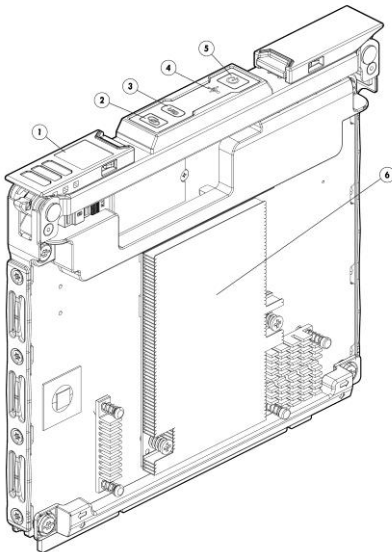# QuickSpecs

Overview

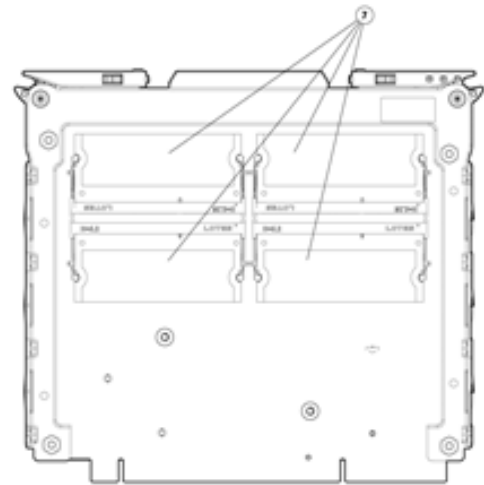### HP ProLiant m710p Server Cartridge

HP Moonshot System with the HP ProLiant m710p server cartridge is designed to enhance the performance of Rich Application Streaming and Video Transcoding. The ProLiant m710p server cartridge has one Intel® Xeon® E3-1284L v4 four-core processor with Intel® Iris™ Pro P6300 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 E3-1284Lv4™ 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 v4 (2.9-3.8GHz/4-core/6MB/47W) Integrated Intel® Iris™ Pro P6300 graphics and 128MB of embedded DRAM		
Cache Memory	6MB shared Level 3		
Memory Protection	ECC		
Memory	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 Pro 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
		827245-B21	960GB

QuickSpecs

HP ProLiant m710p Server Cartridge

Standard Features

	NOTE: m710p cartridge may be purchased with zero M.2 storage (i.e. network/diskless boot).
Interfaces	Cartridge Link LED/button
	Cartridge UID LED/button
	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
	SUSE Linux Enterprise Server (SLES) 11.4, 12
	Canonical Ubuntu 15.04, 14.04.3 LTS
	CentOS 6.7, 7.2
	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 m710p Server Cartridge is a server cartridge that plugs into the HP Moonshot 1500 Chassis.
Security	Serial interface control
	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

c04760473— DA –15352 - WorldWide — Version 3— October 9, 2015   Page 3

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.

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)

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

Step 2: Pick Moonshot Server

HP Moonshot Server	HP ProLiant m710p 1P E3-1284L CPU 32GB Configure-to-order Server Cartridge **NOTE:** Mixed Cartridge configuration is supported **NOTE:** Each Moonshot server comes preconfigured with four 8 GB SODIMM pre-installed. This is the only memory configuration available on this server. **NOTE:** Each Moonshot cartridge is pre-configured with a single Intel® Xeon® E3-1284L v4 (x86-64) processor running at 2.9-3.8GHz. This processor is four-core and contains 6MB of shared L3 cache. The same processor package also contains an Integrated Intel® Iris™ Pro P6300 graphics controller and 128MB of embedded DRAM.	808915-B21

Step 3: Configure Moonshot Servers (Choose appropriate Option)

HP Solid State	**Optional Factory Integration Options (FIO)** **NOTE:** Additional options are not configurable for server upgrade kits. **NOTE:** 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
	HP Moonshot 960GB M.2 2280 Solid State Device	827245-B21

Step 4: To Select a different cartridge see details:

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

Server Cartridge	**HP Moonshot m710p 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	58.0W
	Max Power	82.9W
System Inlet Temperature	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).
Relative Humidity (non-condensing)	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

Technical Specifications

		temperature, non-condensing.
Altitude	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).
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).

Idle

L WAd	7.1 Bels
L pAm	54 dB

Operating

L WAd	7.3 Bels
L pAm	57 dB

| **Environment-friendly Products and Approach** | **End-of-life Management and Recycling** | 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: http://www.hp.com/go/green. To recycle your product, please go to: http://www.hp.com/go/green 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: http://www.hp.com/go/green. 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. |

Summary of Changes

Date	Version History	Action	Description of Change
9-Oct-2015	From version 2 to 3	Updated	Update the Standard Features section
28-Sept-2015	From version 1 to 2	Updated	Update all the sections throughout the QS
17-Aug-2015	Version 1	Created	Create QS for HP ProLiant m710p Sever Cartridge