QuickSpecs

Overview

HPE DDR4 Standard Memory

Is finding reliable DRAM memory for your HPE ProLiant servers a major challenge?

HPE Standard Memory offers the best combination of pricing, quality, reliability and compatibility for HPE ProLiant servers; designed to help your business achieve powerful results with right-sized affordable solutions. It delivers the ideal value that small businesses require to smoothly run a small network server environment and provides entry-level businesses with affordable server memory that has been optimized for HPE entry-level servers. HPE Standard Memory is outstanding for businesses looking for memory with a low acquisition cost, exceptional performance, optimized compatibility, assured reliability, and comprehensive management.

What's New
- HPE Standard Memory DDR4 @2666 registered memory supported on HPE ProLiant Gen10 100 series servers

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Platform Information

Models

Registered DIMMs (RDIMMs)	HPE 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Registered Standard Memory Kit	803026-B21
	HPE 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Standard Memory Kit	803028-B21
	HPE 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Standard Memory Kit	851353-B21
	HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Standard Memory Kit	867853-B21
	HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Registered Standard Memory Kit	867855-B21

Unbuffered DIMMs (UDIMMs)	HPE 4GB (1x4GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Unbuffered Standard Memory Kit	805667-B21
	HPE 8GB (1x8GB) Single Rank x8 DDR4-2133 CAS-15-15-15 Unbuffered Standard Memory Kit	819880-B21
	HPE 8GB (1x8GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Unbuffered Standard Memory Kit	805669-B21
	HPE 16GB (1x16GB) Dual Rank x8 DDR4-2133 CAS-15-15-15 Unbuffered Standard Memory Kit	805671-B21
	HPE 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Unbuffered Standard Memory Kit	862974-B21
	HPE 16GB (1x16GB) Dual Rank x8 DDR4-2400 CAS-17-17-17 Unbuffered Standard Memory Kit	862976-B21

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Standard Features

What is HPE Standard Memory?	It is industry-standard memory from the world's server memory leader. Ideal for entry-level customers who need competitively priced, high-quality memory, HPE Standard Memory provides genuine HPE certified memory that has been optimized for HPE entry-level servers such as the ProLiant 10/100 Series. HPE Standard Memory offers the best combination of pricing, quality, reliability and compatibility to help customers achieve powerful results with right-sized affordable solutions.
Quality and Performance	HPE Standard Memory is compliant with JEDEC specifications and offers industry-standard memory speed with assured quality and reliability. It has passed rigorous qualification tests to ensure consistent performance. With its Error Correcting Code (ECC) feature, HPE Standard Memory can protect your business data from data loss during unplanned system downtime.
HPE Active Health System	Future ROM updates will enable HPE Standard Memory to will work in conjunction with the HPE Active Health System, which monitors changes to the server hardware configuration to enable lifecycle monitoring of memory health status. Having insight into memory related service events will shorten the diagnosis of problems and deliver rapid resolutions if and when failures occur. Whereas a pre-failure alert simply notifies the administrator of an impending failure, HPE Standard Memory will provide insight with rich information on memory-related events like multibit errors or configuration issues.
Support Matrix	Please see the following URL for the latest list of supported servers: **http://www.hpe.com/servers/servermemoryconfigurator**
Other Resources	For the latest updates on HPE Server Memory Options visit: **https://www.hpe.com/us/en/servers/memory.html**

Service and Support

Service and Support	**HPE Technology Services for Industry Standard Servers** HPE Technology Services deliver confidence, reduces risk and helps customers realize agility and stability. Connect to Hewlett Packard Enterprise to help prevent problems and solve issues faster. Our support technology lets you to tap into the knowledge of millions of devices and thousands of experts to stay informed and in control, anywhere, any time. **Protect your business beyond warranty with HPE Support Services** HPE Support Services enable you to order the right service level, length of coverage and response time as you purchase your new server, giving you full entitlement for the selected support. **NOTE:** This option is covered under the HPE Support Service(s) applied to the compute module. No separate HPE Support Service(s) need to be purchased.
HPE Support Center	The HPE Support Center offers personalized online support portal with access to information, tools and experts to support Hewlett Packard Enterprise business products. Submit support cases online, chat with HPE experts, access support resources or collaborate with peers. Learn more: **https://www.hpe.com/us/en/services/it-support.html** The HPE Support Center Mobile App allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalize IT support anywhere, anytime. **NOTE:** Hewlett Packard Enterprise Support Center Mobile App is subject to local availability
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 QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced.
Warranty / Service Coverage	For ProLiant servers and storage systems, this service covers HPE branded hardware options qualified for the server, purchased at the same time or afterward, internal to the enclosure, as well as external monitors up to 22 inches and tower UPS products. These items will be covered at the same service level and for the same coverage period as the server unless the maximum supported lifetime and/or the maximum usage limitation has been exceeded. Coverage of the UPS battery is not included; standard warranty terms and conditions apply. For details on HPE Qualified Options Limited Warranty visit: **http://h20566.www2.hpe.com/hpsc/wc/public/home**

Technical Specifications

General Memory Population Rules and Guidelines:

For HPE Gen9 Servers:
- Install DIMMs only if the corresponding processor is installed.
- If only one processor is installed in a two-processor system, only half of the DIMM slots are available.
- To maximize performance, it is recommended to balance the total memory capacity between all installed processors and load the channels similarly whenever possible.
- When two processors are installed, balance the DIMMs across the two processors.
- White DIMM slots denote the first slot to be populated in a channel.
- Place the DIMMs with the highest number of ranks in the white slot when mixing DIMMs of different ranks on the same channel.
- Mixing of DIMM types (UDIMM, RDIMM, and LRDIMM) is not supported. Mixing the 128GB LRDIMM with other capacities is not supported. HPE Gen9 servers with Quad rank 2400MT/s LRDIMMs are capable of up to 3DPC.
- DIMMs of different speeds may be mixed in any order; the server will select a common optimal speed.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- The maximum memory capacity is a function of the memory type and number of installed processor.
  To enable Mirrored Memory mode, the system allocates half of the installed memory as system memory and the remaining half as mirrored memory.
- All memory channels must be configured identically.
- For HPE Gen9 servers, only an RDIMM can be mixed with HPE NVDIMM
- When installing NVDIMM(s) on the same memory channel as RDIMM(s), populate the RDIMM(s) first and farthest from the processor, then populate the NVDIMM(s) last and closer to the processor.

For HPE Gen10 Servers:
- Install DIMMs only if the corresponding processor is installed.
- If only one processor is installed in a two-processor system, only half of the DIMM slots are available.
- To maximize performance, it is recommended to balance the total memory capacity between all installed processors.
- When two processors are installed, balance the DIMMs across the two processors.
- White DIMM slots denote the first slot to be populated in a channel.
- Mixing of DIMM types (UDIMM, RDIMM, and LRDIMM) is not supported.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- The maximum memory capacity is a function of the number of DIMM slots on the platform, the largest DIMM capacity qualified on the platform, and the number and model of installed processors qualified on the platform.

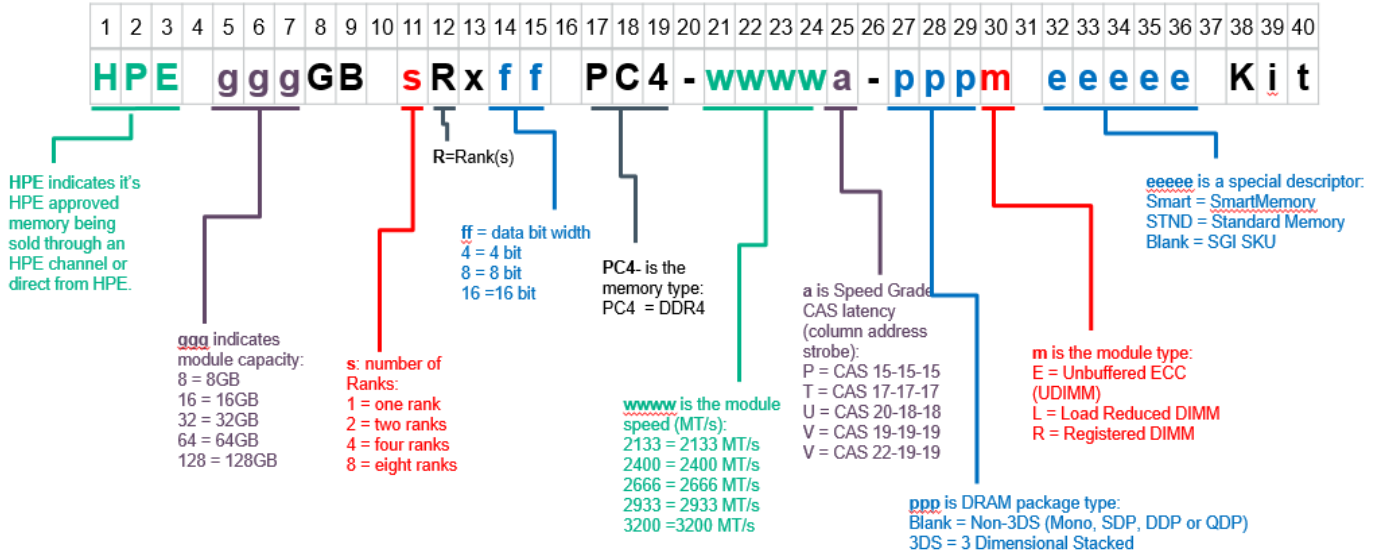For details on the HPE Server Memory Options Population Rules, visit: **http://www.hpe.com/docs/memory-population-rules**

Technical Specifications

Memory Speed by Processor Model

For details on HPE Server memory speeds, visit: **http://www.hpe.com/docs/memory-speed-table**

Memory Options Part Number Decoder

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
H	P	E		g	g	g	G	B		s	R	x	f	f		P	C	4	-	w	w	w	w	a	-	p	p	p	m		e	e	e	e	e		K	i	t

R=Rank(s)

HPE indicates it's HPE approved memory being sold through an HPE channel or direct from HPE.

ggg indicates module capacity:
8 = 8GB
16 = 16GB
32 = 32GB
64 = 64GB
128 = 128GB

s: number of Ranks:
1 = one rank
2 = two ranks
4 = four ranks
8 = eight ranks

ff = data bit width
4 = 4 bit
8 = 8 bit
16 = 16 bit

PC4- is the memory type:
PC4 = DDR4

wwww is the module speed (MT/s):
2133 = 2133 MT/s
2400 = 2400 MT/s
2666 = 2666 MT/s
2933 = 2933 MT/s
3200 = 3200 MT/s

a is Speed Grade CAS latency (column address strobe):
P = CAS 15-15-15
T = CAS 17-17-17
U = CAS 20-18-18
V = CAS 19-19-19
V = CAS 22-19-19

ppp is DRAM package type:
Blank = Non-3DS (Mono, SDP, DDP or QDP)
3DS = 3 Dimensional Stacked

m is the module type:
E = Unbuffered ECC (UDIMM)
L = Load Reduced DIMM
R = Registered DIMM

eeeee is a special descriptor:
Smart = SmartMemory
STND = Standard Memory
Blank = SGI SKU

Example: HPE 128GB 8Rx4 PC4-2666V-3DSL Smart Kit

For example, HPE 128GB 8Rx4 PC4-2666V-2HTSVL Smart Kit indicates an HPE SmartMemory DIMM with a 128GB capacity, Octal rank, a data width of 4, memory type of DDR4, 2666 Load Reduced 22-19-19 latency, and an HPE kit.

Summary of Changes

Date	Version History	Action	Description of Change
25-Sep-2017	From Version 7 to 8	Changed	Overview, Platform Information, Standard Features, Service and Support, and Technical Specifications sections were updated.
		Added	SKUs added in Platform Information section: 867853-B21 867855-B21
8-May-2017	From Version 6 to 7	Changed	Overview, Platform Information, Standard Features, and Technical Specifications sections were updated.
		Added	SKUs added in Platform Information section: 862974-B21, 862976-B21.
31-Mar-2016	From Version 5 to 6	Changed	Overview, Overview, Standard Features, Service and Support, and Technical Specifications
		Added	SKU added in Overview section: 851353-B21
03-Feb-2016	From Version 4 to 5	Changed	Overview, Technical Specifications sections
		Added	New 2400MHz SKU 851353-B21
01-Dec-2015	From Version 3 to 4	Changed	Overview, Service and Support, and Technical Specifications sections were updated.
		Added	SKUs added in Overview section: 805667-B21, 819880-B21, 805669-B21, 805671-B21
20-Feb-2015	From Version 2 to 3	Changed	Overview, Technical Specifications sections were updated
05-Dec-2014	From Version 1 to 2	Changed	Note added on Overview section: **NOTE:** Available WW except EMEA

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