

# QuickSpecs

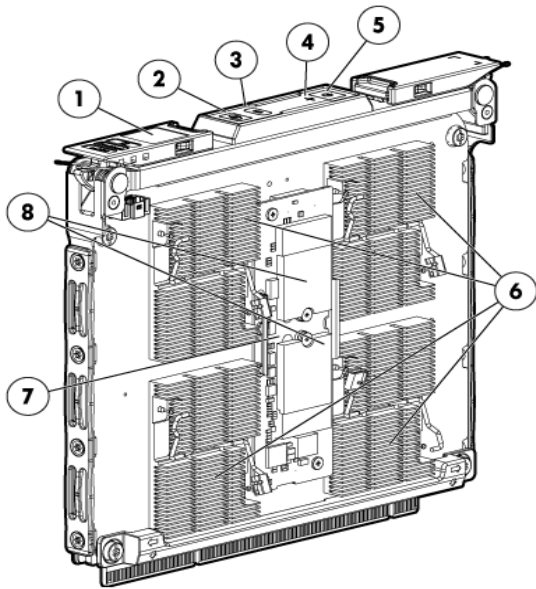
## HP ProLiant m350 Server Cartridge

### Overview

### HP ProLiant m350 Server Cartridge

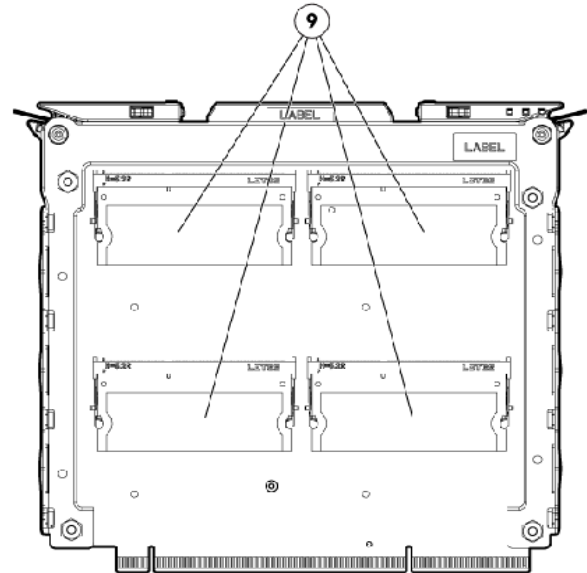
HP Moonshot System with the HP ProLiant m350 server cartridge was created for cost-effective managed hosting and high throughput computing. The ProLiant m350 server cartridge has four (4) Intel® Atom™ Processor C2730. Each processor has eight cores with integrated Ethernet along with one m.2 drive and 16GB of memory

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. Cartridge health LED
5. Cartridge power LED/button
6. Four (4) Intel® Atom™ Processor C2730
7. m.2 Storage mezzanine
8. Four (4) m.2 solid state device



#### Rear View

9. Four (4) DDR3 SODIMM memory slots

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## HP ProLiant m350 Server Cartridge

### Standard Features

#### Models

HP ProLiant m350 4x1P C2730 CPU 4x16GB Configure-to-order Server Cartridge

750492-B21

**NOTE:** For ordering the HP ProLiant m350 Server Cartridge, please see Step 1 of the Configuration to Order section of this QuickSpecs.

**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-180G Switch Module

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

#### Uplink:

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>

<b>Processor</b>	Intel® Atom™ Processor C2730 , 1.7 GHz		
<b>Cache Memory</b>	1MB shared per 2 cores		
<b>Memory Protection</b>	ECC		
<b>Memory</b>	Type	HP 8GB (1x8GB) PC3L-12800 (DDR3-1600) SODIMM Low Voltage Memory	
	DIMM Slots Available	Four (4) SODIMM Slots	
	Configuration	16GB (1x8GB SO-DIMM, 1x8GB embedded onto cartridge)	
<b>Network Controller</b>	Integrated into the System on a Chip (SoC) Dual 1Gbe NIC		
<b>Storage Controller</b>	Integrated into the System on a Chip (SoC)		
<b>Maximum Internal Storage (per Moonshot Server)</b>	m.2 SSD	32GB	1 x 32GB
		64GB	1 x 64GB
	<b>NOTE:</b> Each cartridge will ship with a storage mezzanine, on which will be connected 4 x 32GB or 4 x 64GB of m.2 storage. All four per cartridge will be of identical size.		
<b>Interfaces</b>	Cartridge Link LED/button Cartridge UID LED/button Drive LED Cartridge health LED		
<b>Industry Standard Compliance</b>	PXE Support PCIe 3.0		



## Standard Features

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

[Microsoft Windows Server](#)  
[Red Hat Enterprise Linux \(RHEL\)](#)  
[SUSE Linux Enterprise Server \(SLES\)](#)  
[Canonical Ubuntu](#)

**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 m350 Server Cartridge is a server cartridge that plugs into the HP Moonshot 1500 Chassis.

**Security**

Power-on password  
 Setup password  
 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. Warranty terms may vary by region. 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 m350 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 m350 4x1P C2730 CPU 4x16GB Configure-to-order Server Cartridge <b>NOTE:</b> Mixed Cartridge configuration is supported <b>NOTE:</b> Each Moonshot server comes preconfigured with one 8GB SODIMM pre-installed and 8GB of memory embedded on the cartridge itself. This is the only memory configuration available on this server. <b>NOTE:</b> Each Moonshot cartridge is pre-configured with a single Intel® Atom™ Processor C2730 running at 1.7 GHz. This processor is eight-core and contains 1 MB cache shared per two cores. The C2730 is the only processor option available and represents a balance of performance and energy efficiency.	750492-B21
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**Step 3: Configure Moonshot Server**

<b>HP Moonshot Storage Subsystem</b>	HP m350 SATA Mezzanine FIO Kit for M.2 2230 Solid State Device <b>NOTE:</b> Must order the same quantity as the HP ProLiant m800 Server Cartridge.	750501-B21
<b>HP Solid State Device</b>	<b>M.2 2230 Solid State Device</b>	
	HP Moonshot 32GB 6G SATA Value Endurance M.2 2230 Client Value 1yr Wty Solid State FIO Kit	762593-B21
	HP Moonshot 64GB 6G SATA Value Endurance M.2 2230 Client Value 1yr Wty Solid State FIO Kit	762595-B21

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

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

<b>Server Cartridge</b>	<b>HP Moonshot m350 Server Cartridge</b>	6.57 x 7.23 x 0.78in (16.71 x 18.37 x 1.98cm)
	<b>Dimensions (H x W x D)</b>	
	<b>Typical Power</b>	27.5W
	<b>Max Power</b>	44.0W
<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.

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## HP ProLiant m350 Server Cartridge

### Technical Specifications

		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</b> (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 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>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: <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.

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## HP ProLiant m350 Server Cartridge

### Summary of Changes

Date	Version History	Action	Description of Change
28-Sept-15	From version 12 to 13	Changed	Changes throughout the QuickSpecs
17-Aug-15	From version 11 to 12	Updated	Updates throughout the QuickSpecs.
17-Jul-15	From version 10 to 11	Updated	Updates throughout the QuickSpecs.
1-Jun-15	From version 9 to 10	Update	Update configuration section
5-May-15	From version 8 to 9	Update	Add chassis part number
09-Apr-15	From version 7 to 8	Update	Add power supply
01-Jul-15	From version 7 to 8	Changed	Updated
02-Feb-15	From version 6 to 7	Changed	Updates made throughout the QuickSpecs
21-Jan-15	From version 4 to 6	Changed	Changes made in the configuration section.
01-Dec-14	From version 3 to 4	Changed	Updates made throughout the QuickSpecs
05-Nov-14	From version 2 to 3	Corrections	Changes in images and verbiage
30-Sep-14	From version 1 to 2	Corrections Changed	Made general changes/corrections throughout the QS in the sections Overview, Technical Specifications.
29-Sep-14	Version 1	Created	Created the QuickSpecs for the HP ProLiant m350 Server Cartridge.

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