FORTINET FS-224E-POE

Fortinet FortiSwitch FS-224E-POE Layer 2/3 PoE+ Switch User Manual

Model: FS-224E-POE

1. Introduction

The Fortinet FortiSwitch FS-224E-POE is a secure access switch designed to provide a robust, scalable Ethernet solution. It offers advanced security, performance, and manageability for small to mid-sized businesses, distributed enterprises, and branch offices. This switch integrates seamlessly with the FortiGate network security platform, allowing for centralized management and comprehensive visibility of all connected devices.

2. Product Overview

2.1 Key Features

- **Layer 2/3 Switching:** Supports routing for flexible network design.
- **24 GE RJ45 Ports:** All ports are equipped with Power over Ethernet Plus (PoE+) capability.
- **4 GE SFP Ports:** Provides high-speed fiber uplinks for extended network reach.
- **180W PoE Budget:** Sufficient power budget to support a variety of PoE-powered devices.
- **FortiGate Switch Controller Compatibility:** Enables centralized management and streamlined operations through the FortiGate interface.

2.2 Front Panel

Figure 1: Front view of the FortiSwitch FS-224E-POE, showing 24 RJ45 ports and 4 SFP ports.

The front panel of the FortiSwitch FS-224E-POE features 24 Gigabit Ethernet RJ45 ports, all supporting PoE+. These ports are numbered 1 through 24. Additionally, there are 4 Gigabit Ethernet SFP ports, labeled 25/26 and 27/28, for fiber optic connections. Status LEDs for Power, Alarm, PoE, Speed, and Link/Activity are also present to indicate the operational status of the switch and its ports.

2.3 Rear Panel

Figure 2: Rear view of the FortiSwitch FS-224E-POE, showing power input and console port.

The rear panel includes the AC power input connector (100-240VAC, 50/60Hz) and an RJ45 console port for local management and initial configuration. There is also a DC input for remote power supply, as specified in the manual.

3. Setup

3.1 Unpacking

Carefully unpack the FortiSwitch from its packaging. Verify that all components are present and undamaged. Retain the packaging for future transport or storage.

3.2 Physical Installation

The FortiSwitch FS-224E-POE can be installed on a desktop or mounted in a standard 19-inch equipment rack. Ensure the installation location provides adequate ventilation and is free from excessive heat, dust, and moisture. Maintain proper airflow around the device to prevent overheating.

3.3 Power Connection

Connect the provided AC power cord to the power input on the rear panel of the switch and then to a grounded electrical outlet. Ensure the power source meets the switch's power requirements (100-240VAC, 50/60Hz).

3.4 Network Connections

Connect Ethernet cables from your network devices (computers, access points, IP cameras, etc.) to the RJ45 ports (1-24) on the front panel. For fiber optic connections, insert compatible SFP transceivers into the SFP ports (25/26, 27/28) and connect fiber optic cables.

3.5 Console Connection

For initial configuration or direct management, connect a console cable (RJ45 to DB9 or USB) from your management workstation to the console port on the rear panel. Use a terminal emulation program (e.g., PuTTY, Tera Term) with appropriate settings (e.g., 9600 baud, 8 data bits, no parity, 1 stop bit, no flow control).

3.6 Initial Configuration

The FortiSwitch is designed for integration with a FortiGate firewall. For initial setup and management, refer to the FortiGate documentation for instructions on how to discover and authorize the FortiSwitch. This allows for centralized management through the FortiGate interface.

4. Operating Instructions

4.1 Powering On

After connecting the power cord, the switch will automatically power on. Observe the Power LED on the front panel; it should illuminate to indicate the device is receiving power.

4.2 LED Indicators

The front panel LEDs provide visual status information:

- **Power LED:** Indicates power status.
- **Alarm LED:** Indicates system alarms or errors.
- **PoE LED:** Indicates Power over Ethernet status for the ports.
- **Speed LED:** Indicates the connection speed of the respective port.
- **Link/Act LED:** Indicates a valid network link and activity on the respective port.

Refer to the Fortinet documentation for detailed LED behavior and troubleshooting.

4.3 Management

The FortiSwitch FS-224E-POE is primarily managed through a FortiGate firewall using the FortiGate Switch Controller. This provides a single pane of glass for configuration, monitoring, and troubleshooting. For advanced configurations, the switch can also be accessed via the console port or SSH/Telnet (if enabled and configured).

5. Maintenance

5.1 Cleaning

Periodically clean the exterior of the switch with a soft, dry cloth. Do not use liquid or aerosol cleaners. Ensure ventilation openings are clear of dust and debris to maintain proper cooling.

5.2 Firmware Updates

Regularly check the Fortinet support website for the latest firmware updates. Keeping the firmware up-to-date ensures optimal performance, security, and access to new features. Follow the instructions provided by Fortinet for firmware upgrade procedures.

5.3 Environmental Considerations

Ensure the operating environment adheres to the specified temperature and humidity ranges to prevent damage and ensure reliable operation. Avoid placing the switch in direct sunlight or near heat sources.

6. Troubleshooting

6.1 Common Issues

- **No Power:** Verify the power cord is securely connected to both the switch and a working electrical outlet. Check the Power LED.
- **No Link/Activity:** Ensure Ethernet or fiber cables are properly connected to both the switch and the connected device. Check the Link/Act LED. Verify the connected device is powered on and functioning.
- **PoE Not Working:** Confirm the connected device is PoE-compatible. Check the PoE LED for the port. Ensure the total PoE budget (180W) is not exceeded by all connected devices.
- **Cannot Access Management Interface:** Verify network connectivity between your management station and the FortiGate. If using the console, check cable connections and terminal emulation settings.

6.2 Support

If you encounter issues that cannot be resolved using this manual, please refer to the official Fortinet support documentation or contact Fortinet technical support for assistance. Provide your product model and serial number when seeking support.

7. Specifications

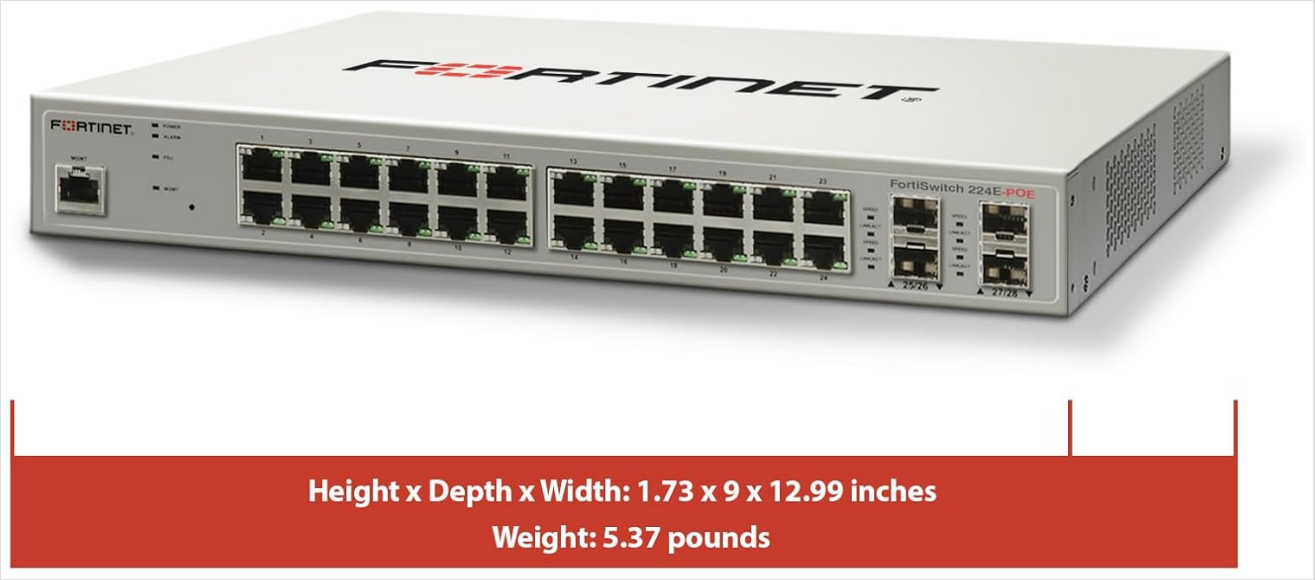


Figure 3: Dimensions and weight of the FortiSwitch FS-224E-POE.

Fortinet FortiSwitch FS-224E-POE Technical Specifications

Feature	Specification
Model Number	FS-224E-POE
Switching Capacity (Duplex)	56 Gbps
Packets Per Second (Duplex)	83 Mpps
Memory	512 MB DDR3
RJ-45 Serial Console Port	1
VLANs Supported	4K
Network Latency	< 1µs

Feature	Specification
Total Network Interfaces	24x GE RJ45 ports, 4x GE SFP ports
PoE+ Ports	24 (all RJ45 ports)
PoE Budget	180W
Form Factor	1 RU Rack Mount
Dimensions (H x D x W)	1.73 x 9 x 12.99 inches (44 x 230 x 330 mm)
Weight	5.37 pounds (2.44 kg)
Case Material	Metal
Operating Temperature	32-122°F (0-50°C)
Storage Temperature	-4-158°F (-20-70°C)
Humidity	10-90% non-condensing
Power Supply	AC built-in (100-240VAC, 50/60Hz)
Management	FortiGate Switch Controller Compatible

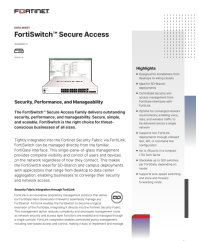
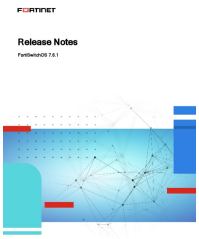
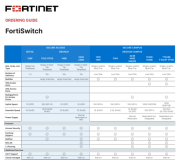
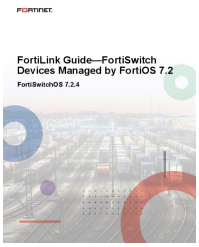
8. Warranty and Support

The Fortinet FortiSwitch FS-224E-POE comes with a limited lifetime warranty. For detailed information regarding warranty terms, conditions, and registration, please refer to the official Fortinet website or the warranty documentation included with your product.
For technical support, documentation, and software downloads, visit the Fortinet support portal. You will typically need your product's serial number to access support resources.

9. Safety Information

- Always connect the device to a grounded power outlet.
- Do not operate the device in environments with excessive heat, humidity, or dust.
- Ensure proper ventilation and do not block any ventilation openings.
- Do not open the device casing; there are no user-serviceable parts inside. Refer all servicing to qualified personnel.
- Use only the power adapter and cables supplied or recommended by Fortinet.
- Disconnect power before cleaning or moving the device.

Related Documents - FS-224E-POE

	[FortiSwitch Secure Access Series Data Sheet | Fortinet] Explore the FortiSwitch Secure Access Series from Fortinet, offering high-performance, secure, and manageable network switches designed for businesses of all sizes. Learn about features, specifications, and deployment options.
	[FortiSwitchOS 7.6.1 Release Notes] Release notes for FortiSwitchOS version 7.6.1, detailing new features, resolved issues, known issues, and upgrade information for Fortinet FortiSwitch devices.
	[FortiSwitch Ordering Guide - Fortinet Network Switches] This guide provides detailed ordering information for Fortinet's FortiSwitch product line, covering various models for retail, branch, campus, data center, and industrial environments. It includes specifications, port configurations, power supply options, and transceiver compatibility.
	[FortiSwitchOS 7.2.6 Release Notes] This document provides release notes for FortiSwitchOS 7.2.6, detailing new features, supported models, special notices, upgrade information, product integration, resolved issues, and known issues.
	[FortiSwitchOS 7.4.2 Release Notes] This document provides release notes for FortiSwitchOS version 7.4.2, detailing new features, supported models, upgrade information, product integration, resolved issues, and known issues.
	[FortiLink Guide: Managing FortiSwitch Devices with FortiOS 7.2] A comprehensive guide for IT professionals on configuring and managing FortiSwitch devices using FortiLink with FortiOS 7.2. This document details setup, network topologies, VLAN configuration, Power over Ethernet (PoE), security features, and advanced management capabilities for enterprise networks.