

Overview

HPE Synergy 50Gb Interconnect Link Module

The HPE Synergy 50Gb Interconnect Link Module, satellite module, is designed for Composable Infrastructure. Based on disaggregated, rack-scale design, it uses a master/satellite architecture to consolidate data center network connections, reduce hardware and scale network bandwidth across multiple HPE Synergy Frames. This module extends HPE composable fabric up to four additional satellite frames with 25/50Gb connectivity to Synergy Compute Modules and replaces a fixed ratio of interconnects in each frame by extending the fluid pool of network resources.

The master module contains intelligent networking capabilities that extend connectivity to frames equipped with satellite modules. This reduces the need for top of rack switches and substantially decreases cost. The reduction in components simplifies fabric management at scale while consuming fewer ports at the data center aggregation layer.



Figure 1 HPE Synergy 50Gb Interconnect Link Module

1. UID LED
2. Health LED
3. Insertion & Extraction Lever
4. CXP28 ports --- L1 & L2 used for Interconnect Link Ports

Overview

Models

HPE Synergy 50Gb Interconnect Link Module

867793-B21

Compatibility

HPE Synergy 50Gb Interconnect Link Module interoperates with the following HPE Synergy hardware housed in the Synergy Frames:

HPE Synergy Compute Modules

HPE Synergy 480 Gen10 Configure-to-order Compute Module	871940-B21
HPE Synergy 480 Gen10 Configure-to-order without Drive Bays Compute Module	871941-B21
HPE Synergy 480 Gen10 Configure-to-order Premium Compute Module	871942-B21
HPE Synergy 660 Gen10 Configure-to-order Compute Module	871929-B21
HPE Synergy 660 Gen10 Configure-to-order without Drive Bays Compute Module	871930-B21
HPE Synergy 660 Gen10 Configure-to-order Premium Backplane Compute Module	871931-B21

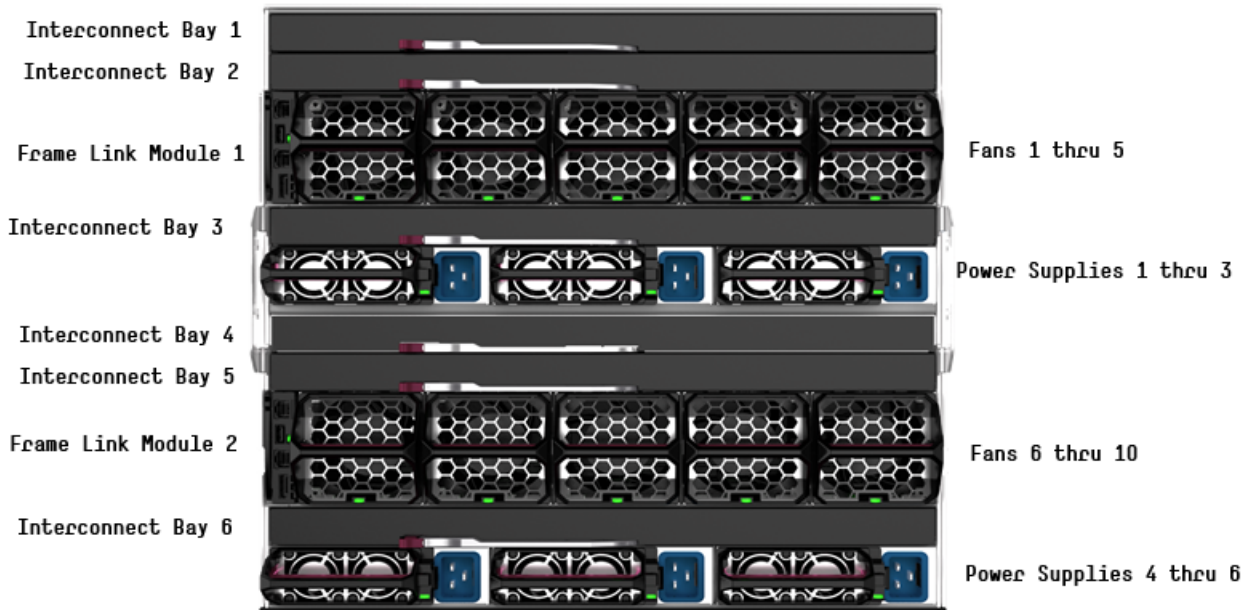
HPE Interconnect Module

HPE Virtual Connect SE 100Gb F32 Module for Synergy	867796-B21
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HPE Network Adapters

HPE Synergy 4820C 10/20/25Gb Converged Network Adapter	876449-B21
HPE Synergy 6820C 25/50Gb Converged Network Adapter	P02054-B21

Supported Configurations



HPE Synergy 12000 Frame - Rear View

Platform Information

Interconnect Module Configurations					Compute Module Network Adapters Used
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Frame 1

[ICB 1]	Empty/Interconnect	->	Empty/Interconnect	[ICB 4]	Empty/Adapter
[ICB 2]	Empty/Interconnect	->	Empty/Interconnect	[ICB 5]	Empty/Adapter
[ICB 3]	HPE VC SE 100Gb F32	->	HPE 50Gb ILM	[ICB 6]	HPE 25Gb/50Gb CNA

Frame 2

[ICB 1]	Empty/Interconnect	->	Empty/Interconnect	[ICB 4]	Empty/Adapter
[ICB 2]	Empty/Interconnect	->	Empty/Interconnect	[ICB 5]	Empty/Adapter
[ICB 3]	HPE 50Gb ILM	->	HPE VC SE 100Gb F32	[ICB 6]	HPE 25Gb/50Gb CNA

Frame 1

[ICB 1]	Empty/Interconnect	->	Empty/Interconnect	[ICB 4]	Empty/Adapter
[ICB 2]	HPE VC SE 100Gb F32	->	HPE 50Gb ILM	[ICB 5]	HPE 25Gb/50Gb CNA
[ICB 3]	Empty/Interconnect	->	Empty/Interconnect	[ICB 6]	Empty/Adapter

Frame 2

[ICB 1]	Empty/Interconnect	->	Empty/Interconnect	[ICB 4]	Empty/Adapter
[ICB 2]	HPE 50Gb ILM	->	HPE VC SE 100Gb F32	[ICB 5]	HPE 25Gb/50Gb CNA
[ICB 3]	Empty/Interconnect	->	Empty/Interconnect	[ICB 6]	Empty/Adapter

Frame 1

[ICB 1]	HPE VC SE 100Gb F32	->	HPE 50Gb ILM	[ICB 4]	HPE 25Gb/50Gb CNA
[ICB 2]	Empty/Interconnect	->	Empty/Interconnect	[ICB 5]	Empty/Adapter
[ICB 3]	Empty/Interconnect	->	Empty/Interconnect	[ICB 6]	Empty/Adapter

Frame 2

[ICB 1]	HPE 50Gb ILM	->	HPE VC SE 100Gb F32	[ICB 4]	HPE 25Gb/50Gb CNA
[ICB 2]	Empty/Interconnect	->	Empty/Interconnect	[ICB 5]	Empty/Adapter
[ICB 3]	Empty/Interconnect	->	Empty/Interconnect	[ICB 6]	Empty/Adapter

Frame 1

[ICB 1]	HPE VC SE 100Gb F32	->	HPE 50Gb ILM	[ICB 4]	HPE 25Gb/50Gb CNA
[ICB 2]	HPE VC SE 100Gb F32	->	HPE 50Gb ILM	[ICB 5]	HPE 25Gb/50Gb CNA
[ICB 3]	Empty/Interconnect	->	Empty/Interconnect	[ICB 6]	Empty/Adapter

Platform Information

Interconnect Module Configurations

Frame 2

[ICB 1]	HPE 50Gb ILM	->	HPE VC SE 100Gb F32	[ICB 4]	HPE 25Gb/50Gb CNA
[ICB 2]	HPE 50Gb ILM	->	HPE VC SE 100Gb F32	[ICB 5]	HPE 25Gb/50Gb CNA
[ICB 3]	Empty/Interconnect	->	Empty/Interconnect	[ICB 6]	Empty/Adapter

Frame 1

[ICB 1]	HPE VC SE 100Gb F32	->	HPE 50Gb ILM	[ICB 4]	HPE 25Gb/50Gb CNA
[ICB 2]	Empty/Interconnect	->	Empty/Interconnect	[ICB 5]	Empty/Adapter
[ICB 3]	HPE VC SE 100Gb F32	->	HPE 50Gb ILM	[ICB 6]	HPE 25Gb/50Gb CNA

Frame 2

[ICB 1]	HPE 50Gb ILM	->	HPE VC SE 100Gb F32	[ICB 4]	HPE 25Gb/50Gb CNA
[ICB 2]	Empty/Interconnect	->	Empty/Interconnect	[ICB 5]	Empty/Adapter
[ICB 3]	HPE 50Gb ILM	->	HPE VC SE 100Gb F32	[ICB 6]	HPE 25Gb/50Gb CNA

Frame 1

[ICB 1]	Empty/Interconnect	->	Empty/Interconnect	[ICB 4]	Empty/Adapter
[ICB 2]	HPE VC SE 100Gb F32	->	HPE 50Gb ILM	[ICB 5]	HPE 25Gb/50Gb CNA
[ICB 3]	HPE VC SE 100Gb F32	->	HPE 50Gb ILM	[ICB 6]	HPE 25Gb/50Gb CNA

Frame 2

[ICB 1]	Empty/Interconnect	->	Empty/Interconnect	[ICB 4]	Empty/Adapter
[ICB 2]	HPE 50Gb ILM	->	HPE VC SE 100Gb F32	[ICB 5]	HPE 25Gb/50Gb CNA
[ICB 3]	HPE 50Gb ILM	->	HPE VC SE 100Gb F32	[ICB 6]	HPE 25Gb/50Gb CNA

Frame 1

[ICB 1]	HPE VC SE 100Gb F32	->	HPE 50Gb ILM	[ICB 4]	HPE 25Gb/50Gb CNA
[ICB 2]	HPE VC SE 100Gb F32	->	HPE 50Gb ILM	[ICB 5]	HPE 25Gb/50Gb CNA
[ICB 3]	HPE VC SE 100Gb F32	->	HPE 50Gb ILM	[ICB 6]	HPE 25Gb/50Gb CNA

Frame 2

[ICB 1]	HPE 50Gb ILM	->	HPE VC SE 100Gb F32	[ICB 4]	HPE 25Gb/50Gb CNA
[ICB 2]	HPE 50Gb ILM	->	HPE VC SE 100Gb F32	[ICB 5]	HPE 25Gb/50Gb CNA
[ICB 3]	HPE 50Gb ILM	->	HPE VC SE 100Gb F32	[ICB 6]	HPE 25Gb/50Gb CNA

Standard Features

Product Features

Performance

- 12 x 25Gb or 12x50Gb Ethernet downlinks (traversing the midplane) to compute module Converged Network Adapters
- The FlexHBA can be configured to transport either Fiber Channel over Ethernet/CEE or Accelerated iSCSI protocol.
- Each FlexNIC and FlexHBA is recognized by the compute module as a PCIe physical function device with adjustable speeds from 250Mb to 25Gb in 250Mb increments when connected to a 2-port Converged Network Adapter or any Flex-25/50 NIC and from 500Mb to 50Gb in 500Mb increments when connected to a Dual-Port 25/50Gb Converged Network Adapter

Management

- Integrated composer based HPE OneView included with every frame, providing out-of-the-box Virtual Connect configuration and management.
- Pre-configure compute modules I/O configurations prior to their installation for easy deployment
- Move, add, or change compute module network connections on the fly without impacting LAN and SAN administrator
- Provisioned storage resource is associated directly to a specific virtual machine - even if the virtual server is re-allocated within a frame
- Compute module-side NPIV removes storage management constraint of a single physical HBA on a compute module does not add to SAN switch domains or require traditional SAN management
- Licensing support for native Fibre Channel through Composer powered by OneView

Service and Support

HPE Pointnext operational and Warranty Information

Service and Support

HPE Technology Services offers you a rich portfolio of consulting and support services designed to add value to our core products and solutions. We have the know-how and experience to put technology to work for you. We work closely with you, as your strategic partner, leveraging our full services portfolio to make sure that everything works to help optimize your enterprise.

Choose from services aligned to our product offerings and lifecycle. From proactive onsite services to innovative support when your products are connected to Hewlett Packard Enterprise, you choose the precise level of attention and support your business demands.

HPE Technology Services for HPE Synergy

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. Our support technology lets you to tap into the knowledge of millions of devices and thousands of experts to stay informed and in control, anywhere, any time.

Protect your business beyond warranty with HPE Support Services

HPE support services offer complete care and support expertise with committed response choices that are designed to meet your IT and business needs.

HPE Foundation Care services offer scalable reactive support-packages for HPE Synergy and software. You choose the type and level of service that is most suitable for your IT and business needs.

HPE Proactive Care keeps your system stable and reliable helping to prevent problems and reduce outages through proactive service management and enhanced technical response.

Advise, transform, integrate, support, automate, and flex **HPE Technology Services** helps you get the most out of what you have today and transition to HPE Synergy, a composable infrastructure, at your pace and from wherever you are on the journey.

Start with the HPE Transformation Workshop to ensure that your business and IT organizations collaborate, define the topline strategy for composable, software-defined, cloud-ready infrastructure and kick-start your projects confidently. This workshop clarifies your business requirements and the issues that IT and operations teams must resolve in order to meet these requirements. A detailed executive briefing or high-level report summarizes the strategies, high-level plan and functional requirements.

HPE Modernization and Migration Services helps you choose the right platform for the right workload at the right cost and evolve your IT infrastructure, processes and organization taking advantage of “on-hybrid infrastructure” innovations such as composable, converged, software-defined, technologies. Hewlett Packard Enterprise experts advise, transform, integrate and implement for platform refresh, datacenter consolidation virtualization, migration and automation projects.

HPE Flexible Capacity is a pay per use model for on premise infrastructure. This offers needed HPE Synergy capacity in the datacenter, plus a buffer of additional capacity. As HPE Synergy will be a dynamic environment, this provides enough room to grow your environment, but only pay for actual metered use. Technology transitions and refresh can be built in, infrastructure and services are billed monthly, enabling you to align costs to business use.

HPE Datacenter Care Infrastructure Automation: HPE Synergy with OneView embedded helps enable infrastructure automation and is integrated with tools such as those from Chef, Puppet, and Docker, to enable rapid bare metal provisioning. With DC-IA, HPE service experts provide advice, support, best practices, for these tools that work with OneView to help create a fast, agile, and reliable automated IT environment. With this approach, customers can deploy faster. DC-IA delivers support to customers to enable infrastructure as

Service and Support

code and agile processes as part of the service. Customers schedule quarterly reviews and reports with HPE Center of Expertise, as well as having access to these experts when needed, for automation development and code coaching.

Choose the right support to maximize uptime, free up your resources, and achieve improved value—as you get the most out of the existing IT assets while accelerating time-to-revenue.

Optimized Support **HPE Proactive Care Advanced - 24x7 coverage, three year Support Service**

Builds and incorporates on Proactive Care and also gives customers personalized technical and operational advice from an assigned, local Account Support Manager for personalized technical collaboration, flexible access to specialist skills to help optimize business critical IT, and Critical Incident Management to help so the business is not affected if there is a system or device outage. This recommendation provides 24x7 coverage with four-hour response for hardware and Basic Software Support and Collaborative Call Management for selected non-HPE software that offers two-hour callback for supported software issues.

<https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA5-3259ENW.pdf>

Standard Support **HPE Proactive Care with 24x7 coverage, three year Support Service**

Hardware and software support services designed specifically for your technology with rapid access to Advanced Solution Center specialists for start to finish case management plus proactive reports and recommendations for firmware and software management and best practice advice. This recommendation provides 24x7 coverage with four-hour response for hardware and Basic Software Support and Collaborative Call Management for selected non-HPE software that offers two-hour callback for supported software issues.

<https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf>

Deploy and integrate

HPE Factory Express Initial Frame Service for Synergy

Factory Express allows a customers' configurations to be pre-configured in the HPE Integration center with an implementation project manager to manage the deployment end to end. The project manager will act as a single point of contact to coordinate the build, delivery and onsite installation and commissioning of the solution. In addition to the configuration and deployment activities, your HPE Synergy configuration goes through comprehensive testing and a detailed documentation package on the configuration and settings of the delivered solution will be provided.

HPE Factory Express Synergy Additional Frame Service for Synergy

Add additional frames to your HPE Synergy Factory Express service or expand your existing HPE Synergy Infrastructure.

HPE Synergy First Frame Installation and Startup - Provides for hardware installation (HPE Synergy compute modules, Storage Modules, Virtual Connect modules, Interconnect Link Modules, Frame Link Modules, and HPE Synergy D3940 Storage Modules) and software startup for the first frame of your HPE Synergy deployment. Additional frames can be added using the HPE Synergy Additional Frame Installation and Startup Service.

HPE Synergy Additional Frame Installation and Startup Service - Add additional frames to your HPE Synergy First Frame Startup service or expand your existing HPE Synergy Infrastructure.

HPE Education

Training your IT staff is critical to help drive the value of HPE Synergy with increased efficiencies and better business outcomes. Training is key to the transformation and management of HPE Synergy.

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.

Service and Support

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.

**For more
information**

Additional Support Services can be found at HPE Support Services Central
[**http://ssc.hpe.com/portal/site/ssc**](http://ssc.hpe.com/portal/site/ssc)

Related Options

CXP28 Cables	HPE Synergy 300Gb Interconnect Link 2.1m Direct Attach Copper Cable	876680-B21
	HPE Synergy 300Gb Interconnect Link 3m Active Optical Cable	876689-B21
	HPE Synergy 300Gb Interconnect Link 5m Active Optical Cable	876692-B21
	HPE Synergy 300Gb Interconnect Link 15m Active Optical Cable	876698-B21

HPE Synergy Services

HPE Synergy Proactive Care Services

HPE 3 Year Proactive Care 24x7 Synergy Interconnect Link Mod Service	H0WD9E
HPE 3 Year Proactive Care 24x7 with CDMR Synergy Interconnect Link Mod Service	HOWE1E
HPE 3 Year Proactive Care Advanced 24x7 Synergy Interconnect Link Mod Service	HOWE2E
HPE 3 Year Proactive Care Advanced 24x7 with CDMR Synergy Interconnect Link Mod Service	HOWE4E

Deployment/Installation & Start-up Services

HPE Factory Express Synergy Initial Frame Package 4 Service	HA454A1-300
HPE Factory Express Synergy Add-on Frame Package 4 Service	HA454A1-301
HPE Synergy First Frame Startup Service	U8JM3E
HPE Synergy Additional Frame Startup Service	U8JM4E

Technical Specifications

System Unit	Shipping Dimensions	Length	19.53 in (496 mm)	
		Width	15.67 in (398 mm)	
		Height	5.88 in (149.5 mm)	
	Shipping Weight		Approximately 3.0 Kg (6.2 Lbs)	
Product Specifications Hardware	Performance	Connectors and Cabling	Non-blocking architecture 12 x 50Gb downlinks through the midplane 2 x 300Gb interconnect link ports	
		Indicators	Health LED UID LED Link cable port LEDs Compute Module Link LEDs	
		Weight	2.81Kg (6.2 Lbs)	
	Latency	Low-latency design (<5ns round trip)		
	Environmental Ranges	Temperature Range	Specification	10° to 35°C (50° to 95°F)*
			Temperature Range	
		Operating	10° to 35°C (50° to 95°F)	
		Shipping	Shipping -40°C to 60°C (-40°F to 140°F)	
		Storage	-20°C to 60°C (-4F to 140°F)	
		Maximum wet bulb temperature	30C (80F)	
Relative Humidity (noncondensing)	Operating	10% to 90%		
	Shipping	10% to 90%		
Power Specification		12V @ 1.4A (17 W max)		
Safety and Compliance	Safety Certifications		UL/CUL Recognition to UL/CSA 60950-1 TUV to EN 60950-1 CB report and certificate to IEC 60950-1 with all country deviations CE Marking	

NOTE: All temperature ratings shown are for sea level. An altitude derating of 1°C per 304.8 m (1.8°F per 1,000 ft) to 3048 m (10,000 ft) is applicable. No direct sunlight allowed. Upper operating limit is 3,048m (10,000 ft) or 70 Kpa/10.1 psia. Upper non-operating limit is 9,144 m (30,000 ft) or 30.3 KPa/4.4 psia.

NOTE: Storage maximum humidity of 90% is based on a maximum temperature of 45°C (113°F). Altitude maximum for storage corresponds to a pressure minimum of 70 KPa.

Technical Specifications

Electromagnetic Emissions Certifications FCC Part 15 Class A	FCC Part 15 Class A
	EN 55022 Class A (CISPR22 Class A)
	VCCI Class A
	CE Marking
	FCC
	ICES (Canada)
	VCCI (Japan)
	RCM (Australia/NZ)
	KCC (Korea)
	BSMI (Taiwan)

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 Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

Summary of Changes

Date	Version History	Action	Description of Change
3-Sep-2019	Version 1	Created	New QuickSpecs



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