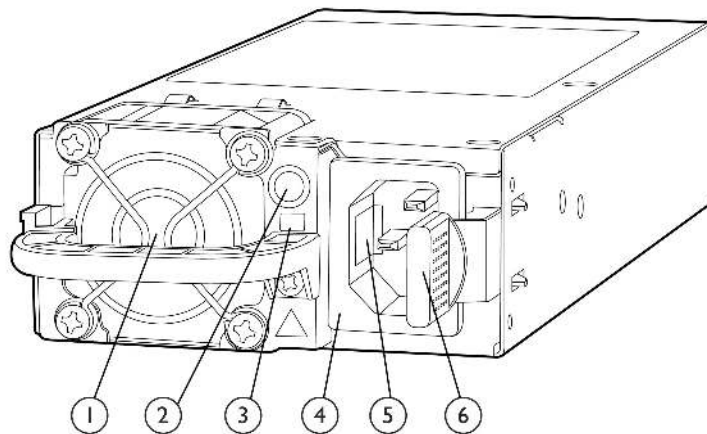


### Overview

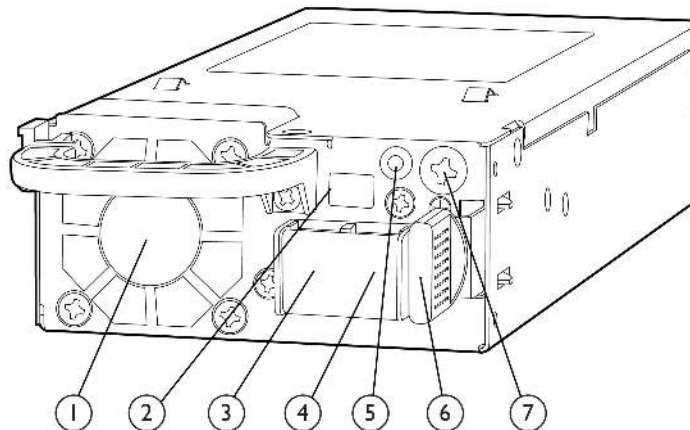
HP Common Slot (CS) Power Supplies share a common electrical and physical design that allows for hot-swap, tool-less installation into HP server and storage solutions. HP's CS power supplies offer high-efficiency power options available in multiple input and output options, allowing users to "right-size" a power supply for specific server/storage configurations and environments. This flexibility helps to minimize power waste, lower overall energy costs, and avoid "trapped" power capacity in the data center.

HP's CS Platinum/Platinum Plus Power Supplies provide a power efficiency rating of 94%, the highest level recognized in the IT industry. Both options also support HP Intelligent Power Discovery via embedded PLC technology. This feature enables each server to communicate identification, location, and power-related data to the Intelligent Power Distribution Unit in the rack which can then be shared with HP Insight Control to manage power usage and efficiency in the data center.



**HP Common Slot Platinum Plus Power Supplies**

- |                                      |                                                                                     |
|--------------------------------------|-------------------------------------------------------------------------------------|
| 1. Power Supply Identification Label | 4. Blue C-13 Power Connector (indicates support for HP Intelligent Power Discovery) |
| 2. Power LED                         | 5. Power Line Communication Port (requires PLC power cable for use)                 |
| 3. Front-Side Revision Control Label | 6. Quick-Release Lever                                                              |



**HP 750W Common Slot -48VDC Power Supply**

- |                                      |              |
|--------------------------------------|--------------|
| 1. Power Supply Identification Label | 5. Power LED |
|--------------------------------------|--------------|



### Overview

- |                                      |                              |
|--------------------------------------|------------------------------|
| 2. Front-Side Revision Control Label | 6. Quick-Release Lever       |
| 3. Power Input Connector             | 7. Power Grounding Connector |
| 4. Power Return Connector            |                              |

### Models

#### HP Power Supplies

#### HP Common Slot Platinum Plus Power Supply Kits

|                                                              |            |
|--------------------------------------------------------------|------------|
| HP 460W Common Slot Platinum Plus Hot Plug Power Supply Kit  | 656362-B21 |
| HP 750W Common Slot Platinum Plus Hot Plug Power Supply Kit  | 656363-B21 |
| HP 1200W Common Slot Platinum Plus Hot Plug Power Supply Kit | 656364-B21 |

#### HP Common Slot Platinum Power Supplies

|                                                                       |            |
|-----------------------------------------------------------------------|------------|
| HP 460W Common Slot Platinum Hot Plug Power Supply Kit                | 593188-B21 |
| HP 460W Common Slot Platinum Hot Plug Power Supply Kit with Backplane | 605923-B21 |
| HP 750W Common Slot Platinum Hot Plug Power Supply Kit                | 593831-B21 |
| HP 1200W Common Slot Platinum Hot Plug Power Supply Kit               | 578322-B21 |

#### HP Common Slot Gold Power Supplies

|                                                                                      |            |
|--------------------------------------------------------------------------------------|------------|
| HP 460W Common Slot Gold Hot Plug Power Supply Kit                                   | 503296-B21 |
| HP 460W Common Slot Gold Hot Plug Factory Integrated Power Supply Kit with Backplane | 535684-B21 |
| HP 750W Common Slot Gold Hot Plug Power Supply Kit                                   | 512327-B21 |
| HP 750W Common Slot Gold Hot Plug Factory Integrated Power Supply Kit with Backplane | 535683-B21 |

#### HP Common Slot Silver Power Supplies

|                                                       |            |
|-------------------------------------------------------|------------|
| HP 1200W Common Slot Silver Hot Plug Power Supply Kit | 500172-B21 |
|-------------------------------------------------------|------------|

#### HP Common Slot -48VDC Power Supplies

|                                                       |            |
|-------------------------------------------------------|------------|
| HP 1200W Common Slot -48VDC Hot Plug Power Supply Kit | 437573-B21 |
| HP 750W Common Slot -48VDC Hot Plug Power Supply Kit  | 636673-B21 |



### Standard Features

#### Common Slot Features and Benefits

##### Common Slot Design

- Tool-less hot-swap design allows for quick and easy access to power supplies
- Wide range of compatibility across HP server and storage solutions minimizes the cost and management effort to maintain different sets of power supply spares

##### Multiple Output and Input Options

- Multiple output options allowing users to "right-size" their power needs and avoid "trapped" power capacity in their data centers caused by over-subscribing power needs
- Both AC and DC power input options available providing flexibility to operate in different IT environments
- All Common Slot AC power supply options support both low-line and high-line voltage inputs providing additional flexibility to operate in multiple IT environments

##### Power Management for Redundant Power Configurations

- Supports multiple operating modes to maximize power efficiency when configuring servers and storage with redundant power supplies
- Load-Balancing mode designed to maximize power efficiency at higher power supply utilization loads
- High-Efficiency mode designed to maximize power efficiency at lower power supply utilization loads

---

#### Platinum/Platinum Plus Features and Benefits

##### Highest Rated Power Efficiency

- Platinum (94%) power efficiency certification from 80Plus program - highest certifications available in the IT industry
- Minimize data center operating costs related to power by reducing power waste and requirements for HP server and storage solutions

##### Supports HP's Intelligent Power Discovery

- Creates energy-aware network through embedded power line communication feature in Platinum power options
  - Communicates power-related data to both iPDU and HP Insight Manager
  - Reduces human error, reclaims over-provisioned power capacity, and accurately measures/monitors power usage
-

### Standard Features

#### 80Plus Certification

The 80PLUS test protocol was developed jointly by Ecos Plug Load Solutions and the Electric Power Research Institute (EPRI) in 2003, with the program being formally launched in 2004.

The 80 PLUS performance specification requires power supplies in servers to be 80% or greater energy efficient at 20%, 50% and 100% of rated load with a true power factor of 0.9 or greater. This makes an 80 PLUS certified power supply substantially more efficient than typical power supplies found in many other electrical devices.

#### Who benefits from the 80PLUS power supply program?

- Commercial/Residential Consumers - empowered with information regarding energy efficient IT options that help them cut energy costs and reduce their environmental impact
- Utility/Power Providers - participation in a program that focuses on reducing power demands on overburdened grids as well as reducing power waste and its associated environmental impact

#### What are the efficiency requirements for each certification level?

| 80 PLUS Certification | 230V Internal |     |      |
|-----------------------|---------------|-----|------|
| % of Rated Load       | 20%           | 50% | 100% |
| 80 PLUS Bronze        | 81%           | 85% | 81%  |
| 80 PLUS Silver        | 85%           | 89% | 85%  |
| 80 PLUS Gold          | 88%           | 92% | 88%  |
| 80 PLUS Platinum      | 90%           | 94% | 91%  |

#### What level of certification do HP Common Slot (CS) Power Supplies meet?

HP offers a range of CS Power Supplies that meet various 80PLUS levels of certification, from Silver to Platinum. HP's latest set of CS options, Platinum Plus, meet 80PLUS requirements for Platinum certification. To review 80Plus certification reports for each HP Common Slot Power Supply, please refer to the 80Plus website at: [www.80plus.com](http://www.80plus.com).

**NOTE:** Only VAC CS Power Supplies are tested/certified by the 80PLUS program; VDC power supplies are tested by HP for efficiency ratings.



### Standard Features

**Enabling Intelligent Power Discovery** HP Intelligent Power Discovery (IPD) combines the HP Intelligent Power Distribution Unit (iPDU) and HP Common Slot Platinum/Platinum Plus power supplies with HP Insight Control software to create an automated, energy-aware network between IT systems and facilities.

#### HP Intelligent Power Discovery Features and Benefits:

- Captures highly accurate power data across racks and rows of servers in order to identify and eliminate areas of waste
- Extends the life of the data center by reclaiming up to 3x energy capacity of the data center
- Ensures uptime by eliminating human error during power planning and provisioning

#### Which HP Power Supplies Support IPD?

- HP Common Slot Platinum Plus Power Supplies (including 460W, 750W, and 1200W options)
- HP Common Slot Platinum Power Supplies (including 460W, 750W, and 1200W options)

#### How Is IPD enabled by the Common Slot Platinum/Platinum Plus Power Supply?

HP Common Slot Platinum and Platinum Plus Power Supplies include an embedded power line communication (PLC) feature that allows the power supply to communicate server data (such as server name, UUID, and IP address) to an HP Intelligent Power Distribution Unit (iPDU). This feature is supported on most HP ProLiant G6 and G7 servers that support HP Common Slot Platinum power supplies, as well as on new HP ProLiant Generation 8 servers supporting HP Common Slot Platinum Plus Power Supply options.

**NOTE:** Standard power cables and jumpers do not support Power Line Communications or Intelligent Power Discovery. Please refer to the HP iPDU Data Sheet for more information on power cord options and part numbers at: [http://h18004.www1.hp.com/products/quickspecs/DS\\_00193/DS\\_00193.pdf](http://h18004.www1.hp.com/products/quickspecs/DS_00193/DS_00193.pdf)

To learn more on HP Intelligent Power Discovery, please visit the IPD website at: [www.hp.com/go/ipd](http://www.hp.com/go/ipd).

### Support for Redundant Power Supplies

An HP ProLiant server configured with an HP Common Slot VAC Power Supply (460W, 750W, or 1200W) supports the following three power scenarios:

- Operating with a single supply
- Operating with redundant supplies in load-balanced mode
- Operating with redundant supplies in high-efficiency mode

A single Common Slot Power Supply supporting the entire load of the server can achieve the highest efficiency when operating in the middle range (50%) of its capacity.

For redundant Common Slot Power Supplies operating in load-balanced mode (the default mode when adding redundant power supplies), the load is shared equally between the two (or four) power supplies. In general, the load-balanced mode offers better efficiency for loads requiring more than 60 percent of the primary power supply capacity.

When high-efficiency mode is enabled for redundant supplies (via the server's ROM-based setup utility under System options -> Redundancy options), each power supply in the server is designated as either a primary or secondary supply, and the entire server load is shifted to the primary power supply. This allows the primary power supply to operate at higher efficiency points on the load curve while the secondary power supply operates in idle mode, providing no output power and consuming very little energy (typically two to four watts per supply). The user can also specify that odd or even power supplies will be designated manually or automatically as secondary supplies. This flexibility allows users to balance the



### Standard Features

load across a rack manually or automatically.

**NOTE:** HP Common Slot VDC Power Supply options support load-balancing when configured with redundant power supplies. However, neither model supports high-efficiency mode.

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### Compatibility

HP Common Slot (CS) power supplies are compatible with a wide range HP server and storage solutions. To check for CS power supply compatibility with specific HP ProLiant servers, use the HP ProLiant Options Compatibility Guide located at: [www.hpproliantoptions.com](http://www.hpproliantoptions.com). For compatibility with specific HP Integrity servers and HP Storage solutions, please review the appropriate QuickSpec for that product.



### Service and Support

#### Service and Support

##### HP Technology Services

HP Technology Services offers you consultants and support experts to solve your most complex infrastructure problems. We help keep your business running, boost availability, and avoid downtime.

##### Protect your business beyond warranty with HP Care Pack Services

When you buy HP Options, it's also a good time to think about what level of service you may need. HP Care Pack services provide total care and support expertise with committed response choices designed to meet your IT and business need.

HP Foundation Care services deliver scalable support-packages for HP industry-standard servers and software. You can choose the type and level of service that is most suitable for your business needs. New to this portfolio is HP Collaborative Support. If you are running business critical environments, HP offers Proactive Care or Critical Advantage. These services help you deliver high levels of application availability through proactive service management and advanced technical response.

Here is the support service recommendation from the Foundation Care and Proactive Care portfolio. For customized support service solution, HP can work with you to tailor a service solution for your unique support requirements using broader services portfolio of Foundation Care and Proactive Care.

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### Recommended HP Care Pack Services for optimal satisfaction with your HP product

#### Recommended Services

##### 3-Year HP 24x7 4 hour Response, Hardware Support Onsite Service

Provides you with rapid remote support and if required an HP authorized representative who will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5982-6547EEE.pdf>

OR

##### 3-Year HP 24x7 4 hour Response, HP Collaborative Support

Offers customers a single point of contact for server problem diagnosis, hardware problem resolution, and basic software problem diagnosis, fault isolation, and resolution if available to HP. If the problem is with HP HW, the representative will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged. In case, the issue is with HP or supported third-party software product and cannot be resolved by applying known fixes, HP will contact the third-party vendor and create a problem incident on your behalf.

##### HP ProLiant Server Hardware Installation

Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf>



### Service and Support

#### Related HP Care Pack Services to enhance your HP product experience

##### Related Services

##### **3-Year HP 24x7 4 hour Response, Proactive Care or Critical Advantage**

Helps optimize your systems and delivers high levels of application availability through proactive service management and advanced technical response. A skilled Technical Manager will own your query or issue end to end until resolved, delivering a single point of contact for you

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA3-2140ENW.pdf>

OR

##### **3-Year HP 6-hour Onsite Call-to-Repair, HP Collaborative Support**

Offers customers a single point of contact for server problem diagnosis, hardware problem resolution to return the hardware in operating condition within 6 hours of the initial service request to the HP Global Solution Center, and basic software problem diagnosis, fault isolation, and resolution if available to HP. In case, the issue is with HP or supported third-party software product and cannot be resolved by applying known fixes, HP will contact the third-party vendor and create a problem incident on your behalf.

##### **HP Proactive Select Service**

Provides a flexible way to purchase HP best-in-class consultancy and technical services. You can buy Proactive Select Service Credits when you purchase your hardware and then use the credits over the next 12 months. <http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-3842ENN.pdf>

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##### Insight Remote Support

Provides 24 X 7 remote monitoring, proactive notifications, and problem resolution. Learn more

<http://www.hp.com/go/insightremotesupport>

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##### HP Support Center

Personalized online support portal with access to information, tools and experts to support HP business products. Submit support cases online, chat with HP experts, access support resources or collaborate with peers. Learn more <http://www.hp.com/go/hpsc>

HP's Support Center Mobile App\* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime.

HP Insight Remote Support and HP Support Center are available at no additional cost with a HP warranty, HP Care Pack or HP contractual support agreement.

*\*HP's Support Center Mobile App is subject to local availability*

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##### Parts and materials

HP will provide HP-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements. Supplies and consumable parts will not be provided as part of this service; standard warranty terms and conditions apply. Parts and components that have exceeded their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual or the technical product data sheet will not be provided, repaired or replaced as part of this service.

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### Service and Support

#### Warranty / Service Coverage

For ProLiant servers and storage systems, this service covers HP-branded hardware options qualified for the server, purchased at the same time or afterward, internal to the enclosure, as well as external monitors up to 22" and tower UPS products; these items will be covered at the same service level and for the same coverage period as the server unless the maximum supported lifetime and/or the maximum usage limitation has been exceeded. Coverage of the UPS battery is not included; standard warranty terms and conditions apply.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by HP due to malfunction. It does not apply to any exchange of Disk or SSD/Flash Drives that have not failed. SSD/Flash Drives that are specified by HP as consumable parts and/or that have exceeded maximum supported lifetime and/or the maximum usage limit as set forth in the manufacturer's operating manual or the technical data sheet are not eligible for the defective media retention service feature option.

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#### For more information

To learn more on services for HP ESSN Options, please contact your HP sales representative or HP Authorized Channel Partner. Or visit: <http://www.hp.com/services/proliant> or [www.hp.com/services/bladesystem](http://www.hp.com/services/bladesystem)



### Related Options

#### Related Options

##### Enablement Kits

HP DL160 Gen8 FIO Power Backplane Kit

662959-B21

**NOTE:** When configuring the HP DL160 Gen 8 with a Common Slot power supply, the HP Power Backplane Kit must be used for proper installation. The Common Slot power supply and power backplane kit for the DL160 Gen8 must be factory installed and cannot be purchased as separate options.

##### VAC C13 to C14 Power Cables

HP 0.7m 10A C13-C14 Gray Jumper Cord

A0K03A

HP 1.37m 10A C13-C14 Gray Jumper Cord

A0K04A

HP 2m 10A C13-C14 Redundant Jumper Cord

AF573A

HP 3.0m 10A C13-C14 Gray Jumper Cord

A0K06A

HP IEC C13-C14 Cable Option Kit

142257-B28

HP IEC320-C14 to C13 (10A/4.5ft/1.37m) PDU Cable

142257-006

HP IEC320-C14 to C13 10A/4.5ft/1.37m/ 15 PDU Cable

142257-007

HP 2.0m 10A C13-C14 Black Jumper Cord

A0K02A

HP IEC320-C14 to C13 (10A/8ft/2.5m) PDU Cable

142257-002

HP IEC320-C14 to C13 (10A/10ft/3.0m) PDU Cable

142257-003

**NOTE:** Standard power cables and jumpers do not support Power Line Communications or Intelligent Power Discovery.

##### Power Line Communication (PLC) Power Cables

HP C13-C14 2.5ft Single Power Line Communications Power Cable

SG506A

HP C13-C14 2.5ft 5pc Power Line Communications Power Cable

SG507A

HP C13-C14 4.5ft Single Power Line Communications Power Cable

SG508A

HP C13-C14 4.5ft 5pc Power Line Communications Power Cable

SG509A

HP C13-C14 6ft Single Power Line Communications Power Cable

SG510A

HP C13-C14 6ft 5pc Power Line Communications Power Cable

SG511A

HP C13-C14 10ft Single Power Line Communications Power Cable

SG512A

##### VDC Power Cables

HP 1.3M, 48V DC Power Cable Kit

A5S97A

HP 2.5M, 48V DC Power Cable Kit

A5S98A

**NOTE:** The HP 1200W Common Slot -48VDC Power Supply (437573-B21) ships with a standard cable. The VDC cable options listed above can only be used with the HP 750W Common Slot -48VDC Power Supply (636673-B21).

**NOTE:** Please refer to the Power Cord Matrix for more information on power cords/cable part numbers, input/output descriptions:

<http://www.hp.com/go/powercordmatrix>.



### Power Specifications

|                                                                                 |                               |      |      |      |      |      |      |                   |
|---------------------------------------------------------------------------------|-------------------------------|------|------|------|------|------|------|-------------------|
| <b>HP 460W Common Slot Platinum Plus Hot Plug Power Supply Kit (656362-B21)</b> | <b>HP Generic Part Number</b> |      |      |      |      |      |      | <b>643931-001</b> |
|                                                                                 | <b>HP Spares Part Number</b>  |      |      |      |      |      |      | <b>660184-001</b> |
| Input Voltage Range ( V rms )                                                   | 100-240                       |      |      |      |      |      |      |                   |
| Frequency Range (Nominal) ( Hz )                                                | 50 / 60                       |      |      |      |      |      |      |                   |
| Nominal Input Voltage ( Vrms )                                                  | 100                           | 120  | 200  | 208  | 220  | 230  | 240  |                   |
| Maximum Rated Output Wattage Rating                                             | 460                           | 460  | 460  | 460  | 460  | 460  | 460  |                   |
| Nominal Input Current ( A rms )                                                 | 5.2                           | 4.3  | 2.5  | 2.4  | 2.3  | 2.2  | 2.1  |                   |
| Maximum Rated Input Wattage Rating ( Watts )                                    | 517                           | 509  | 496  | 496  | 495  | 495  | 494  |                   |
| Maximum Rated VA ( Volt-Amp )                                                   | 524                           | 515  | 503  | 502  | 502  | 501  | 500  |                   |
| Efficiency ( % )                                                                | 89.0                          | 90.4 | 92.7 | 92.8 | 92.9 | 93.0 | 93.1 |                   |
| Power Factor                                                                    | 0.998                         |      |      |      |      |      |      |                   |
| Leakage Current ( mA )                                                          | 0.42                          | 0.50 | 0.83 | 0.87 | 0.92 | 0.96 | 1.00 |                   |
| Maximum Inrush Current ( A peak )                                               | 30                            |      |      |      |      |      |      |                   |
| Maximum Inrush Current duration ( mS )                                          | 20                            |      |      |      |      |      |      |                   |
| Maximum British Thermal Unit Rating ( BTU-Hr )                                  | 1764                          | 1736 | 1694 | 1692 | 1689 | 1687 | 1686 |                   |

|                                                                                 |                               |      |      |      |      |      |      |                   |
|---------------------------------------------------------------------------------|-------------------------------|------|------|------|------|------|------|-------------------|
| <b>HP 750W Common Slot Platinum Plus Hot Plug Power Supply Kit (656363-B21)</b> | <b>HP Generic Part Number</b> |      |      |      |      |      |      | <b>643932-001</b> |
|                                                                                 | <b>HP Spares Part Number</b>  |      |      |      |      |      |      | <b>660183-001</b> |
| Input Voltage Range ( V rms )                                                   | 100-240                       |      |      |      |      |      |      |                   |
| Frequency Range (Nominal) ( Hz )                                                | 50 / 60                       |      |      |      |      |      |      |                   |
| Nominal Input Voltage ( Vrms )                                                  | 100                           | 120  | 200  | 208  | 220  | 230  | 240  |                   |
| Maximum Rated Output Wattage Rating                                             | 750                           | 750  | 750  | 750  | 750  | 750  | 750  |                   |
| Nominal Input Current ( A rms )                                                 | 8.5                           | 7.0  | 4.1  | 3.9  | 3.7  | 3.6  | 3.5  |                   |
| Maximum Rated Input Wattage Rating ( Watts )                                    | 843                           | 831  | 811  | 811  | 809  | 808  | 821  |                   |
| Maximum Rated VA ( Volt-Amp )                                                   | 855                           | 842  | 822  | 821  | 820  | 819  | 832  |                   |
| Efficiency ( % )                                                                | 88.9                          | 90.3 | 92.4 | 92.5 | 92.7 | 92.8 | 91.3 |                   |
| Power Factor                                                                    | 0.998                         |      |      |      |      |      |      |                   |
| Leakage Current ( mA )                                                          | 0.42                          | 0.50 | 0.83 | 0.87 | 0.92 | 0.96 | 1.00 |                   |
| Maximum Inrush Current ( A peak )                                               | 30                            |      |      |      |      |      |      |                   |
| Maximum Inrush Current duration ( mS )                                          | 20                            |      |      |      |      |      |      |                   |
| Maximum British Thermal Unit Rating ( BTU-Hr )                                  | 2878                          | 2834 | 2769 | 2766 | 2762 | 2758 | 2803 |                   |



### Power Specifications

|                                                                                  |                               |      |      |      |      |      |      |                   |
|----------------------------------------------------------------------------------|-------------------------------|------|------|------|------|------|------|-------------------|
| <b>HP 1200W Common Slot Platinum Plus Hot Plug Power Supply Kit (656364-B21)</b> | <b>HP Generic Part Number</b> |      |      |      |      |      |      | <b>643933-001</b> |
|                                                                                  | <b>HP Spares Part Number</b>  |      |      |      |      |      |      | <b>660185-001</b> |
| Input Voltage Range ( V rms )                                                    | 100-240                       |      |      |      |      |      |      |                   |
| Frequency Range (Nominal) ( Hz )                                                 | 50 / 60                       |      |      |      |      |      |      |                   |
| Nominal Input Voltage ( Vrms )                                                   | 100                           | 120  | 200  | 208  | 220  | 230  | 240  |                   |
| Maximum Rated Output Wattage Rating                                              | 800                           | 900  | 1200 | 1200 | 1200 | 1200 | 1200 |                   |
| Nominal Input Current ( A rms )                                                  | 9.1                           | 8.4  | 6.7  | 6.4  | 6.1  | 5.8  | 5.5  |                   |
| Maximum Rated Input Wattage Rating ( Watts )                                     | 897                           | 999  | 1321 | 1319 | 1317 | 1315 | 1314 |                   |
| Maximum Rated VA ( Volt-Amp )                                                    | 909                           | 1012 | 1338 | 1337 | 1334 | 1332 | 1331 |                   |
| Efficiency ( % )                                                                 | 89.2                          | 90.1 | 90.9 | 91.0 | 91.1 | 91.2 | 91.3 |                   |
| Power Factor                                                                     | 0.998                         |      |      |      |      |      |      |                   |
| Leakage Current ( mA )                                                           | 0.42                          | 0.50 | 0.83 | 0.87 | 0.92 | 0.96 | 1.00 |                   |
| Maximum Inrush Current ( A peak )                                                | 30                            |      |      |      |      |      |      |                   |
| Maximum Inrush Current duration ( mS )                                           | 20                            |      |      |      |      |      |      |                   |
| Maximum British Thermal Unit Rating ( BTU-Hr )                                   | 3061                          | 3408 | 4506 | 4501 | 4493 | 4487 | 4483 |                   |

|                                                                            |                                 |      |      |      |      |      |      |                   |
|----------------------------------------------------------------------------|---------------------------------|------|------|------|------|------|------|-------------------|
| <b>HP 460W Common Slot Platinum Hot Plug Power Supply Kit (593188-B21)</b> | <b>HP's Generic Part Number</b> |      |      |      |      |      |      | <b>591553-001</b> |
|                                                                            | <b>HP's Spares Part Number</b>  |      |      |      |      |      |      | <b>599381-001</b> |
| Input Voltage Range ( V rms )                                              | 100-240                         |      |      |      |      |      |      |                   |
| Frequency Range (Nominal) ( Hz )                                           | 50 / 60                         |      |      |      |      |      |      |                   |
| Nominal Input Voltage ( Vrms )                                             | 100                             | 120  | 200  | 208  | 220  | 230  | 240  |                   |
| Maximum Rated Output Wattage Rating                                        | 460                             | 460  | 460  | 460  | 460  | 460  | 460  |                   |
| Nominal Input Current ( A rms )                                            | 5.3                             | 4.3  | 2.5  | 2.4  | 2.3  | 2.2  | 2.1  |                   |
| Maximum Rated Input Wattage Rating ( Watts )                               | 512                             | 505  | 493  | 493  | 492  | 492  | 491  |                   |
| Maximum Rated VA ( Volt-Amp )                                              | 526                             | 518  | 506  | 506  | 505  | 505  | 504  |                   |
| Efficiency ( % )                                                           | 89.8                            | 91.2 | 93.2 | 93.3 | 93.5 | 93.6 | 93.6 |                   |
| Power Factor                                                               | 0.985                           |      |      |      |      |      |      |                   |
| Leakage Current ( mA )                                                     | 0.42                            | 0.50 | 0.83 | 0.87 | 0.92 | 0.96 | 1.00 |                   |
| Maximum Inrush Current ( A peak )                                          | 30                              |      |      |      |      |      |      |                   |
| Maximum Inrush Current duration ( mS )                                     | 20                              |      |      |      |      |      |      |                   |
| Maximum British Thermal Unit Rating ( BTU-Hr )                             | 1747                            | 1722 | 1683 | 1682 | 1679 | 1678 | 1677 |                   |

**NOTE:** The ProLiant DL160 G6 server supports the HP 460W Common Slot Platinum Hot Plug Power Supply Kit with Backplane (PN 605923-B21). This option kit includes both the 460W Common Slot Platinum Power Supply and a new Common Slot power backplane. The table above provides power specifications for this power supply; however, it is recommended that the HP Power Advisor tool be used to estimate power requirements for this server as power efficiency may vary when using this option kit. The HP Power Advisor tool can be downloaded at: [www.hp.com/go/hppoweradvisor](http://www.hp.com/go/hppoweradvisor).



### Power Specifications

|                                                                            |                                 |      |      |      |      |      |      |                   |
|----------------------------------------------------------------------------|---------------------------------|------|------|------|------|------|------|-------------------|
| <b>HP 750W Common Slot Platinum Hot Plug Power Supply Kit (593831-B21)</b> | <b>HP's Generic Part Number</b> |      |      |      |      |      |      | <b>591554-001</b> |
|                                                                            | <b>HP's Spares Part Number</b>  |      |      |      |      |      |      | <b>599383-001</b> |
| Input Voltage Range ( V rms )                                              | 100-240                         |      |      |      |      |      |      |                   |
| Frequency Range (Nominal) ( Hz )                                           | 50 / 60                         |      |      |      |      |      |      |                   |
| Nominal Input Voltage ( Vrms )                                             | 100                             | 120  | 200  | 208  | 220  | 230  | 240  |                   |
| Maximum Rated Output Wattage Rating                                        | 750                             | 750  | 750  | 750  | 750  | 750  | 750  |                   |
| Nominal Input Current ( A rms )                                            | 8.6                             | 7.1  | 4.2  | 4.0  | 3.8  | 3.6  | 3.4  |                   |
| Maximum Rated Input Wattage Rating ( Watts )                               | 841                             | 828  | 809  | 808  | 807  | 806  | 805  |                   |
| Maximum Rated VA ( Volt-Amp )                                              | 863                             | 850  | 830  | 829  | 828  | 827  | 826  |                   |
| Efficiency ( % )                                                           | 89.2                            | 90.6 | 92.7 | 92.8 | 93.0 | 93.1 | 93.2 |                   |
| Power Factor                                                               | 0.985                           |      |      |      |      |      |      |                   |
| Leakage Current ( mA )                                                     | 0.42                            | 0.50 | 0.83 | 0.87 | 0.92 | 0.96 | 1.00 |                   |
| Maximum Inrush Current ( A peak )                                          | 30                              |      |      |      |      |      |      |                   |
| Maximum Inrush Current duration ( mS )                                     | 20                              |      |      |      |      |      |      |                   |
| Maximum British Thermal Unit Rating ( BTU-Hr )                             | 2868                            | 2825 | 2761 | 2757 | 2753 | 2749 | 2747 |                   |

|                                                                             |                                 |      |      |      |      |      |      |                   |
|-----------------------------------------------------------------------------|---------------------------------|------|------|------|------|------|------|-------------------|
| <b>HP 1200W Common Slot Platinum Hot Plug Power Supply Kit (578322-B21)</b> | <b>HP's Generic Part Number</b> |      |      |      |      |      |      | <b>570451-101</b> |
|                                                                             | <b>HP's Spares Part Number</b>  |      |      |      |      |      |      | <b>579229-001</b> |
| Input Voltage Range ( V rms )                                               | 100-240                         |      |      |      |      |      |      |                   |
| Frequency Range (Nominal) ( Hz )                                            | 50 / 60                         |      |      |      |      |      |      |                   |
| Nominal Input Voltage ( Vrms )                                              | 100                             | 120  | 200  | 208  | 220  | 230  | 240  |                   |
| Maximum Rated Output Wattage Rating                                         | 800                             | 900  | 1200 | 1200 | 1200 | 1200 | 1200 |                   |
| Nominal Input Current ( A rms )                                             | 9.3                             | 8.6  | 6.7  | 6.5  | 6.1  | 5.8  | 5.6  |                   |
| Maximum Rated Input Wattage Rating ( Watts )                                | 889                             | 989  | 1290 | 1290 | 1290 | 1290 | 1290 |                   |
| Maximum Rated VA ( Volt-Amp )                                               | 927                             | 1031 | 1345 | 1345 | 1345 | 1345 | 1345 |                   |
| Efficiency ( % )                                                            | 90                              | 91   | 93   | 93   | 93   | 93   | 93   |                   |
| Power Factor                                                                | 0.97                            |      |      |      |      |      |      |                   |
| Leakage Current ( mA )                                                      | 0.42                            | 0.50 | 0.83 | 0.87 | 0.92 | 0.96 | 1.00 |                   |
| Maximum Inrush Current ( A peak )                                           | 30                              |      |      |      |      |      |      |                   |
| Maximum Inrush Current duration ( mS )                                      | 10                              |      |      |      |      |      |      |                   |
| Maximum British Thermal Unit Rating ( BTU-Hr )                              | 3033                            | 3375 | 4403 | 4403 | 4403 | 4403 | 4403 |                   |



### Power Specifications

|                                                                 |                          |      |      |      |      |      |      |            |
|-----------------------------------------------------------------|--------------------------|------|------|------|------|------|------|------------|
| HP 460W Common Slot Gold Hot Plug Power Supply Kit (503296-B21) | HP's Generic Part Number |      |      |      |      |      |      | 499249-001 |
|                                                                 | HP's Spares Part Number  |      |      |      |      |      |      | 511777-001 |
| Input Voltage Range ( V rms )                                   | 100-240                  |      |      |      |      |      |      |            |
| Frequency Range (Nominal) ( Hz )                                | 50 / 60                  |      |      |      |      |      |      |            |
| Nominal Input Voltage ( Vrms )                                  | 100                      | 120  | 200  | 208  | 220  | 230  | 240  |            |
| Maximum Rated Output Wattage Rating                             | 460                      | 460  | 460  | 460  | 460  | 460  | 460  |            |
| Nominal Input Current ( A rms )                                 | 5.5                      | 4.5  | 2.6  | 2.5  | 2.4  | 2.3  | 2.2  |            |
| Maximum Rated Input Wattage Rating ( Watts )                    | 526                      | 520  | 505  | 505  | 503  | 503  | 503  |            |
| Maximum Rated VA ( Volt-Amp )                                   | 548                      | 542  | 527  | 527  | 524  | 524  | 524  |            |
| Efficiency ( % )                                                | 524                      | 88.5 | 91   | 91   | 91.5 | 91.5 | 91.5 |            |
| Power Factor                                                    | 0.97                     |      |      |      |      |      |      |            |
| Leakage Current ( mA )                                          | 0.42                     | 0.50 | 0.83 | 0.87 | 0.92 | 0.96 | 1.00 |            |
| Maximum Inrush Current ( A peak )                               | 30                       |      |      |      |      |      |      |            |
| Maximum Inrush Current duration ( mS )                          | 20                       |      |      |      |      |      |      |            |
| Maximum British Thermal Unit Rating ( BTU-Hr )                  | 1794                     | 1773 | 1725 | 1725 | 1715 | 1715 | 1715 |            |

**NOTE:** The ProLiant DL160 G6 server supports the HP 460W Common Slot Gold Hot Plug Factory Integrated Power Supply Kit with Backplane (PN 535684-B21). This option kit includes both the 460W Common Slot Gold Power Supply and a new Common Slot power backplane. The table above provides power specifications for this power supply; however, it is recommended that the HP Power Advisor tool be used to estimate power requirements for this server as power efficiency may vary when using this option kit. The HP Power Advisor tool can be downloaded at: [www.hp.com/go/hppoweradvisor](http://www.hp.com/go/hppoweradvisor).

|                                                                 |                          |      |      |      |      |      |      |            |
|-----------------------------------------------------------------|--------------------------|------|------|------|------|------|------|------------|
| HP 750W Common Slot Gold Hot Plug Power Supply Kit (512327-B21) | HP's Generic Part Number |      |      |      |      |      |      | 506821-001 |
|                                                                 | HP's Spares Part Number  |      |      |      |      |      |      | 511778-001 |
| Input Voltage Range ( V rms )                                   | 100-240                  |      |      |      |      |      |      |            |
| Frequency Range (Nominal) ( Hz )                                | 50 / 60                  |      |      |      |      |      |      |            |
| Nominal Input Voltage ( Vrms )                                  | 100                      | 120  | 200  | 208  | 220  | 230  | 240  |            |
| Maximum Rated Output Wattage Rating                             | 750                      | 750  | 750  | 750  | 750  | 750  | 750  |            |
| Nominal Input Current ( A rms )                                 | 8.9                      | 7.4  | 4.3  | 4.1  | 3.9  | 3.7  | 3.6  |            |
| Maximum Rated Input Wattage Rating ( Watts )                    | 857                      | 847  | 824  | 824  | 820  | 820  | 820  |            |
| Maximum Rated VA ( Volt-Amp )                                   | 894                      | 884  | 859  | 859  | 854  | 854  | 854  |            |
| Efficiency ( % )                                                | 87.5                     | 88.5 | 91   | 91   | 91.5 | 91.5 | 91.5 |            |
| Power Factor                                                    | 0.97                     |      |      |      |      |      |      |            |
| Leakage Current ( mA )                                          | 0.42                     | 0.50 | 0.83 | 0.87 | 0.92 | 0.96 | 1.00 |            |
| Maximum Inrush Current ( A peak )                               | 30                       |      |      |      |      |      |      |            |
| Maximum Inrush Current duration ( mS )                          | 20                       |      |      |      |      |      |      |            |
| Maximum British Thermal Unit Rating ( BTU-Hr )                  | 2925                     | 2892 | 2812 | 2812 | 2797 | 2797 | 2797 |            |

**NOTE:** The ProLiant DL160 G6 and DL165 G7 servers support the HP 750W Common Slot Gold Hot Plug Factory Integrated Power Supply Kit with Backplane (PN 535683-B21). This option kit includes both the 750W Common Slot Gold Power Supply and a new Common Slot power backplane. The table above provides power specifications for this power supply; however, it is recommended that the HP Power Advisor tool be used to estimate power requirements for this server as power efficiency may vary when using this option kit. The HP Power Advisor tool can be downloaded at: [www.hp.com/go/hppoweradvisor](http://www.hp.com/go/hppoweradvisor).



### Power Specifications

|                                                                    |                          |      |      |      |      |      |      |            |
|--------------------------------------------------------------------|--------------------------|------|------|------|------|------|------|------------|
| HP 1200W Common Slot Silver Hot Plug Power Supply Kit (500172-B21) | HP's Generic Part Number |      |      |      |      |      |      | 490594-001 |
|                                                                    | HP's Spares Part Number  |      |      |      |      |      |      | 498152-001 |
| Input Voltage Range ( V rms )                                      | 100-240                  |      |      |      |      |      |      |            |
| Frequency Range (Nominal) ( Hz )                                   | 50 / 60                  |      |      |      |      |      |      |            |
| Nominal Input Voltage ( Vrms )                                     | 100                      | 120  | 200  | 208  | 220  | 230  | 240  |            |
| Maximum Rated Output Wattage Rating                                | 800                      | 900  | 1200 | 1200 | 1200 | 1200 | 1200 |            |
| Nominal Input Current ( A rms )                                    | 9.7                      | 9.0  | 7.0  | 6.8  | 6.4  | 6.1  | 5.9  |            |
| Maximum Rated Input Wattage Rating ( Watts )                       | 930                      | 1034 | 1348 | 1348 | 1348 | 1348 | 1348 |            |
| Maximum Rated VA ( Volt-Amp )                                      | 970                      | 1079 | 1406 | 1406 | 1406 | 1406 | 1406 |            |
| Efficiency ( % )                                                   | 86                       | 87   | 89   | 89   | 89   | 89   | 89   |            |
| Power Factor                                                       | 0.97                     |      |      |      |      |      |      |            |
| Leakage Current ( mA )                                             | 0.42                     | 0.50 | 0.83 | 0.87 | 0.92 | 0.96 | 1.00 |            |
| Maximum Inrush Current ( A peak )                                  | 30                       |      |      |      |      |      |      |            |
| Maximum Inrush Current duration ( mS )                             | 20                       |      |      |      |      |      |      |            |
| Maximum British Thermal Unit Rating ( BTU-Hr )                     | 3174                     | 3530 | 4600 | 4600 | 4600 | 4600 | 4600 |            |

|                                                                    |                          |      |      |            |
|--------------------------------------------------------------------|--------------------------|------|------|------------|
| HP 1200W Common Slot -48VDC Hot Plug Power Supply Kit (437573-B21) | HP's Generic Part Number |      |      | 412837-001 |
|                                                                    | HP's Spares Part Number  |      |      | 437962-001 |
| Input Voltage Range ( V rms )                                      | 36-72                    |      |      |            |
| Frequency Range (Nominal) ( Hz )                                   | DC                       |      |      |            |
| Nominal Input Voltage ( Vrms )                                     | 36                       | 48   | 72   |            |
| Maximum Rated Output Wattage Rating                                | 1200                     | 1200 | 1200 |            |
| Nominal Input Current ( A rms )                                    | 38                       | 28   | 19   |            |
| Maximum Rated Input Wattage Rating ( Watts )                       | 1380                     | 1350 | 1365 |            |
| Maximum Rated VA ( Volt-Amp )                                      | 1380                     | 1380 | 1365 |            |
| Efficiency ( % )                                                   | 87                       | 89   | 88   |            |
| Power Factor                                                       | N/A                      |      |      |            |
| Leakage Current ( mA )                                             | N/A                      |      |      |            |
| Maximum Inrush Current ( A peak )                                  | 20                       | 25   | 35   |            |
| Maximum Inrush Current duration ( mS )                             | 1                        | 1    | 3    |            |
| Maximum British Thermal Unit Rating ( BTU-Hr )                     | 4713                     | 4610 | 4662 |            |



### Power Specifications

|                                                                   |                          |      |            |
|-------------------------------------------------------------------|--------------------------|------|------------|
| HP 750W Common Slot -48VDC Hot Plug Power Supply Kit (636673-B21) | HP's Generic Part Number |      | 619671-401 |
|                                                                   | HP's Spares Part Number  |      | 639173-001 |
| Input Voltage Range ( V rms )                                     | 36-72                    |      |            |
| Frequency Range (Nominal) ( Hz )                                  | DC                       |      |            |
| Nominal Input Voltage ( Vrms )                                    | 36                       | 48   | 72         |
| Maximum Rated Output Wattage Rating                               | 750                      | 750  | 750        |
| Nominal Input Current ( A rms )                                   | 23                       | 17   | 12         |
| Maximum Rated Input Wattage Rating ( Watts )                      | 840                      | 820  | 830        |
| Maximum Rated VA ( Volt-Amp )                                     | 840                      | 820  | 830        |
| Efficiency ( % )                                                  | 92                       | 94   | 92         |
| Power Factor                                                      | N/A                      |      |            |
| Leakage Current ( mA )                                            | N/A                      |      |            |
| Maximum Inrush Current ( A peak )                                 | 24                       |      |            |
| Maximum Inrush Current duration ( mS )                            | 15                       |      |            |
| Maximum British Thermal Unit Rating ( BTU-Hr )                    | 2865                     | 2796 | 2830       |





### Technical Specifications

#### All AC Power Supplies:

|                                 |                                                                                                                                                                      |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Temperature           | 41° to 122°F (5° to 50°C)                                                                                                                                            |
| Operating Relative Humidity (%) | 5% to 95%, non condensing                                                                                                                                            |
| Operating Elevation             | 0 to 5,000ft (1,524m) with no derating;<br>Maximum inlet air temperature derated linearly down to 40°C from 5000ft (1,524m) to 10,000ft (3,048m) msl                 |
| Storage Temperature             | -40° to 185°F (-40 to 85°C)                                                                                                                                          |
| Storage Relative Humidity (%)   | 5% to 95%, non condensing                                                                                                                                            |
| Storage Elevation               | 0 to 50,000ft (0 to 15,240m)                                                                                                                                         |
| Input Voltage                   | Low Line - Rated: 100V; Min 90V to Max 132V<br>High Line - Rated: 220 - 240V; Min 180V to Max 264V                                                                   |
| Input Frequency                 | Rated: 50 to 60Hz; Min 47Hz to Max 63Hz                                                                                                                              |
| Conformance Standards           | CE Mark, UL, CSA, IEC, EN. CNS, KCC, BSMI, CCC, C-tick, TUV, FCC Class B;<br>FCC Class A (models 593188-B21, 593831-B21, 578322-B21 only)                            |
| Mechanical Dimensions (WxHxD)   | 1.5 x 3.4 x 7.5 in (3.81 x 8.63 x 19.05 cm)                                                                                                                          |
| Unit Weight                     | 2.5 lb (1.13 kg) (for models 656362-B21 and 656364-B21 only)<br>2 lb (0.91 kg) (for all other VAC models)                                                            |
| Shipping Dimensions (WxHxD)     | 15.5 x 7.25 x 5.5 in (39.37 x 18.44 x 13.97 cm) (for models 656362-B21 and 656364-B21 only)<br>12 x 8 x 4.5 in (30.48 x 20.32 x 11.43 cm) (for all other VAC models) |
| Shipping Weight                 | 3.5 lb (1.59 kg) (for models 656362-B21 and 656364-B21 only)<br>3 lb (1.36 kg) (for all other VAC models)                                                            |
| Kit Contents                    | All models ship with:<br>(1) Power supply unit, (1) IEC C13-C14 jumper cable, installation/safety guide                                                              |

#### All DC Power Supplies:

|                                 |                                                                                                                                                      |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Temperature           | 41° to 122°F (5° to 50°C)                                                                                                                            |
| Operating Relative Humidity (%) | 5% to 95%, non condensing                                                                                                                            |
| Operating Elevation             | 0 to 5,000ft (1,524m) with no derating;<br>Maximum inlet air temperature derated linearly down to 40°C from 5000ft (1,524m) to 10,000ft (3,048m) msl |
| Storage Temperature             | -40 to 85°C                                                                                                                                          |
| Storage Relative Humidity (%)   | 5% to 95%, non condensing                                                                                                                            |
| Storage Elevation               | 0 to 50,000ft msl                                                                                                                                    |
| Input Voltage                   | 48VDC - 54VDC (nominal); 36VDC - 72VDC (full operating range)                                                                                        |
| Input Frequency                 | DC input                                                                                                                                             |
| Conformance Standards           | CE Mark, UL, CSA, IEC, EN. CCC, FCC Class A;<br>KCC (model 636673-B21 only)                                                                          |
| Mechanical Dimensions (WxHxD)   | 1.5 x 3.4 x 7.5 in (3.81 x 8.63 x 19.05 cm)                                                                                                          |
| Unit Weight                     | 3 lb (1.36 kg) (model 437573-B21)<br>2.5 lb (1.13 kg) (model 636673-B21)                                                                             |
| Shipping Dimensions (WxHxD)     | 7.75 X 12.25 X 8.25 in (19.69 x 31.12 x 20.96 cm) (model 437573-B21)<br>4.4 X 12.25 X 8 in (11.18 x 31.12 x 20.32 cm) (model 636673-B21)             |
| Shipping Weight                 | 7 lb (3.18 kg) (model 437573-B21)<br>3.2 lb (1.45 kg) (model 636673-B21)                                                                             |



### Technical Specifications

#### Kit Contents

Model 636673-B21 ships with:

(1) Power supply unit, installation/safety guide

Model 437573-B21 ships with:

(1) Power supply unit, (1) 3M VDC power cable, installation/safety guide

#### Environment-friendly Products and Approach

#### End-of-life Management and Recycling

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The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: <http://www.hp.com/go/green>. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

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