



Ethernet Switch Products

Quick Start Guide

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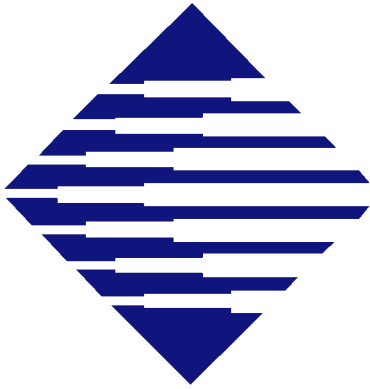
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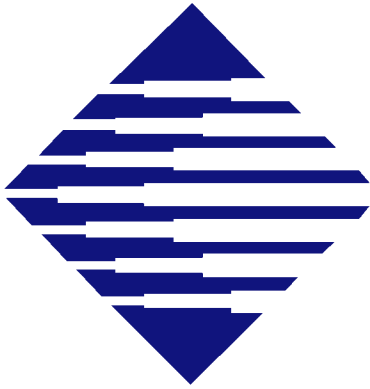
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Basic Platform Configuration

Overview

This document was created to help simplify the initial set up a Performance Technologies' 10/100/1000 Fabric Ethernet Switch. There are several basic Ethernet Switch offerings, but this document will be generic enough to handle them all. All Advanced Managed Platforms (AMP) consist of one PICMG 2.16 or ATCA compliant chassis (including power supplies and cooling fans), one or two Intelligent Shelf Managers (ISMs), and one or two 10/100/1000 Fabric Ethernet switches.

The Ethernet switches used in a typical Advanced Managed Platform are used as a high-speed interconnect within server blade chassis or as a core switch in fault-tolerant clusters of embedded systems.

These instructions will cover the basic steps to set up a system; set up the hardware (switches and jumpers) and software, and finally communicate between the components.

This document does not intend to take the place of the user manuals for any component in your system. Please refer to your Ethernet Switch's User's manuals for all safety information related to connecting and using this equipment, as well as detailed information for the configuration or programming.

Topics in this choater include:

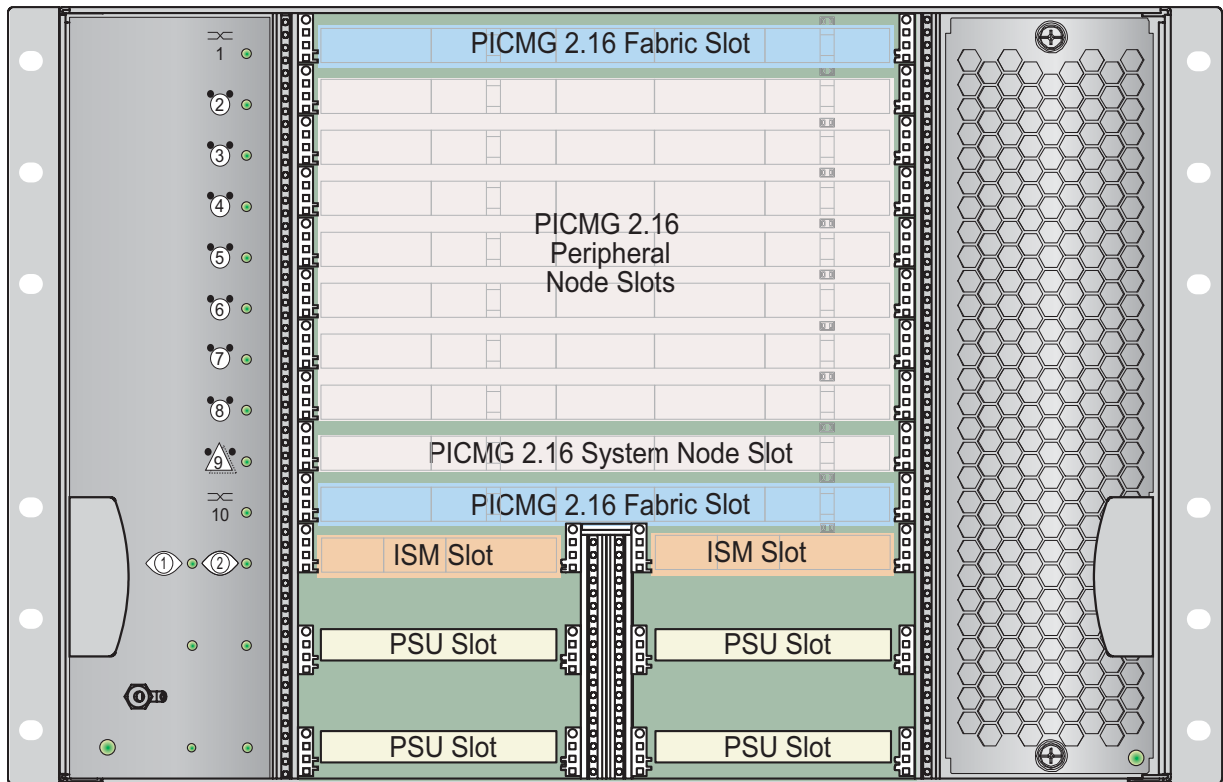
- ["Configuring the Hardware," on page 6](#)
- ["Ethernet Switch Hardware Configuration," on page 7](#)

Configuring the Hardware

Prior to configuring this hardware, be sure to refer to your chassis *Hardware Manual* for details regarding to the chassis type and capabilities. This is an important step as there are specific jumper and switch settings that directly relate to the chassis being used. In addition, please follow all safety instructions pertaining to wiring power and ground.

Figure 1-1, “Midplace Slot Assignments of the AMP5095 Chassis — Front View,” shows a typical AMP system using a CPC5095 chassis. As illustrated, the Ethernet Switches are installed in the fabric slots labelled “PICMG 2.16 Fabric Slot.”


Figure 1-1: Midplace Slot Assignments of the AMP5095 Chassis — Front View

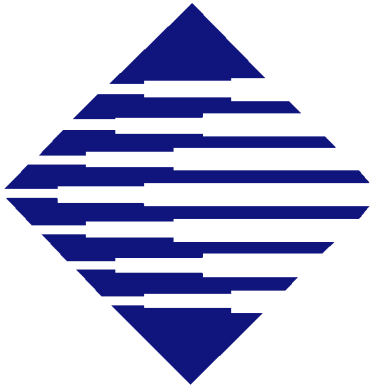


Ethernet Switch Hardware Configuration

Please locate and refer to your *Ethernet Switch User's Manual* to assist with the following steps.

Configure Ethernet Switch Hardware

1. Review the *Hardware Manual* and set switches and/or jumpers for each Ethernet Switch board, chassis, and RTM type you selected, being careful to understand how you wish to use the fabric-to-fabric link. Several important switch and jumpers to pay careful attention to are:
 - Board select (BDSEL)
 - SMB enable
 - HEALTHY
 - Hot Swap control (monitored by SMB or not)
2. Install, or re-install, the switches in their respective fabric slots (as identified by the *Chassis Manual* or the glyph  on the front of the chassis).
3. Install, or re-install, each RTM into the slot at the rear of the chassis corresponding to their appropriate fabric board mate.



Setting Up the Components

Overview

This chapter describes how to set up the Ethernet Switch.

Ethernet Switch Set-up

There are several ways to communicate with the Performance Technologies' Ethernet Switch, but for initial configuration, connect via the serial console port. After the initial IP addresses are input and saved, you can connect via telnet session through one of the Ethernet ports (either the out-of-band management port **mgmt0**, or one of the in-band Ethernet ports).

After the switch has completed the Boot Process, it is operational. Once operational, you can log into the switch and configure an IP address for each or any of the switches IP interfaces (Out-of-Band Management and up to 16 switch interfaces).

The following steps describe how to configure the IP settings of the board.

1. Connect a terminal or workstation running terminal-emulation software to the console port. Refer to the "RS-232 Console Port" section of the *User's Manual* for pin connection information.
2. At the Login prompt, type:
`admin`
3. At the Password prompt, type:
`password`
4. By default, Performance Technologies' Ethernet switches come pre-configured as **Layer 2** switches only.

If you want to have a remote interface to the switch, you can assign a unique IP address and sub-network mask for the management port (**mgmt0**) ONLY! This IP Address may be used as a dedicated communication channel to manage the switch via its processor and IP stack via the Management port only.

The following example defines an IP address and subnet for the management port.

```
# ip config mgmt0 192.168.2.33 255.255.255.0
```

5. To set up a switch as a **Layer 3** switch:

a. First assign an IP address and subnetwork mask for the management port (**mgmt0**). Be sure that the Management Port IP address is in a different subnet than the Switch Port IP address. For example:

```
# ip config mgmt0 192.168.2.33 255.255.255.0
```

b. Then assign an IP address and subnetwork mask for the Switch Port IP Interface (**sw0**). This IP Address may be used to communicate with the CPC660x IP stack via a switched port.

```
# ip config sw0 192.167.1.33 255.255.255.0 1
```

c. Lastly, assign a gateway address for the switch if you want it to access an address outside of the current subnetwork. You will not have to set this parameter if you are only using the switch on an internal network. To set the gateway address type the following, substituting your own IP address:

```
# ip gateway 192.168.1.101
```

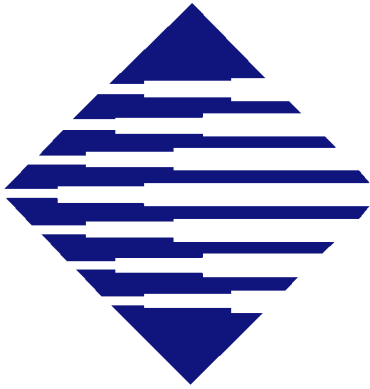
6. Save your configuration settings so they will be in effect after a switch reboot:

```
# save
```

7. When you are finished initializing the configuration, log out of the switch by typing:

```
# exit
```

8. Repeat steps 1-7 for the second Ethernet switch if available. Be sure to correctly differentiate the IP addresses and subnets on the second switch based on your desired topology.



Communicating Between Components

Overview

This chapter describes useful commands for communicating between and obtaining useful analytical information from the Advanced Managed Platform slot components.

Working with the Ethernet Switches

There are a large number of commands used to manage, monitor, and operate the Ethernet Switches. Please refer to your *Ethernet Switch User's Manual* for a complete listing of the available commands and the proper syntax.

Using the Ethernet Switch CLI Commands - Operational Information

The following is a script of basic commands that will confirm that the Ethernet switch is operating and useable in your configuration.

1. Connect a terminal or workstation running terminal-emulation software to the console port on one of the Ethernet switches. Refer to the "RS-232 Console Port" section of the *User's Manual* for pin connection information or connect via the management port via Ethernet to the IP address specified in an earlier step.
2. At the Login prompt, type:
`admin`
3. At the Password prompt, type:
`password`

4. Review the configuration of the switch by typing the following commands:

<code>switch display</code>	Shows Ethernet Switch model #, s/n, MAC address, etc.
<code>switch version</code>	Displays version information on the Ethernet Switch.
<code>port config all</code>	Displays port configuration information for all ports.
<code>port link all</code>	Displays link status for all ports.
<code>ip arp display</code>	Lists the contents of the arp table.
<code>vlan show</code>	Displays VLAN information across all ports on the Ethernet Switch.
<code>ip stats sw[0-15]</code>	Displays IP information for all switch interfaces.
<code>ip stats mgmt[0]</code>	Displays IP information on the management interface.
<code>fdb learned all</code>	Displays the entries in the dynamic filtering database.
<code>span bridge show</code>	Displays Spanning Tree status information.

5. You can communicate with another device on the network by using the ping command:

```
ping [IP address]
```

6. Repeat steps 1 through 6 on the second Ethernet switch (if present.)