

Safety Information: OmniAccess™ 512 hardware installation and maintenance is to be provided by Customer Support personnel, or equivalent, knowledgeable in basic electrical and mechanical safety procedures.

Safety Information for Rack Mounting: Switches should be installed in a maximum 40° C environment. To ensure proper air flow, it is recommended that the switches have at least two inches of clear space on all sides. To ensure stability, precautions should be taken to prevent uneven loading of the rack. Loading of the rack should begin at the bottom. When multiple components are installed, precautions should be taken to prevent overloading of power outlets. The switches should always be properly grounded.

Lithium Batteries Caution: There is a danger of explosion if the Lithium battery in your chassis is incorrectly replaced. Replace the battery only with the same or equivalent type of battery recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. The manufacturer's instructions are as follows:

Return the module with the Lithium battery to Alcatel. The Lithium battery will be replaced at Alcatel's factory.

All-In-OneSM Service Programs: An Alcatel service agreement brings your company the assurance of 7x24 no-excuses technical support. You'll also receive regular software updates to maintain and maximize your Alcatel product's features and functionality and on-site hardware replacement through our global network of highly qualified service delivery partners. Additionally, with 24-hour-a-day access to Alcatel's Service and Support web page, you'll be able to view and update any case (open or closed) that you have reported to Alcatel's technical support, open a new case or access helpful release notes, technical bulletins, and manuals. For more information on Alcatel's Service Programs, see our web page at www.ind.alcatel.com, call us at 1-800-995-2696, or email us at support@ind.alcatel.com.

The features and specifications described in this manual are subject to change without notice.



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Introduction

The OmniAccess™ 512 (OA-512) switch connects branch offices to WAN and Voice networks, thus offering “edge of network” connectivity solutions.

The OA-512 provides branch access to an enterprise backbone. This switch combines LAN switching, WAN routing, and Service Level Management in a single platform.

The OA-512 supports up to two wide-area uplinks. User-installable USP, T1/E1, and ISDN submodules provide flexibility. VoIP (Voice Over IP) uplink submodules and compression/encryption SIMMs are also supported on the OA-512. Virtual Private Network (VPN) software is also supported if the compression/encryption SIMM is installed.

◆ Note ◆

The OA-512 supports a maximum of one ISDN module per switch chassis. Refer to the *OmniAccess 512 User Manual* for more information.

This Getting Started Guide walks you through installation and startup procedures for your switch. Steps include:

- Installing and connecting your OmniAccess 512 switch
- Logging in to the switch and configuring basic system software parameters, including defining an IP address

This guide also includes sections on OmniAccess 512 basics. Refer to these sections for general OmniAccess chassis and LED information.

The CD that accompanies this Getting Started Guide contains OmniAccess 512 user manuals. These user manuals provide information on OmniAccess switches and OA-512 uplink submodules, as well as comprehensive networking information. Refer to the user manuals when you require more detailed information about your switch.

Installing an OmniAccess

This section covers procedures for:

- Unpacking the switch
- Finding a secure, well-ventilated location
- Rack-mounting the switch (optional)
- Installing uplink submodules
- Connecting to a power source
- Verifying management LED status
- Connecting external devices

1. Unpack the Switch

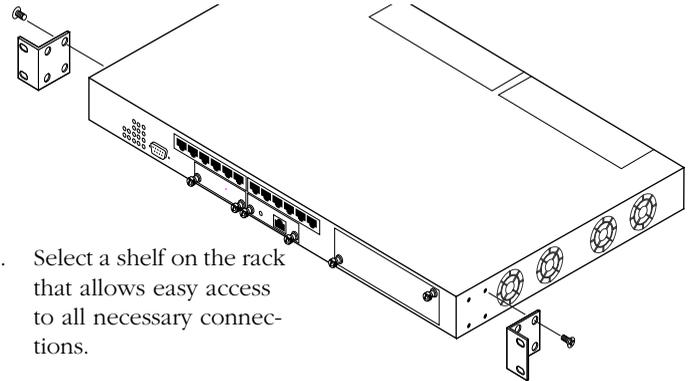
Remove the switch and accessories from their packing box and inspect each item to ensure there has been no damage during shipping.

If you discover or suspect any damage, contact your OmniAccess 512 distributor immediately.

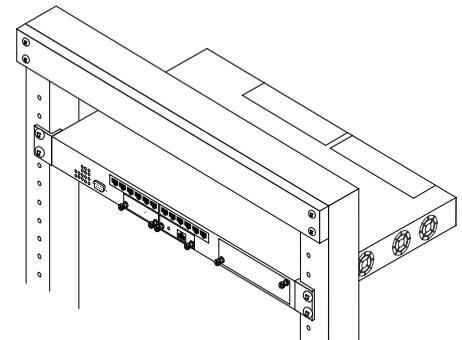
2. Find a Secure, Well-Ventilated Location

Find a secure, flat surface for the switch—preferably on a desk or in a wiring closet. For proper cooling, the sides of the switch should have at least two inches of clearance. Be sure that the switch is within reach of all necessary connections (e.g., power source, external devices, etc.).

3. Rack-Mount the OmniAccess (Optional)



- a. Select a shelf on the rack that allows easy access to all necessary connections.
- b. Attach one rack-mounting bracket to the side of the switch using Phillips-head screws shipped with your switch.
- c. Attach the second bracket to the opposite side of the switch using the remaining screws.
- d. Carefully lift the switch and insert it into the rack.
- e. Attach both brackets to the rack with the screws provided by your rack vendor.



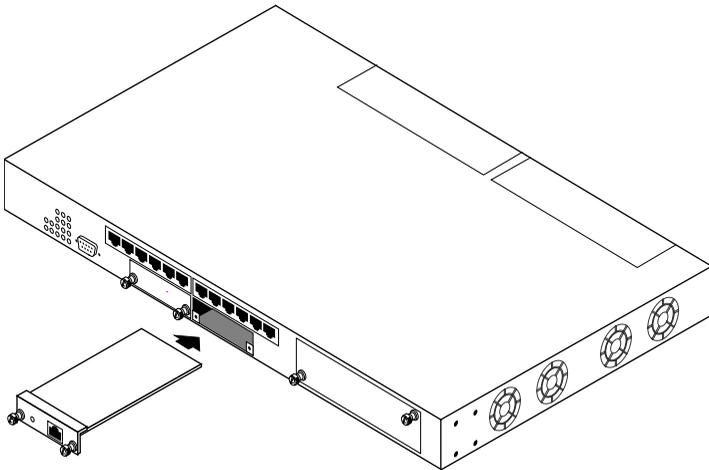
4. Install an Uplink Submodule

Skip this step if:

- you are not installing an uplink submodule, or
- an uplink submodule was installed for you at the factory.

◆ Caution ◆

Do not attempt to install or remove an uplink module while the switch's power is on. Verify that the switch is powered off before proceeding.



- a. Use a screwdriver to remove the blank uplink submodule cover plate on the OA-512 front panel.

- b. Insert the uplink submodule into the uplink submodule slot. Uplink submodules have an “up” and a “down” side. Use the printing on the submodule’s front panel as a reference for orienting the submodule—if the printing is right-side up, you are installing the submodule correctly.
- c. Slide the uplink submodule in until it rests against the connector, then press firmly until it seats into the connector. Once installed, tighten the screws by hand or with a flat blade screwdriver. Ensure that the screws are completely screwed down, but do not overtighten.

5. Connect to a Power Source

All OmniAccess switches are powered by an internal AC power supply. The AC power connector can be found on the rear panel of all OA-512 switches.

◆ Note ◆

OmniAccess switches do not support the Alcatel Backup Power System (BPS).

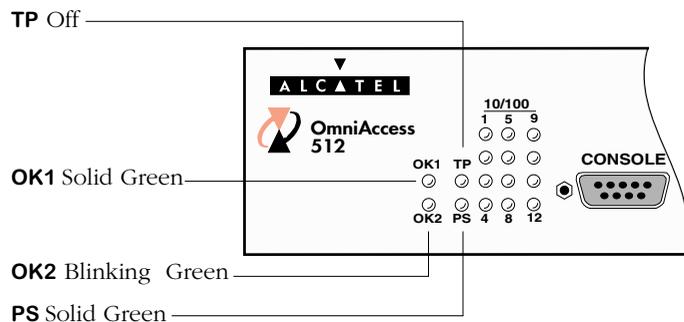
Connect the provided power cord to the AC power connector on the OmniAccess. Then plug the power cord into a properly grounded AC electrical outlet.

6. Turn the Power On

Move the ON/OFF power switch (located next to the AC power connector) to the ON (I) position.

7. Verify the Management LEDs

Verify that the management LEDs on the front panel indicate normal operation.



When the OmniAccess 512 is powered up, extensive power-on diagnostics are performed. As a result, you should allow the switch time to perform preliminary tests before evaluating the LEDs. While diagnostics are running, the

- **OK1** LED will blink amber and/or green
- **OK2** LED will blink amber and/or green
- **PS** LED will display solid green
- **TP** LED will be off

After diagnostics are complete, the

- **OK1** LED will display solid green
- **OK2** LED will blink green
- **PS** LED will display solid green
- **TP** LED will be off

If you power up the switch and the LED results are different from those listed above, contact Alcatel Customer Support personnel for assistance:

- US Customer Support: (800) 995-2696
- International Customer Support: (818) 878-4507

8. Connect External Devices

Connect any external devices (e.g., computers, phones, printers, servers) to the appropriate OmniAccess ports.

◆ Note ◆

Until you configure your OmniAccess 512 switch via the built-in software, the attached devices will not be accessible from the network. Refer to the next section, *Setting Up Software* on page 5, for information on configuring your switch.

Setting Up Software

This section covers procedures for setting up your OmniAccess 512 software. Procedures include

- Connecting a workstation to the console port
- Accessing terminal emulation software
- Logging in to the switch's Command Line Interface (CLI)
- Setting a password
- Setting basic system parameters, including date, time, system description, and IP address
- Logging out

By the end of this section, you will be ready to use the switch's software to begin configuring and monitoring your branch office network connections. For detailed information on how to accomplish these tasks, refer to your switch user manual.

1. *Connect the Console Port*

Attach a serial cable to the console port connector on the switch's front panel. The console port is a female DB-9 serial connector that conforms to the IBM AT serial port specification.

Connect the other end of the serial cable to a PC or workstation equipped with terminal emulation software. You will use this connection to enter initial configuration values on the switch.

2. *Access your Terminal Emulation Software*

Use your computer's terminal emulation software to initiate a session with the switch. Set your terminal emulation software parameters to: 9600 baud, 8 data bits, 1 stop bit, and no parity. If you are using Windows 95 or later, turn hardware flow control off.

3. *Log In to the Command Line Interface (CLI)*

After your terminal emulation software package establishes a connection, the following prompt will be displayed:

```
Welcome to the Alcatel OmniAccess 512! Version x.x.x  
login      :
```

Initially, there are three login accounts available: **admin**, **diag** and **user**. The **admin** and **diag** accounts allow full access to all functions, with the **diag** account additionally supports a set of switching module tests (see the "Running Hardware Diagnostics" chapter in your *OmniAccess User Manual* for details). The **user** account supports read-only privileges. All three accounts use **switch** as the default password.

◆ **Important Note** ◆

If you have Administrative (WRITE) privileges on the switch, you can create or delete logins and new user accounts with administrative privileges.

About Partition Management

Partition Management allows you to restrict access to particular switch features on a per user basis. See the “Switch Security” chapter in your *OmniAccess User Manual* for details.

The following procedure uses the **admin** login account as an example. Complete the following steps to log in to the switch.

◆ **Caution** ◆

If the system displays the following prompt:

Please Standby, chassis configuration changing (Hit ^C to abort)...

you are attempting to access the switch before it has completed initialization or processing a previous command. Wait for the switch to initialize before entering any commands.

- a. Enter **admin** at the login prompt and press **<Enter>**. The following prompt displays:

password:

- b. Enter **switch** at the password prompt and press **<Enter>**. When you have successfully logged in, the screen will display similar to the following:

Welcome to the Alcatel OmniAccess 512!

Press ENTER to start

The OmniAccess 512 is factory-configured to boot up in CLI (Command Line Interface) mode. The CLI allows you to enter single-line commands through the local console. (For more information on CLI, see your *Text-Based Configuration Reference Manual*.)

To start the Command Line Interface, press **<Enter>**. The following message and CLI prompt (->) will be displayed, to indicate that you are in CLI mode.

Entering Command Line Interface

->

◆ Configuration Modes ◆

You can configure your OmniAccess 512 through the User Interface (UI). To enter the UI, type **ui** at the CLI prompt (->) and press **<Enter>**. The UI prompt (*I=>*) will be displayed, indicating that you are in UI mode. From here, you can type **?** and press **<Enter>** to view the Main Menu.

For more information on using the UI, refer to the *OmniAccess 512 User Manual*.

To return to CLI mode from UI mode, type either **cli** or **exit** at the UI prompt (*I=>*) and press **<Enter>**.

4. Set up a Password

Before you begin configuring your switch, you should change the password for the **admin** login account. The **admin** login account provides full access to all switch management functions.

The factory default password for the **admin** account is **switch**. Use the following procedure to change the password for the **admin** account:

- a. Type **password admin <old_password> <new_password>** at the CLI prompt and press **<Enter>**. For example, to change the factory default password (**switch**) to a new password (**lahaina**), enter the following:

```
-> password admin switch lahaina
```
- b. No confirmation message will appear onscreen. Only the system prompt (->) will appear.

◆ Important Note ◆

To create an all-numeric password (for example, **7654321**), you *must* enter quotation marks before and after the password **7654321**.

All new passwords take effect at your next login session.

◆ Note ◆

If the switch will be managed via SNMP, refer to your switch's user manual for instructions on setting SNMP passwords.

◆ **Caution** ◆

Your password is stored (encrypted) in the **mpm.cnf** configuration file. If you remove this file and reboot the switch, your login password (as well as all user-configured data) will automatically reset to the factory default. In this event, you must start over from Step **a** (see *preceding page*) to change the password.

5. Set the System Time and System Date

Complete the following steps to set the system time and system date:

- a. To view the system time, type **system time** at the CLI prompt and press **<Enter>**. The system time will be displayed, as shown in the example below:

```
-> system time
```

```
10:53:19
```

- b. To set the system time, type **system time hh:mm:ss** at the CLI prompt and press **<Enter>**. The new system time will be displayed, as shown in the example below:

```
-> system time 11:53:19
```

```
New time: 11:53:19
```

- c. To view the system date, enter **system date** at the CLI prompt and press **<Enter>**. The system date will be displayed, as shown here:

```
-> system date
```

```
06/11/02
```

- d. To change the system date, enter **system date mm/dd/yyyy** at the CLI prompt and press **<Enter>**. The system date will be displayed, as shown here:

```
-> system date 06/12/2002
```

6. Enter a System Description (Optional)

You can use the following CLI commands to view or specify a contact person for the switch, a switch name, its location, a description of the switch, and the switch's MAC aging timer value. Although this information is not required, you may find it helpful for managing the switch. Follow the steps below:

- a. To view the department or network administrator for the switch, type **system admin-contact** at the CLI prompt and press **<Enter>**. If no network administrator has been specified, **Unset** will be displayed, as shown in the example below:

```
-> system admin-contact
```

```
Unset
```

- b. To specify the department or network administrator for the switch, type **system admin-contact** followed by a text-string name you want to use at the CLI prompt and press **<Enter>**. For example, to specify **Networking Corp Customer Service (800-555-6000)**, type the following at the CLI prompt and press **<Enter>**:

```
-> system admin-contact "Networking Corp  
Customer Service (800-555-6000)"
```

◆ **Important Notes** ◆

To add spaces between words, you *must* include quotation marks (“ ”) around the text string when entering the **admin-contact** information.

No confirmation message will appear onscreen. To verify that the system admin-contact information has been set, type **system admin-contact** at the CLI prompt and press **<Enter>**.

- c. To view the system name, type **system name** at the CLI prompt and press **<Enter>**. If no name has been specified, the following will display:

```
-> system name
```

```
Unset
```

- d. To specify a system name, type **system name** followed by a text-string name at the CLI prompt and press **<Enter>**. For example, to specify **Sales** as the system name, type the following at the CLI prompt and press **<Enter>**:

```
-> system name Sales
```

◆ **Important Notes** ◆

The system name *must* be a single word or hyphenated text string. Do *not* use commas, quotation marks or underscores.

No confirmation message will appear onscreen. To verify that the system name has been set, type **system name** at the CLI prompt and press **<Enter>**.

- e. To view the system location, type **system location** at the CLI prompt and press **<Enter>**. If no location has been specified, the following will display:

```
-> system location
```

```
Unset
```

- f. To specify the system location, type **system location** followed by text-string name at the CLI prompt and press **<Enter>**. For example, to specify **Calabaras Test Lab** as the system location, type the following at the CLI prompt and press **<Enter>**:

-> **system location "Calabaras Test Lab"**

◆ **Important Notes** ◆

To add spaces between words, you *must* include quotation marks (“ ”) around the text string for **system location**.

No confirmation message will appear onscreen. To verify that the system location has been set, type **system location** at the CLI prompt and press **<Enter>**.

- g. To view the system description, type **system description** at the CLI prompt and press **<Enter>**. If no description has been specified, an error message will appear, as shown below:
- > **system description**
- DESCRIPTION NOT SET.**
- h. To specify the system description, type **system description** followed by a text-string name you want to use at the CLI prompt and press **<Enter>**. For example, to specify **Engineering #2** as the system description, type the following at the CLI prompt and press **<Enter>**:
- > **system description "Engineering #2"**

◆ **Important Notes** ◆

Any text-string name that includes spaces must be enclosed in quotes (e.g., “**Test Lab**”).

No confirmation message will appear onscreen. To verify that the system description has been set, type **system description** at the CLI prompt and press **<Enter>**.

- i. The MAC aging timer indicates how many seconds any duplicate MACs can remain in the switch’s CAM (Content Addressable Memory) if there is no traffic from those MACs. After the specified time has expired, inactive MACs age out of the CAM. To view the switch’s MAC aging timer value (default=0), type **system dup-mac-timer** at the CLI prompt and press **<Enter>**. the following will display:
- > **system dup-mac-timer**
- 0**
- j. To specify the switch’s MAC aging timer value in seconds, type **system dup-mac-timer** followed by a number of seconds (the valid range is **10** through **1000000** seconds) at the CLI prompt and press **<Enter>**. For example, to specify **5000** as the MAC aging timer value, type the following at the CLI prompt and press **<Enter>**:
- > **system dup-mac-timer 5000**

◆ Important Notes ◆

Do *not* use commas when specifying a MAC aging timer value. For example, the entry **63,000** will result in an error.

If you want to use the Group aging timer, enter **0** as the value for the MAC aging timer.

If you entered a new **dup-mac-timer** value, you must reboot the switch before the changes will take effect.

No confirmation message will appear onscreen. To verify that the switch's MAC aging timer has been set, type **system dup-mac-timer** at the CLI prompt and press **<Enter>**.

7. Assign an IP Address to the Default Group

Your switch is configured with a default Group and VLAN. You can add Groups and VLANs later through the switch software. To get started, you can use the default group and default VLAN to configure the IP address for this switch. (The default IP address is **192.168.10.1**.) To modify Group IP routing parameters, complete the following steps:

- a. To assign or modify the default Group and VLAN Address, type the following at the CLI prompt and press **<Enter>**:

```
-> group 1 router ip <ip-address>
```

where **1** is the default group and VLAN, and **<ip-address>** is the IP Address for a specific virtual router port (for example, **168.23.9.100**).

- b. No confirmation message will appear onscreen. Only the system prompt (**->**) will appear.

See your switch manual to set other parameters.

You have now set up all of the basic software parameters you need to begin managing your switch. Once your switch is connected to the network, you can use Telnet or FTP to access the switch software through your network.

More Information on Switch Commands?

At this point, you can begin configuring other switch parameters. See your *OmniAccess 512 User Manual* and any supplements for information on all switch commands.

8. Log Out

You have now completed the initial software set-up. You can exit the switch by typing **logout** or **exit** and pressing **<Enter>**.

OmniAccess Basics

This section provides general information on the OA-512 chassis and LEDs. For more detailed information, refer to the *OmniAccess 512 User Manual*.

Management LEDs

Each OA-512 chassis provides four Management LEDs. Refer to page 15 for detailed information on LED functions.

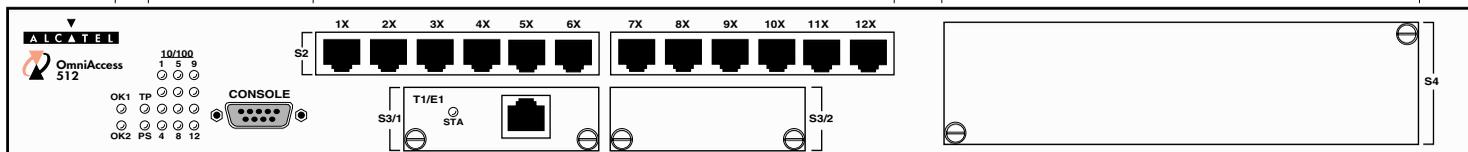
Ethernet Port Connectors

OA-512 switches provide twelve 10/100 Ethernet ports. Each port will automatically configure itself to match the data speed of attached devices.

Each port can use unshielded twisted pair (UTP) or shielded twisted pair (STP) cable to connect to a device.

Slot for VoIP Uplink Submodule

OA-512 switches provide a slot for a Voice over IP (VoIP) uplink submodule. Contact your Alcatel supplier for information on VoIP uplink submodules.



Port Status LEDs

Each OA-512 chassis provides twelve Port LEDs. Refer to page 15 for detailed information on LED functions.

Console Management Port

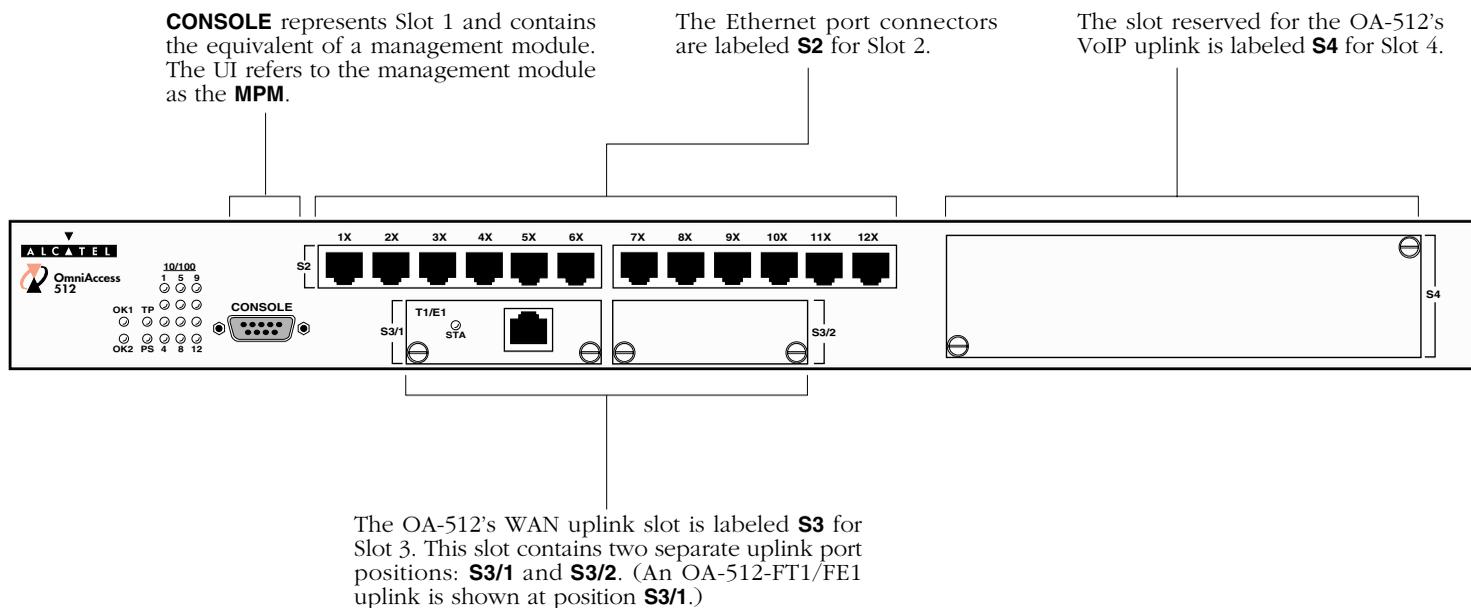
This connector allows you to access the UI and CLI via a PC or workstation.

Slot for WAN Uplink Submodules

OA-512 switches provide a slot that supports up to two user-installable WAN uplinks (T1/E1 uplink shown).

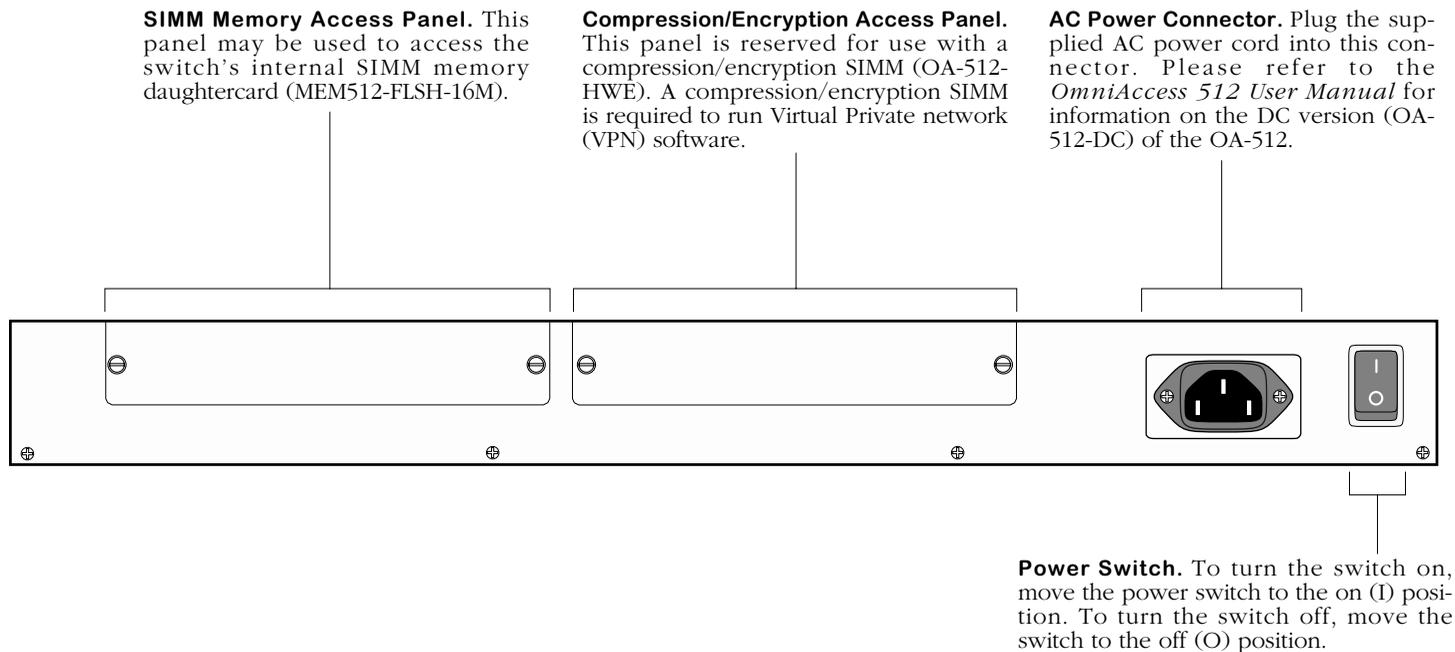
OA-512 Slot Numbering

The front panel of an OA-512 is divided into several areas labeled S2, S3/1, S3/2, S/4, etc. Think of these areas as a division of the switch into several modules, or *slots*. The UI and CLI, accessible via the front panel console port, rely on these slot designations for many of their management and configuration commands.



OA-512 Rear Panel

The figure below illustrates the rear panel of an OmniAccess 512.



OA-512 Management and Port LEDs

OK1 (Hardware Status). This LED displays Green when the switch has successfully passed power-on hardware diagnostics. It displays Amber if the hardware has failed diagnostic tests. If it is alternating Green and Amber, file system compaction is in progress.

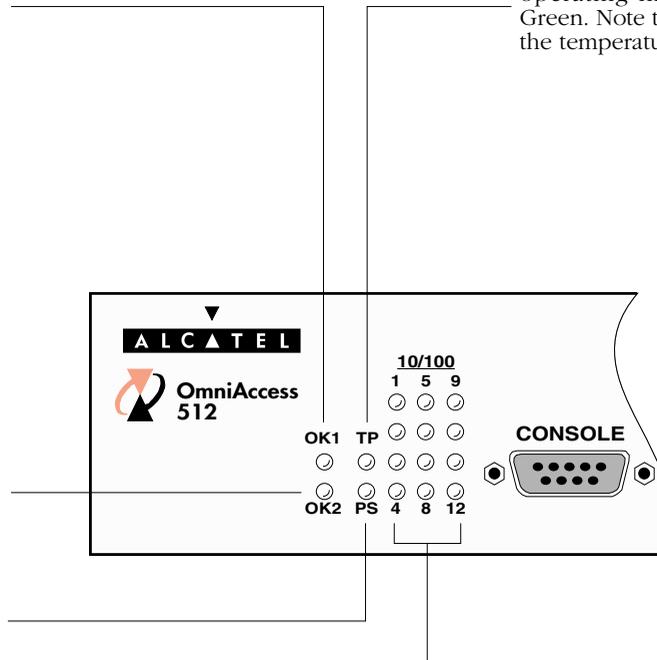
Important

Do not power down the switch while the **OK1** LED is alternating Green and Amber.

OK2 (Software Status). This LED blinks Green when software has successfully loaded and the switch is ready to execute commands. It blinks Amber when the switch is in a transitional state, such as when it first boots up. If it blinks Amber for an extended period of time (i.e., more than a minute), reboot the switch. If the software was not loaded successfully, the LED will display solid Amber.

PS (Power Supply Status). This LED displays Green when the switch is connected to an AC power source. It is off when the switch is not receiving power from an AC power source.

TP (Temperature). If the internal switch temperature is approaching maximum operating limits, this LED will display Green. Note that this LED comes on *before* the temperature limit is reached.



10/100 Each LED is associated with a corresponding Ethernet port located at slot 2 (**S2**). In this figure, the LED labeled **1** (located at top left of the **10/100** LED bank) reports the status of Ethernet port **1X** at slot **S2**. The LED located immediately below LED **1** is LED **2** and reports the status of Ethernet port **2X** at slot **S2**, etc. Refer to page 13 for slot locations.

An LED displays Green continuously when a good cable connection exists on the corresponding port. The LED then flashes Green when traffic is detected on the port. If the LED is off, a cable is not connected to the corresponding port or the connected cable does not have link integrity.

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