

SwitchBlade Power Supply Unit Quick Install Guide
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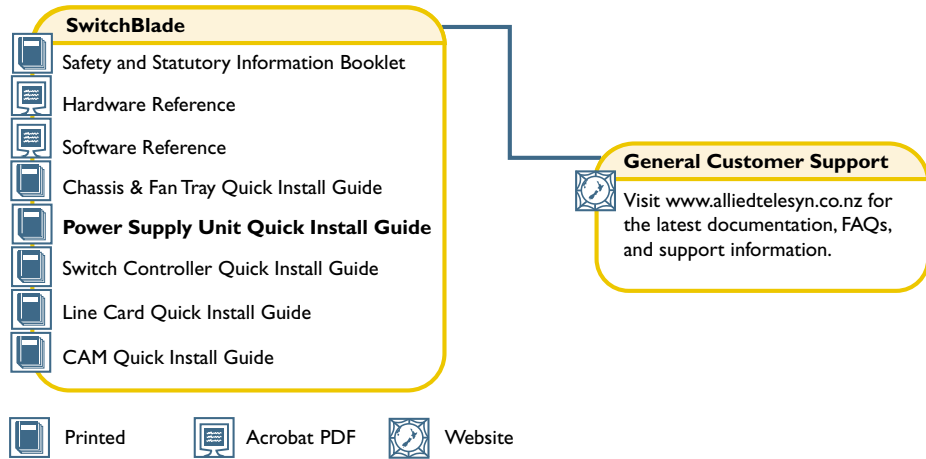
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Documentation Roadmap



Models Covered By This Guide

This Quick Install Guide includes information on installing the following units:

- AT-SB4161 SwitchBlade AC Power Supply Units
- AT-SB4161-80 SwitchBlade DC Power Supply Units

Quick Install Guide updates can be downloaded from www.alliedtelesyn.co.nz/support/switchblade/.

Package Contents

The following items are included with each SwitchBlade PSU. Contact your sales representative if any items are damaged or missing.

- 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.

Related items that can be purchased separately:

- Blank faceplates for PSU bays (AT-SB4192).

Installing a Power Supply Unit (PSU)



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



PSUs can be hot swapped. When swapping PSUs, the SwitchBlade 8 (AT-SB4108) will continue to operate as long as two functional PSUs remain in place. The SwitchBlade 4 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 each switch controller and chassis, or can be downloaded from 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

PSU bays should be filled from left to right.

Unless replacing an existing PSU, choose the empty PSU bay that is nearest to the chassis's front left-hand corner.

4. Prepare the PSU

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

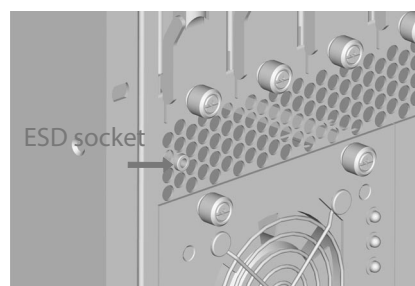


Do not attempt to install a PSU without observing correct antistatic procedures. Failure to do so may damage the chassis or PSU. If you are unsure what the correct procedures are, contact your authorised Allied Telesyn distributor or reseller.



An ESD socket is provided on the front panel of the SwitchBlade chassis. This socket is designed to be used in conjunction with an ESD wrist strap. See Figure 1 on page -4.

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.



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.



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

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

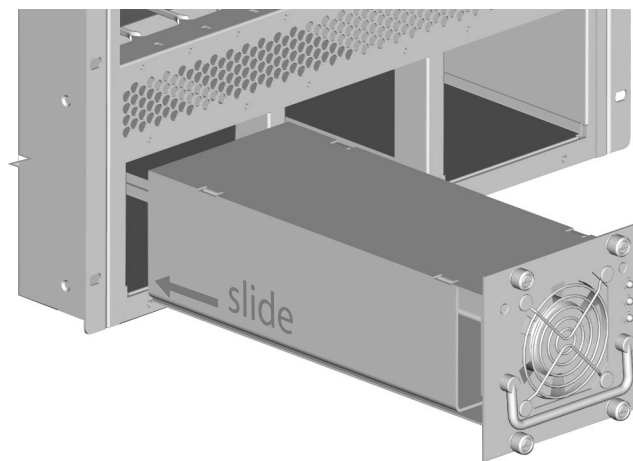
Slowly and carefully slide the PSU into the chassis (Figure 2 on page -5).

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



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

Figure 2: PSU insertion.



7. Secure the PSU

Tighten the PSU's four Phillips screws.

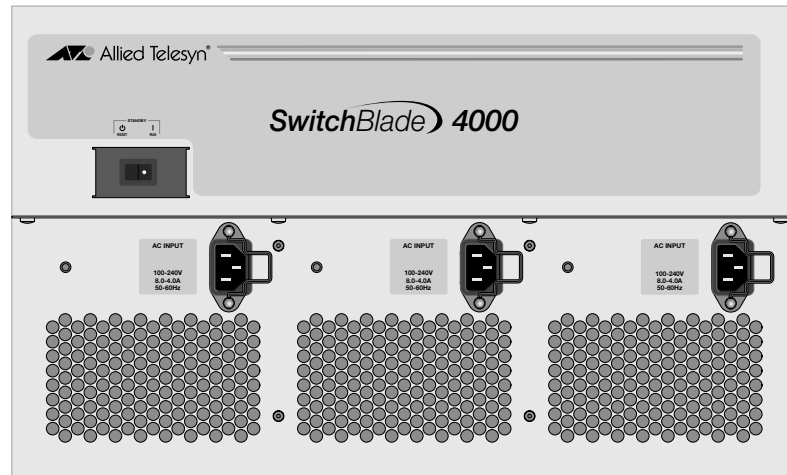
8. Apply AC power to the PSU (for AC models)

Plug the power cord into the PSU's AC power connector on the chassis's rear panel (Figure 3 on page -6). The connector for each PSU is the connector that is directly behind the corresponding PSU bay.

Also plug the power cord into an outlet that can supply a voltage of 90-264V AC.

Make sure the Standby switch (on the chassis's rear panel) is in the Run position.

Figure 3: AC power connectors.



9. Apply DC power to the chassis (for DC models)

Read the *Safety and Statutory Information* booklet before connecting a DC power supply. A copy of this booklet is included with each PSU. A PDF version is included on the Documentation and Tools CD-ROM shipped with each switch controller and chassis, or can be downloaded from www.alliedtelesyn.co.nz/support/switchblade/.



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

DC supply cable specifications:

- Number of wires (cores): 3 (only 2 wires are required if the switch is ground bonded via the separate ground terminal on the chassis's rear panel)
- Minimum size: 3.3 mm² (12 AWG)
- Minimum cable rating: 600V, 90 degrees Celsius

DC power supply specifications:

- 48 V DC (36-59 V DC is acceptable)
- Either positive grounded or negative grounded

Circuit protection:

- Use a 20 Amp circuit breaker

To connect the DC supply:



Ensure that the supply cable is not live.

- Strip the supply cable wires to expose 8mm (0.31 in.) of bare conductor
- If using 3 wires, on the chassis's 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 4 on

page -7). Tighten the terminal to between 0.6 and 0.8 Nm (0.041 to 0.055 pound-force per foot)

If using separate ground bonding, connect a separate ground wire to the ground bonding terminal on the chassis's rear panel

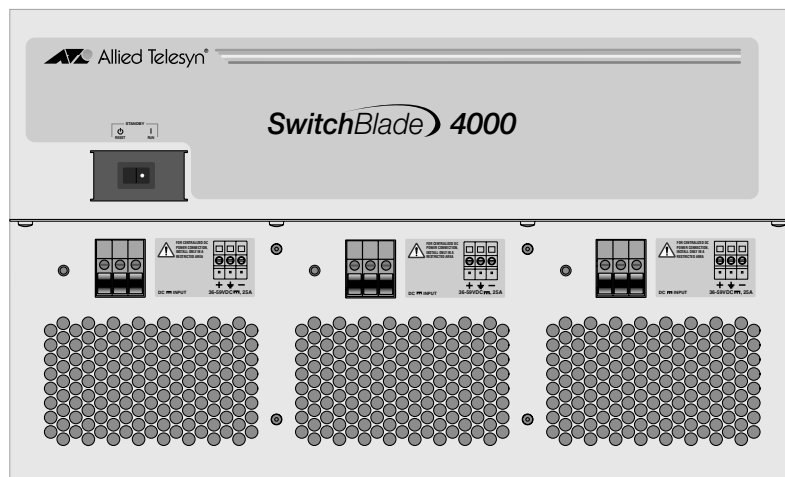
- c) On the chassis's rear panel, connect the positive feed to the + (positive) terminal and the negative feed to the - (negative) terminal for the corresponding PSU. Tighten the terminals to between 0.6 and 0.8 Nm (0.041 to 0.055 pound-force per foot)



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

- d) Ensure that there are no exposed conductor strands
- e) Secure the supply cable (to the rack framework or similar object) so that the connections are isolated from any forces applied to the cable
- f) Ensure that the circuit breaker is in the Off position
- g) Connect the supply-cable wires to the circuit breaker
- h) Energise the circuit breaker
- i) Make sure the Standby switch (on the chassis's rear panel) is in the Run position.

Figure 4: DC power terminals.



10. Check the PSU's LEDs.

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, which lights green to indicate that at least one PSU is operational.

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

How Many PSUs Do You Need?

The number of PSUs required depends on the combination of switch controllers and line controllers that is installed.

If up to three line cards and two switch controllers, or four line cards and one switch controller are installed (i.e., any five bays are in use), one PSU is sufficient. Installing a second PSU provides $N+1$ redundancy.

If more than three line cards and two switch controllers, or four line cards and one switch controller are installed (i.e., six or more bays are in use), two PSUs are required. Installing a third PSU in the SwitchBlade CH8 chassis provides $N+1$ redundancy.

Where To Find More Information

Sources of further information:

- The Documentation and Tools CD-ROM bundled with each switch controller and chassis, which contains the complete Documentation Set for your switch and its expansion options, as well as tools for managing the switch.
- The *SwitchBlade Safety and Statutory Information Booklet*, which provides safety and statutory information for the SwitchBlade and its accessories.
- The *SwitchBlade Hardware Reference*, which provides detailed information on the switch and its hardware features.
- The *SwitchBlade Software Reference*, which provides detailed information on configuring the switch and its software.
- The *SwitchBlade Chassis and Fan Tray Quick Install Guide*, which outlines the procedure for installing chassis and fan trays.
- The *SwitchBlade Switch Controller Quick Install Guide*, which outlines the procedure for installing switch controllers.
- The *SwitchBlade Line Card Quick Install Guide*, which outlines the procedure for installing line cards.
- The *CAM Quick Install Guide*, which outlines the procedure for installing Content Addressable Memory.
- www.alliedtelesyn.co.nz/support/switchblade/