

Ubiquiti Networks US-48-500W

Ubiquiti UniFi Switch US-48-500W Instruction Manual

Model: US-48-500W

[Overview](#)

[Setup](#)

[Operation](#)

[Maintenance](#)

[Troubleshooting](#)

[Specifications](#)

[Warranty & Support](#)

1. PRODUCT OVERVIEW

The Ubiquiti UniFi Switch US-48-500W is a fully managed PoE+ Gigabit switch designed for enterprise networks. It provides robust performance and intelligent switching capabilities. This switch features 48 ports with auto-sensing IEEE 802.3af/at or configurable 24V PoE, simplifying network infrastructure. Additionally, it includes two SFP+ ports and two SFP ports for uplink and fiber connectivity, supporting speeds up to 10 Gbps. The UniFi Switch is managed and configured via the UniFi Controller, offering advanced Layer-2 switching features and protocols, including per-port operation mode (switching, mirroring, or aggregate).



Figure 1: Front view of the Ubiquiti UniFi Switch US-48-500W, showcasing its 48 Ethernet ports and SFP/SFP+ ports.

2. SETUP AND INSTALLATION

2.1. Package Contents

Verify that your package contains the following items:

- UniFi Switch US-48-500W
- Power Cord
- 4 Mounting Screws
- 4 Cage Nuts
- Quick Start Guide

2.2. Hardware Installation

The UniFi Switch US-48-500W is designed for rack mounting. Use the provided mounting screws and cage nuts to secure

the switch in a standard server rack.

2.3. Power Connection

Connect the included power cord to the power port on the rear of the switch and then to a suitable power outlet.

2.4. Initial Configuration (Console Access)

For initial configuration or troubleshooting, you may need to access the switch via its console port. This requires a serial connection from your computer to the switch.

1. **Connect the Serial Hub:** Connect a USB-to-serial hub (such as the DriverGenius 4-port serial hub) to your computer's USB port.
2. **Driver Installation:** Upon first connection, your operating system (e.g., Windows) should automatically detect the device and download necessary drivers from the internet. Ensure your computer has an active internet connection.
3. **Identify COM Ports:** Open your computer's Device Manager. Under 'Ports (COM & LPT)', identify the assigned COM ports for the USB-to-serial controller. Each port on the serial hub will correspond to a unique COM port number.
4. **Connect to Switch Console:** Use an RJ45 to DB9 console cable to connect one of the serial ports on the hub to the 'CONSOLE' port on the UniFi Switch.
5. **Configure Terminal Emulator:** Use a terminal emulator program (e.g., PuTTY) with the following serial settings, which are typical for Ubiquiti devices:

Setting	Value
Serial Line	COMx (where x is the identified COM port)
Speed (Baud)	115200
Data bits	8
Parity	NONE
Stop bits	1
Flow control	NONE

Once connected, you can log in using the device's credentials (e.g., default admin/ubnt) to access the Command Line Interface (CLI) for configuration and management.



Figure 2: Example of a console port on a network switch, typically an RJ45 connector labeled 'CONSOLE'.

3. OPERATION

The UniFi Switch US-48-500W is primarily managed through the Ubiquiti UniFi Controller software. This graphical user interface (GUI) allows for comprehensive configuration and monitoring of all switch features.

3.1. UniFi Controller Management

The UniFi Controller provides a centralized platform to:

- Configure port settings, including PoE (IEEE 802.3af/at or 24V passive), network/VLAN configurations, and operation modes (switching, mirroring, or aggregate).
- Monitor network performance, device status, and client connectivity.
- Implement 802.1X Authentication and Radius VLAN support.
- Perform firmware upgrades and manage device backups.

Refer to the official Ubiquiti UniFi Controller documentation for detailed instructions on using the software.

3.2. Ethernet and Fiber Connectivity

The switch features 48 Gigabit Ethernet ports for connecting network devices. The two SFP ports support 1 Gbps uplinks, while the two SFP+ ports provide high-capacity uplinks of up to 10 Gbps for fiber connectivity.

4. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your UniFi Switch.

4.1. Environmental Conditions

Ensure the switch operates within the specified temperature range of 23 to 104° F (-5 to 40° C) and in a well-ventilated area to prevent overheating.

4.2. Fan Operation and Sound Levels

The switch incorporates fans for cooling. Sound levels vary depending on the fan speed, which adjusts based on internal temperature and load:

- Fan Level 0: 10.7 dBr
- Fan Level 1: 16.2 dBr
- Fan Level 2: 19.3 dBr
- Fan Level 3: 23.6 dBr

The background noise level is approximately 27.5 dB. Ensure adequate airflow around the device and keep vents clear of obstructions.

4.3. Firmware Updates

Regularly check for and apply firmware updates through the UniFi Controller to benefit from new features, performance improvements, and security patches.

5. TROUBLESHOOTING

This section provides basic troubleshooting steps for common issues.

5.1. Device Not Recognized During Console Setup

- Ensure the USB-to-serial hub is properly connected to your computer.
- Verify your computer has an active internet connection for automatic driver download.
- Check Device Manager for any unrecognized devices or driver errors. Manually update drivers if necessary.
- Confirm the console cable (RJ45 to DB9) is securely connected to both the serial hub and the switch's console port.

5.2. Unable to Access CLI via Console

- Double-check the serial port settings in your terminal emulator (COM port, Baud rate, Data bits, Parity, Stop bits, Flow control) against the manufacturer's specifications.
- Ensure you are using the correct login credentials for the switch.
- Try restarting the terminal emulator program or reconnecting the serial cable.

5.3. Network Connectivity Issues

- Verify all Ethernet and fiber cables are securely connected.
- Check the LED indicators on the switch ports for link status and activity.
- Ensure proper VLAN and network configurations are applied via the UniFi Controller.
- Confirm that connected devices are receiving power if PoE is enabled on the port.

For more advanced troubleshooting, consult the official Ubiquiti Networks support resources and documentation.

6. SPECIFICATIONS

Feature	Detail
Model	US-48-500W
Product Dimensions (LxWxH)	19.09" x 14.75" x 1.72" (48.5 x 37.5 x 4.37 cm)
Item Weight	13.5 lbs (6.12 kg)
Number of Ports	48 Gigabit Ethernet, 2 SFP, 2 SFP+
Interface Type	PoE, SFP
Data Transfer Rate	1000 Megabits Per Second (Gigabit Ethernet), 10 Gbps (SFP+)
Max Power Consumption	500W
Power Method	100-240VAC/50-60 Hz
Operating Temperature	23 to 104° F (-5 to 40° C)
Switching Capacity	140 Gbps
RAM	1 GB
Flash Memory Size	1
Color	White
Case Material	Plastic

7. WARRANTY AND SUPPORT

7.1. Product Warranty

The Ubiquiti UniFi Switch US-48-500W typically comes with a 1-year limited warranty. Please refer to the official Ubiquiti Networks warranty policy for specific terms and conditions, as warranty periods may vary by region and retailer.

7.2. Technical Support

For technical assistance, additional documentation, or advanced troubleshooting, please visit the official Ubiquiti Networks support website. Their resources include knowledge bases, forums, and contact information for direct support.

