

High-speed, Layer 2 Managed Gigabit Switching with Static Routing

NETGEAR delivers wirespeed Gigabit performance and a full set of Layer 2 management features, as well as static routing with unsurpassed affordability. This next-generation, high-speed switch delivers maximum throughput where you need it — to high-performance workgroups at the edge of the network, or as a backbone for Fast Ethernet switches and high-speed servers in demanding small networks. The non-blocking design offers full Gigabit throughput simultaneously to all 24 or 48 10/100/1000 ports to ensure reliable performance. Flexible fiber connectivity is enabled through four combination small form-factor pluggable (SFP)** gigabit interfaces. Layer 2 management functionality delivers reliability, control, and availability. Static routing enables inter-VLAN routing and provides a faster network and more effective bandwidth management. Access control lists (L2-L4) provide robust security, while L2-L4 based QoS provides enhanced traffic management capabilities. The cost-effective NETGEAR ProSafe 24- and 48-port Gigabit L2 Managed Switch creates a more productive — and future-proof — network. With increasing bandwidth requirements from applications such as voice, video, database management, and other services that slow throughput and response time, you can unleash your network and enable maximum productivity with Gigabit Ethernet for today's high-performance environments.

Optimize bandwidth, security, and control with full Layer 2 management capabilities. Network administrators can use any combination of these features to ensure uptime, availability, bandwidth and throughput.

Powerful

Full 24 or 48 10/100/1000 ports and a non-blocking design provide wire speed throughput and maximum bandwidth for the most demanding network environments. Small form-factor pluggable (SFP) modules deliver choice in 1000BASE-SX, 1000BASE-LX or 1000BASE-ZX (70Km) optics. The Layer 2 management features optimize bandwidth throughout the network — delivering Gigabit performance to systems, applications, and services. Take advantage of forwarding rates up to 71.4 million pps, and a switching capacity of 96 Gbps.

Easy to Use

Move up to Gigabit power in minutes. Use either of these solutions as a managed switch out of the box — just plug and play! All ports are auto-negotiating and support Auto Uplink™ technology. Choose from two easy-to-use management interface options — Web interface or a command line interface available through console or telnet. Comprehensive remote administration capabilities reduce the need for on-site administration. Easy to troubleshoot — built-in testing capability locates cable-related network problems.

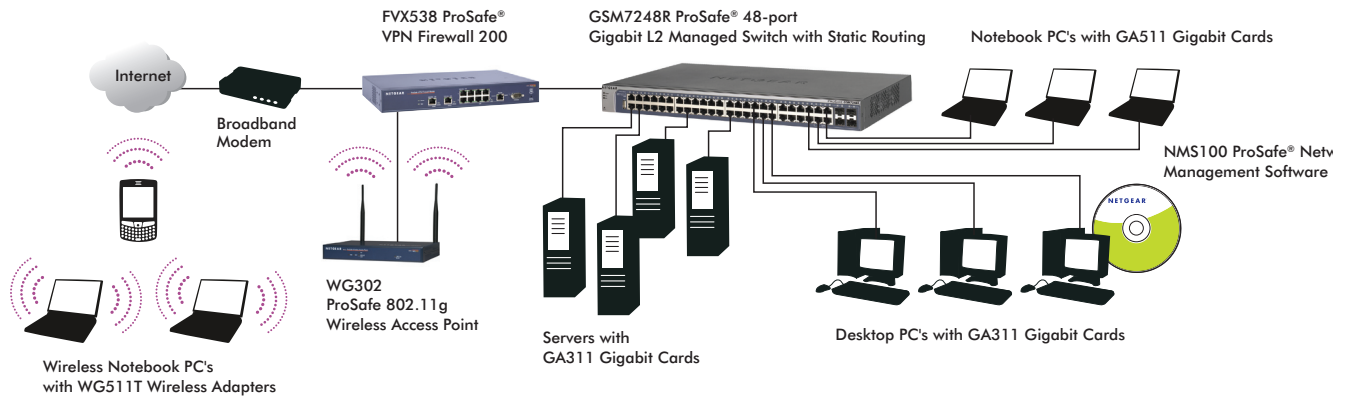
Manageable

Meet your management needs with SNMP (v1, v2c and v3), RMON, Command Line Interface (CLI) and completely redesigned Web-based GUI, ProSafe Control Center. Advanced features include up to 512 VLANs, DiffServ traffic prioritization and 802.1p (QoS) for Voice over IP services (VoIP), broadcast storm protection, RADIUS, 802.1x, port trunking, Rapid Spanning Tree, and link aggregation. In addition, L2-L4 based ACLs provide robust security, while static routing enables inter-VLAN routing for effective bandwidth management. Full Layer 2 implementation allows you to configure your network for maximum performance, reliability, and availability. Manageable with any popular SNMP-based management software, but optimized for NETGEAR ProSafe Network Management Software NMS100.

Outstanding

These products offer Layer 2 management and full Gigabit power at a compelling price. Use at the edge to improve workgroup connections, or at the core to upgrade a Gigabit Ethernet backbone — now you can afford the power your network deserves. Like all NETGEAR products, everything you need is in the box — including rack-mount kit, power and serial cables, and more.





Technical Specifications

• Physical Interfaces

- RJ-45 Connectors for 10BASE-T, 100BASE-TX, and 1000BASE-T (Auto Uplink™ on all ports):
GSM7224R 24 ports
GSM7248R 48 ports

- Small form-factor pluggable (SFP) modules for fiber Gigabit Ethernet interfaces:

GSM7224R 4 slots
GSM7248R 4 slots

- RS-232 console port

• Layer 2 Services

- IEEE 802.1Q static VLAN (512)
- IEEE 802.1p Class of Service (CoS)
- IEEE 802.1D Spanning Tree Protocol
- IEEE 802.1v Protocol VLAN & Port VLAN and MAC-based VLAN
- IEEE 802.1 Q-in-Q
- IEEE 802.1w Rapid Spanning Tree
- IEEE 802.1s Multiple Spanning Tree
- IEEE 802.3ad Link Aggregation (LACP)
- IEEE 802.1x port access authentication
- IGMP v1, v2, v3 snooping support
- Static multicast filtering
- Ingress rate limit in 1 Kbps increments
- Weighted round robin (WRR) queue technology

• Layer 3 Services

- IGMP Querier
- COS
- Diffserv QoS
- Static routing
- ARP

• Security

- Access Control Lists (ACL) - MAC, IP, TCP
- ACLs: L2/L3/L4
- Network storm protection including broadcast multicast and unicast traffic
- Protected ports
- MAC filtering
- Port locking

• Switch Management Specifications

- SNMP v1, v2c, v3 with multiple IP addresses
- RFC 1157, 1902-1907
- RFC 768 UDP
- UDP relay
- RFC 854-859 telnet
- RFC 951 BOOTP
- RFC 1213 MIB II
- RFC 1757 RMON groups 1,2,3, and 9
- RFC 1215 SNMP Traps
- RFC 1493 Bridge MIB
- RFC 1643 Ethernet Interface MIB
- RFC 1534 DHCP and BOOTP interoperation
- RFC 2131, 2132 DHCP and BOOTP
- RFC 2865 RADIUS (both switch and management access)
- RFC 2866 RADIUS accounting
- Private Enterprise MIB
- Port mirroring support (many-to-one)
- RFC 2236 IGMP v2
- DHCP/BOOTP relay-primary and backup (RFC 3046, option 82)
- RFC 2030 Simple Network Time Protocol (SNTP)
- DHCP server

- DHCP relay (with backup servers)

- GARP/GVRP/GMRP

- SYSLOG

- Firmware upgrade via TFTP or HTTP

- Port description

- RFC 1519 CIDR

- Proxy ARP

- DNS lookup

• Performance Specifications

- Forwarding modes: Store-and-forward

- Bandwidth:

GSM7224R: 48 Gbps; 35.7 Mpps

GSM7248R: 96 Gbps; 71.4 Mpps

- Switch latency: 20 us for 64-byte frames (1G to 1G)

- System memory: 64 MB

- Packet buffer memory:

GSM7224R: max support 0.75 MB buffer memory

GSM7248R: max support 1.5 MB buffer memory

- Code storage (flash): 32 MB

- Address database size: 8K media access control (MAC) addresses

- Number of VLANs: 512 (1-4093)

- Number of trunks: 16

- Number of queues: 8

- Number of static route: 32

- Number of routed VLANs: 32

- Number of ARP entries: 480

- Number of ACL rules: 224

- Jumbo frame support: up to 9K packet size

- Acoustic noise:

GSM7224R: 38.6 dB

GSM7248R: 48.8 dB

- Heat Dissipation:
GSM7224R: 131.439 BTU/hr
GSM7248R: 244.101 BTU/hr
- Mean time between failures (MTBF):
GSM7224R: 239,032 hours
(~27 years) GSM7248R: 162,303
hours (~19 years)
- User interfaces
- Command Line Interface (CLI) via
console port (5 sessions)
- Web-based management via
embedded HTTP server protected with
Secure Sockets Layer
- (SSLv3) or Transport Layer Security
(TLS v1)
- Telnet remote login (5 sessions)
securable with Secure Shell
(SSH v1.5, v2)

• LEDs

- Per port: Speed, link, activity
- Per device: Power, fan, RPS status

• Network Standards Compatibility

- IEEE 802.3i 10BASE-T
- IEEE 802.3u 100BASE-TX, 100BASE-FX
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3z 1000BASE-X
- IEEE 802.3x flow control

• Physical Specifications

- Dimensions (w x d x h):
440 x 205 x 43 mm
(17.3 x 8.1 x 1.6 in)
- Weight:
GSM7224R: 3.65 kg (8.03 lb)
GSM7248R: 4.15 kg (9.13 lb)

• Environmental Specifications

- Operating temperature: 0° to 55° C
(32° to 131° 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

• Electrical Specifications

- Power consumption:
GSM7224R 38.5W maximum
GSM7248R 71.5W maximum
- Redundant power supply
input: 12V

• Electromagnetic Emissions

- CE mark
- EN 55022 Class A - Emissions
- EN 55024 - Immunity
- FCC Part 15 Class A
- VCCI Class A
- C-Tick

• Electromagnetic Safety

- CE mark
- EN 60950-1
- UL/cUL 60950-1

Warranty

- NETGEAR Lifetime Warranty†

Modules

- ProSafe AGM731F 1000BASE-SX
SFP GBIC
- ProSafe AGM732F 1000BASE-LX
SFP GBIC
- ProSafe AGM733 1000BASE-ZX
SFP GBIC
- 100FX SFP LC transceiver

Package Contents

- ProSafe Gigabit L2 Managed Switch
with Static Routing (GSM7224R
or GSM7248R)
- Null modem cable
- Rubber footpads
- Power cable
- Rack-mount kit
- Installation guide
- Resource CD-ROM
- Warranty/support information card

Ordering Information

• North America

- GSM7224R-100NAS
- GSM7248R-100NAS

• Europe

- GSM7224R-100EUS
- GSM7248R-100EUS

• Asia

- GSM7224R-100AUS
- GSM7248R-100AUS

• Japan

- GSM7224R-100JPS
- GSM7248R-100JPS

ProSupport Service Packs Available

GSM7224R

• OnCall 24x7, Category 2

- PMB0332

• XPressHW, Category 2

- PRR0332-100

GSM7248R

• OnCall 24x7, Category 3

- PMB0333

• XPressHW, Category 3

- PRR0333-100

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*Free basic installation support provided for 90 days from date of purchase. Advanced product features and configurations are not included in free basic installation support; optional premium support available.

†Lifetime warranty for product purchased after 05/01/2007.

** Use with AGM731F 1000Base-SX SFP module, AGM732F 1000Base-LX SFP module or the AGM733 1000Base-ZX (70km) SFP module.

D-GSM7224R/GSM7248R-4