NETGEAR®

Connect with Innovation ™

ProSafe® 12-, 24- and 48-port Gigabit
L2 Managed Switches
GSM7212, GSM7224, GSM7248

Data Sheet

High-speed, Layer 2 Managed Gigabit Switching

NETGEAR delivers wirespeed Gigabit performance and a full set of Layer 2 management features with unsurpassed affordability. These next-generation, high-speed switches deliver 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 12, 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. The very affordable NETGEAR ProSafe 12-, 24- and 48-port Gigabit L2 Managed Switches, GSM7212, GSM7224 and GSM7248, create 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 12, 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 any 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 a complete Web-based GUI. 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. 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

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.

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

24/7
TECHNICAL
SUPPORT*

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Email: info@NETGEAR.com

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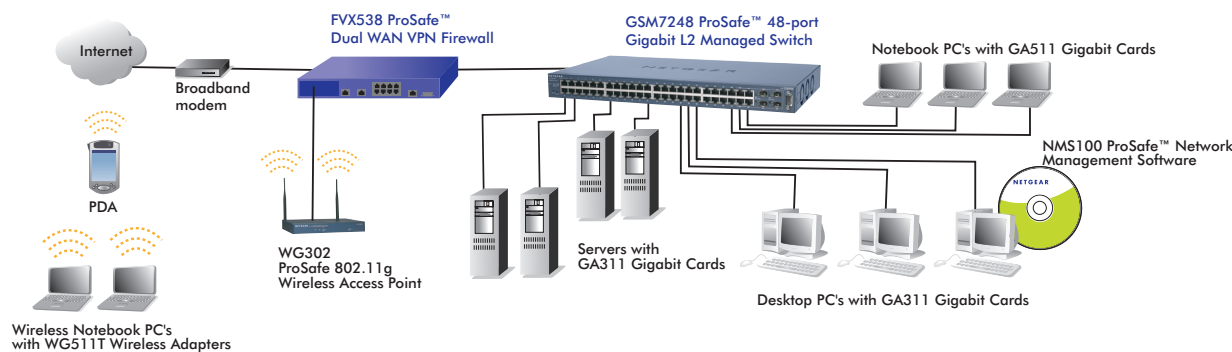
Physical Interfaces

– RJ-45 connectors for 10BASE-T, 100BASE-TX, and 1000BASE-T (Auto Uplink™ on all ports):
GSM7212: 12 ports
GSM7224: 24 ports
GSM7248: 48 ports

– Small form-factor pluggable (SFP) modules for fiber Gigabit Ethernet interfaces:
GSM7212: 12 slots
GSM7224: 4 slots
GSM7248: 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
– 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 snooping support
– Network storm protection including broadcast, multicast and unicast traffic
– Static multicast filtering
– Weighted round robin (WRR) query technology

• 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
– IGMP querier
– DHCP/BOOTP relay primary and backup (RFC3046, option 82)
– RFC 2030 Simple Network Time Protocol (SNTP)
– SYSLOG
– Firmware upgrade via TFTP or HTTP
– Port description

GSM7248 only:

– Ingress rate limit in 1 Kbps increments
– DiffServ QoS (RFC 2998)
– L3 prioritization
– L4 prioritization
– Policy-based QoS
– IEEE 802.1 QinQ
– Access control lists (ACL, MAC, IP)

• Performance Specifications

– Forwarding modes: Store-and-forward
– Bandwidth:
GSM7212: 24 Gbps; 17.8 Mpps
GSM7224: 48 Gbps; 35.7 Mpps
GSM7248: 96 Gbps; 71.4 Mpps
– Switch latency: 20 μs for 64-byte frames (1G to 1G)
– System memory: 64 MB
– Packet buffer memory: 122 KB embedded memory per port
– Code storage (flash): 8 MB
– MAC address database size:
GSM7212: 8 K
GSM7224: 8 K
GSM7248: 16 K
– Number of VLANs:
GSM7212: 228
GSM7224: 228
GSM7248: 240
– Number of trunks: 6
– Number of priority queues: 8
– Jumbo frame support: up to 9 K packet size
– Acoustic noise:
GSM7212: 41.6 dB
GSM7224: 60 dB
GSM7248: 47 dB
– Heat Dissipation: 28.24 BTU/hr
– Mean time between failure (MTBF):
GSM7212: 61,349 hours (>7 years)
GSM7224: 58,300 hours (>6.6 years)
GSM7248: 58,300 hours (>6.6 years)
– User Interfaces
– Command Line Interface (CLI) via console port (4 sessions)
– Web-based management via embedded HTTP server protected with Secure Sockets Layer
– (SSLv3) or Transport Layer Security (TLSv1)
– Telnet remote login (5 sessions) securable with Secure Shell (SSH v1.5, v2)

- **LEDs**
  – Per port: Speed, link, activity
    Per device: Power, fan status

- **Network Standards Compatibility**
  – IEEE 802.3i 10BASE-T
  – IEEE 802.3u 100BASE-TX
  – 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 257 x 43 mm
    (17.32 x 10.2 x 1.7 in)
  – Weight: 4.2 kg (9.2 lb)

- **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

- **Electrical Specifications**
  – Power Consumption:
    GSM7212 20.7W maximum
    GSM7224 42.9W maximum
    GSM7248 99W maximum
  – 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

Modules
  – ProSafe AGM731F 1000BASE-SX
    SFP GBIC
  – ProSafe AGM732F 1000BASE-LX
    SFP GBIC
  – ProSafe AGM733 1000BASE-ZX
    SFP GBIC

Warranty
  – NETGEAR Lifetime Warranty†

Package Contents
  – ProSafe Gigabit L2 Managed Switch
    (GSM7212, GSM7224 or GSM7248)
  – Null modem cable
  – Rubber footpads
  – Power cable
  – Rack-mount kit
  – Installation guide
  – Resource CD-ROM
  – Warranty/support information card

Ordering Information
- **North America**
  – GSM7212NA
  – GSM7224NA
  – GSM7248NA
- **Europe**
  – GSM7212EU
  – GSM7224EU
  – GSM7248EU
- **Asia**
  – GSM7212AU
  – GSM7224AU
  – GSM7248AU
- **Japan**
  – GSM7212JP
  – GSM7224JP
  – GSM7248JP

ProSupport Service Packs Available

GSM7212 & GSM7224
- **OnCall 24x7, Category 2**
  – PMB0332
- **XPressHW, Category 2**
  – PRR0332-100

GSM7248
- **OnCall 24x7, Category 3**
  – PMB0333
- **XPressHW, Category 3**
  – PRR0333-100