



HPE ML350 Gen10 Hybrid SAS LFF WSSD Premium Solution

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WSSD solution BOM/node
Version 1.2

ML350 Gen10 12LFF Hybrid WSSD Premium Solution
SAS SSD cache/SAS HDD capacity
Processor configurations 2.0 GHz or faster
Memory configurations from 64 GB to 3 TB
Minimum of 2 nodes with a cluster witness
Maximum of 2 nodes

Item	Description	Part number	Quantity
Operating system	Windows Server® 2016 Datacenter (16 core) HPE recommends HPE OEM licenses	See Appendix for HPE OEM license options	1
Additional processor core licenses depend upon processor option	Windows Server Datacenter 2016 Additional License (2 cores) HPE recommends HPE OEM licenses	See Appendix for HPE OEM license options	Varies
Server	HPE ProLiant ML350 Gen10 Hot Plug LFF Configure-to-order Server	877625-B21	1
Processors	Any processor 2.0 GHz or faster. See HPE ProLiant ML350 Gen10 QuickSpecs for Processor Options	xxxxxx-L21 xxxxxx-B21	1 or 2
Memory	Memory size must be between 64 GB and 3 TB. See HPE ProLiant ML350 Gen10 QuickSpecs for Memory Options		
Storage controllers	See storage controller options below for modular and PCIe plug-in controllers	xxxxxx-B21	1 or more
Drive cage PS	HPE ML350 Gen10 4LFF Hot Plug Drive Backplane Cage Kit	874566-B21	2
Network adapters	See network adapter options below for FlexibleLOM and PCIe plug-in controllers	xxxxxx-B21	1 or more
Mirrored M.2 boot	HPE Universal SATA HHHL M.2 Kit	878783-B21	1
Mirrored M.2 boot	HPE 480GB SATA RI M.2 2280 DS SSD	875319-B21	2
Cable	HPE ML350 Gen10 Embedded SATA Cable Kit for LFF Configuration	877578-B21	1
Cable	HPE ML350 Gen10 Smart Array/HBA Mini-SAS Cable Kit for LFF Configuration	874574-B21	1
Cable	HPE ML350 Gen10 AROC Mini-SAS Cable Kit for LFF Configuration	874573-B21	1
Fans	HPE ML350 Gen10 Redundant Fan Cage Kit with 4 Fan Modules	874572-B21	1
Power supply	HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865414-B21	2
TPM	HPE TPM 2.0 Gen10 Kit	864279-B21	1
HPE OneView	HPE OV w/o iLO 3yr 24x7 FIO Phys 1 LTU	P8B31A	1
iLO Advanced	HPE iLO Adv Security Lic 3yr Support	BD505A	1



Option type	Description	Part number	Quantity
Network FlexibleLOM	HPE Ethernet 10/25 Gb 2-port 640FLR-SFP28 Adapter	817749-B21	1
Network adapter PCIe plug-in	HPE Ethernet 10/25Gb 2-port 640SFP28 Adapter	817753-B21	1
Storage controller modular	HPE Smart Array P816i-a SR Gen10 (16 Internal Lanes/4GB Cache/SmartCache) 12G SAS Modular Controller	804338-B21	1
Storage controller modular	HPE Smart Array E208i-a SR Gen10 (8 Internal Lanes/No Cache) 12G SAS Modular Controller	804326-B21	1
Storage controller modular	HPE Smart Array P408i-a SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS Modular Controller	804331-B21	1
Storage controller PCIe plug-in	HPE Smart Array E208i-p SR Gen10 (8 Internal Lanes/No Cache) 12G SAS PCIe Plug-in Controller	804394-B21	1
Storage controller PCIe plug-in	HPE Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS PCIe Plug-in Controller	830824-B21	1
Storage SAS expander	HPE ML350 Gen10 12Gb SAS Expander	874576-B21	1
Minimum drive size validated, equal or larger drive sizes may be used			
Cache SSD	HPE 400GB SAS 12G Mixed Use LFF (3.5in) LPC	See guidelines below	2-4
Capacity HDD	HPE 1TB SAS 12G Midline 7.2K LFF (3.5in) LP	See guidelines below	4-8

Cabling instructions can be found [here](#).

Configuration guidelines

- You will achieve better Storage Spaces Direct I/O performance with drives connected to storage controllers versus connecting drives to the storage SAS expander.
- The P816i-a controller is the most performant storage controller with 16 PCIe lanes, supporting 16 drives. It is your best choice for achieving maximum storage spaces direct I/O performance without the use of a SAS expander.
- Use of alternative size Cache SSDs and Capacity HDDs is supported.
 - All drives available for [HPE ProLiant](#) can be used with [WSSD solutions](#) and will have SDDC Premium AQ
 - The Cache must be configured with 2 or more SAS SSDs with a size greater than or equal to 400 GB per drive
 - The Capacity must be configured with 4 or more SAS HDDs with a size greater than or equal to 1 TB per drive
 - See [HPE ProLiant ML350 Gen10 QuickSpecs](#) for alternative Drive Options
 - For more information on hardware requirements, please refer to [Microsoft®'s Storage Spaces Direct Hardware requirements](#)
- Use of alternative boot drives other than what is specified in this configuration is supported. SDDC Premium AQ is not required for boot drives.
- Update this WSSD solution drivers and firmware for the Smart Arrays, Network Adapters, and Storage Drives using [Service Pack for ProLiant \(SPP\) Version 2018.11.0](#) or newer.



Appendix

Hewlett Packard Enterprise recommends cost-efficient [HPE OEM Windows Server 2016 Datacenter Edition](#) licenses for a complete WSSD solution out of one hand. Alternatively, customer supplied Windows Server 2016 Datacenter licenses such as Volume License or Retail can also be used.

The HPE OEM Windows Server 2016 Core Licensing Calculator tool can assist you in calculating the number of required licenses: hpe.com/servers/windows-license-calculator.

HPE offers OEM Windows Server licenses in two distinct options and a wide range of languages:

- **Reseller Option Kit (ROK)**—Available through authorized HPE resellers at the time of purchase of an [HPE server system](#).
- **Direct from HPE factory**—Available for sale along with the purchase of your [HPE server](#) from the factory, you can select OEM Windows Server 2016 Datacenter as a **not preinstalled** (Npi) option (also referred to as **drop in the box** license).

In both the options, the OS media is included with the server.

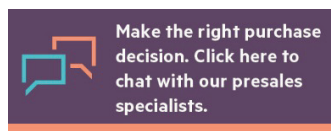
For an updated list of available part numbers, see the [HPE OEM Windows Server 2016 OEM QuickSpecs](#).

Reference

[Microsoft Windows Server 2016 OEM from HPE](#)

Learn more at

hpe.com/solutions/wssd



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