

# **24 ports PoE switch hardware installation**

## **Users Manual**

**(V1.0)**

# Contents

|  |    |
|--|----|
| <b>Chapter 1 About This Manual</b> .....         | 3  |
| <b>Chapter 2</b> .....                           | 3  |
| <b>Chapter 3</b> .....                           | 3  |
| <b>Introduction</b>                              |    |
| Front Panel and LEDs .....                       | 3  |
| Rear Panel .....                                 | 3  |
| Safety Instructions .....                        | 3  |
| <b>Chapter 4 Hardware Installation</b>           |    |
| Protecting Against Electrostatic Discharge ..... | 7  |
| UnpackingtheHardware.....                        | 7  |
| Installation .....                               | 7  |
| Select a Location .....                          | 7  |
| Install the Switch .....                         | 8  |
| Check the Installation .....                     | 9  |
| Connect to Power and Check the LEDs .....        | 10 |
| Connecting Equipment to the Switch .....         | 10 |
| RJ-45 Ports .....                                | 10 |
| Gigabit Module Bay .....                         | 10 |
| <b>Chapter 5 Troubleshooting</b>                 |    |
| TroubleshootingChart .....                       | 11 |

# Chapter 1 About This Manual

Thanks for purchasing this 24 ports PoE switch, This hardware Installation Guide describes how to install this units. Please read it carefully before getting it stalled/

## Chapter 2 Introduction

This 24 ports Fast PoE Ethernet Switch is a state-of-the-art, high-performance, IEEE-compliant network solution. It includes powerful management features that you can use to eliminate bottlenecks, boost performance, and increase productivity.

This 24 Port 10/100Mbps PoE switches can be free-standing or rack-mounted in a wiring closet or an equipment room. For information about features for each product, please go our website [www.acorid.com](http://www.acorid.com) or contact our technical support.

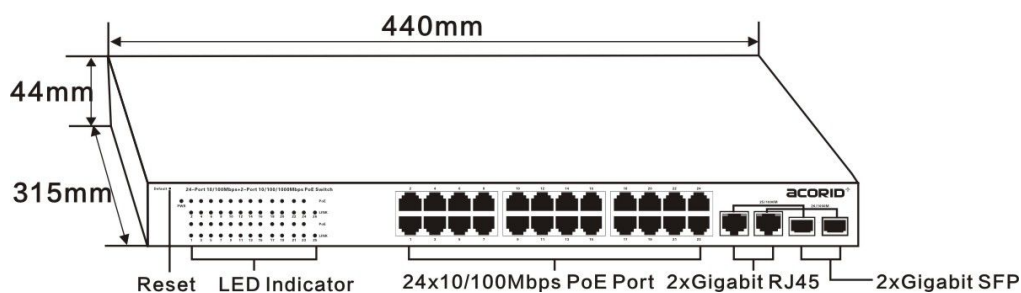
## Chapter 3 Technical specification

| Item   | Description  |
|--|--|
| Ordering Information                         | <b>LS5126P</b> (24 PoE 10/100 ports+2 Gigabit SFP Fiber switch)  |
| Network Protocol and Standards Compatibility | —IEEE 802.3 10BASE-T<br>—IEEE 802.3u 100BASE-TX<br>—IEEE 802.3ab 1000BASE-T<br>—IEEE 802.3z 1000BASE-X<br>—IEEE 802.3x full-duplex flow control<br>—IEEE 802.3af (Power over Ethernet) |
| Power Supply                                 | —Power consumption: 225W maximum<br>—100-240VAC/50-60-Hz universal input<br>—PoE budget: 250W/450W Optional.   |
| Network Ports                                | —24 10/100 Mbps auto sensing ,Fast Ethernet<br>—2+2 10/100/1000 Mbps auto-sensing Gigabit Ethernet switching ports,(RJ-45)<br>—2 Dual Personality SFP slots                            |
| LEDs   | Power, Link/Act, Speed   |

| Item                                | Description   |
|-------------------------------------|---|
| <b>Performance Specifications</b>   | <ul style="list-style-type: none"> <li>—Forwarding modes: Store-and-forward</li> <li>—Bandwidth: 8.8 Gbps</li> <li>—Network latency: &lt;20µs for 64-byte frames in store-and-forward mode for 100 Mbps to 100 Mbps transmission</li> <li>—Buffer memory: 3MB per system</li> <li>—Address database size: 8,000 media access control (MAC) addresses per system</li> <li>—Addressing: 48-bit MAC address</li> <li>—Mean time between failures (MTBF):176,000 hours (~20 years)</li> <li>—Acoustic noise: 49 dB</li> </ul> |
| <b>Electromagnetic Immunity</b>     | —EN 55024   |
| <b>Safety</b>                       | —CE/FCC/RoHS/WEEE   |
| <b>Environmental Specifications</b> | <ul style="list-style-type: none"> <li>—Operating temperature: 32° to 104° F (0° to 50° C)</li> <li>—Storage temperature: -4° to 158° F (-20° to 70° C)</li> <li>—Operating humidity: 90% maximum, relative humidity, non-condensing</li> <li>—Storage humidity: 95% maximum, relative humidity, non-condensing</li> </ul>  |
| <b>Physical Specifications</b>      | Dimensions: (w x d x h):440 x 257 x 43 mm<br>Weight: 3.6 kg   |

## LS5126P Front Panel and LEDs

The following figure shows the front panel of the LS5126P. The front panel contains LEDs, RJ-45 jacks, SFP module bays, and a console port.



|             |   |
|-------------|---|
| PWR (power) | Green: Power is supplied, and the switch is operating normally.<br>Blinking yellow: The switch is performing boot-up diagnostics.<br>Off: Power is not present. |
|-------------|---|

|  |   |
|--|---|
| RPS(redundant power supply)                              | <ul style="list-style-type: none"> <li>• Green: RPS is detected</li> <li>• Off: RPS is either not present or is not functional.</li> </ul>  |
| Max PoE  | <ul style="list-style-type: none"> <li>• Yellow: Power supply has reached its maximum load, and no more powered devices can be attached to the switch.</li> <li>• Off: More PoE powered devices can be attached to the switch.</li> </ul>   |
| 10/100M Fast ports: LINK, SPEED/ACT, and PoE             | <p>LINK</p> <ul style="list-style-type: none"> <li>• Green: Link in full duplex.</li> <li>• Yellow: Link in half duplex.</li> </ul> <p>SPEED/ACT (Activity)</p> <ul style="list-style-type: none"> <li>• Solid green: Link in 100 Mbps.</li> <li>• Blinking green: The port is sending or receiving packets at 100 Mbps.</li> <li>• Solid yellow: A valid 10-Mbps link is established on the port.</li> <li>• Blinking yellow: The port is sending or receiving packets at 10 Mbps. PoE</li> <li>• Solid green: Power is being provided to a powered device through this port.</li> </ul>   |
| 10/100/1000M Combo ports: LINK, SPEED/ACT, and 1000M/ACT | <p>LINK</p> <ul style="list-style-type: none"> <li>• Green: Link in full duplex.</li> <li>• Yellow: Link in half duplex.</li> </ul> <p>SPEED/ACT (Activity)</p> <ul style="list-style-type: none"> <li>• Solid green: Link in 100 Mbps.</li> <li>• Blinking green: The port is sending or receiving packets at 100 Mbps.</li> <li>• Solid yellow: A valid 10-Mbps link is established on the port.</li> <li>• Blinking yellow: The port is sending or receiving packets at 10 Mbps. 1000M/ACT (Activity)</li> <li>• Solid green: Link in 1,000 Mbps.</li> <li>• Blinking green: The port is sending or receiving packets at 1000 Mbps.</li> </ul> |

## LS5126P Rear Panel

The rear panel has a standard AC power receptacle for the supplied power cord.



## Safety Instructions

Use the following safety guidelines to ensure your own personal safety and to help protect your system from potential damage.

To reduce the risk of bodily injury, electrical shock, fire, and damage to the equipment, observe the following precautions.

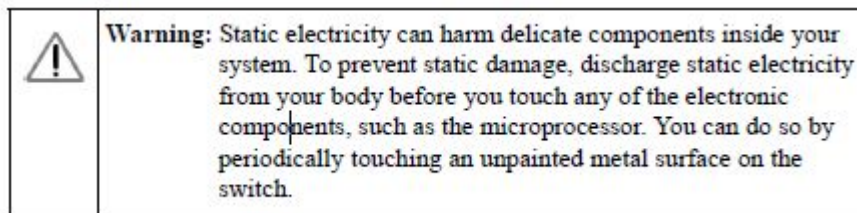
- Observe and follow service markings.
  - Do not service any product except as explained in your system documentation.
  - Opening or removing covers that are marked with the triangular symbol with a lightning bolt may expose you to electrical shock. Only a trained service technician should service components inside these compartments.
- If any of the following conditions occur, unplug the product from the electrical outlet and replace the part or contact your trained service provider:
  - The power cable, extension cable, or plug is damaged.
  - An object has fallen into the product.
  - The product has been exposed to water.
  - The product has been dropped or damaged.
  - The product does not operate correctly when you follow the operating instructions.
- Keep your system away from radiators and heat sources. Also, do not block cooling vents.
- Do not spill food or liquids on your system components, and never operate the product in a wet environment. If the system gets wet, see the appropriate section in your troubleshooting guide or contact your trained service provider.
  - Do not push any objects into the openings of your system. Doing so can cause fire or electric shock by shorting out interior components.
  - Use the product only with approved equipment.
  - Allow the product to cool before removing covers or touching internal components.
  - Operate the product only from the type of external power source indicated on the electrical ratings label. If you are not sure of the type of power source required, consult your service provider or local power company.
    - To help avoid damaging your system, be sure that the voltage selection switch (if provided) on the power supply is set to match the power available at your location:
    - Also, be sure that attached devices are electrically rated to operate with the power available in your location.
    - Use only approved power cables. If you have not been provided with a power cable for your system or for any AC powered option intended for your system, purchase a power cable that is approved for use in your country. The power cable must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cable should be greater than the ratings marked on the product.
    - To help prevent electric shock, plug the system and peripheral power cables into properly grounded electrical outlets.
    - The peripheral power cables are equipped with three-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable. If you must

use an extension cable, use a three-wire cable with properly grounded plugs.

- Move products with care; ensure that all casters and stabilizers are firmly connected to the system. Avoid sudden stops and uneven surfaces.

## Chapter 4 Hardware Installation

### Protecting Against Electrostatic Discharge



You can also take the following steps to prevent damage from electrostatic discharge (ESD):

1. When unpacking a static-sensitive component from its shipping carton, leave it in the antistatic package until you are ready to install it. Just before unwrapping the antistatic package, discharge static electricity from your body.
2. Before moving a sensitive component, place it in an antistatic container or package.
3. Handle all sensitive components in a static-safe area. If possible, use antistatic floor pads, workbench pads, and an antistatic grounding strap.

### Unpacking the Hardware

Check the contents of the boxes to make sure that all items are present before beginning the installation.

1. Place the container on a clean flat surface and cut all straps securing the container.
2. Unpack the hardware from the boxes. Carefully remove the hardware and place it on a secure and clean surface.
3. Remove all packing material
4. Inspect the products and accessories for damage. Report any damage immediately

### Installation

Install the equipment in the following sequence:

1. Select a Location.
2. Install the Switch.
3. Check the installation.
4. Apply power, and check the LEDs.

### Select a Location

The switch can be mounted in a standard 19-inch (48.26-centimeter) rack, wall-mounted, or left freestanding (placed on a tabletop).

The site where you install the switch may greatly affect its performance. Before installing the switch or switches, make sure that the chosen installation location meets the following site requirements.

### Site Requirements for Switch Location

|                    |   |
|--------------------|---|
| Mounting           | <ul style="list-style-type: none"> <li>• Desktop Installations: Provide a flat table or shelf surface.</li> <li>• Rack-mount Installations: Use a 19-inch (48.3-centimeter) EIA standard equipment rack that is grounded and physically secure. You need the rack-mount kit supplied with your switch.</li> </ul> |
| Access             | Locate the switch in a position that enables you to access the front panel RJ-45 ports, view the front panel LEDs, and access the rear-panel power connector.   |
| Power source       | Provide a power source within 6 feet (1.8 meters) of the installation location. Power specifications for the switch are shown in “Technical Specifications”. Be sure that the AC outlet is not controlled by a wall switch, which can accidentally turn off power to the outlet and the switch.                   |
| Environment        | Install the switch in a site free from strong electromagnetic field generators (such as motors), vibration, dust, and direct exposure to sunlight.  |
| Temperature        | The ambient switch operating temperature range is 32° to 104°F (0° to 40°C). Keep the switch away from heat sources such as direct sunlight, warm air exhausts, hot-air vents, and heaters  |
| Operating humidity | Install the switch in a dry area with a maximum relative humidity of 90%, noncondensing.  |
| Ventilation        | Do not restrict airflow by covering or obstructing air inlets on the sides of the switch. Keep at least 2 inches (5.08 centimeters) free on all sides for cooling. Be sure that there is adequate airflow in the room or wiring closet where you intend to install the switch.                                    |
| Cabling            | Route the cable to avoid sources of electrical noise such as radio transmitters, broadcast amplifiers, power lines, and fluorescent lighting fixtures.  |

## Install the Switch



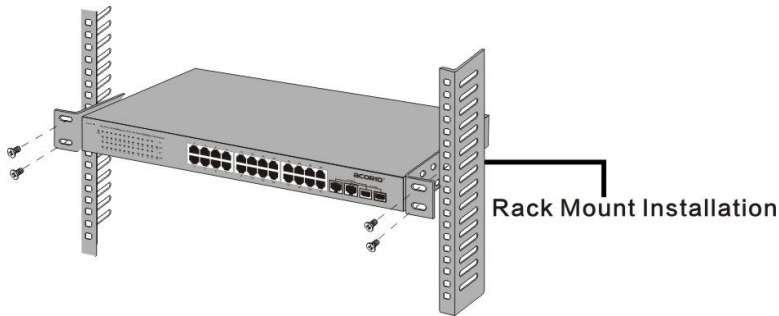
You can install the switch on a flat surface or in a standard 19-inch rack.

### **Installing the Switch on a Flat Surface**

The switch ships with four self-adhesive rubber footpads. Stick one rubber footpad on each of the four concave spaces on the bottom of the switch. The rubber footpads cushion the switch against shock and vibrations.

**Installing the Switch in a Rack** To install the switch in a rack, you will need the 19-inch rack-mount kit supplied with your switch.

1. Attach the supplied mounting brackets to the side of the switch.
2. Use the provided Phillips head screws to fasten the brackets to the sides of the switch.



3. Tighten the screws with a No. 1 Phillips screwdriver to secure each bracket.
4. Align the bracket and rack holes. Use two pan-head screws with nylon washers to fasten each bracket to the rack.
5. Tighten the screws with a No. 2 screwdriver to secure the switch in the rack.

### **Check the Installation**

Before you apply power, perform the following checks:

1. Inspect the equipment thoroughly.
2. Verify that all cables are installed correctly.
3. Check cable routing to ensure that cables are not damaged and will not create a safety hazard.
4. Be sure that all equipment is mounted properly and securely.

### **Connect to Power and Check the LEDs**

The switch does not have an ON/OFF switch. The only way to apply or remove power is to connect or disconnect the power cord. Before you connect the power cord, select an AC outlet that is not controlled by a wall switch (which can turn off power to the switch). After you select an appropriate outlet, follow these steps to apply AC power:

1. Connect one end of the AC power adapter cable to the rear of the switch, and the other end to a grounded three-pronged AC outlet.
2. Check the Power LED on the front panel of the switch. The LED should light up in the following sequence:
  - The LED turns yellow as the switch runs a Power-On Self-Test (POST).
  - The switch passes the test, the LED turns green, and the switch is working and ready to pass

data.

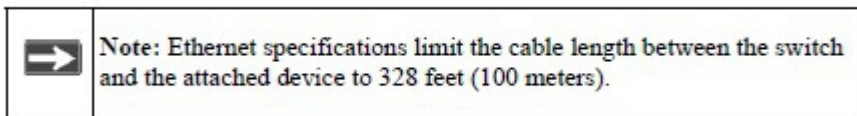
- If the POST fails, the Power LED blinks yellow. If the Power LED does not light up, check that the power cable is plugged in correctly and that the power source is good. For help with troubleshooting, see Chapter 4, “Troubleshooting”.

## Connecting Equipment to the Switch

You can connect devices, an SFP Gigabit Ethernet module, and a console to the switch.

### RJ-45 Ports

The switch uses Auto Uplink technology, which allows you to attach devices using either straight-through or crossover cables. Use a Category 5 (Cat5) unshielded twisted-pair (UTP) cable terminated with an RJ-45 connector.



### Gigabit Module Bay

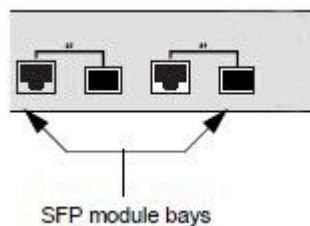
You can install an SFP Gigabit Ethernet module in the gigabit module bays. SFP modules are sold separately.

Four ports on the switch can be used for either STP (RJ-45) or SFP (fiber) cable. However, both port types cannot be used at the same time. The switch selects the first connected interface. If both connectors are plugged, the SFP interface operates normally and disables the copper interface.

The SFP bay accommodates a standard SFP module with an LC connector that is compatible with the IEEE 802.3z 1000BASE-SX standard.

To install an SFP module:

1. Insert the module into the SFP module bay. Press firmly to ensure that the module seats into the connector.



2. To install more Gigabit Ethernet modules,

## Chapter 5 Troubleshooting Chart

The following table lists symptoms, causes, and solutions of possible problems.

| <b>Problem</b>   | <b>Cause</b>  | <b>Solution</b>  |
|--|---|--|
| Power LED is off.  | No power is received.   | Check the power cord connections for the switch at the switch and the connected device. Make sure that all cables used are correct and comply with Ethernet specifications   |
| Link LED is off or intermittent.                               | Port connection is not working.   | Check the crimp on the connectors and make sure that the plug is properly inserted and locked into the port at both the switch and the connecting device. Make sure that all cables used are correct and comply with Ethernet specifications. See Appendix A, “Technical Specifications”. Check for a defective adapter card, cable, or port by testing them in an alternate environment where all products are functioning. |
| File transfer is slow or performance degradation is a problem. | Half- or full-duplex setting on the switch and the connected device are not the same.         | Make sure that the attached device is set to auto negotiate.   |
| A segment or device is not recognized as part of the network.  | One or more devices are not properly connected, or cabling does not meet Ethernet guidelines. | Verify that the cabling is correct. Be sure all connectors are securely positioned in the required ports. Equipment may have been accidentally disconnected.   |

### **Additional Troubleshooting Suggestions**

If the suggestions do not resolve your problem, refer to the following troubleshooting suggestions.

**Network Adapter Cards** Make sure that the network adapter cards installed in the

PCs are in working condition and the software driver has been installed.

**Configuration** If problems occur after you change the network configuration, restore the original connections. Then find the problem by making the changes, one step at a time. Make sure that cable distances, repeater limits, and other physical aspects of the installation do not exceed the Ethernet limitations.

**Switch Integrity** You can verify the integrity of the switch by resetting the switch. To reset the switch, use the Tools> Reset command, or remove AC power from the switch and then reapply AC power. If the problem continues, contact our technical support.

#### **Auto-Negotiation**

The 10/100/1000 Mbps ports negotiate the correct duplex mode and speed if the device at the other end of the link supports auto-negotiation. If the device does not support auto-negotiation, the switch only determines the speed correctly and the duplex mode defaults to half-duplex.

The gigabit port on the gigabit Ethernet module negotiates speed, duplex mode, and flow control, provided that the attached device supports auto-negotiation.