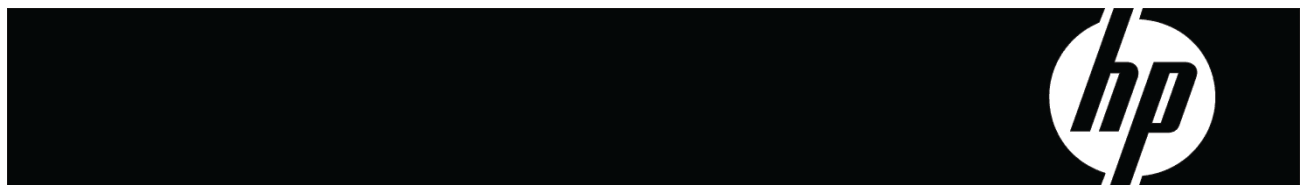


HP ProLiant SL165z G6 Server

Maintenance and Service Guide



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Customer Self Repair

HP products are designed with many Customer Self Repair (CSR) parts to minimize repair time and allow for greater flexibility in performing defective parts replacement. If during the diagnosis period HP (or HP service providers or service partners) identifies that the repair can be accomplished by the use of a CSR part, HP will ship that part directly to you for replacement. There are two categories of CSR parts:

- **Mandatory**—Parts for which customer self repair is mandatory. If you request HP to replace these parts, you will be charged for the travel and labor costs of this service.
- **Optional**—Parts for which customer self repair is optional. These parts are also designed for customer self repair. If, however, you require that HP replace them for you, there may or may not be additional charges, depending on the type of warranty service designated for your product.

NOTE: Some HP parts are not designed for customer self repair. In order to satisfy the customer warranty, HP requires that an authorized service provider replace the part. These parts are identified as "No" in the Illustrated Parts Catalog.

Based on availability and where geography permits, CSR parts will be shipped for next business day delivery. Same day or four-hour delivery may be offered at an additional charge where geography permits. If assistance is required, you can call the HP Technical Support Center and a technician will help you over the telephone. HP specifies in the materials shipped with a replacement CSR part whether a defective part must be returned to HP. In cases where it is required to return the defective part to HP, you must ship the defective part back to HP within a defined period of time, normally five (5) business days. The defective part must be returned with the associated documentation in the provided shipping material. Failure to return the defective part may result in HP billing you for the replacement. With a customer self repair, HP will pay all shipping and part return costs and determine the courier/carrier to be used.

For more information about HP's Customer Self Repair program, contact your local service provider. For the North American program, refer to the HP website (<http://www.hp.com/go/selfrepair>).

Parts only warranty service

Your HP Limited Warranty may include a parts only warranty service. Under the terms of parts only warranty service, HP will provide replacement parts free of charge.

For parts only warranty service, CSR part replacement is mandatory. If you request HP to replace these parts, you will be charged for the travel and labor costs of this service.

Réparation par le client (CSR)

Les produits HP comportent de nombreuses pièces CSR (Customer Self Repair = réparation par le client) afin de minimiser les délais de réparation et faciliter le remplacement des pièces défectueuses. Si pendant la période de diagnostic, HP (ou ses partenaires ou mainteneurs agréés) détermine que la réparation peut être effectuée à l'aide d'une pièce CSR, HP vous l'envoie directement. Il existe deux catégories de pièces CSR:

- **Obligatoire** - Pièces pour lesquelles la réparation par le client est obligatoire. Si vous demandez à HP de remplacer ces pièces, les coûts de déplacement et main d'œuvre du service vous seront facturés.
- **Facultatif** - Pièces pour lesquelles la réparation par le client est facultative. Ces pièces sont également conçues pour permettre au client d'effectuer lui-même la réparation. Toutefois, si vous demandez à HP de remplacer ces pièces, l'intervention peut ou non vous être facturée, selon le type de garantie applicable à votre produit.

REMARQUE: Certaines pièces HP ne sont pas conçues pour permettre au client d'effectuer lui-même la réparation. Pour que la garantie puisse s'appliquer, HP exige que le remplacement de la pièce soit effectué par un Mainteneur Agréé. Ces pièces sont identifiées par la mention "Non" dans le Catalogue illustré.

Les pièces CSR sont livrées le jour ouvré suivant, dans la limite des stocks disponibles et selon votre situation géographique. Si votre situation géographique le permet et que vous demandez une livraison le jour même ou dans les 4 heures, celle-ci vous sera facturée. Pour bénéficier d'une assistance téléphonique, appelez le Centre d'assistance technique HP. Dans les documents envoyés avec la pièce de rechange CSR, HP précise s'il est nécessaire de lui retourner la pièce défectueuse. Si c'est le cas, vous devez le faire dans le délai indiqué, généralement cinq (5) jours ouvrés. La pièce et sa documentation doivent être retournées dans l'emballage fourni. Si vous ne retournez pas la pièce défectueuse, HP se réserve le droit de vous facturer les coûts de remplacement. Dans le cas d'une pièce CSR, HP supporte l'ensemble des frais d'expédition et de retour, et détermine la société de courses ou le transporteur à utiliser.

Pour plus d'informations sur le programme CSR de HP, contactez votre Mainteneur Agréé local. Pour plus d'informations sur ce programme en Amérique du Nord, consultez le site Web HP (<http://www.hp.com/go/selfrepair>).

Service de garantie "pièces seules"

Votre garantie limitée HP peut inclure un service de garantie "pièces seules". Dans ce cas, les pièces de rechange fournies par HP ne sont pas facturées.

Dans le cadre de ce service, la réparation des pièces CSR par le client est obligatoire. Si vous demandez à HP de remplacer ces pièces, les coûts de déplacement et main d'œuvre du service vous seront facturés.

Riparazione da parte del cliente

Per abbreviare i tempi di riparazione e garantire una maggiore flessibilità nella sostituzione di parti difettose, i prodotti HP sono realizzati con numerosi componenti che possono essere riparati direttamente dal cliente (CSR, Customer Self Repair). Se in fase di diagnostica HP (o un centro di servizi o di assistenza HP) identifica il guasto come riparabile mediante un ricambio CSR, HP lo spedisce direttamente al cliente per la sostituzione. Vi sono due categorie di parti CSR:

- **Obbligatorie** – Parti che devono essere necessariamente riparate dal cliente. Se il cliente ne affida la riparazione ad HP, deve sostenere le spese di spedizione e di manodopera per il servizio.
- **Opzionali** – Parti la cui riparazione da parte del cliente è facoltativa. Si tratta comunque di componenti progettati per questo scopo. Se tuttavia il cliente ne richiede la sostituzione ad HP, potrebbe dover sostenere spese aggiuntive a seconda del tipo di garanzia previsto per il prodotto.

NOTA: alcuni componenti HP non sono progettati per la riparazione da parte del cliente. Per rispettare la garanzia, HP richiede che queste parti siano sostituite da un centro di assistenza autorizzato. Tali parti sono identificate da un "No" nel Catalogo illustrato dei componenti.

In base alla disponibilità e alla località geografica, le parti CSR vengono spedite con consegna entro il giorno lavorativo seguente. La consegna nel giorno stesso o entro quattro ore è offerta con un supplemento di costo solo in alcune zone. In caso di necessità si può richiedere l'assistenza telefonica di un addetto del centro di supporto tecnico HP. Nel materiale fornito con una parte di ricambio CSR, HP specifica se il cliente deve restituire dei componenti. Qualora sia richiesta la resa ad HP del componente difettoso, lo si deve spedire ad HP entro un determinato periodo di tempo, generalmente cinque (5) giorni lavorativi. Il componente difettoso deve essere restituito con la documentazione associata nell'imballo di spedizione fornito. La mancata restituzione del componente può comportare la fatturazione del ricambio da parte di HP. Nel caso di riparazione da parte del cliente, HP sostiene tutte le spese di spedizione e resa e sceglie il corriere/vettore da utilizzare.

Per ulteriori informazioni sul programma CSR di HP contattare il centro di assistenza di zona. Per il programma in Nord America fare riferimento al sito Web HP (<http://www.hp.com/go/selfrepair>).

Servizio di garanzia per i soli componenti

La garanzia limitata HP può includere un servizio di garanzia per i soli componenti. Nei termini di garanzia del servizio per i soli componenti, HP fornirà gratuitamente le parti di ricambio.

Per il servizio di garanzia per i soli componenti è obbligatoria la formula CSR che prevede la riparazione da parte del cliente. Se il cliente invece richiede la sostituzione ad HP, dovrà sostenere le spese di spedizione e di manodopera per il servizio.

Customer Self Repair

HP Produkte enthalten viele CSR-Teile (Customer Self Repair), um Reparaturzeiten zu minimieren und höhere Flexibilität beim Austausch defekter Bauteile zu ermöglichen. Wenn HP (oder ein HP Servicepartner) bei der Diagnose feststellt, dass das Produkt mithilfe eines CSR-Teils repariert werden kann, sendet Ihnen HP dieses Bauteil zum Austausch direkt zu. CSR-Teile werden in zwei Kategorien unterteilt:

- **Zwingend** – Teile, für die das Customer Self Repair-Verfahren zwingend vorgegeben ist. Wenn Sie den Austausch dieser Teile von HP vornehmen lassen, werden Ihnen die Anfahrt- und Arbeitskosten für diesen Service berechnet.
- **Optional** – Teile, für die das Customer Self Repair-Verfahren optional ist. Diese Teile sind auch für Customer Self Repair ausgelegt. Wenn Sie jedoch den Austausch dieser Teile von HP vornehmen lassen möchten, können bei diesem Service je nach den für Ihr Produkt vorgesehenen Garantiebedingungen zusätzliche Kosten anfallen.

HINWEIS: Einige Teile sind nicht für Customer Self Repair ausgelegt. Um den Garantieanspruch des Kunden zu erfüllen, muss das Teil von einem HP Servicepartner ersetzt werden. Im illustrierten Teilekatalog sind diese Teile mit „No“ bzw. „Nein“ gekennzeichnet.

CSR-Teile werden abhängig von der Verfügbarkeit und vom Lieferziel am folgenden Geschäftstag geliefert. Für bestimmte Standorte ist eine Lieferung am selben Tag oder innerhalb von vier Stunden gegen einen Aufpreis verfügbar. Wenn Sie Hilfe benötigen, können Sie das HP technische Support Center anrufen und sich von einem Mitarbeiter per Telefon helfen lassen. Den Materialien, die mit einem CSR-Ersatzteil geliefert werden, können Sie entnehmen, ob das defekte Teil an HP zurückgeschickt werden muss. Wenn es erforderlich ist, das defekte Teil an HP zurückzuschicken, müssen Sie dies innerhalb eines vorgegebenen Zeitraums tun, in der Regel innerhalb von fünf (5) Geschäftstagen. Das defekte Teil muss mit der zugehörigen Dokumentation in der Verpackung zurückgeschickt werden, die im Lieferumfang enthalten ist. Wenn Sie das defekte Teil nicht zurückschicken, kann HP Ihnen das Ersatzteil in Rechnung stellen. Im Falle von Customer Self Repair kommt HP für alle Kosten für die Lieferung und Rücksendung auf und bestimmt den Kurier-/Frachtdienst.

Weitere Informationen über das HP Customer Self Repair Programm erhalten Sie von Ihrem Servicepartner vor Ort. Informationen über das CSR-Programm in Nordamerika finden Sie auf der HP Website unter (<http://www.hp.com/go/selfrepair>).

Parts-only Warranty Service (Garantieservice ausschließlich für Teile)

Ihre HP Garantie umfasst möglicherweise einen Parts-only Warranty Service (Garantieservice ausschließlich für Teile). Gemäß den Bestimmungen des Parts-only Warranty Service stellt HP Ersatzteile kostenlos zur Verfügung.

Für den Parts-only Warranty Service ist das CSR-Verfahren zwingend vorgegeben. Wenn Sie den Austausch dieser Teile von HP vornehmen lassen, werden Ihnen die Anfahrt- und Arbeitskosten für diesen Service berechnet.

Reparaciones del propio cliente

Los productos de HP incluyen muchos componentes que el propio usuario puede reemplazar (*Customer Self Repair*, CSR) para minimizar el tiempo de reparación y ofrecer una mayor flexibilidad a la hora de realizar sustituciones de componentes defectuosos. Si, durante la fase de diagnóstico, HP (o los proveedores o socios de servicio de HP) identifica que una reparación puede llevarse a cabo mediante el uso de un componente CSR, HP le enviará dicho componente directamente para que realice su sustitución. Los componentes CSR se clasifican en dos categorías:

- **Obligatorio:** componentes para los que la reparación por parte del usuario es obligatoria. Si solicita a HP que realice la sustitución de estos componentes, tendrá que hacerse cargo de los gastos de desplazamiento y de mano de obra de dicho servicio.
- **Opcional:** componentes para los que la reparación por parte del usuario es opcional. Estos componentes también están diseñados para que puedan ser reparados por el usuario. Sin embargo, si precisa que HP realice su sustitución, puede o no conllevar costes adicionales, dependiendo del tipo de servicio de garantía correspondiente al producto.

NOTA: Algunos componentes no están diseñados para que puedan ser reparados por el usuario. Para que el usuario haga valer su garantía, HP pone como condición que un proveedor de servicios autorizado realice la sustitución de estos componentes. Dichos componentes se identifican con la palabra "No" en el catálogo ilustrado de componentes.

Según la disponibilidad y la situación geográfica, los componentes CSR se enviarán para que lleguen a su destino al siguiente día laborable. Si la situación geográfica lo permite, se puede solicitar la entrega en el mismo día o en cuatro horas con un coste adicional. Si precisa asistencia técnica, puede llamar al Centro de asistencia técnica de HP y recibirá ayuda telefónica por parte de un técnico. Con el envío de materiales para la sustitución de componentes CSR, HP especificará si los componentes defectuosos deberán devolverse a HP. En aquellos casos en los que sea necesario devolver algún componente a HP, deberá hacerlo en el periodo de tiempo especificado, normalmente cinco días laborables. Los componentes defectuosos deberán devolverse con toda la documentación relacionada y con el embalaje de envío. Si no enviara el componente defectuoso requerido, HP podrá cobrarle por el de sustitución. En el caso de todas sustituciones que lleve a cabo el cliente, HP se hará cargo de todos los gastos de envío y devolución de componentes y escogerá la empresa de transporte que se utilice para dicho servicio.

Para obtener más información acerca del programa de Reparaciones del propio cliente de HP, póngase en contacto con su proveedor de servicios local. Si está interesado en el programa para Norteamérica, visite la página web de HP siguiente (<http://www.hp.com/go/selfrepair>).

Servicio de garantía exclusivo de componentes

La garantía limitada de HP puede que incluya un servicio de garantía exclusivo de componentes. Según las condiciones de este servicio exclusivo de componentes, HP le facilitará los componentes de repuesto sin cargo adicional alguno.

Para este servicio de garantía exclusivo de componentes, es obligatoria la sustitución de componentes por parte del usuario (CSR). Si solicita a HP que realice la sustitución de estos componentes, tendrá que hacerse cargo de los gastos de desplazamiento y de mano de obra de dicho servicio.

Customer Self Repair

Veel onderdelen in HP producten zijn door de klant zelf te repareren, waardoor de reparatieduur tot een minimum beperkt kan blijven en de flexibiliteit in het vervangen van defecte onderdelen groter is. Deze onderdelen worden CSR-onderdelen (Customer Self Repair) genoemd. Als HP (of een HP Service Partner) bij de diagnose vaststelt dat de reparatie kan worden uitgevoerd met een CSR-onderdeel, verzendt HP dat onderdeel rechtstreeks naar u, zodat u het defecte onderdeel daarmee kunt vervangen. Er zijn twee categorieën CSR-onderdelen:

- **Verplicht:** Onderdelen waarvoor reparatie door de klant verplicht is. Als u HP verzoekt deze onderdelen voor u te vervangen, worden u voor deze service reiskosten en arbeidsloon in rekening gebracht.
- **Optioneel:** Onderdelen waarvoor reparatie door de klant optioneel is. Ook deze onderdelen zijn ontworpen voor reparatie door de klant. Als u echter HP verzoekt deze onderdelen voor u te vervangen, kunnen daarvoor extra kosten in rekening worden gebracht, afhankelijk van het type garantieservice voor het product.

OPMERKING: Sommige HP onderdelen zijn niet ontwikkeld voor reparatie door de klant. In verband met de garantievoorwaarden moet het onderdeel door een geautoriseerde Service Partner worden vervangen. Deze onderdelen worden in de geïllustreerde onderdelencatalogus aangemerkt met "Nee".

Afhankelijk van de leverbaarheid en de locatie worden CSR-onderdelen verzonden voor levering op de eerstvolgende werkdag. Levering op dezelfde dag of binnen vier uur kan tegen meerkosten worden aangeboden, indien dit mogelijk is gezien de locatie. Indien assistentie gewenst is, belt u een HP Service Partner om via de telefoon technische ondersteuning te ontvangen. HP vermeldt in de documentatie bij het vervangende CSR-onderdeel of het defecte onderdeel aan HP moet worden geretourneerd. Als het defecte onderdeel aan HP moet worden teruggezonden, moet u het defecte onderdeel binnen een bepaalde periode, gewoonlijk vijf (5) werkdagen, retourneren aan HP. Het defecte onderdeel moet met de bijbehorende documentatie worden geretourneerd in het meegeleverde verpakkingsmateriaal. Als u het defecte onderdeel niet terugzendt, kan HP u voor het vervangende onderdeel kosten in rekening brengen. Bij reparatie door de klant betaalt HP alle verzendkosten voor het vervangende en geretourneerde onderdeel en kiest HP zelf welke koerier/transportonderneming hiervoor wordt gebruikt.

Neem contact op met een Service Partner voor meer informatie over het Customer Self Repair programma van HP. Informatie over Service Partners vindt u op de HP website (<http://www.hp.nl/services/servicepartners>).

Garantieservice "Parts Only"

Het is mogelijk dat de HP garantie alleen de garantieservice "Parts Only" omvat. Volgens de bepalingen van de Parts Only garantieservice zal HP kosteloos vervangende onderdelen ter beschikking stellen.

Voor de Parts Only garantieservice is vervanging door CSR-onderdelen verplicht. Als u HP verzoekt deze onderdelen voor u te vervangen, worden u voor deze service reiskosten en arbeidsloon in rekening gebracht.

Reparo feito pelo cliente

Os produtos da HP são projetados com muitas peças para reparo feito pelo cliente (CSR) de modo a minimizar o tempo de reparo e permitir maior flexibilidade na substituição de peças com defeito. Se, durante o período de diagnóstico, a HP (ou fornecedores/parceiros de serviço da HP) concluir que o reparo pode ser efetuado pelo uso de uma peça CSR, a peça de reposição será enviada diretamente ao cliente. Existem duas categorias de peças CSR:

- **Obrigatória** – Peças cujo reparo feito pelo cliente é obrigatório. Se desejar que a HP substitua essas peças, serão cobradas as despesas de transporte e mão-de-obra do serviço.
- **Opcional** – Peças cujo reparo feito pelo cliente é opcional. Essas peças também são projetadas para o reparo feito pelo cliente. No entanto, se desejar que a HP as substitua, pode haver ou não a cobrança de taxa adicional, dependendo do tipo de serviço de garantia destinado ao produto.

OBSERVAÇÃO: Algumas peças da HP não são projetadas para o reparo feito pelo cliente. A fim de cumprir a garantia do cliente, a HP exige que um técnico autorizado substitua a peça. Essas peças estão identificadas com a marca "No" (Não), no catálogo de peças ilustrado.

Conforme a disponibilidade e o local geográfico, as peças CSR serão enviadas no primeiro dia útil após o pedido. Onde as condições geográficas permitirem, a entrega no mesmo dia ou em quatro horas pode ser feita mediante uma taxa adicional. Se precisar de auxílio, entre em contato com o Centro de suporte técnico da HP para que um técnico o ajude por telefone. A HP especifica nos materiais fornecidos com a peça CSR de reposição se a peça com defeito deve ser devolvida à HP. Nos casos em que isso for necessário, é preciso enviar a peça com defeito à HP dentro do período determinado, normalmente cinco (5) dias úteis. A peça com defeito deve ser enviada com a documentação correspondente no material de transporte fornecido. Caso não o faça, a HP poderá cobrar a reposição. Para as peças de reparo feito pelo cliente, a HP paga todas as despesas de transporte e de devolução da peça e determina a transportadora/serviço postal a ser utilizado.

Para obter mais informações sobre o programa de reparo feito pelo cliente da HP, entre em contato com o fornecedor de serviços local. Para o programa norte-americano, visite o site da HP (<http://www.hp.com/go/selfrepair>).

Serviço de garantia apenas para peças

A garantia limitada da HP pode incluir um serviço de garantia apenas para peças. Segundo os termos do serviço de garantia apenas para peças, a HP fornece as peças de reposição sem cobrar nenhuma taxa.

No caso desse serviço, a substituição de peças CSR é obrigatória. Se desejar que a HP substitua essas peças, serão cobradas as despesas de transporte e mão-de-obra do serviço.

カスタマーセルフリペア

修理時間を短縮し、故障部品の交換における高い柔軟性を確保するために、HP製品には多数のCSR部品があります。診断の際に、CSR部品を使用すれば修理ができるとHP（HPまたはHP正規保守代理店）が判断した場合、HPIはその部品を直接、お客様に発送し、お客様に交換していただきます。CSR部品には以下の2通りがあります。

- **必須** - カスタマーセルフリペアが必須の部品。当該部品について、もしもお客様がHPIに交換作業を依頼される場合には、その修理サービスに関する交通費および人件費がお客様に請求されます。
- **任意** - カスタマーセルフリペアが任意である部品。この部品もカスタマーセルフリペア用です。当該部品について、もしもお客様がHPIに交換作業を依頼される場合には、お買い上げの製品に適用される保証サービス内容の範囲内においては、別途費用を負担していただくことなく保証サービスを受けることができます。

注： HP製品の一部の部品は、カスタマーセルフリペア用ではありません。製品の保証を継続するためには、HPまたはHP正規保守代理店による交換作業が必須となります。部品カタログには、当該部品がカスタマーセルフリペア除外品である旨が記載されています。

部品供給が可能な場合、地域によっては、CSR部品を翌営業日に届くように発送します。また、地域によっては、追加費用を負担いただくことにより同日または4時間以内に届くように発送することも可能な場合があります。サポートが必要なときは、HPの修理受付窓口に電話していただければ、技術者が電話でアドバイスします。交換用のCSR部品または同梱物には、故障部品をHPIに返送する必要があるかどうかが表示されています。故障部品をHPIに返送する必要がある場合は、指定期限内（通常は5営業日以内）に故障部品をHPIに返送してください。故障部品を返送する場合は、届いた時の梱包箱に関連書類とともに入れてください。故障部品を返送しない場合、HPから部品費用が請求されます。カスタマーセルフリペアの際には、HPIは送料および部品返送費を全額負担し、使用する宅配便会社や運送会社を指定します。

部品のみ保証サービス

HP保証サービスには、部品のみ保証サービスが適用される場合があります。このサービスでは、交換部品は無償で提供されます。

部品のみ保証サービスにおいては、CSR部品をお客様により交換作業していただくことが必須となります。当該部品について、もしもお客様がHPIに交換作業を依頼される場合には、その修理サービスに関する交通費および人件費はお客様の負担となります。

客户自行维修

HP 产品提供许多客户自行维修 (CSR) 部件，以尽可能缩短维修时间和在更换缺陷部件方面提供更大的灵活性。如果在诊断期间 HP（或 HP 服务提供商或服务合作伙伴）确定可以通过使用 CSR 部件完成维修，HP 将直接把该部件发送给您进行更换。有两类 CSR 部件：

- **强制性的** — 要求客户必须自行维修的部件。如果您请求 HP 更换这些部件，则必须为该服务支付差旅费和人工费用。
- **可选的** — 客户可以选择是否自行维修的部件。这些部件也是为客户自行维修设计的。不过，如果您要求 HP 为您更换这些部件，则根据您的产品指定的保修服务类型，HP 可能收取或不再收取任何附加费用。

注：某些 HP 部件的设计并未考虑客户自行维修。为了满足客户保修的需要，HP 要求授权服务提供商更换相关部件。这些部件在部件图解目录中标记为“否”。

CSR 部件将在下一个工作日发运（取决于备货情况和允许的地理范围）。在允许的地理范围内，可在当天或四小时内发运，但要收取额外费用。如果需要帮助，您可以致电 HP 技术支持中心，将会有技术人员通过电话为您提供帮助。HP 会在随更换的 CSR 部件发运的材料中指明是否必须将有缺陷的部件返还给 HP。如果要求您将有缺陷的部件返还给 HP，那么您必须在规定期限内（通常是五 (5) 个工作日）将缺陷部件发给 HP。有缺陷的部件必须随所提供的发运材料中的相关文件一起返还。如果未能送还有缺陷的部件，HP 可能会要求您支付更换费用。客户自行维修时，HP 将承担所有相关运输和部件返回费用，并指定快递员/承运商。

有关 HP 客户自行维修计划的详细信息，请与您当地的服务提供商联系。有关北美地区的计划，请访问 HP 网站 (<http://www.hp.com/go/selfrepair>)。

仅部件保修服务

您的 HP 有限保修服务可能涉及仅部件保修服务。根据仅部件保修服务条款的规定，HP 将免费提供更换的部件。

仅部件保修服务要求进行 CSR 部件更换。如果您请求 HP 更换这些部件，则必须为该服务支付差旅费和人工费用。

客戶自行維修

HP 產品設計了許多「客戶自行維修」(CSR) 的零件以減少維修時間，並且使得更換瑕疵零件時能有更大的彈性。如果在診斷期間 HP (或 HP 服務供應商或維修夥伴) 辨認出此項維修工作可以藉由使用 CSR 零件來完成，則 HP 將直接寄送該零件給您作更換。CSR 零件分為兩種類別：

- **強制的** — 客戶自行維修所使用的零件是強制性的。如果您要求 HP 更換這些零件，HP 將會向您收取此服務所需的外出費用與勞動成本。
- **選購的** — 客戶自行維修所使用的零件是選購的。這些零件也設計用於客戶自行維修之用。不過，如果您要求 HP 為您更換，則可能需要也可能不需要負擔額外的費用，端視針對此產品指定的保固服務類型而定。

備註：某些 HP 零件沒有消費者可自行維修的設計。為符合客戶保固，HP 需要授權的服務供應商更換零件。這些零件在圖示的零件目錄中，被標示為「否」。

基於材料取得及環境允許的情況下，CSR 零件將於下一個工作日以快遞寄送。在環境的允許下當天或四小時內送達，則可能需要額外的費用。若您需要協助，可致電「HP 技術支援中心」，會有一位技術人員透過電話來協助您。不論損壞的零件是否必須退回，HP 皆會在與 CSR 替換零件一起運送的材料中註明。若要將損壞的零件退回 HP，您必須在指定的一段時間內（通常為五 (5) 個工作天），將損壞的零件寄回 HP。損壞的零件必須與寄送資料中隨附的相關技術文件一併退還。如果無法退還損壞的零件，HP 可能要向您收取替換費用。針對客戶自行維修情形，HP 將負責所有運費及零件退還費用並指定使用何家快遞/貨運公司。

如需 HP 的「客戶自行維修」方案詳細資訊，請連絡您當地的服務供應商。至於北美方案，請參閱 HP 網站 (<http://www.hp.com/go/selfrepair>)。

僅限零件的保固服務

您的「HP 有限保固」可能包含僅限零件的保固服務。在僅限零件的保固服務情況下，HP 將免費提供替換零件。

針對僅限零件的保固服務，CSR 零件替換是強制性的。如果您要求 HP 更換這些零件，HP 將會向您收取此服務所需的外出費用與勞動成本。

고객 셀프 수리

HP 제품은 수리 시간을 최소화하고 결함이 있는 부품 교체 시 더욱 융통성을 발휘할 수 있도록 하기 위해 고객 셀프 수리(CSR) 부품을 다량 사용하여 설계되었습니다. 진단 기간 동안 HP(또는 HP 서비스 공급업체 또는 서비스 협력업체)에서 CSR 부품을 사용하여 수리가 가능하다고 판단되면 HP는 해당 부품을 바로 사용자에게 보내어 사용자가 교체할 수 있도록 합니다. CSR 부품에는 두 가지 종류가 있습니다.

- **고객 셀프 수리가 의무 사항인 필수 부품.** 사용자가 HP에 이 부품의 교체를 요청할 경우 이 서비스에 대한 출장비 및 작업비가 청구됩니다.
- **고객 셀프 수리가 선택 사항인 부품.** 이 부품들도 고객 셀프 수리가 가능하도록 설계되었습니다. 하지만 사용자가 HP에 이 부품의 교체를 요청할 경우 사용자가 구입한 제품에 해당하는 보증 서비스 유형에 따라 추가 비용 없이 교체가 가능할 수 있습니다.

참고: 일부 HP 부품은 고객 셀프 수리가 불가능하도록 설계되었습니다. HP는 만족스러운 고객 보증을 위해 공인 서비스 제공업체를 통해 부품을 교체하도록 하고 있습니다. 이러한 부품들은 Illustrated Parts Catalog에 "No"라고 표시되어 있습니다.

CSR 부품은 재고 상태와 지리적 조건이 허용하는 경우 다음 영업일 납품이 가능하도록 배송이 이루어집니다. 지리적 조건이 허용하는 경우 추가 비용이 청구되는 조건으로 당일 또는 4시간 배송이 가능할 수도 있습니다. 도움이 필요하시면 HP 기술 지원 센터로 전화하십시오. 전문 기술자가 전화로 도움을 줄 것입니다. HP는 결함이 발생한 부품을 HP로 반환해야 하는지 여부를 CSR 교체 부품과 함께 배송된 자료에 지정합니다. 결함이 발생한 부품을 HP로 반환해야 하는 경우에는 지정된 기간 내(통상 영업일 기준 5일)에 HP로 반환해야 합니다. 이 때 결함이 발생한 부품은 제공된 포장 재료에 넣어 관련 설명서와 함께 반환해야 합니다. 결함이 발생한 부품을 반환하지 않는 경우 HP가 교체 부품에 대해 비용을 청구할 수 있습니다. 고객 셀프 수리의 경우, HP는 모든 운송 및 부품 반환 비용을 부담하며 이용할 운송업체 및 택배 서비스를 결정합니다.

HP 고객 셀프 수리 프로그램에 대한 자세한 내용은 가까운 서비스 제공업체에 문의하십시오. 북미 지역의 프로그램에 대해서는 HP 웹 사이트(<http://www.hp.com/go/selfrepair>)를 참조하십시오.

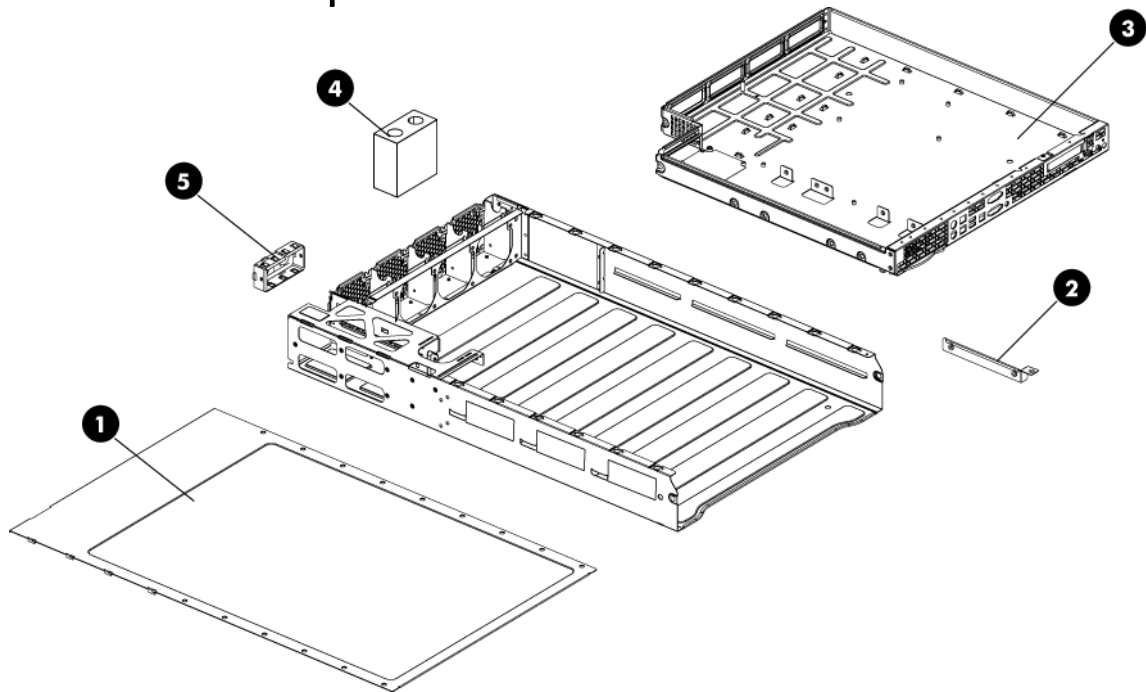
부품 제공 보증 서비스

HP 제한 보증에는 부품 제공 보증 서비스가 포함될 수 있습니다. 이러한 경우 HP는 부품 제공 보증 서비스의 조건에 따라 교체 부품만을 무료로 제공합니다.

부품 제공 보증 서비스 제공 시 CSR 부품 교체는 의무 사항입니다. 사용자가 HP에 이 부품의 교체를 요청할 경우 이 서비스에 대한 출장비 및 작업비가 청구됩니다.

Illustrated Parts Catalog

Mechanical Components



Item	Description	Spare part number	Customer self repair
1	Top cover	590626-001	Mandatory ¹
2	PCIe x16 riser card bracket	—	Mandatory ¹
3	1U tray for 165z system	—	Mandatory ¹
4	Fan blank kit	—	Mandatory
5	Power supply blank kit	—	Mandatory ¹

¹Mandatory—Parts for which customer self repair is mandatory. If you request HP to replace these parts, you will be charged for the travel and labor costs of this service.

²Optional—Parts for which customer self repair is optional. These parts are also designed for customer self repair. If, however, you require that HP replace them for you, there may or may not be additional charges, depending on the type of warranty service designated for your product.

³No—Some HP parts are not designed for customer self repair. In order to satisfy the customer warranty, HP requires that an authorized service provider replace the part. These parts are identified as "No" in the Illustrated Parts Catalog.

¹Mandatory: Obligatoire—Pièces pour lesquelles la réparation par le client est obligatoire. Si vous demandez à HP de remplacer ces pièces, les coûts de déplacement et main d'œuvre du service vous seront facturés.

²Optional: Facultatif—Pièces pour lesquelles la réparation par le client est facultative. Ces pièces sont également conçues pour permettre au client d'effectuer lui-même la réparation. Toutefois, si vous demandez à HP de remplacer ces pièces, l'intervention peut ou non vous être facturée, selon le type de garantie applicable à votre produit.

³No: Non—Certaines pièces HP ne sont pas conçues pour permettre au client d'effectuer lui-même la réparation. Pour que la garantie puisse s'appliquer, HP exige que le remplacement de la pièce soit effectué par un Mainteneur Agréé. Ces pièces sont identifiées par la mention "Non" dans le Catalogue illustré.

¹Mandatory: Obbligatorie—Parti che devono essere necessariamente riparate dal cliente. Se il cliente ne affida la riparazione ad HP, deve sostenere le spese di spedizione e di manodopera per il servizio.

²Optional: Opzionali—Parti la cui riparazione da parte del cliente è facoltativa. Si tratta comunque di componenti progettati per questo scopo. Se tuttavia il cliente ne richiede la sostituzione ad HP, potrebbe dover sostenere spese aggiuntive a seconda del tipo di garanzia previsto per il prodotto.

³No: Non CSR—Alcuni componenti HP non sono progettati per la riparazione da parte del cliente. Per rispettare la garanzia, HP richiede che queste parti siano sostituite da un centro di assistenza autorizzato. Tali parti sono identificate da un "No" nel Catalogo illustrato dei componenti.

¹Mandatory: Zwingend—Teile, die im Rahmen des Customer Self Repair Programms ersetzt werden müssen. Wenn Sie diese Teile von HP ersetzen lassen, werden Ihnen die Versand- und Arbeitskosten für diesen Service berechnet.

²Optional: Optional—Teile, für die das Customer Self Repair-Verfahren optional ist. Diese Teile sind auch für Customer Self Repair ausgelegt. Wenn Sie jedoch den Austausch dieser Teile von HP vornehmen lassen möchten, können bei diesem Service je nach den für Ihr Produkt vorgesehenen Garantiebedingungen zusätzliche Kosten anfallen.

³No: Kein—Einige Teile sind nicht für Customer Self Repair ausgelegt. Um den Garantieanspruch des Kunden zu erfüllen, muss das Teil von einem HP Servicepartner ersetzt werden. Im illustrierten Teilekatalog sind diese Teile mit „No“ bzw. „Nein“ gekennzeichnet.

¹Mandatory: Obligatorio—componentes para los que la reparación por parte del usuario es obligatoria. Si solicita a HP que realice la sustitución de estos componentes, tendrá que hacerse cargo de los gastos de desplazamiento y de mano de obra de dicho servicio.

²Optional: Opcional— componentes para los que la reparación por parte del usuario es opcional. Estos componentes también están diseñados para que puedan ser reparados por el usuario. Sin embargo, si precisa que HP realice su sustitución, puede o no conllevar costes adicionales, dependiendo del tipo de servicio de garantía correspondiente al producto.

³No: No—Algunos componentes no están diseñados para que puedan ser reparados por el usuario. Para que el usuario haga valer su garantía, HP pone como condición que un proveedor de servicios autorizado realice la sustitución de estos componentes. Dichos componentes se identifican con la palabra "No" en el catálogo ilustrado de componentes.

¹Mandatory: Verplicht—Onderdelen waarvoor Customer Self Repair verplicht is. Als u HP verzoekt deze onderdelen te vervangen, komen de reiskosten en het arbeidsloon voor uw rekening.

²Optional: Optioneel—Onderdelen waarvoor reparatie door de klant optioneel is. Ook deze onderdelen zijn ontworpen voor reparatie door de klant. Als u echter HP verzoekt deze onderdelen voor u te vervangen, kunnen daarvoor extra kosten in rekening worden gebracht, afhankelijk van het type garanteservice voor het product.

³No: Nee—Sommige HP onderdelen zijn niet ontwikkeld voor reparatie door de klant. In verband met de garanti voorwaarden moet het onderdeel door een geautoriseerde Service Partner worden vervangen. Deze onderdelen worden in de geïllustreerde onderdelencatalogus aangemerkt met "Nee".

¹Mandatory: Obrigatória—Peças cujo reparo feito pelo cliente é obrigatório. Se desejar que a HP substitua essas peças, serão cobradas as despesas de transporte e mão-de-obra do serviço.

²Optional: Opcional—Peças cujo reparo feito pelo cliente é opcional. Essas peças também são projetadas para o reparo feito pelo cliente. No entanto, se desejar que a HP as substitua, pode haver ou não a cobrança de taxa adicional, dependendo do tipo de serviço de garantia destinado ao produto.

³No: Nenhuma—Algumas peças da HP não são projetadas para o reparo feito pelo cliente. A fim de cumprir a garantia do cliente, a HP exige que um técnico autorizado substitua a peça. Essas peças estão identificadas com a marca "No" (Não), no catálogo de peças ilustrado.

¹Mandatory : 必須 - 顧客自己修理が必須の部品。当該部品について、もしもお客様がHPに交換作業を依頼される場合には、その修理サービスに関する交通費および人件費がお客様に請求されます。

²Optional : 任意 - 顧客自己修理が任意である部品。この部品も顧客自己修理用です。当該部品について、もしもお客様がHPに交換作業を依頼される場合には、お買い上げの製品に適用される保証サービス内容の範囲内においては、費用を負担していただくことなく保証サービスを受けることができます。

³No : 除外 - HP製品の一部の部品は、顧客自己修理用ではありません。製品の保証を継続するためには、HPまたはHP正規保守代理店による交換作業が必須となります。部品カタログには、当該部品が顧客自己修理除外品である旨が記載されています。

¹Mandatory: 强制性的 — 要求客户必须自行维修的部件。如果您请求 HP 更换这些部件，则必须为该服务支付差旅费和人工费用。

²Optional: 可选的 — 客户可以选择是否自行维修的部件。这些部件也是为客户自行维修设计的。不过，如果您要求 HP 为您更换这些部件，则根据为您的产品指定的保修服务类型，HP 可能收取或不再收取任何附加费用。

³No: 否 — 某些 HP 部件的设计并未考虑客户自行维修。为了满足客户保修的需要，HP 要求授权服务提供商更换相关部件。这些部件在部件图解目录中标记为“否”。

¹Mandatory: 強制的 — 客戶自行維修所使用的零件是強制的。如果您要求 HP 更換這些零件，HP 將會向您收取此服務所需的外出費用與勞動成本。

²Optional: 選購的 — 客戶自行維修所使用的零件是選購的。這些零件也設計用於客戶自行維修之用。不過，如果您要求 HP 為您更換，則可能需要也可能不需要負擔額外的費用，端視針對此產品指定的保固服務類型而定。

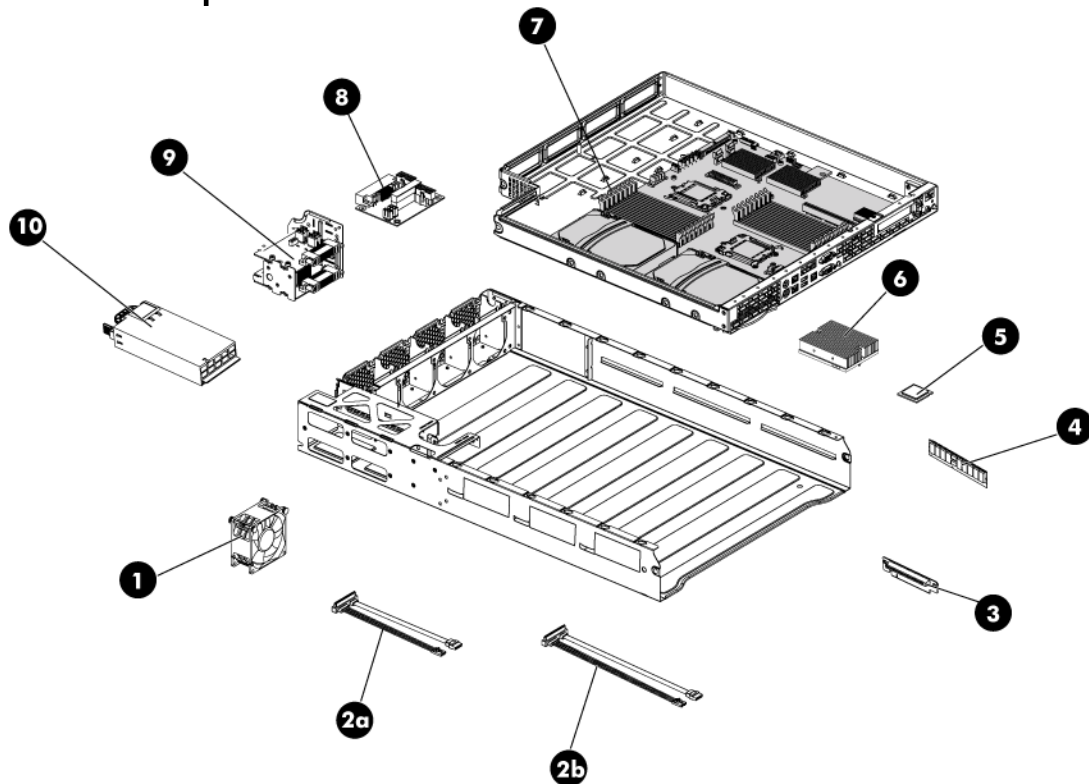
³No: 否 — 某些 HP 零件沒有消費者可自行維修的設計。為符合客戶保固，HP 需要授權的服務供應商更換零件。這些零件在圖示的零件目錄中，被標示為「否」。

¹ Mandatory: 필수 — 고객 셀프 수리가 의무 사항인 필수 부품. 사용자가 HP에 이 부품의 교체를 요청할 경우 이 서비스에 대한 출장비 및 작업비가 청구됩니다.

² Optional: 옵션 — 고객 셀프 수리가 선택 사항인 부품. 이 부품들도 고객 셀프 수리가 가능하도록 설계되었습니다. 하지만 사용자가 HP에 이 부품의 교체를 요청할 경우 사용자가 구입한 제품에 해당하는 보증 서비스 유형에 따라 추가 비용 없이 교체가 가능할 수 있습니다.

³ No: No — 고객 셀프 수리가 불가능하도록 설계된 HP 부품. 이 부품들은 고객 셀프 수리가 불가능하도록 설계되었습니다. HP는 고객 보증을 만족시키기 위해 공인 서비스 제공업체를 통해 부품을 교체하도록 하고 있습니다.

System Components



Item	Description	Spare Part Number	Customer Self Repair
1	System fan	576898-001	Mandatory ¹
2a	SATA cable 2	576895-001	Mandatory ¹
2b	SATA cable 1	576895-001	Mandatory ¹
3	PCIe x16 riser card	590827-001	Mandatory ¹
4	Memory modules	—	—
	DIMM,REG,1GB PC2-5300,128Mx8,RoHS	488608-001	Mandatory ¹
	DIMM,REG,2GB PC2-5300,256Mx4,RoHS	416357-001	Mandatory ¹
	DIMM,REG,4GB PC2-5300,256Mx4,LP,RoHS	487945-001	Mandatory ¹
	DIMM,REG,1GB PC2-6400,128Mx8,RoHS	501156-001	Mandatory ¹
	DIMM,REG,2GB PC2-6400,256Mx4,RoHS	501157-001	Mandatory ¹
	DIMM,REG,4GB PC2-6400,256Mx4,RoHS	501158-001	Mandatory ¹
	DIMM,REG,8GB PC2-5300,512Mx4,RoHS	432671-001	Mandatory ¹
5	Processors, Optional Series	—	—
	IC, uP, Shanghai 2376 2.3 GHz 75W	502922-001	Optional ²

Item	Description	Spare Part Number	Customer Self Repair
	IC, uP, Shanghai 2377EE 2.3 Ghz 50W	538609-001	Optional ²
	IC, uP, Shanghai 2381HE 2.5 Ghz 55W	538607-001	Optional ²
	IC, uP, Shanghai 2389, 2.9 Ghz, 75W	534249-001	Optional ²
	IC, uP, Shanghai 2374HE 2.2 Ghz 55W	500513-001	Optional ²
	IC, uP, Shanghai 2376HE 2.3 Ghz 55W	509294-001	Optional ²
	IC, uP, Shanghai 2380 2.5 GHz 75W	500515-001	Optional ²
	IC, uP, Shanghai 2384 2.7 GHz 75W	505917-001	Optional ²
	IC, uP, Istanbul 2427 2.2 Ghz 6M 75W	573871-001	Optional ²
	IC, uP, Istanbul 2435 2.6 Ghz 6M 75W	573870-001	Optional ²
	IC, uP, Istanbul 2431 2.4 Ghz 6M 75W	575257-001	Optional ²
	IC, uP, Istanbul 2423HE 2.0 Ghz 6M 55W	572550-001	Optional ²
	IC, uP, Istanbul 2425HE 2.1 Ghz 6M 55W	572549-001	Optional ²
6	Processor heatsink	452332-001	Optional ²
7	165z system board	588021-001	Mandatory ¹
8	Personality board for 165z board	588022-001	Mandatory ¹
9	AC power board	576882-001	Mandatory ¹
10	750W power supply	511778-001	Mandatory ¹

¹Mandatory—Parts for which customer self repair is mandatory. If you request HP to replace these parts, you will be charged for the travel and labor costs of this service.

²Optional—Parts for which customer self repair is optional. These parts are also designed for customer self repair. If, however, you require that HP replace them for you, there may or may not be additional charges, depending on the type of warranty service designated for your product.

³No—Some HP parts are not designed for customer self repair. In order to satisfy the customer warranty, HP requires that an authorized service provider replace the part. These parts are identified as "No" in the Illustrated Parts Catalog.

¹Mandatory: Obligatoire—Pièces pour lesquelles la réparation par le client est obligatoire. Si vous demandez à HP de remplacer ces pièces, les coûts de déplacement et main d'œuvre du service vous seront facturés.

²Optional: Facultatif—Pièces pour lesquelles la réparation par le client est facultative. Ces pièces sont également conçues pour permettre au client d'effectuer lui-même la réparation. Toutefois, si vous demandez à HP de remplacer ces pièces, l'intervention peut ou non vous être facturée, selon le type de garantie applicable à votre produit.

³No: Non—Certaines pièces HP ne sont pas conçues pour permettre au client d'effectuer lui-même la réparation. Pour que la garantie puisse s'appliquer, HP exige que le remplacement de la pièce soit effectué par un Mainteneur Agréé. Ces pièces sont identifiées par la mention "Non" dans le Catalogue illustré.

¹Mandatory: Obbligatorie—Parti che devono essere necessariamente riparate dal cliente. Se il cliente ne affida la riparazione ad HP, deve sostenere le spese di spedizione e di manodopera per il servizio.

²Optional: Opzionali—Parti la cui riparazione da parte del cliente è facoltativa. Si tratta comunque di componenti progettati per questo scopo. Se tuttavia il cliente ne richiede la sostituzione ad HP, potrebbe dover sostenere spese aggiuntive a seconda del tipo di garanzia previsto per il prodotto.

³No: Non CSR—Alcuni componenti HP non sono progettati per la riparazione da parte del cliente. Per rispettare la garanzia, HP richiede che queste parti siano sostituite da un centro di assistenza autorizzato. Tali parti sono identificate da un "No" nel Catalogo illustrato dei componenti.

¹Mandatory: Zwingend—Teile, die im Rahmen des Customer Self Repair Programms ersetzt werden müssen. Wenn Sie diese Teile von HP ersetzen lassen, werden Ihnen die Versand- und Arbeitskosten für diesen Service berechnet.

²Optional: Optional—Teile, für die das Customer Self Repair-Verfahren optional ist. Diese Teile sind auch für Customer Self Repair ausgelegt. Wenn Sie jedoch den Austausch dieser Teile von HP vornehmen lassen möchten, können bei diesem Service je nach den für Ihr Produkt vorgesehenen Garantiebedingungen zusätzliche Kosten anfallen.

³No: Kein—Einige Teile sind nicht für Customer Self Repair ausgelegt. Um den Garantieanspruch des Kunden zu erfüllen, muss das Teil von einem HP Servicepartner ersetzt werden. Im illustrierten Teilekatalog sind diese Teile mit „No“ bzw. „Nein“ gekennzeichnet.

¹Mandatory: Obligatorio—componentes para los que la reparación por parte del usuario es obligatoria. Si solicita a HP que realice la sustitución de estos componentes, tendrá que hacerse cargo de los gastos de desplazamiento y de mano de obra de dicho servicio.

²Optional: Opcional— componentes para los que la reparación por parte del usuario es opcional. Estos componentes también están diseñados para que puedan ser reparados por el usuario. Sin embargo, si precisa que HP realice su sustitución, puede o no conllevar costes adicionales, dependiendo del tipo de servicio de garantía correspondiente al producto.

³No: No—Algunos componentes no están diseñados para que puedan ser reparados por el usuario. Para que el usuario haga valer su garantía, HP pone como condición que un proveedor de servicios autorizado realice la sustitución de estos componentes. Dichos componentes se identifican con la palabra "No" en el catálogo ilustrado de componentes.

¹Mandatory: Verplicht—Onderdelen waarvoor Customer Self Repair verplicht is. Als u HP verzoekt deze onderdelen te vervangen, komen de reiskosten en het arbeidsloon voor uw rekening.

²Optional: Optioneel—Onderdelen waarvoor reparatie door de klant optioneel is. Ook deze onderdelen zijn ontworpen voor reparatie door de klant. Als u echter HP verzoekt deze onderdelen voor u te vervangen, kunnen daarvoor extra kosten in rekening worden gebracht, afhankelijk van het type garantieservice voor het product.

³No: Nee—Sommige HP onderdelen zijn niet ontwikkeld voor reparatie door de klant. In verband met de garantievoorwaarden moet het onderdeel door een geautoriseerde Service Partner worden vervangen. Deze onderdelen worden in de geïllustreerde onderdelencatalogus aangemerkt met "Nee".

¹Mandatory: Obrigatória—Peças cujo reparo feito pelo cliente é obrigatório. Se desejar que a HP substitua essas peças, serão cobradas as despesas de transporte e mão-de-obra do serviço.

²Optional: Opcional—Peças cujo reparo feito pelo cliente é opcional. Essas peças também são projetadas para o reparo feito pelo cliente. No entanto, se desejar que a HP as substitua, pode haver ou não a cobrança de taxa adicional, dependendo do tipo de serviço de garantia destinado ao produto.

³No: Nenhuma—Algumas peças da HP não são projetadas para o reparo feito pelo cliente. A fim de cumprir a garantia do cliente, a HP exige que um técnico autorizado substitua a peça. Essas peças estão identificadas com a marca “No” (Não), no catálogo de peças ilustrado.

¹Mandatory : 必須 - 顧客自己修理が必須の部品。当該部品について、もしもお客様がHPに交換作業を依頼される場合には、その修理サービスに関する交通費および人件費がお客様に請求されます。

²Optional : 任意 - 顧客自己修理が任意である部品。この部品も顧客自己修理用です。当該部品について、もしもお客様がHPに交換作業を依頼される場合には、お買い上げの製品に適用される保証サービス内容の範囲内においては、費用を負担していただくことなく保証サービスを受けることができます。

³No : 除外 - HP製品の一部の部品は、顧客自己修理用ではありません。製品の保証を継続するためには、HPまたはHP正規保守代理店による交換作業が必須となります。部品カタログには、当該部品が顧客自己修理除外品である旨が記載されています。

¹Mandatory: 强制性的 — 要求客户必须自行维修的部件。如果您请求 HP 更换这些部件，则必须为该服务支付差旅费和人工费用。

²Optional: 可选的 — 客户可以选择是否自行维修的部件。这些部件也是为客户自行维修设计的。不过，如果您要求 HP 为您更换这些部件，则根据为您的产品指定的保修服务类型，HP 可能收取或不再收取任何附加费用。

³No: 否 — 某些 HP 部件的设计并未考虑客户自行维修。为了满足客户保修的需要，HP 要求授权服务提供商更换相关部件。这些部件在部件图解目录中标记为“否”。

¹Mandatory: 強制的 — 客戶自行維修所使用的零件是強制性的。如果您要求 HP 更換這些零件，HP 將會向您收取此服務所需的外出費用與勞動成本。

²Optional: 選購的 — 客戶自行維修所使用的零件是選購的。這些零件也設計用於客戶自行維修之用。不過，如果您要求 HP 為您更換，則可能需要也可能不需要負擔額外的費用，端視針對此產品指定的保固服務類型而定。

³No: 否 — 某些 HP 零件沒有消費者可自行維修的設計。為符合客戶保固，HP 需要授權的服務供應商更換零件。這些零件在圖示的零件目錄中，被標示為「否」。

¹ Mandatory: 필수 — 고객 셀프 수리가 의무 사항인 필수 부품. 사용자가 HP에 이 부품의 교체를 요청할 경우 이 서비스에 대한 출장비 및 작업비가 청구됩니다.

² Optional: 옵션 — 고객 셀프 수리가 선택 사항인 부품. 이 부품들도 고객 셀프 수리가 가능하도록 설계되었습니다. 하지만 사용자가 HP에 이 부품의 교체를 요청할 경우 사용자가 구입한 제품에 해당하는 보증 서비스 유형에 따라 추가 비용 없이 교체가 가능할 수 있습니다.

³ No: No — 고객 셀프 수리가 불가능하도록 설계된 HP 부품. 이 부품들은 고객 셀프 수리가 불가능하도록 설계되었습니다. HP는 고객 보증을 만족시키기 위해 공인 서비스 제공업체를 통해 부품을 교체하도록 하고 있습니다.

HP Contact Information

For United States and worldwide contact information, see the Contact HP website at <http://hp.com/go/assistance>.

In the United States:

- To contact HP by phone, call 1-800-334-5144. For continuous quality improvement, calls may be recorded or monitored.
- If you have purchased a Care Pack (service upgrade), see the Support & Drivers website at <http://www8.hp.com/us/en/support-drivers.html>. If the problem cannot be resolved at the website, call 1-800-633-3600. For more information about Care Packs, see the HP website at <http://pro-aq-sama.houston.hp.com/services/cache/10950-0-0-225-121.html>.

Before You Contact HP

Be sure to have the following information available before you call HP:

- Technical support registration number (if applicable)
- Product serial number
- Product model name and number
- Applicable error messages
- Add-on boards or hardware
- Third-party hardware or software
- Operating system type and revision level

Removal and Replacement Procedures

This chapter provides subassembly/module-level removal and replacement procedures for the HP ProLiant SL165z G6 server.

Review the specifications of a new component before installing it to make sure it is compatible with the server. When you integrate new components into the system, record its model and serial number, and any other pertinent information for future reference. After completing any removal or replacement procedure, run the diagnostics program to verify that all components operate properly.

NOTE: The figures used in this chapter to illustrate procedural steps are labeled numerically (i.e., 1, 2...). When these figures are used in substep items, the alphabetically labeled instructions correspond to the numbered labels on the related figure (i.e., label 1 corresponds to step a, label 2 corresponds to step b, etc.). The procedures described in this section assume that the server is out of the rack and is positioned on a flat, stable surface.

Hardware Configuration Tools

You need the following items for some procedures:

- T-10/T-15 wrench

The following references and software tools may also be used:

- HP ProLiant SL165z G6 Server Support CD
- IPMI Event Log
- Diagnostics Software

Hardware Configuration Information

Electrostatic Discharge Information

An electrostatic discharge (ESD) can damage static-sensitive devices or microcircuit. Proper packaging and grounding techniques are necessary precautions to prevent damage. To prevent electrostatic damage, observe the following precautions:

- Transport products in static-safe containers such as conductive tubes, bags, or boxes.
- Keep electrostatic-sensitive parts in their containers until they arrive at static-free stations.
- Cover workstations with approved static-dissipating material. Use a wrist strap connected to the work surface, and properly grounded (earthed) tools and equipment.
- Keep work area free of nonconductive materials, such as ordinary plastic assembly aids and foam packing.
- Make sure that you are always properly grounded (earthed) when touching a static-sensitive component or assembly.
- Avoid touching pins, leads, or circuitry.
- Always place drives with the Printed Circuit Board (PCB) assembly-side down.
- Use conductive field service tools.

Pre-installation Procedure

Perform the steps below before you open the server or before you remove or replace any component.



WARNING: Failure to properly turn off the server before you open the server or before you start installing/removing components may cause serious damage as well as bodily harm.

1. Turn off the server and all the peripherals connected to it.
2. Unplug all cables from the power outlets to avoid exposure to high energy levels that may cause burns when parts are short-circuited by metal objects such as tools or jewelry.
If necessary, label each one to expedite reassembly.
3. Disconnect telecommunication cables to avoid exposure to shock hazard from ringing voltages.
4. If server is installed in a rack, remove server and place it on a flat surface.
5. Remove the top cover according to the instructions described in the System Covers section in this chapter.
6. Remove the top middle cover according to the instructions described in the System Covers section in this chapter.
7. Follow the ESD precautions listed previously in this chapter when handling a server component.



IMPORTANT: To streamline the configuration process, read through the entire installation/removal procedure first and make sure you understand them before you begin.

Post-installation Instructions

Observe the following items after installing or removing a server component:

1. Be sure all components are installed according to the described step-by-step instructions.
2. Reinstall the rear cage, air baffle, peripherals, and system cables that you have removed.
3. Reinstall the top cover.
4. Reinstall server into rack.
5. Connect all external cables and the AC power cord to the system.
6. Press the power button on the front panel to turn on the server.

Server Warnings and Cautions

Before installing a server, be sure that you understand the following warnings and cautions.



WARNING: To reduce the risk of electric shock or damage to the equipment:

- Do not disable the power cord grounding plug. The grounding plug is an important safety feature.
 - Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.
 - Unplug the power cord from the power supply to disconnect power to the equipment.
 - Do not route the power cord where it can be walked on or pinched by items placed against it. Pay particular attention to the plug, electrical outlet, and the point where the cord extends from the server.
-



WARNING: To reduce the risk of personal injury from hot surfaces, allow the drives and the internal system components to cool before touching them.



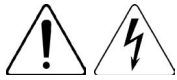
CAUTION: Do not operate the server for long periods with the access panel open or removed. Operating the server in this manner results in improper airflow and improper cooling that can lead to thermal damage.

⚠ CAUTION: The following rack-mount instructions shall be paid attention to.

- Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.
 - Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
 - Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
 - Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
 - Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips)."
-

Symbols on Equipment

The following symbols may be placed on equipment to indicate the presence of potentially hazardous conditions.



This symbol indicates the presence of hazardous energy circuits or electric shock hazards. Refer all servicing to qualified personnel.

WARNING: To reduce the risk of injury from electric shock hazards, do not open this enclosure. Refer all maintenance, upgrades, and servicing to qualified personnel.



This symbol indicates the presence of electric shock hazards. The area contains no user or field serviceable parts. Do not open for any reason.

WARNING: To reduce the risk of injury from electric shock hazards, do not open this enclosure.



This symbol on an RJ-45 receptacle indicates a network interface connection.

WARNING: To reduce the risk of electric shock, fire, or damage to the equipment, do not plug telephone or telecommunications connectors into this receptacle.



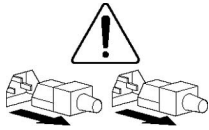
This symbol indicates the presence of a hot surface or hot component. If this surface is contacted, the potential for injury exists.

WARNING: To reduce the risk of injury from a hot component, allow the surface to cool before touching.



This symbol indicates that the component exceeds the recommended weight for one individual to handle safely.

WARNING: To reduce the risk of personal injury or damage to the equipment, observe local occupational health and safety requirements and guidelines for manual material handling.



These symbols, on power supplies or systems, indicate that the equipment is supplied by multiple sources of power.

WARNING: To reduce the risk of injury from electric shock, remove all power cords to completely disconnect power from the system.

Powering Down the Server

The server does not completely power down when the power button on the front panel is pressed. The button toggles between On and Standby. The standby position removes power from most electronics and the drives, but some internal circuitry remains active. To completely remove all power from the system, disconnect all power cords from the server.

To power down the server:

1. Shut down server as directed by the operating system documentation.
2. Press the power button to toggle to Standby.

This places the server in standby mode changing the power LED indicator to amber. In this mode, the main power supply output is disabled. Standby does not completely disable or remove power from the system.

3. Disconnect the AC power cord from the AC outlet and then from the server.
4. Be sure that the power LED indicator is turned off and that the fan noise has stopped.
5. Disconnect all external peripheral devices from the server.

System Covers

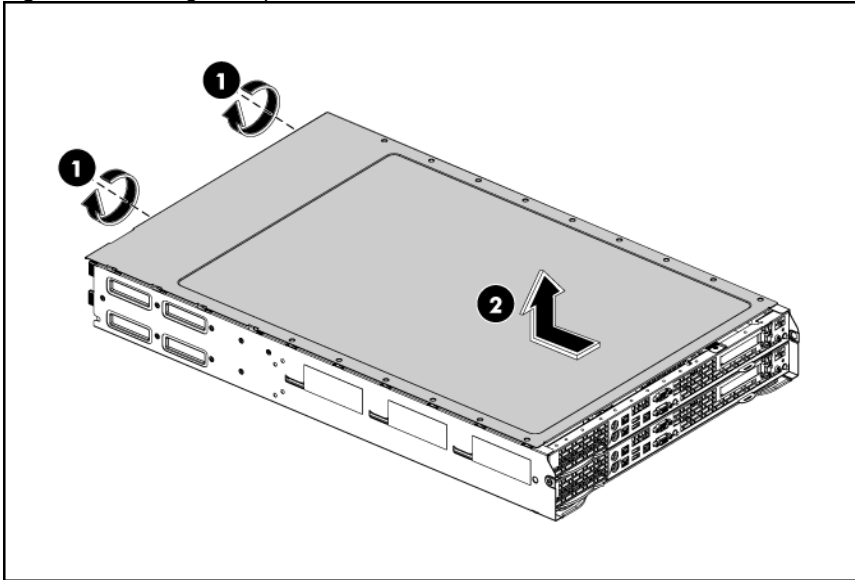
The top cover is detachable for system fans and AC power board maintenance. If you need to repair or replace a server component, it's unnecessary to remove the top cover.

Top Cover

To remove the top cover:

1. Remove the screws securing the top cover to the chassis.
2. Slide the top cover and then lift them away from the chassis.

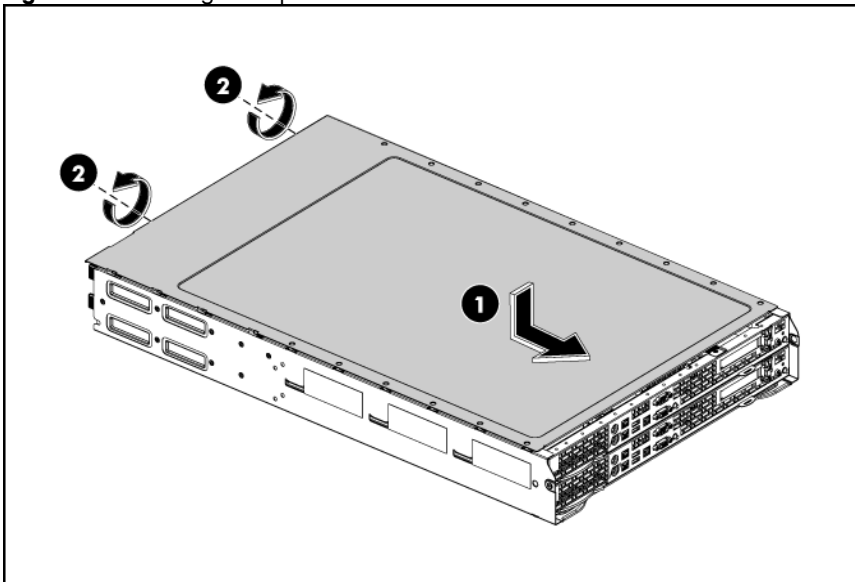
Figure 1 Removing the top cover



To reinstall the top cover:

1. Align the top cover to the chassis and then slide it towards the front panel to position it into place.
2. Fasten the two rear screws to secure the top cover to the chassis.

Figure 2 Reinstalling the top cover



Cable Management

Always follow good cable management practices when working inside the computer.

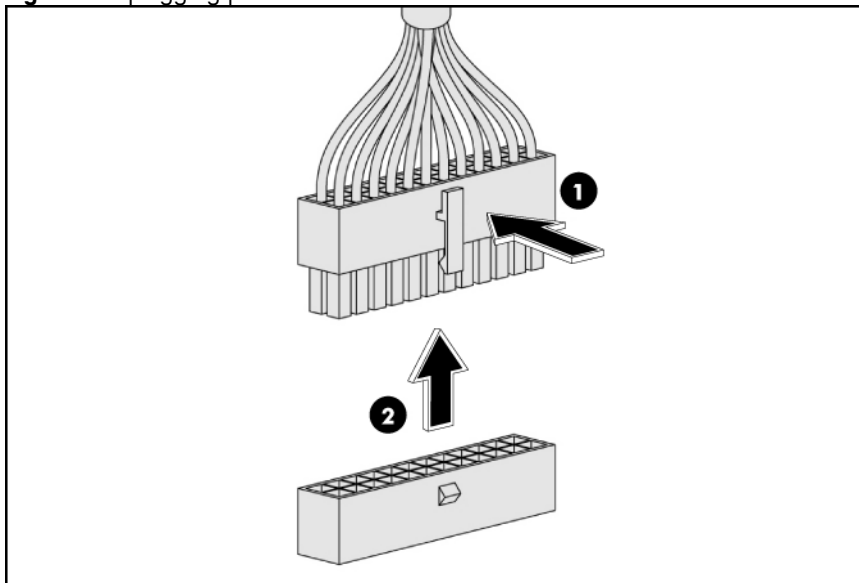
- Keep cables away from major heat sources like the heatsink.
- Do not jam cables on top of expansion cards or memory modules. Printed circuit cards are not designed to withstand excessive pressure.
- Keep cables clear of sliding or moveable parts to prevent cutting or crimping.
- When folding a flat ribbon cable, never fold to a sharp crease. Sharp creases may damage the wires.
- Some flat ribbon cables come pre-folded. Never change the folds on these cables.
- Do not sharply bend any cable. A sharp bend can break the internal wires.
- Never bend a SATA data cable tighter than a 30 mm (1.18 in) radius.
- Never crease a SATA data cable.
- Do not rely on components like the drive cage, power supply, or system cover to push cables down into the chassis.

Removing power supply cables from the system board connectors (P21) follow below steps:

1. Squeeze on the top of the retaining latch attached to the cable end of the connector.
2. Grasp the cable end of the connector and pull it straight up.

△ CAUTION: Always pull the connector - NEVER pull on the cable. Pulling on the cable could damage the cable and result in a failed power supply.

Figure 3 Unplugging power cables



Cable Connections

The following table provides information about switching power supply cable connector labels.

Table 1 Cable connections

Cable	To	Cable Designator
8-pin power connector	Power supply	P24
24-pin power connector	Power supply	P21
8-pin power connector	Power supply	P23
Switching Power Supply	System board Power Supply Management Interface connector	J1 (MB)

The following table provides the system board designators that various cables plug into. For more detailed information about system board components, see system board components.

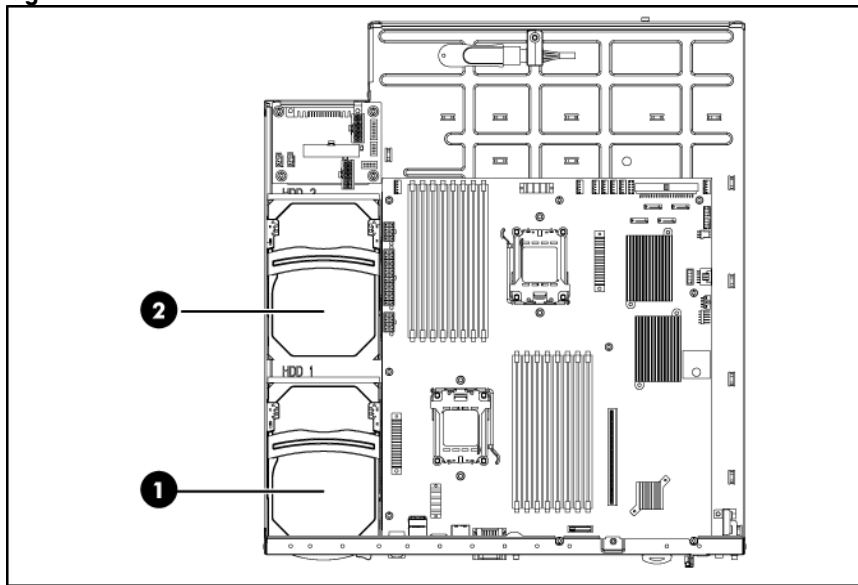
Table 2 Cable connections

Cable	To	System Board Designator
Internal USB connector	USB	J21
18-Pin front panel connector	Front panel	P10
SATA1 connector	SATA1	SATA0
SATA2 connector	SATA2	SATA1
Front board cable 1	Front i/o board	J1 (front board)

Hard Drives

The server can accommodate up to 4 hard disks drives, 2 in each tray. You can install 4 SAS hard drives or 4 SATA hard drives into the server.

Figure 4 Hard drive locations

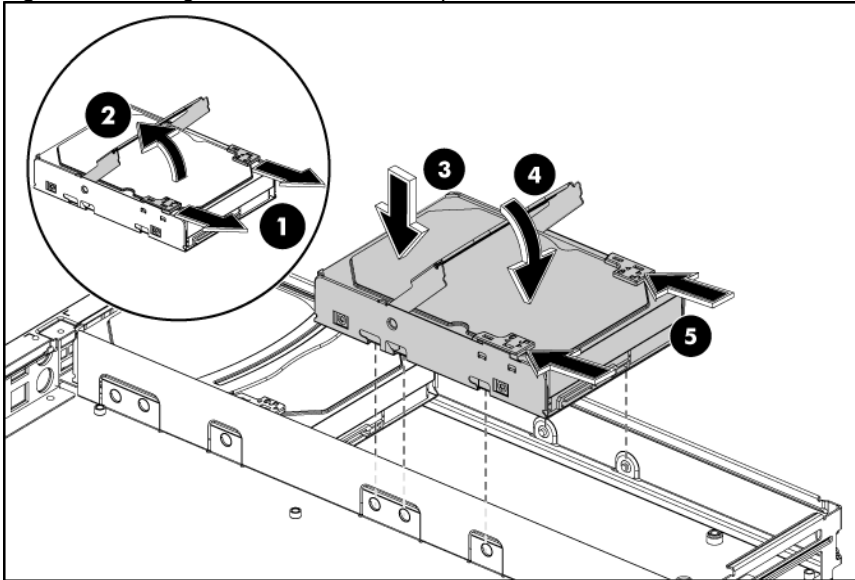


Item	Description
1	SAS/SATA hard drive
2	SAS/SATA hard drive

To install a hard drive:

1. Unlock the HDD carrier latches.
2. Rotate the HDD carrier handle up.
3. Install the HDD carrier vertically into the tray.
4. Rotate the HDD carrier handle down and then lock the HDD carrier latches.

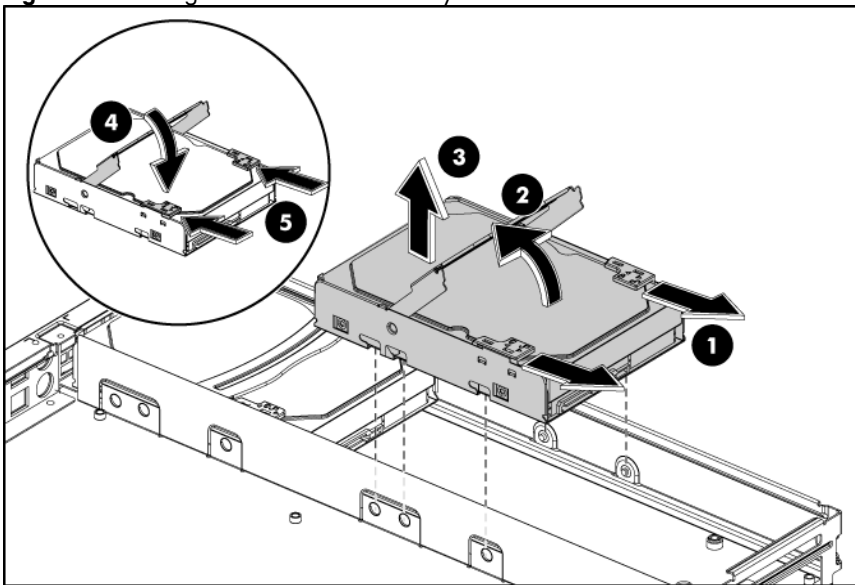
Figure 5 Installing the hard drive assembly



To remove hard drive:

1. Slide the HDD carrier latches to unlock the HDD handle.
2. Raise the HDD handle.
3. Lift the HDD assembly out of the tray
4. Rotate the HDD carrier handle down and then lock the HDD carrier latches.

Figure 6 Removing the hard drive assembly



⚠ WARNING: Ensure that the system is powered off and all power sources have been disconnected from the server. Voltages are present at various locations within the server whenever an AC power source is connected. This voltage is present even when the main power switch is in the off position.

System Board Configuration

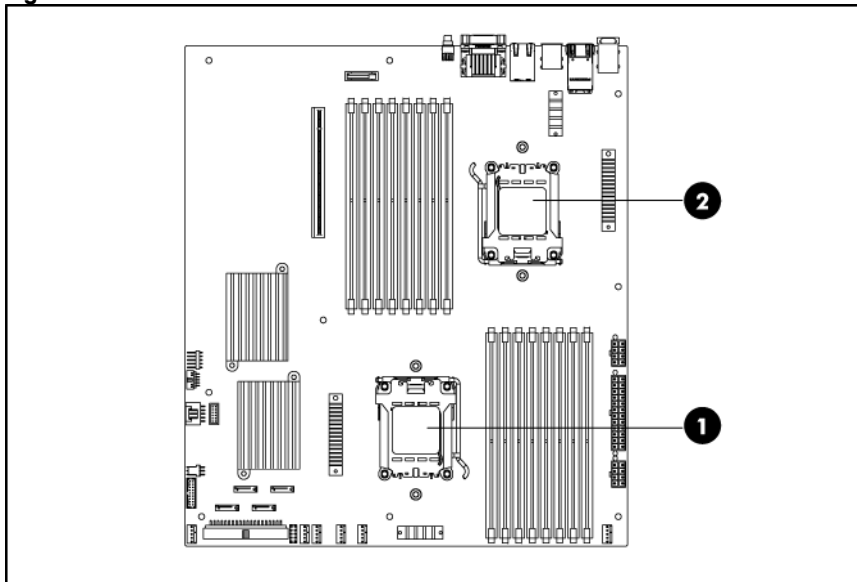
Processor

HP ProLiant SL165z G6 Server, with two nodes, supports four-processor operation. With two processors installed, each node supports boot functions through the processor installed in processor socket 1.

The processor socket supports AMD Opteron Series processors

- △ **CAUTION:** It is recommended to use processors of same speeds or cache sizes to prevent possible server malfunction.

Figure 7 Processor locations



Item	Description
1	Processor 1
2	Processor 2

- △ **WARNING:** To reduce the risk of personal injury from hot surfaces, allow the heatsink and the processor to cool before touching them.

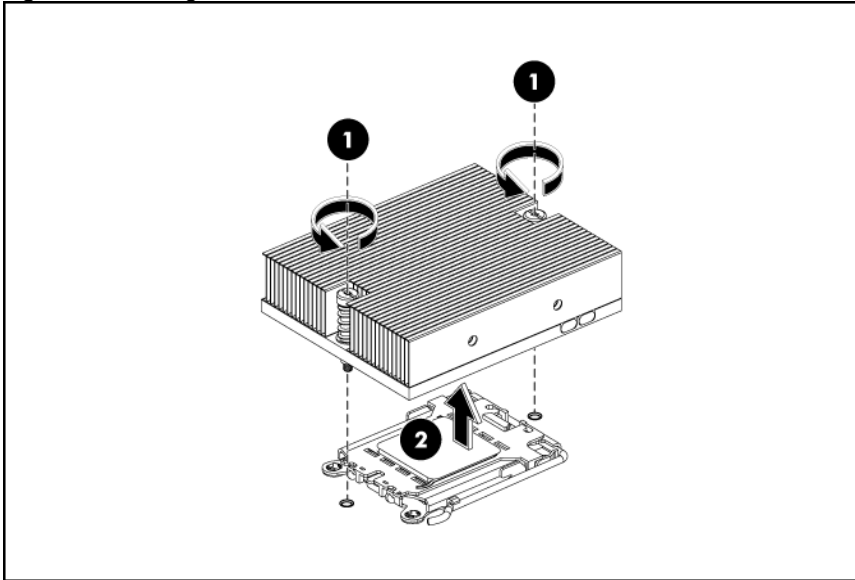
To remove the heatsink:

- △ **CAUTION:** Heatsink screws should be tightened and loosened in opposite sequence. Do not overtighten the screws as this can damage the system board, connectors, or screws. A maximum torque of 6-8 in-lb is set for the system.

1. Loosen the first screw about three quarters out, then loosen the second screw completely.
2. Completely loosen the first screw.
3. Lift the heatsink away from the system board.

- △ **CAUTION:** Place heatsink down in an upright position with the thermal patch facing upward. Do not let the thermal patch touch the work surface.

Figure 8 Removing the heatsink

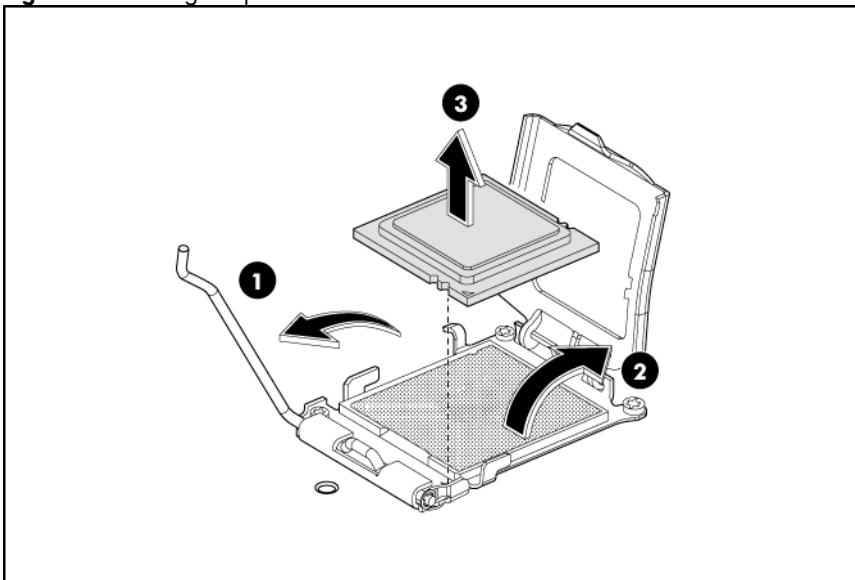


IMPORTANT: If the heatsink has been removed for any reason on a previously installed processor, it is critical that you apply more thermal interface material to the integrated heat spreader on the processor to ensure proper thermal bonding between the processor and the heatsink.

To remove a processor:

1. Disengage the load lever.
2. Lift the retention plate to expose the socket body.
3. Grasp the processor and lift it out of its socket.

Figure 9 Removing the processor



CAUTION: The pins of the socket are very fragile. Do not bend or damage them.

CAUTION: Place the processor on a static-dissipating work surface or in an anti-static bag.

-
- △ CAUTION:** To allow heatsink to draw as much heat as possible from the processor base, there must be good contact between the heatsink base and the top of the processor. To ensure good contact, you must apply thermal interface material.
-

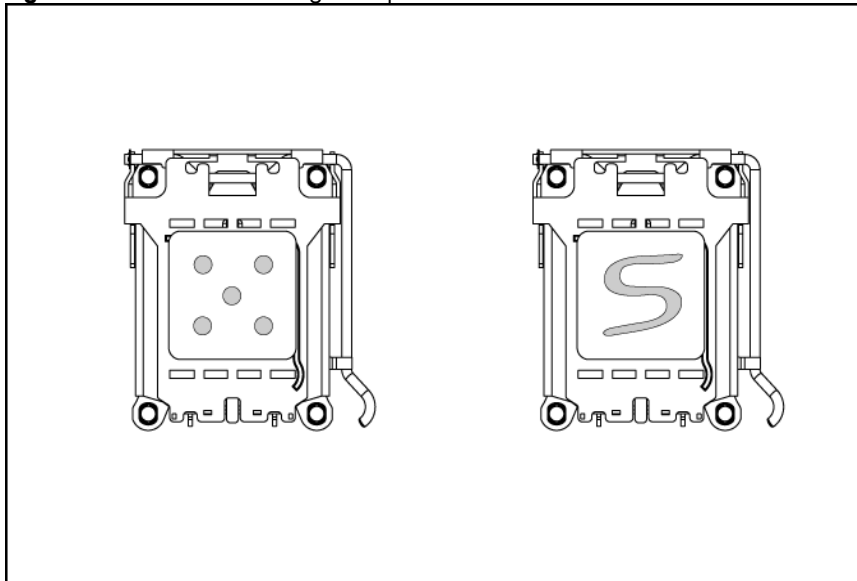
To apply the thermal grease compound:

1. Use a clean cloth dipped in rubbing alcohol to clean the contact surface on the heatsink and on the new processor. Wipe the contact surfaces several times to make sure that no particles or dust contaminants are evident.
 2. Apply the thermal grease compound to the CPU contact surface.
-

- △ CAUTION:** HP recommends using Shin-Etsu X-23-7783D thermal grease compound for your ProLiant server.
-

3. Apply all the grease to the top of the processor in one of the following patterns to insure even distribution.

Figure 10 Processor thermal grease pattern



-
- △ CAUTION:** Never touch the bottom of the processor; any contaminant could prevent the mounting pads from making contact with the socket.
-

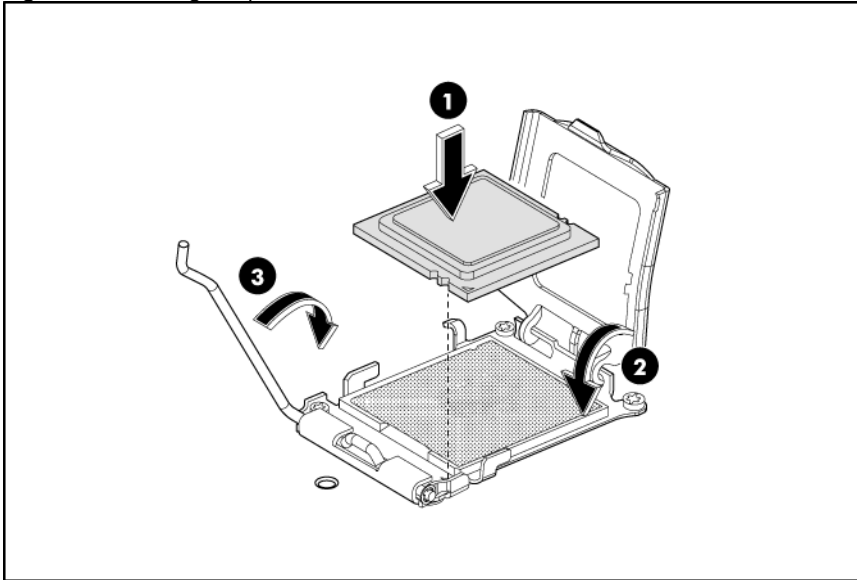
- △ CAUTION:** Applying too much grease creates a gap between the contact surfaces, significantly reducing the ability of the heatsink to draw out heat. Installing the heatsink with excessive grease can also cause the grease to spread over the processor pins or the system board base, which can cause electrical shorts that damage the system.
-

To install the new processor:

1. Insert the processor into the socket, using the key on the processor.
 2. Engage the retention plate.
 3. Engage the load lever.
-

- △ CAUTION:** With the load lever and the retention plate disengaged, hold the processor by its edges and align it over the empty processor socket. Make sure that you properly align the processor with the orientation notch on the socket.
-

Figure 11 Installing the processor



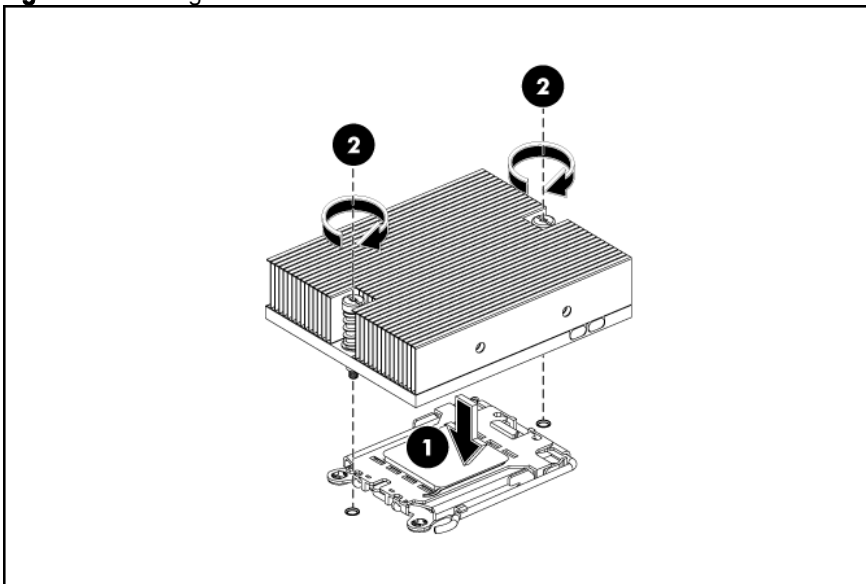
CAUTION: To prevent overheating or a possible system crash, use only a heatsink model specified for the HP ProLiant SL165z G6 server.

To install the heatsink:

CAUTION: Heatsink screws should be tightened and loosened in opposite sequence. Do not overtighten the screws as this can damage the system board, connectors, or screws. A maximum torque of 6-8 in-lb is set for the system.

1. Position the heatsink on the processor backplate.
2. Tighten the first screw about three quarters in, then tighten the second screw completely.
3. Completely tighten the first screw.

Figure 12 Installing the heatsink



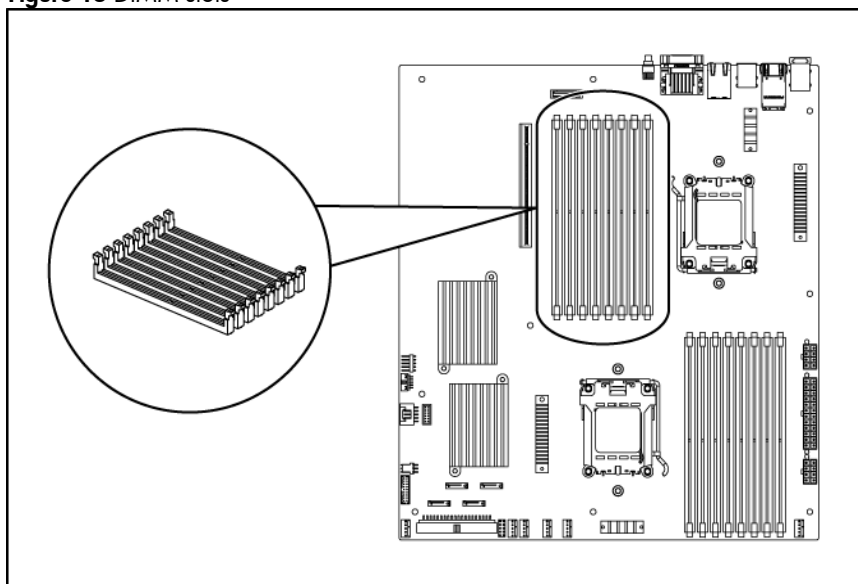
Memory

HP ProLiant SL165z G6 server has sixteen DIMM slots that support up to 128 GB maximum system memory.

You must adhere to the following guidelines when adding or replacing memory modules:

- Supports DDR2 667 or 800 MHz SDRAM with Advanced ECC (Registered).
- Supported configurations:
 - Two DIMMs per processor: J107, J106 for CPU1; J14, J13 for CPU0.
 - Four DIMMs per processor: J107, J106, J105, J104 for CPU1; J14, J13, J12, J11 for CPU0.
 - Six DIMMs per processor: J107, J106, J105, J104, J103, J102 for CPU1; J14, J13, J12, J11, J10, J9 for CPU0.
 - Eight DIMMs per processor: J107, J106, J105, J104, J103, J102, J101, J100 for CPU1; J14, J13, J12, J11, J10, J9, J8, J7 for CPU0.
 - DIMM pairs must be identical.

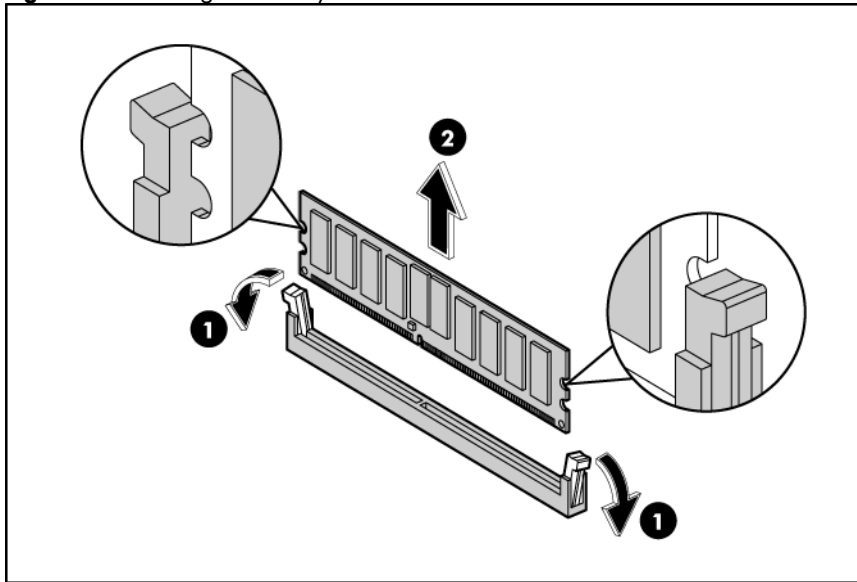
Figure 13 DIMM slots



To remove memory module:

1. Completely open the holding clips securing the module.
2. Gently pull the memory module upward to remove it from the slot.

Figure 14 Removing a Memory module

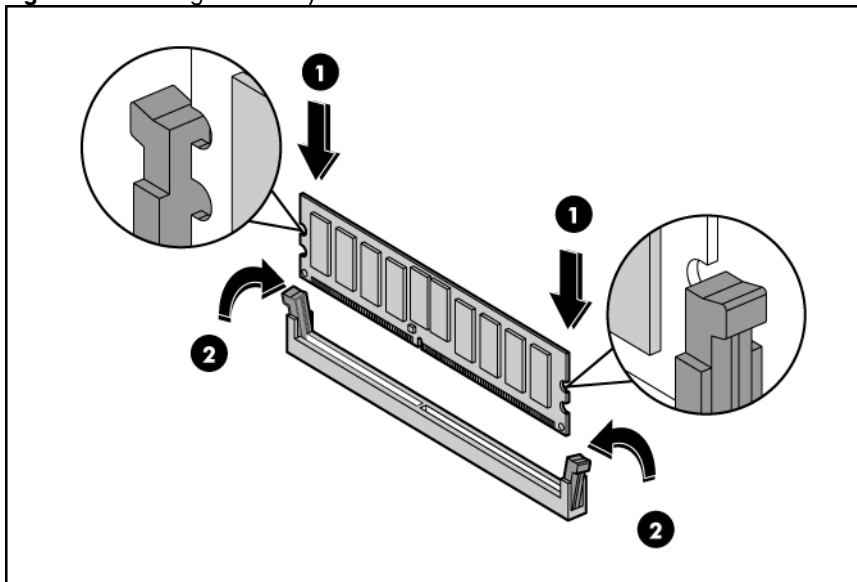


CAUTION: Place the memory module on a static-dissipating work surface or inside of an anti-static bag.

To install a memory module:

1. Align the notch on the bottom edge of the module with the keyed surface of the DIMM slot and then press the module fully into the slot.
2. Firmly press the holding clips inward to secure the memory module in place.

Figure 15 Installing a Memory module



CAUTION: The memory slots are structured to ensure proper installation. If you insert a memory module but it does not fit easily into the slot, you may have inserted it incorrectly. Double-check the orientation of the module and reinsert. If the holding clips do not close, the module is not inserted correctly.

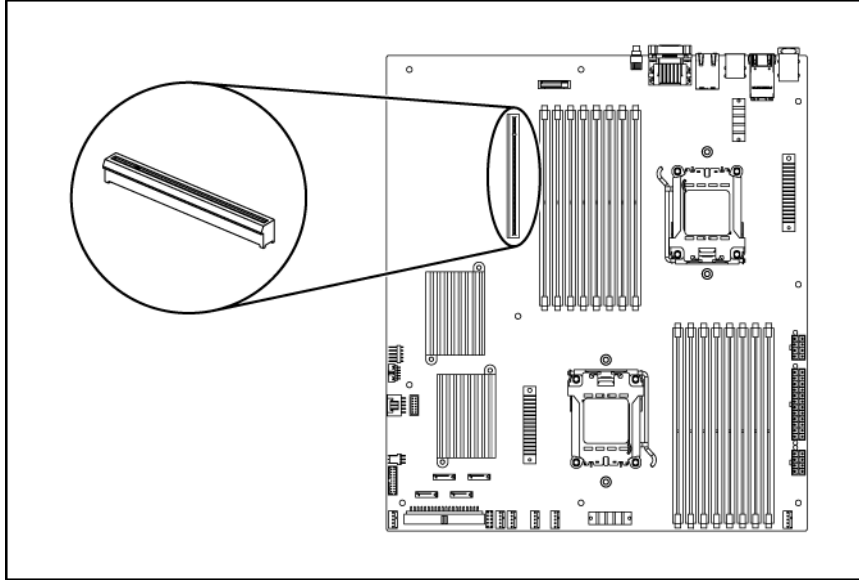
NOTE: The ProLiant SL165z G6 server supports up to 32 memory modules. Install them in the DIMM slots starting from the DIMM 1 slot.

PCI Expansion Cards

System Board PCI Expansion Slots

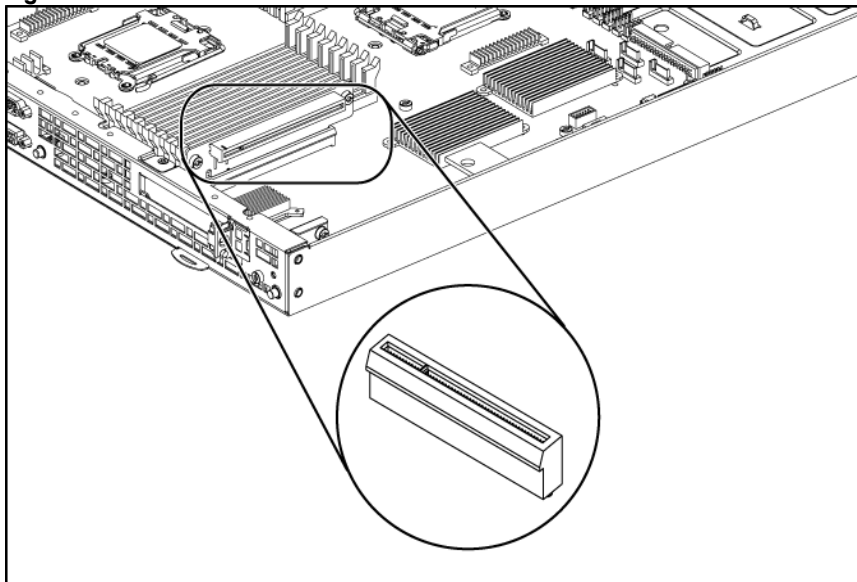
There is one PCIe Gen2 x16 riser card slot on the system boards.

Figure 16 PCIe expansion slot location on 165z system board



Item	Designator	Component	Function
1	PCIe slot	PCIe slot	Supports PCIe x16 riser card

Figure 17 PCIe riser card slot location

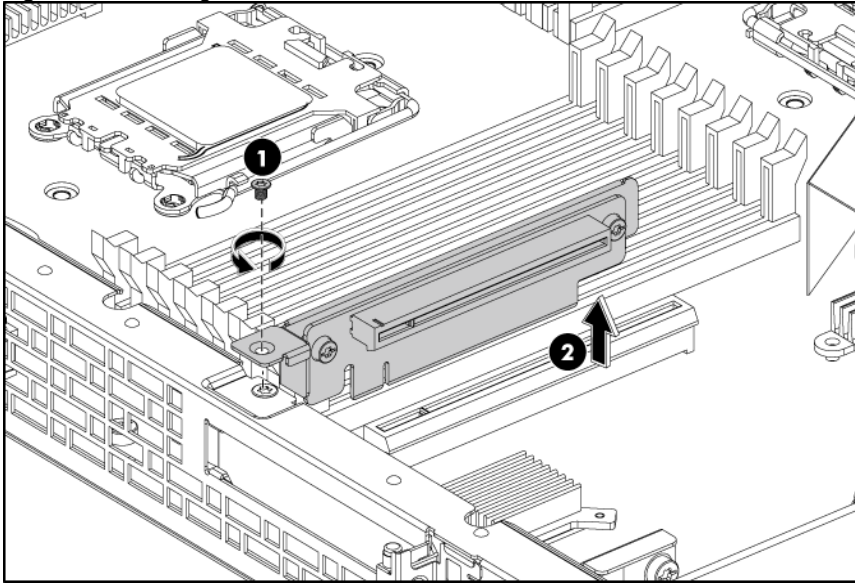


- Single-slot PCIe riser card (x16 slot)

To remove the PCIe riser card with the bracket:

1. Loosening the screw securing the riser card bracket to the chassis.
2. Pull the riser card away together with the bracket.

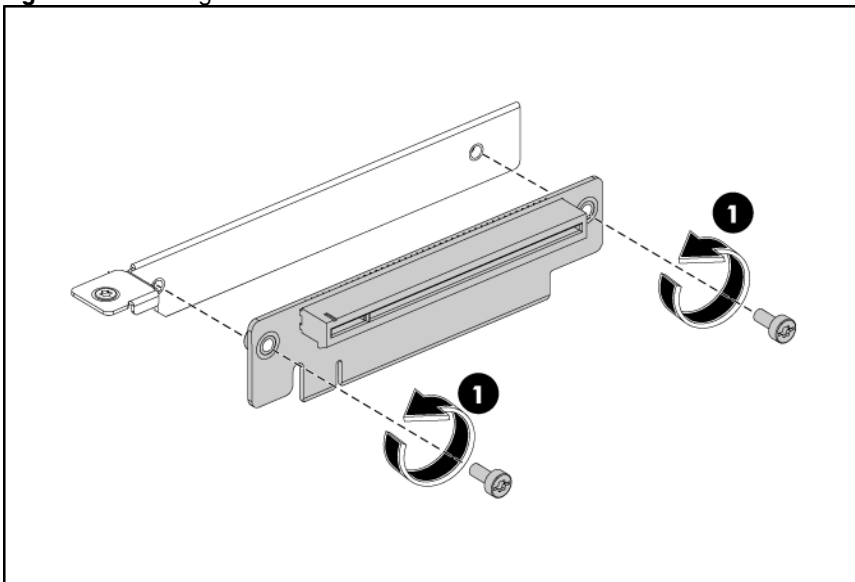
Figure 18 Removing the PCIe riser card



To remove the riser card from the bracket:

Remove the two screws securing the riser card to the bracket.

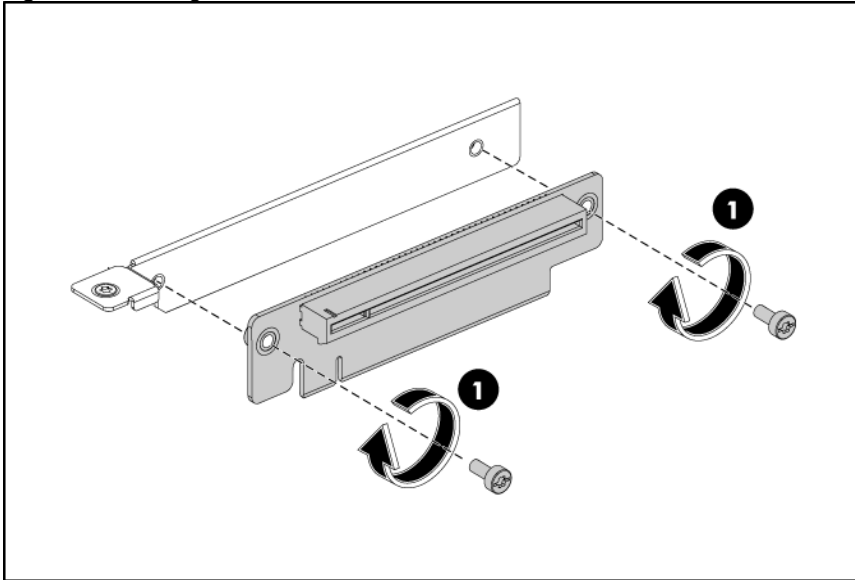
Figure 19 Removing the PCIe riser card from the bracket



To install the riser card on the bracket:

1. Align the riser card with the bracket.
2. Fasten the two screws to secure the riser card to the bracket.

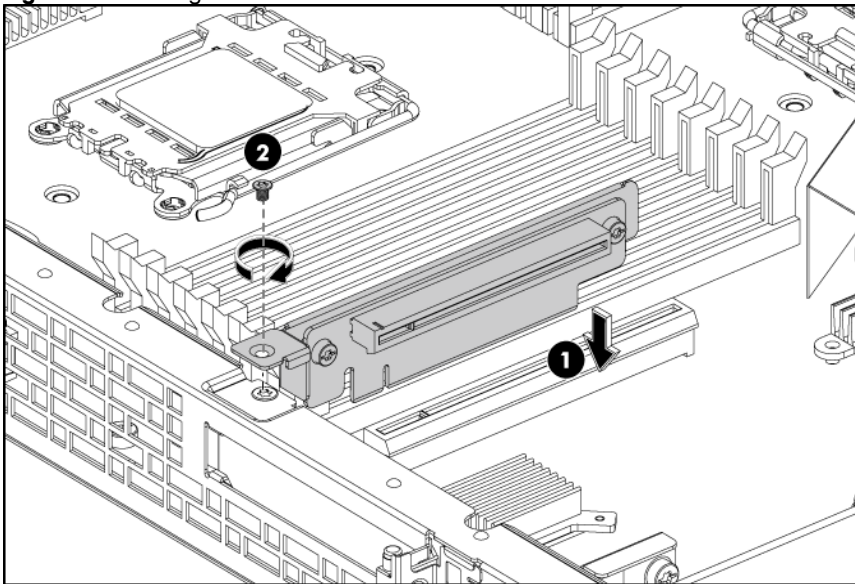
Figure 20 Installing the PCIe riser card on the bracket



To install the riser card with the bracket on the system board:

1. Align the riser card connector with the slot on the system board and then insert the assembly into the slot.
2. Fasten the screw to secure the bracket to the chassis.

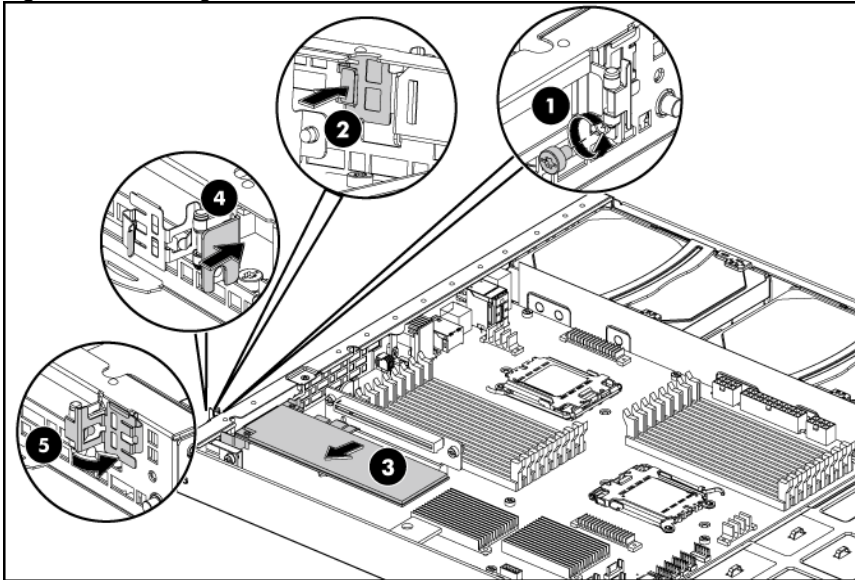
Figure 21 Installing the PCIe riser card with bracket



To remove the PCIe card:

1. Remove the screw that secures the PCIe card.
2. Press the PCIe latch spring.
3. Pull the PCIe card back and away from the PCIe riser card.
4. Slide the PCIe bracket across the chassis.
5. Close the PCIe latch.

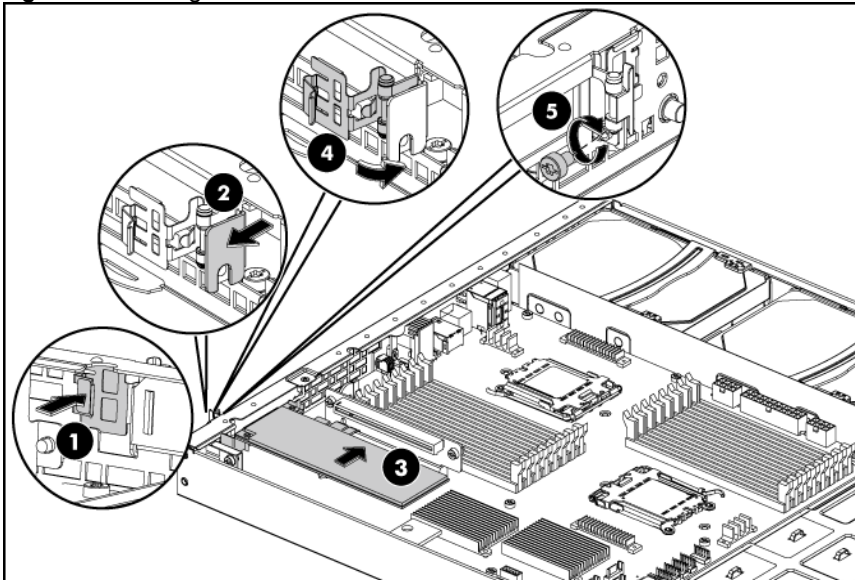
Figure 22 Removing the PCIe card



To install the PCIe card:

1. Press the PCIe latch spring.
2. Remove PCIe card or blank.
3. Push the PCIe card into riser card connector.
4. Close PCIe latch.
5. Install screws.

Figure 23 Installing the PCIe card

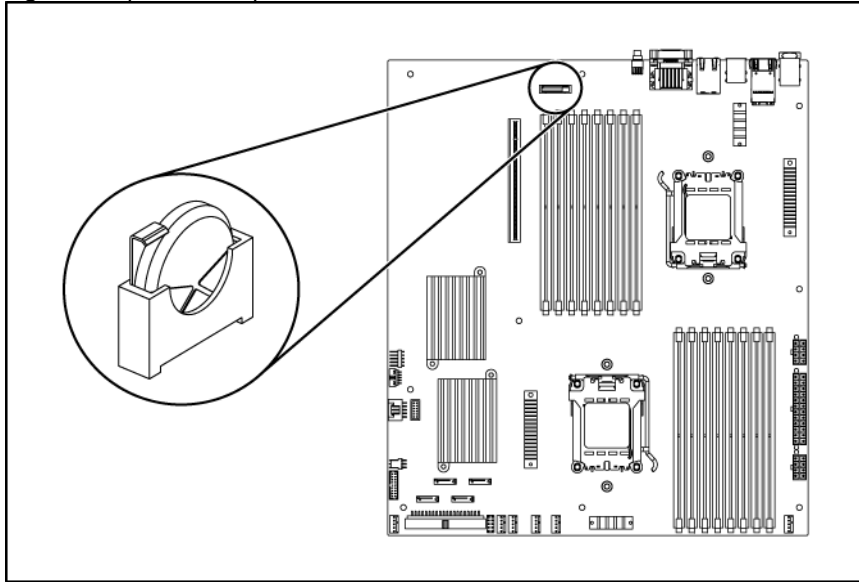


System Battery

The server uses nonvolatile memory that requires 2 batteries to retain system information when power is removed.

This 3-volt lithium coin cell battery is located on the system board.

Figure 24 System battery location



⚠ WARNING: Note the following reminders when replacing the system battery:

- Replace the battery with the same type as the battery recommended by HP. Use of another battery may present a risk of fire or explosion.
 - A risk of fire and chemical burn exists if the battery is not handled properly. Do not disassemble, crush, puncture, or short external contacts, or expose the battery to temperatures higher than 60°C (140°F).
 - Do not dispose of used battery in water or fire. Dispose of used batteries according to manufacturer's instructions.
-

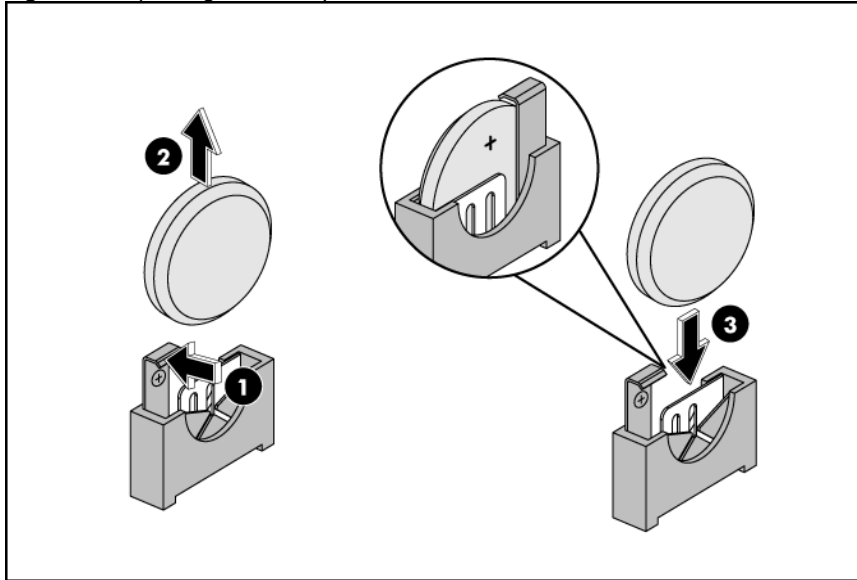
⚠ CAUTION: Loss of BIOS settings occurs when the battery is removed. You must reconfigure BIOS settings whenever you replace the battery.

NOTE: If the server no longer automatically displays the correct date and time, you may need to replace the system battery. Under normal usage, battery life is five to ten years.

To replace the system battery:

1. To release the battery from its holder, squeeze the metal clamp that extends above top of the battery. When the battery pops up, lift it out.
2. To insert the new battery, slide one edge of the replacement battery under the holder's lip with the positive side facing the metal clamp. Push the other edge down until the clamp snaps over the top of the battery.

Figure 25 Replacing the battery

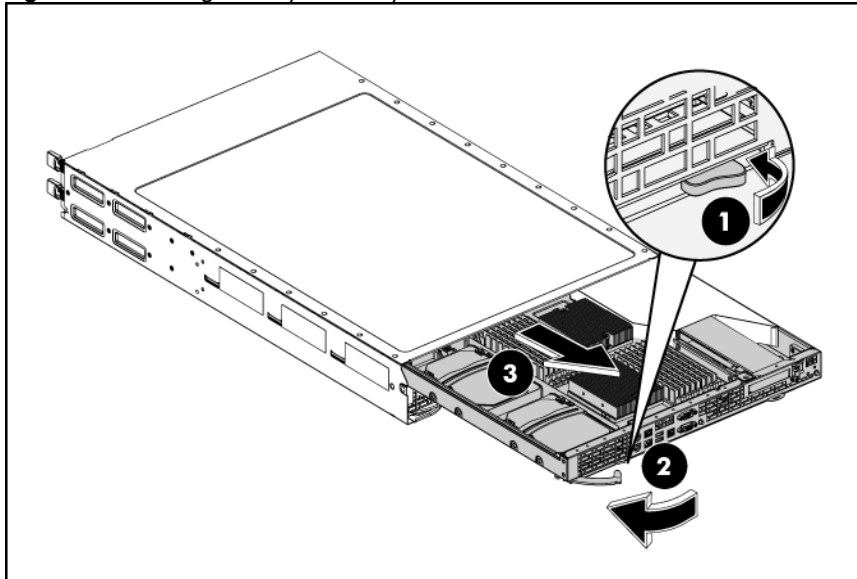


System Board Removal and Replacement Procedure

To remove the system board:

1. Press the tray latch to release the tray handle.
2. Rotate the tray handle to disengage the power connector.
3. Pull the tray assembly out of the chassis.

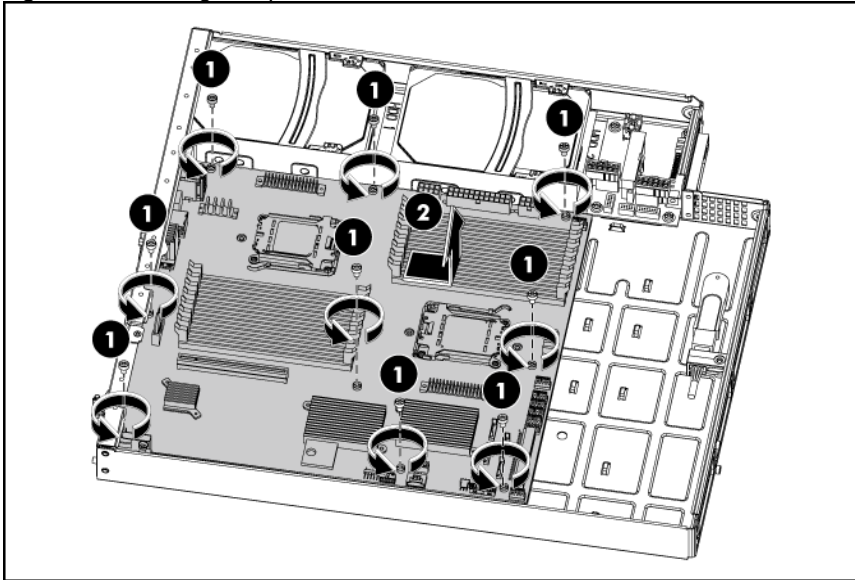
Figure 26 Removing the tray assembly



To remove the system board from the tray:

1. Remove the nine screws that secure the system board to the tray.
2. Release the system board from the tray.

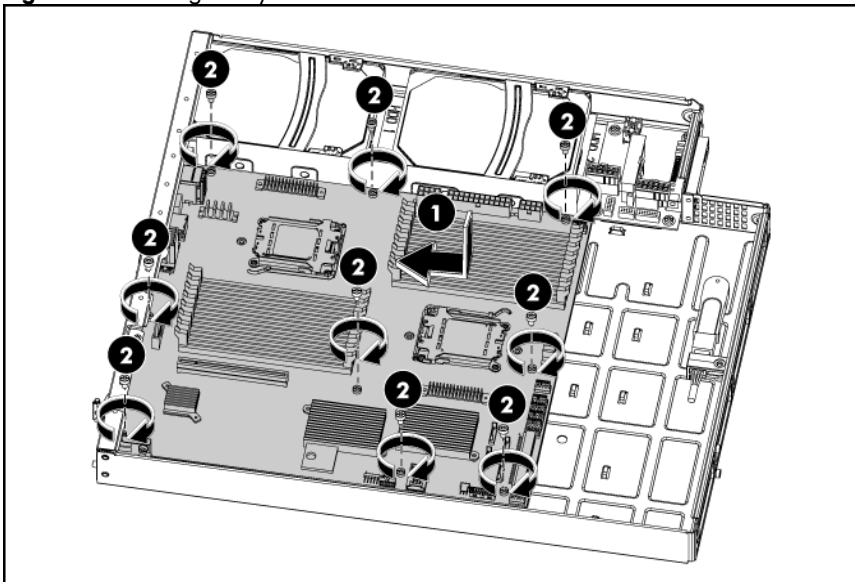
Figure 27 Removing the system board



To replace the system board:

1. Put the system board in the chassis. The nine screw holes on the chassis should align with the system board.
2. Fasten the nine screws on the system board to secure the system board to the chassis.

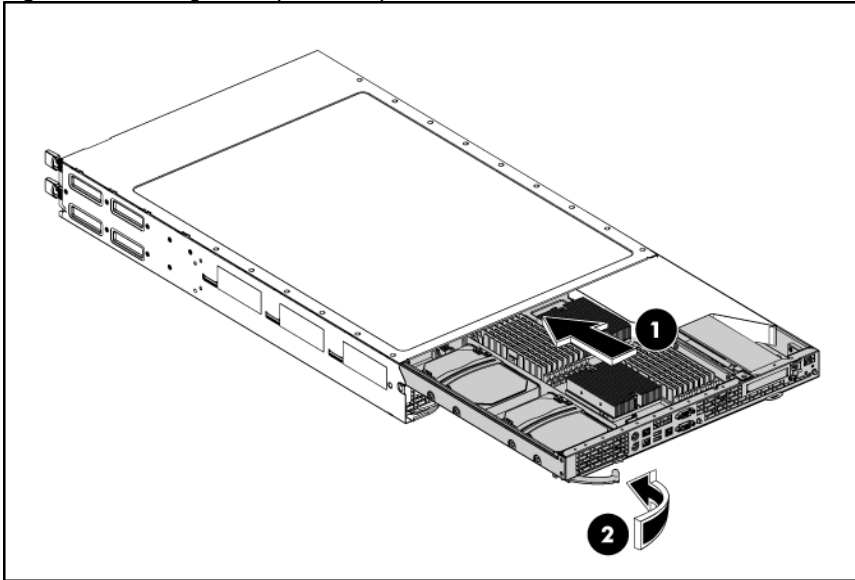
Figure 28 Installing the system board



To replace the tray with system board:

1. Push the tray assembly into the tray bay until it stops.
2. Rotate the tray handle until the tray latch catches.

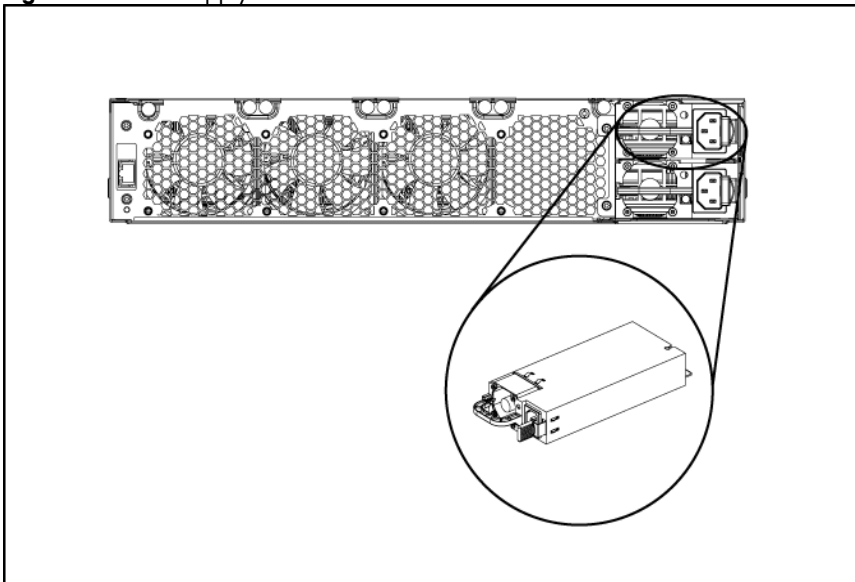
Figure 29 Installing the tray assembly



Power Supply Unit (PSU)

Located on the rear panel of the server power supply is a standard auto ranging 750watt PSU with PFC (power factor correction) function.

Figure 30 Power supply unit



⚠ WARNING: Take note of the following reminders to reduce the risk of personal injury from electric shock hazards and/or damage to the equipment.

- Installation of power supply units should be referred to individuals who are qualified to service server systems and are trained to deal with equipment capable of generating hazardous energy levels.
- DO NOT open the power supply unit. There are no serviceable parts inside it.

To install the power supply:

1. Remove the power supply blank out of the power cage.
2. Slide the power supply into the power supply bay until it snaps into place.

Figure 31 Removing the power supply blank

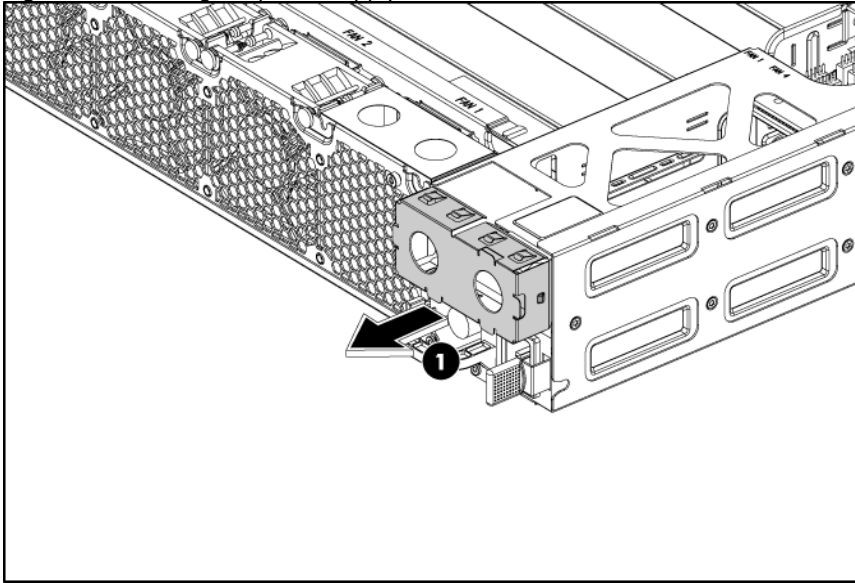
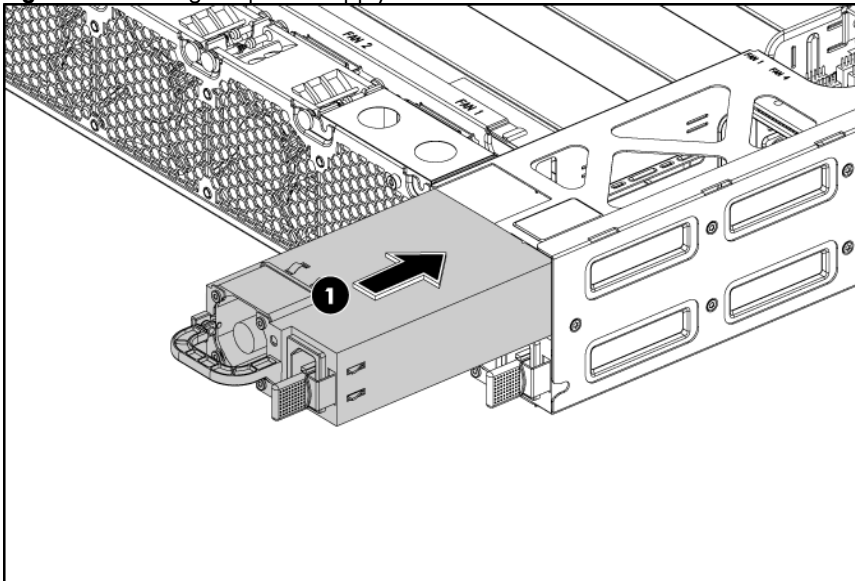


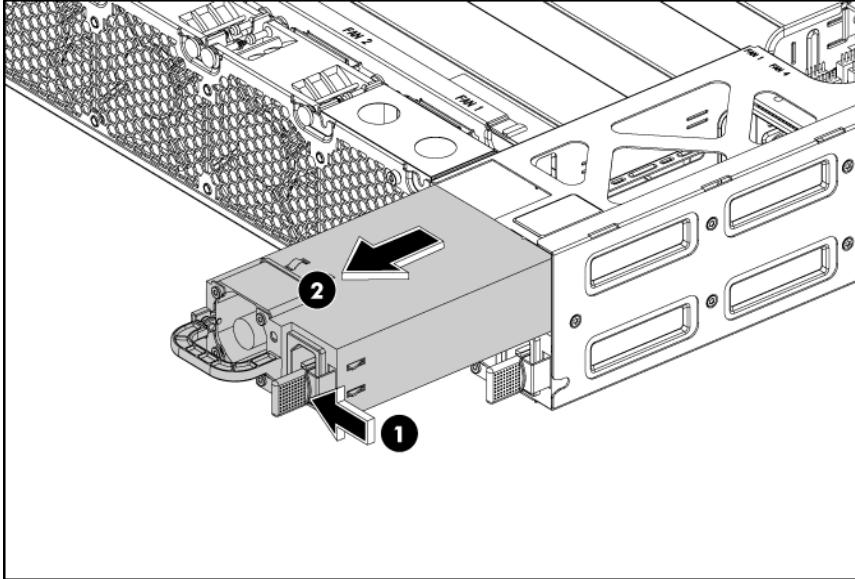
Figure 32 Installing the power supply



To remove the power supply:

1. Press the red colored handle.
2. Slide the power supply out of the power supply cage.

Figure 33 Removing the power supply

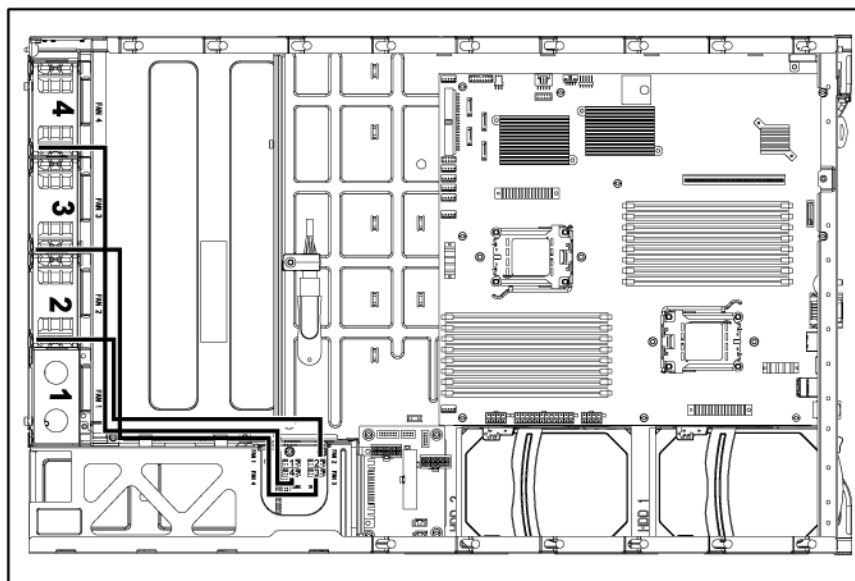


System Fan

The server can support from three to four system fans in the chassis rear fan cage. Fan 1 is optional.

The figure below identifies the system fans by their device number and shows their corresponding cable connections.

Figure 34 System fan connections



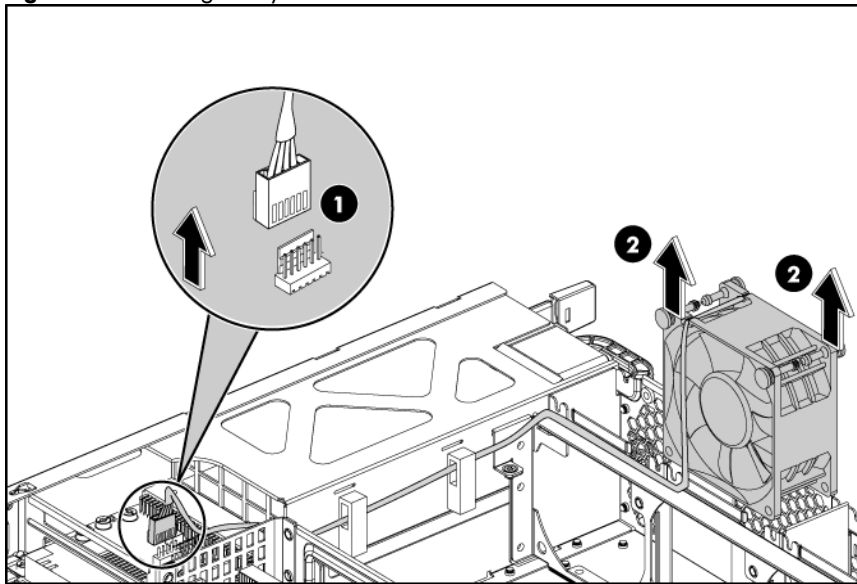
Device number	Connector
System fan 1	J6 on the AC power board
System fan 2	J8 on the AC power board
System fan 3	J10 on the AC power board
System fan 4	J11 on the AC power board
RJ45 cable connector	J1 on the AC power board
UID cable connector	J12 on the AC power board

A new system fan can be installed to allow the server to operate properly in case a default system fan becomes defective.

To remove the system fan:

1. Disconnect the fan cable from its corresponding board connector.
2. Lift the system fan away from the chassis.

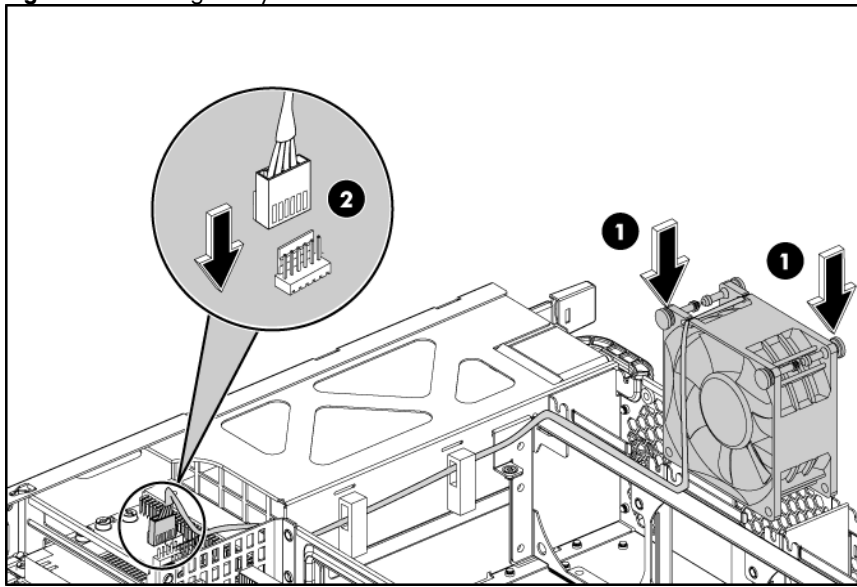
Figure 35 Removing the system fan



To replace the system fan:

1. Insert the system fan into the fan bracket.
2. Connect the fan cable to its corresponding board connector.

Figure 36 Installing the system fan



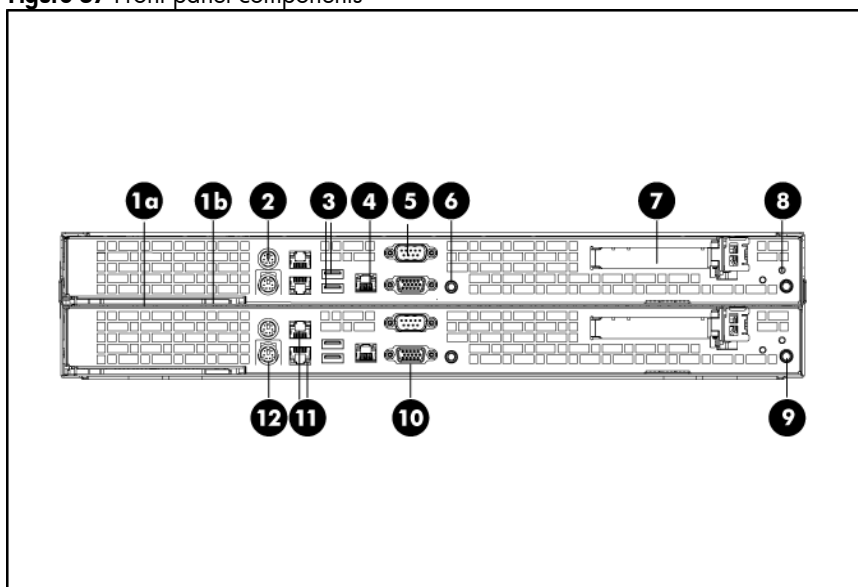
Connectors, Switches, and LEDs

This chapter contains illustrations and tables identifying and describing the connectors, switches, buttons, and LED indicators located on the front panel, rear panel, system board and hard drives of the HP ProLiant SL165z G6 Server.

Connectors and Components

Front Panel Components

Figure 37 Front panel components

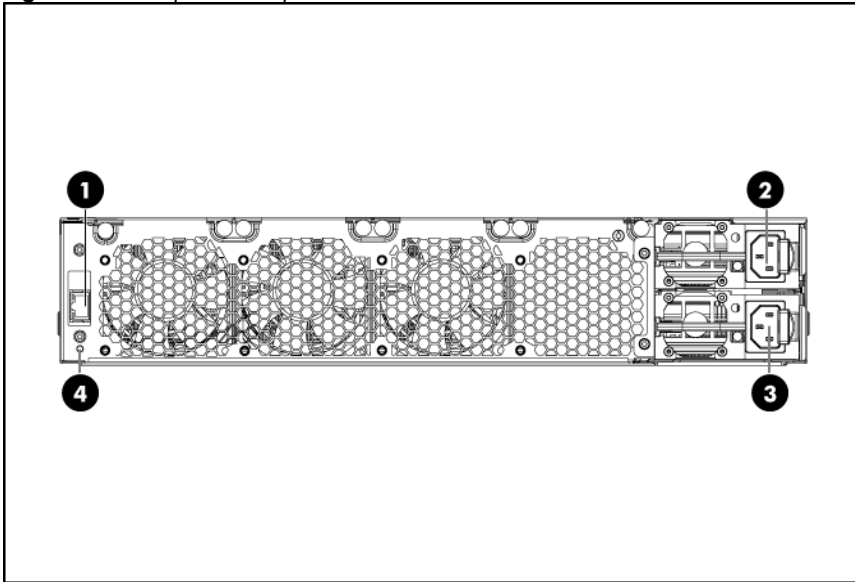


Item	Description
1a	Tray handle
1b	Tray latch
2	Mouse port
3	USB 2.0 ports
4	IPMI port
5	Serial port
6	UID LED/SW
7	PCI slot
8	Health LED
9	Power button
10	VGA port

Item	Description
11	NIC connectors
12	Keyboard port

Rear Panel Components

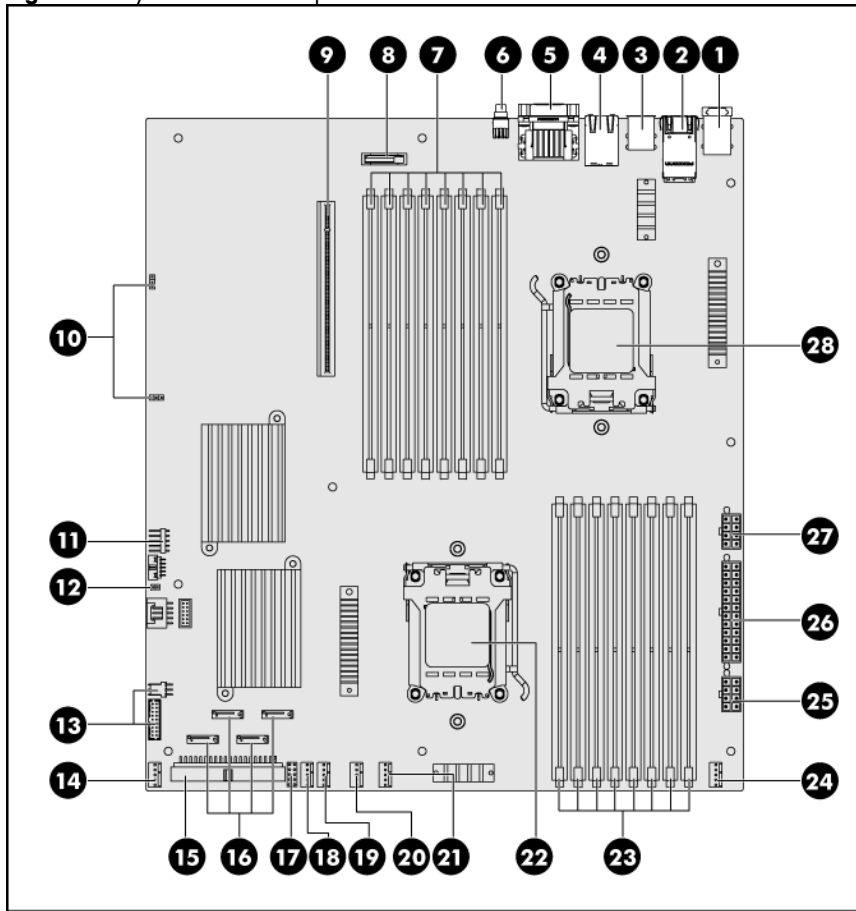
Figure 38 Rear panel components



Item	Description
1	RJ45 port
2	Power supply 2
3	Power supply 1
4	UID LED

System Board Components

Figure 39 System board components



Item	Designator	Description
1	J22	Top: PS/2 mouse port Bottom: PS/2 keyboard port
2	J16	Top: LAN port 2 Bottom: LAN port 1
3	CN21	USB 2.0 ports
4	CN20	IPMI port
5	P7	Top: Serial port Bottom: VGA port
6	SW6	UID LED/button
7	J100,J101,J102,J103,J104,J105,J106,J107	Processor 2 DIMM slots
8	XBT1	Battery
9	J33	PCIe slot (PCIe-x16 link with x16 slot)

Item	Designator	Description
10	P26, P27	Chassis ID 0/1
11	J21	Internal USB connector
12	P20	Password jumper
13	P10	18-pin front panel header
	J36	3-pin front panel header
16	SATA	SATA connectors
22	XU1	Processor 1 socket
23	J7,J8,J9,J10,J11,J12,J13,J14	Processor 1 DIMM slots
25	P24	8-pin power connector
26	P21	24-pin power connector
27	P23	8-pin power connector
28	XU2	Processor 2 socket

△ CAUTION: The TPM is not a customer-removable part.

Any attempt to remove an installed TPM from the system board breaks or disfigures the TPM security rivet. Upon locating a broken or disfigured rivet on an installed TPM, administrators should consider the system compromised and take appropriate measures to ensure the integrity of the system data.

If you suspect a TPM board failure, leave the TPM installed and remove the system board. Contact an HP authorized service provider for a replacement system board and TPM board.

Jumpers – Password and Chassis ID

System board password (P20) chassis ID1(P26) and chassis ID2(P27) jumpers

Table 3 describes the jumper settings

Table 3 System configuration switch settings

Jumper	Status
P20	1-2, password enable
P26	1-2, default setting
P27	2-3, default setting

Front Panel LED Indicators

This section contains illustration and descriptions of external status LED indicators located on the front panel. These LED indicators aid in problem diagnosis by indicating the status of system components and operations of the server. The front panel LED indicators allow constant monitoring of basic system functions while the server is operating.

Health LED Indicator

Figure 40 Health LED indicator location

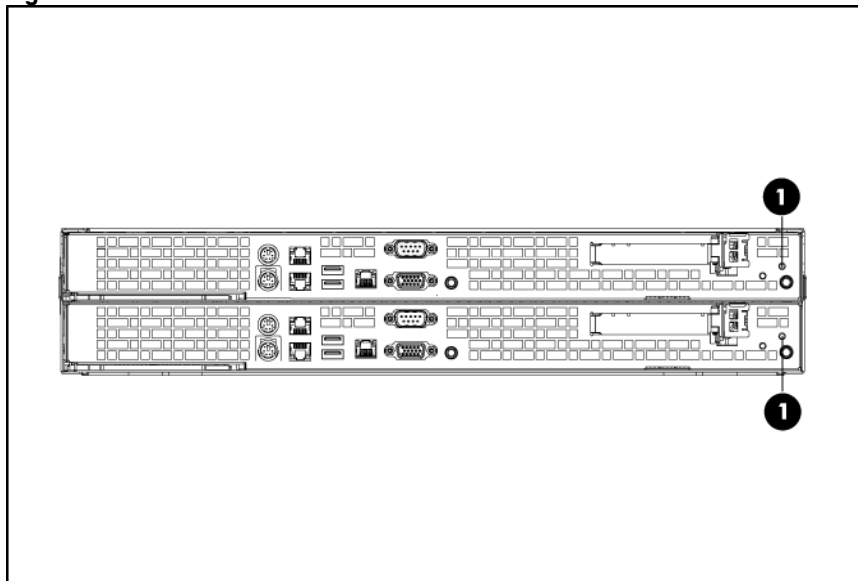


Table 4 Health LED indicator status

Components	Status	Description
Health LED indicator	Flashing red	Critical system failure detected
	Flashing amber	System degrade
	Green	System in on and no failure detected
	Off	System is off and there is no failure prior to system power off

UID LED Indicator

Figure 41 UID LED indicator location

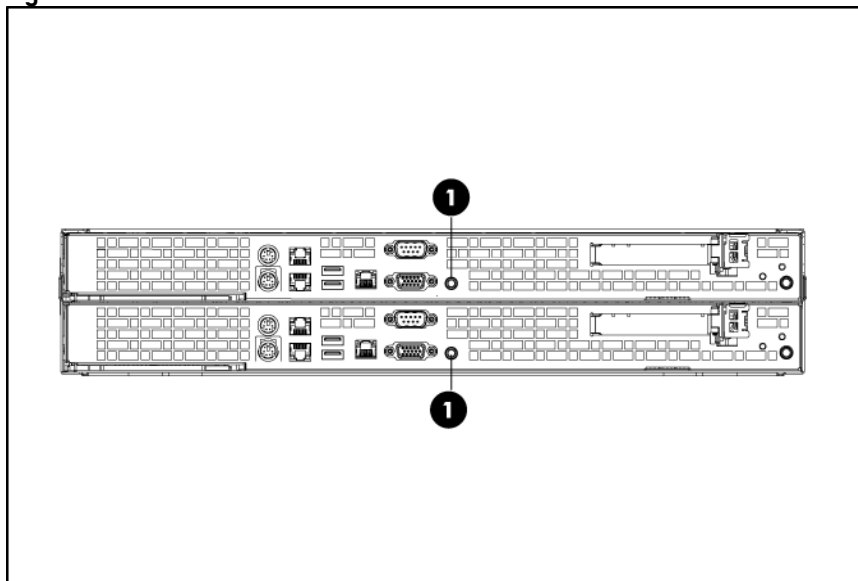


Table 5 UID LED indicator status

Components	Status	Descriptions
UID LED indicator	Blue	Identification
	Flashing blue	System is being remotely managed
	Off	Off

Power LED Indicator

The power status of the server is indicated by the bicolor LED on the front panel.

Figure 42 Power LED indicator location

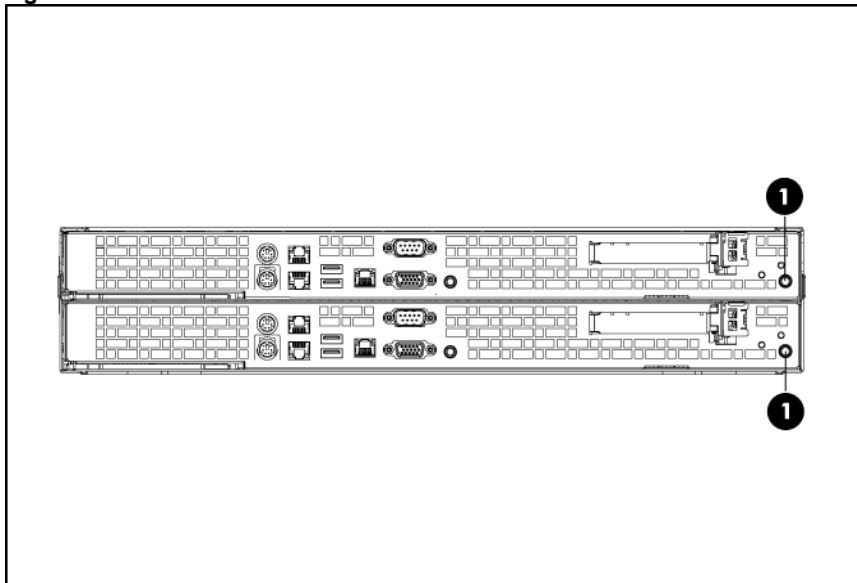


Table 6 Power/system health LED indicator status

Component	Status	Description
Power LED indicator	Steady green	The server is operating normally.
	Steady Amber	The server is system off or in hibernation with AC power.
	Steady red	Critical event happens to the server. Please refer to SEL for details.
	Off	The server is system off without AC power.

LAN Port LED Indicators

The LAN port on the front panel has two LED indicators that allow monitoring of network activity.

Figure 43 LAN/LED indicator location

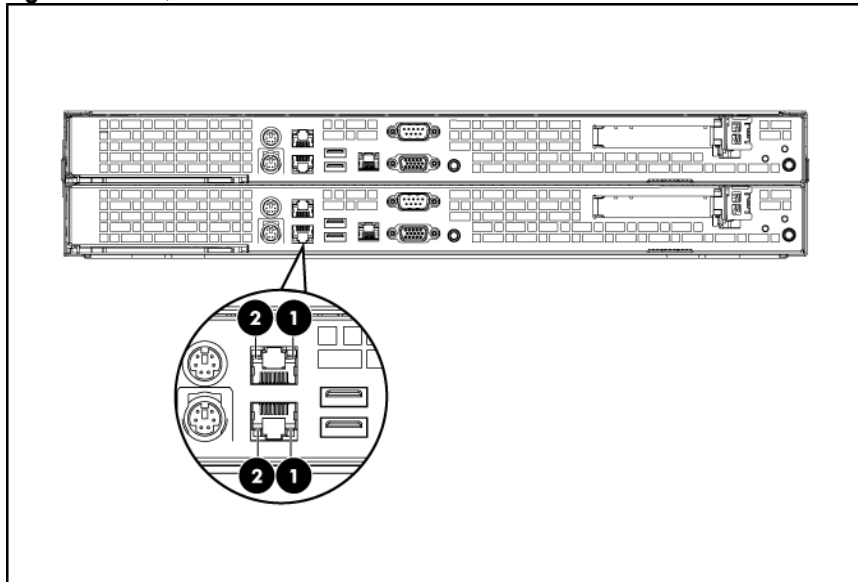


Table 7 LAN/LED indicator status

Item	Component	Status	Description
1	LAN activity status LED indicator	Flashing green	Ongoing network data activity.
		Off	No network data activity or no connection.
2	LAN network speed LED indicator	Steady green	The LAN connection is using a GbE link.
		Steady amber	The LAN connection is using 10Mbps/100 Mbps link.
		Off	No connection.

Diagnostic Tools and Setup Utilities

This chapter provides an overview of the Power-on Self-Test (POST), the POST error messages, and BIOS, SAS and SATA setup utilities.

BIOS Software

The server uses BIOS to boot up the system. BIOS software is a ROM-based firmware that allows reliability, manageability, and connectivity for server platforms. This software contains a set of programs permanently stored in an EEPROM chipset located on the system board. These programs assist in managing, initializing, and testing the hardware devices installed on the computer.

BIOS software allows you to:

- Perform configuration from the BIOS Setup Utility
Using the Setup Utility, you can install, configure, and optimize the hardware devices on the system board. In addition, you can set various features such as serial console redirection, PXE boot, and much more.
- Initialize hardware at boot up using POST routines
During power-on or warm reset, the BIOS perform Power-on Self-Test (POST) routines to test system components, to allocate resource for various hardware devices, and to prepare the system to boot to various operating systems.

BIOS Setup Utility

The HP server BIOS Setup Utility is used to configure five primary menu selections:

- Main
- Advanced
- Boot
- Security
- Exit

Accessing the BIOS Setup Utility

1. Turn on the monitor and server.
2. If the server is already turned on, save your data and exit all open applications, then restart the server.
3. When the HP logo is displayed during POST, press F10 into BIOS Setup Utility. If you fail to press F10 before POST is completed, you will need to restart the server.
4. The first page displayed is the Main menu showing the Setup Utility menu bar. Use the left (←) and right (→) arrow keys to move between selections on the menu bar. Use the up (↑) and down (↓) arrow keys to select items within a menu.

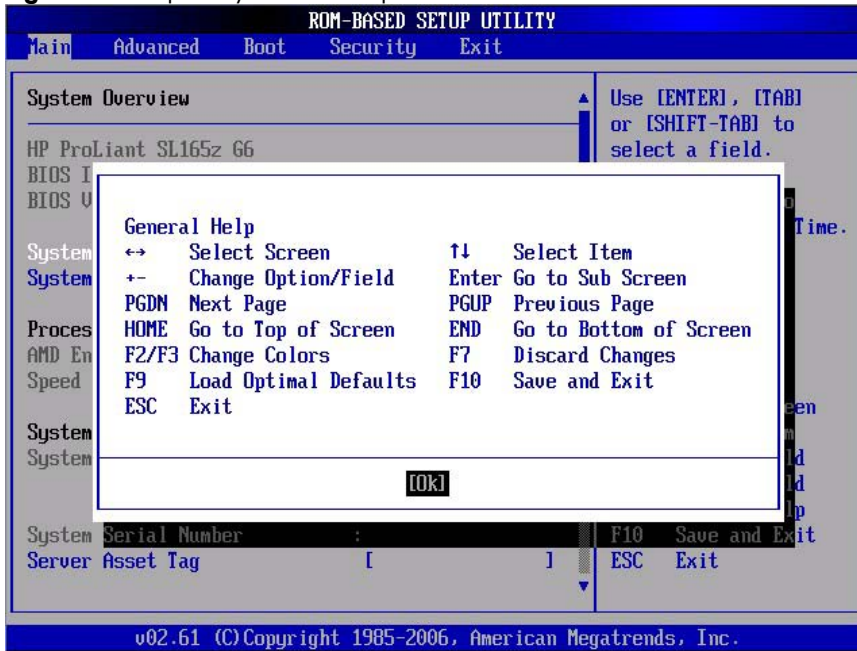
Navigating through the Setup Utility

Use the keys listed in the legend bar on the right of the Setup screen to navigate through the various menu and submenu screens of the Setup Utility. **Table 8** lists these legend keys and their respective functions.

Table 8 Setup Utility Navigation Keys

Key	Function
← and →	To move between selections on the menu bar.
↑ and ↓	To move the cursor to the field you want. The currently selected field is highlighted. The right side of each menu screen displays a field help panel—Item Specific Help panel. This panel displays the help text for the currently selected field. It updates as you move the cursor to each field.
<+>, <->	To select a value for the currently selected field (only if it is user-configurable). A parameter that is enclosed in square brackets is user-configurable. Grayed-out parameters are not user-configurable for one of the following reasons: <ul style="list-style-type: none">• The field value is auto-configured or auto-detected.• The field value is informational only.• The field is password-protected.
Enter	To select a field value or display a submenu screen. Displays more option for items marked with ►
Esc	If you press this key: <ul style="list-style-type: none">• On one of the primary menu screens, the Exit menu displays.• On a submenu screen, the previous screen displays.• When you are making selections from a pop-up menu, the pop-up closes without making a selection.
F1	To bring up the General Help window. The General Help window describes other Setup navigation keys that are not displayed on the legend bar.
F2, F3	To change BIOS Setup Utility screen colours.
F7	Discard any changes you have made.
<Page Up> and <Page Down>	Moves the cursor to the first/last item (each menu), the item will be display highlight.
<Home> and <End>	Moves the cursor to the first/last item (each menu), the item will be display highlight.
F9	To load default system values.
F10	To save changes and close the Setup Utility.

Figure 44 Setup Utility General Help screen



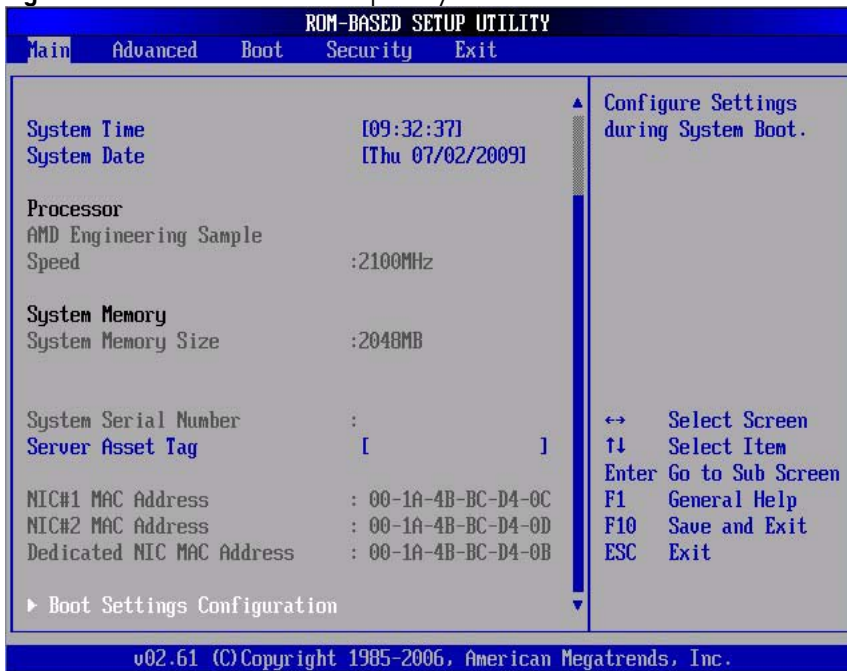
Press **F1** to get the general help message box.

Setup Utility Menu Bar

The BIOS Setup Utility provides a menu bar with the menu selections. The menu bar choices are described in the topics below.

Main Menu

Figure 45 Main menu of BIOS Setup Utility



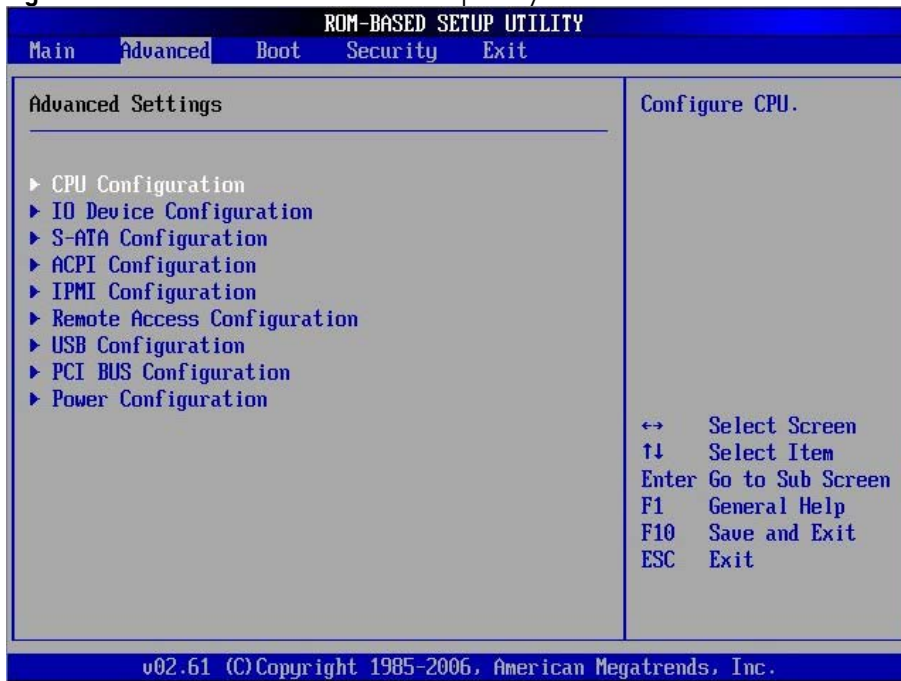
NOTE: The time is in 24-hour format. For example, 5:30 A.M. appears as 05:30:00, and 5:30, P.M. as 17:30:00. If you clear CMOS battery, setup time values will be 00:00:00 and date will be BIOS release date. If you clear CMOS button, setup time and date will not be changed.

Table 9 Main menu fields

Field	Description
System Overview	Displays the system ROM Version, the date when the Setup utility was created and identification number.
Processor	Displays the CPU version and speed.
System Memory	Displays the amount of conventional memory detected during POST.
Server Asset Tag	Enter the server asset tag.
System Serial Number	Enter the server serial number. The serial number is indicated on the serial number label pull tab on the front panel.
System Time	Adjusts the system time.
System Date	Adjusts the system date.
Boot Settings Configuration	Sets which options to run during system boot up. Press Enter to access the related submenu. For details on the submenu options, see the "Boot Settings Configuration submenu" section.

Advanced Menu

Figure 46 Advanced menu of the BIOS Setup Utility



NOTE: The CPU Configuration setup screen varies depending on the installed processor

Table 10 Advanced menu fields

Field	Description
CPU Configuration	You can use this screen to select options for the CPU Configuration Settings. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. A description of the selected item appears on the right Side of the screen. The settings are described on the following pages.
IO Device Configuration	You can use this screen to select options for the I/O Devices settings. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages.
S-ATA Configuration	You can use this screen to select options for the S-ATA mode settings. Use the up and down <Arrow> keys to select item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages.
ACPI Configuration	You can use this screen to select options for the AVPI Configuration settings. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. The settings are described on the following pages. The screen is shown below
IPMI Configuration	Select this option and press <Enter> to access the sub menu you can use the sub menu to view the contents of IPMI .A delay may be noticed when selecting IPMI , this is due to the retrieval of sensor data .In it's sub menu use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus>keys to change the value of the selected option.
Remote Access Configuration	You can select console redirection in the left frame of the screen to go to the sub menu for that item. You can display an console redirection by highlighting it using the<Arrow> keys. Console redirection Setup options are described in this section. The console redirection BIOS Setup screen is shown below.
USB Configuration	These items control various USB devices, from the USB configuration screen ,press <Enter> to the sub menu for the USB controller and USB 2.0 controller, use up and down <Arrow> keys to select an item .use the <plus>and <minus> keys to change the value of the selected option. The setting is described on the following pages .the screen for the USB configuration.
PCI bus Configuration	You can use this screen to select options of PCI Express Devices. For Gen 1 is 2.5 Ghz data transfer rate for PCI Express Devices, and for Gen 2 is 5 Ghz data transfer rate for PCI Express Devices. Use the up and down <Arrow> keys to select an item. Use the <Plus> and <Minus> keys to change the value of the selected option. A description of the selected item appears on the right side of the screen. The settings are described on the following pages.
Power Configuration	You can use this screen to configure the system power, for example, Processor Power Efficiency, Hardware Prefetch, and so on

Figure 47 IPMI Configuration menu of the BIOS Setup Utility

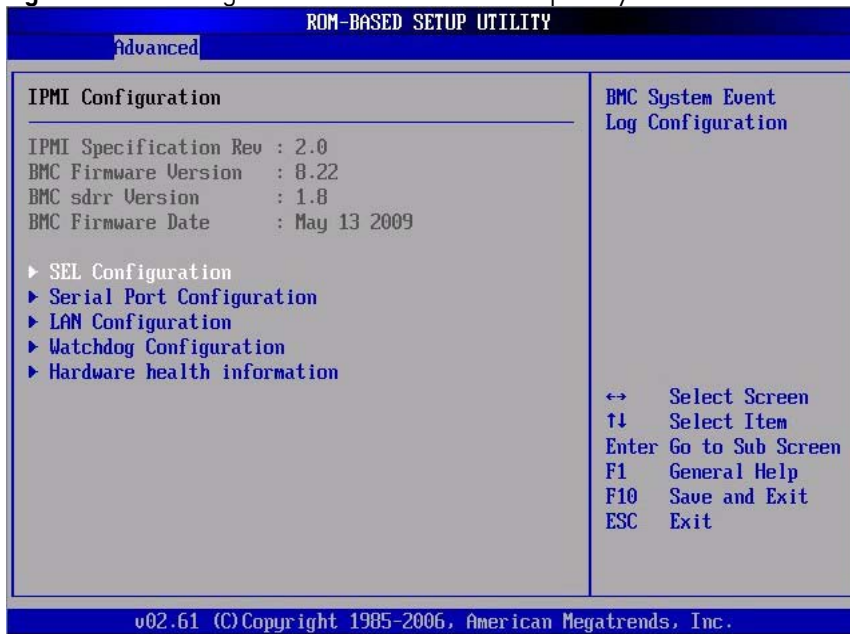
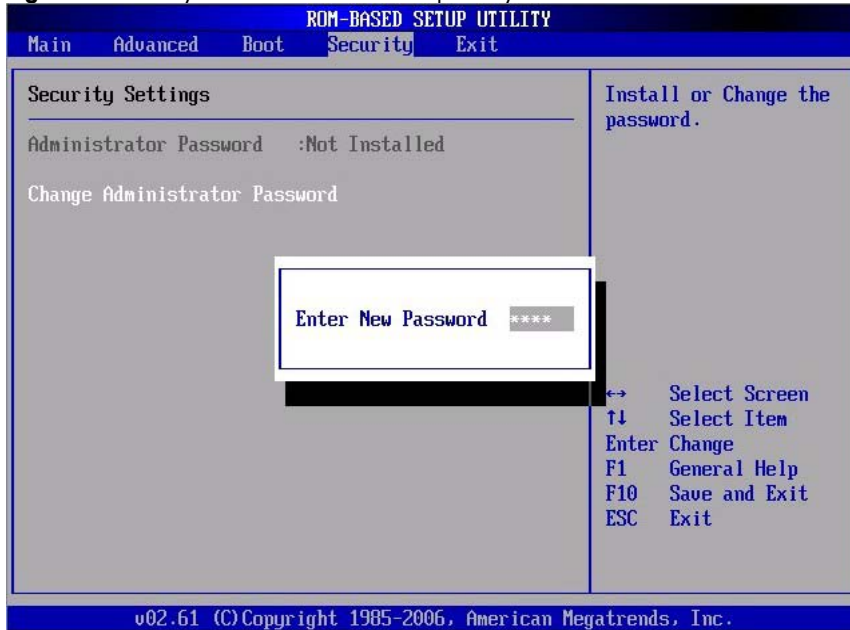


Table 11 IPMI Configuration submenu fields

Field	Description
SEL Configuration	Select SEL Configuration in the left frame of the screen to go to the submenu for that item. Then you can press Enter to enter its submenu. You can display a submenu about SEL Configuration option by highlighting it using the <Arrow> keys.
Serial Port Configuration	Select Serial Port Configuration in the left frame of the screen to go to the submenu for that item. Then you can press Enter to enter its submenu. You can display a submenu about Serial Port Configuration option by highlighting it using the <Arrow> keys.
LAN Configuration	Select LAN Configuration in the left frame of the screen to go to the submenu for that item. You can display a submenu about LAN options by highlighting it using the <Arrow> keys. Set LAN Setup options are described in this section. The Set LAN BIOS Setup screen is shown below (When you have a LO100 Device, this item will display).
Watchdog Configuration	Select Watchdog Configuration in the left frame of the screen and press <enter> to go to the submenu for that item. That will display POST Watchdog Timer Action, BMC Watch Dog Time Out; you can change the default value.
Hardware health information	Select Hardware Health Information in the left frame of the screen and press <enter> to go to the submenu for that item. That will display CPU temperature, ambient temperature, CPU fan speed, system fan speed, chassis fan speed. These items cannot be changed by the user. It accords with the sense of the case. If there is LV CPU and no card in slot1, then System Fan 6 Rotor 1 and System Fan 6 Rotor 2 no display.

Security Menu

Figure 48 Security menu of the BIOS Setup Utility



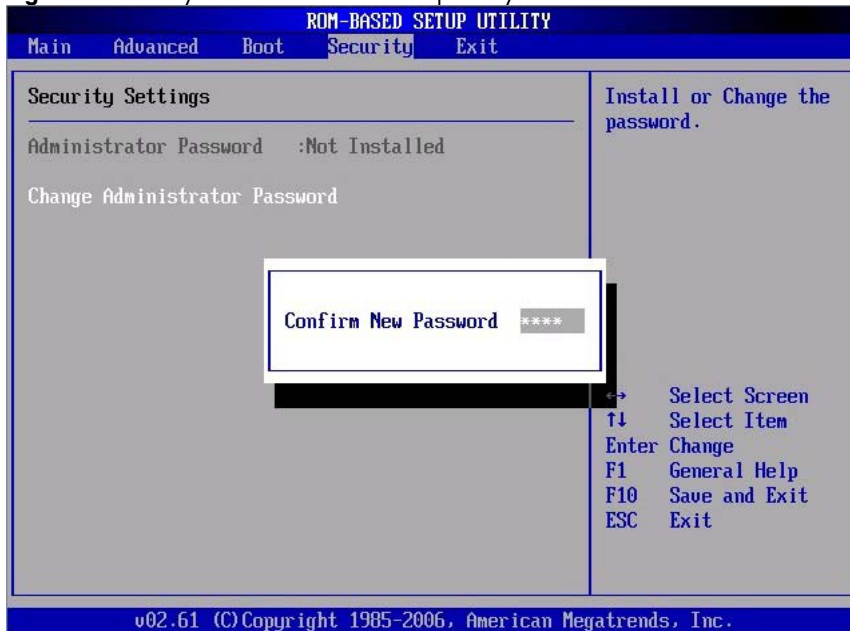
To set an administrator password:

1. Indicates whether a supervisor password has been set, if the password has been installed, installed displays, if not, not installed displays.

In the Security menu screen, in the **Change Administrator Password** field, press **Enter**.

The **Enter New Password** window displays

Figure 49 Security menu of the BIOS Setup Utility



2. Type a new password in the Enter New Password box. The password may consist of up to eight alphanumeric characters (A-Z, a-z, 0-9), then press Enter, The Confirm New Password window displays.

Boot Menu

Figure 50 Boot menu of the BIOS Setup Utility

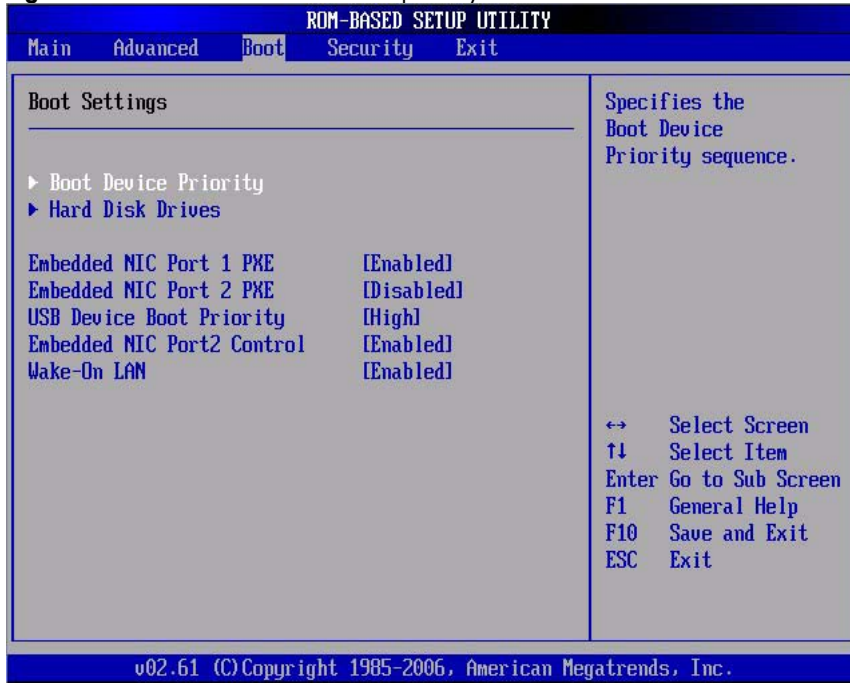


Table 12 Boot Menu fields

Field	Description
Boot Device Priority	Use this screen to specify the order in which the system checks for the device to boot from. To access this screen, select Boot Device priority on the Boot setup screen and press <Enter>, the following screen display
Embedded NIC Port 1 PXE	The option specifies the embedded NIC Port 1 PXE .the defaults is enabled
Embedded NIC Port 2 PXE	The option specifies the embedded NIC Port 2 PXE .the defaults is disabled
USB Device Boot Priority	Set the USB Device Boot Priority as "High" or "Low", "High" means that the USB Device Boot Priority is higher than Hard Drive
Embedded NIC Port2 Control	Disable or Enable the embedded NIC port2
Wake-On LAN	Disable or Enable the Wake on LAN function of the system

Exit Menu

Figure 51 Exit menu of the BIOS Setup Utility

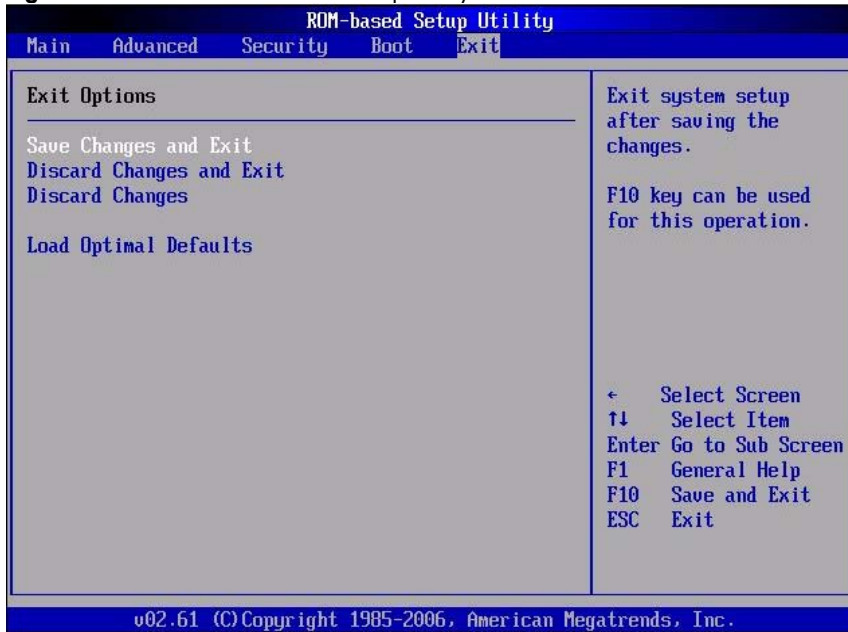


Table 13 Exit menu fields

Option	Description
Save Changes and Exit	Save the changes made and exit the Setup Utility
Discard Changes and Exit	Discard the changes and exit the setup utility
Discard Changes	Discard the changes in the utility
Load Option Default	Loads the default settings for all BIOS setup fields.

BIOS Update

Perform the steps below to update BIOS:

1. Download the Smart Component (SPxxxx.exe) to a directory on your hard drive.
2. Execute (SPxxxx.exe) and followed with direction to complete the steps. "ProLiant Flash Update" interface will appear.
3. Select items which need to execute:
 - Create a bootable ROMPaq diskette
 - Create a bootable ROMPaq USB Key
 - Create a bootable ROMPaq CD
 - ROMPaq Diskette Flat Files
 - Create a label for the ROMPaq diskette
 - Network ROM Flashing Capabilities
4. Reboot SL165z G6 Server with one of the above bootable devices and make sure the BIOS setting allows booting from the USB disk.
5. Follow the on-screen instructions to finish the flashing of the BIOS.

Clear CMOS

You may need to clear the Setup configuration values (CMOS) if the configuration has been corrupted, or if incorrect settings made in the Setup Utility have caused error messages to be unreadable. Clearing the CMOS data removes the administrator password.

The clear CMOS setting is on clear CMOS button (SW4) on the system board. Refer to the HP ProLiant SL165z G6 Server Maintenance and Service Guide for the location of this jumper block and the clear CMOS setting.

To clear CMOS:

1. Perform the pre-installation procedures.
2. If necessary, remove any expansion boards, assemblies, or cables that prevent access to the press CMOS button (SW4).
3. Locate the clear CMOS button (SW4) on the system board.
4. Press clear CMOS button (SW4) to clear the CMOS memory.
5. Perform the post-installation procedures.
6. During POST, press **F10** to access the Setup Utility.
7. Press **F9** to load the system default values.
8. Press **F10** to save the changes you made and closes the Setup Utility.

NOTE: Clearing CMOS restore all system configurations and password default settings.

Power-on Self-Test (POST)

When the server boots up, a series of tests are displayed on the screen. This is referred to as Power-On Self-Test (POST). POST is a series of diagnostic tests that checks firmware and assemblies to ensure that the server is properly functioning. This diagnostic function automatically runs each time the server is powered on.

These diagnostics, which reside in the BIOS ROM, isolate server-related logic failures and indicate the board or component that needs to be replaced, as indicated by the error messages. Most server hardware failures are accurately isolated during POST. The number of tests displayed depends on the configuration of the server.

During POST you can:

- Press **ESC** to skip the HP logo and go to POST boot progress display system summary screen.
- Press **F10** to access the Setup Utility.
- Press **F12** to request a network boot (PXE).

POST Error Indicators

When POST detects a system failure, it either:

- Displays a POST error message
- Emits a series of beep codes (requires an optional expansion board).

POST Errors Message Definition

Whenever a non-fatal error occurs during POST, an error message describing the problem appears onscreen. These text messages are displayed in normal video (white text on black background). It shows the details of the error. The following is an example of a POST error message:

```
Error message 1 of 1: Error code 0103
Keyboard not detected - Keyboard error
```

In some cases an error message may include recommendations for troubleshooting or require that you press the **Enter** key to display recommendations. Follow the instructions on the screen.

Table 14 Lists the most common POST error messages with their corresponding troubleshooting recommendation.

It is recommended that you correct the error before proceeding, even if the server appears to boot successfully. If your system displays one of the messages marked below with an asterisk (*), write down the code and message and contact your HP Customer Support provider.

When no POST error message is displayed but the server stops during POST, listen for beep codes.

Table 14 POST error messages

Error code	Error message	Description/corrective action
040	Refresh timer test failed	Indicates an error while programming the count register of channel 2 of the 8254 timer. This may indicate a problem with system hardware. Requires repair of the system board.
008	Unlock keyboard	PS2 keyboard is locked. Users need to unlock the keyboard to continue the BIOS POST.
048	Password check failed	If user input incorrect password more than three times, then display this error information and continue to boot.
202	CPU mismatch detected! Fatal Error...System Halted.	The Error Message will be display when the two CPUs installed are in different stepping.
211	Keyboard error	Keyboard not working. Verify that the keyboard cable is securely connected to the keyboard port (not the mouse port) on the rear panel of the server. If the problem persists, replace the keyboard or contact your HP Customer Support provider.
212	Keyboard Controller Failed	Keyboard controller failed test.
281	Memory size found by POST differed from CMOS	The user has added or removed a memory module, thus a memory size that is different from the previous boot up.
60D	Power Supply Failure or Power Supply Unplugged	<ul style="list-style-type: none"> ▪ Check if not plug the power cable ▪ Re-plug the power supply ▪ Replace the power supply with another one

Table 14 POST error messages

Error code	Error message	Description/corrective action
60E	Power supplies mismatch, replace slot#2 with identical Power supply Press F1 to continue booting with one power supply	When more than one power supply is installed in a system, and these power supply are mismatch then this Error Message will be display and Halted the system ,don't allow the system to boot in this case.
604	System Fan 1 Missing	Fan1 is broken or not well connected, re-plug it or replace it with another one
605	System Fan 2 Missing	Fan2 is broken or not well connected, re-plug it or replace it with another one
606	System Fan 3 Missing	Fan3 is broken or not well connected, re-plug it or replace it with another one
607	System Fan 4 Missing	Fan4 is broken or not well connected, re-plug it or replace it with another one
60F	Fan Solution Not Sufficient!	Please check the system fans' status as the above error code.
614	Power Supply Mismatch Error – System Halted	When more then one power supply is installed in a system, and these power supply are mismatch then this Error Message will be display and Halted the system, don't allow the system to boot in this case.
616	Uncorrectable Memory ECC Error - DIMM_J8	There is one Uncorrectable Memory ECC Error occurred on the DIM_J8 during the system running last time. Replace this DIMM with another one.
617	Uncorrectable Memory ECC Error - DIMM_J7	There is one Uncorrectable Memory ECC Error occurred on the DIM_J7 during the system running last time. Replace this DIMM with another one.
618	Uncorrectable Memory ECC Error - DIMM_J10	There is one Uncorrectable Memory ECC Error occurred on the DIM_J10 during the system running last time. Replace this DIMM with another one.
619	Uncorrectable Memory ECC Error - DIMM_J9	There is one Uncorrectable Memory ECC Error occurred on the DIM_J9 during the system running last time. Replace this DIMM with another one.
61A	Uncorrectable Memory ECC Error - DIMM_J12	There is one Uncorrectable Memory ECC Error occurred on the DIM_J12 during the system running last time. Replace this DIMM with another one.
61B	Uncorrectable Memory ECC Error - DIMM_J11	There is one Uncorrectable Memory ECC Error occurred on the DIM_J11 during the system running last time. Replace this DIMM with another one.
61C	Uncorrectable Memory ECC Error - DIMM_J14	There is one Uncorrectable Memory ECC Error occurred on the DIM_J14 during the system running last time. Replace this DIMM with another one.

Table 14 POST error messages

Error code	Error message	Description/corrective action
61D	Uncorrectable Memory ECC Error - DIMM_J13	There is one Uncorrectable Memory ECC Error occurred on the DIM_J13 during the system running last time. Replace this DIMM with another one.
61E	Uncorrectable Memory ECC Error - DIMM_J101	There is one Uncorrectable Memory ECC Error occurred on the DIM_J101 during the system running last time. Replace this DIMM with another one.
61F	Uncorrectable Memory ECC Error - DIMM_J100	There is one Uncorrectable Memory ECC Error occurred on the DIM_J100 during the system running last time. Replace this DIMM with another one.
620	Uncorrectable Memory ECC Error - DIMM_J103	There is one Uncorrectable Memory ECC Error occurred on the DIM_J103 during the system running last time. Replace this DIMM with another one.
621	Uncorrectable Memory ECC Error - DIMM_J102	There is one Uncorrectable Memory ECC Error occurred on the DIM_J104 during the system running last time. Replace this DIMM with another one.
622	Uncorrectable Memory ECC Error - DIMM_J105	There is one Uncorrectable Memory ECC Error occurred on the DIM_J105 during the system running last time. Replace this DIMM with another one.
623	Uncorrectable Memory ECC Error - DIMM_J104	There is one Uncorrectable Memory ECC Error occurred on the DIM_J8 during the system running last time. Replace this DIMM with another one.
624	Uncorrectable Memory ECC Error - DIMM_J107	There is one Uncorrectable Memory ECC Error occurred on the DIM_J107 during the system running last time. Replace this DIMM with another one.
625	Uncorrectable Memory ECC Error - DIMM_J106	There is one Uncorrectable Memory ECC Error occurred on the DIM_J106 during the system running last time. Replace this DIMM with another one.
626	Uncorrectable Memory ECC Error - DIMM_J7J8	Set the Memory Channel Mode as "Independent" and the Uncorrectable Memory ECC error occurred on the DIMM_J7 or DIMM_J8, then replace the broken DIMM
627	Uncorrectable Memory ECC Error - DIMM_J9J10	Set the Memory Channel Mode as "Independent" and the Uncorrectable Memory ECC error occurred on the DIMM_J9 or DIMM_J10, then replace the broken DIMM

Table 14 POST error messages

Error code	Error message	Description/corrective action
628	Uncorrectable Memory ECC Error - DIMM_J11J12	Set the Memory Channel Mode as "Independent" and the Uncorrectable Memory ECC error occurred on the DIMM_J11 or DIMM_J12, then replace the broken DIMM
629	Uncorrectable Memory ECC Error - DIMM_J13J14	Set the Memory Channel Mode as "Independent" and the Uncorrectable Memory ECC error occurred on the DIMM_J13 or DIMM_J14, then replace the broken DIMM
62A	Uncorrectable Memory ECC Error - DIMM_J100J101	Set the Memory Channel Mode as "Independent" and the Uncorrectable Memory ECC error occurred on the DIMM_J100 or DIMM_J101, then replace the broken DIMM
62B	Uncorrectable Memory ECC Error - DIMM_J102J103	Set the Memory Channel Mode as "Independent" and the Uncorrectable Memory ECC error occurred on the DIMM_J102 or DIMM_J103, then replace the broken DIMM
62C	Uncorrectable Memory ECC Error - DIMM_J104J105	Set the Memory Channel Mode as "Independent" and the Uncorrectable Memory ECC error occurred on the DIMM_J104 or DIMM_J105, then replace the broken DIMM
62D	Uncorrectable Memory ECC Error - DIMM_J106J107	Set the Memory Channel Mode as "Independent" and the Uncorrectable Memory ECC error occurred on the DIMM_J106 or DIMM_J107, then replace the broken DIMM
	Checking NVRAM Update Failed	BIOS could not write to the NVRAM block. This message appears when the FLASH part is malfunctioning.
	Operating system not found	<ul style="list-style-type: none"> ▪ Operating system cannot be located on any of the boot drives. ▪ Verify that the priority boot drive has power and that the IDE cable is connected properly. ▪ Verify that the desired boot drive has power ▪ Verify that the IDE cable is securely plugged into the respective system board connectors. ▪ Verify that the boot device is enabled in the Setup Utility. ▪ Verify that the boot device has an operating system installed. ▪ If the problem persists, contact your Foxconn Customer Support provider.

POST Related Troubleshooting

Perform the following procedures when POST fails to run, error messages are displayed, or beep codes are emitted.

If the POST failure is during a routine bootup, verify the following conditions:

- All external cables and power cables are firmly plugged in.
- The power outlet to which the server is connected is working.
- The server and monitor are both turned on. The bicolor power status LED indicator on the front panel must be green.
- The monitor's contrast and brightness settings are correct.
- All internal cables are properly connected and all boards firmly seated.
- The processor is fully seated in its socket on the system board.
- The heatsink is properly installed on top of the processor.
- All memory modules are properly installed.

If the POST failure occurs after installing an accessory, perform the following steps:

1. Perform the pre-installation procedure.
2. If necessary, remove any expansion boards, assemblies, or cables that prevent access to the system components.
3. Check the following conditions:
 - a. If you have installed an expansion board, verify that the board is firmly seated in its slot and any switches or jumpers on the board are properly set. Refer to the documentation provided with the expansion board.
 - b. All internal cabling and connections are in their proper order.
 - c. If you have changed any switches on the system board, verify that each one is properly set.
4. Perform the post-installation procedure.
5. Turn on the monitor.
6. If the server still does not work, repeat step 2.
7. Remove all accessories, except the primary boot hard disk drive.
8. Repeat steps 4 and 5.

If the server now works, replace the boards and accessories one at a time to determine which one is causing the problem.

Physical and Operating Specifications

This chapter provides physical and operating specifications for the HP ProLiant SL165z G6 server.

System Unit

Table 15 Hardware Specifications

Item	Components
Processor socket	AMD socket F (1207)
Processor support	2P AMD Opteron processor (includes Shanghai and Istanbul)
Chipset	Broadcom HT2100 and HT1000
Hardware monitoring device	IPMI 2.0 compliant with Server Engine Pilot II
Gigabit Ethernet controller	Intel 82576
Memory controller	AMD Opteron processor
SATA and IDE controllers	Broadcom HT1000
Embedded video controller	ServerEngines VGA core integrated into Pilot II
I/O subsystem	X16 PCIE riser
Memory	Sixteen DIMMs to support 128GB, eight DIMMs per processor
Default media storage	SAS/SATA hard drive
Optional media storage	Two HDD cage for SAS or SATA drives
I/O ports	USB 2.0 ports (two rear-mounted ports one internal connector on the system board), video port, serial port and two GbE ports
Status LED indicators	
Front panel	<ul style="list-style-type: none">• Power/system health status• UID status
Rear panel	<ul style="list-style-type: none">• NIC activity• LAN activity• LAN link status• Power/system health status• UID status
System board	<ul style="list-style-type: none">• Auxiliary power indicators
Power supply unit (PSU)	750W, redundant PSU support

Table 15 Hardware Specifications

Item	Components
Thermal solution	Four 80mm system fans

Table 16 Physical Dimensions

Item	Description
System board platform	ATX (Advanced Technology Extended)
System board dimension	12"x13.5"
Server dimensions Rack	448W X87.9H X 714.7D (mm)
Server weight, basic configuration (excluding keyboard and monitor)	20 kg

Table 17 Environmental Specifications

Item	Description
Temperature	
Operating	+10 to +35° (+50 to +95°F)
Non-operating	-30 to 60° (-22 to 140°F)
Storage	-30 to 60° (-22 to 140°F)
Wet-bulb temperature	38.7° (101.7°F)
Relative humidity	
Operating	10% to 90% (non-condensing)
Non-operating	5% to 95%
Storage	5% to 95%
Altitude	
Operating	0 to 3049 meters (0 to 10,000 ft)
Non-operating	0 to 9146 meters (0 to 30,000 ft)
Thermal output (maximum operating)	392 W/hr
Acoustic emissions	LWad: 6.7 Bels
Normal configuration	(operating at room temperature)
	LWad: 6.7 Bels
	(Idle at room temperature)

Table 18 Power Supply Specifications

Item	Description
Dimensions (H x W x L)	1.515" (H) x 3.4" (W) x 7.736" (L) excluding card edge connector
Weight (approximate)	3 lb

Table 18 Power Supply Specifications

Item	Description
Input requirements:	
Rated input voltage	90 VAC to 264 VAC
Normal line voltage	100 VAC to 120 VAC / 200 VAC to 240 VAC
Line frequency	50Hz – 60Hz
Rated input current (max)	10A
BTU rating	—
Power supply output power	
Rated steady state power	460W /750W/1200W
Maximum peak power	—
Temperature range	
Operating	+5°C to +50°C
Storage/shipping	-40°C to +85°C
Relative humidity	
Operating	5% to 95% relative humidity, non-condensing
Non-operating	5% to 95% relative humidity, non-condensing

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