

### Overview

### HPE BladeSystem c-Class 40G QSFP+ Active Optical Cables



## Platform Information

### Models

HPE BladeSystem c-Class 40G QSFP+ to QSFP+ 7m Active Optical Cable	720205-B21
HPE BladeSystem c-Class 40G QSFP+ to QSFP+ 15m Active Optical Cable	720211-B21
HPE BladeSystem c-Class QSFP+ to 4x10G SFP+ 7m Active Optical Cable	721070-B21
HPE BladeSystem c-Class QSFP+ to 4x10G SFP+ 15m Active Optical Cable	721076-B21

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## Service and Support

### Service and Support

**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.

Most Hewlett Packard Enterprise 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.

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### Warranty and Support Services

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.

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### Protect your business beyond warranty with HPE Support Services

HPE Technology Services delivers confidence, reduces risk and helps customers realize agility and stability. Connect to Hewlett Packard Enterprise 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.

Protect your product, beyond warranty.

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### Parts and Materials

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.

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### For more information

Visit the Hewlett Packard Enterprise Service and Support [website](#).

## Technical Specifications

<b>HPE BladeSystem c-Class 40G QSFP+ to QSFP+ 7m Active Optical Cable (720205-B21)</b>	<b>Connectivity</b> <b>Physical characteristics</b> <b>Environment</b>	<b>Length</b>	22.97 ft. (7 m)
		<b>Weight</b>	0.33 lb. (0.15 kg), Fully loaded the cable with a QSFP+ transceiver at each end of the cable
		<b>Operating temperature</b>	32°F to 158°F (0°C to 70°C)
		<b>Operating relative humidity</b>	0% to 85%, noncondensing
		<b>Non-operating/Storage temperature</b>	-40°F to 185°F (-40°C to 85°C)
		<b>Non-operating/Storage relative humidity</b>	0% to 85%, noncondensing
	<b>Electrical characteristics</b> <b>Notes</b>	<b>Altitude</b>	Up to 10,000 ft. (3 km)
		<b>Notes</b>	1.5 watts maximum per transceiver end
		Electrical Properties Cable Characteristic Impedance: Non-conductive Crosstalk between pairs: 26dB max Time delay: 1.57 nsec/ft o BER: 10-15 max	
		Physical Properties Cable Diameter: 3 mm Minimum Cable Bend Radius: 25mm	

<b>HPE BladeSystem c-Class 40G QSFP+ to QSFP+ 15m Active Optical Cable (720211-B21)</b>	<b>Connectivity</b> <b>Physical characteristics</b> <b>Environment</b>	<b>Length</b>	49.21 ft. (15 m)
		<b>Weight</b>	0.57 lb., Fully loaded the cable with a QSFP+ transceiver at each end of the cable
		<b>Operating temperature</b>	32°F to 158°F (0°C to 70°C)
		<b>Operating relative humidity</b>	0% to 85%, noncondensing
		<b>Non-operating/Storage temperature</b>	-40°F to 185°F (-40°C to 85°C)
		<b>Non-operating/Storage relative humidity</b>	0% to 85%, noncondensing
	<b>Electrical characteristics</b> <b>Notes</b>	<b>Altitude</b>	Up to 10,000 ft. (3 km)
		<b>Notes</b>	1.5 watts maximum per transceiver end
		Electrical Properties Cable Characteristic Impedance: Non-conductive Crosstalk between pairs: 26dB max Time delay: 1.57 nsec/ft o BER: 10-15 max	
		Physical Properties Cable Diameter: 3 mm Minimum Cable Bend Radius: 25mm	

<b>HPE BladeSystem c-Class QSFP+ to 4x10G SFP+ 7m Active Optical Cable (721070-B21)</b>	<b>Connectivity</b> <b>Physical characteristics</b>	<b>Length</b>	22.97 ft. (7 m)
		<b>Weight</b>	0.56 lb. (0.25 kg), Fully loaded the cable with a QSFP+ transceiver at one end and 4 SFP+ transceivers at the other end of the cable
		<b>Environment</b>	
	<b>Environment</b>	<b>Operating temperature</b>	32°F to 158°F (0°C to 70°C)
		<b>Operating relative humidity</b>	5% to 85%, noncondensing
		<b>Non-operating/Storage temperature</b>	-40°F to 185°F (-40°C to 85°C)

## Technical Specifications

<b>Electrical characteristics</b>	<b>Non-operating/Storage relative humidity</b>	5% to 85%, noncondensing
	<b>Altitude</b>	Up to 10,000 ft. (3 km)
<b>Notes</b>	<b>Notes</b>	1.5 Watts maximum QSFP+ cable end 0.35 Watts maximum SFP+ Cable end (each)
	Electrical Properties Cable Characteristic Impedance: Non-conductive Crosstalk between pairs: 26dB max Time delay: 1.475 nsec/ft BER: 10E-15 max Physical Properties QSFP+ Cable Diameter: 3.4 mm SFP+ Cable Diameter: 3 mm QSFP+ Minimum Cable Bend Radius: 25 mm SFP+ Minimum Cable Bend Radius: 30mm	

<b>HPE BladeSystem c-Class QSFP+ to 4x10G SFP+ 15m Active Optical Cable (721076-B21)</b>	<b>Connectivity</b>	<b>Length</b>	49.21 ft. (15 m)
	<b>Physical characteristics</b>	<b>Weight</b>	0.74 lb. (0.34 kg), Fully loaded the cable with a QSFP+ transceiver at one end and 4 SFP+ transceivers at the other end of the cable
		<b>Environment</b>	<b>Operating temperature</b>
	<b>Electrical characteristics</b>	<b>Operating relative humidity</b>	5% to 85%, noncondensing
		<b>Non-operating/Storage temperature</b>	-40°F to 185°F (-40°C to 85°C)
		<b>Non-operating/Storage relative humidity</b>	5% to 85%, noncondensing
		<b>Altitude</b>	Up to 10,000 ft. (3 km)
	<b>Notes</b>	<b>Notes</b>	1.5 Watts maximum QSFP+ cable end 0.35 Watts maximum SFP+ Cable end (each)
		Electrical Properties Cable Characteristic Impedance: Non-conductive Crosstalk between pairs: 26dB max Time delay: 1.475 nsec/ft BER: 10E-15 max Physical Properties QSFP+ Cable Diameter: 3.4 mm SFP+ Cable Diameter: 3 mm QSFP+ Minimum Cable Bend Radius: 25 mm SFP+ Minimum Cable Bend Radius: 30mm	

**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 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
26-Nov-2018	Version 5	Changed	Technical Specifications were updated
05-Feb-2018	Version 4	Changed	Models section was updated.
26-Oct-2016	Version 3	Changed	Rebranding edition.
09-Feb-2015	Version 2	Added	SKUs added on models section: 721070-B21, 721073-B21, 721076-B21
		Changed	QuickSpecs name changed from "HPE BladeSystem c-Class 40G QSFP+ to QSFP+ Active Optical Cable" to "HPE BladeSystem c-Class 40G QSFP+ Active Optical Cables" Overview, Technical Specification sections were updated
10-Jun-2014	Version 1	New	Initial version



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