

# SwitchBlade Power Supply Unit Quick Install Guide



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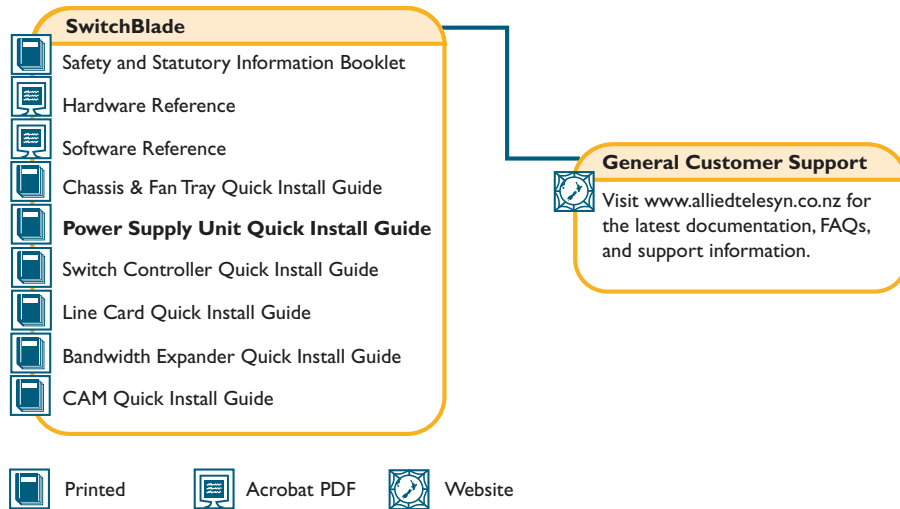
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## Documentation Roadmap



## Models Covered By This Guide

This Quick Install Guide includes information on installing the following power supply units (PSUs):

- AT-SB4161 SwitchBlade AC Power Supply Unit
- AT-SB4162 SwitchBlade AC Power Supply Unit
- AT-SB4161-80 SwitchBlade DC Power Supply Unit
- AT-SB4162-80 SwitchBlade DC Power Supply Unit

Quick Install Guide updates can be downloaded from [www.alliedtelesyn.co.nz/support/switchblade/](http://www.alliedtelesyn.co.nz/support/switchblade/).

## Package Contents

The following items are included with each SwitchBlade PSU:

- One AC or DC power supply unit
- One IEC power cord (AC models only)
- One Power Supply Unit Quick Install Guide
- One Safety and Statutory Information booklet
- One warranty card

The following related items that can be purchased separately:

- Blank faceplates for PSU bays (AT-SB4192)

Contact your sales representative if any items are damaged or missing.

# Installing A Power Supply Unit (PSU)



*All AC and DC versions of this equipment must be earthed.*



*PSUs can be hot swapped providing that the system has been designed for N+1 redundancy. The absolute minimum PSUs required for continued operation varies with the specific configuration; however as a general rule, when swapping PSUs, the SwitchBlade 8 (AT-SB4108) will continue to operate as long as two functional PSUs remain in place. The SwitchBlade 4 (AT-SB4104) will continue to operate as long as one functional PSU remains in place.*

## Follow these steps to install a PSU:

### 1. Read the safety information

The *SwitchBlade Safety and Statutory Information* booklet includes all relevant safety information. A copy of the safety booklet is supplied with each PSU. It can also be found on the CD-ROM that ships with every switch controller and every chassis, or can be downloaded from [www.alliedtelesyn.co.nz/support/switchblade/](http://www.alliedtelesyn.co.nz/support/switchblade/).

### 2. Gather the tools and equipment you will need

To loosen or secure the PSU's mounting screws you will need a Phillips #2 screwdriver.

### 3. Choose a PSU bay

If you are using a SwitchBlade model AT-SB104-80 or AT-SB104-00, either PSU bay can be filled first.

If you are using a SwitchBlade model AT-SB4108-00, you should fill the PSU bays from left to right. For this model, unless replacing an existing PSU, choose the empty PSU bay that is nearest to the chassis' front left-hand corner.

If you are using a SwitchBlade model AT-SB4108-60, fill the centre PSU bay first, followed by the bays on either side. For this model it is not important in which order the two side PSU bays are filled, as long as the centre bay is filled first.

### 4. Prepare the PSU

In an antistatic environment, remove the PSU from its packing material. Be sure to observe ESD precautions.

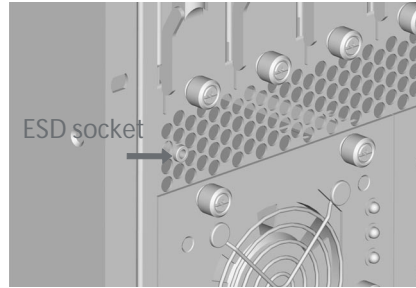


*Do not attempt to install a PSU without observing correct antistatic procedures. Failure to do so may damage the chassis or PSU. If you are unsure what the correct procedures are, contact your authorised Allied Telesyn distributor or reseller.*



*An ESD socket is provided on the front panel of the SwitchBlade chassis. The socket is designed to be used in conjunction with an ESD wrist strap (see Figure 1 on page -5).*

**Figure 1: ESD socket on the SwitchBlade 8 chassis.**



## 5. Remove the PSU bay faceplate or existing PSU

### To remove a blank faceplate:

Loosen the faceplate's four Phillips mounting screws until they disengage from the chassis, then remove the faceplate.



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*Keep the faceplate for future use. If you remove a PSU, replace the faceplate to prevent dust and debris from entering the chassis and to maintain proper airflow.*

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*The switch and PSU may overheat or be damaged by dust and debris if PSU bays are left uncovered.*

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### To remove an existing PSU:

Loosen the PSU's four Phillips screws until they disengage from the chassis.

Using the PSU's handle, pull the PSU out of the chassis.

## 6. Insert the PSU

Slowly and carefully slide the PSU into the chassis (see Figure 2 on page -6).

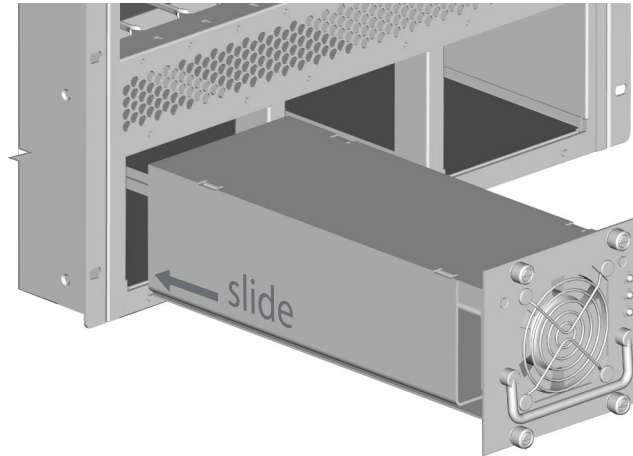
Firmly press the PSU home (until its front panel engages or nearly engages the chassis).



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*Keep the PSU in a straight alignment and insert it slowly. Forcing a misaligned PSU is likely to damage the chassis and PSU.*

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**7. Secure the PSU**

**8. Apply power to the PSU**

**For AC Models:**

panel (for the triple feed model see Figure 3 on page -7, and for the dual feed model see Figure 4 on page -7).

For the triple feed AT-SB4108-00 model, the connector for each PSU is the one located directly behind its corresponding PSU bay.

For dual feed AT-SB4108-60 models, both feeds supply the centre PSU bay, while the outside PSU bays are supplied by the feed located behind each bay.

The operating voltages vary between SwitchBlade models. These are listed below:

- For the triple feed models and 4 blade dual feed models, use a voltage supply between 100 - 240V AC.
- For the dual feed 8 blade models, use a voltage supply between 200 - 240V AC.

Make sure the Standby switch is in the Run position.

Figure 3: AC power connectors on a CH8 with triple power inlets.

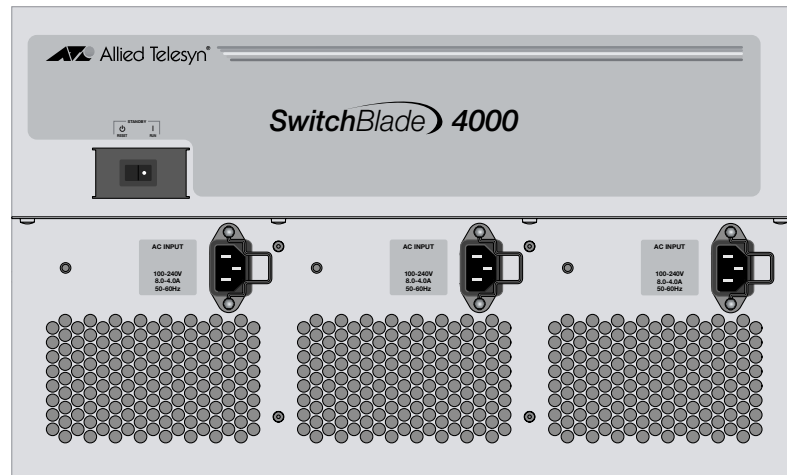
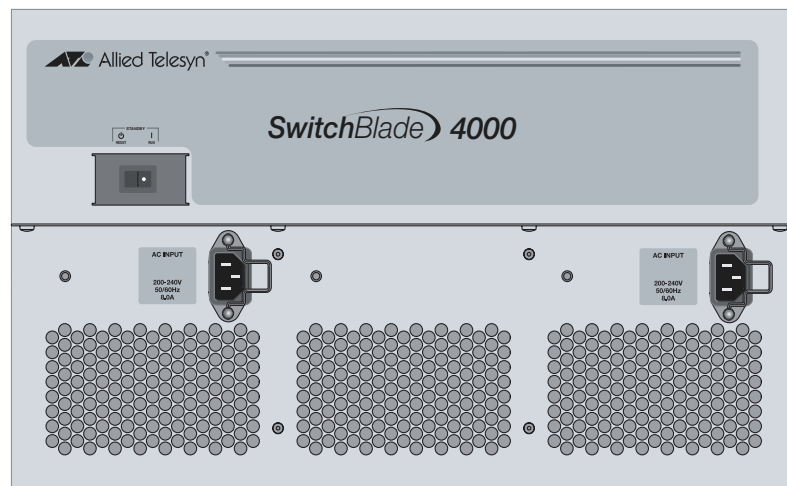


Figure 4: AC power connectors on a CH8 with dual power inlets.



#### For DC Models:

Read the [Safety Booklet](#) before connecting a SwitchBlade PSU to a DC power source. A copy of the safety booklet is included with each PSU. A PDF version is included on the Documentation and Tools CD-ROM shipped with every switch controller and every chassis, or can be downloaded from [www.alliedtelesyn.co.nz/support/switchblade/](http://www.alliedtelesyn.co.nz/support/switchblade/).



**Only trained and qualified personnel should connect a DC power supply. Due to exposed terminals, DC powered SwitchBlades should only be installed in Restricted Access Areas.**

#### DC supply cable specifications:

- Three core cable is required. Where the unit is powered by a centralised DC power, a *UL listed* tray cable should be used to connect to this power source.
- Minimum core size: 3.3 mm<sup>2</sup> (12 AWG) for chassis type AT-SB4104-80, and 8.4 mm<sup>2</sup> (8 AWG) for the chassis type AT-SB4108-80.
- Minimum cable rating: 600V, 90 degrees Celsius.

#### DC power supply specifications:

- 40-60 V DC, 48 V DC nominal.

- Supports either positive grounded or negative grounded operation.

Circuit protection:

- Use a 20 Amp circuit breaker for chassis type AT-SB4104-80
- Use a 50 Amp circuit breaker for chassis type AT-SB4108-80

**To connect the DC supply:**




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***Ensure that the supply cable is not live.***

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- Remove the transparent protective terminal cover (AT-SB4108-80 only).
- Strip the supply cable wires to expose 8mm (0.31 in.) of bare conductor. For AT-SB4108-80, terminate using a double-crimp terminal (Panduit PMNF6 or equivalent) using an approved crimping tool.
- Select a power inlet terminal.

For model AT-SB4104-80, the inlet terminal for each PSU is the terminal on the chassis' rear panel that is located directly behind the corresponding PSU bay.

For the dual feed model AT-SB4108-80, both terminals supply the centre PSU bay, while the outer PSU bays are supplied by the terminal located behind each bay.

- On the chassis' rear panel:

Connect the ground wire to the ground terminal for the corresponding PSU. (The terminals can be identified by the diagram on the switch's rear panel (see Figure 5 on page -9). Connect the positive feed to the + (positive) terminal and the negative feed to the - (negative) terminal for the corresponding PSU.

For the chassis model AT-SB4108-80, tighten the terminals to 1.8 Nm (16 pound-force in) and replace the plastic terminal cover. For the chassis model AT-SB4104-80, tighten the terminals to 1.4 Nm (12 pound-force in).

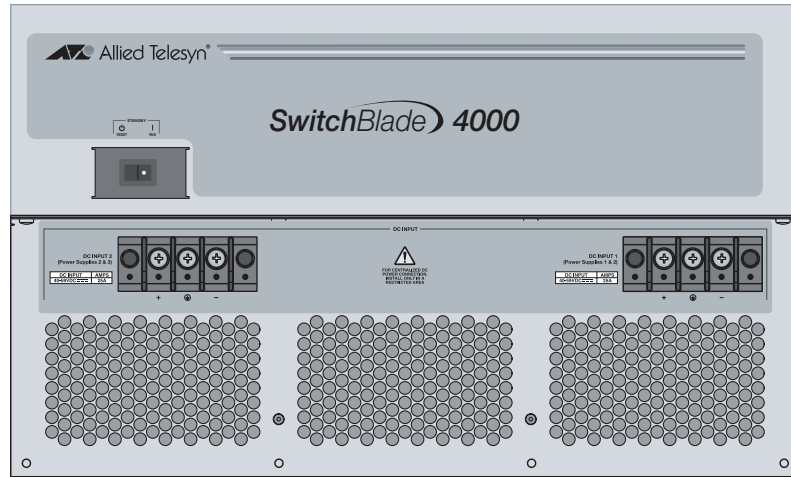



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***Check that the PSU terminals are wired to the correct polarity. The PSUs will be damaged if incorrectly connected.***

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- Replace the transparent protective terminal cover (AT-SB4108-80 only).
- Ensure that there are no exposed conductor strands.
- Secure the supply cable (to the rack framework or similar object) so that the connections are isolated from any forces applied to the cable.
- Ensure that the circuit breaker is in the Off position.
- Connect the supply-cable wires to the circuit breaker.
- Energise the circuit breaker.
- Make sure the Standby switch (on the chassis' rear panel) is in the Run position.

**Figure 5: DC power terminals on a CH8 with three power inlets.**

### 9. Check the PSU's LEDs

Once you have inserted the PSUs and powered on the chassis, check the LEDs for correct operation, using the table below as a guide.

**Table: 1 LEDs on AC and DC PSUs.**

LED	State	Function
DC Good	Green	The PSU is supplying power to the switch
Fan Good	Green	The PSU's fan is functioning
Power Present	Green	The PSU is receiving power from its supply circuit

If installed, the switch controller(s) have an LED labelled Power. This lights green to indicate that at least one PSU is operational.

More troubleshooting information can be found in the *SwitchBlade Hardware Reference*.

## Where To Find More Information

For more information on the SwitchBlade, consult the following sources:

- *Documentation and Tools CD-ROM* - The CD-ROM is bundled with every switch controller and every chassis. It contains the complete documentation set for your switch, its expansion options, and its management tools.
- *SwitchBlade Safety and Statutory Information* - This booklet provides safety and statutory information for the SwitchBlade and its accessories.
- *The SwitchBlade Hardware Reference* - This document provides detailed information on the switch and its hardware features.
- *The SwitchBlade Software Reference* - This document provides detailed information on configuring the switch and its software.
- *The SwitchBlade Chassis and Fan Tray Quick Install Guide* - This guide outlines the procedure for installing the chassis and its fan tray.

- The *SwitchBlade Switch Controller Quick Install Guide* - This guide outlines the procedure for installing switch controllers.
- The *SwitchBlade Line Card Quick Install Guide* - This guide outlines the procedure for installing line cards.
- The *SwitchBlade Bandwidth Expander Quick Install Guide* - This guide outlines the procedure for installing bandwidth expanders.
- The *CAM Quick Install Guide* - This guide outlines the procedure for installing Content Addressable Memory.
- [www.alliedtelesyn.co.nz/support/switchblade/](http://www.alliedtelesyn.co.nz/support/switchblade/) Our website provides an extensive source of product and technical information.