NETGEAR GSM7224

NETGEAR GSM7224 24-Port Layer 2 Managed Gigabit Switch User Manual

1. Introduction

This manual provides comprehensive instructions for the installation, configuration, operation, and maintenance of your NETGEAR GSM7224 24-Port Layer 2 Managed Gigabit Switch. The GSM7224 is designed to deliver high-performance Gigabit Ethernet connectivity with advanced Layer 2 management features, suitable for demanding network environments.

It features 24 10/100/1000 Mbps RJ-45 ports and four combination Small Form-factor Pluggable (SFP) Gigabit ports for fiber connectivity, offering flexibility and scalability for your network infrastructure.

2. Product Overview

2.1 Key Features

- 24 x 10/100/1000BASE-T Gigabit Ethernet ports for high-speed wired connections.
- 4 x Shared SFP ports for flexible fiber uplink options.
- Full Layer 2 management capabilities including VLAN support, QoS, port trunking, and port mirroring.
- Non-blocking architecture for full wire-speed throughput on all ports.
- Advanced security features such as RADIUS authentication and broadcast storm protection.
- SNMP and DHCP support for comprehensive network management.

2.2 Front Panel Layout

Figure 1: Front panel of the NETGEAR GSM7224 switch.

This image displays the front panel of the NETGEAR GSM7224 switch. It features 24 RJ-45 Gigabit Ethernet ports, labeled 1 through 24. To the right, there are four combination SFP ports, labeled 21F, 22F, 23F, and 24F, which share bandwidth with the last four RJ-45 ports. On the far right, a console port (DB9) is visible for command-line interface access. Various LED indicators for power, system status, and port activity (link/speed) are also present on the left side of the panel.

2.3 LED Indicators

The front panel LEDs provide real-time status information about the switch and its ports. Refer to the following table for a description of each LED:

LED	Status	Description
Power	Green (Solid)	The switch is powered on.
System	Green (Solid)	The system is operating normally.
Link/Act (Per Port)	Green (Solid)	A valid network link is established.
Link/Act (Per Port)	Green (Blinking)	Data activity is occurring on the port.
Speed (Per Port)	Green (Solid)	Port is operating at 1000 Mbps.
Speed (Per Port)	Amber (Solid)	Port is operating at 10/100 Mbps.

3. Setup and Installation

3.1 Package Contents

Verify that your package contains the following items:

- NETGEAR GSM7224 24-Port Layer 2 Managed Gigabit Switch
- Power cord
- Rack-mount kit (brackets and screws)
- Console cable (DB9 to RJ-45)
- Resource CD (may contain documentation and utility software)

3.2 Physical Installation

1. **Rack Mounting:** Attach the provided rack-mount brackets to the sides of the switch using the included screws. Secure the switch into a standard 19-inch equipment rack. Ensure adequate ventilation around the switch.
2. **Power Connection:** Connect the power cord to the switch's power inlet and then to a grounded electrical outlet. The Power LED on the front panel should illuminate.
3. **Initial Network Connection:**
    - **Console Port:** For initial configuration or command-line interface (CLI) access, connect a computer to the switch's console port using the provided console cable. Configure your terminal emulation program (e.g., PuTTY, Tera Term) with the following settings: 9600 baud, 8 data bits, no parity, 1 stop bit, no flow control.
    - **Network Ports:** Connect your network devices (servers, workstations, other switches) to the RJ-45 Gigabit Ethernet ports using standard Ethernet cables. For fiber uplinks, insert compatible SFP transceivers into the SFP ports and connect fiber optic cables.

4. Operation and Configuration

4.1 Accessing the Management Interface

The NETGEAR GSM7224 switch can be managed via a Command Line Interface (CLI) through the console port or a Web-based Graphical User Interface (GUI) via an Ethernet port.

- **CLI Access:** As described in the setup section, connect via the console port. This provides full control over all

switch features.

- **Web GUI Access:** The switch typically has a default IP address (e.g., 192.168.0.239 or obtained via DHCP). Connect a computer to any Ethernet port on the switch, configure your computer's IP address to be in the same subnet as the switch, and then open a web browser to the switch's IP address. Enter the default username and password (refer to the product documentation or the switch's label for defaults).

4.2 Basic Configuration

Upon initial access, it is recommended to perform the following basic configurations:

1. **Change Default Password:** For security, immediately change the default administrator password.
2. **Configure IP Address:** Assign a static IP address, subnet mask, and default gateway that is appropriate for your network environment.
3. **System Time:** Set the correct system time and configure NTP (Network Time Protocol) for accurate logging and event correlation.
4. **Save Configuration:** After making any changes, ensure you save the configuration to the switch's non-volatile memory to prevent loss during a power cycle.

4.3 Advanced Layer 2 Features

The GSM7224 supports a wide range of Layer 2 features to optimize network performance and security:

- **VLANs (Virtual Local Area Networks):** Segment your network into logical broadcast domains to improve security and performance.
- **QoS (Quality of Service):** Prioritize critical network traffic (e.g., VoIP, video) to ensure consistent performance.
- **Link Aggregation (Port Trunking):** Combine multiple physical links into a single logical link for increased bandwidth and redundancy.
- **Port Mirroring:** Monitor network traffic by sending a copy of packets from one port to another for analysis.
- **SNMP (Simple Network Management Protocol):** Allow network management systems to monitor and manage the switch.
- **RADIUS Authentication:** Enhance security by integrating with a central authentication server.

5. Maintenance

5.1 Firmware Updates

Periodically check the NETGEAR support website for firmware updates. Firmware updates can provide new features, performance enhancements, and security patches. Follow the instructions provided with the firmware download carefully to avoid damaging the device.

5.2 Cleaning

To ensure optimal performance and longevity, keep the switch clean and free of dust. Use a soft, dry cloth to wipe the exterior. For internal cleaning, if necessary, use compressed air to clear dust from vents, ensuring the switch is powered off and disconnected from all cables first.

5.3 Environmental Considerations

Ensure the switch is operated within its specified environmental limits (temperature, humidity). Avoid placing the switch in direct sunlight, near heat sources, or in areas with excessive dust or moisture.

6. Troubleshooting

6.1 Common Issues and Solutions

- **No Power:**
  - Verify the power cord is securely connected to both the switch and the electrical outlet.
  - Check if the electrical outlet is functional by plugging in another device.
  - Ensure the Power LED on the front panel is illuminated.
- **No Link on a Port:**
  - Check the Ethernet cable connection at both ends. Try a different cable.
  - Verify the connected device is powered on and functioning correctly.
  - Check the Link/Act LED for the specific port. If it's off, there's no link.
  - Ensure the port is not administratively shut down in the switch configuration.
- **Cannot Access Web GUI:**
  - Ensure your computer's IP address is in the same subnet as the switch's IP address.
  - Verify physical connectivity between your computer and the switch.
  - Try pinging the switch's IP address.
  - Clear your browser's cache or try a different browser.
  - If the IP address is unknown, use the console port for CLI access to retrieve or configure the IP address.

6.2 Factory Reset

If you encounter persistent issues or forget the management password, you may need to perform a factory reset. Refer to the specific instructions in the full product documentation for your model, as the procedure can vary. A factory reset will erase all custom configurations and restore the switch to its default settings.

7. Specifications

Feature	Detail
Brand	NETGEAR
Model Number	GSM7224NA
Ethernet Ports	24 x 10/100/1000BASE-T RJ-45
SFP Ports	4 x Shared SFP Gigabit ports
Layer Support	Layer 2
Product Dimensions	20 x 15.2 x 4.9 inches (50.8 x 38.6 x 12.4 cm)
Item Weight	9.75 pounds (4.42 kg)
UPC	606449032093
Date First Available	January 30, 2004

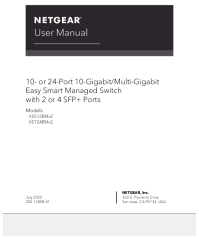
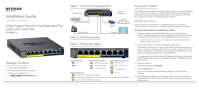
8. Warranty and Support

For detailed warranty information, please refer to the warranty card included with your product or visit the official NETGEAR website. NETGEAR provides technical support and resources to assist with product installation, configuration, and troubleshooting.

You can find support contact information, FAQs, and driver/firmware downloads on the official NETGEAR support portal. Please have your product model number (GSM7224) and serial number ready when contacting support.

Visit NETGEAR Support Website

Related Documents - GSM7224

	NETGEAR XS512EMv2 & XS724EMv2 10-Gigabit Easy Smart Managed Switch User Manual Comprehensive user manual for NETGEAR's 10-Port (XS512EMv2) and 24-Port (XS724EMv2) 10-Gigabit/Multi-Gigabit Easy Smart Managed Switches. Covers installation, configuration, performance optimization, VLANs, management, maintenance, and troubleshooting.
	NETGEAR GS752TPv2/GS752TPP Smart Managed Pro Switch Installation Guide Installation guide for the NETGEAR 48-Port Gigabit PoE+ Smart Managed Pro Switch with 4 SFP Ports (GS752TPv2 and GS752TPP). Learn how to connect, discover, configure, and manage your switch.
	NETGEAR MS510TXM and MS510TXUP Smart Managed Pro Switch Installation Guide Installation guide for NETGEAR MS510TXM and MS510TXUP 8-Port Multi-Gigabit/10G Ethernet Smart Managed Pro Switches. Covers connection, discovery, configuration, and PoE++ features for enhanced network management.
	NETGEAR: Configuring Multiple VLANs and VLAN Routing Guide Learn how to configure multiple VLANs and VLAN routing with internet access using NETGEAR M4300 and M4250 series switches. This guide covers ProAV network setup.
	NETGEAR GS105Ev2 5-Port Gigabit Ethernet Smart Managed Plus Switch Installation Guide Installation guide for the NETGEAR GS105Ev2 5-Port Gigabit Ethernet Smart Managed Plus Switch, detailing setup, registration, network connection, and IP address discovery.
	NETGEAR GS108PEv3 8-Port Gigabit Ethernet Smart Managed Plus Switch with 4-Port PoE Installation Guide Installation guide for the NETGEAR GS108PEv3, an 8-port Gigabit Ethernet Smart Managed Plus Switch featuring 4-Port PoE. Learn how to connect equipment, power the switch, check status, and access advanced configuration features via web browser or utility.