



AT-SB×3106WMB

Wall Mounting Brackets for the AT-SBx3106 Access Edge Chassis Switch



Installation Guide

613-001941 Rev. A



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Preface

This guide contains instructions on how to install the AT-SBx3106 Chassis on a wall with the AT-SBx3106WMB Wall Mounting Brackets. This preface contains the following sections:

- □ "Safety Symbols Used in this Document" on page 8
- □ "Contacting Allied Telesis" on page 9

Safety Symbols Used in this Document

This document uses the following conventions.

Note

Notes provide additional information.



Caution

Cautions inform you that performing or omitting a specific action may result in equipment damage or loss of data.



Warning

Warnings inform you that performing or omitting a specific action may result in bodily injury.



Warning

Laser warnings inform you that an eye or skin hazard exists due to the presence of a Class 1 laser device.



Warning

Fan warnings inform you of danger from hazardous moving fan blades.

Contacting Allied Telesis

If you need assistance with this product, you may contact Allied Telesis technical support by going to the Support & Services section of the Allied Telesis web site at **www.alliedtelesis.com/support**. You can find links for the following services on this page:

- 24/7 Online Support Enter our interactive support center to search for answers to your product questions in our knowledge database, to check support tickets, to learn about RMAs, and to contact Allied Telesis technical experts.
- □ USA and EMEA phone support Select the phone number that best fits your location and customer type.
- ☐ Hardware warranty information Learn about Allied Telesis warranties and register your product online.
- ☐ Replacement Services Submit a Return Merchandise Authorization (RMA) request via our interactive support center.
- Documentation View the most recent installation and user guides, software release notes, white papers, and data sheets for your products.
- □ Software Downloads Download the latest software releases for your managed products.

For sales or corporate information, go to www.alliedtelesis.com/purchase.

Preface

Installation Instructions

The following instructions explain how to install the AT-SBx3106 Chassis on a wall with the AT-SBx3106WMB Wall Mounting Brackets. The instructions contain the following sections:

- □ "AT-SBx3106 Chassis and AT-SBx3106WMB Brackets" on page 12
- □ "Required Tools" on page 13
- "Selecting a Wall Location" on page 14
- □ "Reviewing Safety Precautions" on page 20
- "Checking the Components of the AT-SBx3106WMB Brackets" on page 25
- □ "Marking the Wall Locations for the Screw Holes" on page 26
- "Installing the Screws in the Wall" on page 30
- "Installing the Brackets on the Chassis" on page 32
- "Installing the Chassis on the Wall" on page 35
- "Installing the Vent Covers" on page 39



Warning



THE CHASSIS MUST BE INSTALLED BY A QUALIFIED BUILDING CONTRACTOR. SERIOUS INJURY OR DEATH MAY RESULT IF THE CHASSIS IS NOT PROPERLY SECURED TO THE WALL.

AT-SBx3106 Chassis and AT-SBx3106WMB Brackets

Figure 1 illustrates the AT-SBx3106 Chassis as it looks on the wall with the AT-SBx3106WMB Wall Mounting Brackets.



Caution

The chassis must be installed on the wall in the orientation shown in Figure 1. The fan module must be on top and the slot openings for the line cards and power supplies must be on the right. The chassis may experience inadequate ventilation and may overheat and fail if it is installed on the wall in a different position than the one shown in the figure.

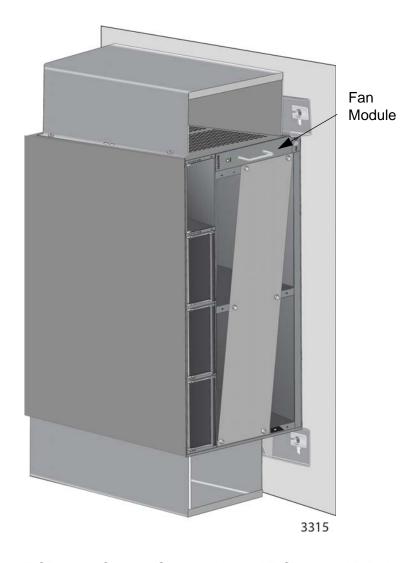


Figure 1. AT-SBx3106 Chassis Switch with the AT-SBx3106WMB Wall Mounting Brackets

Required Tools

This section lists the tools necessary for installing the chassis on a wall with the provided screws.

Concrete Wall

The brackets come with hex-washer head lag screws for a concrete wall. The screws are blue and have the following specifications:

□ Length: 1 3/4 in.□ Diameter: 1/4 in.□ Hex size: 5/16 in.□ Quantity: 4

The following tools are required to install the chassis on a concrete wall with the provided screws:

- ☐ Hammer drill
- □ 3/16" carbide drill bit
- □ 5/16" socket or wrench

Wallboard

The brackets come with hex-washer head lag screws for a wallboard wall. The screws are silver and have the following specifications:

□ Length: 2 1/2 in.
□ Diameter: 1/4 in.
□ Hex size: 3/8 in.
□ Quantity: 4

The following tools are required to install the chassis on wallboard with the provided screws:

- □ 3/8" socket or wrench
- □ 3/16" drill bit
- Stud finder capable of identifying the middle of studs and hot electrical wiring



Caution

The supplied screws may not be appropriate for all concrete or wallboard walls. A qualified building contractor should determine the appropriate hardware requirements for the wall prior to installing the chassis.

Selecting a Wall Location

The following sections contain information on how to select a wall location for the chassis.

Minimum Dimensions of the Reserved Wall Area

This section discusses the recommended minimum dimensions of the reserved wall area for the chassis.

Note

You might not be able to install or service the components of the chassis if the reserved wall area is smaller than the recommended minimum sizes given in this section.

The recommended minimum dimensions of the wall area for the unit depend on whether the chassis has AC or DC power supplies. The reserved wall area for a chassis that has AC power supplies has to be larger than a chassis with DC power supplies, because AC power supplies are powered on from the back panel of the chassis, whereas DC power supplies are powered on from the front panel.

The minimum dimensions for the wall area for a chassis that has AC power supplies are listed here:

Height: 84 cm (33 in.)Width: 121 cm (48 in.)

The dimensions are illustrated in Figure 2 on page 15.

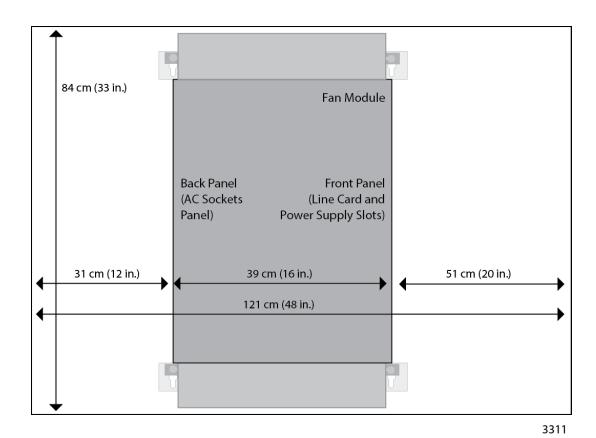


Figure 2. Minimum Area Dimensions When the Chassis has AC Power Supplies

The front panel should have a minimum space of 51 cm (20 in.) so that you can install and service the line cards and power supplies. The back panel should have a minimum space of 31 cm (12 in.) so that you can connect the AC power cords.

The minimum dimensions for the reserved wall area for a chassis that has DC power supplies are listed here:

☐ Height: 84 cm (33 in.)

Width: 105 cm (42 in.)

The dimensions are illustrated in Figure 3 on page 16.

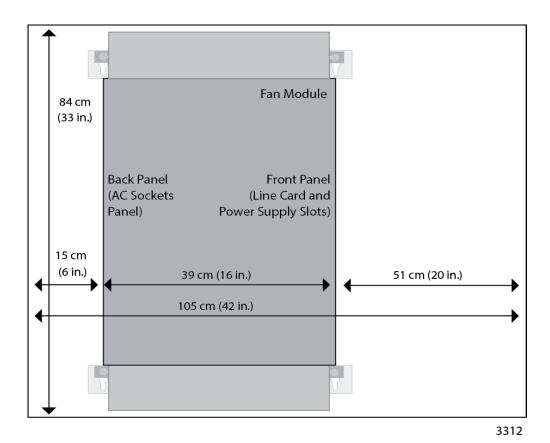


Figure 3. Minimum Area Dimensions When the Chassis has DC Power Supplies

The minimum space on the back panel of the chassis can be reduced to 15 cm (6 in.) when the device has DC power supplies because the power wires are connected to the front panel of the power supplies. However, the minimum space on the front panel must remain at 51 cm (20 in.) to allow for the installation of the line cards and power supplies.

Wallboard Requirements

Please observe the following guidelines if you are installing the chassis on wallboard:

- ☐ The brackets are designed for wood studs at 16" intervals.
- ☐ You should use a stud finder to locate and mark the middle of the studs and to identify the locations of metal conduits and any hot AC wiring in the reserved wall area.
- ☐ All four bracket screws should be fastened to stude in the wallboard. Refer to Figure 4 on page 17.

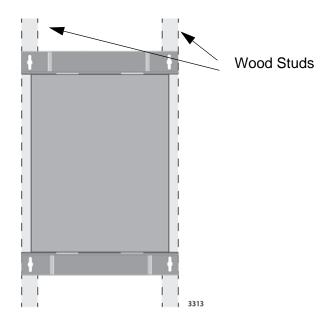


Figure 4. Brackets Aligned with Wallboard Studs

☐ The brackets should NOT be fasten intra-stud or with only two of the bracket screws fastened to a wall stud. Refer to Figure 5.

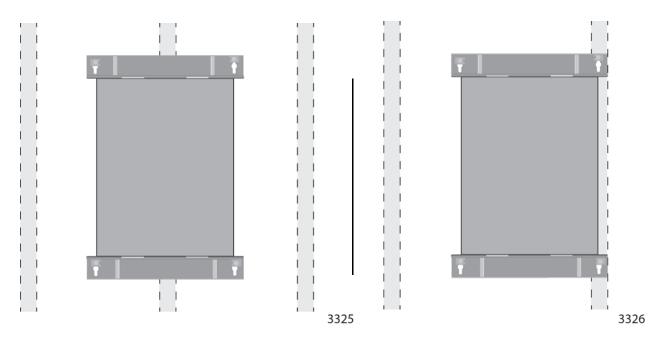


Figure 5. Incorrect Installations on Wallboard



Caution

Do not install the chassis on metal studs. Metal studs may not be strong enough to hold an object as heavy as the chassis.

General Wall Requirements

Please perform the following procedure to determine the suitability of the site for the chassis:

1. Verify that the wall material is strong enough to safely support the weight of the chassis. A fully loaded chassis can weight as much as 30 kg (67.1 lb.)



Warning

Injury to yourself or others or damage to the equipment may result if the wall material that cannot support the device.

- 2. Verify that the power outlets for the chassis are located near the unit and are easily accessible.
- 3. Verify that the power sources are on different A/C circuits to protect the unit from a power circuit failure.
- 4. Verify that the site has dedicated power circuits or power conditioners to supply reliable electrical power to the network devices.
- 5. Verify that the site allows for easy access to the ports on the front of the chassis so that you can easily connect and disconnect the network cables, as well as view the unit's LEDs.
- 6. Verify that the site allows for adequate air flow around the unit and through the cooling vents. The ventilation direction for the chassis when it is mounted on wall is from bottom to top, with the fan module drawing air out of the chassis. The power supplies have fans that draw air from right to left.
- 7. Verify that the site has a reliable and earth (grounded) power supply source, preferably dedicated and filtered.
- 8. Verify that the twisted pair cabling is not exposed to sources of electrical noise, such as radio transmitters, broadband amplifiers, power lines, electric motors, and fluorescent fixtures.
- 9. Verify that the site protects the chassis from moisture, water, and dust.

Here are other guidelines to consider:

- ☐ Switch ports are suitable for intra-building connections, or where non-exposed cabling is required.
- Do not place objects on top of the chassis.
- □ The power cords provided with the AT-SBxPWRSYS1 and AT-SBxPWRPOE1 Power Supplies for some regions, including North America, have 20 Amp, 125 V NEMA 5-20P plugs. The plug is only compatible with a NEMA 5-20R receptacle. See Figure 6 on page 19.

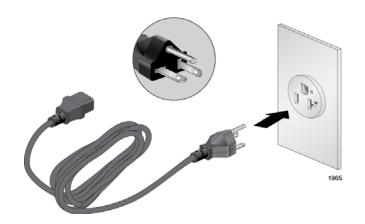


Figure 6. 100 - 125 VAC 125 V NEMA 5-20 Plug and Receptacle

Reviewing Safety Precautions

Please review the following safety precautions before you begin to install the chassis.

Note

The A indicates that a translation of the safety statement is available for viewing in the "Translated Safety Statements" document on our web site at

http://www.alliedtelesis.com/support.



Warning



THE CHASSIS MUST BE INSTALLED BY A QUALIFIED BUILDING CONTRACTOR. SERIOUS INJURY OR DEATH MAY RESULT IF THE CHASSIS IS NOT PROPERLY SECURED TO THE WALL.



Warning

Class 1 Laser product. & L1



Warning

Do not stare into the laser beam. & L2



Warning

To prevent electric shock, do not remove the cover. No user-serviceable parts inside. This unit contains hazardous voltages and should only be opened by a trained and qualified technician. To avoid the possibility of electric shock, disconnect electric power to the product before connecting or disconnecting the LAN cables. 65-



Warning

Do not work on equipment or cables during periods of lightning activity. \mathscr{G} E2



Warning

Power cord is used as a disconnection device. To de-energize equipment, disconnect the power cord. & E3



Warning

Class I Equipment. This equipment must be earthed. The power plug must be connected to a properly wired earth ground socket outlet. An improperly wired socket outlet could place hazardous voltages on accessible metal parts. & E4

Note

Pluggable Equipment. The socket outlet shall be installed near the equipment and shall be easily accessible. &> E5



Caution

Air vents must not be blocked and must have free access to the room ambient air for cooling. 6-5 E6



Warning

Operating Temperature. This product is designed for a maximum ambient temperature of 40° degrees C. & E7

Note

All Countries: Install product in accordance with local and National Electrical Codes. 627 E8



Warning

When installing this equipment, always ensure that the frame ground connection is installed first and disconnected last. & E11



Caution

Circuit Overloading: Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on over current protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern. & E21



Caution

Risk of explosion if battery is replaced by an incorrect type. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Attention: Le remplacement de la batterie par une batterie de type incorrect peut provoquer un danger d'explosion. La remplacer uniquement par une batterie du même type ou de type équivalent recommandée par le constructeur. Les batteries doivent être éliminées conformément aux instructions du constructeur. & E22



Warning

Mounting of the equipment in the rack should be such that a hazardous condition is not created due to uneven mechanical loading. & E25



Warning

The AT-SBxFAN06 Fan Module has hazardous moving parts. Keep fingers away from moving fan blades. & E48



Warning

Remove all metal jewelry, such as rings and watches, before installing or removing a line card from a powered-on chassis. &> E26



Warning

The chassis may be heavy and awkward to lift. Allied Telesis recommends that you get assistance when mounting the chassis in an equipment rack. & E28



Warning

This unit might have more than one power source. To reduce the risk of electric shock, disconnect all power sources before servicing the unit. & E30

Note

If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than the room ambient temperature. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature (Tmra). 627



Caution

Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised. & E36



Warning

Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuits (e.g., use of power strips).

E37



Warning

To reduce the risk of electric shock, the PoE ports on this product must not connect to cabling that is routed outside the building where this device is located. & E40



Warning



Caution

An Energy Hazard exists inside this equipment. Do not insert hands or tools into open chassis slots or sockets. & E44



Warning

This equipment shall be installed in a Restricted Access location. 627 E45

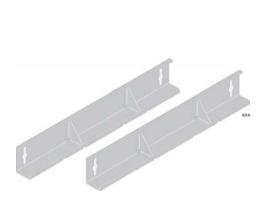


Warning

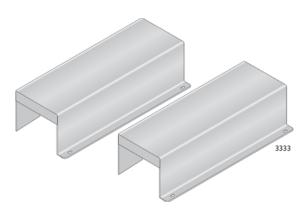
High Leakage Current exists in this chassis. Connect external ground wire before connecting AC power supply(s). & E46

Checking the Components of the AT-SBx3106WMB Brackets

Check the shipping package for the items in Figure 7. If any item is missing, contact Allied Telesis for assistance.



Two wall mounting brackets



Two vent covers



Four washers



Twelve bracket and vent cover screws



Four hex-washer head lag screws for wallboard:

Length: 2 1/2 in.Diameter: 1/4 in.Hex size: 3/8 in.Color: silver



Four hex-washer head lag screws for concrete:

Length: 1 3/4 in.Diameter: 1/4 in.Hex size: 5/16 in.Color: blue

Figure 7. Components of the AT-SBx3106WMB Wall Mounting Brackets

Marking the Wall Locations for the Screw Holes

To mark the screw holes for the brackets on the wall, perform the following procedure:

1. Position one of the wall brackets as the top bracket in the reserved wall area for the chassis. (Either bracket can be the top bracket because they are identical.)

Please review the following guidelines as you position the bracket on the wall:

- ☐ The bracket must be level with the floor.
- ☐ The minimum dimensions of the reserved area around the bracket are given in Figure 8. There must not be any objects or other devices within the area.

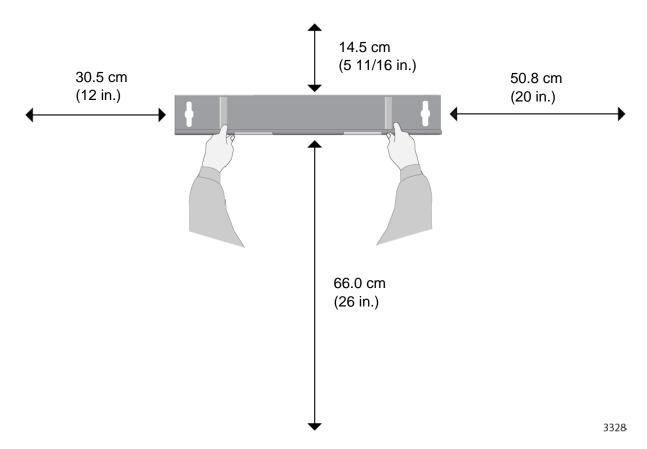


Figure 8. Minimum Area Dimensions When Positioning the Bracket on the Wall

☐ The reserved area in Figure 8 is for the chassis if it will have AC power supplies. If the chassis will have DC power supplies, you may reduce the reserved area for the back panel (left side) from

- 31.0 cm (12 in.) to 15.0 cm (6 in.).
- ☐ If you are installing the chassis on wallboard, be sure to position the screw holes over the centers of the studs in the wall. If you have not already done so, use a stud finder to locate the studs. For additional recommendations, refer to "Wallboard Requirements" on page 16.



Caution

Do not install the chassis on a wall that has metal studs. Metal studs may not be strong enough to safely support the chassis.

2. After positioning the bracket on the wall, use a pen or pencil to mark the wall with the locations of the two screw holes in the bracket. Refer to Figure 9.



Figure 9. Marking the Screw Holes for the Top Bracket

3. Measure 50.6 cm (19 7/8 in.).vertically down from the hole marks you made in the previous step and mark the two screw holes for the bottom bracket. Refer to Figure 10 on page 28.

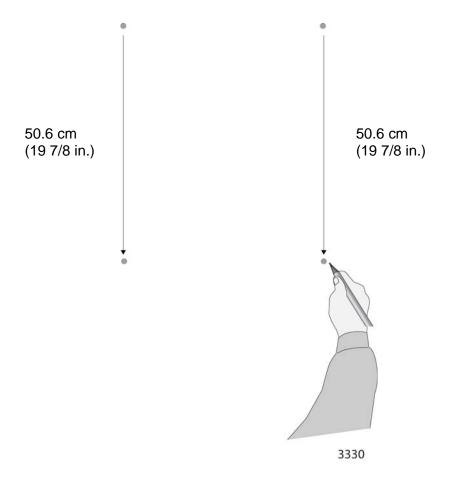


Figure 10. Marking the Screw Holes for the Bottom Bracket

4. Double-check the measurements of the marks on the wall for the screw holes to be sure they are correct. Refer to Figure 11 on page 29.

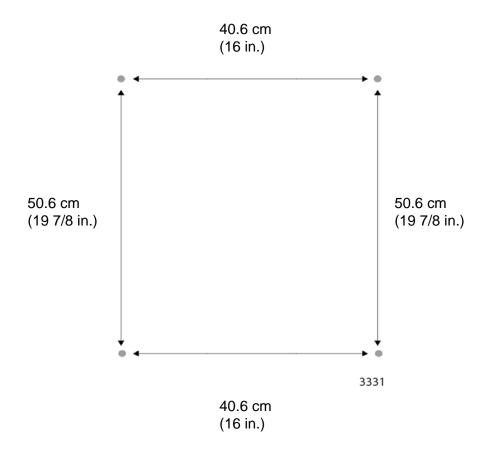


Figure 11. Screw Hole Measurements

5. Go to "Installing the Screws in the Wall" on page 30.

Installing the Screws in the Wall

This section contains instructions on how to install the provided screws in the wall.



Warning

Be sure to observe all appropriate safety rules, including the use of safety glasses, when using power tools.

Concrete Wall

To use the four blue 1 3/4" concrete screws that come with the brackets, perform the following procedure:

- Use a drill and 3/16" carbide drill bit to pre-drill the four screw holes you marked on the wall in the previous section. Please review the following guidelines:
 - ☐ Prior to drilling, set the drill to hammer and rotation mode. The modes break up the concrete and clean out the hole.
 - ☐ The holes should be 2" deep, which is 1/4" deeper that the concrete screws.
 - Allied Telesis recommends cleaning out the holes with a brush or compressed air.
- 2. Use a 5/16" socket or wrench to slowly install the concrete screws into the holes. Do not install the screws flush with the wall. They should extend 1.25 cm (1/2 in.) from the wall. Refer to Figure 12.

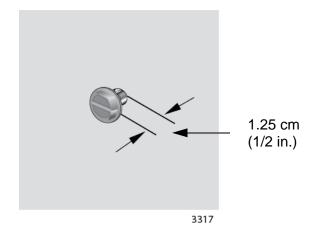


Figure 12. Installing the Screws

3. Go to "Installing the Brackets on the Chassis" on page 32.

Wallboard

To install the four 2 1/2" wood screws, perform the following procedure:

- 1. Use a drill and 3/16" drill bit to pre-drill the four screw holes you marked on the wall in the previous section.
- 2. Use a 3/8" socket or wrench to install the screws at the points you marked on the wall. Do not install the screws flush with the wall. They should extend 1.25 cm (1/2 in.) from the wall. Refer to Figure 12 on page 30.
- 3. Go to "Installing the Brackets on the Chassis" on page 32.

Installing the Brackets on the Chassis

This procedure installs the wall brackets on the chassis.

Note

Do not remove the shipping brace from the front of the chassis until after the unit is installed on the wall. You might bend the chassis and cause misalignment of the slots and card guides if you lift the chassis without the shipping brace. You should reinstall the shipping brace if you have already removed it. Refer to Figure 13.



Caution

If the chassis already contains line cards and power supplies, you should remove them and reinstall the shipping brace before installing the chassis on the wall.

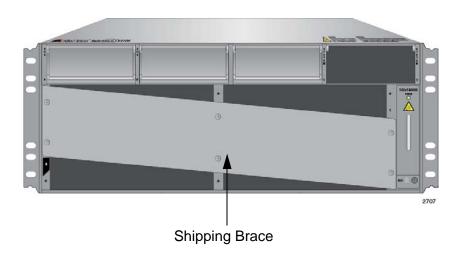


Figure 13. Shipping Brace

To install the brackets on the chassis, perform the following procedure:

 With a #2 Phillips-head screwdriver, remove the two pre-installed rack mount brackets from the sides of the chassis. Refer to Figure 14 on page 33.

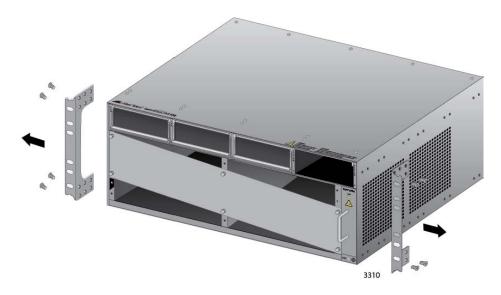


Figure 14. Removing the Equipment Rack Brackets

2. Turn the chassis upside down on a table or desk. Refer to Figure 15.

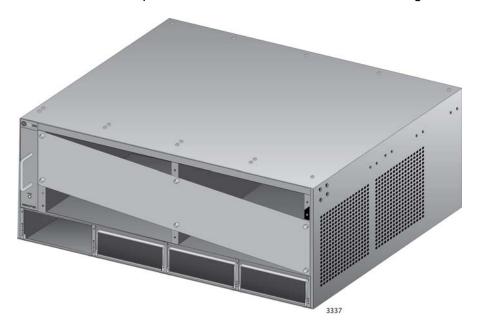


Figure 15. Turning the Chassis Upside Down on a Table

3. With a #2 Phillips-head screwdriver, attach the wall mounting brackets to the sides on the chassis. Each bracket should be attached with four screws. The screws come with the brackets. Refer to Figure 16 on page 34.

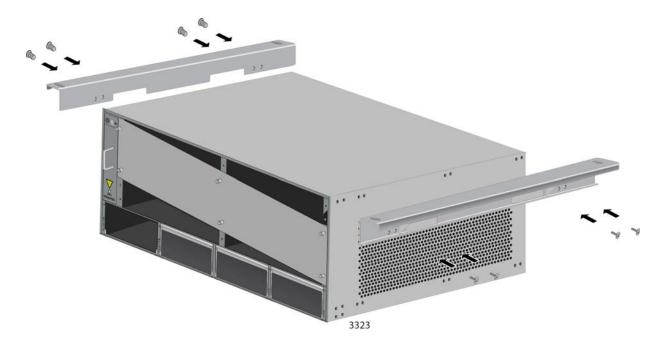


Figure 16. Attaching the Wall Mounting Brackets to the Chassis

4. Go to "Installing the Chassis on the Wall" on page 35.

Installing the Chassis on the Wall

To install the chassis on the wall, perform the following procedure:



Warning

The chassis is heavy. You might injure yourself or damage the equipment if you attempt to perform this procedure alone. Allied Telesis recommends a minimum of three people for the procedure. Two people should lift the chassis and another person should secure it with the bracket screws.

1. Have two people lift the chassis onto the screws on the wall. Refer to Figure 17.

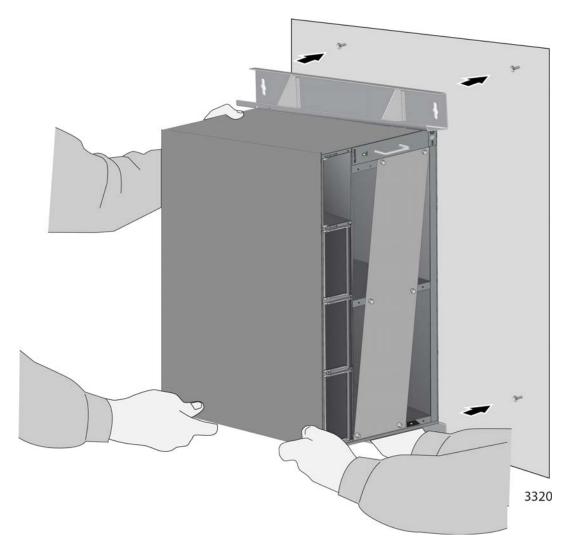


Figure 17. Placing the Chassis on the Wall

2. Gently lower the chassis until it is resting on the screws. Refer to Figure 18.

Note

As a safety precaution, the individuals who are holding the chassis should continue to support it until the completion of step 4.

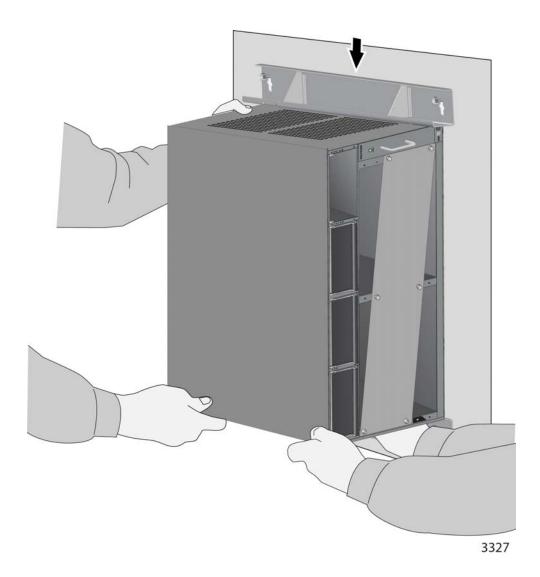


Figure 18. Lowering the Chassis onto the Screws

3. Install the four washers included with the brackets by sliding them between the screws and brackets. Refer to Figure 19 on page 37.

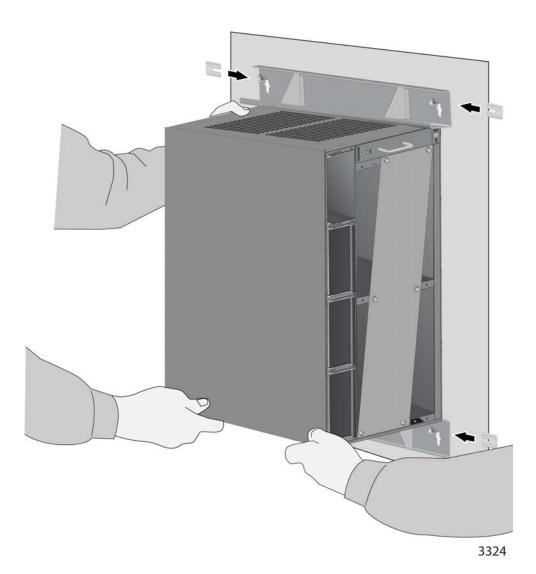


Figure 19. Installing the Washers

4. Tighten the four bracket screws to secure the brackets and chassis to the wall. Refer to Figure 20 on page 38. The provided concrete screws require a 5/16" socket or wrench. The provided wood screws require a 3/8" socket or wrench.

Tighten the screws until they are fully seated and then tighten another 1/8 to 1/4 turn.

Note

Be careful not to over-tighten the screws or you might damage the threads in the holes.

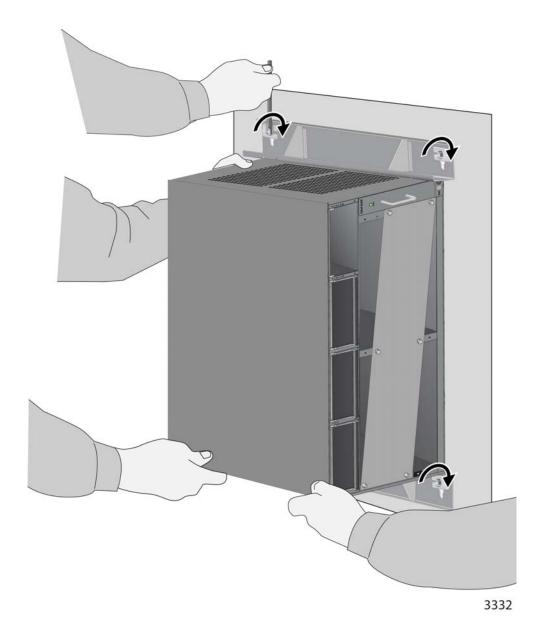


Figure 20. Tightening the Screws

5. Go to "Installing the Vent Covers" on page 39.

Installing the Vent Covers

To install the vent covers, perform the following procedure:

1. Slide one of the vent covers that come with the brackets over the top vents of the chassis. The tabs on the cover fit into the slots on the bracket. Refer to Figure 21.

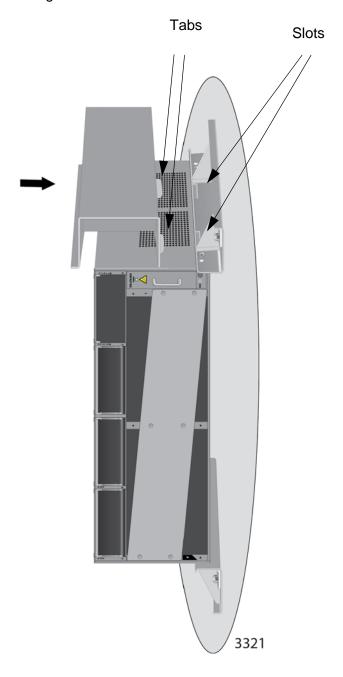


Figure 21. Installing the Top Vent Cover

2. Secure the vent cover to the chassis with two screws. Refer to Figure 22.



Figure 22. Securing the Top Vent Cover

3. Slide the second vent cover over the bottom vents. The tabs on the cover fit into the slots on the bracket. Refer to Figure 23.

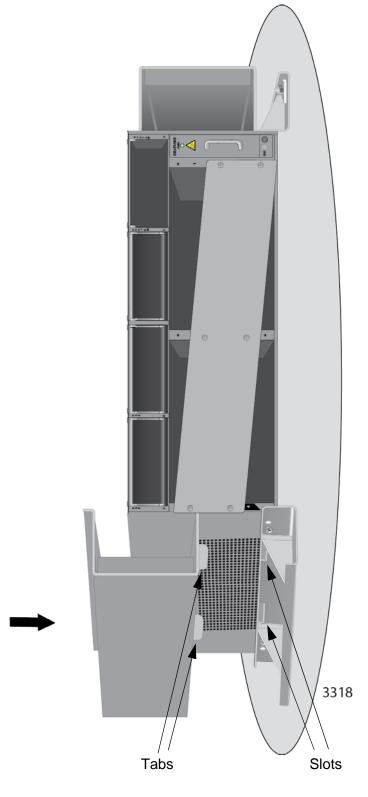


Figure 23. Installing the Bottom Vent Cover

4. Secure the bottom vent cover with the two remaining screws. Refer to Figure 24.



Figure 24. Securing the Bottom Vent Cover

This completes the procedure for installing the chassis on the wall. Refer to the SBx3106 Chassis Switch Installation Guide for instructions on how to install the components of the switch.

Installation Instructions