



# NETGEAR GSM7312 12-port Layer 3 Managed Gigabit Switch Specifications And Datasheet

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# NETGEAR

## NETGEAR GSM7312 12-port Layer 3 Managed Gigabit Switch



## Description

### High-speed, Layer 3 Managed Gigabit Switching

Now you can enjoy full Layer 3, Gigabit functionality at an affordable price. The NETGEAR Managed Gigabit

Switch provides maximum throughput and flexibility for demanding networks, with all the Layer 3 features you expect. This 10/100/1000 Mbps switch addresses today's high-performance requirements, while providing the control you need — and the future proofing you want. The GSM7312 is ideal as a backbone for 10/100 Mbps switches, Gigabit servers, or as the robust core of a demanding, all-Gigabit network.

The GSM7312 can be used to inexpensively off-load routers that are segmenting your network and lay the groundwork for new IP-based services. Layer 3 routing combined with L2/L3/L4 Quality of Service, bandwidth provisioning and access control features enable Voice over IP (VoIP) telephony, video conferencing, and other cost-saving applications. The GSM7312 Layer 3 Managed Gigabit Switch provides both Layer 2 and Layer 3 managed switching functionality. Its high-performance design offers a comprehensive set of features:

- **Routing:** IPv4 routing at wire speed, with up to 512 routes per unit; VRRP (IP redundancy), ICMP, RIP I and RIP II, OSPF, and DHCP/BOOTP relay
- **Switching:** Port trunking, broadcast storm protection, extensive VLAN support, IGMP snooping, Rapid Spanning Tree, and link aggregation
- **Quality of Service:** DiffServ, access control lists, and bandwidth provisioning using L2, L3, and L4 information.

Very affordable, the GSM7312 provides the connection flexibility of 12 Copper Gigabit ports, or up to 12 small form-factor pluggable (SFP) modules, sold separately.

## **Robust**

The GSM7312 provides powerful, non-blocking data routing and forwarding via 12 Gigabit Ethernet ports. All ports have copper Gigabit Ethernet, with each port offering optional hot-swappable SFP GBIC slots, for fiber connections.

## **Easier Network Management**

The GSM7312 is simple to set up and use, with an intuitive browser interface for easy configuration. Choose from two management interface options – an easy-to-follow, browser-based interface, and a command line interface, available through console or Telnet. Configuration files can be loaded and saved using TFTP, reducing the need for on-site administration.

## **Versatile**

A comprehensive set of Layer 3 features provides strong functionality in any network. For example, RIP routing for smaller networks and OSPF2 routing for larger, more complex networks. The GSM7312 helps maximize your network capabilities — and your return on investment.

## **Cost-Effective**

Moderately priced to boost your network throughput without blowing your budget. Designed in a 1U form factor, this complete package comes equipped with a rack-mounting kit, terminal cable, and power cord.

## **Package Contents**

- GSM7312 Managed Gigabit Switch
- Null modem cable
- Rack-mount kit
- Installation guide

- Resource CD
- Warranty card/Support information card

## **Technical Specifications**

### **Network Protocol and Standards Compatibility**

- IEEE 802.3 10BASE-T
- IEEE 802.3u 100BASE-TX
- IEEE 802.3z 1000BASE-SX
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3x Flow Control
- IEEE 802.3ad (LACP)
- IEEE 802.1v Protocol VLAN & Port VLAN
- IEEE 802.1w Rapid Spanning Tree
- IEEE 802.1s Multiple Spanning Tree
- IEEE 802.1x Port-based Security

### **Management Specifications**

- IEEE 802.1Q Static VLAN
- IEEE 802.1p Class of Service (CoS)
- IEEE 802.1D Spanning Tree Protocol
- RFC 768 UDP
- RFC 854-859 Telnet
- RFC 1057 RIP
- IGMP Snooping Support
- Port Mirroring Support
- RFC 1157 SNMP
- RFC 1757 RMON groups 1,2,3, and 9
- RFC 1534 DHCP and BootP Interoperation
- RFC 1583 OSPF v2
- RFC 2131, 2132 DHCP and BootP
- RFC 2236 IGMP v2
- RFC 2328 OSPF v2
- RFC 2338, 2787 VRRP
- RFC 2453 RIP v2
- RFC 2998 DiffServ
- Private Enterprise MIB
- Broadcast Storm Protection

### **System Parameters**

- **Number of VLANs:** 228

- **Maximum VLAN ID:** 4069
- **Number of 802.1p traffic classes:** 8
- **Number of trunks (up to 8 ports):** 6
- **Number of routes:** 512
- **Number of routed VLANs:** 24
- **Number of ARP entries:** 2048
- **Number of ACL rules (and entries):** 100 rules with 10 entries/rule
- **Number of Queues used for DiffServ:** 8
- **Maximum rules per class:** 8
- **Maximum instances per policy:** 10
- **Maximum attributes per instance:** 1
- **Maximum service interfaces:** 48

## User Interfaces

- Command Menu Interface via console port
- Web-based management via web browser
- Telnet remote login

## Physical Interfaces

- 12 RJ-45 connectors for 10BASE-T, 100BASE-TX, and 1000BASE-T (Auto Uplink™ on all ports)
- 12 small form-factor pluggable (SFP) slots for fiber SFP GBIC modules
- RS-232 Console Port

## LEDs

- **Per port:** Speed, Link, Activity
- **Per device:** Power, Fan Status

## Performance Specifications

- **Forwarding modes:** Store-and-forward
- **Bandwidth:** 24 Gbps
- **Switch latency:** < 20  $\mu$ s for 64-byte frames
- **System memory:** 128 MB
- **Packet buffer memory:** 122 KB embedded memory per port
- **Code Storage (Flash):** 16 MB
- **Address database size:** 16,000 media access control (MAC) addresses
- **Addressing:** 48-bit MAC address
- **Acoustic noise:** (ANSI-S10.12) 60 dB
- **Heat Dissipation:** 28.24 BTU/hr
- **Mean Time Between Failure (MTBF):** 166,600 hours (~ 19 years)

## Physical Specifications

- **Dimensions (w x d x h):** 440 x 258 x 43 mm (17.32 x 10.16 x 1.7 in)
- **Weight:** 3.97 kg (8.75 lbs.)

## Environmental Specifications

- **Operating temperature:** 0 to 40°C (32 to 104°F)
- **Storage temperature:** -20 to 70°C (-4 to 158°F)
- **Operating humidity:** 90% maximum relative humidity, non-condensing
- **Storage humidity:** 95% maximum relative humidity, non-condensing
- **Operating altitude:** 3,000 m (10,000 ft) maximum
- **Storage altitude:** 3,000 m (10,000 ft) maximum

## Electromagnetic Emissions

- CE mark, commercial
- FCC Part 15 Class A
- VCCI Class A
- EN 55022 (CISPR 22), Class A
- C-Tick

## Electromagnetic Immunity

- EN 50082-1
- EN 55024

## Safety

- CE mark, commercial
- CSA certified (CSA 22.2 #950)
- TUV licensed (EN 60 950)
- UL listed (UL 1950)/CUL IEC950/EN60950

## Modules

- NETGEAR AGM731F SFP GBIC SX module for 1000BASE-SX connections with LC connectors for 50um or 62.5um multi-mode fiber cable

## Warranty

- NETGEAR 5-year warranty

## Help

Help is here when you need it! NETGEAR provides 24x7 technical support\* in English, with selected local

language support during office hours.

## Support

- **Address:** 4500 Great America Parkway Santa Clara, CA 95054 USA
- **Phone:** 1-888-NETGEAR
- **E-mail:** [info@NETGEAR.com](mailto:info@NETGEAR.com)
- **Website:** [www.NETGEAR.com](http://www.NETGEAR.com)

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\* Free hardware support is provided for 90 days from the date of purchase; optional premium support is available

## FAQ's

What is the NETGEAR GSM7312 12-port Layer 3 Managed Gigabit Switch?

The NETGEAR GSM7312 is a 12-port Layer 3 managed gigabit switch designed for advanced network management and high-speed data transmission.

What are the key features of the NETGEAR GSM7312 switch?

The NETGEAR GSM7312 typically features Layer 3 routing capabilities, gigabit Ethernet ports, advanced QoS (Quality of Service), VLAN support, and robust security features.

How many gigabit Ethernet ports are available on this switch?

The NETGEAR GSM7312 switch offers a total of 12 gigabit Ethernet ports, making it suitable for connecting multiple devices at high speeds.

What is Layer 3 routing, and how does it benefit network management?

Layer 3 routing allows the switch to make intelligent routing decisions, which can enhance network efficiency and enable subnet segregation for better traffic control.

Is this switch suitable for small to medium-sized businesses?

Yes, the NETGEAR GSM7312 switch is often used in small to medium-sized businesses due to its advanced features and manageable port count.

Does the switch support Power over Ethernet (PoE) for powering connected devices?

The NETGEAR GSM7312 typically does not support Power over Ethernet (PoE). It focuses on data switching and routing capabilities.

What types of VLAN support are available on this switch?

This switch often supports both port-based and 802.1Q VLANs, allowing for flexible network segmentation and management.

Can the NETGEAR GSM7312 switch be managed remotely?

Yes, this switch often supports remote management, which enables administrators to configure and monitor it from a remote location.

What is Quality of Service (QoS), and how does it improve network performance?

QoS on the NETGEAR GSM7312 allows for traffic prioritization, ensuring that critical data gets preferential treatment, resulting in improved network performance.

Is there a web-based interface for managing the switch?

Yes, the NETGEAR GSM7312 switch often provides a user-friendly web-based interface for configuration and monitoring.

What is the maximum data transfer speed supported by this switch?

The NETGEAR GSM7312 typically supports data transfer speeds of up to 1 gigabit per second (Gbps) per port, making it ideal for high-speed data networks.

Are there any security features integrated into this switch?

Yes, this switch often includes security features such as access control lists (ACLs), port security, and authentication protocols to safeguard the network.

Is there a warranty provided with the NETGEAR GSM7312 switch?

The NETGEAR GSM7312 switch often comes with a limited warranty. The duration and terms of the warranty may vary, so check the documentation for details.

**References:** [NETGEAR GSM7312 12-port Layer 3 Managed Gigabit Switch – Device.report](#)