655639-B21
	Mezzanine Adapters	
	HP FlexFabric 10Gb 2-port 534FLB FIO Adapter	700742-B21
	HP Flex-10 10Gb 2-port 530M Adapter	631884-B21
	HP Flex-10 10Gb 2-port 552M Adapter	674764-B21
	HP Ethernet 1Gb 4-port 366M Adapter	615729-B21
	HP FlexFabric 10Gb 2-port 534FLB FIO Adapter	700742-B21
	HP Flex-10 10Gb 2-port 530M Adapter	631884-B21

HPE c-Class BladeSystem Interconnect Options	HP 6120XG Blade Switch	516733-B21
	HP Cisco B22HP Fabric Extender for BladeSystem c-Class	641146-B21
	HP GbE2c Ethernet Blade Switch for HP c-Class BladeSystem	410917-B21
	HP 1GB Ethernet Pass-Thru Module for c-Class BladeSystem	406740-B21
	HP 1GB Ethernet Pass-Thru Module for c-Class BladeSystem	406740-B21
	HP 6125G Ethernet Blade Switch	658247-B21
	HP 6125G/XG Ethernet Blade Switch	658250-B21

Technical Specifications

General Specifications	Network processor	Solarflare™ SFC9120Ethernet Controller	
	Data rate	Two ports, each at 20 Gbps full duplex; 40 Gbps aggregate full duplex theoretical bandwidth.	
	Bus type	PCI Express v3.0 (Gen 3) x8	
	Form factor	FlexibleLOM	
	IEEE Compliance	802.3, , 802.3x, 802.3ad, 802.3p/802.1q, 802.3ae	

Power and Environmental Specifications	Operating	Temperature	0°C to 55°C / 32°F to 131°F
		Humidity	10% to 90% non-condensing
	Power requirement	<8W	
	Emissions classification	FCC Class A	
	Agency Approvals	USA: FCC Part 15 Class A Canada: ICES=--3, Issue 4 Japan: VCCI V3 (2010.04) Class A International: EN55022:2006 + A1:2007 Class A International: 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	
	RoHS Compliance	6 of 6	
	Safety	UL Mark (USA and Canada) CE Mark EN 60590	

Operating System Support	Red Hat Enterprise Linux 5. 8, 5.9, 6.2, 6.3 and 7.2 SLES 10 SP4 and 11SP2

Environment-friendly Products and Approach	End-of-life Management and Recycling	Hewlett Packard Enterprise offers end-of-life Hewlett Packard Enterprise product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: **http://www.hpe.com/info/recycle**. To recycle your product, please go to: **http://www.hpe.com/info/recycle** or contact your nearest Hewlett Packard Enterprise sales office. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner. The EU WEEE directive (2002/95/EC) 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 at: **http://www.hpe.com/info/recycle**. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewllet Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

Summary of Changes

Date	Version History	Action	Description of Change
05-Dec-2016	From Version 2 to 3	Changed	Related Options and Technical Specifications sections were updated.
		Removed	Obsolete SKU was deleted: 647590-B21
20-May-2016	From Version 1 to 2	Changed	Sections were updated in QuickSpecs
		Removed	Obsolete SKUs were deleted: 498358-B21, 438031-B21, 451438-B21, 451439-B21, 410916-B21.

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