

# QuickSpecs

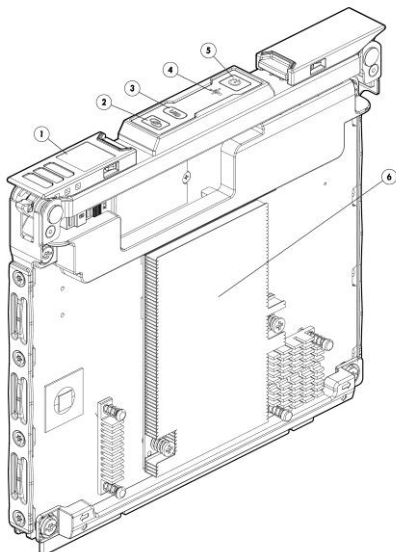
## HP ProLiant m710 Server Cartridge

### Overview

### HP ProLiant m710 Server Cartridge

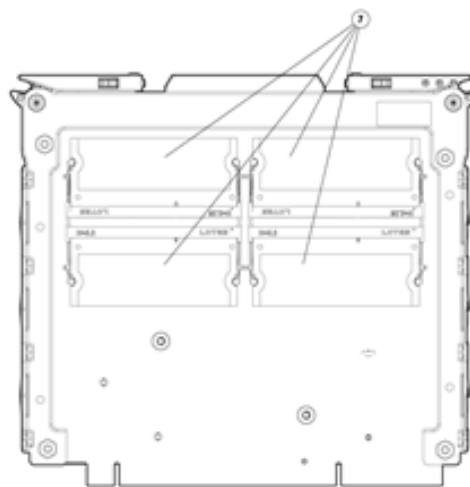
HP Moonshot System with the HP ProLiant m710 server cartridge is designed to enhance the performance of Rich Application Streaming and Video Transcoding. The ProLiant m710 server cartridge has one Intel® Xeon® E3-1284L v3 four-core processor with Intel® Iris™ Pro P5200 graphics, 32GB of ECC protected memory, 10Gb Ethernet along with one M.2 flash storage module for local OS booting.

The HP 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 servers cartridge per 4.3U chassis. This gives you the ability to generate greater revenue from a smaller footprint while driving down your operational costs.



#### Front View:

1. QR Code label
2. Cartridge Link LED/button
3. Cartridge UID LED/button
4. Drive LED
5. Cartridge power LED/button
6. One (1) Intel® Xeon E3-1284Lv3™ Processor



#### Rear View:

7. Four (4) DDR3 SODIMM memory slots

## Standard Features

**NOTE:** For information on HP Moonshot Chassis, Switch and Uplink Modules, please see the following:

**Chassis:**

HP Moonshot 1500 Chassis Opt OS

<http://www8.hp.com/us/en/products/servers/moonshot/index.html>

**Switch:****FastPATH**

HP Moonshot-45G Switch Module

<http://www8.hp.com/h20195/v2/GetHTML.aspx?docname=c04111070>

HP Moonshot-180G Switch Module

<http://www8.hp.com/h20195/v2/GetHTML.aspx?docname=c04111290>

**Comware**

HP Moonshot-45Gc Switch Module

<http://www8.hp.com/us/en/products/servers/moonshot/index.html>

HP Moonshot-45XGc Switch Module

<http://www8.hp.com/h20195/v2/GetHTML.aspx?docname=c04384058>

**Uplink:**

HP Moonshot-6SFP+ Uplink Module

<http://www8.hp.com/h20195/v2/GetHTML.aspx?docname=c04111292>

HP Moonshot-16SFP+ Uplink Module

<http://www8.hp.com/h20195/v2/gethtml.aspx?docname=c04499458>

HP Moonshot-4QSFP+ Uplink Module

<http://www8.hp.com/h20195/v2/GetHTML.aspx?docname=c04111291>

**Processor** Intel® Xeon® E3-1284L v3 (1.8-3.2GHz/4-core/6MB/47W)  
Integrated Intel® Iris™ Pro P5200 graphics and 128MB of embedded DRAM

**Cache Memory** 6MB shared Level 3

**Memory Protection** ECC

<b>Memory</b>	Type	HP 8GB (1x8GB) PC3L-12800 (DDR3-1600) SODIMM Low Voltage Memory	
	DIMM Slots Available	Four (4) SODIMM Slots	
	Maximum Configuration	32GB (4x8GB)	

**Network Controller** Mellanox Connect-X3  
Dual 10GbE NIC. Supports RDMA over Converged Ethernet (RoCE)

**Storage Controller** Integrated into the Intel® QM87 chipset

M.2 2280 solid state device	765479-B21	120GB
	765481-B21	240GB
	765483-B21	480GB

**NOTE:** m710 cartridge may be purchased with zero M.2 storage (i.e. network/diskless boot).

**Interfaces** Cartridge Link LED/button  
Cartridge UID LED/button

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### Standard Features

Drive LED

Cartridge health LED

HDMI 1.4b compliant connector for external monitor

Micro-USB 2.0 connector

**NOTE:** HDMI and Micro-USB connectors are for diagnostic usage only and may require removal of any adjacent cartridge.

**NOTE:** To connect a standard USB device to the cartridge, connect a USB on-the-go adapter to the cartridge Micro-USB connector, and then connect the USB device to the adapter.

### Industry Standard Compliance

PXE Support

PCIe 3.0

iSCSI Boot (with supported operating systems)

### Operating Systems and Virtualization Software Support for ProLiant Servers

[Microsoft Windows Server 2012 / 2012 R2](#), Windows 2008 R2, Client OS Windows 7, 8.1

[Red Hat Enterprise Linux \(RHEL\) 6.5 and 7.0](#)

[SUSE Linux Enterprise Server \(SLES\) 11 SP3](#)

[Canonical Ubuntu 14.04](#)

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

**NOTE:** For more information on HP's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server including how to purchase from HP, please visit our OS Support Site at: <http://www.hp.com/go/ossupport> and our driver download page: <http://www.hp.com/go/servers/Moonshot/download>

### Form Factor

HP ProLiant m710 Server Cartridge is a server cartridge that plugs into the HP Moonshot 1500 Chassis.

Serial interface control

### Security

Power switch security

Administrator's password

### Warranty

This product is covered by a global limited warranty and supported by HP Services and a worldwide network of HP 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 HP Care Pack 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 Cartridge Warranty includes 3-Year Parts, 0-Year Labor, 0-Year Onsite support. Additional information regarding worldwide limited warranty and technical support is available at: <http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html>

### Optional Features

**HP Insight Cluster Management Utility (CMU)**

HP Insight Cluster Management Utility (CMU) is an HP-licensed and HP-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 HP Insight Cluster Management Utility, please contact your sales representative or go to: <http://www.hp.com/go/cmu>

**Factory Express Portfolio for Servers and Storage**

HP Factory Express offers configuration, customization, integration and deployment services for HP 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. HP products supported through Factory Express include a wide array of servers and storage: HP Moonshot, HP Integrity, HP ProLiant, HP ProLiant Server Blades, and HP BladeSystem, HP 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>.

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## HP ProLiant m710 Server Cartridge

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### Service and Support

**Service and Support**

**To see recommended HP Care Pack Services for your HP product**

(4 and 5 year Service offerings are also available)

see HP Moonshot 1500 Chassis Opt OS Quick Specs.

<http://www8.hp.com/us/en/products/servers/moonshot/index.html>

**For more information**

To learn more on HP Moonshot System, please contact your HP sales representative.

## Configuration Information - Factory Integrated Models

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

**NOTE:** If you want to configure the HP Moonshot 1500 Chassis Opt OS with cartridges, proceed to the HP Moonshot 1500 Chassis Opt OS Quick Specs

<http://www8.hp.com/us/en/products/servers/moonshot/index.html>

**NOTE:** If you want to configure a cartridge only, proceed to Step 1

**Step 1: Base Configuration (Choose upgrade kit)**

<b>HP Moonshot Server Upgrade Kit</b>	HP Moonshot Server Multipack <b>NOTE:</b> up to 15 cartridges of any kind fit in this multipack <b>NOTE:</b> Mixed Cartridge configuration is supported	814659-B21
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**Step 2: Pick Moonshot Server**

<b>HP Moonshot Server</b>	HP ProLiant m710 1P E3-1284L CPU 32GB Configure-to-order Server Cartridge <b>NOTE:</b> Mixed Cartridge configuration is supported <b>NOTE:</b> Each Moonshot server comes preconfigured with four 8 GB SODIMM pre-installed. This is the only memory configuration available on this server. <b>NOTE:</b> Each Moonshot cartridge is pre-configured with a single Intel® Xeon® E3-1284L v3 (x86-64) processor running at 1.8-3.2GHz. This processor is four-core and contains 6MB of shared L3 cache. The same processor package also contains an Integrated Intel® Iris™ Pro P5200 graphics controller and 128MB of embedded DRAM.	755860-B21
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**Step 3: Configure Moonshot Server (Choose appropriate Option)**

<b>HP Solid State</b>	<b>Optional Factory Integration Options (FIO)</b> <b>NOTE:</b> Additional options are not configurable for server upgrade kits. <b>NOTE:</b> Must order identical quantity as configured Moonshot server	
	HP Moonshot 120GB M.2 2280 Solid State Device	765479-B21
	HP Moonshot 240GB M.2 2280 Solid State Device	765481-B21
	HP Moonshot 480GB M.2 2280 Solid State Device	765483-B21

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

<http://www8.hp.com/us/en/products/servers/moonshot/index.html>

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### Technical Specifications

<b>Server Cartridge</b>	<b>HP Moonshot m710 Server Cartridge Dimensions (H x W x D)</b>	6.57 x 7.23 x 0.78in (16.71 x 18.37 x 1.98cm)
	<b>Typical Power</b>	50.4W
	<b>Max Power</b>	68.5W
<b>System Inlet Temperature</b>	Operating	50° to 95° F (10° to 35° C) at sea level with an altitude derating of 1.8°F per every 1000 ft (1.0°C per every 304.8 m) above sea level to a maximum of 10,000 ft (3048 m), no direct sustained sunlight. Maximum rate of change is 18°F/hr (10°C/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 86°F (30°C).
	Non-operating	-22° to 140° F (-30° to 60° C) Maximum rate of change is 36°F/hr (20°C/hr).
<b>Relative Humidity (non-condensing)</b>	Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.
	Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
<b>Altitude</b>	Operating	10,000 ft (3048 m). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 1500 ft/min (457 m/min).
	Non-operating	30,000 ft (9144 m). Maximum allowable altitude change rate is 1500 ft/min (457 m/min).
<b>Acoustic Noise</b>	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).	
	<b>Idle</b>	
	L WAd	7.1 Bels
	L pAm	54 dB
	<b>Operating</b>	
	L WAd	7.3 Bels
	L pAm	57 dB
<b>Environment-friendly Products and Approach</b>	<b>End-of-life Management and Recycling</b>	Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: <a href="http://www.hp.com/go/green">http://www.hp.com/go/green</a> . To recycle your product, please go to: <a href="http://www.hp.com/go/green">http://www.hp.com/go/green</a> or contact your nearest HP sales office. Products returned to HP 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 web site at: <a href="http://www.hp.com/go/green">http://www.hp.com/go/green</a> . These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

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## HP ProLiant m710 Server Cartridge

### Summary of Changes

Date	Version History	Action	Description of Change
28-Sept-2015	From version 12 to 13	Updated	Update information throughout the QuickSpecs
17-Aug-2015	From version 11 to 12	Changed	Changes trough the QuickSpecs
17-Jul-2015	From version 10 to 11	Changed	Changes trough the QuickSpecs
1-Jun-2015	From version 9 to 10	Update	Update the configuration section
5-May-2015	From version 8 to 9	Update	Add chassis part number
9-Apr-2015	From version 7 to 8	Update	Add power supply
3-Feb-2015	From Version 6 to 7	Changed	Changes throughout the QuickSpecs
21-Jan-2015	From Version 4 to 6	Changed	Changes made in the configuration section
01-Dec-2014	From Version 3 to 4	Changed	Changes troughout the QuickSpecs
05-Nov-2014	From Version 1 to 3	Changed	Change Images and verbiage
09-Sept-2014	Create Version 1	Created	Create QS for HP ProLiant m710 Sever Cartridge

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For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less.