

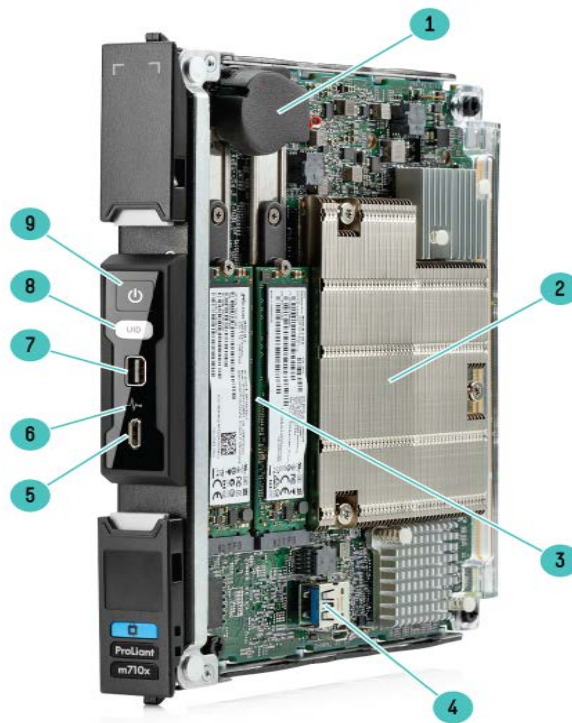
Overview

HPE ProLiant m710x / m710x-L Server Blade

HPE ProLiant m710x/m710x-L Server Cartridge is designed to enhance the performance of Rich Application Streaming, Remote Workstation/Desktop Delivery and Video Transcoding. It has one Intel® Xeon® E3-1585L v5 (in m710x)/E3-1565L v5 (in m710x-L) four-core processor with integrated Intel® Iris Pro™ P580 graphics, up to 64GB of ECC protected memory, dual 10Gb Ethernet along with up to Four (4) 2TB NVMe M.2 SSD storage modules, and up to One (1) 240GB M.2 SSD for local OS booting.

The HPE Moonshot System uses an innovative new architecture that results from one simple design tenet: to align purpose-built modules with the right workload to provide optimal results for your environment. Traditional servers rely on dedicated components, including management, networking, storage, power cords and cooling fans in a single chassis. In contrast, the Moonshot system shares these chassis components and is capable of supporting 45 server cartridges per 4.3U chassis. This gives you the ability to generate greater revenue from a smaller footprint while driving down your operational costs.

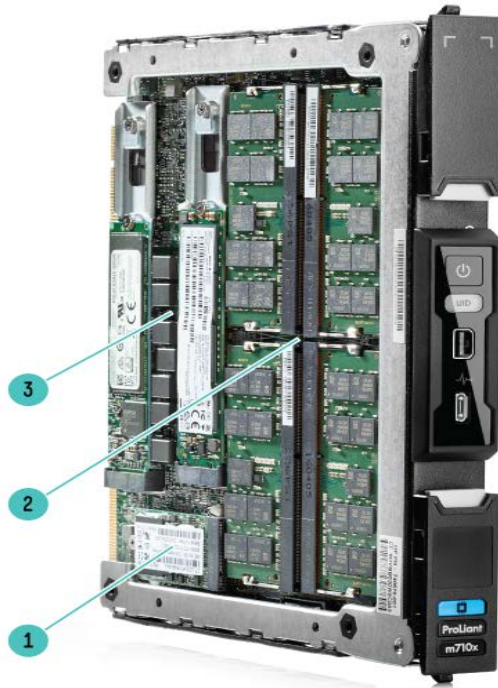
HPE Edgeline is the industry's first "Converged Edge System" - converging compute, storage, data capture, control and enterprise-class systems and device management built to thrive in hardened environments and handle shock, vibration and extreme temperatures. HPE Edgeline Systems allow deployment 1 to 4 HPE ProLiant m710x/m710x-L servers, along with associated storage and I/O options to locations both inside and outside the traditional datacenter (e.g. factories, branch office and retail outlet).



Front View

- | | | | |
|----|---|----|-----------------------------------|
| 1. | Battery | 6. | Server Cartridge Health LED |
| 2. | Intel® Xeon® E3 Processor and Heat Sink | 7. | Mini-DisplayPort Connector |
| 3. | Two (2) 2280 or 22110 M.2 SSDs (NVMe) | 8. | Server Cartridge UID LED/Button |
| 4. | Standard USB Connector | 9. | Server Cartridge Power LED/Button |
| 5. | Micro USB Connector | | |

Overview



Rear View

1. 2242 M.2 SSD (SATA)
2. Four (4) DDR4 SODIMMs
3. Two (2) 2280 or 22110 M.2 SSDs (NVMe)

Standard Features

Processor

Intel® Xeon® E3 Model	SoC Frequency	Turbo Frequency	Cores	L3 Cache	Power	DDR4 MHz
E3-1585L v5 (m710x)	3.0GHz	3.7GHz	4-core	8MB	45W	2133
E3-1565L v5 (m710x-L)	2.5GHz	3.5GHz	4-core	8MB	35W	2133

NOTE: For more information regarding Intel® Xeon® E3, please see the following

URL: <http://www.intel.com/content/www/us/en/processors/xeon/xeon-processor-e3-family.html>

Chipset

Intel® C236 Chipset

NOTE: For more information regarding chipset, please see the following URL:

<http://ark.intel.com/products/90594/Intel-GL82C236-PCH>

Graphics

Intel® Iris Pro™ P580 Graphics (3D) with 128MB of embedded DRAM (L4 cache) -and- iLO remote console (2D) Expansion I/O slots or selected 3D graphics cards are available in the HPE Edgeline System. Refer to the chassis documentation for details.

On System Management Chipset

HPE iLO (Firmware HPE iLO4 2.4 or later) 4GB NAND

NOTE: 1GB USB user space configurable via UEFI and accessible via iLO is available only on HPE Edgeline System. Read and learn more in the iLO QuickSpecs:

<http://www.hpe.com/info/ilo>

Memory

Type	HPE SmartMemory DDR4 ECC Unbuffered Small Outline (SODIMM)	
Supported DIMMs	DDR4-2133 8GB (2R x 8), 16GB (2R x 8)	
DIMM Slots Available	4	(4 DIMM slots per processor, 2 channels per processor, 2 DIMMs per channel)
Maximum Capacity (RDIMM)	64GB	(4 x 16GB SODIMM)

NOTES:

- Rules under “Memory” section must be followed for Configuring and Mixing of DIMMs.
- Registered DIMMs (RDIMMs), Load Reduced DIMMs (LRDIMMs) and Non-Volatile DIMMs (NVDIMMs) are not supported

Memory Protection

Advanced ECC

Advanced ECC uses single device data correction to detect and correct single and all multibit error that occurs within a single DRAM chip.

Patrol/Demand scrubbing

Patrol and Demand scrubbing detect and correct memory errors by periodically inspecting the entire memory space or when the data is accessed during normal operation.

Standard Features

Expansion slots

Expansion I/O slot options are available in the HPE Edgeline System. Refer to the chassis documentation for details.

Network Controller

Mellanox Connect-X3 Pro

Dual 10GbE NIC. Supports RDMA over Converged Ethernet (RoCE)

Storage Controller and Devices

SATA and PCIe controllers are Integrated in the Intel® Xeon® E3 SoC and Intel® C236 Chipset

SSD Slot #	Technology	Bus Width	Connector Width	Form Factor	Supported Sizes
SATA #1	SATA-3	x1	x1	M.2 2242	64GB 120GB 240GB
NVMe #1	PCIe 3.0	x4	x4	M.2 2280 or 22110	256GB 512GB 1024GB
NVMe #2	PCIe 3.0	x4	x4	M.2 2280 or 22110	256GB 512GB 1024GB
NVMe #3	PCIe 3.0	x4	x4	M.2 2280 or 22110	256GB 512GB 1024GB
NVMe #4	PCIe 3.0	X2	x4	M.2 2280 or 22110	256GB 512GB 1024GB

NOTE: The HPE m710x server cartridge may be purchased with zero M.2 storage (i.e. network/diskless boot).

NOTE: SATA and NVMe M.2 SSDs can both be used as an OS boot drive

NOTE: SATA M.2 2242 SSDs are designed for “Read Intensive” environments. For “Mixed Use” applications, M.2 2280 or 2110 SSDs are recommended (256GB, 512GB, 1024GB, 2TB).

Maximum Internal Storage

M.2 2242 SATA solid state device	240 GB	1 x 240 GB
M.2 2280 NVMe solid state devices	8 TB	4 x 2 TB

Power Supply

Power supply options depend on the chassis used. Refer to the chassis documentation for details.

System Fans

System fan options depend on the chassis used. Refer to the chassis documentation for details.

Standard Features

Interfaces

Server Cartridge Link LED/button

Server Cartridge UID LED/button

Drive LED

Server Cartridge Health LED

Micro-USB 2.0 connector

NOTE: To connect a standard USB device to the server cartridge, connect a Micro-USB to USB Type-A adapter (from the orderable m710x cable kit) to the cartridge Micro-USB connector, and then connect the USB device to the adapter.

Mini-DisplayPort connector

NOTE: To connect a monitor, use one of the following adapters from the orderable m710x cable kit:

- Mini Displayport (DP) to Displayport (DP) Female Adapter
- Mini Displayport (DP) to HDMI Adapter

Operating Systems and Virtualization Software

Support for ProLiant Servers

Microsoft Windows Client

Microsoft Windows Server

RedHat Enterprise Linux (RHEL)

SUSE Linux Enterprise Server (SLES)

Citrix XenServer

VMware ESXi

NOTE: Only 64-bit versions of these operating systems are supported

NOTE: For more information on the Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server, please visit our OS Support Site at:

<http://www.hpe.com/info/ossupport> and our driver download page which can be found from the HPE Support Center:

<http://www.hpe.com/support/hpesc>

Industry Standard Compliance

PXE Support

PCIe 3.0 Compliant

WOL Support

Microsoft® Logo certifications

USB 2.0 and 3.0 Support

ACPI 2.0 Compliant

Standard Features

HPE Server UEFI ROM

Unified Extensible Firmware Interface (UEFI) is an industry standard that provides better manageability and more secured configuration than the legacy ROM while interacting with your server at boot time. The HPE ProLiant m710x Server defaults to UEFI and does not support Legacy BIOS Boot Mode.

NOTE: The UEFI System Utilities function is analogous to the HPE ROM-Based Setup Utility (RBSU) of legacy BIOS. For more information, please visit <http://www.hpe.com/servers/uefi>

UEFI enables numerous new capabilities specific to HPE ProLiant servers such as:

- Secure Boot
- Operating system specific functionality
- Support for > 2.2 TB (using GPT) boot drives
- USB 3.0 Stack (only used in HPE Edgeline System)
- Embedded UEFI Shell
- Mass Configuration Deployment Tool using RESTful API for iLO 4
- PXE boot support for IPv6 networks
- Boot support for option cards that only support a UEFI option ROM (only used in HPE Edgeline System)
- Network Stack configurations

NOTE: For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI.

Form Factor

HPE ProLiant m710x Server Cartridge plugs into the HPE Moonshot 1500 and HPE Edgeline EL1000/EL4000 Systems.

Embedded Management

HPE Integrated Lights-Out (HPE iLO)

Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO.

Learn more at <http://www.hpe.com/info/ilo>

UEFI

Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI).

Learn more at <http://www.hpe.com/servers/uefi>

RESTful API

RESTful API for iLO 4 is Redfish 1.0 conformance for simplified server management such as configuration and maintenance tasks based on modern industry standards. Learn more at: <http://www.hpe.com/info/restfulapi>

NOTE: Full REST API is available when the server is installed in a HPE Edgeline System

Intelligent Provisioning

Hassle free server and OS provisioning for 1 or few servers with Intelligent Provisioning. Learn more at

<http://www.hpe.com/servers/intelligentprovisioning>

NOTE: Intelligent provisioning is only supported when the server is installed in a HPE Edgeline System

NOTE: HPE iLO provides only Remote Console and Virtual Media capabilities when the server is installed in a HPE Moonshot 1500 System.

NOTE: HPE iLO provides the full set of ProLiant features when the server is installed in a HPE Edgeline System. Advanced Pack licenses will be required for enhanced capabilities, including Remote Console and Virtual Media.

Standard Features

Server Utilities

Moonshot Component Pack

The HPE Moonshot Component Pack is a comprehensive firmware solution tested on the HPE Moonshot System and delivered as a compressed file. The compressed file includes all the component files needed to update a Moonshot System. Users deploy the firmware updates contained in the Moonshot Component Pack via the iLO Chassis Manager CLI or HPE Moonshot-45G/180G Switch Module CLI. This can be accomplished using HPE Smart Update Manager, which is included with the files, or manually.

Access the Moonshot supporting software/driver download page via: <https://www.hpe.com/us/en/servers/moonshot.html>

NOTE: The Moonshot Component Pack is only supported when the server is installed in a HPE Moonshot 1500 System.

Edgeline Component Pack

The HPE Edgeline Component Pack, is the delivery mechanism for firmware updates on the HPE Edgeline System. Before using your system for the first time, verify that you have the latest drivers, firmware, and system software installed.

For more information, see the Edgeline Component Pack Update Guide on the Hewlett Packard Enterprise website:

<http://www.hpe.com/info/edgeline-docs>

NOTE: The Edgeline Component Pack is only supported when the server is installed in a HPE Edgeline System.

Scripting Tool Kit and Windows PowerShell

Provision 1 to many servers using your own scripts to discover and deploy them with Scripting Tool Kit (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at <http://www.hpe.com/servers/proliant/stk>

or <http://www.hpe.com/servers/powershell>.

NOTE: This Feature will be available when the server is installed in a HPE Edgeline System.

RESTful Interface Tool

RESTful Interface tool is a scripting tool to provision using RESTful API for iLO4 to discover and deploy servers at scale.

Learn more at <http://www.hpe.com/info/resttool>

NOTE: This Feature will be available when the server is installed in a HPE Edgeline System.

HPE Insight Online

HPE Insight Online, available at no additional cost as part of your Hewlett Packard Enterprise warranty or contractual support agreement with Hewlett Packard Enterprise, is a personalized dashboard for simplified tracking of IT operations and support information from anywhere, anytime. Learn more at: <http://www.hpe.com/info/insightonline/explore>.

Security

- Serial interface control
- Administrator's password
- Power-on password
- TPM2.0
- UEFI
- iLO 4 (Integrated Lights-Out 4) has 12 customizable user accounts and SSL encryption ¹
- iLO 4 can be disabled via a Global Setting ²
- iLO Advanced supports directory services integration ³

NOTE: 1,2 and 3 are delivered by iLO Chassis Manager in HPE Moonshot 1500 System and HPE m710x's embedded iLO4 in the HPE Edgeline System.

NOTE: 1, 2 and 3 require an HPE iLO Advanced License when the HPE m710x is installed in a HPE Edgeline System.

Standard Features

HPE Trusted Platform Module

HPE Trusted Platform Module 2.0 is embedded on the Server Cartridge, and can be enabled and disabled using the BIOS.

NOTE: The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Server® 2008, 2012/2012 R2. BitLocker leverages the enhanced security capabilities of a Trusted Platform Module (TPM) version 2.0. The TPM works with BitLocker to help protect user data and to ensure that a server running Windows Server has not been tampered with while the system was offline. For more information about TPM, including a white paper, go to:

<https://www.hpe.com/h20195/v2/gethtml.aspx?docname=c04939549>

NOTE: ProLiant OS pre-installed units will come with the partition required for TPM deployment.

NOTE: The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss.

Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of Hewlett Packard Enterprise Authorized Channel Partners resellers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Enhancements to warranty services are available through HPE Pointnext operational services or customized service agreements. Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

NOTE: Server Warranty includes 3-Year Parts, 0-Year Labor, 0-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Optional CSR parts are designed for easy replacement but may involve added complexity. Customers may choose to have Hewlett Packard Enterprise replace Optional CSR parts at no charge. 2) No CSR parts are also designed for requiring a Hewlett Packard Enterprise authorized service provider replace the part. Additional information regarding worldwide limited warranty and technical support is available at: <http://h20564.www2.hpe.com/hpsc/wc/public/home>

Optional Features

HPE Insight Cluster Management Utility (CMU)

HPE Insight Cluster Management Utility (CMU) is a Hewlett Packard Enterprise-licensed and Hewlett Packard Enterprise-supported suite of tools that are used to manage large-scale systems. Insight CMU includes software for the centralized provisioning, management and monitoring of nodes. Insight CMU makes the administration of clusters more user friendly, efficient, and error free than if they were being managed by scripts, or on a node-by-node basis. For more information on Hewlett Packard Enterprise Insight Cluster Management Utility, please contact your sales representative or go to:

<https://www.hpe.com/us/en/servers/server-management.html>

Factory Express Portfolio for Servers and Storage

HPE Factory Express offers configuration, customization, integration and deployment services for Hewlett Packard Enterprise servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as asset tagging, and custom packaging. Hewlett Packard Enterprise products supported through Factory Express include a wide array of servers and storage: HPE Moonshot, HPE Integrity, HPE ProLiant, HPE ProLiant Server Blades, and HPE BladeSystem, HPE 9000 servers as well as the MSAXxxx, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches.

For more information on Factory Express services for your specific server model please contact your sales representative or go to: <http://www.hp.com/go/factory-express>

Service and Support

Service and Support

To see recommended HPE Support Services for your HPE product (4 and 5 year Service offerings are also available)

See HPE Moonshot 1500 System

See HPE Edgeline System

For more information

To learn more on HPE Moonshot or HPE Edgeline Systems, please contact your Hewlett Packard Enterprise sales representative.

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.

Configuration Information

NOTE: This section lists some of the steps required to configure a Factory Integrated Model. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for information on configurable product offerings and requirements

NOTES:

- If you want to configure the HPE Moonshot 1500 System with server cartridges, proceed to the HPE Moonshot 1500 System Quick Specs: <https://www.hpe.com/us/en/servers/moonshot.html>
- If you want to configure the HPE Edgeline EL1000/EL4000 System with server cartridges, proceed to the HPE Edgeline QuickSpecs: <http://www.hpe.com/info/edgeline-docs>
- If you want to configure a server cartridge only, proceed to Step 1

Step 1: Base Configuration (Choose upgrade kit)

HPE ProLiant Server Upgrade Kit

HPE Moonshot Server Multipack

814659-B21

NOTE: Up to 15 server cartridges of any kind fit in this multipack

NOTE: Mixed Cartridge configuration is supported

Step 2: Pick ProLiant Server Cartridge

HPE ProLiant m710x/m710x-L Server Cartridge

HPE ProLiant m710x E3-1585Lv5 3.1GHz 4-core 45W Configure-to-order Server Cartridge

833105-B21

HPE ProLiant m710x-L E3-1565Lv5 2.5GHz 4-core 35W Configure-to-order Server Cartridge

P12482-B21

NOTE: Each ProLiant m710x server cartridge is pre-configured with a single Intel® Xeon® E3-1585L v5 (x86-64) Four-core processor running at 3.0-3.7GHz. Each ProLiant m710x-L server cartridge is pre-configured with a single Intel® Xeon® E3-1565L v5 (x86-64) Four-core processor running at 2.5-3.5GHz.

Each of these processor packages also contains an integrated Intel® Iris Pro™ P580 Graphics processor with 128MB of embedded DRAM. This processor contains 6MB of shared L3 cache with Memory configurable up to 64GB.

NOTES:

- The processor on each server is fixed and cannot be changed after ordering. DIMMs and SSDs are configurable.
- Mixing of different server cartridges within the same chassis is supported

Step 3: Configure ProLiant Server Cartridge (Choose appropriate Option)

NOTE: Additional options are not configurable for server upgrade kits.

NOTE: Must order identical quantity on all configured ProLiant server cartridges.

NOTE: Part numbers provided below can be used to order upgrades as well

HPE Memory

Select 1 to 4 of the following:

HPE 8GB (1x8GB) ECC Dual Rank x8 DDR4-2400 CAS-15-15-15 Unbuffered SO-DIMM Field Upgradable Kit

863951-B21

HPE 16GB (1x16GB) ECC Dual Rank x8 DDR4-2400 CAS-15-15-15 Unbuffered SO-DIMM Field Upgradable Kit

863953-B21

HPE Solid State Drives

Select 0 to 1 of the following:

HPE 120GB SATA M.2 2242 Solid State Drive Field Upgradable Kit

866842-B21

HPE 240GB SATA M.2 2242 Solid State Drive Field Upgradable Kit

866844-B21

Configuration Information

Select 0 to 4 of the following:

HPE 256GB PCIe M.2 2280 Solid State Drive Field Upgradable Kit	862159-B21
HPE 256GB NVMe x4 Lanes Read Intensive M.2 2280 1yr Wty Extended Temperature SSD	880262-B21
HPE 512GB NVMe x4 Lanes Read Intensive M.2 2280 1yr Wty Extended Temperature SSD	880264-B21
HPE 1TB NVMe x4 Lanes Read Intensive M.2 2280 1yr Wty Extended Temperature SSD	880266-B21
HPE 2.48TB NVMe x4 Lanes Read Intensive M.2 2280 1yr Wty Extended Temperature SSD	P00375-B21
HPE Edgeline 960GB NVMe x4 Lanes Mixed Use M.2 22110 3yr Wty Extended Temperature SSD	P05892-B21
HPE Edgeline 1.92TB NVMe x4 Lanes Mixed Use M.2 22110 3yr Wty Extended Temperature SSD	P05896-B21
HPE Edgeline 3.84TB NVMe x4 Lanes Mixed Use M.2 22110 3yr Wty Extended Temperature SSD	P05900-B21

HPE Video Processing Unit (VPU)

HPE Edgeline Movidius Myriad X VPU Module	P08409-B21
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NOTE: Mixing of 2280/22110 M.2 SSD types in a server is allowed

NOTE: SATA and NVMe M.2 SSDs can both be used as an OS boot drive

NOTE: The m710x can support up to Qty of 4 of the XTemp M.2 SSD models up to 55c

NOTE: For additional M.2 SSD information please visit the Edgeline M.2 SSD QuickSpecs.

Step 4: To Select a different server cartridge see details:

HPE Moonshot 1500 System:

<https://www.hpe.com/us/en/servers/moonshot.html>

HPE Edgeline EL1000/EL4000 System:

<http://www.hpe.com/info/edgeline-docs>

Additional Options

Step 5: Choose Additional Options

NOTE: Some options may not be integrated at the factory. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of a Hewlett Packard Enterprise approved configurator. Contact your local sales representative for additional information.

Cable Kits

HPE m710x Front I/O Cable Kit

867893-B21

NOTE:

1. This optional kit provides the following cables for connecting the HPE ProLiant m710x server directly to a monitor, keyboard, mouse or other accessories.

- Mini Displayport (DP) to Displayport (DP) Female Adapter
- Mini Displayport (DP) to HDMI Adapter
- Micro-USB to USB Type-A Female Adapter

2. These cables can be used in production when the server is installed in a HPE Edgeline EL1000 system (front access). However, they will require removal of the top cover when the server is installed in a Moonshot 1500 (top access) and partial extraction of the chassis from the rack when installed in an Edgeline EL4000 system (side access).

HPE Embedded Management

HPE Integrated Lights Out (iLO) Advanced

HPE iLO Advanced Electronic License with 1yr Support on iLO Licensed Features	E6U59ABE
HPE iLO Advanced Electronic License with 3yr Support on iLO Licensed Features	E6U64ABE
HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features	512485-B21
HPE iLO Advanced Flexible Quantity License with 1yr Support on iLO Licensed Features	512486-B21
HPE iLO Advanced AKA Tracking License with 1yr Support on iLO Licensed Features	512487-B21
HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A
HPE iLO Advanced Flexible Quantity License with 3yr Support on iLO Licensed Features	BD506A
HPE iLO Advanced AKA Tracking License with 3yr Support on iLO Licensed Features	BD507A

NOTE: If the server cartridge will be installed in a Moonshot 1500 system, do NOT order any iLO Advanced pack licenses (it's not supported). If the server will be installed in an Edgeline system, 1 optional iLO Advanced license can be ordered for each configured server. E.g. In a HPE Edgeline EL4000 system with 4 server cartridges, you can order 0-4 iLO Advanced licenses depending on the number of servers you wish to enable with the advanced capabilities.

For more details on iLO Advanced, refer to: <http://www.hpe.com/info/ilo>

HPE Insight Software

HPE Insight Control

NOTE: Electronic and Flexible-Quantity licenses can be used to purchase multiple licenses with a single activation key.

NOTE: Customer will receive a license entitlement certificate. The license entitlement certificate must be redeemed online or via fax in order to obtain the license activation key(s). Includes one year of 24x7 HPE Software Technical Support and Update Service.

NOTE: Licenses ship without media. The HPE Insight Control Media Kit can be ordered separately, or can be downloaded at: <http://www.hpe.com/info/insightmanagement>

NOTE: For additional license options please see the QuickSpecs at:

<http://www.hpe.com/h20195/v2/gethtml.aspx?docname=c04123391>

Additional Options

High Performance Clusters

HPE Cluster Management Utility

HPE Insight Cluster Management Utility 1yr 24x7 Flexible LTU

QL803B

HPE Insight Cluster Management Utility 3yr 24x7 Flexible LTU

BD476A

NOTE: These part numbers can be used to purchase one certificate for multiple licenses and support with a single activation key. Each license is for one node (server). Customer will receive a printed end user license agreement and license entitlement certificate via physical shipment. The license entitlement certificate must be redeemed online in order to obtain a license key. Customer will also receive a support agreement.

HPE Insight Cluster Management Utility Media

BD477A

NOTE: For additional license kits please see the QuickSpecs at:

<https://www.hpe.com/us/en/servers/server-management.html>

Memory

DIMM Population Order for the HPE m710x/m710x-L Server Cartridge

Total Memory	Slot #			
	DIMM 1 (GB)	DIMM 2 (GB)	DIMM 3 (GB)	DIMM 4 (GB)
8 GB		8		
16 GB		8		8
24 GB		16		8
32 GB		16		16
40 GB	16	16		8
48 GB	16	16	8	8
64 GB	16	16	16	16

NOTE: Table shows recommended HPE m710x server memory configurations that have been optimized by HPE.

NOTE: DIMM slots are not color coded on this server. Refer to the picture below for the locations.

NOTE: Do not use Registered DIMMs (RDIMMs). Load Reduced DIMMs (LRDIMMs) and Non-Volatile DIMMs (NVDIMMs)

General Memory Population Rules and Guidelines:

- There are two (2) Memory channels per processor. This server only has 1 processor.
- There are two (2) DIMM slots for each memory channel; four (4) total slots per processor.
- A minimum of one DIMM is required per processor.
- DIMM 1 and DIMM 2 belong to CPU Channel A. DIMM 3 and DIMM 4 belong to Channel B. Recommended configurations are designed to optimize performance.
- When mixing DIMMs of different sizes, load the heaviest load (DIMM with most ranks) DIMM first.
- Load DIMMS in this sequence: DIMM 2 -> DIMM 4 -> DIMM 1 -> DIMM 3. See the diagram above.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- Use only HPE memory specified in this document.

Memory



DIMM Locations on the HPE m710x/m710x-L Server

Item **DIMM 3 / DIMM 4 = Channel B**
1. DIMM 3
2. DIMM 4

Item **DIMM 1 / DIMM 2 = Channel A**
3. DIMM 2
4. DIMM 1

Memory

Intel Supported Memory Bandwidth for HPE ProLiant m710x/m710x-L Intel® Xeon® E3-1585L/1565L v5 Series Processor Family

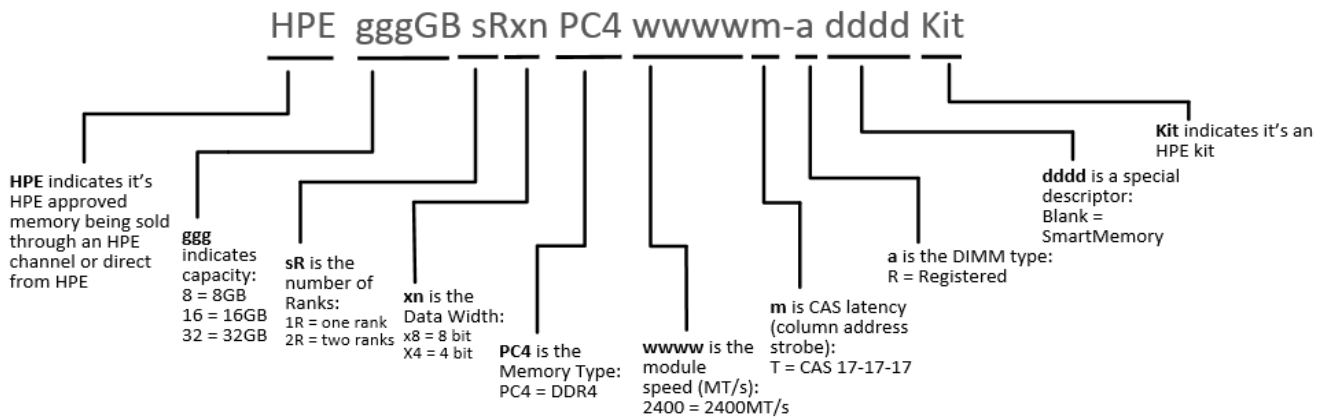
Memory Bandwidth and Capacity		
[DIMM Type]	ECC Unbuffered Small Outline DIMMs (SODIMMs)	
HPE P/N	HPE 16GB (1x16GB) ECC Dual Rank x8 DDR4-2400 CAS-15-15-15 Unbuffered SO-DIMM Field Upgradable Kit	863953-B21
DIMM Rank	Dual Rank	Dual Rank
DIMM Capacity	8GB	16GB
Voltage	Std Voltage 1.2V	Std Voltage 1.2V
DRAM Depth [bit]	1G	2G
DRAM Width [bit]	x8	X8
DRAM Density	8Gb	8Gb
CAS Latency	15-15-15	15-15-15
DIMM Native Speed (MT/s)	2400	2400
Slots that can be populated	4	4
Maximum Capacity (GB)	32	64
POPULATED DIMM SPEED (MT/s)		
1 DIMM Per Channel	2133	2133
2 DIMM Per Channel	2133	2133

Memory Speed by Processor Model	Processor Model	Supported Memory Speeds
	E3-1585L v5/ E3-1565L v5	2133 MT/s

DDR4 memory options part number decoder

NOTE: Capacity references are rounded to the common gigabyte (GB) values.

- 8GB = 8,192MB
- 16GB = 16,384MB



Storage**SSD Options on the HPE m710x/m710x-L Server Cartridge**

SSD Numbering	Supported Module	Connection Type
SATA # 1	M.2 2242	SATA-3 x1
NVMe # 1	M.2 2280 or 22110	PCIe 3.0 x4
NVMe # 2	M.2 2280 or 22110	PCIe 3.0 x4
NVMe # 3	M.2 2280 or 22110	PCIe 3.0 x4
NVMe # 4	M.2 2280 or 22110	PCIe 3.0 x2

Technical Specifications

Server Cartridge	HPE ProLiant m710x/m710x-L Server Cartridge	
	Dimensions (H x W x D)	6.57 x 7.23 x 0.78in (16.71 x 18.37 x 1.98cm)
	Typical Power	70W
	Max Power	85W
System Inlet Temperature	Standard Operating	HPE Moonshot 1500 and HPE Edgeline EL1000/4000 Systems Fully supported. Typical range is 10° to 35°C (50° to 95°F) with altitude derating. Refer to the HPE Moonshot 1500 or Edgeline EL1000/4000 System documentation for details.
	Extended Operating	HPE Moonshot 1500 System: NOT supported. HPE Edgeline EL1000/4000 System: Depending on hardware configuration, the supported system inlet range can be extended up to 55°C. Compliance to ASHRAE A3 and A4 standards is also available. The approved hardware configurations for this system are listed in the Edgeline system documentation.
	Non-operating	Refer to the HPE Moonshot 1500 or Edgeline EL1000/4000 System documentation for details.
Altitude	Operating	Refer to the HPE Moonshot 1500 or Edgeline EL1000/4000 System documentation for details.
	Non-operating	Refer to the HPE Moonshot 1500 or Edgeline EL1000/4000 System documentation for details.
Acoustic Noise	Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). Refer to the HPE Moonshot 1500 or Edgeline EL1000/4000 System documentation for details.	
Emissions Classification (EMC)	FCC Rating	Class A
	Normative Standards	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1
	NOTE: Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.	

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.

Technical Specifications

Other Infrastructure Components

NOTE: For information on supported Chassis, Switch and Uplink Modules, please see the following:

System Types

HPE Moonshot

HPE Moonshot 1500 System

HPE Edgeline

HPE Edgeline EL1000 System

HPE Edgeline EL4000 System

Switch (Moonshot 1500 Only)

FastPATH

HPE Moonshot-45G Switch Module

HPE Moonshot-180G Switch Module

Comware

HPE Moonshot-45Gc Switch Module

HPE Moonshot-45XGc Switch Module

HPE Moonshot-180XGc Switch Module

Uplink Module (Moonshot 1500 Only)

HPE Moonshot-6SFP+ Uplink Module

HPE Moonshot-16SFP+ Uplink Module

HPE Moonshot-4QSFP+ Uplink Module

Summary of Changes

Date	Version History	Action	Description of Change
06-May-2019	Version 10	Changed	Configuration Information section was updated.
02-Apr-2019	Version 9	Changed	Updates throughout the QuickSpecs to add m710x-L & related updates. Obsolete SKUs were removed. QS name was updated
15-Oct-2018	Version 8	Changed	SKU description were updated. Obsolete SKUS were removed.
04-Dec-2017	Version 7	Updated	Update Overview and Service and Support section
25-Sep-2017	Version 6	Updated	Updates throughout the QuickSpecs
01-May-2017	Version 5	Updated	Updates throughout the QuickSpecs
16-Dec-2016	Version 4	Updated	Added iLO licensing and clarified some notes
09-Sep-2016	Version 3	Changed	Detailed configuration information and cleanup
15-Jul-2016	Version 2	Changed	Updates throughout the QuickSpecs
06-Jun-2016	Version 1	New	New QuickSpecs



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