Overview

Xilinx Accelerators for HPE

Hewlett Packard Enterprise supports, on select HPE servers, computational accelerator modules based on Xilinx Alveo Field Programmable Gate Array (FPGA) technology.

An FPGA can be reprogrammed and updated with new algorithms for different workloads. This flexibility allows a single FPGA to accelerate many different workloads efficiently, and to support future applications without the need to change the hardware. For instance, a FPGA could handle one workload during the morning shift and a different workload during an evening shift. Programmability also allows FPGAs to stay abreast of evolving standards, such as networking protocols, and enables updates to maintain compliance when a standard is finalized—again, without having to re-spin the hardware.

HPE has now teamed up with Xilinx to offer FPGA solutions on **select HPE servers**. HPE servers also offer a unique **Silicon Root of Trust** to protect against firmware-based cybersecurity threats. The combination of HPE servers with Xilinx FPGAs provides flexible, industrial-strength compute solutions that can be tuned for specific workloads.

The collaboration between **HPE and Xilinx** provides industrial-strength FPGA solutions that accelerate business-critical workloads. The supporting software ecosystem is developing at a rapid enough pace to be able to continuously add value to customers in an ever-expanding range of uses cases. The performance, adaptability and power efficiency of FPGAs serve to increase productivity and drive innovation—with rapid ROI and minimized TCO.

For further information on Xilinx Vitus Unified Software Platform, please visit
https://www.xilinx.com/products/design-tools/vitis.html

Xilinx Accelerators Models

Xilinx Alveo U50 Accelerator for HPE	R4B02A
Xilinx Alveo U50 Accelerator for HPE	R4B02C
Xilinx Alveo U250 Accelerator for HPE	R4B03C

Notes: Please see the HPE server QuickSpecs for the following servers for configuration rules, including requirements for enablement kits.

Hewlett Packard Enterprise

Standard Features

HPE Xilinx Alveo U50 Accelerator	
SKU	R4B02A/R4B02C
Memory Size	8GB HBM2 with Error Correction Code
Interface	1x QSFP28 (100GbE)
System Interface	PCIe 3.0 x 16
Power	75W TDP
Form Factor	Single-slot; ½ Height, ½ Length
Thermal Specifications	Passive

Supported Servers and Operating Systems							
R4B02A/R4B02C Supported Servers	**CPU** *	**RHEL Enterprise**	**SLES Enterprise**	**Ubuntu Community**	**Windows Enterprise**	**VMware ESXi**	**Citrix XenServer**
HPE ProLiant DL380 Gen10	2nd Gen	7.6	15 SP1	--	--	--	--
HPE ProLiant DL385 Gen10 Plus	AMD Rome	7.6	15 SP1	--	--	--	--
HPE ProLiant DL385 Gen10 Plus v2	AMD Milan	8.2/8.3	15 SP2	20.04	--	--	--
HPE ProLiant DL345 Gen10 Plus	AMD Milan	8.2/8.3	15 SP2	20.04	--	--	--
HPE XL290n Gen10 Plus	Intel Ice Lake	8.2/8.3	15 SP2	20.04	--	--	--

HPE Xilinx Alveo U250 Accelerator	
Xilinx Alveo U250 Accelerator for HPE	R4B03C
Memory Size	64GB DDR4 with Error Correction Code
Interface	2x QSFP28 (100GbE)
System Interface	PCIe 3.0 x 16
Power	225W TDP
Form Factor	Dual-slot; Full Height, ¾ Length
Thermal Specifications	Passive

Supported Servers and Operating Systems							
R4B03C Supported Servers	**CPU** *	**RHEL Enterprise**	**SLES Enterprise**	**Ubuntu Community**	**Windows Enterprise**	**VMware ESXi**	**Citrix XenServer**
HPE ProLiant DL380 Gen10	2nd Gen	7.6	15 SP1	--	--	--	--
HPE ProLiant DL385 Gen10 Plus	AMD Rome	7.6	15 SP1	--	--	--	--
HPE ProLiant DL385 Gen10 Plus v2	AMD Milan	8.3	15 SP2	20.04	--	--	--

Standard Features

Supported Cables

The Xilinx FPGA has a QSFP+ cage on the front panel which supports one 40GbE or four 10GbE. The table below details the Xilinx-supported connectors which are required for use with the FPGA. Successful functioning of 40GbE and 10GbE requires appropriate physical medium attachment (PMA) settings. These settings may be set by your third-party Accelerator Functional Unit (AFU) provider. If not, or if you are developing your own AFU, run the provided PMA settings script as detailed in the 10Gbps Ethernet AFU Design Example User Guide or 40Gbps Ethernet AFU Design Example User Guide.

- Running 10GbE FPGA-to-FPGA Test between two connected FPGAs in the 10Gbps Ethernet Accelerator Functional Unit (AFU) Design Example User Guide

- Running 40GbE FPGA-to-FPGA Test between two connected FPGA in the 40Gbps Ethernet Accelerator Functional Unit (AFU) Design Example User Guide

Networking Cable

HPE 100Gb QSFP28 to QSFP28 5m DAC
Notes: Contact your Sales/Account Representative for sourcing a network cable.

XXXXXX-**X21** is SKU designation formed by a common six-digit part number and a **-X21** suffix that identifies a SKU that is available across multiple server family lines. Refer to the table below to find the SKU suffix that applies to the specific server product line this option can be ordered with.

-B21	-H21	-K21
COMPUTE Server Line	**SPECIALIZED COMPUTE Server Line**	**STORAGE Line**
HPE Cloudline CL2100/CL2200/CL2800/CL3100/CL4100/CL5200/CL5800 Servers HPE Composable Cloud for ProLiant DL HPE ProLiant BL460c/BL660c Servers HPE ProLiant DL20/DL160/DL180 Servers HPE ProLiant DL325/DL360/DL380/DL385/DL560/DL580 Servers HPE ProLiant DX360/DX380 Servers HPE ProLiant MicroServer HPE ProLiant for Microsoft Azure Stack HPE ProLiant ML30/ML110/ML350 Servers HPE Synergy 480/660 Systems HPE ProLiant DX170r/DX190r, DX2000 Servers HPE ProLiant DX560 Gen10 server HPE ProLiant DX4200 Gen10 server	HPE Apollo 35/40/70 Systems HPE Apollo 2000/6000 Servers HPE XL170r/XL190r/XL270d (Apollo 6500) Gen10 Server for BlueData Software HPE Converged System 300/500/700/750 HPE Edgeline Systems and Servers HPE Integrity BL860c i6/BL870c i6/BL890c i6 Server Blades HPE Integrity MC990 X Server HPE Integrity rx2800 i6 Server HPE Integrity Superdome HPE SGI 8600 System HPE Solutions for SAP HANA (TDI)	HPE Apollo 4200 Gen9/Gen10 Servers HPE Apollo 4200 Gen10 LFF Server for BlueData Software HPE Apollo 4510 Gen10 System HPE D2220sb/D2500sb Storage Blade HPE D3000/D6020/D8000 Disk Enclosures HPE Scalable Object Storage with Scality RING HPE SimpliVity 2600 HPE SimpliVity 325/380 Gen10 HPE Storage File Controllers HPE StoreEasy 1460/1560/1650/1660/1860 Disclaimer: This may not be a complete listing of applicable servers

Service and Support

HPE Services
No matter where you are in your digital transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.
https://www.hpe.com/services

Consulting Services
No matter where you are in your journey to hybrid cloud, experts can help you map out your next steps. From determining what workloads should live where, to handling governance and compliance, to managing costs, our experts can help you optimize your operations.
https://www.hpe.com/services/consulting

HPE Managed Services
HPE runs your IT operations, providing services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.
HPE Managed Services | HPE

Operational services
Optimize your entire IT environment and drive innovation. Manage day-to-day IT operational tasks while freeing up valuable time and resources. Meet service-level targets and business objectives with features designed to drive better business outcomes.
https://www.hpe.com/services/operational

HPE Complete Care Service
HPE Complete Care Service is a modular, edge-to-cloud IT environment service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals through a personalized experience. All delivered by an assigned team of HPE Services experts. HPE Complete Care Service provides:
- A complete coverage approach -- edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

https://www.hpe.com/services/completecare

HPE Tech Care Service
HPE Tech Care Service is the operational support service experience for HPE products. The service goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Tech Care Service delivers a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service is available in three response levels. Basic, which provides 9x5 business hour availability and a 2-hour response time. Essential which provides a 15-minute response time 24x7 for most enterprise level customers, and Critical which includes a 6-hour repair commitment where available and outage management response for severity 1 incidents.
https://www.hpe.com/services/techcare

Technical Specifications

HPE Lifecycle Services
HPE Lifecycle Services provide a variety of options to help maintain your HPE systems and solutions at all stages of the product lifecycle. A few popular examples include:
- Lifecycle Install and Startup Services: Various levels for physical installation and power on, remote access setup, installation and startup, and enhanced installation services with the operating system.
- HPE Firmware Update Analysis Service: Recommendations for firmware revision levels for selected HPE products, taking into account the relevant revision dependencies within your IT environment.
- HPE Firmware Update Implementation Service: Implementation of firmware updates for selected HPE server, storage, and solution products, taking into account the relevant revision dependencies within your IT environment.
- Implementation assistance services: Highly trained technical service specialists to assist you with a variety of activities, ranging from design, implementation, and platform deployment to consolidation, migration, project management, and onsite technical forums.
- HPE Service Credits: Access to prepaid services for flexibility to choose from a variety of specialized service activities, including assessments, performance maintenance reviews, firmware management, professional services, and operational best practices.

Notes: To review the list of Lifecycle Services available for your product go to:
https://www.hpe.com/services/lifecycle

For a list of the most frequently purchased services using service credits, see the **HPE Service Credits Menu**

Other Related Services from HPE Services:
HPE Education Services
Training and certification designed for IT and business professionals across all industries. Broad catalogue of course offerings to expand skills and proficiencies in topics ranging from cloud and cybersecurity to AI and DevOps. Create learning paths to expand proficiency in a specific subject. Schedule training in a way that works best for your business with flexible continuous learning options.
https://www.hpe.com/services/training

Defective Media Retention
An option available with HPE Complete Care Service and HPE Tech Care Service and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and services options.

Parts and Materials
HPE 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.

How to Purchase Services
Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:
- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at **https://ssc.hpe.com/portal/site/ssc/**

Technical Specifications

AI Powered and Digitally Enabled Support Experience
Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data driven customer experience

Sign into the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with seamless transition when needed to a live support agent.
https://support.hpe.com/hpesc/public/home/signin

Consume IT On Your Terms
HPE GreenLake edge-to-cloud platform brings the cloud experience directly to your apps and data wherever they are—the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake edge-to-cloud platform accelerates digital transformation in a distributed, edge-to-cloud world.
- Get faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

To learn more about HPE Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Contact information for a representative in your area can be found at "Contact HPE"
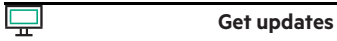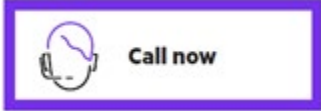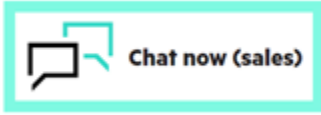**https://www.hpe.com/us/en/contact-hpe.html**

For more information
www.hpe.com/services

Summary of Changes

Date	Version History	Action	Description of Change
04-Dec-2023	Version 7	Changed	Service and Support Section was updated
15-Nov-2021	Version 6	Changed	Service and Support Section was updated
04-Oct-2021	Version 5	Changed	Added DL385 Gen 10 Plus V2 (Milan) to R4B03C
07-Jun-2021	Version 4	Changed	Standard Features Section was updated
06-Apr-2021	Version 3	Changed	Added DL345 Gen10 Plus
08-Jun-2020	Version 2	Changed	Removed embedded links to incorrect website
01-Jun-2020	Version 1	New	New QuickSpecs

Copyright

**Make the right purchase decision.
Contact our presales specialists.**

Chat now (sales)

Call now

Get updates

**Hewlett Packard
Enterprise**

a00056650enw - 16527 - Worldwide - V7 - 04-December-2023