Кому: Департамент внутреннего государственного аудита по городу Алматы

От: ТОО «АИК Астана»
г.Нур-Султан, ул.Темирказык 74
Директор
Шутилин Е.Ю.
astana@aic.kz
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+7 702 440 08 99

03.08.2021

Обжалование итогов тендера

Наша компания ТОО «АИК Астана» учатсвует в закупке серверного оборудования (Конкурс №5970585-2, лот: №40906428-ОК1), заказчиком которого является АО «Центр развития города Алматы»

По итогам закупки ТОО "Компания Телемост" признано победителем конкурса, которое предлагает в своей заявке следующий сервер: **Сервер HPE DL380 Gen10 (п/н P24848-B21/1, спецкомплектация)**.
Характеристики, указанные в письме не имеют конкретных данных о составляющей сервера, указаны не точные данные о составляющих компонентах (указано не менее/не более), что представляет собой невозможность определить точную комплектацию сервера.

Согласно открытым и официальным источникам производителя HPE (https://buy.hpe.com/be/en/search/?text=P24848-B21%2F1) Сервера с партномером P24848-B21/1, спецкомплектация – **не существует.**

Есть сервер с партномером P24848-B21 – данный сервер является BTO (Build-To-Order) сервером и не имеет никаких дополнительных конфигураций или других подпартномеров в виде «**B21/1**», это выдумка ТОО «Компания Телемост».

Прикладываем ссылку на сайт производителя (https://buy.hpe.com/be/en/servers/proliant-dl-servers/proliant-dl300-servers/proliant-dl380-server/hpe-proliant-dl380-gen10-server/hpe-proliant-dl380-gen10-4215r-1p-32gb-r-s100i-nc-8sff-800w-ps-server/p/P24848-B21)

Наша компания имеет богатый и обширный опыт по работе с сетевым и серверным оборудованием, в нашем штате более 30 высококвалифицированных специалистов в данной области и мы хотим раскрыть вам некоторые детали по Серверам HPE.

BTO сервер – это сервер предварительной сборки. При этом в сборку не включаются все компоненты, оговоренные техническим заданием. Например, диски и дополнительные комплектующие устанавливаются в шасси сервера **не на заводе**, а «кустарным» способом поставщиком, т.е является **самосборным**, **а не «спецкомлектацией»** как заявляет Компания Телемост.

Согласно Технической спецификации (далее ТС) **Оборудование должно быть собрано (в сборку включаются все компоненты, оговоренные техническим заданием) и протестировано на заводах фирмы-изготовителя.** В данном случае потенциальному поставщику от завода придет лишь «коробка» с минимальными количеством компонентов, а остальные комплектующие Потенциальный поставщик может укомплектовать по своему усмотрению, разными брендами, не заводскими комплектующими, бывших в употреблении или восстановленными. Если наступит гарантийный случай, а сервер будет укомплектован разными комплектующими, то авторизованные сервисные центры не примут за гарантийный случай поломку.

Далее, согласно ТС, Потенциальный поставщик в составе прочего должен приложить копии **технических паспортов** (приложить к конкурсной заявке).

ТОО «Компания Телемост» в своей конкурсной заявке не приложило вышеуказанный документ. Однако Заказчик, в том числе на этапе предварительного допуска, должным образом не проверив состав конкурсной заявки допустил указанного поставщика к участию в конкурсе. В этой связи просим отклонить указанного поставщика.

В этом документе Конкурсная комиссия смогла бы увидеть нестыковки технической составляющей сервера, в данном документе были бы указаны точные данные о комплектующих сервера.

Далее, в приложении к настоящей жалобе, прикладываем авторизационное письмо от производителя HPE, выданное нам, в котором указывается следующие данные: **дата выдачи, номер документа, для какого конкурса, для закупки какого оборудования, для какого заказчика предназначено авторизационное письмо** – в письме ТОО «Компания Телемост» указанных данных нет. Копия письма от Comportal не заверена нотариально. В этой связи предполагаем, что ТОО «Компания Телемост», возможно, подделала письмо, что является уголовно наказуемым деянием. Прошу проверить письмо. Запросить у дистрибъютора Comportal информацию, выдавалось ли такое письмо.

Согласно требованиям ТС, потенциальный поставщик должен приложить «Документ, подтверждающий наличие авторизованного сервисного центра производителя аппаратного обеспечения в г.Алматы, осуществляющее гарантийное и пост гарантийное обслуживание товара» от производителя оборудования. Однако ТОО «Компания Телемост», приложила письмо от себя, с указанием на наличие сервисных центром у производителя. В этой связи необходимо отметить, что ТОО «Компания Телемост» **не уполномочена выдавать** такой документ вместо производителя. Компания Телемост **не является производителем серверов HPE**, чтобы выдавать и подтверждать статусы авторизованных сервисных центров. Тому подтверждение, что указанный сервис центр LogyCom ул. Аральская, 8, Алматы, +7 (727) 227 58 27 в письме о сервисных центрах у потенциального поставщика, **не является авторизованным сервисным центром HPE**. В подтверждение вышеуказанного прикладываем оригинальное письмо от производителя HPE о сервисных центрах.

Для ознакомления - Сравнительная таблица минимально требуемых характеристик по ТС с тем, что предлагает компания Компания Телемост:

Наименование характеристик	**Характеристики по ТС**	**Характеристики ВТО сервера P24848-B21/1**
	Intel® Xeon® Gold 6238R Processor	**Intel® Xeon® Silver 4215R Processor**
Технические характеристики процессора		**Не соответствует ТС**
Количество ядер	28	8
Количество потоков	56	16
Кэш память	38.5 MB	11 MB
Расчетная мощность	165 W	130 W
Характеристики памяти		
Типы памяти	DDR4-2933	DDR4-2400
Максимальная скорость памяти	2933 MHz	2400 MHz

На основании вышеуказанного можно сделать ряд выводов:

1. Недостоверно указан партномер сервера. Нет точных характеристик сервера и его комплектующих, ТС просто скопирована. Есть вероятность получить некачественное оборудование.

2. Так как это ВТО сервер, он не может удовлетворять условиям ТС согласно которой, сервер должен быть **собран** (**в сборку** включаются **все компоненты**, оговоренные техническим заданием) **и протестировано** на заводах фирмы-изготовителя.

3. Не приложен технический паспорт предлагаемого Оборудования.

4. Авторизационное письмо выданное в апреле месяце, без данных конкурса и заказчика, и с заметными пятнами редактирования похоже на подлог документа.

5. Компания Телемост не уполномочена выдавать Документ согласно ТС (Документ, подтверждающий наличие авторизованного сервисного центра производителя аппаратного обеспечения в г.Алматы, осуществляющее гарантийное и пост гарантийное обслуживание товара, поставляемого в соответствии с технической спецификацией), так как не является производителем оборудования HPE.

6. Несоответствие Технических характеристик ВТО сервера с заявленными характеристиками в ТС. Прилагаем data sheet сервера P24848-B21. (стр.26) Все не соответствия указаны в письме в таблице.

На основании изложенного прошу:

1. Отклонить ТОО «Компания Телемост» в связи с несоответствием конкурсной заявки ТОО «Компания Телемост» требованиям конкурсной документации.

2. Отменить протокол итогов, обязать Заказчика устранить нарушения.

Директор
ТОО «АИК Астана» _____ **Шутилин Е.Ю.**

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ АСТАНА ҚАЛАСЫ ЖАУАПКЕРШІЛІГІ ШЕКТЕУЛІ СЕРІКТЕСТІГІ * РЕСПУБЛИКА КАЗАХСТАН ГОРОД АСТАНА ТОВАРИЩЕСТВО С ОГРАНИЧЕННОЙ ОТВЕТСТВЕННОСТЬЮ
«АИК Астана»

КӨШІРМЕ
КОПИЯ

Hewlett Packard
Enterprise

Hewlett Packard Enterprise B.V.,
Amstelveen, Meyrin Branch
150 Route du Nant d'Avril
1217 Meyrin (Geneva), Switzerland

Авторизационная форма производителя

Кому: Акционерное общество "Центр развития города Алматы"

Уважаемые господа,

Настоящим подтверждаем от имени Hewlett-Packard Enterprise B.V., Amstelveen, Meyrin Branch (Хьюлетт-Паккард Энтерпрайз БиВи, Амстелвин, Мейрин Бранч (здесь и далее "HPEBV"), что HPEBV осведомлена о том, что:

- **ТОО «АИК Астана»**, Адрес: РК, г. Нур-Султан, район Есиль, Жилой массив Шұбар, улица Темірқазық, дом 74 (здесь и далее "Партнер HPE") намерено подать заявку на тендер № 5970585-2 Лот 40906428-ОК1 "Сервер", для АО "Центр развития города Алматы" (здесь и далее "Заказчик") которая включает следующие продукты HPE:

Название	Описание
Сервер	HPE ProLiant DL380 Gen10 8SFF NC Configure-to-order Server (2 штуки)

- В случае победы Партнера HPE на конкурсе на Продукты HPE, указанные выше, непосредственно Партнер HPE ведет с Заказчиком последующие переговоры и подписывает с Заказчиком договор поставки продукции, включая указанные выше Продукты HPE, на условиях, которые согласуются исключительно между Заказчиком и Партнером HPE.

HPEBV подтверждает, что Партнер HPE на дату предоставления настоящего письма является не эксклюзивным авторизованным партнером HPE в отношении вышеуказанных Продуктов HPE. В рамках участия конкурсе и в дальнейшем, при согласовании и заключении договора, Партнер HPE действует самостоятельно и от своего имени и не имеет права, полномочий или разрешения принимать обязательства или гарантии, явно выраженные или подразумеваемые, от имени HPEBV. Обязательства HPEBV в отношении Продуктов HPE ограничены обязательствами в рамках стандартной гарантии, предоставляемой на продукцию HPE.

На Продукты HPE распространяются стандартные гарантийные условия HPE, применимые в Казахстане. Гарантийная поддержка продукции HPE осуществляется либо локальным офисом HPE в Казахстане, либо локальными авторизованными провайдерами HPE, предоставляющими услуги по технической поддержке

С уважением,
Geneva, June 22nd, 2021

Bertrand Germe
WW Sales Channel Development Manager

АРҒЫ ЖАҒЫНА
ҚАРАҢЫЗ
СМОТРИ НА ОБОРОТЕ

28 -06- 2011

Қ.Мұн.Исекеев Мұқаңғалий Мухаметкалиевич, Астана қ-ны нотариусы, 28.12.2010 ж. Қазақстан Республикасының Әділет Министрлігі берген № 0003194 мемлекеттік лицензия бойынша осы көшірменің құжаттың түпнұсқасымен дұрыстығын куәландырамын. Соңғысында тазартылып өшірілген, қосылып жазылған, сызылған сөздермен өзге де келісілмеген түзетулер немесе қандай да бір ерекшеліктер болған жоқ.

«_____» _____ г. Я.Исекеев Мукангалий Мухаметкалиевич, нотариус города Астаны, действующий на основании гос. лицензии № 0003194 от 28.12.2010 года, выданной Министерством Юстиции Республики Казахстан, свидетельствую верность этой копии с подлинником документа. В последнем подчистек, приписок, зачеркнутых слов и иных неоговоренных исправлений или каких-либо особенностей не оказалось.

Зарегистрировано в реестре за № 029 тізілімде тіркелді

Нотариусқа төленген сома

Сумма, оплаченная нотариусу 0 тг

Нотариус:

Hewlett Packard Enterprise

Исх.№2856 от 01 июля 2021 г.

Кому: АО «Центр развития города Алматы"

ИНФОРМАЦИОННОЕ ПИСЬМО

Настоящим письмом ТОО “Хьюлетт-Паккард (К)” БИН 060440003732 выражает почтение и сообщает в соответствии с требованиями конкурса: № 5970585-2 "Сервер" Лот 40906428-ОК1 "Сервер" . Вашему вниманию перечень авторизованных сервисных центров Хьюлетт-Паккард Энтерпрайз в Республике Казахстан:

Компания	область/город	статус	контактный телефон / e-mail	адрес
ТОО «Enterprise ESYSTEMS»	Алматы	головной офис	+7 (727) 245 94 96 support_desk@hpe.com	г. Алматы, ул. Тимирязева 42 пав.16, блок 4, офис 5
ТОО «Enterprise ESYSTEMS»	Астана	филиал	+77772280858 support_desk@hpe.com	г.Астана, ул.Сыганак, д.29 14 этаж, блок «В» Офис №1404 БЦ «Евроцентр»
Алси	Алматы	головной офис	+7 (7272) 971150 support_desk@hpe.com	г. Алматы, ул. Муканова, д.245
Алси	Алматы	филиал	+7 (7172) 550 888 support_desk@hpe.com	г. Алматы, ул. Сарыарка, д.26

Настоящим письмом гарантируем, что в случае признания тендерной заявки ТОО “АИК Астана” Адрес: г. Нур-Султан, район Есиль, Жилой массив Шұбар, улица Темірқазық, дом 74 выигравшей, услуги по технической поддержке товаров производства Hewlett-Packard Enterprise будут предоставлены сертифицированными специалистами авторизованных Хьюлетт-Паккард Энтерпрайз сервисных центров на условиях согласно требованиям конкурсной документации.

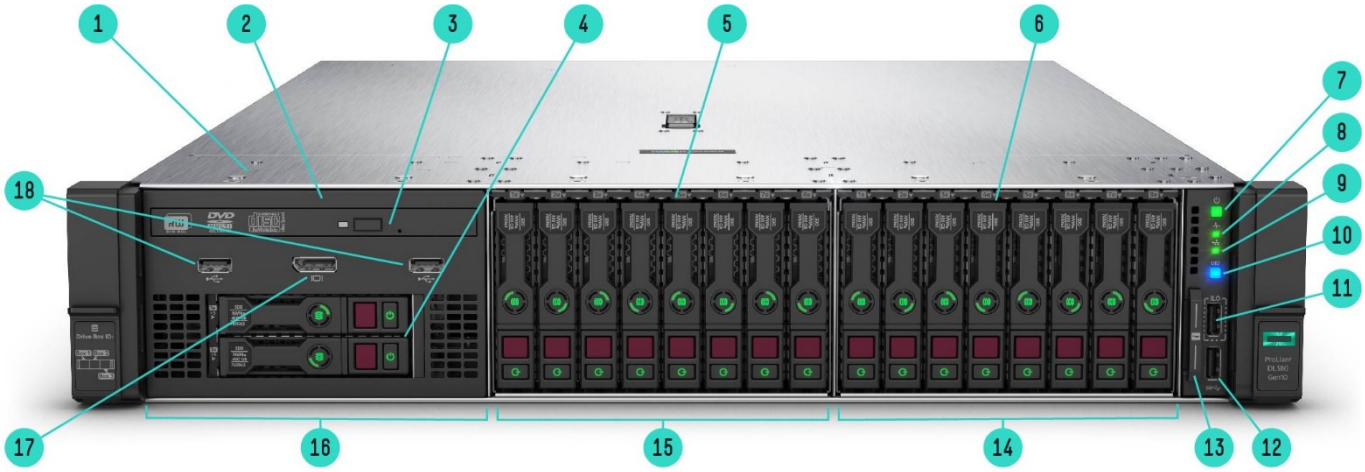
Ержан Абдикарим
Partner Business Manager
+7 777 555 45 04
Yerzhan.abdikarim@hpe.com

Генеральный Директор
ТОО «Хьюлетт-Паккард (К)»
Дана Алтыбаева

Overview

HPE ProLiant DL380 Gen10 Server

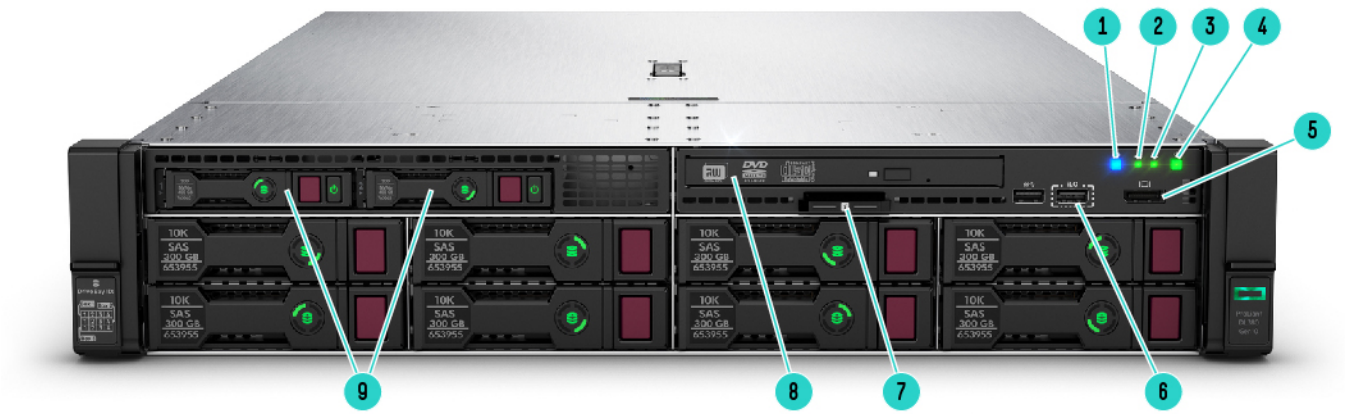
Adaptable for diverse workloads and environments, the secure 2P 2U HPE ProLiant DL380 Gen10 delivers world-class performance with the right balance of expandability and scalability. Designed for supreme versatility and resiliency while being backed by a comprehensive warranty make it ideal for multiple environments from Containers to Cloud to Big Data. Standardize on the industry's most trusted compute platform.



Front View – SFF chassis with optional Universal Media bay with optical and 2 NVME plus 16 NVMe shown

1. Quick removal access panel
2. Optional Universal Media bay. 2 USB 2.0 and Display port standard (8 SFF bay or 6 SFF+2NVMe or 8NVMe optional)
3. Optional Optical drive. Requires Universal Media bay
4. Optional 2 SFF HDD, requires optional Universal Media bay
5. Drive Bay 2. NVMe shown (8 SFF, 6SFF+2NVMe or 8 NVMe PCIe SSD optional)
6. 8 SFF Drive Cage Bay
7. Power On/Standby button and system power LED button
8. Health LED
9. NIC status
10. UID button
11. iLO Front Service Port
12. USB 3.0
13. Serial label pull tag
14. Box 3
15. Box 2
16. Box 1
17. Optional front display port (Via Universal Media Bay)
18. Optional USB 2.0 (via Universal Media Bay)

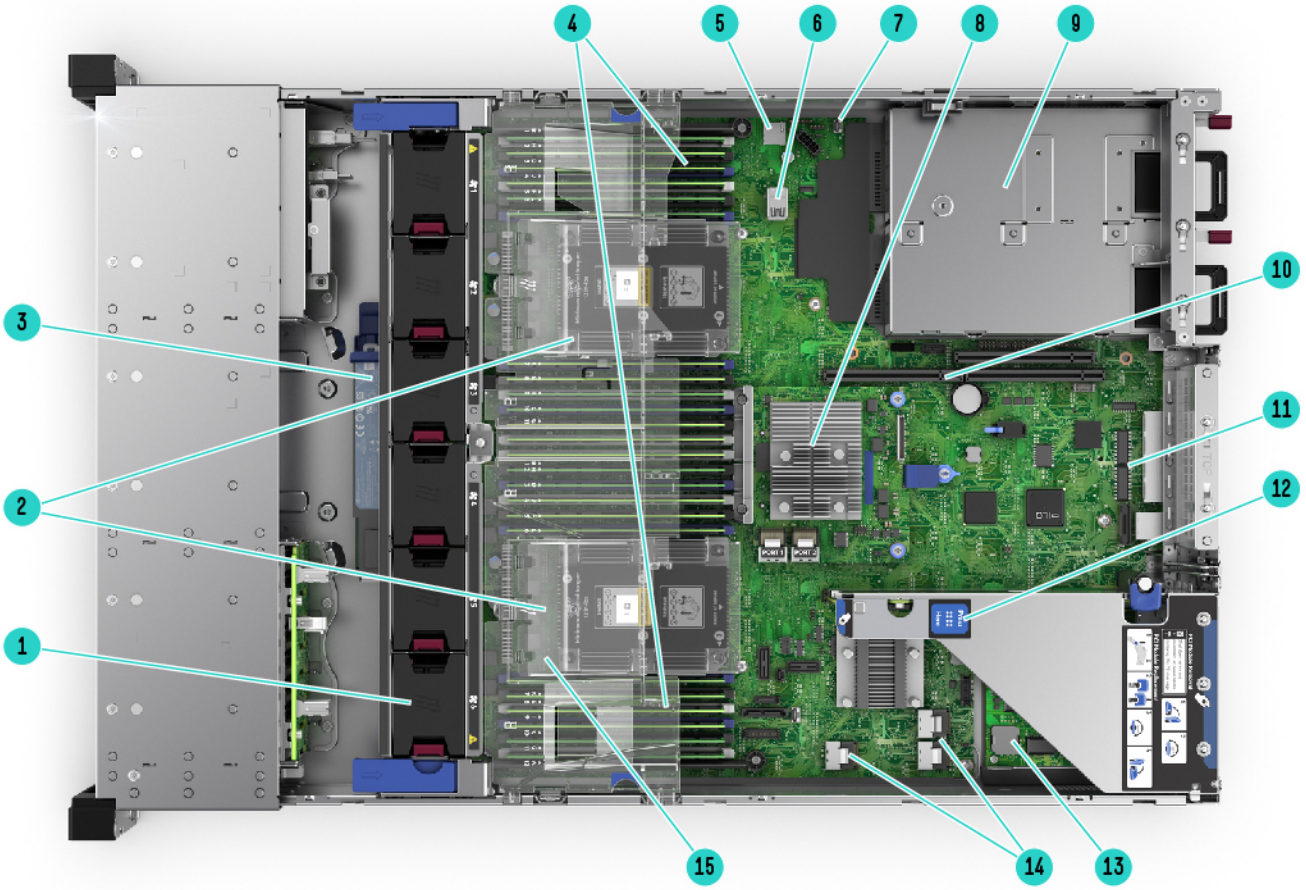
Overview



Front View – 8LFF chassis with Universal media bay and optional 2SFF and optical drive shown

1. UID button
2. Health LED
3. NIC status
4. Power On/Standby button and system power LED button
5. Front display port
6. iLO Front Service Port
7. Serial label pull tag
8. Optional optical drive shown (blank as standard)
9. Optional 2 SFF Drive bay, 2 NVMe shown

Overview

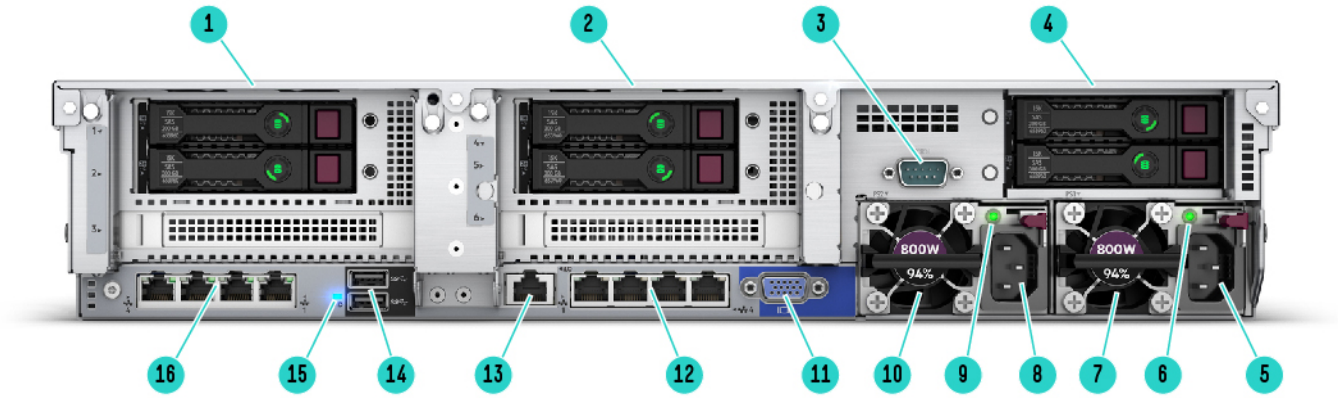


Internal View 8SFF chassis – with optional 2nd CPU, FlexLOM, Smart array shown

1. Fan cage shown with 6 standard Hot-plug fans (High Performance temperature fans optional)
2. 2 Processors, heatsink showing
3. Optional HPE Smart Hybrid Capacitor or HPE Smart Storage Battery
4. DDR4 DIMM slots. Shown fully populated in 24 slots (12 per processor)
5. MicroSD card slot (Optional Dual Micro-SD option)
6. Internal USB 3.0 connector
7. Chassis intrusion detection connector
8. Optional HPE Smart Array (P408i-a shown)Clear air baffle
9.. (Under) Hot Plug redundant HPE Flexible Slot Power supplies
10. Connection for second (optional) riser (Requires second CPU)
11. Embedded 4x1Gbe NIC (if equipped)[1]
12. Primary PCIe riser, standard (Optional double wide GPU riser)
13. FlexibleLOM slot (Optional, depending on model selected)
14. X4 SATA ports (1, 2 and 3)
15. Clear air baffle

Notes: [1] Networking Choice (NC) models do not include an embedded NIC and have a FlexibleLOM pre-selected for Build-to-Order (BTO) models; Configure-to-Order (CTO) models require a primary networking choice of FlexibleLOM or select networking adapters NIC adapters. See “FlexibleLOM Adapters” and/or “HPE Networking” sections for available options.

Overview



Rear View – With optional FlexLOM, Rear drives and Serial port shown.

1. Primary Riser. PCI Slots (Slots 1-3 top to bottom, riser shipped standard, not shown), optional 2SFF rear drives
2. Secondary Riser. PCI Slots (Slots 4-6top to bottom, not shown, requires second riser card, and second processor). Showing optional 2 SFF rear
3. Optional serial port
4. Tertiary Riser (Slots 7-8). Optional rear 2 SFF HDD (supported in 24 SFF or 12 LFF front end)
5. Power supply Power connection
6. Power supply Power LED
7. HPE Flexible Slot Power Supply bay 1 (800W shown)
8. Power supply Power connection
9. Power supply Power LED
10. HPE Flexible Slot Power Supply bay 2 (800W shown)
11. VGA connector
12. Embedded 4 x 1GbE Network Adapter (if equipped)[1]
13. Dedicated iLO management port
14. USB connectors 3.0 (2)
15. Unit ID LED
16. FlexibleLOM ports (4 x 1GbE shown); optional, depending on model

Notes: [1] Networking Choice (NC) models do not include an embedded NIC and have a FlexibleLOM pre-selected for Build-to-Order (BTO) models; Configure-to-Order (CTO) models require a primary networking choice of FlexibleLOM or select networking adapters NIC adapters. See "FlexibleLOM Adapters" and/or "HPE Networking" sections for available options.

What's New

- New Read-Intensive SFF Value SAS SSD (960GB/1.92TB/3.84TB/7.68TB)
- New Mixed-Use SFF Value SAS SSD (960GB/1.92TB/3.84TB)
- New Mixed-Use LFF Value SAS SSD (1.92TB)
- New HPE 32GB 1Rx4 DDR4-2933 Registered Memory Kit (P38466-B21)
- New HPE Trusted Supply Chain/HPE ProLiant DL380T Gen10 option (P36394-B21)

Overview

Platform Information

Form Factor

- 2U rack

Chassis Types

- 8 SFF with optional Universal Media Bay, and optional SFF or NVMe drive bay options
- 24 SFF bay with additional 6SFF rear drive bay option to total 30 SFF drives
- 8 LFF with Universal Media Bay
- 12 LFF with optional 4 LFF mid-plane and optional 3LFF + 2 SFF rear drive bay to total 19 LFF drives + 2 SFF drives

Notes:

- The 3 LFF rear drive box will consume space for the secondary and tertiary riser.
- The 8 and 12 LFF chassis also supports the 2 SFF rear drive box which allows for the user to attach a secondary or tertiary riser.
- The 8 NVMe drive option (826689-B21) can only be leveraged in the SFF chassis and replaces Box 1, 2 or 3, however there is a maximum of 20 NVMe drives supported with Partial population of Box 1.
- The Premium cage (826690-B21, 6 SAS/SATA+2 NVMe) can only be leveraged in the SFF chassis and replaces Box 1, 2 or 3.
- The Universal Media Bay (826708-B21) not available with the LFF chassis or the 24 SFF front end, and can only be populated in Box 1.
- The 8 SFF can be upgraded with additional 8SFF drive box to total 16 or 24 SFF drives. For optimal upgrade Box 2 should be populated second, with Box 1 the last to be populated for a field upgrade to 24 SFF. For CTO builds requiring 24 SFF please use the 24 SFF chassis (868704-B21) or (P19719-B21). Note a field upgrade to 24 SFF will require a High Performance fan kit (867810-B21).
- The 8 LFF chassis cannot be upgraded to 12 LFF front in the field; however the 4-LFF Mid plane (826686-B21) is supported, but will also require a performance fan kit (867810-B21).
- The 8LFF chassis ships with 6-standard fans.
- All models come with the S100i Smart Array Controller with embedded software RAID support for 12 drives. The S100i uses 14 embedded SATA ports, but only 12 ports are accessible as 2 are leveraged to support the 2 M.2 options on the primary riser.

System Fans

- Standard – fan types included

Notes:

- 1P models typically ship with 4 standard fans. The second processor option kit contains 2 additional fans. 1P Models have (4) (N+1 redundancy standard).
- 2P models typically ship with 6 standard fans. 2P Models have (6) (N+1 redundancy standard).
- The 12 LFF and 24 SFF chassis ship with 6 High performance fans as standard.
- The 8LFF chassis ships with 6 standard fans as standard.
- High performance fan kit is available to meet ambient temperature environments.
- High performance fan kits are required for rear drives, Graphics (GPU) card or NVMe configurations.

Standard Features

Processors – Up to 2 of the following depending on model.
The 2nd digit of the processor model number "x1xx" and "x2xx" is used to denote the processor generation (i.e. 1=1st generation and 2=2nd generation)
Notes: Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported.
"U" processors (i.e. 6212U) only supported in single socket configurations
For more information regarding Intel Xeon processors, please see the following **http://www.intel.com/xeon.**
This table covers the public Intel offering only.

Intel Xeon processors		
Processor Suffix	**Description**	**Offering**
L	Large memory tier	Up to 4.5 TB addressable memory per socket
M	Medium memory tier	Up to 2.0 TB addressable memory per socket (up to 1.5TB for 1st generation Intel Xeon Scalable Processors denoted with the "M" suffix)
N	NFV Optimized	Targeted at Network Function Virtualization (NFV) workloads. Intel® SST-BF improves performance by directing base frequency to high priority/bottleneck cores. Other workloads may see throttling, more details to be provided in upcoming documentation.
S	Search Optimized	Optimized base frequency to address 'search' workloads. Other workloads may see throttling, more details to be provided in upcoming documentation.
U	1 Socket Optimized	Focused on single socket (1P) configurations, delivering performance at competitive price points. Does not support two socket (2P) arrangements.
V	VM Optimized	Fosters enhanced VM density, allowing to support more/largervirtual machines per host.
Y	Speed Select	Intel® SST-PP increases base frequency when fewer cores are enabled. Allows greater flexibility, deployment options and platform longevity.

Notes: More than 1.5 TB memory per socket requires memory higher than 128 GB capacity

2nd Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache (MB)**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Platinum 8280M Processor	2.7GHz	28	38.5	205W	3 @ 10.4 GT/s	2933 MT/s	2TB
Platinum 8280L Processor	2.7GHz	28	38.5	205W	3 @ 10.4 GT/s	2933 MT/s	4.5TB
Platinum 8280 Processor	2.7GHz	28	38.5	205W	3 @ 10.4 GT/s	2933 MT/s	1TB
Platinum 8276M Processor	2.2GHz	28	38.5	165W	3 @ 10.4 GT/s	2933 MT/s	2TB
Platinum 8276L Processor	2.2GHz	28	38.5	165W	3 @ 10.4 GT/s	2933 MT/s	4.5TB
Platinum 8276 Processor	2.2GHz	28	38.5	165W	3 @ 10.4 GT/s	2933 MT/s	1TB
Platinum 8270 Processor	2.7GHz	26	35.75	205W	3 @ 10.4 GT/s	2933 MT/s	1TB
Platinum 8268 Processor	2.9GHz	24	35.75	205W	3 @ 10.4 GT/s	2933 MT/s	1TB
Platinum 8260Y Processor	2.4/2.5 /2.7GHz	24/20/16	35.75	165W	3 @ 10.4 GT/s	2933 MT/s	1TB
Platinum 8260M Processor	2.4GHz	24	35.75	165W	3 @ 10.4 GT/s	2933 MT/s	2TB
Platinum 8260L Processor	2.4GHz	24	35.75	165W	3 @ 10.4 GT/s	2933 MT/s	4.5TB
Platinum 8260 Processor	2.4GHz	24	35.75	165W	3 @ 10.4 GT/s	2933 MT/s	1TB
Platinum 8256 Processor	3.8 GHz	4	16.5	105W	3 @ 10.4 GT/s	2933 MT/s	1TB
Platinum 8253 Processor	2.2GHz	16	22	125W	3 @ 10.4 GT/s	2933 MT/s	1TB

Standard Features

Notes:

- Platinum – 8200 Series – 2 Socket supports supports 6-Channel DDR4 @ 2933 MT/s providing up to 1TB memory capacity per socket (up to 2TB/socket on M series and up to 4.5TB/socket on L series); Intel Optane Persistent Memory for HPE (select skus), Vector Neural Network Instructions (VNNI) for inference acceleration, Intel Turbo Boost Technology, Intel Hyper-Threading Technology Intel AVX-512 (2x 512-bit FMA). 48 lanes PCIe 3.0, advanced RAS
- Processors with 130W TDP or higher and the 8256, 8156, 6128, 5222, and 5122 will ship with the High Performance heatsink. All other will processors will ship with the Standard heatsink.

1st Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache (MB)**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Platinum 8180M Processor	2.5 GHz	28	38.5	205W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Platinum 8180 Processor	2.5 GHz	28	38.5	205W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8176 Processor	2.1 GHz	28	38.5	165W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8170 Processor	2.1 GHz	26	35.75	165W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8168 Processor	2.7 GHz	24	33	205W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8165 Processor	2.3 GHz	24	33	205W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8164 Processor	2.0 GHz	26	35.75	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8160 Processor	2.1 GHz	24	33	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8158 Processor	3.0 GHz	12	24.75	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8156 Processor	3.6 GHz	4	16.5	105W	3 @ 10.4 GT/s	2666 MT/s	768GB
Platinum 8153 Processor	2.0 GHz	16	22	125W	3 @ 10.4 GT/s	2666 MT/s	768GB

Notes:

- Platinum – 8100 Series –2 Socket supports 2UPI, supports 6-Channel DDR4 @ 2666 MT/s providing up to 768GB memory capacity (1.5 TB on select processor skus). Intel Turbo Boost Technology, Intel Hyper-Threading Technology supported. Intel AVX-512 (2x 512-bit FMA), 48 lanes PCIe 3.0, advanced RAS.
- Processors with 130W TDP or higher and the 8256, 8156, 6128, 5222, and 5122 will ship with the High Performance heatsink. All other will processors will ship with the Standard heatsink.

2nd Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache (MB)**	**Power (TDP)**	**UPI**	**DDR4**	**Memory per socket**
Gold 6262V Processor	1.9GHz	24	33	135W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6258R Processor	2.7GHz	28	38.5	205W	2 @ 10.4 GT/s	2933MT/s	1TB
Gold 6256 Processor[4]	3.6GHz	12	33	205W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6254 Processor	3.1GHz	18	24.75	200W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6252N Processor	2.3GHz	24	35.75	150W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6252 Processor	2.1GHz	24	35.75	150W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6250L Processor	3.9GHz	8	35.75	185W	3 @ 10.4 GT/s	2933MT/s	4.5TB
Gold 6250 Processor[4]	3.9GHz	8	35.75	185W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6248R Processor	3.0GHz	24	35.75	205W	2 @ 10.4 GT/s	2933MT/s	1TB
Gold 6248 Processor	2.5GHz	20	27.5	150W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6246R Processor	3.4GHz	16	35.75	205W	2 @ 10.4 GT/s	2933MT/s	1TB
Gold 6246 Processor	3.3GHz	12	24.75	165W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6244 Processor	3.6GHz	8	24.75	150W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6242R Processor	3.1GHz	20	35.75	205W	2 @ 10.4 GT/s	2933MT/s	1TB
Gold 6242 Processor	2.8GHz	16	22	150W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6240Y Processor	2.6/2.8/ 3.1 GHz	18/14/8	24.75	150W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6240M Processor	2.6GHz	18	24.75	150W	3 @ 10.4 GT/s	2933MT/s	2TB
Gold 6240L Processor	2.6GHz	18	24.75	150W	3 @ 10.4 GT/s	2933MT/s	4.5TB

Standard Features

Gold 6240R Processor	2.4GHz	24	35.75	165W	2 @ 10.4 GT/s	2933MT/s	1TB
Gold 6240 Processor	2.6GHz	18	24.75	150W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6238R Processor	2.2GHz	28	38.5	165W	2 @ 10.4 GT/s	2933MT/s	1TB
Gold 6238M Processor	2.1GHz	22	30.25	140W	3 @ 10.4 GT/s	2933MT/s	2TB
Gold 6238L Processor	2.1GHz	22	30.25	140W	3 @ 10.4 GT/s	2933MT/s	4.5TB
Gold 6238 Processor	2.1GHz	22	30.25	140W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6234 Processor	3.3GHz	8	24.75	130W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6230R Processor	2.1GHz	26	35.75	150W	2 @ 10.4 GT/s	2933MT/s	1TB
Gold 6230N Processor	2.3GHz	20	27.5	125W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6230 Processor	2.1GHz	20	27.5	125W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6226R Processor	2.9GHz	16	22	150W	2 @ 10.4 GT/s	2933MT/s	1TB
Gold 6226 Processor	2.7GHz	12	19.25	125W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6222V Processor	1.8GHz	20	27.5	115W	3 @ 10.4 GT/s	2933MT/s	1TB
Gold 6212U Processor	2.4GHz	24	35.75	165W	0	2933MT/s	1TB
Gold 6210U Processor	2.5GHz	20	27.5	150W	0	2933MT/s	1TB
Gold 6209U Processor	2.1GHz	20	27.5	125W	0	2933MT/s	1TB
Gold 6208U Processor	2.9GHz	16	22	150W	0	2933MT/s	1TB
Gold 5222 Processor[1]	3.8GHz	4	16.5	105W	2 @ 10.4 GT/s	2933MT/s	1TB
Gold 5220S Processor	2.7GHz	18	24.75	125W	2 @ 10.4 GT/s	2666MT/s	1TB
Gold 5220R Processor	2.2GHz	24	35.75	150W	2 @ 10.4 GT/s	2666MT/s	1TB
Gold 5220 Processor	2.2GHz	18	24.75	125W	2 @ 10.4 GT/s	2666MT/s	1TB
Gold 5218R Processor	2.1GHz	20	27.5	125W	2 @ 10.4 GT/s	2666MT/s	1TB
Gold 5218N Processor[3]	2.3GHz	16	22	110W	2 @ 10.4 GT/s	2666MT/s	1TB
Gold 5218B Processor [2]	2.3GHz	16	22	125W	2 @ 10.4 GT/s	2666MT/s	1TB
Gold 5218 Processor	2.3GHz	16	22	125W	2 @ 10.4 GT/s	2666MT/s	1TB
Gold 5217 Processor	3.0GHz	8	11	115W	2 @ 10.4 GT/s	2666MT/s	1TB
Gold 5215M Processor	2.5GHz	10	13.75	85W	2 @ 10.4 GT/s	2666MT/s	2TB
Gold 5215L Processor	2.5GHz	10	13.75	85W	2 @ 10.4 GT/s	2666MT/s	4.5TB
Gold 5215 Processor	2.5GHz	10	13.75	85W	2 @ 10.4 GT/s	2666MT/s	1TB

Notes:

- [1] Gold Processor 5222 supports 2933 DDR4 and 2 512-bit FMA units
- [2] Gold Processor 5218B has consistent features with the 5218 processor but is from a different die. Mixing both 5218B & 5218 in a system is not supported
- [3] Gold Processor 5218N processor available April 2019, Intel® Speed Select Technology-Base Frequency enablement via System ROM upgrade targeting June 2019
- Processors with 130W TDP or higher and the 8256, 8156, 6128, 5222, and 5122 will ship with the High Performance heatsink. All other processors will ship with the Standard heatsink.
- [4] Configuration support and facilities-requirements matrix for Gold Processor 6256 and Gold Processor 6250 listed below:

Standard Features

Intel Xeon Scalable Series 6250, 6250L, and 6256 Configuration and Facilities Requirements Matrix				
DL380 Gen10	**6250 & 6250L**		**6256**	
Max inlet temp.	Without DIMM blanks	With DIMM blanks kit[1]	Without DIMM blanks	With DIMM blanks kit[1]
8SFF	Up to 30°C / 86°F	Up to 35°C / 95°F[1]	Up to 30°C / 86°F	Up to 35°C / 95°F[1]
16SFF + front 2SFF	Up to 25°C / 77°F	Up to 30°C / 86°F[1]	Up to 30°C / 86°F	Up to 35°C / 95°F[1]
16SFF + 8NVMe	Not Supported	Not Supported	Not Supported	Not Supported
24SFF	Up to 25°C / 77°F	Up to 30°C / 86°F[1]	Up to 30°C / 86°F	Up to 35°C / 95°F[1]
24SFF + rear SFF	Not Supported	Not Supported	Not Supported	Not Supported
8LFF	Up to 25°C / 77°F	Up to 30°C / 86°F[1]	Up to 30°C / 86°F	Up to 35°C / 95°F[1]
12LFF	Up to 20°C / 68°F	Up to 25°C / 77°F[1]	Up to 20°C / 68°F	Up to 25°C / 77°F[1]
12LFF + rear 2SFF	Not Supported	Not Supported	Not Supported	Not Supported
High Perf. fans	Mandatory	Mandatory	Mandatory	Mandatory
NVMe SSDs	Not supported	Not supported	Not supported	Not supported
Rear 2SFF	Not supported	Not supported	Not supported	Not supported
GPUs	Not supported	Not supported	Not supported	Not supported
4LFF mid-tray	Not supported	Not supported	Not supported	Not supported

Notes: [1]Must install DDR4 DIMM blanks (P07818-B21) on all empty DIMM slots

1st Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache (MB)**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Gold 6154 Processor	3.0 GHz	18	24.75	200W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6152 Processor	2.1 GHz	22	30.25	140W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6150 Processor	2.7 GHz	18	24.75	165W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6148 Processor	2.4 GHz	20	27.5	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6146 Processor	3.2 GHz	12	24.75	165W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6144 Processor	3.5 GHz	8	24.75	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6143 Processor	2.8 GHz	16	22	205W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6142 Processor	2.6 GHz	16	22	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6140 Processor	2.3 GHz	18	24.75	140W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6138 Processor	2.0 GHz	20	27.5	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6137 Processor	3.9 GHz	8	24.75	205W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6136 Processor	3.0 GHz	12	24.75	150W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6134M Processor	3.2 GHz	8	24.75	130W	3 @ 10.4 GT/s	2666 MT/s	1.5TB
Gold 6134 Processor	3.2 GHz	8	24.75	130W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6132 Processor	2.6 GHz	14	19.25	140W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6130 Processor	2.1 GHz	16	22	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6128 Processor	3.4 GHz	6	19.25	115W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 6126 Processor	2.6 GHz	12	19.25	125W	3 @ 10.4 GT/s	2666 MT/s	768GB
Gold 5122 Processor	3.6 GHz	4	16.5	105W	2 @ 10.4 GT/s	2666 MT/s	768GB
Gold 5120 Processor	2.2 GHz	14	19.25	105W	2 @ 10.4 GT/s	2400 MT/s	768GB
Gold 5118 Processor	2.3 GHz	12	16.5	105W	2 @ 10.4 GT/s	2400 MT/s	768GB
Gold 5117 processor	2.0 GHz	14	19.25	105W	2 @ 10.4 GT/s	2400 MT/s	768GB
Gold 5115 Processor	2.4 GHz	10	13.75	85W	2 @ 10.4 GT/s	2400 MT/s	768GB

Notes:

- Gold - 6200 & 5200 Series - 6-Channel DDR4 @ 2933 MT/s (6200 & 5222 skus only) or 2666 MT/s (all Gold 5200 skus except 5222 @ 2933 MT/s); providing up to 1TB memory capacity per socket (up to 2TB/socket on M series and up to 4.5TB/socket on L series); Support for Intel Optane Persistent Memory for HPE (select skus), Vector Neural Network Instructions (VNNI) for inference acceleration.

Standard Features

- Intel Turbo Boost Technology, Intel Hyper-Threading Technology Intel AVX-512 (2x 512-bit FMA for 6200 series and 5222; 1 x 512-bit FMA for 5200 series, except for 5222) 48 lanes PCIe 3.0, advanced RAS
- Gold – 5100, 6100 Series - 2 Socket supports 2UPI, supports 6-Channel DDR4 @ 2400 MHz (SKU 5122=supports 2666) providing up to 768GB memory capacity (1.5 TB on select skus). Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512(1x 512-bit FMA) (SKU 5122 supports 2x 512 bit FMA), 48 lanes PCIe 3.0, advanced RAS supported.
- Processors with 130W TDP or higher and the 8256, 8156, 6128, 5222, and 5122 will ship with the High Performance heatsink. All other will processors will ship with the Standard heatsink.

2nd Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache (MB)**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Silver 4216 Processor	2.1GHz	16	22	100W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4215R Processor[4]	3.2GHz	8	11	130W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4215 Processor[4]	2.5GHz	8	11	85W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4214R Processor	2.4GHz	12	16.5	100W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4214Y Processor	2.2/2.3/ 2.4GHz	12/10/8	16.5	85W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4214 Processor	2.2GHz	12	16.5	85W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4210R Processor	2.4GHz	10-core	13.75	100W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4210 Processor	2.2GHz	10	13.75	85W	2 @ 9.6 GT/s	2400 MT/s	1TB
Silver 4208 Processor	2.1GHz	8	11	85W	2 @ 9.6 GT/s	2400 MT/s	1TB

Notes: [4] Silver Processors 4215R and 4215 support Intel Optane Persistent Memory for HPE

1st Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache (MB)**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Silver 4116 Processor	2.1 GHz	12	16.50 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4114 Processor	2.2 GHz	10	13.75 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4112 Processor	2.6 GHz	4	8.25 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4110 Processor	2.1 GHz	8	11.00 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB
Silver 4108 Processor	1.8 GHz	8	11.00 MB	85W	2 @ 9.6 GT/s	2400 MT/s	768GB

Notes:
- Silver – 4200 Series - 6-Channel DDR4 @ 2400 MT/s, providing up to 1TB memory capacity per socket; Support for: Intel® Vector Neural Network Instructions (VNNI) for inference acceleration; Intel Turbo Boost Technology, Intel Hyper-Threading Technology Intel AVX-512 (1x 512-bit FMA).48 lanes PCIe 3.0, standard RAS
- Silver – 4100 Series - 2 Socket supports 2UPI @ 9.6 GT/s, 6-Channel DDR4 @ 2400 MHz providing up to 768 GB memory capacity. Intel Turbo Boost Technology, Intel Hyper-Threading Technology, Intel AVX-512(1x 512-bit FMA), 48 lanes PCIe 3.0, standard RAS supported.

2nd Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache (MB)**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Bronze 3206R Processor	1.9GHz	8	11	85W	2 @ 9.6 GT/s	2133MT/s	1TB
Bronze 3204 Processor	1.9GHz	6	8.25	85W	2 @ 9.6 GT/s	2133MT/s	1TB

Notes: Bronze – 3200 Series - 6-Channel DDR4 @ 2133 MT/s, providing up to 1TB memory capacity per socket; Support for: Intel® Vector Neural Network Instructions (VNNI) for inference acceleration; Intel AVX-512 (1x 512-bit FMA); 48 lanes PCIe 3.0, standard RAS

Standard Features

1st Generation Intel® Xeon® Scalable Processor Family							
Intel Xeon Models	**CPU Frequency**	**Cores**	**L3 Cache (MB)**	**Power**	**UPI**	**DDR4**	**Memory per socket**
Bronze 3106 Processor	1.7 GHz	8	11.00 MB	85W	2 @ 9.6 GT/s	2133 MT/s	768GB
Bronze 3104 Processor	1.7 GHz	6	8.25 MB	85W	2 @ 9.6 GT/s	2133 MT/s	768GB

Notes: Bronze – 3100 Series - 2 Socket supports 2UPI @ 9.6 GT/s, supports 6-Channel DDR4 @ 2133 MHz providing up to 768GB memory capacity. Intel AVX-512(1x 512-bit FMA), 48 lanes PCIe 3.0, standard RAS supported.

Chipset

Intel C621 Chipset
For more information regarding Intel® chipsets, please see the following URL: **http://www.intel.com/products/server/chipsets/**

On System Management Chipset

HPE iLO 5 ASIC
Read and learn more in the **iLO QuickSpecs**.

Memory

One of the following depending on model.

Type	HPE DDR4 SmartMemory, Registered (RDIMM), Load Reduced (LRDIMM)
DIMM Slots Available	24 12 DIMM slots per processor, 6 channels per processor, 2 DIMMs per channel
Maximum capacity (LRDIMM)	3.0 TB 24 x 128 GB LRDIMM @ 2933 MT/s
Maximum capacity (RDIMM)	1.54 TB 24 x 64 GB RDIMM @ 2933 MT/s
Maximum capacity (Intel Optane Persistent Memory for HPE)	6.0 TB 12 X 512 GB Memory Modules @ 2666 MT/s
Maximum capacity (HPE NVDIMMs)	192 GB 12 x 16 GB NVDIMM @ 2666 MT/s

Notes:

- Intel Optane Persistent Memory for HPE only supported with select 2nd generation Intel Xeon Scalable Series Processors ONLY (82xx/62xx/52xx/4215R/4215) and can only be mixed with either RDIMMs or LRDIMMs.
- HPE NVDIMMs are only supported on 1st generation Intel Xeon Scalable Series Processors and can only be mixed with RDIMMs.
- Maximum memory per socket is dependent on processor selection. 2nd generation processors supporting 2 TB or 4.5 TB per CPU are indicated by the "M" and "L" in the processor model names (i.e. 8276M and 8276L). 1st generation processors supporting 1.5 TB per CPU are indicated by the "M" in the processor model names (ie 8160M)
- Maximum memory per socket is dependent on processor selection. Processors supporting 1.5 TB per CPU is indicated by the "M" in the processor model names (i.e. 8160M).
- Mixing of RDIMM and LRDIMM memory is not supported.
- For General Server Memory and HPE NVDIMM Population Rules and Guidelines for Gen10 see details here: **http://www.hpe.com/docs/memory-population-rules**
- For details on the HPE Server Memory speed, visit: **https://www.hpe.com/docs/memory-speed-table**
- To realize the performance memory capabilities listed in this document, HPE DDR4 SmartMemory is required.
- For additional information, please see the **HPE DDR4 SmartMemory QuickSpecs**.

Memory Protection

For details on the HPE Server Memory Options RAS feature, visit: **http://www.hpe.com/docs/memory-ras-feature**

Standard Features

Expansion Slots

Primary Riser					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
1	PCIe 3.0	X8	X8	Full-height, full-length slot	Proc 1
2	PCIe 3.0	X16	X16	Full-height, full-length slot	Proc 1
3	PCIe 3.0	X8	X8	Full-height, half-length slot	Proc 1

Notes:
- Bus Width Indicates the number of physical electrical lanes running to the connector.
- The specifications above correspond with the default primary riser which also supports dual m.2 cards. Additional Primary Riser options and specifications noted in the “Riser Information” table within this document.

Secondary Riser					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
1	PCIe 3.0	X8	X8	Full-height, full-length slot	Proc 2
2	PCIe 3.0	X16	X16	Full-height, full-length slot	Proc 2
3	PCIe 3.0	X8	X8	Full-height, half-length slot	Proc 2

Notes:
- Bus Width Indicates the number of physical electrical lanes running to the connector.
- The Secondary Riser requires Processor 2 to be populated 870548-B21
- The specifications above correspond with the x8/x16/x8 Secondary Riser Kit (870548-B21). Additional Secondary Riser options and specifications noted in the “Riser Information” table within this document.

Tertiary Riser					
Slots #	**Technology**	**Bus Width**	**Connector Width**	**Slot Form Factor**	**Notes**
1	PCIe 3.0	X8	X8	Full-height, full-length slot	Proc 2
2	PCIe 3.0	X8	X8	Full-height, full-length slot	Proc 2

Notes:
- Bus Width Indicates the number of physical electrical lanes running to the connector.
- The Tertiary Riser requires Processor 2 to be populated
- The specifications above correspond with the 2x8 Tertiary Riser Kit (875780-B21). Additional Tertiary Riser options and specifications noted in the “Riser Information” table within this document

Graphics

Integrated Video Standard

- Video modes up to 1920 x 1200@60Hz (32 bpp)
- 16MB Video Memory

HPE iLO 5 on system management memory

- 32 MB Flash
- 4 Gbit DDR 3 with ECC protection

Standard Features

Maximum Internal Storage

Drive	Capacity	Configuration
Hot Plug SFF SAS HDD	72.0 TB	24+6 x 2.4 TB* (with optional rear SFF drive cage)
Hot Plug SFF SATA HDD	60.0 TB	24+6 x 2 TB (with optional SFF drive cage)
Hot Plug LFF SAS HDD	311.68 TB	12+4+3 x 16 TB + 2 x 3.84 TB (with optional mid –tray and rear LFF drive cage, plus 2 SFF SSD rear)
Hot Plug LFF SATA HDD	311.68 TB	12+4+3 x 16 TB + 2 x 3.84 TB (with optional mid –tray and rear LFF drive cage, plus 2 SFF SSD rear)
Hot Plug SFF SAS SSD	459 TB	24+6 x 15.3 TB (with optional rear SFF drive cage)
Hot Plug SFF SATA SSD	230.4 TB	24+6 x 7.68 TB (with optional rear SFF drive cage)
Hot Plug LFF SATA SSD	44.16 TB	12+4+3 x 1.92 TB + 2 x 3.84 TB (with optional mid –tray and rear LFF drive cage, plus 2 SFF SSD rear)
Hot Plug LFF SAS SSD	44.16 TB	12+4+3 x 1.92 TB + 2 x 3.84 TB (with optional mid –tray and rear LFF drive cage, plus 2 SFF SSD rear)
Hot Plug SFF NVMe PCIe SSD	307.2 TB	20 x 15.36 TB NVMe

Notes:
- 2x m.2 drives are supported on the Primary Riser.
- UFF drives are also supported.

Internal Storage Devices

One of the following depending on model

- **Optical Drive**
  Ships standard in Performance Models
  Optional: DVD-ROM, DVD-RW
- **Hard Drives**
  None ship standard

Power Supply

- HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  Notes: Available in 94% efficiency.
- HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  Notes:
  - Available in 94% and 96% efficiency.
  - Also available in -48VDC and 227VAC/380VDC power inputs.
- HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
  Notes:
  - Available in 94% efficiency.
  - Also available in -48VDC

HPE Flexible Slot (Flex Slot) Power Supplies share a common electrical and physical design that allows for hot plug, tool-less installation into HPE ProLiant Gen10 Performance Servers. Flex Slot power supplies are certified for high-efficiency operation and offer multiple power output options, allowing users to "right-size" a power supply for specific server configurations. This flexibility helps to reduce power waste, lower overall energy costs, and avoid "trapped" power capacity in the data center.

All pre-configured servers ship with a standard 6-foot IEC C-13/C-14 jumper cord (A0K02A). This jumper cord is also included with each standard AC power supply option kit. If a different power cord is required, please check the **ProLiant Power Cables** web page. o review the power requirements for your selected system, please use the **HPE Power Advisor Tool**.
For information on power specifications and technical content visit **HPE Server power supplies**.

Standard Features

Storage Controllers

The Gen10 controller naming framework has been updated to simplify identification as depicted below. For a more detailed breakout of the available Gen10 Smart Array controllers visit the **HPE Smart Array Gen10 Controllers Data Sheet**.
One of the following depending on model

Software RAID

- HPE Smart Array S100i SR Gen10 SW RAID
  Notes:
  - HPE Smart Array S100i SR Gen10 SW RAID will operate in UEFI mode only. For legacy support an additional controller will be needed, and for CTO orders please also select the Legacy mode settings part, 758959-B22.
  - HPE Smart Array S100i SR Gen10 SW RAID is off by default and must be enabled.
  - The S100i uses 14 embedded SATA ports, but only 12 ports are accessible as 2 are leveraged to support the 2 M.2 options on the primary riser. If more than 8 SATA devices are being supported on this controller, then a Qty=1 of the SAS 3POS Cable Kit (826709-B21) is required.
  - The S100i supports Windows only
  - For Linux users, HPE offers a solution that uses in-distro open-source software to create a two-disk RAID 1 boot volume. For more information visit: **https://downloads.linux.hpe.com/SDR/project/lsrrb/**

Essential RAID Controller

- HPE Smart Array E208i-a SR Gen10 Controller
- HPE Smart Array E208i-p SR Gen10 Controller
- HPE Smart Array E208e-p SR Gen10 Controller

Performance RAID Controller

- HPE Smart Array P408i-a SR Gen10 Controller
- HPE Smart Array P408i-p SR Gen10 Controller
- HPE Smart Array P408e-p SR Gen10 Controller
- HPE Smart Array P816i-a SR Gen10 Controller
  Notes:
  - Performance RAID Controllers require the HPE Smart Hybrid Capacitor (P02377-B21) or the HPE Smart Storage Battery (P01366-B21) which are sold separately.
  - For additional details, please see **HPE Smart Array Gen10 Controllers Data Sheet**.

Interfaces

Serial	Optional, rear
Display Port	1 (SFF 1 front, optional via Universal Media Bay, 826708-B21), 8 LFF chassis standard
Network Ports	4 x 1GbE embedded (if equipped/depending on model) One (1) FlexibleLOM slot available on all chassis types (supporting various NIC adapters)
HPE iLO Remote Management Network Port	1 Gb Dedicated
Front iLO Service Port	1 standard (Not available on 12 LFF chassis or when SID is ordered, note iLO dongle required, 880123-B21)
Micro SD Slot	1 Micro SD **Notes:** The Micro SD slot is not a hot-pluggable device. Customers should not attempt to plug an SD card into the SD slot while the server is powered.
USB 3.0	Up to 5 total: 1 front, 2 rear, 2 internal (secure), 2 optional USB 2.0 front via Universal Media Bay, or standard on 8LFF chassis
SID (Systems Insight Display)	Optional **Notes:** Not shipping as standard. Available as a CTO option or as a field upgrade (826703-B21).

Standard Features

Operating Systems and Virtualization Software Support for ProLiant Servers

2nd Generation Intel® Xeon® Scalable Processor Family

- Windows Server 2019: Essentials, Standard, Datacenter
- **Windows Server 2016**: Essentials, Standard, Datacenter
- **Windows Server 2012 R2:** Essentials, Standard, Datacenter
- Microsoft Hyper-V Server: 2012 R2, 2016 & 2019
- **VMware vSphere 6.0 U3**, 6.5 U2 through U.3 & 6.7 U1 through U3, 7.0
  Notes: 6.5 U3, 6.7 U3 & 7.0 minimums for Xeon "R", Gold 6256, Gold 6250L & Gold 6250 processors.
- ClearOS: 7.6; ClearVM: 2.0
- **Red Hat Enterprise Linux (RHEL)** 7.6 w/ Kbase**, 8.0
- **SUSE Linux Enterprise Server (SLES)** 12 SP3, 15 (includes Xen) **

Notes:

– SLES12 SP4 is the minimum for servers featuring Intel® Optane™ DC Persistent Memory.
– Ubuntu: 18.04 LTS (4.15.0)
– Oracle Linux: Oracle Linux 7.6 UEK Release 5 Update 2; Oracle VM 3.4.6 (UEK Release 4 Update 7)
– Citrix: Hypervisor: 8,0, 8.1, 8.2; XenServer 7.1, 7.4, 7.5, 7.6

1st Generation Intel® Xeon® Scalable Processor Family

- Windows Server 2019: Essentials, Standard & Datacenter
- **Windows Server 2016** : Essentials, Standard & Datacenter
- **Windows Server 2012 R2:** Essentials, Standard & Datacenter
- Micrsoft Hyper-V Server: 2012 R2, 2016 & 2019
- VMware vSphere 6.0 U3, 6.5 through U.3 & 6.7 through U3, 7.0
- **ClearOS**: 7.6; ClearVM: 2.0
- **Red Hat Enterprise Linux (RHEL)** 6.9, 7.3 **
- **SUSE Linux Enterprise Server (SLES)** 11 SP4, 12 SP2 & 15 (includes Xen) **
- Ubuntu: 16.04.3 HWE (4.10), 18.04 LTS (4.15.0)
- Oracle Linux: Oracle Linux/UEK 6.9, 7.4; Oracle VM 3.4.4
- Citrix: Hypervisor: 8,0, 8.1, 8.2; XenServer 7.1, 7.4, 7.5, 7.6

Notes:

– For more information on Hewlett Packard Enterprise Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server **http://www.hpe.com/info/ossupport**
– ** 64-bit only;includes KVM

HPE Server UEFI/Legacy ROM

Unified Extensible Firmware Interface (UEFI) is an industry standard that provides better manageability and more secured configuration than the legacy ROM while interacting with your server at boot time. HPE ProLiant Gen10 servers have a UEFI Class 2 implementation and support both UEFI Mode (default) and Legacy BIOS Mode.
Notes: The UEFI System Utilities tool is analogous to the HPE ROM-Based Setup Utility (RBSU) of legacy BIOS. For more information, please visit **http://www.hpe.com/servers/uefi**.

UEFI enables numerous new capabilities specific to HPE ProLiant servers such as:

- Secure Boot and Secure Start enable for enhanced security
- Embedded UEFI Shell
- Operating system specific functionality
- Mass Configuration Deployment Tool using iLO RESTful API that is Redfish API Conformant
- Support for > 2.2 TB (using GPT) boot drives
- PXE boot support for IPv6 networks
- USB 3.0 Stack

Standard Features

- Workload Profiles for simple performance optimization

UEFI Boot Mode only:

- TPM 2.0 Support
- iSCSI Software Initiator Support.
- NVMe Boot Support
- HTTP/HTTPs Boot support as a PXE alternative.
- Platform Trust Technology (PTT) can be enabled.
- Boot support for option cards that only support a UEFI option ROM

Notes:

- For UEFI Boot Mode, boot environment and OS image installations should be configured properly to support UEFI.
- UEFI FIO Setting (758959-B22) can be selected to configure the system in Legacy mode in the factory for your HPE ProLiant Gen10 Server.

Industry Standard Compliance

- ACPI 6.1 Compliant
- PCIe 3.0 Compliant
- WOL Support
- Microsoft® Logo certifications
- PXE Support
- VGA/Display Port
  Notes: This support is on the optional Universal Media Bay.
- USB 3.0 Compliant (internal)
- USB 2.0 Compliant (external ports via SUV)
  Notes: This support is on the optional Universal Media Bay.
- Energy Star
- SMBIOS 3.1
- Redfish API
- IPMI 2.0
- Secure Digital 4.0
- TPM 1.20 and 2.0 Support
- Advanced Encryption Standard (AES)
- Triple Data Encrytion Standard (3DES)
- SNMP v3
- TLS 1.2
- DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP)
- Active Directory v1.0
- ASHRAE A3/A4
  Notes: For additional technical, thermal details regarding ambient temperature, humidity, and feature support, please visit **http://www.hpe.com/servers/ashrae**
- EU Lot9
  Notes: European Union (EU) eco-design regulations for server and storage products, known as Lot 9, go into effect on March 1st, 2020. Among other requirements, for servers this directive establishes power thresholds for idle state, as well as efficiency and performance in active state which vary among configurations. HPE ProLiant Gen10 servers are compliant with Lot9 requirements.
  Please visit: **https://www.hpe.com/us/en/about/environment/msds-specs-more.html** for more information regarding HPE Lot 9 conformance.
- UEFI (Unified Extensible Firmware Interface Forum) 2.6
  Notes: UEFI is the default for the DL380 Gen10. Legacy mode can be selected in the field or as a CTO option (758959-B22); some configuration restrictions apply.

Standard Features

Embedded Management

HPE Integrated Lights-Out (HPE iLO)
Monitor your servers for ongoing management, service alerting, reporting and remote management with HPE iLO.
Learn more at **http://www.hpe.com/info/ilo**.

UEFI
Configure and boot your servers securely with industry standard Unified Extensible Firmware Interface (UEFI).
Learn more at **http://www.hpe.com/servers/uefi**.

Intelligent Provisioning
Hassle free server and OS provisioning for 1 or more servers with Intelligent Provisioning.
Learn more at **http://www.hpe.com/servers/intelligentprovisioning**..

iLO RESTful API
iLO RESTful API is Redfish API conformance and offers simplified server management automation such as configuration and maintenance tasks based on modern industry standards. Learn more at **http://www.hpe.com/info/restfulapi**

Server Utilities

Active Health System
The HPE Active Health System (AHS) is an essential component of the iLO management portfolio that provides continuous, proactive health monitoring of HPE servers. Learn more at **http://www.hpe.com/servers/ahs**.

Active Health System Viewer
Use the Active Health System Viewer, a web-based portal, to easily read AHS logs and speed problem resolution with HPE self-repair recommendations, to learn more visit: **http://www.hpe.com/servers/ahsv**.

Smart Update
Keep your servers up to date with the HPE Smart Update solution by using Smart Update Manager (SUM) to optimize the firmware and driver updates of the Service Pack for ProLiant (SPP).

iLO Amplifier Pack
Designed for large enterprise and service provider environments with hundreds of HPE servers, the iLO Amplifier Pack is a free, downloadable open virtual application (OVA) that delivers the power to discover, inventory and update Gen8, Gen9 and Gen10 HPE servers at unmatched speed and scale. Use with an iLO Advanced License to unlock full capabilities.
Learn more at **http://www.hpe.com/servers/iLOamplifierpack**.

HPE iLO Mobile Application
Enables the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. For additional information please visit: **http://www.hpe.com/info/ilo/mobileapp**.

RESTful Interface Tool
RESTful Interface tool (iLOREST) is a single scripting tool to provision using iLO RESTful API to discover and deploy servers at scale. Learn more at **http://www.hpe.com/info/resttool**.

Scripting Tools
Provision one to many servers using your own scripts to discover and deploy with Scripting Tool (STK) for Windows and Linux or Scripting Tools for Windows PowerShell. Learn more at **http://www.hpe.com/servers/powershell**.

HPE OneView Standard
HPE OneView Standard can be used for inventory, health monitoring, alerting, and reporting without additional fees. It can monitor multiple HPE server generations. The user interface is similar to the HPE OneView Advanced version, but the software-defined functionality is not available. Learn more at **http://www.hpe.com/info/oneview.**

Standard Features

HPE Systems Insight Manager (HPE SIM)

Ideal for environments already using HPE SIM, it allows you to monitor the health of your HPE ProLiant Servers and HPE Integrity Servers. Also provides you with basic support for non-HPE servers. HPE SIM also integrates with Smart Update Manager to provide quick and seamless firmware updates. Learn more at **http://www.hpe.com/info/hpesim.**

Security

- UEFI Secure Boot and Secure Start support
- Tamper-free updates – components digitally signed and verified
- Immutable Silicon Root of Trust
- Ability to rollback firmware
- FIPS 140-2 validation
- Secure erase of NAND/User data
- Common Criteria certification
- TPM (Trusted Platform Module) 1.2 option
- Configurable for PCI DSS compliance
- TPM (Trusted Platform Module) 2.0 option
- Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser
- Bezel Locking Kit option
- Support for Commercial National Security Algorithms (CNSA)
- Chassis Intrusion detection option
- Secure Recovery – recover critical firmware to known good state on detection of compromised firmware

Warranty

This product is covered by a global limited warranty and supported by HPE Services and a worldwide network of Hewlett Packard Enterprise 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 HPE Pointnext operational 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.

Notes: Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response. Warranty repairs may be accomplished through the use of Customer Self Repair (CSR) parts. These parts fall into two categories: 1) Mandatory CSR parts are designed for easy replacement. A travel and labor charge will result when customers decline to replace a Mandatory CSR part; 2) Optional CSR parts are also designed for easy replacement but may involve added complexity. Customers may choose to have Hewlett Packard Enterprise replace Optional CSR parts at no charge. Additional information regarding worldwide limited warranty and technical support is available at: **http://h17007.www1.hpe.com/us/en/enterprise/servers/warranty/**.

Optional Features

Server Management

HPE iLO Advanced

HPE iLO Advanced licenses offer smart remote functionality without compromise, for all HPE ProLiant servers. The license includes the full integrated remote console, virtual keyboard, video, and mouse (KVM), multi-user collaboration, console record and replay, and GUI-based and scripted virtual media and virtual folders. You can also activate the enhanced security and power management functionality.

HPE OneView Advanced

HPE OneView brings a new level of automation to infrastructure management by taking a template driven approach to provisioning, updating, and integrating compute, storage, and networking infrastructure. It provides full-featured licenses which can be purchased for managing Gen8, Gen9 and Gen10 servers.
To learn more visit **http://www.hpe.com/info/oneview**.

HPE InfoSight for Servers

HPE InfoSight for Servers combines the cloud-based machine learning of InfoSight with the health and performance monitoring of Active Health System (AHS) and iLO to optimize performance and predict and prevent problems. The end result is an intelligent environment that modernizes IT operations and enhances the support experience by predicting and preventing the infrastructure issues that lead to application disruptions, wasted IT staff time and missed business opportunities.
Learn more at **https://www.hpe.com/servers/infosight**

HPE Insight Cluster Management Utility (CMU)

HPE Insight Cluster Management Utility is a HyperScale management framework that includes software for the centralized provisioning, management and monitoring of nodes and infrastructure. Learn more at **http://www.hpe.com/info/cmu**.

Accelerator and GPGPU Information

Hewlett Packard Enterprise supports various accelerators on select HPE Proliant servers to support different workloads. The accelerators enable seamless integration of GPU computing with HPE ProLiant servers for high-performance computing, large data center graphics, deep learning and virtual desktop deployments. These accelerators deliver all of the standard benefits of GPU computing while enabling maximum reliability and tight integration with system monitoring and management tools such as HPE Insight Cluster Management Utility.

One Config Simple (SCE)

SCE is a guided self-service tool to help sales and non-technical people provide customers with initial configurations in 3 to 5 minutes. You may then send the configuration on for configuration help, or use in your existing ordering processes. If you require "custom" rack configuration or configuration for products not available in SCE, please contact Hewlett Packard Enterprise Customer Business Center or an Authorized Partner for assistance.
https://h22174.www2.hpe.com/SimplifiedConfig/Welcome#

Optional Features

Rack and Power Infrastructure

The story may end with servers, but it starts with the foundation that makes compute go – and business grow. We've reinvented our entire portfolio of rack and power products to make IT infrastructure more secure, more practical, and more efficient. In other words, we've created a stronger, smarter, and simpler infrastructure to help you get the most out of your IT equipment. As an industry leader, Hewlett Packard Enterprise is uniquely positioned to address the key concerns of power, cooling, cable management and system access.

HPE G2 Advanced and Enterprise Racks are perfect for the server room or today's modern data center with enhanced airflow and thermal management, flexible cable management, and a 10 year Warranty to support higher density computing.

HPE G2 PDUs offer reliable power in flexible form factors that operate at temperatures up to 60°C, include color-coded outlets and load segments and a low-profile design for optimal access to the rack and support for dense rack environments.

HPE Uninterruptible Power Systems are cost-effective power protection for any type workload. Some UPSs include options for remote management and extended runtime modules so you're critical dense data center is covered in power outages.
HPE KVM Solutions include a console and switches designed to work with your server and IT equipment reliably. We've got a cost-effective KVM switch for your first rack and multiple connection IP switches with remote management and security capabilities to keep your data center rack up and running.

Learn more about HPE Racks, KVM, PDUs and UPSs at **HPE Rack and Power Infrastructure**.

Service and Support

HPE Pointnext - Service and Support

Get the most from your HPE Products. Get the expertise you need at every step of your IT journey with **HPE Pointnext Services**. We help you lower your risks and overall costs using automation and methodologies that have been tested and refined by HPE experts through thousands of deployments globally. HPE Pointnext **Advisory Services**, focus on your business outcomes and goals, partnering with you to design your transformation and build a roadmap tuned to your unique challenges. Our **Professional** and **Operational Services** can be leveraged to speed up time-to-production, boost performance and accelerate your business. HPE Pointnext specializes in flawless and on-time implementation, on-budget execution, and creative configurations that get the most out of software and hardware alike

Consume IT on your terms

HPE GreenLake brings the cloud experience directly to your apps and data wherever they are—the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake accelerates digital transformation in a distributed, edge-to-cloud world.

- Get Faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

Recommended Services

HPE Pointnext Tech Care

HPE Pointnext Tech Care is the new operational service experience for HPE products. Tech Care goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Pointext Tech Care has been reimagined from the ground up to support a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Pointnext Tech Care is available in three response levels. Basic, which provides 9x5 business hour availability and a 2 hour response time. Essential which provides a 15 minute response time 24x7 for most enterprise level customers, and Critical which includes a 6 hour repair commitment where available and outage management response for severity 1 incidents.
https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00108652enw

HPE Datacenter Care

HPE Datacenter Care helps customers address the pressing needs of IT today and smoothly transform to a more agile cloud-like IT operations model. We help run and monitor your IT by offloading the day to day routine tasks, helping customers be more predictive and proactive, and saving time with one place to call with for all of their IT.

Partner with an assigned account team backed by local and global experts, access HPE enhanced call experience with priority access, use specialized support for complex, technologies, choose hardware and software support for your devices, implement proactive monitoring to stay ahead of issues , and access HPE IT best practices and IP. HPE Datacenter Care advantage options are available to add to your agreement to give you specialized expertise for performance, security, back up analysis, and much more. Datacenter Care is available as both tailored statement of work and as a packaged service for 3, 4, and 5 year terms.
https://www.hpe.com/us/en/services/datacenter-hybrid-services.html

Service and Support

Other related Services

HPE Server Hardware Installation
Provides for the basic hardware installation of HPE branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner.
https://h20195.www2.hpe.com/v2/Getdocument.aspx?docname=5981-9356enw

HPE Installation and Startup Service
Provides for the installation of your HPE hardware according to product specifications including options. The HPE service delivery technician will connect the product to a LAN as appropriate and enable remote support to allow for automatic case creation for hardware failures. Installation and start up services also includes the installation of one supported operating system type (Windows® or Linux).

DC for Hyperscale
Datacenter Care for Hyperscale is available for Service Providers and HPC customers who use a scale out approach to computing with a high volume homogenous infrastructure and resilient architecture can take advantage of this environment support tailored to their operating model.

HPE Factory Express for Servers and storage
HPE Factory Express offers configuration, customization, integration and deployment services for HPE 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 image loading, asset tagging, and custom packaging. HPE products supported through Factory Express include a wide array of servers and storage: HPE Integrity, HPE ProLiant, HPE Apollo, HPE ProLiant Server Blades, HPE BladeSystem, HPE 9000 servers as well as the MSAxxxx3PAR suite, XP, rackable tape libraries and configurable network switches.

HPE Service Credits
HPE Service Credits offers flexible services and technical skills to meet your changing IT demands. With a menu of service that is tailored to suit your needs, you get additional resources and specialist skills to help you maintain peak performance of your IT. Offered as annual credits, you can plan your budgets while proactively responding to your dynamic business.

HPE Education Services
Keep your IT staff trained making sure they have the right skills to deliver on your business outcomes. Book on a class today and learn how to get the most from your technology investment. **http://www.hpe.com/ww/learn**

Service and Support

HPE Support Center

The HPE Support Center is a personalized online support portal with access to information, tools and experts to support HPE business products. Submit support cases online, chat with HPE experts, access support resources or collaborate with peers. Learn more **http://www.hpe.com/support/hpesc**.

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 personalized IT support anywhere, anytime.
HPE Insight Remote Support and HPE Support Center are available at no additional cost with a HPE warranty, HPE Support Service or HPE contractual support agreement.

Notes: *HPE Support Center Mobile App is subject to local availability.
For more information: **http://www.hpe.com/services**.
Notes: HPE ProLiant DL385 Gen10 Plus Server is covered under the HPE Service Contract applied to the HPE ProLiant Server. No separate HPE support services need to be purchased.

Warranty and Support Services will extend to include HPE options configured with your server or storage device. The price of support service is not impacted by configuration details. HPE sourced options that are compatible with your product will be covered under your server support at the same level of coverage allowing you to upgrade freely. Installation for HPE options is available as needed. To keep support costs low for everyone, some high value options will require additional support. Additional support is only required on select high value workload accelerators, fibre switches, InfiniBand and UPS batteries over 12KVA. See the specific high value options that require additional support **here**.

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 as part of these services.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Packard Enterprise due to malfunction.

Pre-configured Models

Powered by 2nd Generation Intel Processors

Worldwide & Japan BTO Networking Choice (NC) Models			
SKU Number	P20182-B21 P20182-291	P20172-B21 P20172-291	P20174-B21 P20174-291
Model Name	HPE ProLiant DL380 Gen10 3204 1.9GHz 6-core 1P 16GB-R S100i NC 8LFF 500W PS Server	HPE ProLiant DL380 Gen10 4208 2.1GHz 8-core 1P 32GB-R P816i-a NC 12LFF 800W RPS Server	HPE ProLiant DL380 Gen10 4210 2.2GHz 10-core 1P 32GB-R P408i-a NC 8SFF 500W PS Server
Chassis	8LFF NC Chassis (P19717-B21)	12LFF NC Chassis (P19718-B21)	8SFF NC Chassis (P19720-B21)
Processor	3204 (6 core, 1.9GHz, 85W)	4208 (8 core, 2.1GHz, 85W)	4210 (10 core, 2.2GHz, 85W)
Number of Processors	One with standard heatsink	One with standard heatsink	One with standard heatsink
Memory	16 GB RDIMM 2R 2933 MT/s (1x 16 GB) **Notes:** Runs at 2133MT/s due to processor limitation	32 GB RDIMM 2R 2933MT/s (1x 32 GB) **Notes:** Runs at 2400MT/s due to processor limitation	32 GB RDIMM 2R 2933 MT/s (1x 32GB) **Notes:** Runs at 2400MT/s due to processor limitation
Network Controller	HPE Ethernet 1Gb 4-port FLR-T I350-T4V2 Adapter (665240-B21) plus optional stand-up card **Notes:** No embedded networking	HPE Ethernet 1Gb 4-port FLR-T I350-T4V2 Adapter (665240-B21) plus optional stand-up card **Notes:** No embedded networking	HPE Ethernet 1Gb 4-port FLR-T I350-T4V2 Adapter (665240-B21) plus optional stand-up card **Notes:** No embedded networking
Storage Controller	S100i embedded SW RAID with 14 SATA ports (12-ports accessible)	P816i-a/4GB with Smart Storage Battery	P408i-a/2GB with Smart Storage Battery
Hard Drive	None Included	None Included	None Included
Internal Storage	8 LFF chassis, with 2 SFF bays optional (upgradeable to 15LFF with 4LFF mid and 3LFF rear + 2SFF rear)	12 LFF chassis, with 2 SFF bays optional (upgradeable to 19LFF with 4LFF mid and 3LFF rear + 2SFF rear)	8 SFF Chassis (upgradeable to 24 SFF front + 6SFF rear)
PCIe Slots	3-slots (x8, x16, x8 with dual m.2) as standard; upgradeable to 8-slots in a 2 processor configuration		
Power Supply	1x HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	2x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	1x HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
Fans	6 - Standard	6 - Performance	4 - Standard
Management	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced, HPE iLO Advanced Premium Security Edition and HPE OneView Advanced (require licenses)		
Rail Kit	LFF Easy Install Rail Kit; cable management arm not included	LFF Easy Install Rail Kit with Cable Management Arm	SFF Easy Install Rail Kit with Cable Management Arm
Energy Star	Energy Star 3.0		
Form Factor	2U Rack		
Warranty	3-year parts, 3-year labor, 3-year onsite support with next business day response.		

Notes:
- Network Choice (NC) models do not include an embedded NIC. A pre-selected FlexibleLOM is included in the configuration with additional options available via stand-up card NIC adapters listed in the "HPE Networking" section.
- UEFI is the standard default for all SMB models.

Country Code Key

- -B21 = Worldwide (excl. Japan and PRC)
- -291 = Japan

Pre-configured Models

Powered by 2nd Generation Intel Xeon Processors

SMB Models

- New SMB focused offers regionally released as "Smart Buy Express" in the U.S. and Canada, "Top Value" in Europe, and "Intelligent Buy" in Asia Pacific and Japan".
- SMB Models ship with the configurations below. Options can be selected from the Core or Additional options section of this QuickSpecs.
- Hewlett Packard Enterprise does not provide factory integration of options into SMB Models. Any additional options purchased will be shipped separately and would need to be field integrated.
- If you desire to custom configure an SMB Model please consult your preferred reseller.

SMB Networking Choice (NC) Models			
SKU Number	P23465-B21 P23465-291	P24840-B21 P24840-291	P24841-B21 P24841-291
Model Name	HPE ProLiant DL380 Gen10 4208 2.1GHz 8-core 1P 32GB-R P408i-a NC 8SFF 500W PS Server	HPE ProLiant DL380 Gen10 4210R 2.4GHz 10-core 1P 32GB-R P408i-a NC 24SFF 800W PS Server	HPE ProLiant DL380 Gen10 4210R 2.4GHz 10-core 1P 32GB-R P408i-a NC 8SFF 800W PS Server
Chassis	8SFF NC Chassis (P19720-B21)	24SFF NC Chassis (P19719-B21)	8SFF NC Chassis (P19720-B21)
Processor	4208 (2.1GHz, 8 core, 85W)	4210R (2.4GHz, 10 core, 100W)	4210R (2.4GHz, 10 core, 100W)
Number of Processors	One with standard heatsink	One with standard heatsink	One with standard heatsink
Memory	32 GB RDIMM 2R 2933 MT/s (1x 32 GB; P00924-B21) **Notes:** Runs at 2400 MT/s due to processor limitation.	32 GB RDIMM 2R 2933 MT/s (1x 32 GB; P00924-B21) **Notes:** Runs at 2400 MT/s due to processor limitation.	32 GB RDIMM 2R 2933 MT/s (1x 32 GB; P00924-B21) **Notes:** Runs at 2400 MT/s due to processor limitation.
Network Controller	HPE Ethernet 1Gb 4-port FLR-T I350-T4V2 Adapter (665240-B21) plus optional stand-up card **Notes:** No embedded networking	HPE Ethernet 1Gb 4-port FLR-T I350-T4V2 Adapter (665240-B21) plus optional stand-up card **Notes:** No embedded networking	HPE Ethernet 1Gb 4-port FLR-T I350-T4V2 Adapter (665240-B21) plus optional stand-up card **Notes:** No embedded networking
Storage Controller	P408i-a w/2GB cache (804331-B21) **Notes:** 8-Port modular Smart Array. Smart Storage battery (P01366-B21) included.	P408i-a w/2GB cache (804331-B21) + HPE 12Gb SAS Expander Card Kit w/ cables (870549-B21) **Notes:** 8-Port modular Smart Array. Smart Storage battery (P01366-B21) included.	P408i-a w/2GB cache (804331-B21) **Notes:** 8-Port modular Smart Array. Smart Storage battery (P01366-B21) included.
Hard Drive	None ship as standard		
Internal Storage	8 SFF (upgradeable to 24 SFF front + 6SFF rear)	24 SFF (upgradeable + 6SFF rear)	8 SFF (upgradeable to 24 SFF front + 6SFF rear)
PCIe Slots	3-slots (x8, x16, x8 with dual m.2) as standard; upgradeable to 8-slots in a 2 processor configuration		
Power Supply	1x HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit (865408-B21)	1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit (865414-B21)	1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit (865414-B21)
Fans	4-standard fans	6 - Performance	4-standard fans
Management	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced, HPE iLO Advanced Premium Security Edition and HPE OneView Advanced (require licenses)		
Rail Kit	SFF Easy install rail kit (73360-B21) with Cable Management Arm (733664-B21)		
Energy Star	3.0 Certified		
Form Factor	2U Rack		
Warranty	3-year parts, 3-year labor, 3-year onsite support with next business day response.		

Pre-configured Models

Notes:
- Network Choice (NC) models do not include an embedded NIC. A pre-selected FlexibleLOM is included in the configuration with additional options available via stand-up card NIC adapters listed in the "HPE Networking" section.
- UEFI is the standard default for all SMB models.

Country Code Key

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- -291 = Japan

SKU Number	P24842-B21 P24842-291	P24848-B21 / P40425-B21 P24848-291 / P40425-291	P40717-B21 P40717-291
Model Name	HPE ProLiant DL380 Gen10 4214R 2.4GHz 12-core 1P 32GB-R P408i-a NC 8SFF 800W PS Server	HPE ProLiant DL380 Gen10 4215R 3.2GHz 8-core 1P 32GB-R S100i NC 8SFF 800W PS Server	HPE ProLiant DL380 Gen10 4215R 3.2GHz 8-core 1P 32GB-R P408i-a NC 8SFF 800W PS Server
Chassis	8SFF NC Chassis (P19720-B21)		
Processor	4214R (2.4GHz, 12 core, 100W)	4215R (3.2GHz, 8 core, 130W)	4215R (3.2GHz, 8 core, 130W)
Number of Processors	One with standard heatsink	One with performance heatsink	One with performance heatsink
Memory	32 GB RDIMM 2R 2933 MT/s (1x 32 GB; P00924-B21) **Notes:** Runs at 2400 MT/s due to processor limitation.	32 GB RDIMM 2R 2933 MT/s (1x 32 GB; P00924-B21) **Notes:** Runs at 2400 MT/s due to processor limitation.	32 GB RDIMM 2R 2933 MT/s (1x 32 GB; P00924-B21) **Notes:** Runs at 2400 MT/s due to processor limitation.
Network Controller	HPE Ethernet 1Gb 4-port FLR-T I350-T4V2 Adapter (665240-B21) plus optional stand-up card **Notes:** No embedded networking	P24848-B21 / 291 HPE Ethernet 10Gb 2-port FLR-SFP+ X710-DA2 Adapter (727054-B21) plus optional stand-up card **Notes:** No embedded networking	
		P40425-B21 /291 HPE Ethernet 10Gb 2-port FLR-SFP+ BCM57414 Adapter (P08440-B21) plus optional stand-up card **Notes:** No embedded networking	HPE Ethernet 10Gb 2-port FLR-SFP+ BCM57414 Adapter (P08440-B21) plus optional stand-up card **Notes:** No embedded networking
Storage Controller	P408i-a w/2GB cache (804331-B21) **Notes:** – 8-Port modular Smart Array. – Smart Storage battery (P01366-B21) included.	S100i embedded SW RAID with 14 SATA ports (12-ports accessible)	P408i-a w/2GB cache (804331-B21) **Notes:** – 8-Port modular Smart Array. Smart Storage battery (P01366-B21) included.
Hard Drive	None ship as standard		
Internal Storage	8 SFF (upgradeable to 24 SFF front + 6SFF rear)		
PCIe Slots	3-slots (x8, x16, x8 with dual m.2) as standard; upgradeable to 8-slots in a 2 processor configuration		
Power Supply	1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit (865414-B21)		
Fans	4-standard fans		
Management	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced, HPE iLO Advanced Premium Security Edition and HPE OneView Advanced (require licenses)		
Rail Kit	SFF Easy install rail kit (73360-B21) with Cable Management Arm (733664-B21)		
Energy Star	3.0 Certified		
Form Factor	2U Rack		
Warranty	3-year parts, 3-year labor, 3-year onsite support with next business day response.		

Pre-configured Models

Notes:
- Network Choice (NC) models do not include an embedded NIC. A pre-selected FlexibleLOM is included in the configuration with additional options available via stand-up card NIC adapters listed in the "HPE Networking" section.
- UEFI is the standard default for all SMB models.

Country Code Key

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- -291 = Japan

SMB Networking Choice (NC) Models		
SKU Number	P36135-B21 P36135-291	P24844-B21 P24844-291
Model Name	HPE ProLiant DL380 Gen10 5218R 2.1GHz 20-core 1P 32GB-R S100i NC 8SFF 800W PS Server	HPE ProLiant DL380 Gen10 5218R 2.1GHz 20-core 1P 32GB-R S100i NC 8SFF 800W PS Server
Chassis	8SFF NC Chassis (P19720-B21)	
Processor	5218R (2.1GHz, 20 core, 125W)	
Number of Processors	One with standard heatsink	
Memory	32 GB RDIMM 2R 2933 MT/s (1x 32 GB; P00924-B21) **Notes:** Runs at 2666 MT/s due to processor limitation.	
Network Controller	P36135-B21 / 291 HPE Ethernet 10Gb 2-port FLR-T BCM57416 Adapter (817721-B21) plus optional stand-up card **Notes:** No embedded networking	P24844-B21 / 291 HPE Ethernet 10Gb 2-port FLR-SFP+ X710-DA2 Adapter (727054-B21) plus optional stand-up card **Notes:** No embedded networking
Storage Controller	S100i embedded SW RAID with 14 SATA ports (12-ports accessible)	
Hard Drive	None ship as standard	
Internal Storage	8 SFF (upgradeable to 24 SFF front + 6SFF rear)	
PCIe Slots	3-slots (x8, x16, x8 with dual m.2) as standard; upgradeable to 8-slots in a 2 processor configuration	
Power Supply	1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit (865414-B21)	
Fans	4-standard fans	
Management	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced, HPE iLO Advanced Premium Security Edition and HPE OneView Advanced (require licenses)	
Rail Kit	SFF Easy install rail kit (73360-B21) with Cable Management Arm (733664-B21)	
Energy Star	3.0 Certified	
Form Factor	2U Rack	
Warranty	3-year parts, 3-year labor, 3-year onsite support with next business day response.	

Notes:
- Network Choice (NC) models do not include an embedded NIC. A pre-selected FlexibleLOM is included in the configuration with additional options available via stand-up card NIC adapters listed in the "HPE Networking" section.
- UEFI is the standard default for all SMB models.

Country Code Key

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- -291 = Japan

Pre-configured Models

SMB Networking Choice (NC) Models			
SKU Number	P24845-B21/ P40422-B21 P24845-291/ P40422-291	P24846-B21/ P40423-B21 P24846-291/ P40423-291	P24847-B21/ P40424-B21 P24847-291/ P40424-291
Model Name	HPE ProLiant DL380 Gen10 5222 3.8GHz 4-core 1P 32GB-R S100i NC 8SFF 800W PS Server	HPE ProLiant DL380 Gen10 6226R 2.9GHz 16-core 1P 32GB-R S100i NC 8SFF 800W PS Server	HPE ProLiant DL380 Gen10 6234 3.3GHz 8-core 1P 32GB-R S100i NC 8SFF 800W PS Server
Chassis	8SFF NC Chassis (P19720-B21)		
Processor	5222 (3.8GHz, 4 core, 105W)	6226R (2.9GHz, 16 core, 150W)	6234 (3.3GHz, 8 core, 130W)
Number of Processors	One with performance heatsink	One with performance heatsink	One with performance heatsink
Memory	32 GB RDIMM 2R 2933 MT/s (1x 32 GB; P00924-B21)	32 GB RDIMM 2R 2933 MT/s (1x 32 GB; P00924-B21)	32 GB RDIMM 2R 2933 MT/s (1x 32 GB; P00924-B21)
Network Controller	P24845-B21 / 291, P24846-B21 / 291, P24847-B21 / 291 HPE Ethernet 10Gb 2-port FLR-SFP+ X710-DA2 Adapter (727054-B21) plus optional stand-up card **Notes:** No embedded networking		
	P40422-B21 / 291,, P40423-B21 / 291, P40424-B21 / 291 HPE Ethernet 10Gb 2-port FLR-SFP+ BCM57414 Adapter (P08440-B21) plus optional stand-up card **Notes:** No embedded networking		
Storage Controller	S100i embedded SW RAID with 14 SATA ports (12-ports accessible)		
Hard Drive	None ship as standard		
Internal Storage	8 SFF (upgradeable to 24 SFF front + 6SFF rear)		
PCIe Slots	3-slots (x8, x16, x8 with dual m.2) as standard; upgradeable to 8-slots in a 2 processor configuration		
Power Supply	1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit (865414-B21)		
Fans	4-standard fans		
Management	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced, HPE iLO Advanced Premium Security Edition and HPE OneView Advanced (require licenses)		
Rail Kit	SFF Easy install rail kit (73360-B21) with Cable Management Arm (733664-B21)		
Energy Star	3.0 Certified		
Form Factor	2U Rack		
Warranty	3-year parts, 3-year labor, 3-year onsite support with next business day response.		

Notes:

- Network Choice (NC) models do not include an embedded NIC. A pre-selected FlexibleLOM is included in the configuration with additional options available via stand-up card NIC adapters listed in the "HPE Networking" section.
- UEFI is the standard default for all SMB models.

Country Code Key

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Pre-configured Models

SMB Networking Choice (NC) Models		
SKU Number	P24849-B21/ P40426-B21 P24849-291/ P40426-291	P24850-B21/ P40427-B21 P24850-291/ P40427-291
Model Name	HPE ProLiant DL380 Gen10 6248R 3.0GHz 24-core 1P 32GB-R S100i NC 8SFF 800W PS Server	HPE ProLiant DL380 Gen10 6250 3.9GHz 8-core 1P 32GB-R S100i NC 8SFF 800W PS Server
Chassis	8SFF	
Processor	6248R (3.0GHz, 24 core, 205W)	6250 (3.9GHz, 8 core, 185W) [1]
Number of Processors	One with performance heatsink	One with performance heatsink
Memory	32 GB RDIMM 2R 2933 MT/s (1x 32 GB; P00924-B21)	
Network Controller	P24849-B21 / 291, P24850-B21 / 291 HPE Ethernet 10Gb 2-port FLR-SFP+ X710-DA2 Adapter (727054-B21) plus optional stand-up card **Notes:** No embedded networking	
	P40426-B21 / 291, P40427-B21 / 291 HPE Ethernet 10Gb 2-port FLR-SFP+ BCM57414 Adapter (P08440-B21) plus optional stand-up card **Notes:** No embedded networking	
Storage Controller	S100i embedded SW RAID with 14 SATA ports (12-ports accessible)	
Hard Drive	None ship as standard	
Internal Storage	8 SFF Chassis (upgradeable to 24 SFF front + 6SFF rear)	
PCIe Slots	3-slots (x8, x16, x8 with dual m.2) as standard; upgradeable to 8-slots in a 2 processor configuration	
Power Supply	1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit (865414-B21)	
Fans	4-standard fans	6-high performance fans
Management	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced, HPE iLO Advanced Premium Security Edition and HPE OneView Advanced (require licenses)	
Rail Kit	SFF Easy install rail kit (73360-B21) with Cable Management Arm (733664-B21)	
Energy Star	3.0 Certified	
Form Factor	2U Rack	
Warranty	3-year parts, 3-year labor, 3-year onsite support with next business day response.	

Notes:

- Network Choice (NC) models do not include an embedded NIC. A pre-selected FlexibleLOM is included in the configuration with additional options available via stand-up card NIC adapters listed in the "HPE Networking" section.
- UEFI is the standard default for all SMB models.
- [1]Not supported with NVMe SSDs, nor 2SFF HDD kits (826687-B21; 826688-B21) installed in rear, nor GPUs, nor 4LFF mid-tray. Detailed configuration and facilities requirements can be found under "Intel Xeon Scalable Series 6250, 6250L, and 6256 Configuration and Facilities Requirements Matrix" with this document.

Country Code Key

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- -291 = Japan

Pre-configured Models

SMB Networking Choice (NC) Models			
SKU Number	P20245-B21/ P40428-B21 P20245-291/ P40428-291	P20248-B21/ P39380-B21 P20248-291/ P39380-291	P20249-B21 P20249-291
Model Name	HPE ProLiant DL380 Gen10 6242 2.8GHz 16-core 1P 32GB-R P408i-a NC 8SFF 800W PS Server	HPE ProLiant DL380 Gen10 5220 2.2GHz 18-core 1P 32GB-R P408i-a NC 8SFF 800W PS Server	HPE ProLiant DL380 Gen10 5218 2.3GHz 16-core 1P 32GB-R P408i-a NC 8SFF 800W PS Server
Chassis	8SFF		
Processor	6242 (16C, 2.8GHz, 150W)	5220 (18C, 2.2GHz, 125W)	5218 (16 core, 2.3 GHz, 125W)
Number of Processors	1	1	1
Memory	32 GB RDIMM 2R 2933 MT/s (1x 32 GB)	32 GB RDIMM 2R 2933 MT/s (1x 32 GB) **Notes:** Runs at 2666 MT/s due to processor limitation.	32 GB RDIMM 2R 2933 MT/s (1x 32 GB) **Notes:** Runs at 2666 MT/s due to processor limitation.
Network Controller	P20245-B21 / 291 HPE Ethernet 10/25Gb 2-port FLR-SFP28 MCX4121A-ACFT Adapter (817749-B21) plus optional stand-up card **Notes:** No embedded networking	P20248-B21 /291 HPE Ethernet 10/25Gb 2-port FLR-SFP28 MCX4121A-ACFT Adapter (817749-B21) plus optional stand-up card **Notes:** No embedded networking	HPE Ethernet 1Gb 4-port FLR-T I350-T4V2 Adapter (665240-B21) plus optional stand-up card **Notes:** No embedded networking
	P40428-B21 / 291 HPE Ethernet 10/25Gb 2-port FLR-SFP28 BCM57414 Adapter (817709-B21) plus optional stand-up card **Notes:** No embedded networking	P39380-B21 / 291 HPE Ethernet 10/25Gb 2-port FLR-SFP28 BCM57414 Adapter (817709-B21) plus optional stand-up card **Notes:** No embedded networking	
Storage Controller	P408i-a w/2GB cache **Notes:** - 8-Port modular Smart Array. - Smart Storage battery included.		
Hard Drive	None ship as standard		
Internal Storage	8 SFF Chassis (upgradeable to 24 SFF front + 6SFF rear)		
PCIe Slots	3-slots (x8, x16, x8 with dual m.2) as standard; upgradeable to 8-slots in a 2 processor configuration	3-slots (x8, x16, x8 with dual m.2) as standard; upgradeable to 8-slots in a 2 processor configuration	3-slots (x8, x16, x8 with dual m.2) as standard; upgradeable to 8-slots in a 2 processor configuration
Power Supply	1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	1x HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit
Fans	4-standard fans	4-standard fans	6-standard fans
Management	HPE iLO Standard with Intelligent Provisioning (embedded), HPE OneView Standard (requires download); HPE iLO Advanced, HPE iLO Advanced Premium Security Edition and HPE OneView Advanced (require licenses)		
Rail Kit	SFF Easy install rails with Cable Management Arm		
Energy Star	3.0 Certified		
Form Factor	2U Rack		
Warranty	3-year parts, 3-year labor, 3-year onsite support with next business day response.		

Notes:
- Network Choice (NC) models do not include an embedded NIC. A pre-selected FlexibleLOM is included in the configuration with additional options available via stand-up card NIC adapters listed in the “HPE Networking” section.
- UEFI is the standard default for all SMB models.

Pre-configured Models

Country Code Key

- -B21 = Worldwide (excl. Japan and PRC)
- -291 = Japan

Configuration Information

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

- Factory Integrated Models must start with a CTO Server.
- FIO indicates that this option is only available as a factory installable option.
- All Factory Integrated Models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the server.
- Some options may not be integrated at the factory. Contact your local sales representative for additional information.

Step 1: Base Configuration (choose one (1) of the following eight (8) configurable server models from the tables below)
The below (4) CTO server models denoted with "NC" in the SKU description, provide flexibility in the networking choice and require a FlexibleLOM Adapter or a validated alternative from the "HPE Networking" section be selected.

Networking Choice CTO Server Models	HPE ProLiant DL380 Gen10 8LFF NC CTO Server	HPE ProLiant DL380 Gen10 12LFF NC CTO Server	HPE ProLiant DL380 Gen10 8SFF NC CTO Server	HPE ProLiant DL380 Gen10 24SFF NC CTO Server
SKU Number	P19717-B21	P19718-B21	P19720-B21	P19719-B21
HPE Trusted Supply Chain	P36394-B21 Optional			
TAA Instruction SKU	P19713-B21 Optional			
Processor	Not included as standard	Not included as standard	Not included as standard	Not included as standard
DIMM Slots	24-DIMM slots	24-DIMM slots	24-DIMM slots	24-DIMM slots
Storage Controller	Embedded SW RAID with 14 SATA ports (12-ports accessible), choice of HPE modular Smart Array and PCIe plug-in controller			
PCIe	Three standard in primary riser (with dual M.2 support)			
Drive Cage - included	8 LFF	12 LFF	8 SFF	24 SFF
Network Controller	Choice of either HPE FlexibleLOM or select stand-up network adapters for primary networking selection plus additional/optional stand-up network adapters **Notes:** No embedded networking			
Fans	6-Standard	6-Performance	4-Standard	6-Performance
Management	HPE iLO with Intelligent Provisioning (standard), iLO Advances and OneView (optional)			
USB	1x 3.0 standard plus iLO front service port	None as standard	1x 3.0 standard plus iLO front service port	1x 3.0 standard plus iLO front service port

Notes:

- Network Choice (NC) server models require a networking selection of a FlexibleLOM from the options listed in the "FlexibleLOM Adapter" section or select network adapters in the "HPE Networking" section.
- HPE Trusted Supply Chain (P36394-B21) is an optional security upgrade intended for agencies and regulated industries needing enhanced security and compliance needs. Applying this option to a DL380 Gen10 CTO server ensures it is built in the USA in a secured facility by vetted HPE personnel assigned to the manufacturing processes. A multitude of checkpoints/inspections for malicious microcode and counterfeit parts are performed throughout the server build, and additional safeguards are put in place against cyber-exploits throughout the server lifecycle. The HPE ProLiant DL380 Gen10 server is re-branded as a HPE ProLiant DL380T Gen10 to denote the HPE Trusted Supply Chain security enhancements. The DL380T Gen10 is currently supported in the USA, exclusively, and is Trade Agreement Act (TAA) compliant. See "HPE Security" section within this document for more detail and learn more at **http://www.hpe.com/security**
- HPE offers multiple Trade Agreement Act (TAA) compliant configurations to meet the needs of US Federal Government customers. These products are either manufactured or substantially transformed in a designated country. TAA compliance is only provided when HPE options are included as part of factory integrated orders (CTO).
- To select a TAA model from the above, first select a Networking Choice CTO server model, then add the TAA Instruction SKU (P19713-B21).
- The HPE ProLiant DL380 Gen10 12 LFF CTO Server ships with the cable required for the P816i-a installation.
- All CTO servers are Energy Star 3.0 compliant.

Configuration Information

The below (4) CTO server models come standard with an embedded HPE 1Gb Ethernet 4-port 331i adapter.

Embedded LOM CTO Server Models	HPE ProLiant DL380 Gen10 8LFF CTO Server	HPE ProLiant DL380 Gen10 12LFF CTO Server	HPE ProLiant DL380 Gen10 8SFF CTO Server	HPE ProLiant DL380 Gen10 24SFF CTO Server
SKU Number	868706-B21	868705-B21	868703-B21	868704-B21
HPE Trusted Supply Chain	P36394-B21 Optional			
TAA Instruction SKU	P19713-B21 Optional			
Processor	Not included as standard	Not included as standard	Not included as standard	Not included as standard
DIMM Slots	24-DIMM slots	24-DIMM slots	24-DIMM slots	24-DIMM slots
Storage Controller	Embedded SW RAID with 14 SATA ports (12-ports accessible), choice of HPE modular Smart Array and PCIe plug-in controller			
PCIe	Three standard in primary riser (with dual M.2 support)			
Drive Cage - included	8 LFF	12 LFF	8 SFF	24 SFF
Network Controller	HPE 1Gb Ethernet 4-Port 331i Adapter plus optional HPE FlexibleLOM or stand up card			
Fans	6-Standard	6-Performance	4-Standard	6-Performance
Management	HPE iLO with Intelligent Provisioning (standard), iLO Advances and OneView (optional)			
USB	1x 3.0 standard plus iLO front service port	None as standard	1x 3.0 standard plus iLO front service port	1x 3.0 standard plus iLO front service port

Notes:

- HPE Trusted Supply Chain (P36394-B21) is an optional security upgrade intended for agencies and regulated industries needing enhanced security and compliance needs. Applying this option to a DL380 Gen10 CTO server ensures it is built in the USA in a secured facility by vetted HPE personnel assigned to the manufacturing processes. A multitude of checkpoints/inspections for malicious microcode and counterfeit parts are performed throughout the server build with additional safeguards in place against cyber-exploits throughout the server lifecycle. The HPE ProLiant DL380 Gen10 server is re-branded as a HPE ProLiant DL380T Gen10 Server to denote the HPE Trusted Supply Chain security enhancements. The DL380T Gen10 is currently supported in the USA, exclusively, and is Trade Agreement Act (TAA) compliant. See "HPE Security" section within this document for more detail and learn more at **http://www.hpe.com/security**
- HPE offers multiple Trade Agreement Act (TAA) compliant configurations to meet the needs of US Federal Government customers. These products are either manufactured or substantially transformed in a designated country. TAA compliance is only provided when HPE options are included as part of factory integrated orders (CTO).
- To select a TAA model from the above, first select an Embedded LOM CTO server model, then add the TAA Instruction SKU (P19713-B21)
- The HPE ProLiant DL380 Gen10 12 LFF CTO Server ships with the cable required for the P816i-a installation.
- All CTO servers are Energy Star 3.0 compliant.

CTO Server	**8 SFF CTO Chassis**	**24 SFF CTO Chassis**	**8 LFF CTO Chassis**	**12 LFF CTO Chassis**
Included Drive Cage	8 SFF SAS/SATA	3x 8 SFF SAS/SATA	8 LFF + UMB	12 LFF Chassis
Universal Media Bay	1 Optional	Not available	1 Included	Not available
ODD	1 Optional with UMB	Not available	1 Optional	Not available
8 SFF Drive Cage	Up to 2 Optional	Not available	Not available	Not available
8 NVME/SAS Bay	Up to 3 Optional	Not available	Not available	Not available
8 NVME Cage	Up to 3 Optional	Not available	Not available	Not available
2 SFF SAS/SATA (Front)	1 Optional with UMB	Not available	1 Optional	Not available
2 SFF SAS/SATA (Rear)	1 Optional	1 Optional	1 Optional	1 Optional
2 NVMe (Front)	1 Optional with UMB	Not available	1 Optional	Not available
4 LFF Mid-plane	Not available	Not available	1 Optional	1 Optional
3 LFF Rear	Not available	Not available	1 Optional	1 Optional

Configuration Information

Notes:
- This applies to CTO configurations; field upgrades may differ depending on field configuration.
- 3x 8 NVMe option on SFF will only allow for partial population of Box1 to max 20 NVMe.

Step 2: Choose Required Options (only one of the following unless otherwise noted)

Please select one –L21 processor required below.

For second processor, please select the same processor model with –B21 from Core Options – HPE Processors section.

For example: first processor, select 874752-L21 then for second processor, select 874752-B21.

Notes:
- 8SFF CTO 1P models ship with 4 standard fans. The second processor option kit contains 2 additional fans. 12 LFF and 24 SFF CTO Servers ship with 6 High performance fans included; 8LFF CTO Servers ship with 6 Standard fans included. High performance fan kit is available to meet ambient temperature environments and are required for rear drives or NVMe configurations.
- Maximum memory capacity per processor is dependent on processor models. All processors support up to 768 GB max memory per processor except "M" model processors will support up to 1.5 TB max memory per processor.
- Mixing of 2 different processor models are NOT allowed.
- DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.
- Processors with 130W or higher will ship with the High Performance heat sink plus SKUs 8156, 6128, 5122 as noted below. All other will processors will ship with the Standard heat sink.

Step 2a: Choose Processors

Processor Option Kits (Required Processor)

2nd Generation Intel Xeon-Platinum

Notes:
- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported.
- All the below models ships with Performance Heatsink.

Intel Xeon-Platinum 8280L (2.7GHz/28-core/205W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02540-L21
Intel Xeon-Platinum 8280 (2.7GHz/28-core/205W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02527-L21
Intel Xeon-Platinum 8276L (2.2GHz/28-core/165W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02539-L21
Intel Xeon-Platinum 8276 (2.2GHz/28-core/165W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02526-L21
Intel Xeon-Platinum 8270 (2.7GHz/26-core/205W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02525-L21
Intel Xeon-Platinum 8268 (2.9GHz/24-core/205W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02524-L21
Intel Xeon-Platinum 8260Y (2.4GHz/24-core/165W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02508-L21
Intel Xeon-Platinum 8260L (2.4GHz/24-core/165W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02538-L21
Intel Xeon-Platinum 8260 (2.4GHz/24-core/165W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02521-L21
Intel Xeon-Platinum 8256 (3.8GHz/4-core/105W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02519-L21
Intel Xeon-Platinum 8253 (2.2GHz/16-core/125W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02518-L21

Notes: Do not ship with Performance Heatsink.

2nd Generation Intel Xeon-Gold

Notes:
- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported.
- All the below models ship with Performance Heatsink.

Intel Xeon-Gold 6262V (1.9GHz/24-core/135W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P11822-L21
Intel Xeon-Gold 6258R (2.7GHz/28-core/205W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P24474-L21
Intel Xeon-Gold 6256 (3.6GHz/12-core/205W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P24476-L21

Configuration Information

Notes:
- Requires high performance fan kit (867810-B21), unless 24SFF or 12LFF server models are selected, which provide high performance fans as the default.
- Not supported with NVMe SSDs, nor 2SFF HDD kits (826687-B21; 826688-B21) installed in rear, nor GPUs, nor 4LFF mid-tray. Detailed configuration and facilities requirements can be found under "Intel Xeon Scalable Series 6250, 6250L, and 6256 Configuration and Facilities Requirements Matrix" with this document.

Intel Xeon-Gold 6254 (3.1GHz/18-core/200W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02517-L21
Intel Xeon-Gold 6252N (2.3GHz/24-core/150W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P11829-L21
Intel Xeon-Gold 6252 (2.1GHz/24-core/150W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02516-L21
Intel Xeon-Gold 6250L (3.9GHz/8-core/185W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P28387-L21

Notes:
- Requires high performance fan kit (867810-B21), unless 24SFF or 12LFF server models are selected, which provide high performance fans as the default.
- Not supported with NVMe SSDs, nor 2SFF HDD kits (826687-B21; 826688-B21) installed in rear, nor GPUs, nor 4LFF mid-tray. Detailed configuration and facilities requirements can be found under "Intel Xeon Scalable Series 6250, 6250L, and 6256 Configuration and Facilities Requirements Matrix" with this document.

Intel Xeon-Gold 6250 (3.9GHz/8-core/185W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P24475-L21

Notes:
- Requires high performance fan kit (867810-B21), unless 24SFF or 12LFF server models are selected, which provide high performance fans as the default.
- Not supported with NVMe SSDs, nor 2SFF HDD kits (826687-B21; 826688-B21) installed in rear, nor GPUs, nor 4LFF mid-tray. Detailed configuration and facilities requirements can be found under "Intel Xeon Scalable Series 6250, 6250L, and 6256 Configuration and Facilities Requirements Matrix" with this document.

Intel Xeon-Gold 6248R (3.0GHz/24-core/205W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P24473-L21
Intel Xeon-Gold 6248 (2.5GHz/20-core/150W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02514-L21
Intel Xeon-Gold 6246R (3.4GHz/16-core/205W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P24472-L21
Intel Xeon-Gold 6246 (3.3GHz/12-core/165W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P15758-L21
Intel Xeon-Gold 6244 (3.6GHz/8-core/150W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02512-L21
Intel Xeon-Gold 6242R (3.1GHz/20-core/205W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P24471-L21
Intel Xeon-Gold 6242 (2.8GHz/16-core/150W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02510-L21
Intel Xeon-Gold 6240R (2.4GHz/24-core/165W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P24470-L21
Intel Xeon-Gold 6240L (2.6GHz/18-core/150W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02537-L21
Intel Xeon-Gold 6240Y (2.6GHz/18-14-8-core/150W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02507-L21
Intel Xeon-Gold 6240 (2.6GHz/18-core/150W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02509-L21
Intel Xeon-Gold 6238R (2.2GHz/28-core/165W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P24469-L21
Intel Xeon-Gold 6238L (2.1GHz/22-core/140W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02536-L21
Intel Xeon-Gold 6238 (2.1GHz/22-core/140W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02504-L21
Intel Xeon-Gold 6234 (3.3GHz/8-core/130W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02503-L21
Intel Xeon-Gold 6230R (2.1GHz/26-core/150W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P24468-L21
Intel Xeon-Gold 6230 (2.1GHz/20-core/125W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02502-L21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 6230N (2.3GHz/20-core/125W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P11830-L21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 6226R (2.9GHz/16-core/150W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P24467-L21

Configuration Information

Intel Xeon-Gold 6226 (2.7GHz/12-core/125W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P02501-L21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 6222V (1.8GHz/20-core/115W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P11823-L21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 6212U (2.4GHz/24-core/165W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P11825-L21

Notes: 2-processor configurations NOT supported with this processor; secondary and tertiary risers not supported

Intel Xeon-Gold 6210U (2.5GHz/20-core/150W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P11826-L21

Notes: 2-processor configurations NOT supported with this processor; secondary and tertiary risers not supported

Intel Xeon-Gold 6209U (2.1GHz/20-core/125W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P11827-L21

Notes:
- 2-processor configurations NOT supported with this processor; secondary and tertiary risers not supportec
- Do not ship with Performance Heatsink.

Intel Xeon-Gold 6208U (2.9GHz/16-core/150W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P24477-L21

Intel Xeon-Gold 5222 (3.8GHz/4-core/105W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P02500-L21

Intel Xeon-Gold 5220S (2.7GHz/18-core/125W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P11824-L21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 5220R (2.2GHz/24-core/150W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P23553-L21

Intel Xeon-Gold 5220 (2.2GHz/18-core/125W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P02499-L21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 5218R (2.1GHz/20-core/125W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P24466-L21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 5218N (2.3GHz/16-core/110W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P11831-L21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 5218B (2.3GHz/16-core/125W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P12513-L21

Notes:
- 5218B has consistent features with the 5218 processor but from a different die. Mixing both 5218B & 5218 in a system is not supported
- Do not ship with Performance Heatsink.

Intel Xeon-Gold 5218 (2.3GHz/16-core/125W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P02498-L21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 5217 (3.0GHz/8-core/115W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P02497-L21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 5215L (2.5GHz/10-core/85W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P02533-L21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 5215 (2.5GHz/10-core/85W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P02496-L21

Notes: Do not ship with Performance Heatsink.

2nd Generation Intel Xeon-Silver

Notes:
- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported.
- All the below models do not ship with Performance Heatsink unless otherwise noted

Intel Xeon-Silver 4216 (2.1GHz/16-core/100W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P02495-L21

Intel Xeon-Silver 4215R (3.2GHz/8-core/130W) FIO Processor Kit for HPE ProLiant DL380 Gen10 P24465-L21

Notes: Ships with Performance Heatsink.

Configuration Information

Intel Xeon-Silver 4215 (2.5GHz/8-core/85W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02494-L21
Intel Xeon-Silver 4214R (2.4GHz/12-core/100W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P23550-L21
Intel Xeon-Silver 4214Y (2.2GHz/12-10-8-core/85W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02506-L21
Intel Xeon-Silver 4214 (2.2GHz/12-core/85W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02493-L21
Intel Xeon-Silver 4210R (2.4GHz/10-core/100W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P23549-L21
Intel Xeon-Silver 4210 (2.2GHz/10-core/85W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02492-L21
Intel Xeon-Silver 4208 (2.1GHz/8-core/85W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02491-L21

2nd Generation Intel Xeon-Bronze

Notes:
- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported.
- All the below models do not ship with Performance Heatsink.

Intel Xeon-Bronze 3206R (1.9GHz/8-core/85W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P23547-L21
Intel Xeon-Bronze 3204 (1.9GHz/6-core/85W) FIO Processor Kit for HPE ProLiant DL380 Gen10	P02489-L21

Notes: Processors with 130W or higher will ship with the High Performance heatsink plus SKUs 8256, 8156, 6128, 5222, 5122 as noted below. All other will processors will ship with the Standard heat sink.

Step 2b: Choose Memory Options

Please select one or more memory from below.

For new Gen10 memory population rule whitepaper and optimal memory performance guidelines, please go to: **https://www.hpe.com/docs/memory-population-rules**

For Gen10 memory speed table, please go to: **https://www.hpe.com/docs/memory-speed-table**

For memory Reliability, Accessibility, Serviceability (RAS) features whitepaper like Gen10 Fast Fault Tolerance and legacy mirrored memory feature etc. please go to: **http://www.hpe.com/docs/memory-ras-feature**

Notes:
- The maximum memory speed and capacity is a function of the memory type, memory configuration, and processor model.
- DDR4-2933 Memory Kits are only supported with 2nd Generation Intel Xeon Scalable Series Processors and DDR4-2666 Memory Kits are only supported with 1st Generation Intel Xeon Scalable Series Processors.

Registered DIMMs (RDIMMs)

HPE 8GB (1x8GB) Single Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00918-B21
HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815097-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00920-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815098-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00922-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	835955-B21
HPE 32GB (1x32GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Memory Kit	P38446-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00924-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815100-B21
HPE 64GB (1x64GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00930-B21

Load Reduced DIMMs (LRDIMMs)

HPE 64GB (1x64GB) Quad Rank x4 DDR4-2933 CAS-21-21-21 Load Reduced Smart Memory Kit	P00926-B21
HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit	815101-B21
HPE 128GB (1x128GB) Octal Rank x4 DDR4-2933 CAS-24-21-21 Load Reduced 3DS Smart Memory Kit	P00928-B21

HPE Persistent Memory (Intel Optane)

Intel Optane 128GB persistent memory 100 Series for HPE	835804-B21
Intel Optane 256GB persistent memory 100 Series for HPE	835807-B21
Intel Optane 512GB persistent memory 100 Series for HPE	835810-B21

Configuration Information

Notes:
- A maximum of 12 Intel Optane Persistent Memory for HPE supported with select 2nd Generation Intel Xeon Scalable Series Processors ONLY (82xx/62xx/52xx/4215R/4215) and can only be mixed with either RDIMMs or LRDIMMs.
- For configurations exceeding 1TB/socket, the "M" series (2TB/socket) or "L" series processors (4.5TB/socket) are required.
- For information regarding Intel Optane Persistent Memory for HPE visit: **http://www.hpe.com/info/persistentmemory**

HPE NVDIMMs

HPE 16GB NVDIMM Single Rank x4 DDR4-2666 Module Kit	845264-B21

Notes:
- A maximum of 12 HPE NVDIMMs supported.
- Can only be mixed with RDIMMs.
- For General Server Memory and HPE NVDIMM Population Rules and Guidelines for Gen10 see details here: **http://www.hpe.com/docs/memory-population-rules**
- For details on the HPE Server Memory speed, visit: **https://www.hpe.com/docs/memory-speed-table**
- To realize the performance memory capabilities listed in this document, HPE DDR4 SmartMemory is required.
- For additional information, please see the **HPE DDR4 SmartMemory QuickSpecs**.

Step 2c: Choose Power Supplies

Select one or two power supplies from below.

Notes: Mixing of 2 different power supplies is NOT allowed.

HPE Flex Slot Power Supplies

HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21
HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit	865438-B21
HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865414-B21
HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit	865434-B21
HPE 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit	865428-B21
HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	830272-B21

Step 3: Choose Additional Factory Integratable Options

One of the following from each list may be selected if desired at time of factory integration

HPE Security Options

HPE iLO Common Password FIO Setting	P08040-B21

Notes:
- Replaces iLO default randomized password by an HPE defined common password. HPE highly recommends changing this password immediately after the initial onboarding process.
- Customers who want to choose their own custom iLO default password should use the HPE Factory Express Integration Services

HPE Trusted Platform Module 2.0 Gen10 Option	864279-B21

Notes:
- HPE Trusted Platform Module 2.0 option works with Gen10 servers with UEFI Mode not Legacy Mode. It is not compatible with HPE ProLiant Gen8 servers or earlier generation variants.
- HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module.

HPE Gen10 TPM 1.2 FIO Setting	872108-B21

Notes: TPM 2.0 is set as default, for 1.2 TPM setting instead, please select this option.

Factory Instructions and Server Settings

HPE DL38X Gen10 4 NVMe Box 1 FIO Option	878186-B21
HPE DL38X Gen10 2 NVMe FIO Option	878189-B21

Configuration Information

Notes:
- This is a factory integrated only option.
- This will connect 2 SFF cage installed in the front of the chassis to NVMe.

HPE DL380X/Apollo 6500 Gen10 6+2 NVMe FIO Option 878192-B21

Notes:
- This is a factory integrated only option.
- Indicates the cage will also have an NVMe connection.

HPE DL38X Gen10 8 SFF Front Cage Removal FIO Option 873763-B21

Notes:
- This is a factory integrated only option.
- Will remove the Primary 8SFF cage in Box 3 of the 8SFF and replace with a Box blank.

HPE DL38X Gen10 Primary Riser Removal FIO Option 873766-B21

Notes:
- This is a factory integrated only option.
- Will remove the Primary shipping PCIe riser.

HPE Legacy FIO Mode Setting 758959-B22

Notes: UEFI is the default, this FIO part can be used for CTO to enable Legacy mode.

HPE Smart Memory Fast Fault Tolerance FIO Setting 875293-B21

Notes: Fast Fault Tolerance is a new feature in Gen10 server memory that enables the system to boot with full memory performance while monitoring for DRAM device failures.

HPE 2U Bezel Air Filter NEBS-compliant Kit P05420-B21

HPE Converged Infrastructure Management Software

HPE OneView for ProLiant DL Server including 3yr 24x7 Support FIO Bundle Physical 1-server LTU E5Y43A

HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU P8B31A

vSAN ReadyNode

- 3, 6, 8 or 16 node vSAN Clusters (3 node minimum)
- HW is optimized for vSAN
- VMware vSAN Advanced LTU bundled

Notes: Software Requirements: VMware vSphere 6.7 Update 1, VMware vSphere with Operations Management™ 6.1 (any edition), VMware vCloud Suite 6.0 (any edition updated with 6.5) or VMware vCenter Server 6.7 Update 1.

Step 4: Choose additional options for Factory Integration from Core and Additional Options sections below

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Core Options

Some options may not be integrated at the factory. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE approved configurator. Contact your local sales representative for additional information.

Notes: The **http://www.hpe.com/info/CablingMatrixGen10** can help to explain the cable routing for each option:

HPE DL38X NVMe 8 Solid State Drive Express Bay Enablement Kit 826689-B21

Notes:
- This option provides support for up to 8 NVMe drives, and can only be populated in Box 1, Box 2 and Box 3 of the SFF chassis, note Box 1 can only be partially populated with four drives if Box 2 and Box 3 are fully populated with NVMe drives.
- The HPE DL380 Gen10 High Performance fan kit is required for NVMe support (867810-B21).
- The HPE DL38X Gen10 4-port 8 NVMe SlimSAS Riser (867807-B21) is required to support this.
- There are limitations on GPU support with the NVMe bay installed.
- If configuration is 2x CPU + HPE DL38X NVMe 8 Solid State Drive Express Bay Enablement Kit. Then can only select 4 Port Slimline Secondary riser (873732-B21). Box3: SAS/SATA. Box2: NVMe.

HPE DL38X Gen10 Universal Media Bay Kit 826708-B21

Notes:
- The HPE DL380 Gen10 Universal Media bay provides front Display Port and 2xUSB 2.0; plus support for 2x SFF front drives or 2 NVME front drives (826687-B21, riser required) and ODD support (Not included); and can only be located in Box1 in either an 8 SFF or 8+8 SFF model.
- This is a SFF model option only.

HPE DL38X Gen10 SFF Box1/2 Cage/Backplane Kit 826691-B21

Notes: Supports 8 SAS/SATA SFF drives in Box 1 or 2 to a max of 24 SFF SAS/SATA front.

HPE DL38X Gen10 Premium 6 SFF SAS/SATA + 2 NVMe or 8 SFF SAS/SATA Bay Kit 826690-B21

Notes:
- This kit can be supported in Box 1, 2 or 3 and provides support for up to 6 SAS/SATA + 2 NVMe or 8 SFF SAS/SATA drives per Box. If only populating SFF SAS/SATA, the HPE DL38X Gen10 SFF Box1/2 Cage/Backplane Kit (826691-B21) is the more appropriate option.
- With NVMe drives a specific riser is required.
- When adding to Box 1 the addition of the High Performance Fan kit (867810-B21) is required.

HPE DL380 Gen10 High Performance Heat Sink Kit 826706-B21

Notes:
- Required for GPU installations.
- Processor kits above 130W include a High Performance Heatsink, along with the 8156, 6128 and 5122.
- This kit contains 2 High Performance Heatsinks.

HPE DL38X Gen10 High Performance Temperature Fan Kit 867810-B21

Notes:
- This kit is required for specific **Ambient temperature environments**
- This kit is also required to support GPUs configurations.
- This is required for NVMe configurations.
- This kit provides maximum cooling for your Server.
- This kit is required when Box 1, 2 and 3 are populated.

HPE DL38X Gen10 2SFF HDD SAS/SATA Riser Kit 826688-B21

Notes:
- 2 SFF in the rear is only supported with a 24 SFF model or 12 LFF model.
- In the rear this leaves 1x16 slot accessible.
- Rear drives require the addition of the High Performance Fan kit (867810-B21).
- Supports UFF SCM drives.

HPE DL38X Gen10 2SFF Premium HDD Front NVMe or Front/Rear SAS/SATA Kit 826687-B21

Notes:
- HPE DL38X Gen10 Universal Media Bay Kit (826708-B21).
- NVMe drives require the addition of the High Performance Fan kit (867810-B21).
- NVMe drives require the addition of an NVMe capable riser.

Core Options

- Drive cage can be used in the rear of the chassis, but will not support NVMe drives rear.
- Supports UFF SCM drives.

HPE DL38X Gen10 8LFF Front 2NVMe HDD Bay Kit 873781-B21

Notes:
- Supports 2 NVMe in the Universal Media bay (included) on the 8 LFF model.
- For support of the 2 NVMe drives this will require the addition of the HPE DL38X Gen10 x8/x8/x8 1-port 2 NVMe SlimSAS Riser (867806-B21); or the HPE DL38X Gen10 2-port 4 NVMe SlimSAS Riser (867808-B21).
- NVMe drives require the addition of the High Performance Fan kit (867810-B21).

HPE DL38X Gen10 12Gb SAS Expander Card Kit with Cables 870549-B21

Notes: SAS expander to enable 24 SFF field upgrade.

HPE DL380 Gen10 SFF Systems Insight Display Kit 826703-B21

Notes:
- Systems Insight Display does not ship standard but is available as a Factory Integrated or field upgrade option.
- Primary population in slot 3 of the primary riser.

HPE DL3XX Gen10 Rear Serial Cable and Enablement Kit 873770-B21

HPE DL38X Gen10 8LFF Front 2SFF SAS/SATA HDD Kit 867805-B21

Notes: HPE ProLiant DL380 Gen10 8LFF with Universal Media Bay Configure-to-order Server (868706-B21).

HPE 2U Bezel Air Filter NEBS-compliant Kit P05420-B21

HPE Processors

Processor Option Kits

2nd Generation Intel Xeon-Platinum

Notes:
- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported.
- All the below models ship with Performance Heatsink unless otherwise noted.

Intel Xeon-Platinum 8280L (2.7GHz/28-core/205W) Processor Kit for HPE ProLiant DL380 Gen10 P02540-B21

Intel Xeon-Platinum 8280 (2.7GHz/28-core/205W) Processor Kit for HPE ProLiant DL380 Gen10 P02527-B21

Intel Xeon-Platinum 8276L (2.2GHz/28-core/165W) Processor Kit for HPE ProLiant DL380 Gen10 P02539-B21

Intel Xeon-Platinum 8276 (2.2GHz/28-core/165W) Processor Kit for HPE ProLiant DL380 Gen10 P02526-B21

Intel Xeon-Platinum 8270 (2.7GHz/26-core/205W) Processor Kit for HPE ProLiant DL380 Gen10 P02525-B21

Intel Xeon-Platinum 8268 (2.9GHz/24-core/205W) Processor Kit for HPE ProLiant DL380 Gen10 P02524-B21

Intel Xeon-Platinum 8260L (2.4GHz/24-core/165W) Processor Kit for HPE ProLiant DL380 Gen10 P02538-B21

Intel Xeon-Platinum 8260Y (2.4GHz/24-20-16-core/165W) Processor Kit for HPE ProLiant DL380 Gen10 P02508-B21

Intel Xeon-Platinum 8260 (2.4GHz/24-core/165W) Processor Kit for HPE ProLiant DL380 Gen10 P02521-B21

Intel Xeon-Platinum 8256 (3.8GHz/4-core/105W) Processor Kit for HPE ProLiant DL380 Gen10 P02519-B21

Intel Xeon-Platinum 8253 (2.2GHz/16-core/125W) Processor Kit for HPE ProLiant DL380 Gen10 P02518-B21

Notes: Do not ship with Performance Heatsink.

2nd Generation Intel Xeon-Gold

Notes:
- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported.
- All the below models ship with Performance Heatsink unless otherwise noted.

Intel Xeon-Gold 6262V (1.9GHz/24-core/135W) Processor Kit for HPE ProLiant DL380 Gen10 P11822-B21

Intel Xeon-Gold 6258R (2.7GHz/28-core/205W) Processor Kit for HPE ProLiant DL380 Gen10 P24474-B21

Intel Xeon-Gold 6256 (3.6GHz/12-core/205W) Processor Kit for HPE ProLiant DL380 Gen10 P24476-B21

Notes:
- Requires high performance fan kit (867810-B21), unless 24SFF or 12LFF server models are selected, which provide high performance fans as the default.

Core Options

- Not supported with NVMe SSDs, nor 2SFF HDD kits (826687-B21; 826688-B21) installed in rear, nor GPUs, nor 4LFF mid-tray. Detailed configuration and facilities requirements can be found under "Intel Xeon Scalable Series 6250, 6250L, and 6256 Configuration and Facilities Requirements Matrix" with this document.

Intel Xeon-Gold 6254 (3.1GHz/18-core/200W) Processor Kit for HPE ProLiant DL380 Gen10	P02517-B21
Intel Xeon-Gold 6252N (2.3GHz/24-core/150W) Processor Kit for HPE ProLiant DL380 Gen10	P11829-B21
Intel Xeon-Gold 6252 (2.1GHz/24-core/150W) Processor Kit for HPE ProLiant DL380 Gen10	P02516-B21
Intel Xeon-Gold 6250L (3.9GHz/8-core/185W) Processor Kit for HPE ProLiant DL380 Gen10	P28387-B21

Notes:
- Requires high performance fan kit (867810-B21), unless 24SFF or 12LFF server models are selected, which provide high performance fans as the default.
- Not supported with NVMe SSDs, nor 2SFF HDD kits (826687-B21; 826688-B21) installed in rear, nor GPUs, nor 4LFF mid-tray. Detailed configuration and facilities requirements can be found under "Intel Xeon Scalable Series 6250, 6250L, and 6256 Configuration and Facilities Requirements Matrix" with this document.

Intel Xeon-Gold 6250 (3.9GHz/8-core/185W) Processor Kit for HPE ProLiant DL380 Gen10	P24475-B21

Notes:
- Requires high performance fan kit (867810-B21), unless 24SFF or 12LFF server models are selected, which provide high performance fans as the default.
- Not supported with NVMe SSDs, nor 2SFF HDD kits (826687-B21; 826688-B21) installed in rear, nor GPUs, nor 4LFF mid-tray. Detailed configuration and facilities requirements can be found under "Intel Xeon Scalable Series 6250, 6250L, and 6256 Configuration and Facilities Requirements Matrix" with this document.

Intel Xeon-Gold 6248R (3.0GHz/24-core/205W) Processor Kit for HPE ProLiant DL380 Gen10	P24473-B21
Intel Xeon-Gold 6248 (2.5GHz/20-core/150W) Processor Kit for HPE ProLiant DL380 Gen10	P02514-B21
Intel Xeon-Gold 6246R (3.4GHz/16-core/205W) Processor Kit for HPE ProLiant DL380 Gen10	P24472-B21
Intel Xeon-Gold 6246 (3.3GHz/12-core/165W) Processor Kit for HPE ProLiant DL380 Gen10	P15758-B21
Intel Xeon-Gold 6244 (3.6GHz/8-core/150W) Processor Kit for HPE ProLiant DL380 Gen10	P02512-B21
Intel Xeon-Gold 6242R (3.1GHz/20-core/205W) Processor Kit for HPE ProLiant DL380 Gen10	P24471-B21
Intel Xeon-Gold 6242 (2.8GHz/16-core/150W) Processor Kit for HPE ProLiant DL380 Gen10	P02510-B21
Intel Xeon-Gold 6240R (2.4GHz/24-core/165W) Processor Kit for HPE ProLiant DL380 Gen10	P24470-B21
Intel Xeon-Gold 6240L (2.6GHz/18-core/150W) Processor Kit for HPE ProLiant DL380 Gen10	P02537-B21
Intel Xeon-Gold 6240 (2.6GHz/18-core/150W) Processor Kit for HPE ProLiant DL380 Gen10	P02509-B21
Intel Xeon-Gold 6240Y (2.6GHz/18-14-8-core/150W) Processor Kit for HPE ProLiant DL380 Gen10	P02507-B21
Intel Xeon-Gold 6238R (2.2GHz/28-core/165W) Processor Kit for HPE ProLiant DL380 Gen10	P24469-B21
Intel Xeon-Gold 6238L (2.1GHz/22-core/140W) Processor Kit for HPE ProLiant DL380 Gen10	P02536-B21
Intel Xeon-Gold 6238 (2.1GHz/22-core/140W) Processor Kit for HPE ProLiant DL380 Gen10	P02504-B21
Intel Xeon-Gold 6234 (3.3GHz/8-core/130W) Processor Kit for HPE ProLiant DL380 Gen10	P02503-B21
Intel Xeon-Gold 6230R (2.1GHz/26-core/150W) Processor Kit for HPE ProLiant DL380 Gen10	P24468-B21
Intel Xeon-Gold 6230 (2.1GHz/20-core/125W) Processor Kit for HPE ProLiant DL380 Gen10	P02502-B21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 6230N (2.3GHz/20-core/125W) Processor Kit for HPE ProLiant DL380 Gen10	P11830-B21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 6226R (2.9GHz/16-core/150W) Processor Kit for HPE ProLiant DL380 Gen10	P24467-B21
Intel Xeon-Gold 6226 (2.7GHz/12-core/125W) Processor Kit for HPE ProLiant DL380 Gen10	P02501-B21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 6222V (1.8GHz/20-core/115W) Processor Kit for HPE ProLiant DL380 Gen10	P11823-B21

Notes: Do not ship with Performance Heatsink.

Core Options

Intel Xeon-Gold 6212U (2.4GHz/24-core/165W) Processor Kit for HPE ProLiant DL380 Gen10 P11825-B21

Notes:
- 2-processor configurations not supported with this processor; secondary and tertiary risers not supported
- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported. This standalone option kit is intended to upgrade a system originally installed with a 2nd generation Intel Xeon Scalable Series processor.

Intel Xeon-Gold 6210U (2.5GHz/20-core/150W) Processor Kit for HPE ProLiant DL380 Gen10 P11826-B21

Notes:
- 2-processor configurations NOT supported with this processor; secondary and tertiary risers not supported
- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported. This standalone option kit is intended to upgrade a system originally installed with a 2nd generation Intel Xeon Scalable Series processor.

Intel Xeon-Gold 6209U (2.1GHz/20-core/125W) Processor Kit for HPE ProLiant DL380 Gen10 P11827-B21

Notes:
- 2-processor configurations NOT supported with this processor; secondary and tertiary risers not supported
- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported. This standalone option kit is intended to upgrade a system originally installed with a 2nd generation Intel Xeon Scalable Series processor.
- Do not ship with Performance Heatsink.

Intel Xeon-Gold 6208U (2.9GHz/16-core/150W) Processor Kit for HPE ProLiant DL380 Gen10 P24477-B21

Notes:
- 2-processor configurations NOT supported with this processor; secondary and tertiary risers not supported
- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported. This standalone option kit is intended to upgrade a system originally installed with a 2nd generation Intel Xeon Scalable Series processor.

Intel Xeon-Gold 5222 (3.8GHz/4-core/105W) Processor Kit for HPE ProLiant DL380 Gen10 P02500-B21

Intel Xeon-Gold 5220S (2.7GHz/18-core/125W) Processor Kit for HPE ProLiant DL380 Gen10 P11824-B21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 5220R (2.2GHz/24-core/150W) Processor Kit for HPE ProLiant DL380 Gen10 P23553-B21

Intel Xeon-Gold 5220 (2.2GHz/18-core/125W) Processor Kit for HPE ProLiant DL380 Gen10 P02499-B21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 5218R (2.1GHz/20-core/125W) Processor Kit for HPE ProLiant DL380 Gen10 P24466-B21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 5218B (2.3GHz/16-core/125W) Processor Kit for HPE ProLiant DL380 Gen10 P12513-B21

Notes:
- 5218B has consistent features with the 5218 processor but from a different die. Mixing both 5218B & 5218 in a system is not supported
- Do not ship with Performance Heatsink.

Intel Xeon-Gold 5218N (2.3GHz/16-core/110W) Processor Kit for HPE ProLiant DL380 Gen10 P11831-B21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 5218 (2.3GHz/16-core/125W) Processor Kit for HPE ProLiant DL380 Gen10 P02498-B21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 5217 (3.0GHz/8-core/115W) Processor Kit for HPE ProLiant DL380 Gen10 P02497-B21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 5215L (2.5GHz/10-core/85W) Processor Kit for HPE ProLiant DL380 Gen10 P02533-B21

Notes: Do not ship with Performance Heatsink.

Intel Xeon-Gold 5215 (2.5GHz/10-core/85W) Processor Kit for HPE ProLiant DL380 Gen10 P02496-B21

Notes: Do not ship with Performance Heatsink.

Core Options

2nd Generation Intel Xeon-Silver

Notes:
- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported.
- All the below models do not ship with Performance Heatsink unless otherwise noted

Intel Xeon-Silver 4216 (2.1GHz/16-core/100W) Processor Kit for HPE ProLiant DL380 Gen10	P02495-B21
Intel Xeon-Silver 4215R (3.2GHz/8-core/130W) Processor Kit for HPE ProLiant DL380 Gen10	P24465-B21

Notes: Ships with Performance Heatsink.

Intel Xeon-Silver 4215 (2.5GHz/8-core/85W) Processor Kit for HPE ProLiant DL380 Gen10	P02494-B21
Intel Xeon-Silver 4214Y (2.2GHz/12-10-8-core/85W) Processor Kit for HPE ProLiant DL380 Gen10	P02506-B21
Intel Xeon-Silver 4214R (2.4GHz/12-core/100W) Processor Kit for HPE ProLiant DL380 Gen10	P23550-B21
Intel Xeon-Silver 4214 (2.2GHz/12-core/85W) Processor Kit for HPE ProLiant DL380 Gen10	P02493-B21
Intel Xeon-Silver 4210R (2.4GHz/10-core/100W) Processor Kit for HPE ProLiant DL380 Gen10	P23549-B21
Intel Xeon-Silver 4210 (2.2GHz/10-core/85W) Processor Kit for HPE ProLiant DL380 Gen10	P02492-B21
Intel Xeon-Silver 4208 (2.1GHz/8-core/85W) Processor Kit for HPE ProLiant DL380 Gen10	P02491-B21

2nd Generation Intel Xeon-Bronze

Notes:
- Field upgrades from 1st generation processors (x1xx) to 2nd generation processors (x2xx) not supported.
- All the below models do not ship with Performance Heatsink.

Intel Xeon-Bronze 3206R (1.9GHz/8-core/85W) Processor Kit for HPE ProLiant DL380 Gen10	P23547-B21
Intel Xeon-Bronze 3204 (1.9GHz/6-core/85W) Processor Kit for HPE ProLiant DL380 Gen10	P02489-B21

Notes:
- Up to two processors supported.
- HT indicates that the processor model supports Intel® Hyper-Threading Technology.
- Turbo2: Intel® Turbo Boost Technology 2.0 provides more computing power when you need it with performance that adapts to spikes in your workload and delivers more performance upside than previous generation turbo technology.
- DDR4 speed is the maximum memory speed of the processor. Actual memory speed may depend on the quantity and type of DIMMs installed.
- The xxxxxx-L21 is the first processor shipped, the xxxxxx-B21 is the 2nd processor and ships with 2 additional fans for factory of field installation.
- Maximum memory per socket depends on the processor selected.
- Processors above 130W use a High Performance Heatsink, along with the 8256, 8156, 6128, 5222, and 5122.

Memory Selection

To streamline the configuration process for HPE ProLiant Gen10 servers and to provide the best product availability, HPE recommends memory from the list located here: **http://www.hpe.com/products/recommend**.
Best product availability is limited to US, Canada, and Latin America at this time.

Notes:
- Maximum memory capacity and speed per processor is dependent on processor model selection or limitation.
- DDR4-2933 Memory Kits are only supported with 2nd Generation Intel Xeon Scalable Series Processors and DDR4-2666 Memory Kits are only supported with 1st Generation Intel Xeon Scalable Series Processors.

HPE DDR4 Memory

Registered DIMMs (RDIMMs)

HPE 8GB (1x8GB) Single Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00918-B21
HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815097-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00920-B21
HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815098-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00922-B21
HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	835955-B21

Core Options

HPE 32GB (1x32GB) Single Rank x4 DDR4-2933 CAS-21-21-21 Registered Memory Kit	P38446-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00924-B21
HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	815100-B21
HPE 64GB (1x64GB) Dual Rank x4 DDR4-2933 CAS-21-21-21 Registered Smart Memory Kit	P00930-B21

Notes: For configurations exceeding 1TB/socket, the "M" series (2TB/socket) or "L" series processors (4.5TB/socket) are required.

Load Reduced DIMMs (LRDIMMs)

HPE 64GB (1x64GB) Quad Rank x4 DDR4-2933 CAS-21-21-21 Load Reduced Smart Memory Kit	P00926-B21
HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit	815101-B21
HPE 128GB (1x128GB) Quad Rank x4 DDR4-2933 CAS-21-21-21 Load Reduced Smart Memory Kit	P11040-B21
HPE 128GB (1x128GB) Octal Rank x4 DDR4-2933 CAS-24-21-21 Load Reduced 3DS Smart Memory Kit	P00928-B21

Notes:
- Memory DIMM availability with a server platform is dependent upon completion of certification testing.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- Mixing of RDIMM and LRDIMM is not supported.
- For configurations exceeding 1TB/socket, the "M" series (2TB/socket) or "L" series processors (4.5TB/socket) are required.

Intel Optane persistent memory for HPE

Intel Optane 128GB persistent memory 100 Series for HPE	835804-B21
Intel Optane 256GB persistent memory 100 Series for HPE	835807-B21
Intel Optane 512GB persistent memory 100 Series for HPE	835810-B21

Notes:
- A maximum of 12 Intel Optane Persistent Memory for HPE supported with select 2nd Generation Intel Xeon Scalable Series Processors ONLY (82xx/62xx/52xx/4215R/4215) and can only be mixed with either RDIMMs or LRDIMMs.
- For configurations exceeding 1TB/socket, the "M" series (2TB/socket) or "L" series processors (4.5TB/socket) are required.
- For information regarding Intel Optane Persistent Memory for HPE visit: **http://www.hpe.com/info/persistentmemory**

HPE NVDIMMs

HPE 16GB NVDIMM Single Rank x4 DDR4-2666 Module Kit	845264-B21

Notes:
- A maximum of 12 HPE NVDIMMs supported with 1st Generation Intel Xeon Scalable Processors and can only be mixed with RDIMMs.
- Can only be mixed with RDIMMs.
- For General Server Memory and HPE NVDIMM Population Rules and Guidelines for Gen10 see details here: **http://www.hpe.com/docs/memory-population-rules**

HPE DDR-4 Blank Kit

HPE DDR4 DIMM Blank Kit	P07818-B21

HPE Optical Drives

HPE 9.5mm SATA DVD-ROM Optical Drive	726536-B21

Notes: HPE DL38X Gen10 Universal Media Bay Kit (826708-B21) is required for this option on a SFF model. No support in 12 LFF or 24 SFF models.

HPE 9.5mm SATA DVD-RW Optical Drive	726537-B21

Notes: HPE DL38X Gen10 Universal Media Bay Kit (826708-B21) is required for this option on a SFF model. No support in 12 LFF or 24 SFF models.

HPE Mobile USB DVD-RW Optical Drive	701498-B21

Notes: This is only supported on USB 3.0 ports.

Core Options

Media Bay Kits

HPE DL38X Gen10 Universal Media Bay Kit	826708-B21

Notes:

- The HPE DL380 Gen10 Universal Media bay provides front Display Port and 2xUSB 2.0; plus support for 2x SFF front drives or 2 NVME front drives (826687-B21, riser required) and ODD support (Not included); and can only be located in Box1 in either an 8 SFF or 8+8 SFF model.
- This is a SFF model option only.

HPE Hard Disk Drives

Enterprise - 12G SAS - SFF Drives

HPE 2.4TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	881457-B21
HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	872481-B21
HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872479-B21
HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870759-B21
HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870757-B21
HPE 600GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872477-B21
HPE 300GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	870753-B21
HPE 300GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872475-B21

Midline - 12G SAS - SFF Drives

HPE 2TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e HDD	765466-B21
HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD	832514-B21

Midline - 6G SATA - SFF Drives

HPE 2TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	765455-B21
HPE 1TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD	655710-B21

Enterprise - 12G SAS - LFF Drives

HPE 600GB SAS 12G Enterprise 15K LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware HDD	P04695-B21
HPE 300GB SAS 12G Enterprise 15K LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware HDD	P04693-B21

Midline - 12G SAS - LFF Drives

HPE 16TB SAS 12G Business Critical 7.2K LFF (3.5in) SC 1yr Wty 512e ISE HDD	P23863-B21
HPE 14TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	P09153-B21
HPE 12TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	881779-B21
HPE 10TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	857644-B21
HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	819201-B21
HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861754-B21
HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872487-B21
HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872485-B21

Midline - 6G SATA - LFF Drives

HPE 16TB SATA 6G Business Critical 7.2K LFF (3.5in) SC 1yr Wty 512e ISE HDD	P23857-B21
HPE 14TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	P09163-B21
HPE 12TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	881785-B21
HPE 10TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	857648-B21
HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	819203-B21
HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	861750-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872491-B21
HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	872489-B21
HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	861691-B21

Core Options

SSD Selection

For SSD selection guidance, please visit **https://ssd.hpe.com/**

Read Intensive - 24G SAS - SFF - Solid State Drives

HPE 15.3TB SAS 24G Read Intensive SFF SC PM6 SSD	P26314-B21
HPE 7.68TB SAS 24G Read Intensive SFF SC PM6 SSD	P26310-B21
HPE 3.84TB SAS 24G Read Intensive SFF SC PM6 SSD	P26306-B21
HPE 1.92TB SAS 24G Read Intensive SFF SC PM6 SSD	P26302-B21
HPE 960GB SAS 24G Read Intensive SFF SC PM6 SSD	P26285-B21

Read Intensive - 12G SAS - SFF - Solid State Drives

HPE 15.36TB SAS 12G Read Intensive SFF SC PM1643a SSD	P19911-B21
HPE 7.68TB SAS 12G Read Intensive SFF SC PM1643a SSD	P19909-B21
HPE 7.68TB SAS 12G Read Intensive SFF SC SS540 SSD	P21145-B21
HPE 3.84TB SAS 12G Read Intensive SFF SC PM1643a SSD	P19907-B21
HPE 3.84TB SAS 12G Read Intensive SFF SC SS540 SSD	P21143-B21
HPE 3.84TB SAS 12G Read Intensive SFF SC PM5 SSD	P04521-B21
HPE 1.92TB SAS 12G Read Intensive SFF SC PM1643a SSD	P19905-B21
HPE 1.92TB SAS 12G Read Intensive SFF SC SS540 SSD	P21141-B21
HPE 960GB SAS 12G Read Intensive SFF SC PM1643a SSD	P19903-B21
HPE 960GB SAS 12G Read Intensive SFF SC SS540 SSD	P21139-B21

Read Intensive - 12G SAS - SFF - SC Value SAS Digitally Signed Firmware SSD

HPE 7.68TB SAS 12G Read Intensive SFF SC Value SAS Multi Vendor SSD	P37003-B21
HPE 3.84TB SAS 12G Read Intensive SFF SC Value SAS Multi Vendor SSD	P37001-B21
HPE 1.92TB SAS 12G Read Intensive SFF SC Value SAS Multi Vendor SSD	P36999-B21
HPE 960GB SAS 12G Read Intensive SFF SC Value SAS Multi Vendor SSD	P36997-B21

Write Intensive - 24G SAS - SFF - Solid State Drives

HPE 1.6TB SAS 24G Write Intensive SFF SC PM6 SSD	P26376-B21
HPE 800GB SAS 24G Write Intensive SFF SC PM6 SSD	P26372-B21
HPE 400GB SAS 24G Write Intensive SFF SC PM6 SSD	P26295-B21

Write Intensive - 12G SAS – SFF – Solid State Drives

HPE 800GB SAS 12G Write Intensive SFF SC SS540 SSD	P21127-B21
HPE 400GB SAS 12G Write Intensive SFF SC SS540 SSD	P21125-B21

Mixed Use - 24G SAS - SFF - Solid State Drives

HPE 6.4TB SAS 24G Mixed Use SFF SC PM6 SSD	P26362-B21
HPE 3.2TB SAS 24G Mixed Use SFF SC PM6 SSD	P26358-B21
HPE 1.6TB SAS 24G Mixed Use SFF SC PM6 SSD	P26354-B21
HPE 800GB SAS 24G Mixed Use SFF SC PM6 SSD	P26290-B21

Mixed Use - 12G SAS - SFF - Solid State Drives

HPE 6.4TB SAS 12G Mixed Use SFF SC SS540 SSD	P21137-B21
HPE 6.4TB SAS 12G Mixed Use SFF SC PM1645a SSD	P19919-B21
HPE 3.2TB SAS 12G Mixed Use SFF SC SS540 SSD	P21135-B21
HPE 3.2TB SAS 12G Mixed Use SFF SC PM1645a SSD	P19917-B21
HPE 1.6TB SAS 12G Mixed Use SFF SC SS540 SSD	P21133-B21
HPE 1.6TB SAS 12G Mixed Use SFF SC PM1645a SSD	P19915-B21
HPE 800GB SAS 12G Mixed Use SFF SC SS540 SSD	P21131-B21
HPE 800GB SAS 12G Mixed Use SFF SC PM1645a SSD	P19913-B21

Mixed Use - 12G SAS - SFF - SC Value SAS Digitally Signed Firmware SSD

HPE 960GB SAS 12G Mixed Use SFF SC Value SAS Multi Vendor SSD	P37005-B21

Core Options

HPE 1.92TB SAS 12G Mixed Use SFF SC Value SAS Multi Vendor SSD	P37011-B21
HPE 3.84TB SAS 12G Mixed Use SFF SC Value SAS Multi Vendor SSD	P37017-B21
Read Intensive - 6G SATA - SFF - Solid State Drives	
HPE 7.68TB SATA 6G Read Intensive SFF SC 5300P SSD	P19945-B21
HPE 7.68TB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18430-B21
HPE 3.84TB SATA 6G Read Intensive SFF SC 5300P SSD	P19943-B21
HPE 3.84TB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18428-B21
HPE 3.84TB SATA 6G Read Intensive SFF SC PM883 SSD	P04570-B21
HPE 3.84TB SATA 6G Read Intensive SFF SC S4510 SSD	P05946-B21
HPE 1.92TB SATA 6G Read Intensive SFF SC 5300P SSD	P19941-B21
HPE 1.92TB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18426-B21
HPE 1.92TB SATA 6G Read Intensive SFF SC PM883 SSD	P04566-B21
HPE 1.92TB SATA 6G Read Intensive SFF SC S4510 SSD	P05938-B21
HPE 960GB SATA 6G Read Intensive SFF SC 5300P SSD	P19939-B21
HPE 960GB SATA 6G Read Intensive SFF SC PM883 SSD	P04564-B21
HPE 960GB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18424-B21
HPE 960GB SATA 6G Read Intensive SFF SC S4510 SSD	P05932-B21
HPE 480GB SATA 6G Read Intensive SFF SC 5300P SSD	P19937-B21
HPE 480GB SATA 6G Read Intensive SFF SC PM883 SSD	P04560-B21
HPE 480GB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18422-B21
HPE 480GB SATA 6G Read Intensive SFF SC S4510 SSD	P05928-B21
HPE 240GB SATA 6G Read Intensive SFF SC 5300P SSD	P19935-B21
HPE 240GB SATA 6G Read Intensive SFF SC PM883 SSD	P04556-B21
HPE 240GB SATA 6G Read Intensive SFF SC Multi Vendor SSD	P18420-B21
HPE 240GB SATA 6G Read Intensive SFF SC S4510 SSD	P05924-B21
Mixed Use - 6G SATA - SFF - Solid State Drives	
HPE 3.84TB SATA 6G Mixed Use SFF SC 5300M SSD	P19953-B21
HPE 3.84TB SATA 6G Mixed Use SFF SC SM883 SSD	P21517-B21
HPE 3.84TB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18438-B21
HPE 3.84TB SATA 6G Mixed Use SFF SC S4610 SSD	P05994-B21
HPE 3.84TB SATA 6G Mixed Use SFF RW SE5031 SSD	P13664-B21
HPE 1.92TB SATA 6G Mixed Use SFF SC 5300M SSD	P19951-B21
HPE 1.92TB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18436-B21
HPE 1.92TB SATA 6G Mixed Use SFF SC SM883 SSD	P09722-B21
HPE 1.92TB SATA 6G Mixed Use SFF SC S4610 SSD	P05986-B21
HPE 960GB SATA 6G Mixed Use SFF SC 5300M SSD	P19949-B21
HPE 960GB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18434-B21
HPE 960GB SATA 6G Mixed Use SFF SC SM883 SSD	P09716-B21
HPE 960GB SATA 6G Mixed Use SFF SC S4610 SSD	P05980-B21
HPE 480GB SATA 6G Mixed Use SFF SC 5300M SSD	P19947-B21
HPE 480GB SATA 6G Mixed Use SFF SC Multi Vendor SSD	P18432-B21
HPE 480GB SATA 6G Mixed Use SFF SC SM883 SSD	P09712-B21
HPE 480GB SATA 6G Mixed Use SFF SC S4610 SSD	P05976-B21
Very Read Optimized – QLC-NAND SATA – SFF – Solid State Drives	
HPE 7.68TB SATA 6G Very Read Optimized SFF SC 5210 SSD	P23493-B21
HPE 3.84TB SATA 6G Very Read Optimized SFF SC 5210 SSD	P23489-B21
HPE 1.92TB SATA 6G Very Read Optimized SFF SC 5210 SSD	P23487-B21

Core Options

Mixed Use - 12G SAS - LFF – SC Value SAS Digitally Signed Firmware SSD

HPE 1.92TB SAS 12G Mixed Use LFF SCC Value SAS Multi Vendor SSD	P37013-B21

Read Intensive - 6G SATA - LFF - Solid State Drives

HPE 480GB SATA 6G Read Intensive LFF SCC PM883 SSD	P09687-B21

Mixed Use - 6G SATA - LFF - Solid State Drives

HPE 1.92TB SATA 6G Mixed Use LFF SCC SM883 SSD	P09724-B21
HPE 960GB SATA 6G Mixed Use LFF SCC SM883 SSD	P09718-B21
HPE 480GB SATA 6G Mixed Use LFF SCC 5300M SSD	P19978-B21

Read Intensive - 6G SATA - M.2 - Solid State Media (2280 type)

HPE 960GB SATA 6G Read Intensive M.2 2280 5300P SSD	P19892-B21
HPE 480GB SATA 6G Read Intensive M.2 2280 5300P SSD	P19890-B21
HPE 240GB SATA 6G Read Intensive M.2 2280 5300B SSD	P19888-B21

Notes:
- M.2 drives supported in the Primary Riser and use S100i SATA controller only.
- M.2 supports Software RAID only.

Internal Dual M.2 Kit

HPE Universal SATA 6G AIC HHHL M.2 SSD Enablement Kit	878783-B21

Notes: This is a M.2 enablement standup card.

Dual Read Intensive - 6G SATA – UFF SCM M.2 - Solid State Drives

HPE Dual 480GB SATA 6G Read Intensive M.2 to SFF SCM 5300P SSD Kit	P19896-B21
HPE Dual 240GB SATA 6G Read Intensive M.2 to SFF SCM 5300B SSD Kit	P19894-B21

Notes: SCM dual drive functionality supported on the Premium 2SFF HDD Kit (826687-B21) and 2SFF HDD Riser Kit (826688-B21). Installation on any other bay will show one M.2 drive per bay

Dual Mixed Use - 6G SATA – UFF SCM M.2 - Solid State Drives

Notes: SCM dual drive functionality supported on the Premium 2SFF HDD Kit (826687-B21) and 2SFF HDD Riser Kit (826688-B21). Installation on any other bay will show one M.2 drive per bay.

Read Intensive - NVMe - SFF - Solid State Drives

HPE 15.36TB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 PM1733 SSD	P22282-B21
HPE 7.68TB NVMe Gen4 Mainstream Performance Read Intensive SFF SCN U.3 PE8010 SSD	P19821-B21
HPE 7.68TB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 PM1733 SSD	P22280-B21
HPE 7.68TB NVMe Gen4 Mainstream Performance Read Intensive SFF SCN U.3 CD6 SSD	P20143-B21
HPE 4TB NVMe Gen3 High Performance Read Intensive SFF SCN U.2 P4510 SSD	P13697-B21
HPE 3.84TB NVMe Gen4 Mainstream Performance Read Intensive SFF SCN U.3 PE8010 SSD	P19817-B21
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 CM6 SSD	P20019-B21
HPE 3.84TB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 PM1733 SSD	P22278-B21
HPE 3.84TB NVMe Gen4 Mainstream Performance Read Intensive SFF SCN U.3 CD6 SSD	P20141-B21
HPE 3.84TB NVMe Gen3 Mainstream Performance Read Intensive SFF SCN U.2 PE6011 SSD	P13680-B21
HPE 3.84TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P10212-B21
HPE 2TB NVMe Gen3 High Performance Read Intensive SFF SCN U.2 P4510 SSD	P13695-B21
HPE 1.92TB NVMe Gen4 Mainstream Performance Read Intensive SFF SCN U.3 PE8010 SSD	P19813-B21
HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 CM6 SSD	P20017-B21
HPE 1.92TB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 PM1733 SSD	P22276-B21
HPE 1.92TB NVMe Gen4 Mainstream Performance Read Intensive SFF SCN U.3 CD6 SSD	P20139-B21
HPE 1.92TB NVMe Gen3 Mainstream Performance Read Intensive SFF SCN U.2 PE6011 SSD	P13678-B21
HPE 1.92TB NVMe x4 Lanes Read Intensive SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P10214-B21
HPE 960GB NVMe Gen4 Mainstream Performance Read Intensive SFF SCN U.3 PE8010 SSD	P19809-B21
HPE 960GB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 CM6 SSD	P20015-B21
HPE 960GB NVMe Gen4 High Performance Read Intensive SFF SCN U.3 PM1733 SSD	P22331-B21

Core Options

HPE 960GB NVMe Gen4 Mainstream Performance Read Intensive SFF SCN U.3 CD6 SSD	P25944-B21
HPE 960GB NVMe Gen3 Mainstream Performance Read Intensive SFF SCN U.2 PE6011 SSD	P13676-B21

Write Intensive - NVMe - SFF - Solid State Drives

HPE 750GB NVMe Gen3 High Performance Low Latency Write Intensive SFF SCN U.2 P4800X SSD	P06952-B21
HPE 375GB NVMe Gen3 High Performance Low Latency Write Intensive SFF SCN U.2 P4800X SSD	878014-B21

Mixed Use - NVMe - SFF - Solid State Drives

HPE 12.8TB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 PM1735 SSD	P22274-B21
HPE 6.4TB NVMe Gen4 Mainstream Performance Mixed Use SFF SCN U.3 PE8030 SSD	P19837-B21
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 CM6 SSD	P20100-B21
HPE 6.4TB NVMe Gen4 Mainstream Performance Mixed Use SFF SCN U.3 CD6 SSD	P20207-B21
HPE 6.4TB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 PM1735 SSD	P22272-B21
HPE 6.4TB NVMe Gen3 Mainstream Performance Mixed Use SFF SCN U.2 PE6031 SSD	P13674-B21
HPE 6.4TB NVMe Gen3 High Performance Mixed Use SFF SCN U.2 P4610 SSD	P13703-B21
HPE 3.2TB NVMe Gen4 Mainstream Performance Mixed Use SFF SC U.3 PE8030 SSD	P19833-B21
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 CM6 SSD	P20098-B21
HPE 3.2TB NVMe Gen4 Mainstream Performance Mixed Use SFF SCN U.3 CD6 SSD	P20205-B21
HPE 3.2TB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 PM1735 SSD	P22270-B21
HPE 3.2TB NVMe Gen3 High Performance Mixed Use SFF SCN U.2 P4610 SSD	P13701-B21
HPE 1.6TB NVMe Gen4 Mainstream Performance Mixed Use SFF SCN U.3 PE8030 SSD	P19829-B21
HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 CM6 SSD	P20096-B21
HPE 1.6TB NVMe Gen4 Mainstream Performance Mixed Use SFF SCN U.3 CD6 SSD	P20203-B21
HPE 1.6TB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 PM1735 SSD	P22268-B21
HPE 1.6TB NVMe Gen3 High Performance Mixed Use SFF SCN U.2 P4610 SSD	P13699-B21
HPE 800GB NVMe Gen4 Mainstream Performance Mixed Use SFF SCN U.3 PE8030 SSD	P19825-B21
HPE 800GB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 CM6 SSD	P20094-B21
HPE 800GB NVMe Gen4 Mainstream Performance Mixed Use SFF SCN U.3 CD6 SSD	P25953-B21
HPE 800GB NVMe Gen4 High Performance Mixed Use SFF SCN U.3 PM1735 SSD	P22329-B21
HPE 800GB NVMe x4 Lanes Mixed Use SFF (2.5in) SCN 3yr Wty Digitally Signed Firmware SSD	P07179-B21

Notes:

- A NVME (826689-B21 or 873781-B21) or Premium (826690-B21) drive cage is required to support these drives in conjunction with a NVMe riser kit.
- HPE has qualified the NVMe drive portfolio using the Operating System inbox drivers, full detail on the **HPE Solid State Drive QuickSpecs**.
- NVMe drives not supported by HPE Smart Array controllers.
- NVMe drives require the addition of the High Performance Fan kit (867810-B21).

HPE NVMe x8 Lanes Mixed Use HHHL

HPE 3.2TB NVMe Gen4 x8 High Performance Mixed Use AIC HHHL PM1735 SSD	P26936-B21
HPE 1.6TB NVMe Gen4 x8 High Performance Mixed Use AIC HHHL PM1735 SSD	P26934-B21

HPE PCIe Workload Accelerator Options

HPE 750GB NVMe Gen3 x4 High Performance Low Latency Write Intensive AIC HHHL P4800X SSD	878038-B21

Notes: Please see the **HPE PCIe Workload Accelerators for ProLiant Servers QuickSpecs** for Technical Specifications and additional information.

Hard Drive Blank Kits

HPE Large Form Factor Hard Drive Blank Kit	666986-B21
HPE Small Form Factor Hard Drive Blank Kit	666987-B21

Core Options

Hard Drive Kits

HPE DL38X Gen10 8LFF Front 2SFF SAS/SATA HDD Kit 867805-B21

Notes: For 2 SFF SAS/SATA in UMB on 8 LFF model only.

HPE DL38X Gen10 3LFF Rear SAS/SATA Drive Kit 826685-B21

Notes:
- This is supported in the LFF model only.
- 3 LFF rear drives will consume the 2nd riser expansion slot.

HPE DL38X Gen10 4LFF Midplane SAS/SATA HDD Kit 826686-B21

Notes:
- Supported with both the 8 LFF and 12 LFF models.
- Ships with low-profile heatsink for installation. Supporting processors below 125W. Additional processors supported with system inlet ambient temperature limitations. See “CPUs Supported with 4LFF mid-tray” below
- With this mid-tray only single-wide (8.5-inch cards with connections or less) cards are supported.
- This drive does support hot-swap drives.
- This requires High Performance Fans (867810-B21).

CPUs Supported with 4LFF mid-tray

Must install DIMM blanks on all empty DIMM Slots		
System Inlet Ambient	**8LFF/12LFF with 4LFF mid-tray**	**8LFF/12LFF + 4LFF mid-tray + any rear SAS/SATA HDDs**
35C	• CPU≤125W • 135W (6262V) • 140W (6238, 6152, 6140)	
30C	• 140W (6132) • 150W (6210U) • 165 W (8276, 8260, 8260Y, 6240R, 6238R, 8176, 8170, 6150)	• CPU≤125W • 135W (6262V) • 140W (6238, 6152, 6140)
25C	• 105W (8256, 5222, 5122, 8156) • 115W (5217, 6128) • 125W (6230N) • 130W (6234, 4215R, 6134) • 150W (6252, 6248, 6240, 6242, 6230R, 6226R, 6208U, 5220R, 8164, 8160, 8158, 6148, 6142, 6136)	• 140W (6132) • 150W (6210U) • 165 W (8276, 8260, 8260Y, 6240R, 6238R, 8176, 8170, 6150)
20C	• 150W (6252N, 6244, 6240Y, 6144) • 165W (6246, 6146) • 200W (6254, 6154) • 205W (8280, 8270, 8268, 8180, 8168)	• 105W (8256, 5222, 5122, 8156) • 115W (5217, 6128) • 125W (6230N) • 130W (6234, 4215R 6134) • 150W (6252, 6248, 6242, 6240, 6230R, 6226R, 6208U, 5220R, 8164, 8160, 8158, 6148, 6142, 6136)

HPE DL38X Gen10 2SFF Premium HDD Front NVMe or Front/Rear SAS/SATA Kit 826687-B21

Notes:
- HPE DL38X Gen10 Universal Media Bay Kit (826708-B21).
- NVMe drives require the addition of the High Performance Fan kit (867810-B21).
- NVMe drives require the addition of an NVMe capable riser.
- Drive cage can be used in the rear of the chassis, but will not support NVMe drives rear.

Core Options

HPE DL38X Gen10 2SFF HDD SAS/SATA Riser Kit 826688-B21

Notes:
- Supports 2 SFF rear in Riser1 or 2 location – max 2 supported SFF model.
- Supports 2 SFF rear in Riser1 or 2 location in LFF model. Note is 3 LFF rear option is selected maximum of one in riser 1 location.
- Supports uFF drives.

HPE DL38X NVMe 8 Solid State Drive Express Bay Enablement Kit 826689-B21

Notes:
- This option provides support for up to 8NVMe drives, and can be populated in all Boxes in the 8 SFF model.
- A maximum of 20 NVMe drives are supported; this will mean partial population (4 drives) when the 3rd cage is populated in Box 1.
- This will require the HPE DL38X Gen10 4-port 8 NVMe SlimSAS Riser (867807-B21).
- NVMe drives require the addition of the High Performance Fan kit (867810-B21).

HPE DL38X Gen10 SFF Box1/2 Cage/Backplane Kit 826691-B21

Notes: Supports 8 SAS/SATA SFF drives in Box 1 or 2 to a max of 24 SFF SAS/SATA front.

HPE DL38X Gen10 Premium 6 SFF SAS/SATA + 2 NVMe or 8 SFF SAS/SATA Bay Kit 826690-B21

Notes:
- This kit can be supported in Box 1, 2 or 3 and provides support for up to 6 SAS/SATA + 2 NVMe or 8 SFF SAS/SATA drives per Box. If only populating SFF SAS/SATA, the HPE DL38X Gen10 SFF Box1/2 Cage/Backplane Kit (826691-B21) is the more appropriate option.
- With NVMe drives a specific riser is required.
- NVMe drives require the addition of the High Performance Fan kit (867810-B21).

HPE DL38X Gen10 8LFF Front 2NVMe HDD Bay Kit 873781-B21

Notes:
- Supports 2 NVMe in the Universal Media bay (included) on the 8 LFF model.
- For support of the 2 NVMe drives this will require the addition of the HPE DL38X Gen10 x8/x8/x8 1-port 2 NVMe SlimSAS Riser (867806-B21); or the HPE DL38X Gen10 2-port 4 NVMe SlimSAS Riser (867808-B21).
- NVMe drives require the addition of the High Performance Fan kit (867810-B21).

HPE Networking

1 Gigabit Ethernet adapters

HPE Ethernet 1Gb 4-port BASE-T BCM5719 Adapter 647594-B21
HPE Ethernet 1Gb 2-port BASE-T BCM5720 Adapter 615732-B21
HPE Ethernet 1Gb 2-port BASE-T I350-T2V2 Adapter 652497-B21
HPE Ethernet 1Gb 4-port BASE-T I350-T4V2 Adapter 811546-B21

10 Gigabit Ethernet adapters

Notes: Unless otherwise noted, one of the below 10Gb networking adapters below can be selected as the primary networking choice when configuring a Networking Choice (NC) Configure-to-Order (CTO) chassis. The DL380 Gen10 NC CTO chassis does not come with embedded networking, hence the requirement to configure with either a FlexibleLOM or select PCIe networking adapter.

HPE Ethernet 10Gb 2-port BASE-T QL41401-A2G Adapter 867707-B21
HPE Ethernet 10Gb 2-port SFP+ QL41401-A2G Adapter P08446-B21

Notes: Legacy FIO Mode (758959-B22) not supported with this option on Networking Choice (NC) Configure-to-Order (CTO) chassis. To continue with the combined selection of this networking option and Legacy FIO Mode on NC CTO chassis, an additional networking option (stand-up NIC or FlexibleLOM) without the Legacy FIO mode restriction must be selected.

HPE Ethernet 10Gb 2-port BASE-T 57810S Adapter 656596-B21
HPE Ethernet 10Gb 2-port SFP+ 57810S Adapter 652503-B21

Core Options

HPE Ethernet 10Gb 2-port BASE-T BCM57416 Adapter	813661-B21

Notes: Legacy FIO Mode (758959-B22) not supported with this option on Networking Choice (NC) Configure-to-Order (CTO) chassis. To continue with the combined selection of this networking option and Legacy FIO Mode on NC CTO chassis, an additional networking option (stand-up NIC or FlexibleLOM) without the Legacy FIO mode restriction must be selected.

HPE Ethernet 10Gb 2-port SFP+ BCM57414 Adapter	P08421-B21

Notes: Cannot be selected as the primary networking choice when configuring a Networking Choice (NC) Configure-to-Order (CTO) chassis.

HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter	727055-B21
HPE Ethernet 10Gb 2-port BASE-T X550-AT2 Adapter	817738-B21

25 Gigabit Ethernet adapters

Notes: Unless otherwise noted, one of the below 10/25Gb networking adapters below can be selected as the primary networking choice when configuring a Networking Choice (NC) Configure-to-Order (CTO) chassis. The DL380 Gen10 NC CTO chassis does not come with embedded networking, hence the requirement to configure with either a FlexibleLOM or select PCIe networking adapter.

HPE Ethernet 10/25Gb 2-port SFP28 QL41401-A2G Adapter	867328-B21
HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter	817718-B21

Notes: Legacy FIO Mode (758959-B22) not supported with this option on Networking Choice (NC) Configure-to-Order (CTO) chassis. To continue with the combined selection of this networking option and Legacy FIO Mode on NC CTO chassis, an additional networking option (stand-up NIC or FlexibleLOM) without the Legacy FIO mode restriction must be selected.

HPE Ethernet 10/25Gb 2-port SFP28 MCX4121A-ACUT Adapter	817753-B21
Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	P08443-B21
Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE	P08458-B21

100 Gigabit Ethernet Adapters

HPE Ethernet 100Gb 1-port QSFP28 MCX515A-CCAT Adapter	874253-B21

Notes:

- The DL380 Gen10 embedded LOM chassis ships standard with 4x 1 Gb embedded
- A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.
- Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications and additional information: **https://www.hpe.com/us/en/product-catalog/servers/adapters/pip.models.hpe-storefabric-converged-network-adapters.4118472.html**

FlexibleLOM adapters

Pensando Distributed Services Platform for HPE iLO Sideband Management Adaptive LOM Module	P26969-B21

Notes:

- This option requires the selection of Pensando DSP 10/25G 2p SFP28 Card (P26966-B21).
- Legacy FIO Mode (758959-B22) not supported with this option on Networking Choice (NC) Configure-to-Order (CTO) chassis. To continue with the combined selection of this networking option and Legacy FIO Mode on NC CTO chassis, an additional networking option (stand-up NIC or FlexibleLOM) without the Legacy FIO mode restriction must be selected.
- This option cannot be selected with any GPU

HPE Ethernet 1Gb 4-port FLR-T I350-T4V2 Adapter	665240-B21
HPE Ethernet 1Gb 4-port FLR-T BCM5719 Adapter	629135-B22
HPE FlexFabric 10Gb 2-port FLR-T 57810S Adapter	700759-B21
HPE FlexFabric 10Gb 2-port FLR-SFP+ 57810S Adapter	700751-B21
HPE Ethernet 10Gb 2-port FLR-T BCM57416 Adapter	817721-B21
HPE FlexFabric 10Gb 4-port FLR-T 57840S Adapter	764302-B21
HPE Ethernet 10Gb 2-port FLR-SFP+ BCM57414 Adapter	P08440-B21
HPE Ethernet 10/25Gb 2-port FLR-SFP28 BCM57414 Adapter	817709-B21

Core Options

HPE Ethernet 10/25Gb 2-port FLR-SFP28 MCX4121A-ACFT Adapter	817749-B21
HPE Ethernet 10Gb 2-port FLR-SFP+ X710-DA2 Adapter	727054-B21
HPE Ethernet 10Gb 2-port FLR-T X550-AT2 Adapter	817745-B21
HPE Ethernet 10/25Gb 2-port FLR-SFP28 QL41401-A2G Converged Network Adapter	867334-B21

Notes:
- The DL380 Gen10 Embedded LOM Configure-to-Order (CTO) chassis ships with 4x 1Gb embedded.
- When configuring a DL380 Gen10 Networking Choice (NC) Configure-to-Order (CTO) chassis, a FlexibleLOM adapter or select stand-up card networking adapter in the "HPE Networking" section must be selected.
- Only one FlexibleLOM can be added to the server. These options are upgradeable and can be changed from the original configuration after the server is shipped.
- Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications and additional information: **https://www.hpe.com/us/en/product-catalog/servers/adapters/pip.models.hpe-storefabric-converged-network-adapters.4118472.html**

HPE InfiniBand

HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	879482-B21
HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	872726-B21

Notes: 8SFF, 16SFF, 8LFF no restrictions; 24SFF, 12LFF supported, but limited to 25C.

HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter	872725-B21
HPE 100Gb 1-port OP101 QSFP28 x16 PCIe Gen3 with Intel Omni-Path Architecture Adapter	829335-B21
HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	825111-B21
HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe3 x16 MCX653105A-ECAT Adapter	P06250-B21
HPE InfiniBand HDR100/Ethernet 100Gb 2-port QSFP56 PCIe3 x16 MCX653106A-ECAT Adapter	P06251-B21
HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe3 x16 MCX653105A-HDAT Adapter	P06154-B21

Notes: Max Qty=1; Must be ordered with HPE Infiniband HDR PCIe G3 Auxiliary Card (P06154-B23)

HPE InfiniBand HDR PCIe3 Auxiliary Card with 350mm Cable Kit	P06154-B23

Notes: Max Qty=1; Must be ordered with HPE Infiniband HDR/Ethernet 200G 1p 9400QSFP56 (P06154-B21)

HPE Smart IO

Pensando Distributed Services Card (DSC)

Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card	P26966-B21

Notes:
- Legacy FIO Mode (758959-B22) not supported with this option on Networking Choice (NC) Configure-to-Order (CTO) chassis. To continue with the combined selection of this networking option and Legacy FIO Mode on NC CTO chassis, an additional networking option (stand-up NIC or FlexibleLOM) without the Legacy FIO mode restriction must be selected.
- DSC card must be installed in slot 1 when configured with Pensando for HPE iLO Adaptive LOM module (P26969-B21)
- Each card instance requires one RTU license of Silver or Platinum software. In case of more than one adapter, RTU licenses do not need to be of the same part number.
- One 3yr/4yr/5yr Silver or 3yr/4yr/5yr Platinum software license must be purchased for every DSC-25 card/adapter in a server.
- 1yr Silver, 1yr Platinum software licenses are reserved for renewals only.

Pensando Distributed Services Platform FlexibleLOM Adapter

Pensando Distributed Services Platform for HPE iLO Sideband Management Adaptive LOM Module	P26969-B21

Notes:
- This option requires the selection of Pensando DSP 10/25G 2p SFP28 Card (P26966-B21).
- Legacy FIO Mode (758959-B22) not supported with this option on Networking Choice (NC) Configure-to-Order (CTO) chassis. To continue with the combined selection of this networking option and Legacy FIO

Core Options

Mode on NC CTO chassis, an additional networking option (stand-up NIC or FlexibleLOM) without the Legacy FIO mode restriction must be selected
- This option cannot be selected with any GPU; If a GPU is required, contact your field services representative to have the configuration evaluated.

DSP Silver Software Licenses

Pensando Distributed Services Platform Enterprise 1-year Renewal Subscription 24x7 Support E-RTU	R6A06AAE
Pensando Distributed Services Platform Enterprise 3-year Subscription 24x7 Support E-RTU	R6A07AAE
Pensando Distributed Services Platform Enterprise 4-year Subscription 24x7 Support E-RTU	R6F68AAE
Pensando Distributed Services Platform Enterprise 5-year Subscription 24x7 Support E-RTU	R6A08AAE

DSP Platinum Software Licenses

Pensando Distributed Services Platform Enterprise Pro 1-year Renewal Subscription 24x7 Support E-RTU	R6A09AAE
Pensando Distributed Services Platform Enterprise Pro 3-year Subscription 24x7 Support E-RTU	R6A10AAE
Pensando Distributed Services Platform Enterprise Pro 4-year Subscription 24x7 Support E-RTU	R6F69AAE
Pensando Distributed Services Platform Enterprise Pro 5-year Subscription 24x7 Support E-RTU	R6A11AAE

HPE I/O Expansion Options

Notes:
- The Primary Riser shipping default in the chassis is a x8 FH, FL, x16 FH, FL and x8 FH, HL with m.2 support.
- For a Secondary/Tertiary riser, the second processor is required.

HPE DL38X Gen10 Slot 1/2 x16/x16 FIO Riser Kit 871674-B21

Notes:
- Slot 1 (Top slot) and 2 (Middle slot) available in Primary riser location
- Replaces the default Primary riser
- Max Qty=1 Double-wide Accelerator/GPU can be populated
- Supports Full Height and Full length cards.
- Bus width x16, x16, Connector Width x16, x16.

HPE DL38X Gen10 x16/x16 GPU Slot2/3 FIO Riser Kit 871676-B21

Notes:
- Slot 2 (Middle slot) and Slot 3 (Bottom slot) available in Primary riser location
- Replaces the default Primary riser
- Max Qty=1 Double-wide Accelerator/GPU can be populated
- Supports Full Height and Full length cards.
- Bus width x16, x16, Connector Width x16, x16.

HPE DL38X Gen10 x8/x8/x8 1-port 2 NVMe Slim SAS FIO Riser Kit 871673-B21

Notes:
- Slot 1 (Top slot) and 2 (Middle Slot) and 3 (Bottom slot) available in Secondary riser location with support for 2 NVMe drives
- Supports Full Height and half-length cards.
- Bus width x8, x8, x8 Connector Width x8, x8, x8.
- If this option is selected and the Premium 2SFF HDD Kit (826687-B21) has also been ordered, then the 2SFF NVMe Instruction Spec (878189-B21) MUST be selected; does not apply to 8LFF server model
- If this option is selected and HPE DL38X Gen10 Premium 6SFF SAS/SATA + 2SFF NVMe Bay Kit (826690-B21) has also been ordered, then the 6+2 NVMe Instruction Spec (878192-B21) MUST be selected.

HPE DL38X Gen10 x16/x16/x16 Primary GPU FIO Riser Kit P14374-B21

Notes:
- Slot 1 (Top slot) and 2 (Middle Slot) and 3 (Bottom slot) available in Primary riser location and must be populated. Supports up to (3) full-height, half-length, single-width GPU/Accelerators (depending on model)
- Replaces the default Primary riser
- Bus width x8, x16, x8; Connector width x16, x16, x16
- This is a factory-integrated only (FIO) option. All slots (3) must be populated.

Core Options

- HPE DL38X Gen10 x16/x16/x16 Secondary GPU FIO Riser Kit must also be selected and requires all slots (3) be populated.

HPE DL38X Gen10 x16/x16/x16 Secondary GPU FIO Riser Kit P14373-B21

Notes:
- Slot 1 (Top slot) and 2 (Middle Slot) and 3 (Bottom slot) available in Secondary riser location; all slots must be populated. Supports up to (3) full-height, half-length, single-width GPU/Accelerators (depending on model)
- Bus width x8, x16, x8; Connector width x16, x16, x16
- This is a factory-integrated only (FIO) option. All slots (3) must be populated.

HPE DL38X Gen10 x16/x16 Riser Kit 826694-B21

Notes:
- Slot 1 (Top slot) and 2 (Middle slot) available in Secondary riser location.
- NMax Qty=1 Double-wide Accelerator/GPU can be populated
- Supports Full Height and Full length cards.
- Bus width x16, x16, Connector Width x16, x16.

HPE DL Gen10 x8/x16/x8 Riser Kit 870548-B21

Notes:
- Slot 1 (Top slot) and 2 (Middle slot) and 3 (Bottom slot) available in Secondary riser location.
- No M.2 support on this riser.
- Supports Full Height, Half- length cards; Full Height, Full-length cards and Full Height, Half- length cards.
- Bus width x8, x16, x8, Connector Width x8, x16, x8.

HPE DL38X Gen10 4-port 8 NVMe Primary SlimSAS Riser 867807-B21

Notes:
- Riser supporting up to 8 NVMe drives in Primary location. All PCIe lanes dedicated to NVMe; no additional slots available for expansion via stand-up cards in the Primary riser location.
- Replaces the default Primary riser
- This is a factory integrated only option.
- This can be connected to an 8SFF NVMe drive cage in box 3.
- To achieve max 20 NVMe support, connect 4 NVMe drives to the tertiary riser.

HPE DL Gen10 x16/x16 GPU Riser Kit 826704-B21

Notes:
- Slot 2 (Middle slot) and 3 (Bottom slot) available in Secondary riser location.
- Max Qty=1 Double-wide Accelerator/GPU can be populated
- Supports Full Height and Full length cards.
- Bus width x16, x16, Connector Width x16, x16.
- For additional details on ProLiant DL Gen10 server risers please visit: **https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00043229enw**

HPE DL38X Gen10 2SFF HDD SAS/SATA Riser Kit 826688-B21

Notes:
- Premium bay supporting SFF SAS/SATA; can be configured in Primary or Secondary riser location
- Slot 3 (Bottom slot) available in Primary or Secondary Riser location, depending on configuration
- Bus width x16, Connector width x16

HPE DL38X Gen10 x8/x8/x8 1-port 2 NVMe SlimSAS Riser 867806-B21

Notes:
- Slot 1 (Top slot) or 2 (Middle Slot) or 3 (Bottom slot) available in Secondary riser location with support for 2 NVMe drives
- Supports Full Height and half-length cards.
- Bus width x8, x8, x8 Connector Width x8, x8, x8.
- If this option is selected and the Premium 2SFF HDD Kit (826687-B21) has also been ordered, then the 2SFF NVMe Instruction Spec (878189-B21) MUST be selected; does not apply to 8LFF server model
- If this option is selected and HPE DL38X Gen10 Premium 6SFF SAS/SATA + 2SFF NVMe Bay Kit (826690-B21) has also been ordered, then the 6+2 NVMe Instruction Spec (878192-B21) MUST be selected.

Core Options

HPE DL38X Gen10 2-port 4 NVMe SlimSAS Riser 867808-B21

Notes: Supports up to 4 NVMe drives in Tertiary riser location; All PCIe lanes dedicated to NVMe; no additional slots available for expansion via stand-up cards in the Tertiary riser location.

HPE DL38X Gen10 4-port 8 NVMe Secondary Slim SAS Riser 873732-B21

Notes: Riser supporting up to 8 NVMe drives in Secondary riser location; All PCIe lanes dedicated to NVMe; no additional slots available for expansion via stand-up cards in the Secondary riser location.

HPE DL38X Gen10 2 x8 PCIe Tertiary Riser Kit 875780-B21

Notes:

- Slot 1 (Top slot) and slot (2) available in Tertiary riser location.
- Bus width x8, x8; Connector Width x8, x8.

HPE DL38X Gen10 x16 Tertiary Riser Kit 826700-B21

Notes:

- Slot 1 (Top slot) available in Tertiary riser location.
- Supports Full Height and full-length card.
- Bus width x16; Connector Width x16.

HPE DL380 Gen10 Pri/Sec Rsr w/o Retainer P38515-B21

Notes:

- This riser cage removes the retainer clip for proper fitment of certain NVIDIA GPUs in the primary and/or secondary riser. For such applicable NVIDIA GPUs to be populated in the primary riser, first select the appropriate primary riser unless the default x8x16x8 primary is preferred. Then add P38515-B21. For such applicable NVIDIA GPUs in the secondary riser, a secondary riser must first be selected; then add P38515-B21. See “Riser Information” table within this document to select the appropriate primary and/or secondary riser options.
- If an applicable NVIDIA GPU is installed in both primary and secondary risers, a minimum quantity of (2) of P38515-B21 must be selected if the tertiary riser will not be populated; OR (1) P38515-B21 + (1) P38517-B21 HPE DL380 Gen10 Tertiary Riser without Retainer must be selected if, in addition to both primary and secondary risers containing applicable NVIDIA GPUs, the tertiary riser is being populated with any option, including NVIDIA GPUs.

HPE DL380 Gen10 Tert Riser w/o Retainer P38517-B21

Notes:

- This tertiary riser cage is a butterfly cage for both the secondary riser and tertiary riser. It removes the retainer clip in the secondary riser for proper fitment of certain NVIDIA GPUs, while allowing for a tertiary riser selection as well. This option should be selected if the tertiary riser is being populated with any option, including NVIDIA GPUs, and the secondary riser contains an applicable NVIDIA GPU. First select the appropriate secondary riser and tertiary riser (see “Riser Information” table for riser options); then add P38517-B21.

Core Options

Risers

Riser Information*									
Part number	Description	Riser position			Bus width (Gen3 lanes)			NVMe Direct Connect	
		Primary	Secondary	Tertiary	Top slot	Middle Slot	Bottom slot	Ports	Drive count
n/a	This is the default riser in the chassis	D	N	N	x8	x16	x8	-	-
870548-B21	HPE DL Gen10 x8/x16/x8 Riser Kit	N	O	N	x8	x16	x8	-	-
826704-B21	HPE DL Gen10 x16/x16 GPU Riser Kit	N	O	N	0	x16	x16	-	-
826694-B21	HPE DL38X Gen10 x16/x16 Riser Kit	N	O	N	x16	x16	0	-	-
867807-B21	HPE DL38X Gen10 4-port 8 NVMe Primary SlimSAS Riser	O	N	N	0	0	0	4	8
867808-B21	HPE DL38X Gen10 2-port 4 NVMe SlimSAS Riser	N	N	O	0	0	0	2	4
873732-B21	HPE DL38X Gen10 4-port 8 NVMe Secondary SlimSAS Riser	N	O	N	0	0	0	4	8
867806-B21	HPE DL38X Gen10 x8/x8/x8 1-port 2 NVMe SlimSAS Riser	N	O	N	x8	x8	x8	1	2
871673-B21	HPE DL38X Gen10 x8/x8/x8 1-port 2 NVMe SlimSAS FIO Riser Kit	O	N	N	x8	x8	x8	1	2
826688-B21	HPE DL38X Gen10 2SFF HDD SAS/SATA Riser Kit	O	O	N	0	0	x16	-	-
826700-B21	HPE DL38X Gen10 x16 Tertiary Riser Kit	N	N	O	X16	0	0	-	-
875780-B21	HPE DL38X Gen10 2 x8 PCIe Tertiary Riser Kit	N	N	O	X8	X8	0	-	-
871674-B21	HPE DL38X Gen10 Slot 1/2 x16/x16 FIO Riser Kit	O	N	N	x16	x16	0	-	-
871676-B21	HPE DL38X Gen10 x16/x16 GPU Slot2/3 FIO Riser Kit	O	N	N	0	x16	x16	-	-
P14374-B21	HPE DL38X Gen10 x16/x16/x16 Primary GPU FIO Kit[1]	O	N	N	x8	x16	x8	-	-
P14373-B21	HPE DL38X Gen10 x16/x16/x16 Secondary GPU FIO Kit[1]	N	O	N	x8	x16	x8	-	-

Notes:

- [1] P14374-B21 and P14373-B21 each support up to (3) full-height, half-length, single-width Accelerators/GPUs (depending on Accelerator model selected), totaling (6) Accelerators in the primary riser and seconday riser (balanced across both processors in a 2-processor configuration). Connector width = x16/x16/x16; Bus width = x8/x16/x8.
- D = Default on chassis; O = Optional; N = not supported or slot/connector not present.
- The 826687-B21 premium 2SFF cage is leveraged both UMB, plus 2SFF rear over PS.
- *For additional details on ProLiant DL Gen10 server risers please visit: **https://www.hpe.com/h20195/v2/Getdocument.aspx?docname=a00043229enw**

Core Options

HPE Power Supplies

HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit 865408-B21

Notes: Flex Slot Platinum power supplies support power efficiency of up to 94% and include a standard C-14 power inlet connector.

HPE 800W Flex Slot Titanium Hot Plug Low Halogen Power Supply Kit 865438-B21

Notes: Flex Slot Titanium power supplies support power efficiency of up to 96% and include a standard C-14 power inlet connector.

HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit 865414-B21

Notes: Flex Slot Platinum power supplies support power efficiency of up to 94% and include a standard C-14 power inlet connector.

HPE 800W Flex Slot -48VDC Hot Plug Low Halogen Power Supply Kit 865434-B21

Notes: Flex Slot -48VDC power supplies support power efficiency of up to 94%.

HPE 800W Flex Slot Universal Hot Plug Low Halogen Power Supply Kit 865428-B21

Notes: Flex Slot universal power supplies support power efficiency of up to 94% and support both 277VAC/380VDC power inputs.

HPE 1600W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit 830272-B21

Notes: Flex Slot Platinum Plus power supplies support power efficiency of up to 94% and include a C-14 power inlet connector that can support HPE Power Discovery Services (blue connector).

HPE 1600W Flex Slot -48VDC Hot Plug Power Supply Kit P17023-B21

Notes:

- Flex Slot -48VDC power supplies support power efficiency of up to 94%.
- Requires selection of HPE 1600W DC PSU Power Cable Kit (P22173-B21) or HPE 1600W DC PSU Power Lug Option Kit (P36877-B21). P22173-B21 includes the power cable with lugs installed while P36877-B21 is intended for customers using their own cabling and only require the lugs.
- Not supported with Intel Optane Persistent Memory (128/256/512GB)

Core Options

Accelerators

Accelerators Information												
Part number	**Description**	**Qty**	**Processor supported**	**Processor Generation**	**8 SFF**	**8 LFF**	**16SFF +UMB with 2SFF**	**16 SFF +8NVMe**	**24 SFF**	**24 SFF +SFF rear**	**12 LFF**	**12 LFF+ 2SFF rear**
Q1K38C	AMD Radeon Instinct MI25	3	165W or below	1st Gen	35C	25C	25C	25C[1]	25C	25C[1]	N/S*	N/S*
Q9B37C	Intel Arria 10 GX FPGA Accelerator	5	205W or below	1st and 2nd Gen	35C	35C	30C	30C	30C	30C	25C	25C
R0X82C	Intel FPGA PAC D5005 (Stratix 10 SX) FPGA Accelerator	3	205W or below	2nd Gen	30C	N/S*	20C	N/S*	N/S*	N/S*	N/S*	N/S*
Q7G75C	NEC Vector Engine Accelerator Module	3	165W or below	2nd Gen	30C	N/S*	N/S*	N/S*	N/S*	N/S*	N/S*	N/S*
R6B53C	HPE NVIDIA A100 40GB GPU	2	205W or below	2nd Gen	30C	25C	20C	20C	20C	20C	N/S*	N/S*
R2U55C	HPE NVIDIA Quadro P2200 GPU Module	5	205W or below	2nd Gen	35C	35C	35C	35C[1]	35C	35C[1]	35C	35C[1]
R1F95C	HPE NVIDIA Quadro RTX4000 GPU Module	5	205W or below	2nd Gen	35C	35C	35C	35C[1]	35C	35C[1]	30C	30C[1]
R0Z45C	HPE NVIDIA Quadro RTX 6000	3	205W or below	1st and 2nd Gen	35C	35C	35C	35C	35C	35C	25C	25C
R1F97C	HPE NVIDIA Quadro RTX8000 GPU Module	3	205W or below	2nd Gen	35C	35C	35C	35C	35C	35C	30C	30C
Q0J62C	NVIDIA Tesla M10 32GB Module[2]	2	165W or below	1st Gen and 2nd Gen	35C	35C	35C	25C[1]	35C	35C	30C	30C[1]
Q0V80C	NVIDIA Tesla P40 24GB Module	3	165W or below	1st and 2nd Gen	35C	35C	25C	25C[1]	25C	25C[1]	20C	20C[1]
R0W29C	NVIDIA Tesla T4 16GB Computational Accelerator	7	205W or below	1st and 2nd Gen	35C	N/S*	≤ 30C	≤20C	≤ 20C	≤ 20C	N/S*	N/S*
Q9U36C	HPE NVIDIA Tesla V100 PCIe 32GB Module	3	165W or below	1st and 2nd Gen	30C	20C	20C	20C[1]	20C	20C[1]	N/S*	N/S*

Core Options

R4D73C	HPE NVIDIA Tesla V100S PCIe 32GB Module	3	165W or below	2nd Gen	30C	20C	20C	20C[1]	20C	20C[1]	N/S*	N/S*
R4B02C	HPE Xilinx Alveo U50 Accelerator	7	205W or below	2nd Gen	30C	20C	20C	N/S*	20C	N/S*	N/S*	N/S*
R4B03C	HPE Xilinx Alveo U250 Accelerator	3	205W or below	2nd Gen	35C	20C	20C	N/S*	N/S*	N/S*	N/S*	N/S*

Notes:

- *Not Supported
- [1] Invalid configuration or no HW support may apply to multiple GPUs installed. HW limitation may not be a thermal limitation.
- [2] Only 2xM10 can be supported (on any x16 slot 2, 5 or 7) due to system running out of PCIe lanes.
- Within the column labeled "Processor Generation Supported", "1st Gen" and/or "2nd Gen" denotes which generation of Intel Scalable Series processors is supported on the respective GPU/FPGA; for reference, the 2nd digit of the processor model number "x1xx" and "x2xx" is used to identify the processor generation (i.e. 1=1st generation and 2=2nd generation)
- 1x 1600W PS recommended, but this card will work with 1x800W PS (per GPU). However check the power usage via the HPE Power Advisor Tool located at **http://www.hpe.com/info/hppoweradvisor**.
- Performance fans (867810-B21) are required for all GPU installations (Note these ship as standard with the 24SFF and 12LFF models).
- Performance Heatsinks (826706-B21) are required for Double Wide GPU installations (Note these ship as standard on Processors over 130W processors and the 8256, 8156, 6128, 5222 and 5122)
- Mixing of GPUs is not supported.
- With the Standard Primary Riser the top x8 PCIe Slot connector will not be accessible with the installation of a doublewide GPU.
- Only 2 SFF rear drives supported over Power Supply as would require Riser 1 and Riser 2 for GPU support.
- 4 LFF mid-tray will not support any GPU cards.
- The M10 is limited to a max memory support of under 1TB.
- Any GPU installation does not meet Energy Star requirements.
- Installations with Graphics cards do not support Microsoft Windows Server 2012 R2 installations.
- For Graphics cards there is a limitation of 1 single wide GPU on the slot 2/3 riser (826704-B21 Secondary and 871676-B21 Primary).

Core Options

HPE Computation and Graphics Accelerators

HPE NEC Vector Engine Accelerator Module Q7G75C

Notes:
- This requires the HPE DL380 Gen10 8P Keyed Cable Kit 871829-B21. One Pwr Cable Kit can support multiple (Max=3 Doublewide or Max=6 Singlewide) GPUs.
- Only supported on 8SFF server models.
- 3 of these cards are supported.
- NEC VE requires “Max Cooling” settings in current ROM.
- This option requires the High Performance Fan Kit (867810-B21) and the High Performance Heatsink (826706-B21).
- Only supported on 8SFF server models
- Only Supported with 2nd Generation Intel Scalable Series Processors "x2xx”

NVIDIA A100 40GB PCIe Computational Accelerator for HPE R6B53C

Notes:
- Max Qty = 2
- If installed in Primary riser position, the Primary/Secondary Riser w/out Retainer (P38515-B21) must be selected in addition to the appropriate Primary Riser to support this GPU, which may include the default x8/x16/x8 Primary Riser that comes standard on all DL380 Gen10 chassis.
- The second GPU, if desired, will be defaulted to the Secondary Riser position unless one of two slimSAS risers (873732-B21/867806-B21) is selected. If neither of the aforementioned slimSAS risers are selected and no option will be populated in the tertiary riser, P38515-B21 must be selected in addition to the appropriate secondary riser. If neither of the aforementioned slimSAS risers are selected but the tertiary riser will be populated with any option, including an NVIDIA GPU, P38517-B21 should be selected in addition to the appropriate secondary and tertiary risers. If one of the aforementioned slimSAS risers are selected, the second GPU can be installed with the selection of HPE DL38X Gen10 x16 Tertiary Riser Kit (826700-B21) and without the need for a riser cage without retainer kit (P38515-B21/P38517-B21). *The first GPU in the primary riser would still need P38515-B21.
- If installed in Tertiary Riser, the Tertiary Riser w/out Retainer (P38517-B21) must also be selected.
- This requires the HPE DL380 Gen10 8P Keyed Cable Kit 871829-B21. One Pwr Cable Kit can support multiple (Max=3 Doublewide or Max=6 Singlewide) GPUs.
- This option requires the High Performance Fan Kit (867810-B21) and the High Performance Heatsink (826706-B21).
- Only Supported with 2nd Generation Intel Scalable Series Processors "x2xx”
- Not supported on 12LFF chassis
- Not supported if more than 8 NVMe drives are selected

NVIDIA Quadro P2200 Graphics Accelerator for HPE R2U55C

Notes:
- Max Qty=5 per server
- This option requires the High Performance Fan Kit (867810-B21), and the High Performance Heatsink (826706-B21); heatsink rule does not apply if ordering processors above 126W or higher.
- System Memory Restriction <128TB.
- Only Supported with 2nd Generation Intel Scalable Series Processors "x2xx”
- Mixing of GPUs is not supported

NVIDIA Quadro RTX 6000 Graphics Accelerator for HPE R0Z45C

Notes:
- Max Qty=2 per server
- This option requires the High Performance Fan Kit (867810-B21), and the High Performance Heatsink (826706-B21).
- This GPU requires Pwr Cable Kit (871830-B21) to also be selected.
- One Pwr Cable Kit can support multiple (max=3) GPUs.

Core Options

NVIDIA Quadro RTX 4000 Graphics Accelerator for HPE R1F95C

Notes:
- Max Qty=5 per server.
- This GPU requires Pwr Cable Kit (P03849-B21) to also be selected. One Pwr Cable Kit can support multiple (Max=3 Doublewide or Max=6 Singlewide) accelerators.
- This option requires the High Performance Fan Kit (867810-B21), and the High Performance Heatsink (826706-B21)
- Only Supported with 2nd Generation Intel Scalable Series Processors "x2xx"

NVIDIA Quadro RTX 8000 Graphics Accelerator for HPE R1F97C

Notes:
- Max Qty=2 per server
- This option requires the High Performance Fan Kit (867810-B21), and the High Performance Heatsink (826706-B21)
- System Memory Restriction <128TB;
- Only Supported with 2nd Generation Intel Scalable Series Processors "x2xx"
- This GPU requires Pwr Cable Kit (871830-B21) to also be selected. One Pwr Cable Kit can support multiple (max=3) Accelerators.

NVIDIA T4 16GB Computational Accelerator for HPE R0W29C

Notes:
- Max Qty=7 per server; Requires selection of 3x16 Primary and Secondary GPU Risers (P14374-B21, P14373-B21) for Qty=6; Requires the addition of x16 Tertiary Riser for Qty=7. If ordering with a 24SFF CTO server model (868704-B21, or 875783-B21, or P19719-B21), the HPE DL380 Gen10 Tertiary x16 Riser (826700-B21) is required. To achieve a max of 7 with 24SFF model, the pre-selected HPE Smart Array P408i and SAS Expander must be replaced with HPE Smart Array P816i-a SR Gen10 Ctrlr (804338-B21). Otherwise, Max Qty=6 for 24SFF CTO server models.
- This option requires the High Performance Fan Kit (867810-B21), and the High Performance Heatsink (826706-B21)
- System Memory Restriction <128TB

NVIDIA M10 Quad GPU Module for HPE Q0J62C

Notes:
- This required the HPE DL380 Gen10 8P Cable Kit 871828-B21. One Pwr Cable Kit can support multiple (Max=3 Doublewide or Max=6 Singlewide) GPUs.
- Only 2x M10 can be supported (on any x16 slot 2, 5 or 7) due to system running out of PCIe lanes.
- 2 of these cards are supported with a processor 165W or below.
- GRID License required.
- System Memory Restriction <1TB. No support on 12LFF chassis

NVIDIA V100S 32GB Computational Accelerator for HPE R4D73C

Notes:
- 3 of these cards are supported with a processor 165W or below.
- System Memory Restriction <128TB.
- No support on 12LFF chassis.
- This requires the HPE DL380 Gen10 8P Keyed Cable Kit 871829-B21. One Pwr Cable Kit can support multiple (Max=3 Doublewide or Max=6 Singlewide) GPUs.
- This option requires the High Performance Fan Kit (867810-B21), and the High Performance Heatsink (826706-B21)
- Only Supported with 2nd Generation Intel Scalable Series Processors "x2xx"

Xilinx Alveo U50 Accelerator for HPE R4B02C

Notes:
- Max Qty=7 per server
- This option requires the High Performance Fan Kit (867810-B21), and the High Performance Heatsink (826706-B21); heatsink rule does not apply if ordering processors above 126W or higher.
- System Memory Restriction <128TB.

Core Options

- Only Supported with 2nd Generation Intel Scalable Series Processors "x2xx"
- Mixing of GPUs is not supported
- Not supported on 12LFF chassis; not supported on 24SFF chassis when SFF rear drives installed
- Not supported with NVMe 8 SSD Express bay (826689-B21) nor Premium 8SFF Bay Kit (826690-B21) nor 2SFF HDD Riser Kit (826688-B21)
- Supported DAC cables are HPE 100Gb QSFP28 to QSFP28 5m DAC (845408-B21) and HPE 100Gb QSFP28 to QSFP28 3m DAC (845406-B21)

Xilinx Alveo U250 Accelerator for HPE R4B03C

Notes:
- Max Qty=3 per server
- This option requires the High Performance Fan Kit (867810-B21), and the High Performance Heatsink (826706-B21); heatsink rule does not apply if ordering processors above 126W or higher.
- This GPU requires Pwr Cable Kit (871828-B21) to also be selected.
- One Pwr Cable Kit can support multiple (Max=3 Doublewide or Max=6 Singlewide) GPUs.
- System Memory Restriction <128TB.
- Only Supported with 2nd Generation Intel Scalable Series Processors "x2xx"
- Mixing of GPUs is not supported
- Not supported on 12LFF Chassis nor 24SFF Chassis
- Not supported with NVMe 8 SSD Express bay (826689-B21) nor Premium 8SFF Bay Kit (826690-B21) nor 2SFF HDD Riser Kit (826688-B21)

Graphics Cable Kits

HPE DL38x GPU 6px6p Y-Power Cable Kit	874212-B21
HPE DL38x Gen10 8-pin Cable Kit	871828-B21
HPE DL38x Gen10 8-pin Keyed Cable Kit	871829-B21
HPE GPU 2x 8-pin Cable Kit	P03849-B21
HPE DL38x Gen10 8x 6-pin Cable Kit	871830-B21

HPE Cooling Options

HPE DL38X Gen10 High Performance Temperature Fan Kit 867810-B21

Notes:
- This kit is required for specific **Ambient temperature environments**.
- High Performance fan kit consists of 6 fans, these will need to replace all the standard fans in the unit, and fill all 6 fan cages.
- The 12 LFF and 24 SFF models (including field upgrades to 24 SFF) will already include 6 High Performance fan kits.
- The High Performance fan kit is needed to support certain Passive GPGPU (Graphics cards) configurations; or ASHRAE operating environments.
- For elevated ambient temperature support please see: **http://www.hpe.com/servers/ashrae**.

Additional Options

Some options may not be integrated at the factory. To ensure only valid configurations are ordered, Hewlett Packard Enterprise recommends the use of an HPE approved configurator. Contact your local sales representative for additional information.

Embedded Management

HPE iLO Common Password FIO Setting

HPE iLO Common Password FIO Setting	P08040-B21

Notes:
- Replaces iLO default randomized password by an HPE defined common password. HPE highly recommends changing this password immediately after the initial onboarding process.
- Customers who want to choose their own custom iLO default password should use the HPE Factory Express Integration Services

HPE iLO Advanced

HPE iLO Advanced Electronic License with 1yr Support on iLO Licensed Features	E6U59ABE
HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features	512485-B21
HPE iLO Advanced Flexible Quantity License with 1yr Support on iLO Licensed Features	512486-B21
HPE iLO Advanced AKA Tracking License with 1yr Support on iLO Licensed Features	512487-B21
HPE iLO Advanced Electronic License with 3yr Support on iLO Licensed Features	E6U64ABE
HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	BD505A
HPE iLO Advanced Flexible Quantity License with 3yr Support on iLO Licensed Features	BD506A
HPE iLO Advanced AKA Tracking License with 3yr Support on iLO Licensed Features	BD507A

HPE Converged Infrastructure Management Software

HPE OneView including 3yr 24x7 Support Physical 1-server LTU	E5Y34A
HPE OneView including 3yr 24x7 Support Flexible Quantity E-LTU	E5Y35AAE
HPE OneView w/o iLO including 3yr 24x7 Support 1-server LTU	P8B24A
HPE OneView w/o iLO including 3yr 24x7 Support Track 1-server LTU	P8B25A
HPE OneView w/o iLO including 3yr 24x7 Support Flexible Quantity E-LTU	P8B26AAE

Notes: Licenses ship without media. The HPE OneView Media Kit can be ordered separately, or can be **downloaded**.

HPE Security

HPE Trusted Supply Chain FIO Configuration	P36394-B21

Notes:
- HPE Trusted Supply Chain (P36394-B21) is an optional security upgrade intended for agencies and regulated industries needing enhanced security and compliance needs. Applying this option to a DL380 Gen10 CTO server ensures it is built in the USA in a secured facility by vetted HPE personnel assigned to the manufacturing processes. A multitude of checkpoints/inspections for malicious microcode and counterfeit parts are performed throughout the server build, and additional safeguards are put in place against cyber-exploits throughout the server lifecycle. The HPE ProLiant DL380 Gen10 server is re-branded as a HPE ProLiant DL380T Gen10 to denote the HPE Trusted Supply Chain security enhancements. The DL380T Gen10 is currently supported in the USA, exclusively, and is Trade Agreement Act (TAA) compliant.Learn more at **http://www.hpe.com/security**
- This option requires the selection of HPE Gen10 Intrusion Detection Kit (867824-B21)
- This option requires the selection of either HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features (BD505A) or HPE iLO Advanced 1-server License with 1yr Support on iLO Licensed Features (512485-B21)
- This option is limited to stand-alone DL380 Gen10 CTO servers only. The HPE Trusted Supply Chain configuration will not be available if the server is ordered as factory integrated into a rack

Additional Options

- One instance of the following Electronic License to Use is required per order (not per server): R6X85AAE - HPE Trusted Supply Chain E-LTU
- Logistics delivery speeds and services are available and selectable within Next Gen Quoter.
- This option cannot be selected with TAA instruction SKU nor TAA CTO Models

HPE iLO Common Password FIO Setting P08040-B21

Notes:
- Replaces iLO default randomized password by an HPE defined common password. HPE highly recommends changing this password immediately after the initial onboarding process.
- Customers who want to choose their own custom iLO default password should use the HPE Factory Express Integration Services

HPE Gen10 2U Bezel Kit 867809-B21

HPE Bezel Lock Kit 875519-B21

Notes: Requires the bezel kit

HPE Gen10 Chassis Intrusion Detection Kit 867824-B21

Notes: This provides a physical connection from the chassis board and hood and detects any physical intrusion into the chassis, providing security during the entire supply chain process of shipping, receiving, distribution, and operation.

HPE Trusted Platform Module 2.0 Gen10 Option 864279-B21

Notes:
- HPE Trusted Platform Module 2.0 option works with Gen10 servers with UEFI Mode not Legacy Mode. It is not compatible with HPE ProLiant Gen8 servers or earlier generation variants.
- HPE server systems can have a TPM module (of any type) installed only once. It cannot be replaced with any other TPM module.

HPE Gen10 TPM 1.2 FIO Setting 872108-B21

Notes: This is a FIO setting to allow the TPM 2.0 module to operate in a TPM 1.2 mode.

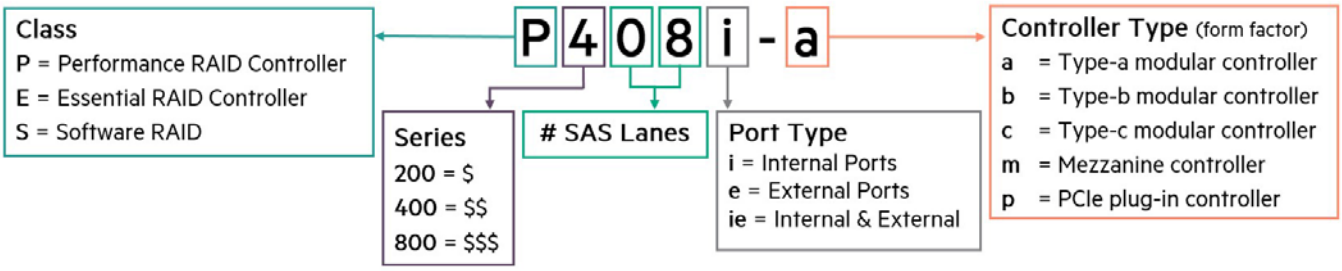
HPE Boot Controllers

HPE NS204i-p x2 Lanes NVMe PCIe3 x8 OS Boot Device P12965-B21

Notes: This option is pre-configured for HW RAID 1 for OS boot only and, by default, comes with 2x 480GB M.2 Read-Intensive enterprise-class NVMe with Power Loss Protection (PLP) by default

HPE Smart Array Controllers

The Gen10 controller naming framework has been updated to simplify identification as depicted below. For a more detailed breakout of the available Gen10 Smart Array controllers visit the **HPE Smart Array Gen10 Controllers Data Sheet**.



HPE Flexible Smart Array Performance RAID Controllers

Notes:
- All performance RAID controllers are supported by the HPE Smart Storage Hybrid Capacitor (P02377-B21) or HPE Smart Storage Battery (P01366-B21), which supports multiple devices and are sold separately.
- Flexible Smart Array controllers do not consume a PCIe slot.

Additional Options

HPE Smart Array P816i-a SR Gen10 (16 Internal Lanes/4GB Cache/SmartCache) 12G SAS Modular Controller	804338-B21

Notes:
- Includes SmartCache license.
- The P816i-a cable ships in the 12LFF chassis only (868705-B21).

HPE Smart Array P408i-a SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS Modular Controller	804331-B21

HPE Flexible Smart Array Essential Controllers

HPE Smart Array E208i-a SR Gen10 (8 Internal Lanes/No Cache) 12G SAS Modular Controller	804326-B21

Performance RAID Controllers

Notes: All performance RAID controllers are supported by the HPE Smart Storage Hybrid Capacitor (P02377-B21) or HPE Smart Storage Battery (P01366-B21), which support multiple devices and are sold separately.

HPE Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS PCIe Plug-in Controller	830824-B21
HPE Smart Array P408e-p SR Gen10 (8 External Lanes/4GB Cache) 12G SAS PCIe Plug-in Controller	804405-B21

Essential RAID Controllers

HPE Smart Array E208i-p SR Gen10 (8 Internal Lanes/No Cache) 12G SAS PCIe Plug-in Controller	804394-B21
HPE Smart Array E208e-p SR Gen10 (8 External Lanes/No Cache) 12G SAS PCIe Plug-in Controller	804398-B21

HPE Cable Options

HPE DL380 SFF Smart Array HBA H200/P400 Series SAS Cable Kit	786092-B21
HPE DL38X Gen10 2 Drive NVMe Slim SAS Cable Kit	871827-B21
HPE DL380 Gen10 Mini SAS 3POS Cable Kit	826709-B21

Notes: If more than 8 SATA devices are being supported on the AHCI Embedded SATA controller, then Qty=1 of the SAS 3POS Cable Kit (826709-B21) is required.The AHCI Embedded SATA Controller is standard with all DL380 Gen10 models and can support up to 12 "SATA Only" devices.

HPE DL38X/560/580/ML350 Gen10 P824i-p Cable Kit	P00614-B21

Notes: For details on cabling options, additional information available here:
http://www.hpe.com/info/CablingMatrixGen10

Optional Software

HPE Smart Array SR Secure Encryption (Data at Rest Encryption/per Server Entitlement) E-LTU	Q2F26AAE
HPE Smart Array SR SmartCache (Single Key/Single Server) LTU	D7S26A
HPE Smart Array SR SmartCache (Single Key/Multiple Servers) LTU	D7S27A
HPE Smart Array SR SmartCache (Single Key/Multiple Servers) E-LTU	D7S27AAE

Notes: SmartCache is offered on HPE Smart Array performance RAID controllers and comes standard (no licensing is required) if the HPE Smart Array P816i-a SR Gen10 Controller is installed in the server.

Optional Upgrades

HPE 96W Smart Storage Lithium-ion Battery with 145mm Cable Kit	P01366-B21
HPE Smart Storage Hybrid Capacitor with 145mm Cable Kit	P02377-B21

Notes: Provides backup power for multiple HPE Smart Array controllers or other devices. Is required with performance RAID controllers.

Additional Options

HPE Tape Backup

For the complete range of tape drives, autoloaders, libraries and media see: **https://www.hpe.com/us/en/storage/storeever-tape-storage.html** For hardware and software compatibility of Hewlett Packard Enterprise tape backup products **http://www.hpe.com/storage/BURAcompatibility**

HPE Storage Options

Emulex Fibre Channel HBAs

HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	Q0L13A
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	Q0L14A
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	Q0L11A
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	Q0L12A
HPE SN1610E 32Gb 1-port Fibre Channel Host Bus Adapter	R2J62A
HPE SN1610E 32Gb 2-port Fibre Channel Host Bus Adapter	R2J63A

QLogic Fibre Channel HBAs

HPE SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter	P9D93A
HPE SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter	P9D94A
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	P9M75A
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	P9M76A
HPE SN1610Q 32Gb 1-port Fibre Channel Host Bus Adapter	R2E08A
HPE SN1610Q 32Gb 2-port Fibre Channel Host Bus Adapter	R2E09A

Converged Network Adapters

HPE CN1200R 10GBASE-T Converged Network Adapter	Q0F26A
HPE CN1300R 10/25Gb Dual Port Converged Network Adapter	Q0F09A

HPE Racks

- Please see the **HPE Advanced Series Racks** QuickSpecs for information on additional racks options and rack specifications.
- Please see the **HPE Enterprise Series Racks QuickSpecs** for information on additional racks options and rack specifications.
- Please see the **HPE Standard Series Racks QuickSpecs** for information on additional racks options and rack specifications.

HPE Power Distribution Units (PDUs)

- Please see the **HPE Basic Power Distribution Units (PDU) QuickSpecs** for information on these products and their specifications.
- Please see the **HPE Metered Power Distribution Units (PDU) QuickSpecs** for information on these products and their specifications. Please see the **HPE Intelligent Power Distribution Unit (PDU)** QuickSpecs for information on these products and their specifications.
- Please see the **HPE Metered and Switched Power Distribution Units (PDU)** QuickSpecs for information on these products and their specifications.

HPE Uninterruptible Power Systems (UPS)

- To learn more, please visit the **HPE Uninterruptible Power Systems (UPS)** web page.
- Please see the **HPE DirectFlow Three Phase Uninterruptible Power System QuickSpecs** for information on these products and their specifications.
- Please see the **HPE Line Interactive Single Phase UPS QuickSpecs** for information on these products and their specifications.

Additional Options

HPE Rack Options

- Please see the **HPE KVM Switches web page** for information on these products and their specifications.

Rail Kits

Ball bearing and Easy Install rail kits contain telescoping rails which allow for in-rack serviceability.
To assist in the installation of the server into the rack an optional installation tool is available by contacting your local services representative (695539-001).
Notes: Hewlett Packard Enterprise recommends that a minimum of two people are required for all Rack Server installations. Please refer to your installation instructions for proper tools and number of people to use for any installation.

HPE 2U Small Form Factor Easy Install Rail Kit	733660-B21
Notes: Does not include CMA (733664-B21).	
HPE 2U Large Form Factor Easy Install Rail Kit	733662-B21
Notes: Does not include CMA (733664-B21).	
HPE 2U Cable Management Arm for Easy Install Rail Kit	733664-B21
HPE 2U Small Form Factor Ball Bearing Rail Kit	720863-B21
Notes: Does not include CMA (720865-B21).	
HPE 2U Large Form Factor Ball Bearing Rail Kit	720864-B21
Notes: Does not include Cable Management Arm (720865-B21).	
HPE 2U Cable Management Arm for Ball Bearing Rail Kit	720865-B21

HPE USB and SD Options

HPE Enterprise Mainstream Flash Media Kits for Memory Cards

HPE 32GB microSD RAID 1 USB Boot Drive	P21868-B21
HPE 32GB microSD Flash Memory Card	700139-B21
Notes: Not supported with Legacy FIO mode (758959-B22)	

HPE Support Services

Installation & Startup Services

HPE Install ProLiant DL38x(p) Service	U4554E
HPE Installation and Startup DL38x(p) Service	U4555E

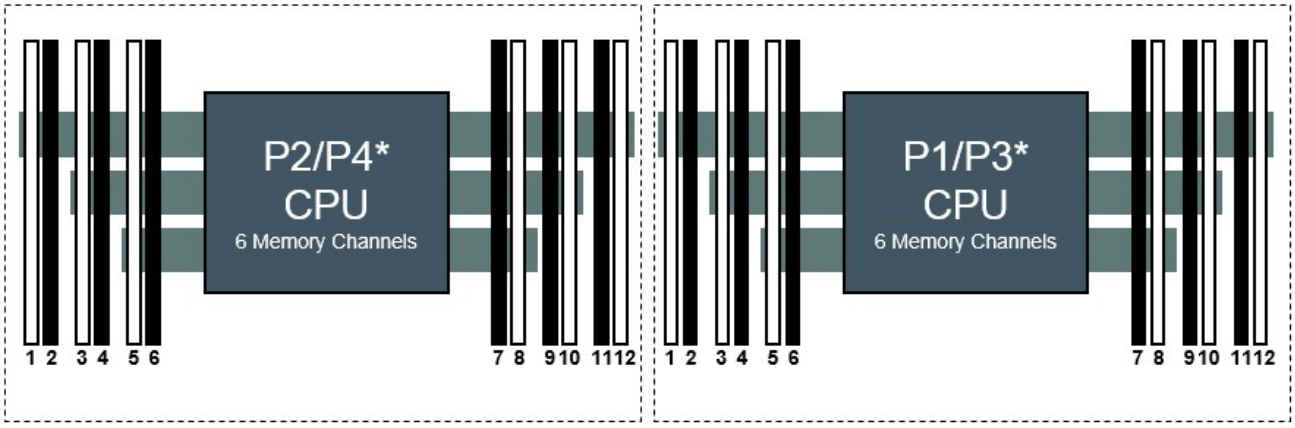
Tech Care

HPE 5 Year Tech Care Essential DL380 Gen10 Service	HS7Y9E
HPE 5 Year Tech Care Essential wDMR DL380 Gen10 Service	HS7Z4E
HPE 3 Year Tech Care Essential DL380 Gen10 Service	HS7Y7E
HPE 3 Year Tech Care Essential wDMR DL380 Gen10 Service	HS7Z2E

Notes: For a full listing of support services available for this server, please visit **http://www.hpe.com/services**.

Memory

Memory Population guidelines



HPE ProLiant Gen10 DL360 / DL380 / DL560

Notes: * Servers Front Server2 Slots per Channel

HPE ProLiant Gen10 12 slot per CPU												
DIMM population order												
1 DIMM								8				
2 DIMM s								8		10		
3 DIMM s								8		10		12
4 DIMM s			3		5			8		10		
5 DIMM s*			3		5			8		10		12
6 DIMM s	1		3		5			8		10		12
7 DIMM s*	1		3		5		7	8		10		12
8 DIMM s			3	4	5	6	7	8	9	10		
9 DIMM s*	1		3		5		7	8	9	10	11	12
10 DIMM s*	1		3	4	5	6	7	8	9	10		12
11 DIMM s*	1		3	4	5	6	7	8	9	10	11	12
12 DIMM s	1	2	3	4	5	6	7	8	9	10	11	12

Notes: *Unbalanced, not recommended

General Memory Population Rules and Guidelines:

- 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**
- To realize the performance memory capabilities listed in this document, HPE DDR4 SmartMemory is required. For additional information, please see the **HPE DDR4 SmartMemory QuickSpecs**.

Memory

Registered DIMM (RDIMM)				
HPE SKU P/N	815097-B21	815098-B21	835955-B21	815100-B21
SKU Description	HPE 8GB (1x8GB) Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	HPE 16GB (1x16GB) Single Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	HPE 32GB (1x32GB) Dual Rank x4 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit
DIMM Capacity	8GB	16GB	16GB	32GB
DIMM Rank	Single Rank (1R)	Single Rank (1R)	Dual Rank (2R)	Dual Rank (2R)
Voltage	1.2 V	1.2 V	1.2 V	1.2 V
DRAM Depth [bit]	1G	2G	1G	2G
DRAM Width [bit]	x8	x4	x8	x4
DRAM Density	8Gb	8Gb	8Gb	8Gb
CAS Latency	19-19-19	19-19-19	19-19-19	19-19-19
DIMM Native Speed	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s
Processors Officially Supported Memory Speed				
Intel Xeon®Platinum/Gold 81xx/61xx				
1 RDIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s
2 RDIMMs Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s
Intel Xeon®Gold/Silver 51xx/41xx				
1 RDIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s
2 RDIMMs Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s
Intel Xeon®Bronze 31xx				
1 RDIMM Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s
2 RDIMMs Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s
HPE Server Memory Speed: Intel Xeon® Platinum/Gold 81xx/61xx Processors *				
1 RDIMM Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s
2 RDIMMs Per Channel	2666 MT/s	2666 MT/s	2666 MT/s	2666 MT/s
HPE Server Memory Speed: Intel Xeon® Gold/Silver 51xx/41xx Processors *				
1 RDIMM Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s
2 RDIMMs Per Channel	2400 MT/s	2400 MT/s	2400 MT/s	2400 MT/s
HPE Server Memory Speed: Intel Xeon® Bronze 31xx Processors *				
1 RDIMM Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s
2 RDIMMs Per Channel	2133 MT/s	2133 MT/s	2133 MT/s	2133 MT/s

Notes: The maximum memory speed is a function of the memory type, memory configuration, and processor model.
For details on the HPE Server Memory speed, visit: **https://www.hpe.com/docs/memory-speed-table**

Memory

Load Reduced DIMM (LRDIMM)	
HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit	815101-B21
SKU Description	HPE 64GB (1x64GB) Quad Rank x4 DDR4-2666 CAS-19-19-19 Load Reduced Smart Memory Kit
DIMM Capacity	64GB
DIMM Rank	Quad Rank (4R)
Voltage	1.2 V
DRAM Depth [bit]	2G
DRAM Width [bit]	x4
DRAM Density	8Gb
CAS Latency	19-19-19
DIMM Native Speed	2666 MT/s
Processors Officially Supported Memory Speed	
Intel Xeon® Platinum/Gold 81xx/61xx	
1 LRDIMM Per Channel	2666 MT/s
2 LRDIMMs Per Channel	2666 MT/s
Intel Xeon® Gold/Silver 51xx/41xx	
1 LRDIMM Per Channel	2400 MT/s
2 LRDIMMs Per Channel	2400 MT/s
Intel Xeon® Bronze 31xx	
1 LRDIMM Per Channel	2133 MT/s
2 LRDIMMs Per Channel	2133 MT/s
HPE Server Memory Speed: Intel Xeon® Platinum/Gold 81xx/61xx Processors *	
1 LRDIMM Per Channel	2666 MT/s
2 LRDIMMs Per Channel	2666 MT/s
HPE Server Memory Speed: Intel Xeon® Gold/Silver 51xx/41xx Processors *	
1 LRDIMM Per Channel	2400 MT/s
2 LRDIMMs Per Channel	2400 MT/s
HPE Server Memory Speed: Intel Xeon® Bronze 31xx Processors *	
1 LRDIMM Per Channel	2133 MT/s
2 LRDIMMs Per Channel	2133 MT/s

Notes: The maximum memory speed is a function of the memory type, memory configuration, and processor model.
For details on the HPE Server Memory speed, visit: **https://www.hpe.com/docs/memory-speed-table**

Memory

RDIMM					
HPE SKU P/N	P00918-B21	P00920-B21	P00922-B21	P00924-B21	P00930-B2
SKU description	HPE 8GB 1Rx8 PC4-2933Y-R Smart Kit	HPE 16GB 1Rx4 PC4-2933Y-R Smart Kit	HPE 16GB 2Rx8 PC4-2933Y-R Smart Kit	HPE 32GB 2Rx4 PC4-2933Y-R Smart Kit	HPE 64GB 2Rx4 PC4-2933Y-R Smart Kit
DIMM rank	Single rank (1R)	Single rank (1R)	Dual rank (2R)	Dual rank (2R)	Dual rank (2R)
DIMM capacity	8 GB	16 GB	16 GB	32 GB	64 GB
Voltage	1.2V	1.2V	1.2V	1.2V	1.2V
DRAM depth	1 Gb	2 Gb	1 Gb	2 Gb	4 Gb
DRAM width (bit)	x8	x4	x8	x4	x4
DRAM density	8 Gb	8 Gb	8 Gb	8 Gb	16 Gb
CAS latency	21-21-21	21-21-21	21-21-21	21-21-21	21-21-21
DIMM native speed (MT/s)	2933	2933	2933	2933	2933
Maximum capacity (GB)					
16-slot servers	128	256	256	512	1024
24-slot servers	192	384	384	768	1536
48-slot servers	384	768	768	1536	3072
HPE Server Memory speed (MT/s): Intel Xeon Platinum/Gold 82xx/62xx processors*					
1 DIMM per channel	2933	2933	2933	2933	2933
2 DIMM per channel	2933	2933	2933	2933	2933
HPE Server Memory speed (MT/s): Intel Xeon Gold 52xx processors*					
1 DIMM per channel	2666	2666	2666	2666	2666
2 DIMM per channel	2666	2666	2666	2666	2666
HPE Server Memory speed (MT/s): Intel Xeon Silver 42xx processors					
1 DIMM per channel	2400	2400	2400	2400	2400
2 DIMM per channel	2400	2400	2400	2400	2400
HPE Server Memory speed (MT/s): Intel Xeon Bronze 32xx processors					
1 DIMM per channel	2133	2133	2133	2133	2133
2 DIMM per channel	2133	2133	2133	2133	2133

Notes: *
- Intel Xeon Gold 52xx processors support 2933 MT/s.
- HPE ProLiant DL560 and DL580 servers do not support 32xx or 42xx processors.
- Memory DIMM availability and maximum memory speed with a server platform is dependent upon completion of certification testing.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- When HPE Persistent Memory for second-generation Intel Xeon Scalable processors is installed, the maximum supported memory speed is 2666 MT/s.

Memory

LRDIMM			
HPE SKU P/N	P00926-B21	P00928-B21	P11040-B21
SKU description	HPE 64GB 4Rx4 PC4-2933Y-L Smart Kit	HPE 128GB 8Rx4 PC4-2933Y-L 3DS Smart Kit	HPE 128GB 4Rx4 PC4-2933Y-L Smart Kit
DIMM rank	Quad rank (4R)	Octal rank (8R)	Quad rank (4R)
DIMM capacity	64 GB	128 GB	128 GB
Voltage	1.2V	1.2V	1.2V
DRAM depth	2 Gb	2 Gb	4 Gb
DRAM width (bit)	x4	x4	x4
DRAM density	8 Gb	8 Gb	16 Gb
CAS latency	21-21-21	24-21-21	21-21-21
DIMM native speed (MT/s)	2933	2933	2933
Maximum capacity (GB)			
16-slot servers	1024	2048	2048
24-slot servers	1536	3072	3072
48-slot servers	3072	6144	6144
HPE Server Memory speed (MT/s): Intel Xeon Platinum/Gold 82xx/62xx processors*			
1 DIMM per channel	2933	2933	2933
2 DIMM per channel	2933	2933	2933
HPE Server Memory speed (MT/s): Intel Xeon Gold 52xx processors*			
1 DIMM per channel	2666	2666	2666
2 DIMM per channel	2666	2666	2666
HPE Server Memory speed (MT/s): Intel Xeon Silver 42xx processors			
1 DIMM per channel	2400	2400	2400
2 DIMM per channel	2400	2400	2400
HPE Server Memory speed (MT/s): Intel Xeon Bronze 32xx processors			
1 DIMM per channel	2133	2133	2133
2 DIMM per channel	2133	2133	2133

Notes: *
- Intel Xeon Gold 52xx processors support 2933 MT/s.
- HPE ProLiant DL560 and DL580 servers do not support 32xx or 42xx processors.
- Memory DIMM availability and maximum memory speed with a server platform is dependent upon completion of certification testing.
- The maximum memory speed is a function of the memory type, memory configuration, and processor model.
- When HPE Persistent Memory for second-generation Intel Xeon Scalable processors is installed, the maximum supported memory speed is 2666 MT/s.

Memory

Standard and Maximum Memory Capacity (Pre-configured Models)			
Pre Configured Models	**Standard Memory**	**Maximum Memory Plus Optional Memory**	**Standard Memory Replaced with Optional Memory**
3106	16 GB (1x16 GB RDIMM DR)	384 GB (24x 16 GB)	3072 GB (24x 128 GB)
4110	32 GB (2x16 GB RDIMM DR)	384 GB (24x 16 GB)	3072 GB (24x 128 GB)
4114	32 GB (2x16 GB RDIMM DR)	384 GB (24x 16 GB)	3072 GB (24x 128 GB)
5118	64 GB (2x32 GB RDIMM DR)	768 GB (24x 32 GB)	3072 GB (24x 128 GB)
6130	64 GB (2x32 GB RDIMM DR)	768 GB (24x 32 GB)	3072 GB (24x 128 GB)

DDR4 memory options part number decoder

Notes:

Capacity references are rounded to the common gigabyte (GB) values.

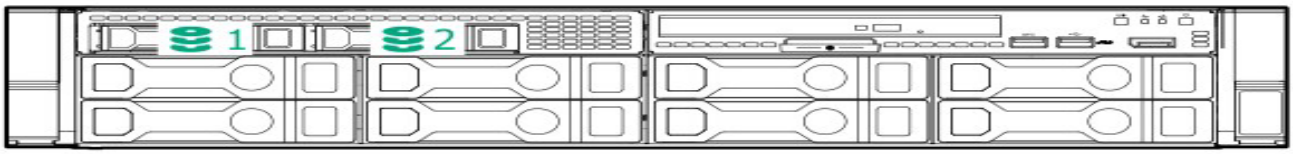
- 8GB = 8,192 MB
- 16GB = 16,384 MB
- 32GB = 32,768 MB
- 64GB = 65,536 MB

For more information on memory, please see the Memory Quickspecs: **HPE DDR4 SmartMemory**

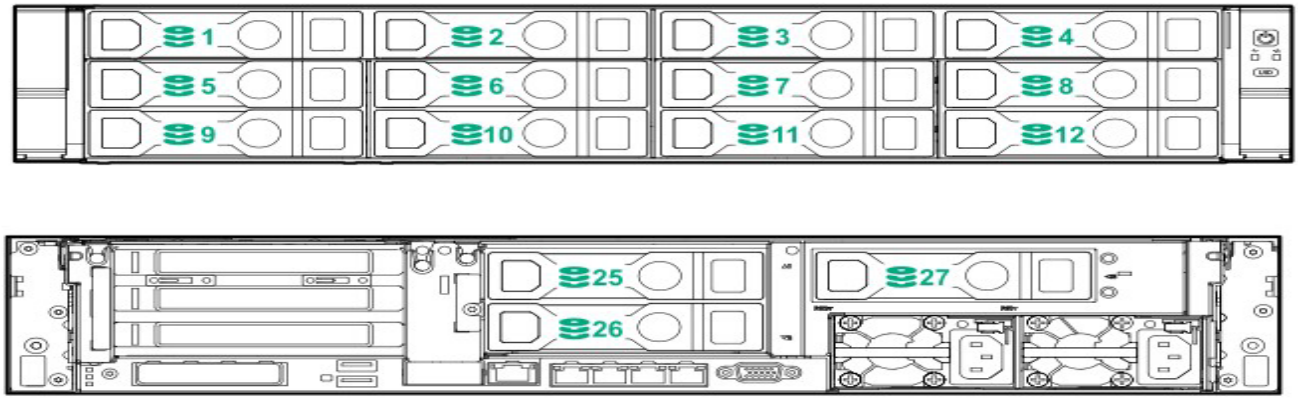
Memory Speed Table for HPE ProLiantDL380 Gen 10

For details on the HPE Server Memory speed, please visit: **https://www.hpe.com/docs/memory-speed-table**

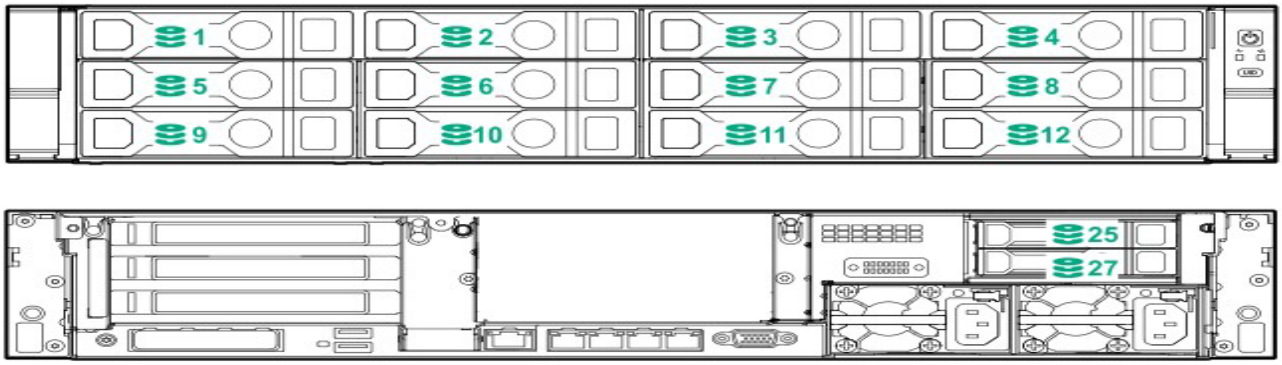
Storage



8LFF chassis with Universal media bay and optional 2SFF and optical drive shown

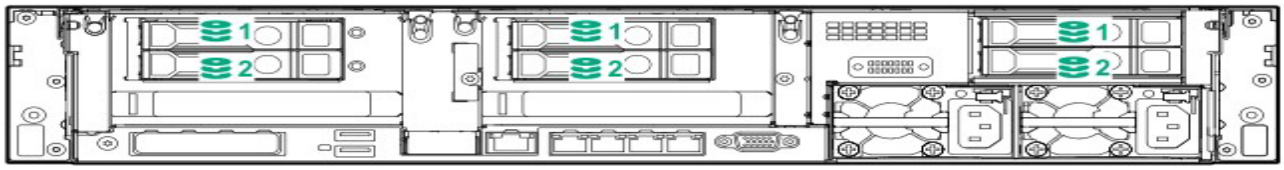


12 LFF + 3 rear LFF drives



12 LFF + 2 rear SFF drives

Storage



6 rear SFF drives

24 SFF + rear 2 SFF drives

Technical Specifications

System Unit

Dimensions

- **SFF Drives:**
  8.73 x 44.54 x 67.94 cm / 3.44 x 17.54 x 26.75 in
- **LFF Drives:**
  8.73 x 44.54 x 73.02 cm / 3.44 x 17.54 x 28.75 in

Weight (approximate)

- **Minimum:** 8 SFF chassis with 1x SFF HDD and 7 HDD blanks, 2x Drive Bay blanks, 1x processor including standard heatsink, 1x power supply (plus blank), 1x Smart Array, 1x Riser installed, cables for the above)
  - **Maximum:**
    19.5 kg / 43.00 lbs
  - **Minimum:**
    14.9 kg / 32.75 lbs
- **Maximum:** 12 LFF hard drives (no rear drives), 2x processors, 2x power supplies, 1x Smart Array, 2x Risers installed)
  - **Maximum:**
    24.5 kg / 54 lbs
  - **Minimum:**
    17.1 kg / 37.75 lbs

Input Requirements (per power supply)

Rated Line Voltage

- For 1600W (Platinum): 200-240 VAC
- For 800W (Titanium) Power Supply: 200-240 VAC
- For 800W (Platinum): 100-240 VAC
- For 800W (Universal) Power Supply: 200-277 VAC
- For 800W (-48VDC): -40 Vdc to -72 Vdc
- 500W (Platinum) Power Supply: 100-240 VAC
- For 1600W (-48VDC): -40 to -72

BTU Rating

Maximum

- For 1600W Power Supply: 5918 BTU/hr (at 200 VAC), 5888 BTU/hr (at 220 VAC), 5884 BTU/hr (at 240 VAC)
- For 800W (Titanium) Power Supply: 2905 BTU/hr (at 200 VAC), 2899 BTU/hr (at 220 VAC), 2893 BTU/hr (at 240 VAC)
- For 800W (Platium) Power Supply: 3067 BTU/hr (at 100 VAC), 2958 BTU/hr (at 200 VAC), 2949 BTU/hr (at 240 VAC)
- For 800W (Universal) Power Supply: 2964 BTU/hr (at 200 VAC), 2951 BTU/hr (at 230 VAC), 2936 BTU/hr (at 277 VAC)
- For 800W-(48Vdc) Power Supply: 2983 BTU/hr (at -40 Vdc), 2951 BTU/hr (at -48Vdc), 2912 BTU/hr (at -72Vdc)
- For 500W (Platinum) Power Supply: 1902 BTU/hr (at 100 VAC), 1840 BTU/hr (at 200 VAC), 1832 BTU/hr (at 240 VAC)
- For 1600W-(48Vdc) Power Supply: 6026 BTU/hr (at -40 Vdc), 6000 BTU/hr (at -48Vdc), 5989 BTU/hr (at -72Vdc)

Relative Humidity (non-condensing)

- **Operating**
  8% to 90% - Relative humidity (Rh), 28°C 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..

Technical Specifications

Power Supply Output

(per power supply)

Rated Steady-State Power

- For 1600W Power Supply: 1600W (at 240 VAC), 1600W (at 240 VDC) for China only
- For 800W (Titanium) Power Supply: 800W (at 200 VAC), 800W (at 240 VAC), 800W (at 240 VDC) for China only
- For 800W (Platinum) Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VDC) input for China only
- For 800W (Universal) Power Supply: 800W (at 200 VAC), 800W (at 277 VAC)
- For 800W (-48VDC) Power Supply: 800W (at -40 Vdc), 800W (at -72Vdc)
- For 500W (Platinum) Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VDC) input for China only
- For 1600W (-48VDC) Power Supply: 1600W (at -40 Vdc), 1600W (at -72Vdc)

Maximum Peak Power

- For 1600W Power Supply: 1600W (at 240 VAC), 16NVIDIA00W (at 240 VDC) for China only
- For 800W (Titanium) Power Supply: 800W (at 200 VAC), 800W (at 240 VAC), 800W (at 240 VDC) for China only
- For 800W (Platinum) Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VDC) input for China only
- For 800W (Universal) Power Supply: 800W (at 200 VAC), 800W (at 277 VAC)
- For 800W (-48VDC) Power Supply: 800W (at -40 Vdc), 800W (at -72Vdc)
- For 500W (Platinum) Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VDC) input for China only
- For 1600W (-48VDC) Power Supply: 1600W (at -40 Vdc), 1600W (at -72Vdc)

System Inlet Temperature

- **Standard Operating Temperature**
  10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed.

  System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).

- **Extended Ambient Operating Temperature**
  For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: **http://www.hpe.com/servers/ashrae**

  For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: **http://www.hpe.com/servers/ashrae**

  System performance may be reduced if operating in the extended ambient operating range or with a fan fault.

- **Non-operating**
  -30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).

Altitude

- **Operating**
  3050 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
- **Non-operating**
  9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

Technical Specifications

Acoustic Noise

Listed are the declared A-Weighted sound power levels (L_{WAd}) and declared average bystander position A-Weighted sound pressure levels (L_{pAm}) 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). The listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels. Please have your HPE representative provide information from the HPE EMESC website for further technical details regarding the configurations listed below.

Acoustic Noise	
Idle	
LWAd	4.8 B Entry 4.4 B Base 4.6 B Perf
LpAm	37 dBA Entry 31 dBA Base 31 dBA Perf
Operating	
LWAd	4.8 B Entry 4.4 B Base 4.6 B Perf
LpAm	37 dBA Entry 31 dBA Base 31 dBA Perf

Notes:

- Acoustics levels presented here are generated by the test configuration only. Acoustics levels will vary depending on system configuration. Values are subject to change without notification and are for reference only.
- Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.
- The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels

Emissions Classification (EMC) – Regulatory Information

To view the regulatory information for your product, view the Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products, available at the Hewlett Packard Enterprise Support Center:
http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts

HPE Smart Array

For latest information on **HPE Smart Array Gen10 Controllers for HPE ProLiant DL, ML and Apollo Servers** please refer to their QuickSpecs. (E208i-a,E208i-p,E208e-p,P408i-a,P408i-p,P408e-p,P816i-a)

Environment-friendly Products and Approach End-of-life Management and Recycling

Hewlett Packard Enterprise offers **end-of-life product return, trade-in, and recycling programs**, in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise 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 Enterprise web site. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.

Summary of Changes

Date	Version History	Action	Description of Change
02-Aug-2021	Version 46	Changed	Overview, Core Options and Configuration Information sections were updated.
06-Apr-2021	Version 45	Changed	Service and Support and Additional Options sections were updated. Obsolete SKUs were removed.
01-Mar-2021	Version 44	Changed	Overview, Pre-configured Models, and Configuration Information sections were updated. Obsolete SKUs were removed.
01-Feb-2021	Version 43	Changed	Pre-configured Models section was updated. Obsolete SKUs were removed.
07-Dec-2020	Version 42	Changed	Standard Features, Core Options and Technical Specifications sections were updated. Obsolete SKUs were removed.
02-Nov-2020	Version 41	Changed	Pre-configured Models, Core Options and Additional Options sections were updated. Obsolete SKUs were removed.
05-Oct-2020	Version 40	Changed	Overview, Standard Features, Pre-configured Models, Configuration Information and Core Options sections were updated. Obsolete SKUs were removed.
01-Oct-2020	Version 39	Changed	Overview, Configuration Information and Additional Options sections were updated. Obsolete SKUs were removed.
03-Aug-2020	Version 38	Changed	Overview, Standard Features, Core Options and Additional Options sections were updated. Obsolete SKUs were removed.
01-Jun-2020	Version 37	Changed	Standard Features,Configuration Information and Core Options sections were updated.
04-May-2020	Version 36	Changed	Pre-configured Models, Core Options and Additional Options sections were updated.
06-Apr-2020	Version 35	Changed	Overview, Standard Features, Pre-configured Models, Configuration Information and Core Options sections were updated
16-Mar-2020	Version 34	Changed	Configuration Information and Core Options sections were updated.
02-Mar-2020	Version 33	Changed	Standard Features, Configuration Information, Core Options and Additional Options sections were updated
24-Feb-2020	Version 32	Changed	Standard Features, Pre-configured Models, Configuration Information, Core Options and Additional Options sections were updated
03-Feb-2020	Version 31	Changed	Overview, Core Options, and Aditional Options . sections were updated. Obsolete SKUs were removed.
20-Jan-2020	Version 30	Changed	Standard Features, Pre-configured Models and Configuration Information sections were updated.
02-Dec-2019	Version 29	Changed	Overview, Standard Features, Configuration Information, Core Options and Additional Options sections were updated. Obsolete SKUs were removed.
07-Oct-2019	Version 28	Changed	Overview, Standard Features, Pre-configured Models, Core Options and Additional Options sections were updated. Obsolete SKU was removed.
16-Sep-2019	Version 27	Changed	Configuration Information section was updated. Obsolete SKU was removed
03-Sep-2019	Version 26	Changed	Overview, Configuration Information - Factory Integrated Models, Pre-configured Models, Core Options, and Additional Options sections were updated. Obsolete SKUs were removed.

Summary of Changes

Date	Version History	Action	Description of Change
12-Aug-2019	Version 25	Changed	Overview,Standard Features,Pre-configured Models,Configuration Information - Factory Integrated Models,Core Options, SMB Models and Additional Options sections were updated. Obsolete SKUs were removed.
01-Jul-2019	Version 24	Changed	Pre-Configured models section was updated. The 5218N wattage has changed from 105 to 110W TDP. The U.S. version of QuickSpecs is no longer being updated, please reference the Worldwide QuickSpecs for latest information
03-Jun-2019	Version 23	Changed	Overview, Standard Features, Configuration Information, Core Options, and Additional Options sections were updated. SKU descriptions were updated. Obsolete SKUs were removed.
15-Apr-2019	Version 22	Changed	Standard Features section was updated
02-Apr-2019	Version 21	Changed	Overview, Standard Features,Pre-configured Models, Configuration Information, Core Options, Aditional Options and Memory sections were updated
04-Feb-2019	Version 20	Changed	Overview, Core Options and Optional Features sections were updated.
03-Dec-2018	Version 19	Changed	Overview, Standard Features, Core Options and Storage sections were Updated.
15-Oct-2018	Version 18	Changed	Configuration Information, Core Options and Additional Options sections were updated
01-Oct-2018	Version 17	Changed	Overview, Standard Features, Preconfigured Models, Configuration Information, Core Options, Additional Options, and Memory sections were updated. SKU descriptions were updated. Obsolete SKUs were removed.
13-Aug-2018	Version 16	Changed	Core Options and Additional Options were revised.
06-Aug-2018	Version 15	Changed	Added new Solid State Drives offering, Added new GPU option. Configuration Information - Factory Integrated Models, Core Options, and Additional Options were revised. Obsolete SKUs were removed from the QuickSpecs.
11-Jun-2018	Version 14	Changed	Smart Buy Models section for the NA version was revised.
04-Jun-2018	Version 13	Changed	Added new SSDs offering to the HPE Drives section. Core Options, Additional Options, and Memory were updated. Obsolete SKUs were removed from the QuickSpecs.
07-May-2018	Version 12	Changed	New SMB Models offering was added. Riser Information was revised. Obsolete SKUs were removed from the QuickSpecs.
02-Apr-2018	Version 11	Changed	SKUs description were updated. Obsolete SKUs were removed from the QuickSpecs.
05-Mar-2018	Version 10	Removed	Obsolete SKUs were removed from the QuickSpecs.
05-Feb-2018	Version 9	Added	Added new SATA SSDs, NVMe drives, and PCIe accelerator cards.
18-Dec-2017	Version 8	Changed	Weight specifications were revised.
04-Dec-2017	Version 7	Changed	Added HPE Scalable Persistent Memory. Added HPE Specific IST Processor offering Gold 6143 and Platinum 8165 bins. Added Large capacity 15.3TB SSDs. Added new AMD and NVIDIA Graphics card options. Processors, Memory, Maximun Internal Storage, Configuration Information - Factory Integrated Models, Core Options, and Additional Options were revised.

Summary of Changes

Date	Version History	Action	Description of Change
23-Oct-2017	Version 6	Changed	Memory speed table was updated to display the 61XX processors running at 2666MT/s.
16-Oct-2017	Version 5	Changed	8GB Dual Rank Memory was added. Riser table was added under Core Options. Platform Information, FlexibleLOM adapters, GPGPU table under Core Options, HPE Computation and Graphics Accelerators, and HPE Smart Array Controllers were revised.
25-Sep-2017	Version 4	Changed	Added new 128GB GB DIMM. Additional Intel® Xeon® Processor Scalable Family processor bins were added. Added new NVIDIA GPU cards. Added new drive options offering (SSD, m.2, NVMe). Memory, Standard Features, Configuration Information - Factory Integrated Models, Core Options, Additional Options, and Technical Specifications were revised. Obsolete SKUs were removed from the QuickSpecs.
04-Sep-2017	Version 3	Changed	Smart Buy models section was revised (NA version only).
07-Aug-2017	Version 2	Changed	Added new Solid State Drives offering to the HPE Drives section. Platform Information, Standard Features, Optional Features, Pre-configured Models, Configuration Information - Factory Integrated Models, Core Options, and Additional Options section were revised.
11-Jul-2017	Version 1	New	New QuickSpecs.

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

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Начальник отдела
корпоративной дистрибуции Hard ТОО "ComPortal"
Зайцева Александра

Кужаттар
Для
документов

ТОО «Компания Телемост»

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Настоящим письмом ТОО «Компания Телемост» подтверждает наличие авторизованных сервис-центров производителя HPE (Hewlett Packard Enterprise) в г. Алматы, осуществляющих гарантийное и постгарантийное обслуживание оборудования:

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