NETGEAR®
PROSAFE®

ProSafe® 24-, 24 SFP, and 48-port Gigabit L3 Managed Stackable Switches Data Sheet

GSM7328S, GSM7328FS, GSM7352S

Flexible, Stackable, High Speed Switching!

NETGEAR's low-cost, stackable, Gigabit Ethernet switches deliver maximum throughput and flexibility where you need it — to high-speed, high-density workgroups at the edge of the network, in the backbone of growing networks or for bandwidth-thirsty file and application servers. The ProSafe GSM7328S and GSM7352S fully-managed switches deliver 24 and 48 ports of auto-sensing 10/100/1000 Mbps interfaces for high-density copper connectivity. Four (GSM7328S) or eight (GSM7352S) hot-swappable Small Form-factor Pluggable (SFP) gigabit interfaces provide optional fiber connectivity for longer reach Gigabit Ethernet requirements. For high-density fiber installations, the GSM7328FS delivers 24 hot-swappable SFP Gigabit interfaces for fiber connectivity and 4 combo ports of auto-sensing 10/100/1000 Mbps interfaces for copper connectivity. All switches have four high-speed, module bays offering modular expansion for 10 Gigabit Ethernet or 24 Gigabit Stacking connectivity. The non-blocking design of the switches delivers simultaneous, full wire-speed, low-latency throughput to all ports.

A full suite of Layer 3 switching functionality ensures reliable routing between VLANs and network segmentation where and when you need it, at no additional cost. By configuring the switches into a stack of up to 8 units across a 48 Gbps bi-directional ring, a high-density, single IP-addressable switch can be built.

Robust security features include IEEE 802.1x port-based authentication and access control lists, ensuring that only authorized users can access your network. Secure management of the switches is available through Secure Sockets Layer (SSLv3) for the Web GUI and Secured Shell (SSH) for command-line sessions or with SNMP v3 for network management software. For workgroup deployments in cost-sensitive organizations that require Layer 3 switching, additional Gigabit capacity, high-value price point, flexibility of stacking, and reduced maintenance requirements, NETGEAR's ProSafe Gigabit Layer 3 Stackable switches deliver the ideal access-edge solution.

With their high-value price point, flexible design, and reduced maintenance requirements, NETGEAR's ProSafe Gigabit Layer 3 Stackable switch solutions yield a high return on investment, and are ideal for delivering highly reliable, converged voice, video, and data services over a single network infrastructure.

Powerful

In desktop switching environments, wire-speed performance with full QoS control for all 10/100/1000 interfaces is critical. The 4 high-speed 10G/24G module bays provide unprecedented flexibility, whether you are stacking between switches, attaching bandwidth-thirsty file servers, or aggregating critical data to the core of your network.

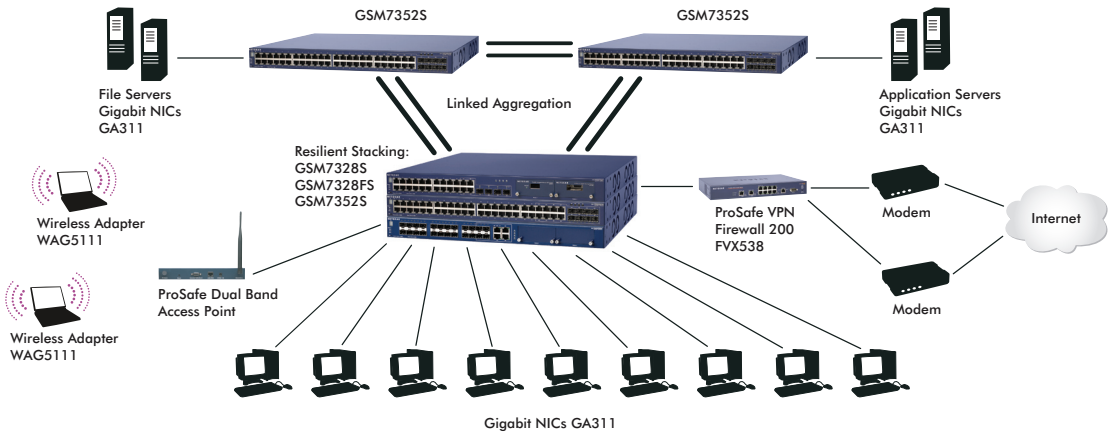
Easy to Use

Simplify and reduce IT staff workload and mean time-to-repair with intuitive, GUI-based device configuration, and an industry-standard command-line interface (CLI). The EZ-Config tool simplifies initial configuration steps to streamline the out-of-box set-up. For easy tracking of port usage, use the text-based port description to label how ports are used. Stacking capabilities allow you to build a single-IP manageable device with up to eight switches utilizing ultra-high-speed 48 Gbps across intelligent bi-directional redundant stacking links.

24/7 TECHNICAL SUPPORT*

1-888-NETGEAR (638-4327)
Email: info@NETGEAR.com

NETGEAR PROSAFE LIFETIME WARRANTY*



Technical Specifications

• Physical Interfaces

– RJ-45 Connectors for 10BASE-T, 100BASE-TX, and 1000BASE-T (Auto Uplink™ on all ports):
-GSM7328S 24 ports
-GSM7328FS 4 ports
-GSM7352S 48 ports

– Small form-factor pluggable (SFP) modules for fiber Gigabit Ethernet interfaces:
-GSM7328S 4 slots
-GSM7328FS 24 slots
-GSM7352S 8 slots

– (4) 10 Gigabit Ethernet/24G Stacking Module Bays

– RS-232 Console Port

• Layer 2 Services

– IEEE 802.1Q Static VLAN (Up to 4k VLAN ID)

– IEEE 802.1p Class of Service (CoS)

– IEEE 802.1D Spanning Tree Protocol

– IEEE 802.1v Protocol VLAN & Port VLAN

– IEEE 802.1 Q-inQ

– IEEE 802.1w Rapid Spanning Tree

– IEEE 802.1s Multiple Spanning Tree

– IEEE 802.3ad Link Aggregation (LACP) up to 48 trunks

– IEEE 802.1x Port Access Authentication

– IGMP v1, v2, v3 snooping support

– Network storm protection including broadcast, multicast and unicast traffic

– Static multicast filtering

– Port locking

– Ingress rate limit in 1 Kbps increments

– GARP/GVRP/GMRP

• Layer 3 Services

– VLAN routing

– Port routing

– RIP v1/v2 (RFC 1058, 2453)

– OSPF v2 (RFC 1583, 2328)

– OSPF equal-cost multi-path (4 - ECMP routes)

– VRRP (RFC 2338, 2787) 64 instances

– Access control lists (ACL) - MAC, IP, TCP

– ACLs – 1,024 Global

– COS

– DiffServ QoS (RFC 2998)

– DNS Caching

– DHCP/BOOTP relay -primary and backup (RFC3046, option 82)

• Switch Management Specifications

– SNMP v1, v2c, v3 with multiple IP addresses

– RFC 1157, 1901-1910, 2574, 2575

– 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

– DHCP relay (with backup servers)

– RFC 2865 RADIUS (both switch and management access)

– RFC 2866 RADIUS accounting

– Private enterprise MIB

– Port mirroring support

– RFC 2236 IGMP v2

– IGMP querier

– RFC 2030 Simple Network Time Protocol (SNTP)

– RFC 1027 Proxy ARP

– SYSLOG

– Firmware upgrade via TFTP or HTTP

– RFC 1519 CIDR

– Proxy ARP

– DNS lookup

– Port description

• Single IP Address Management (firmware version 7.3 or higher)

– Manage up to 48 fully managed switches

– Feature can be used with the following models:
- FSM726E, FSM7226RS, FSM7250RS
- FSM7328S, FSM7352S, FSM7328PS, FSM7352PS
- GSM7224R, GSM7248R
- GSM7328S, GSM7328FS, GSM7352S

• Performance Specifications

– Forwarding modes: Store-and-forward

– GSM7328S/GSM7328FS: 144 Gbps; 107.1 Mpps

– GSM7352S: 192 Gbps; 285.7 Mpps

– Switch latency: < 6 us for 64-byte frames (10 G to 10 G)
< 2 us for 64-byte frames (1 G to 1 G)

– System memory: 256 MB

– Packet buffer memory: 334 KB embedded memory per port

– Code storage (flash): 32 MB

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

– Number of VLANs: 512

– Number of trunks: 48

– Number of queues: 8

– Number of routes: 512

– Jumbo frame support: up to 9K packet size

– Acoustic noise: GSM7328S 52.4 dB
GSM7328FS 51.7 dB
GSM7352S 52.8 dB

– Heat dissipation:
-GSM7328S 273.12 BTU/hr
-GSM7328FS 266 BTU/hr
-GSM7352S 375.54 BTU/hr

– Mean time between failures (MTBF): 117,747 hours (~ 13.4 years)

- **User Interfaces**
  - Command Line Interface (CLI) via console port
  - Web-based management via embedded HTTP server protected with Secured Sockets Layer
  - (SSLv3) or Transport Layer Security (TLS v1)
  - Telnet remote login (5 sessions) securable with Secured Shell (SSH v1.5, v2)
- **LEDs**
  - Per port: Speed, link, activity
  - Per device: Power, fan status, stack ID, RPS, master
- **Network Standards Compatibility**
  - IEEE 802.3i 10BASE-T
  - IEEE 802.3u 100BASE-TX
  - IEEE 802.3u 100BASE-FX*
  - IEEE 802.3ab 1000BASE-T
  - IEEE 802.3z 1000BASE-X
  - IEEE 802.3x Flow Control
  - IEEE 802.3ae 10000BASE-X

  *Tested with Fiberxon SFP Modules
- **Physical Specifications**
  - Dimensions (w x d x h): 440 x 385 x 43 mm (17.32 x 15.16 x 1.7 in)
  - Weight: GSM7328S 4.5 kg (10 lb)
    GSM7352S 5.4 kg (12 lb)
    GSM7328FS 5.4 kg (12 lb)
- **Environmental Specifications**
  - Operating temperature:
    GSM7328S/GSM7352S:
    0° to 40° C (32 to 104° F)
    GSM7328FS:
    0° to 50° C (32 to 122° F)
    Thermal sensor with SNMP trap settings
  - 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:
    -GSM7328S 80W maximum
    -GSM7328FS 78W maximum
    -GSM7352S 110W maximum
- **Electromagnetic Emissions**
  - CE mark
  - EN55022 Class A - Emissions
  - EN55024 - 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
- ProSafe AX741 10 Gigabit Ethernet XFP Adapter
- ProSafe AX742 24 Gigabit Stackable Modul
- ProSafe AXM751 10GBASE-SR XFP GBIC
- ProSafe AXM752 10GBASE-LR XFP GBIC

Package Contents

- ProSafe Gigabit L3 Managed Switch (GSM7328S, GSM7328FS or GSM7352S)
- Null modem cable
- Rubber footpads
- Power cable
- Rack-mount kit
- Installation guide
- Resource CD-ROM
- Warranty/support information card

Ordering Information

- **North America**
  - GSM7328SNA
  - GSM7328FS-100NAS
  - GSM7352SNA
- **Europe**
  - GSM7328SEU
  - GSM7328FS-100EUS
  - GSM7352S
- **Asia**
  - GSM7328SAU
  - GSM7328FS-100AUS
  - GSM7352SAU
- **Japan**
  - GSM7328SJP
  - GSM7328FS-100JPS
  - GSM7352SJP

ProSupport Service Packs Available

GSM7328FS & GSM7328S

- **OnCall 24x7, Category 3**
  - PMB0333
- **XPressHW, Category 3**
  - PRR0333-100

GSM7352S

- **OnCall 24x7, Category 4**
  - PMB0334
- **XPressHW, Category 4**
  - PRR0334-100

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350 E. Plumeria Drive
San Jose, CA 95134-1911 USA
1-888-NETGEAR (638-4327)
E-mail: info@NETGEAR.com
www.NETGEAR.com

*Basic technical support provided for 90 days from date of purchase.

†Lifetime warranty for product purchased after 05/01/2007. For product purchased before 05/01/2007, warranty is 5 years.