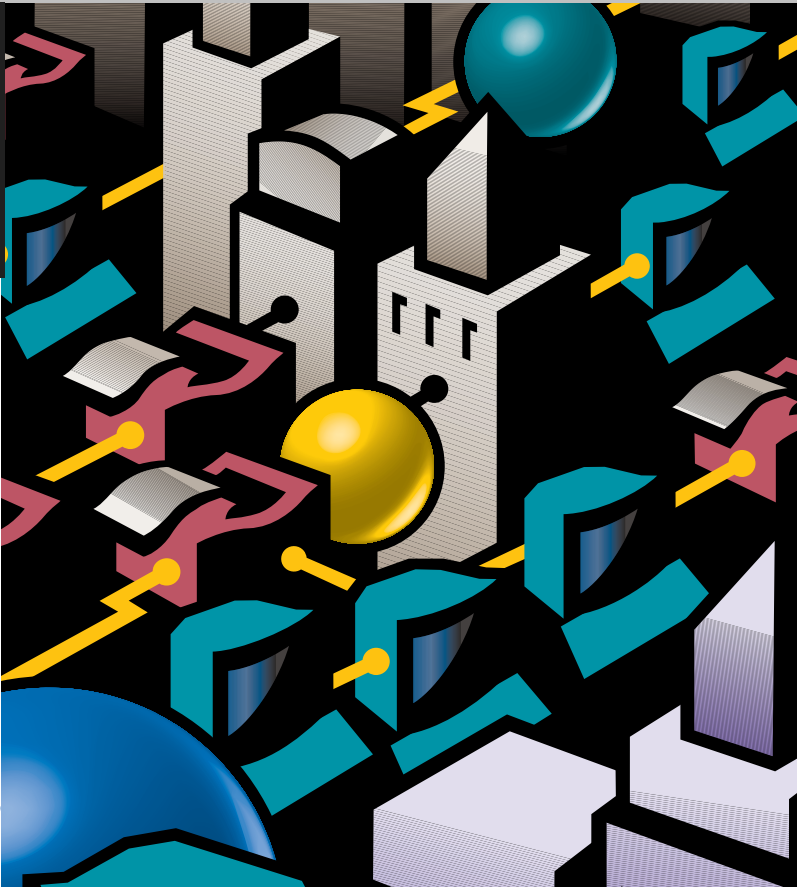


**Installation and  
Reference Guide**

HP J3136A



**HP AdvanceStack Switch 2000  
Redundant Power Supply**



---

HP AdvanceStack Switch 2000  
Redundant Power Supply

---

Installation and Reference Guide

---

**©Copyright Hewlett-Packard Company 1996.  
All Rights Reserved.**

Reproduction, adaptation, or translation without prior written permission is prohibited, except as allowed under the copyright laws.

**Publication Number**

J3136-90001  
Edition 1  
March 1996  
Printed in U.S.A.

**Applicable Product**

HP J3136A

**Trademark Credits**

MS-DOS® and Microsoft® are U.S. registered trademarks of Microsoft Corporation.  
Ethernet is a registered trademark of Xerox Corporation.

**Disclaimer**

The information contained in this document is subject to change without notice.

HEWLETT-PACKARD COMPANY MAKES NO WARRANTY OF ANY KIND WITH REGARD TO THIS MATERIAL, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Hewlett-Packard shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Hewlett-Packard assumes no responsibility for the use or reliability of its software on equipment that is not furnished by Hewlett-Packard.

**Warranty**

A copy of the specific warranty terms applicable to your Hewlett-Packard product and replacement parts can be obtained from your HP Sales and Service Office or authorized dealer.

---

# Contents

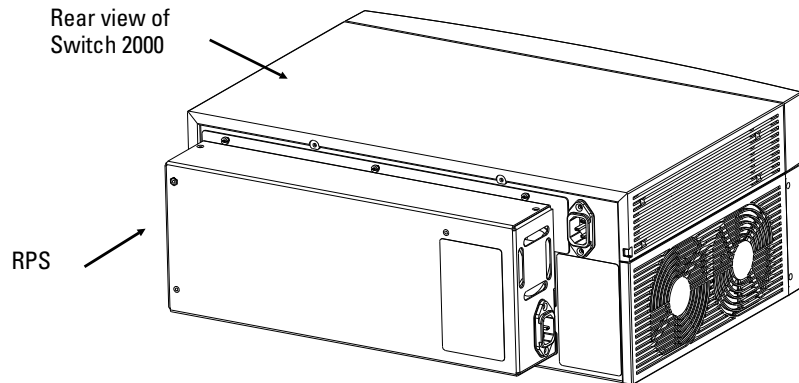
<a href="#"><u>HP Switch 2000 Redundant Power Supply . . . . .</u></a>	<a href="#"><u>2</u></a>
<a href="#"><u><i>At A Glance</i> . . . . .</u></a>	<a href="#"><u>2</u></a>
<a href="#"><u>Installation Summary . . . . .</u></a>	<a href="#"><u>3</u></a>
<a href="#"><u>Included Parts . . . . .</u></a>	<a href="#"><u>3</u></a>
<a href="#"><u>Installation Steps . . . . .</u></a>	<a href="#"><u>4</u></a>
<a href="#"><u>Frequently Asked Questions . . . . .</u></a>	<a href="#"><u>7</u></a>
<a href="#"><u>HP Customer Support Services . . . . .</u></a>	<a href="#"><u>8</u></a>
<a href="#"><u>Specifications . . . . .</u></a>	<a href="#"><u>11</u></a>
<a href="#"><u>Safety Information . . . . .</u></a>	<a href="#"><u>13</u></a>
<a href="#"><u>Index . . . . .</u></a>	<a href="#"><u>21</u></a>

# HP Switch 2000 Redundant Power Supply

## *At A Glance*

The HP J3136A AdvanceStack Switch 2000 Redundant Power Supply provides redundant DC power to the HP J3100A AdvanceStack Switch 2000.

The Redundant Power Supply (RPS) shares the power load with the Switch 2000's main power supply. If the Switch 2000's power supply components were to fail, the RPS power supply component will instantly supply power to the Switch 2000.



---

## Features

- |                             |   |
|-----------------------------|---|
| Network Connections         | <ul style="list-style-type: none"><li>■ Provides fully redundant power to the Switch 2000.</li></ul>  |
| Modular, Easy-to-Use Design | <ul style="list-style-type: none"><li>■ The RPS is easy to mount on the back of the Switch 2000.</li><li>■ Each Switch 2000 has an RPS LED to report the status of the Redundant Power Supply.</li><li>■ RPS status information available from HP Stack Manager (Windows 3.1 software shipped with the devices that support the RPS) and HP Interconnect Manager.</li></ul> |
| Management                  | <ul style="list-style-type: none"><li>■ SNMP indication on the RPS connection and the RPS fault condition through the connected devices.</li></ul>  |
-

---

# Installation Summary

The basic hardware installation procedure for the RPS is as follows:

1. Disconnect the power to the Switch 2000.
2. Mount the RPS to the Switch 2000.
3. Verify the RPS's operation.

## Included Parts

Each RPS has the following components shipped with it:

- *HP Switch 2000 Redundant Power Supply Installation and Reference Guide*—this manual (J3136-90001)
- One AC power cord, one of the following:

Australia/New Zealand	(8120-1369)
Denmark	(8120-2956)
Europe	(8120-1689)
Japan	(8120-4753)
Switzerland	(8120-2104)
United Kingdom	(8120-1351)
U.S./Canada/Mexico/Taiwan	(8120-1378)

## Installation Steps

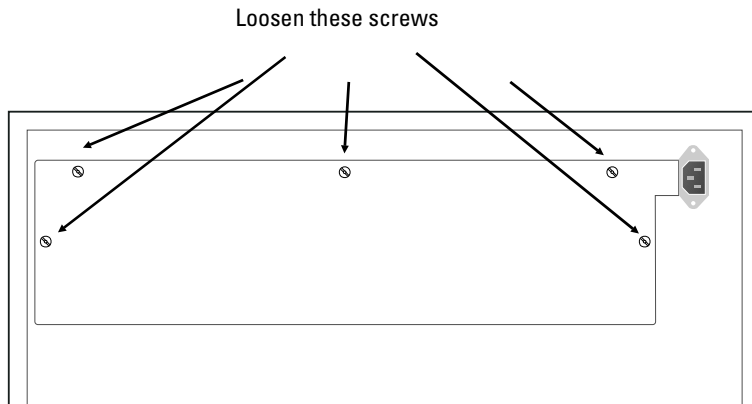
To add redundant power to your Switch 2000, follow these steps:

---

### Warning

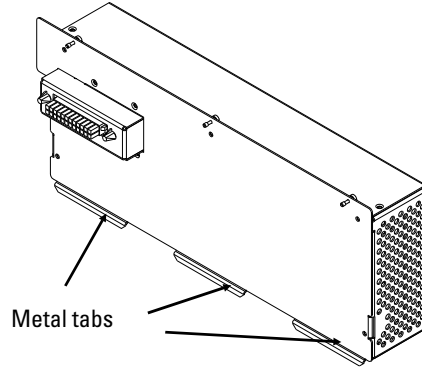
---

1. **Disconnect the power supply from the Switch 2000 before installing the RPS. Electrical shock or other injury can result if you attempt to install the module without unplugging the Switch 2000.**
2. Using a Torx T-10 or flat-bladed screw driver, loosen the five captured screws on the cover plate on the back of the Switch 2000.



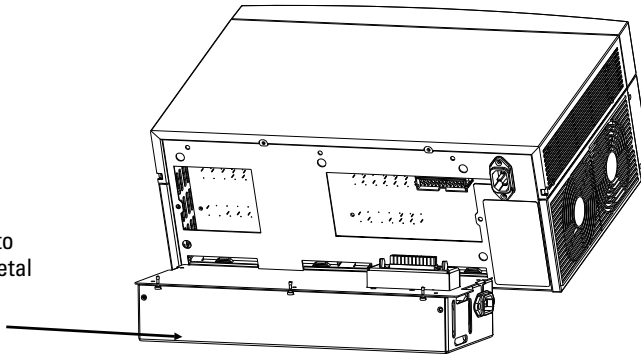
3. Store the cover plate.  
*(Steps continued on next page.)*

4. Notice that the RPS has three metal tabs on its bottom.



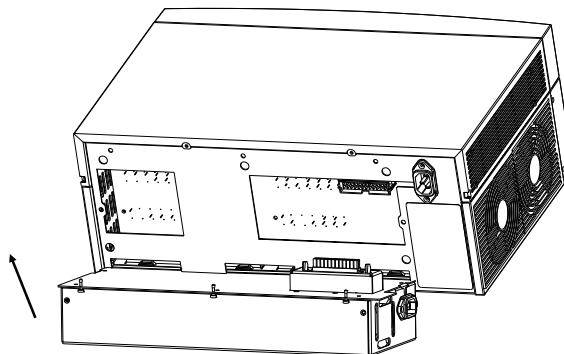
5. Line up the RPS metal tabs to the Switch 2000 and insert the tabs into the three slots on the Switch 2000 as shown below.

RPS attaching to  
Switch 2000, metal  
tabs first.



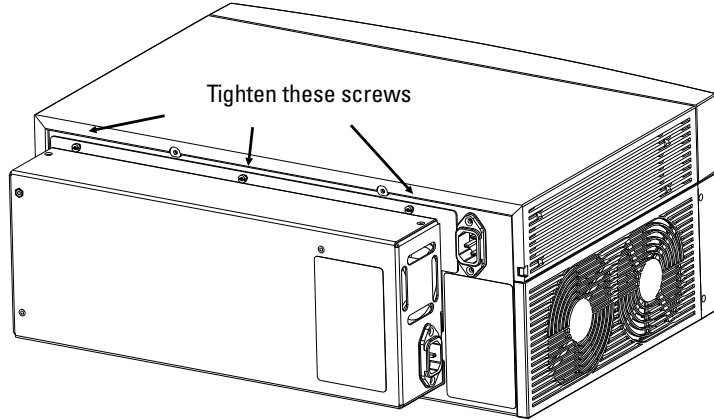
6. Rotate the RPS up and towards the Switch 2000. Then push the RPS until it is firmly seated into the connector inside the Switch 2000.

Rotate the RPS up.



## Installation Summary

- Using the same screw driver, tighten the three screws on the RPS.



- Connect the Switch 2000 AC power cord to an AC outlet.
- Connect the RPS AC power cord to an AC outlet (on a different breaker if possible).

Both AC power cords must be connected to provide full redundancy.

The RPS LED on the Switch 2000 will be on solid to indicate the RPS is working properly. The following table explains the LEDs that reflect the operating state of the RPS.

LED patterns indicating problems			Diagnostic Tips
Fault	Power Fault	RPS	
OFF	OFF	ON	The RPS is connected and functioning properly.
Flashing Slowly	Flashing Slowly	OFF	The RPS is present but failed. Try: Verify that the power cords are connected at both ends. Verify the AC outlet is providing power to another device. Try a different power cord. If the problem persists, the RPS power supply may have failed. Contact your HP-authorized LAN dealer to replace the RPS.
Flashing Slowly	Flashing Slowly	ON	The Switch 2000 main power supply has failed. Contact your HP-authorized LAN dealer for assistance.

**The slow flash rate is approximately once each 1.5 seconds.**

---

## Frequently Asked Questions

The following table lists questions and answers about the Redundant Power Supply:

Question	Answer
What is the difference between a UPS and an RPS?	<p>A UPS (Uninterruptible Power Supply) is an external power backup device. The UPS serves as a battery backup, so that if your AC power source fails (as in a brownout or blackout), the UPS will still provide power. To order an HP UPS, call 1-800-538-8787.</p> <p>An RPS (Redundant Power Supply) is an external power backup device. The power supply of the RPS is duplicated (redundant) of the Switch 2000, so that if one power supply component fails the RPS will still provide power.</p>
Should I keep my device's AC power cord connected?	Yes. Otherwise, you do not have redundant power.
Do I have to plug both AC power cords into different AC power sources?	We recommend that you connect each AC power cord to a different AC power source but it is not required.

## HP Customer Support Services

HP offers these customer support services:

- HP BBS and World Wide Web
- HP FTP Library Service
- CompuServe
- HP FIRST Fax Retrieval Service
- HP Network Phone-In Support

Software upgrades are available through the HP BBS, World Wide Web, CompuServe, and the HP FTP Library Service. After you download the file(s) from one of these sources, you type *filename /x*.

### **HP BBS and World Wide Web**

The HP BBS phone number is (208) 344-1691. Set your modem communication settings to:

- parity = N
- data bits = 8
- stop bits = 1
- baud rates = 300, 1200, 2400, 4800, 9600, or 14400

The URL address for the World Wide Web is:

**[http://www.hp.com/go/network\\_city](http://www.hp.com/go/network_city)**

From this web site, you can download files and learn about HP networking products. After you download the file, extract the file.

## **Hewlett-Packard FTP Library Service**

To access the HP FTP Library, follow these steps:

10. Enter the command:

```
ftp ftp-boi.external.hp.com
```

The ftp> prompt appears.

11. At the ftp > prompt, enter:

```
anonymous
```

12. At the password prompt, enter your internet e-mail address.

13. At the ftp > prompt, set the file type to binary:

```
binary
```

14. Retrieve the file by entering:

```
get filename.exe
```

15. Quit the FTP session by entering:

```
quit
```

16. Extract the file (e.g., filename /x)

### CompuServe

CompuServe is an electronic information and communication service run by an independent company. The service is typically accessed with a computer and modem and uses standard voice telephone lines for transmitting and receiving data. CompuServe is available 24 hours-a-day, seven days per week. The participants pay a monthly fee as well as an hourly connect charge for this service. To get the latest HP software, follow these steps:

1. Login to CompuServe.
2. Type: go hpsys
3. Type: lib 7
4. Type: download *filename.exe* (e.g., download filename.exe)
5. Log off CompuServe.
6. Extract the file (e.g., filename /x)

### HP FIRST Fax Retrieval Service

HP FIRST is an automated fax retrieval service that is available 24 hours a day, seven days a week. HP FIRST provides information on product information, troubleshooting, technical reviews, and configuration information.

To access HP FIRST, dial one of the following phone numbers from your touch-tone telephone:

Location	Phone Number
U.S. and Canada Only	1 (800) 333-1917 and press 1 for HP FIRST
Outside the U.S. and Canada	1 (208) 344-4809 and press 9 for HP FIRST

To receive a list of currently available documents, enter document number 19941. The information you requested will be sent to you by return fax.

### HP Network Phone-In Support (NPS)

Call your HP Authorized Dealer or the nearest HP Sales and Support Office. In addition, the HP Network Phone-In Support (NPS) service provides expert technical assistance for U.S.A. customers through an NPS contract or at an hourly rate (1-800-790-5544) 6 am to 5 pm Pacific Time.

---

# Specifications

## Physical

<b>Width:</b>	35.9 cm (14.1 in)	<b>Height:</b>	15 cm (6 in)
<b>Depth:</b>	6.25 cm (2.5 in)	<b>Weight:</b>	3 kg (6.7 lb)

## Electrical

<b>AC voltage:</b>	100–127 volts (Voltage tolerance of +/- 10%)	200-240 volts (Voltage tolerance of +/- 10%)
<b>Maximum current:</b>	2.5 A	1.5 A
<b>Frequency range:</b>	50/60 Hz	50/60 Hz

## Environmental

	<b>Operating</b>	<b>Non-Operating</b>
<b>Temperature:</b>	0°C to 55°C (32°F to 131°F)	-40°C to 70°C (-40°F to 158°F)
<b>Relative humidity: (non-condensing)</b>	15% to 95% at 40°C (104°F)	90% at 65°C (149°F)
<b>Maximum altitude:</b>	4.6 km (15,000 ft)	4.6 km (15,000 ft)

## Safety

IEC 950: (1991)+A1,A2/.EN60950 I(1992)+A1,A2  
UL1950    CSA 950

*(continued on next page)*

## Specifications

### **Electromagnetic**

#### **Emissions**

FCC part 15 Class A

EN 55022 / CISPR-22 Class A

VCCI Level I

Complies with Canadian EMC Class A requirements

#### **Immunity**

See the Declaration of Conformity in the *HP AdvanceStack Switch 2000 Installation and Reference Guide..*

### **Acoustic Noise**

5.5 Bels max

---

# Safety Information

## Safety Symbols

Documentation reference symbol. If the product is marked with this symbol, refer to the product documentation to get more information about the product.

**WARNING** A WARNING in the manual denotes a hazard that can cause injury or death.

**CAUTION** A CAUTION in the manual denotes a hazard that can damage equipment.

Do not proceed beyond a WARNING or CAUTION notice until you have understood the hazardous conditions and have taken appropriate steps.

## Grounding

These are safety class I products and have protective earthing terminals. There must be an uninterruptible safety earth ground from the main power source to the product's input wiring terminals, power cord, or supplied power cord set. Whenever it is likely that the protection has been impaired, disconnect the power cord until the ground has been restored.

For LAN cable grounding:

- If your LAN covers an area served by more than one power distribution system, be sure their safety grounds are securely interconnected.
- LAN cables may occasionally be subject to hazardous transient voltages (such as lightning or disturbances in the electrical utilities power grid). Handle exposed metal components of the network with caution.

## Servicing

There are no user-serviceable parts inside these products. Any servicing, adjustment, maintenance, or repair must be performed only by service-trained personnel.

These products do not have a power switch; they are powered on when the power cord is plugged in.

## Informations concernant la sécurité

### Symboles de sécurité



Symbole de référence à la documentation. Si le produit est marqué de ce symbole, reportez-vous à la documentation du produit afin d'obtenir des informations plus détaillées.

#### **WARNING**

Dans la documentation, un WARNING indique un danger susceptible d'entraîner des dommages corporels ou la mort.

#### **CAUTION**

Un texte de mise en garde intitulé CAUTION indique un danger susceptible de causer des dommages à l'équipement.

Ne continuez pas au-delà d'une rubrique WARNING ou CAUTION avant d'avoir bien compris les conditions présentant un danger et pris les mesures appropriées.

Cet appareil est un produit de classe I et possède une borne de mise à la terre. La source d'alimentation principale doit être munie d'une prise de terre de sécurité installée aux bornes du câblage d'entrée, sur le cordon d'alimentation ou le cordon de raccordement fourni avec le produit. Lorsque cette protection semble avoir été endommagée, débrancher le cordon d'alimentation jusqu'à ce que la mise à la terre ait été réparée.

Mise à la terre du câble de réseau local:

- si votre réseau local s'étend sur une zone desservie par plus d'un système de distribution de puissance, assurez-vous que les prises de terre de sécurité soient convenablement interconnectées.
- Les câbles de réseaux locaux peuvent occasionnellement être soumis à des surtensions transitoires dangereuses (telles que la foudre ou des perturbations dans le réseau d'alimentation public). Manipulez les composants métalliques du réseau avec précautions.

Aucune pièce contenue à l'intérieur de ce produit ne peut être réparée par l'utilisateur. Tout dépannage, réglage, entretien ou réparation devra être confié exclusivement à un personnel qualifié.

Cet appareil ne comporte pas de commutateur principal ; la mise sous tension est effectuée par branchement du cordon d'alimentation.

---

# Hinweise zur Sicherheit

## Sicherheitssymbole



Symbol für Dokumentationsverweis. Wenn das Produkt mit diesem Symbol markiert ist, schlagen Sie bitte in der Produktdokumentation nach, um mehr Informationen über das Produkt zu erhalten.

### **WARNING**

Eine WARNING in der Dokumentation symbolisiert eine Gefahr, die Verletzungen oder sogar Todesfälle verursachen kann.

### **CAUTION**

CAUTION in der Dokumentation symbolisiert eine Gefahr, die das Gerät beschädigen kann.

Fahren Sie nach dem Hinweis WARNING oder CAUTION erst fort, nachdem Sie den Gefahrenzustand verstanden und die entsprechenden Maßnahmen ergriffen haben.

Dies ist ein Gerät der Sicherheitsklasse I und verfügt über einen schützenden Erdungsterminal. Der Betrieb des Geräts erfordert eine ununterbrochene Sicherheitserdung von der Hauptstromquelle zu den Geräteingabeterminals, den Netzkabeln oder dem mit Strom belieferten Netzkabelsatz voraus. Sobald Grund zur Annahme besteht, daß der Schutz beeinträchtigt worden ist, das Netzkabel aus der Wandsteckdose herausziehen, bis die Erdung wiederhergestellt ist.

Für LAN-Kabelerdung:

- Wenn Ihr LAN ein Gebiet umfaßt, das von mehr als einem Stromverteilungssystem beliefert wird, müssen Sie sich vergewissern, daß die Sicherheitserdungen fest untereinander verbunden sind.
- LAN-Kabel können gelegentlich gefährlichen Übergangsspannungen ausgesetzt werden (beispielsweise durch Blitz oder Störungen in dem Starkstromnetz des Elektrizitätswerks). Bei der Handhabung exponierter Metallbestandteile des Netzwerkes Vorsicht walten lassen.

Dieses Gerät enthält innen keine durch den Benutzer zu wartenden Teile. Wartungs-, Anpassungs-, Instandhaltungs- oder Reparaturarbeiten dürfen nur von geschultem Bedienungspersonal durchgeführt werden.

Dieses Gerät hat keinen Netzschalter; es wird beim Anschließen des Netzkabels eingeschaltet.

## Considerazioni sulla sicurezza

### Simboli di sicurezza



Simbolo di riferimento alla documentazione. Se il prodotto è contrassegnato da questo simbolo, fare riferimento alla documentazione sul prodotto per ulteriori informazioni su di esso.

### **WARNING**

La dicitura WARNING denota un pericolo che può causare lesioni o morte.

### **CAUTION**

La dicitura CAUTION denota un pericolo che può danneggiare le attrezzature.

Non procedere oltre un avviso di WARNING o di CAUTION prima di aver compreso le condizioni di rischio e aver provveduto alle misure del caso.

Questo prodotto è omologato nella classe di sicurezza I ed ha un terminale protettivo di collegamento a terra. Dev'essere installato un collegamento a terra di sicurezza, non interrompibile che vada dalla fonte d'alimentazione principale ai terminali d'entrata, al cavo d'alimentazione oppure al set cavo d'alimentazione fornito con il prodotto. Ogniquale volta vi sia probabilità di danneggiamento della protezione, disinserite il cavo d'alimentazione fino a quando il collegamento a terra non sia stato ripristinato.

Per la messa a terra dei cavi LAN:

- se la vostra LAN copre un'area servita da più di un sistema di distribuzione elettrica, accertatevi che i collegamenti a terra di sicurezza siano ben collegati fra loro;
- i cavi LAN possono occasionalmente andare soggetti a pericolose tensioni transitorie (ad esempio, provocate da lampi o disturbi nella griglia d'alimentazione della società elettrica); siate cauti nel toccare parti esposte in metallo della rete.

Nessun componente di questo prodotto può essere riparato dall'utente. Qualsiasi lavoro di riparazione, messa a punto, manutenzione o assistenza va effettuato esclusivamente da personale specializzato.

Questo apparato non possiede un commutatore principale; si mette sotto tensione all'inserirsi il cavo d'alimentazione.

---

# Consideraciones sobre seguridad

## Símbolos de seguridad



Símbolo de referencia a la documentación. Si el producto va marcado con este símbolo, consultar la documentación del producto a fin de obtener mayor información sobre el producto.

### **WARNING**

Una **WARNING** en la documentación señala un riesgo que podría resultar en lesiones o la muerte.

### **CAUTION**

Una **CAUTION** en la documentación señala un riesgo que podría resultar en averías al equipo.

No proseguir después de un símbolo de **WARNING** o **CAUTION** hasta no haber entendido las condiciones peligrosas y haber tomado las medidas apropiadas.

Este aparato se enmarca dentro de la clase I de seguridad y se encuentra protegido por una borna de puesta a tierra. Es preciso que exista una puesta a tierra continua desde la toma de alimentación eléctrica hasta las bornas de los cables de entrada del aparato, el cable de alimentación o el juego de cable de alimentación suministrado. Si existe la probabilidad de que la protección a tierra haya sufrido desperfectos, desenchufar el cable de alimentación hasta haberse subsanado el problema.

Puesta a tierra del cable de la red local (LAN):

- Si la LAN abarca un área cuyo suministro eléctrico proviene de más de una red de distribución de electricidad, cerciorarse de que las puestas a tierra estén conectadas entre sí de modo seguro.
- Es posible que los cables de la LAN se vean sometidos de vez en cuando a voltajes momentáneos que entrañen peligro (rayos o alteraciones en la red de energía eléctrica). Manejar con precaución los componentes de metal de la LAN que estén al descubierto.

Este aparato no contiene pieza alguna susceptible de reparación por parte del usuario. Todas las reparaciones, ajustes o servicio de mantenimiento debe realizarlos solamente el técnico.

Este producto no tiene interruptor de potencia; se activa cuando se enchufa el cable de alimentación.

---

## Safety Information (Japanese)

---

### 安全性の考慮

#### 安全記号

マニュアル参照記号。製品にこの記号がついている場合はマニュアルを参照し、注意事項等をご確認ください。

**警告** マニュアル中の「警告」は人身事故の原因となる危険を示します。

**注意** マニュアル中の「注意」は装置破損の原因となる危険を示します。

「警告」や「注意」の項は飛ばさないで必ずお読みください。危険性に関する記載事項をよく読み、正しい手順に従った上で次の事項に進んでください。

これは安全性クラス I の製品で保護用接地端子を備えています。主電源から製品の入力配線端子、電源コード、または添付の電源コード・セットまでの間、切れ目のない安全接地が存在することが必要です。もしこの保護回路が損なわれたことが推測される場合は、接地が修復されるまで電源コードを外しておいてください。

LAN ケーブルの接地に関して:

- もし貴社の LAN が複数の配電システムにより電力を受けている領域をカバーしている場合には、それらのシステムの安全接地が確実に相互に結合されていることを確認してください。
- LAN ケーブルは時として危険な過度電圧 (例えば雷や、配電設備の電力網での障害) にさらされることがあります。露出した金属部分の取扱には十分な注意を払ってください。

本製品の内部にはユーザーが修理できる部品はありません。サービス、調整、保守および修理はサービス訓練を受けた専門家におまかせください。

本製品には電源スイッチがありません。電源コードを接続したとき電源入となります。

---

## Regulatory Statements

### FCC Statement (For U.S.A. Only) Federal Communications Commission Radio Frequency Interference Statement



**Warning:** This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with the instruction manual, it may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

If this equipment causes interference to radio reception (which can be determined by unplugging the power cord from the equipment) try these measures: Re-orient the receiving antenna. Relocate the equipment with respect to the receiver. Plug the equipment and receiver into different branch circuits. Consult your dealer or an experienced technician for additional suggestions.

### VCCI Class 1 (For Japan Only)

この装置は、第一種情報装置(商工業地域において使用されるべき情報装置)で商工業地域での電波障害防止を目的とした情報処理装置等電波障害自主規制協議会(VCCI)基準に適合しております。

従って、住宅地域またはその隣接した地域で使用すると、ラジオ、テレビジョン受信機等に受信障害を与えることがあります。

取扱説明書に従って正しい取り扱いをして下さい。

---

### Note

**This is a class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.**

---

## Declaration of Conformity

This product is designed for operation with the J3100A HP AdvanceStack Switch 2000 and is listed in the Declaration of Conformity included in the *HP AdvanceStack Switch 2000 Installation Guide*.

---

# Index

## A

AC power cords  
part numbers ... 3

## B

BBS  
obtaining software from ... 8  
bulletin board  
obtaining software from ... 8

## C

CompuServe  
obtaining software from ... 10  
countries  
AC power cords for ... 3  
customer support services  
list of ... 8–10

## D

Declaration of Conformity ... 20

## E

electrical specifications ... 11  
electromagnetic specifications ... 12  
environmental specifications ... 11

## F

FAQ (frequently asked questions) ... 7  
fax  
using to get HP product information ... 10  
frequently asked questions ... 7  
ftp  
obtaining files from HP ... 9

## H

Hourly support  
calling for ... 10  
HP FIRST Fax Retrieval Service  
using ... 10  
HP FTP Library Service  
using ... 9

## I

included parts ... 3  
installation summary ... 3–6  
Internet  
obtaining software from ... 8–9

## N

Network Phone-In Support  
phone number for ... 10

## P

parts  
included with the RPS ... 3  
physical specifications of hubs ... 11  
power specifications ... 11

## R

Regulatory statements ... 19

## S

Safety information ... 13  
software updates  
downloading electronically ... 8  
specifications  
electrical ... 11  
electromagnetic ... 12  
environmental ... 11  
physical ... 11

**T**

troubleshooting table ... 6

**W**

World Wide Web

    obtaining software from ... 8

WWW

    obtaining software from ... 8





© Copyright 1996  
Hewlett-Packard Company  
Printed in U.S.A. 3/96

Manual Part Number  
J3136-90001, Edition 1

