NETGEAR® PROSAFE®

ProSafe® 12-port and 24-port Gigabit L2+ Managed Switches with PoE+ Data Sheet

GSM5212P, GSM7212F, GSM7212P, GSM7224P

The NETGEAR® ProSafe® "Intelligent Edge" Gigabit L2+ Managed Switches consist of four switches with PoE+ connectivity, delivering a secure and flexible access layer in campus environments, warehouses and commercial buildings for convergence: Wireless access points, IP telephony, CCTV and video-surveillance.

Intelligent Edge

Combining superior resiliency and advanced security even far from the wiring closet, GSM5212P, GSM7212F, GSM7212P, and GSM7224P provide comprehensive Layer 2 and Lite Layer 3 switching, including 16K MAC table size, 64 routing interfaces and 16 static routes.

Unified Communications – Voice over IP

The NETGEAR ProSafe "Intelligent Edge" simplifies converged data deployments with state-of-the-art capabilities. CoS Layer 2 prioritization and DiffServ Layer 3 & 4 policies allow for 1Kbps ingress and egress TCP/UDP granularity. LLDP-MED (Media Endpoint Discovery) automatically configures IP phones QoS and VLAN settings.

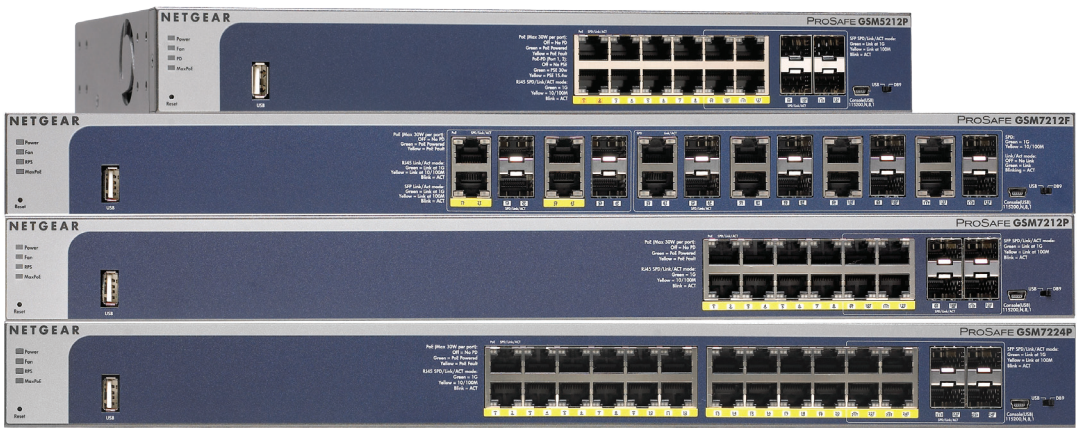
Unified Communications – Video Streams

IGMP filtering and querier ensure multicast streams are only delivered to interested receivers, preventing flooding even without a dedicated multicast router. When receivers are in different VLANs, Multicast VLAN registration (MVR) uses a dedicated multicast VLAN to forward multicast streams and avoid duplication for clients in different VLANs.

Outstanding Value

With its high-value price point, industry-standard command line interface (CLI) and single-pane-of-glass NMS200 management platform (mass-configuration support), NETGEAR ProSafe "Intelligent Edge" yields a high return on investment. All four switches are backed by the NETGEAR ProSafe Lifetime Hardware Warranty+, ProSupport Lifetime 24x7 Advanced Technical Support*, and 3-Year Next Business Day Onsite Hardware Replacement.**

Models	Form Factor	Low Acoustics (Min <25°C – Max >40°C) Variable Speed Fans	Gigabit RJ45 10/100/1000	Shared SFP 100/1000	PoE+ Port Count	PoE+ Budget
GSM5212P	Desktop	Below typical acoustic office ambient: Min 19.8dB – Max 35.1dB	12	4	2 first ports: PoE+ in 10 other ports: PoE+ out	22W (Pass-Through) 125W (Power Supply)
GSM7212F	Rack mount	Min 30dB – Max 48dB	12	12	4 first ports: PoE+ out	150W
GSM7212P	Rack mount	Min 35.8dB – Max 50.3dB	12	4	12 ports PoE+ out	380W
GSM7224P	Rack mount	Min 33.8dB – Max 49.9dB	24	4	24 ports PoE+ out	380W



24/7 TECHNICAL SUPPORT*

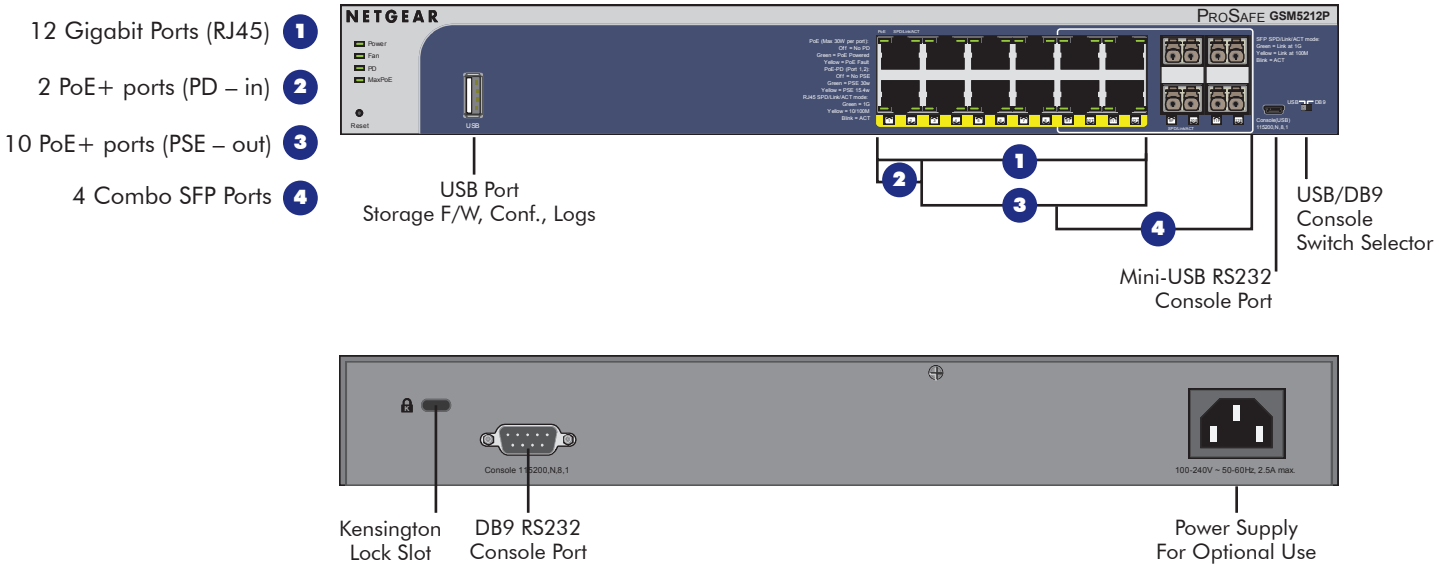
1-888-NETGEAR (638-4327)
Email: info@NETGEAR.com

NETGEAR PROSAFE LIFETIME WARRANTY*

Lifetime Tech Support

NBD* 3-year on-site service

GSM5212P at a Glance



PoE Pass-Through mode: powered by PoE

GSM5212P can draw power from the wiring closet when the aggregation switch delivers PoE power – more flexibility in challenging environments without outlet.

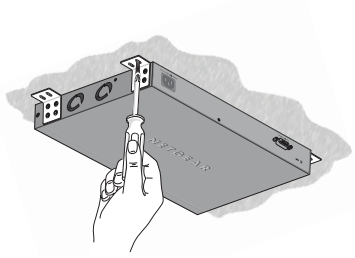
Simultaneously, GSM5212P is capable of powering PoE devices such as VoIP phones or other devices – redistributing PoE budget from the upstream switch such as GSM7212F, GSM7212P or GSM7224P.

The two first Gigabit ports are PoE/PoE+ input ports. The ten other Gigabit ports (Port 3 through 12) are standard PoE/PoE+ output ports.

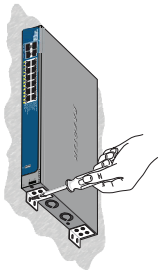
Placement outside the wiring closet

For secure deployment in open areas (conference rooms, offices, class rooms, sales floor in retail stores, etc…), GSM5212P comes with a Wall Mount Kit with four brackets. As an option, a Rack Mount Kit is orderable.

On or underneath shelves

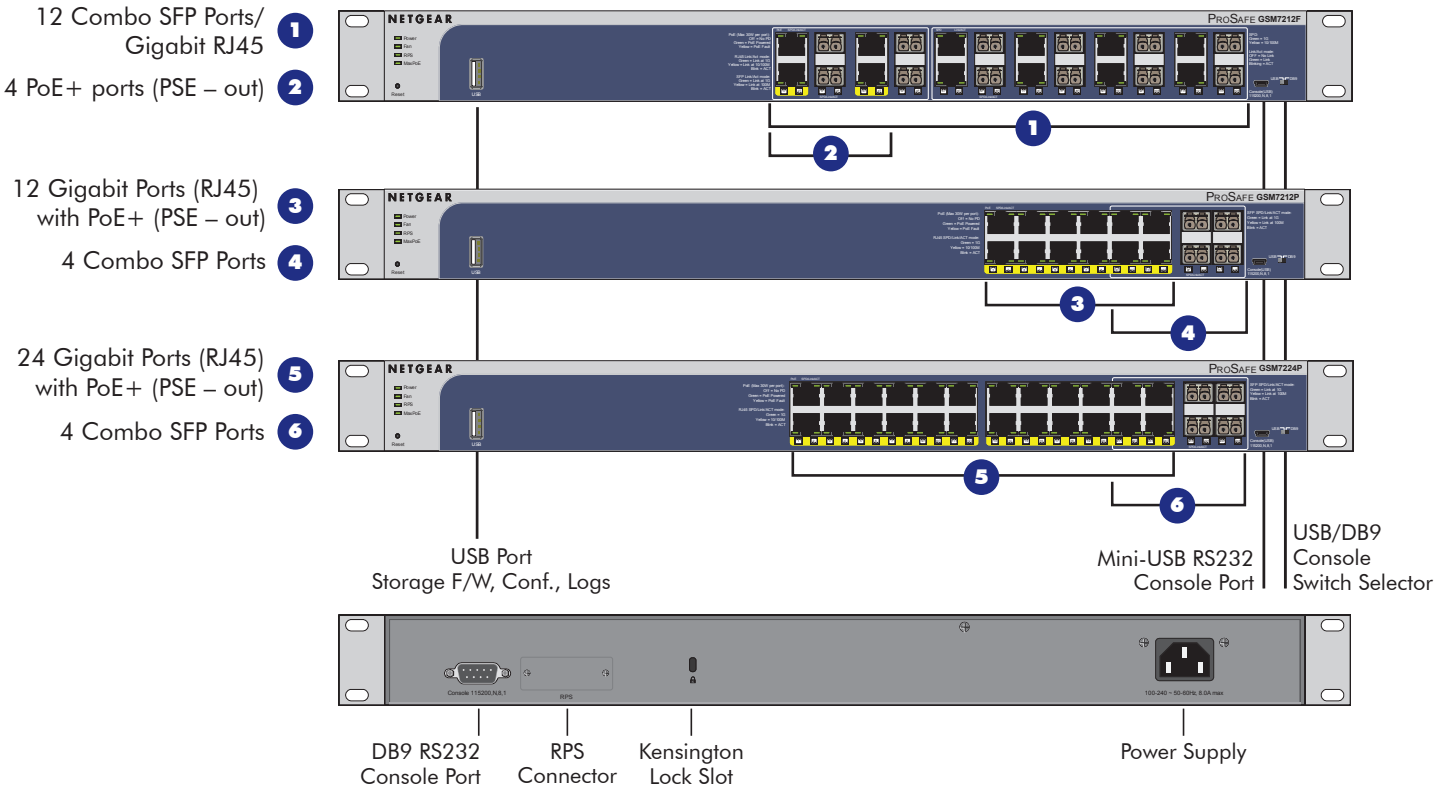


On the wall



Powering Options	PoE Input for PD Ports	Functionality	PoE Budget (output) for PSE Ports
PoE Pass-Through (No AC Power)	PD Port 1: 15.4W input	• Low-power mode • SFP ports, fans, USB ports not operational	-
	PD Port 1: 30W input	• High-power mode • All functions operational	-
	PD Port 1:15.4W input PD Port 2:15.4W input	• Low-power mode • SFP ports, fans, USB ports not operational	Up to 13W Port 3 through 12
	PD Port 1: 30W input PD Port 2:15.4W input	• High-power mode • All functions operational	Up to 13W Port 3 through 12
	PD Port 1: 30W input PD Port 2: 30W input	• High-power mode • All functions operational	Up to 22W Port 3 through 12
AC Power (Power Supply)	-	• High-power mode • All functions operational	Up to 125W Port 3 through 12

GSM7212F, GSM7212P and GSM7224P at a glance



Modules, accessories

420-10043-01
Rack mount kit for GSM5212P

- GSM5212P comes with a wall mount kit only
- The optional rack mount kit contains two brackets for standard 19'' rack mount
- 5-year warranty
- Ordering part number: **420-10043-01**

AGM731F/AGM732F
Gigabit SFP GBIC

- Gigabit Ethernet fiber connectivity - LC duplex connector
- 5-year warranty
- AGM731F 1000SX "short reach multimode"
  50/125µm OM3 multimode: up to 550m
  62.5/125µm OM1 multimode: up to 275m
  Ordering part number: **AGM731F**
- AGM732F 1000LX "long reach single or mode"
  9/125µm SMF single mode: up to 10 km
  Ordering part number: **AGM732F**

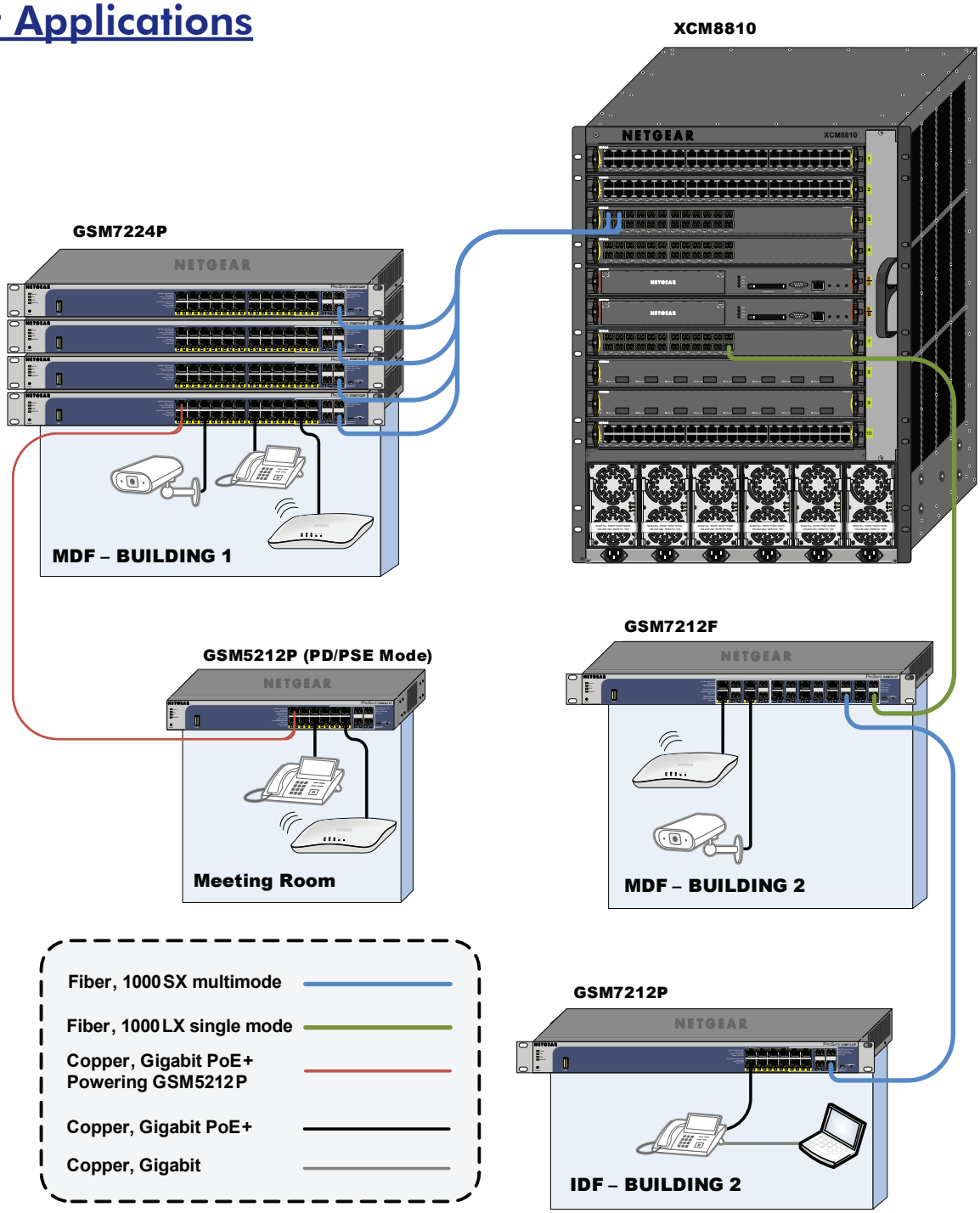
AFM735
Fast Ethernet SFP GBIC

- Fast Ethernet fiber connectivity - LC duplex connector
- 5-year warranty
- AFM735 100BaseFX IEEE 802.3
  50/125µm or 62.5/125µm multimode: up to 2km
  Ordering part number: **AFM735-10000S**

RPS5412
Optimal Power® External Redundant Power Supply

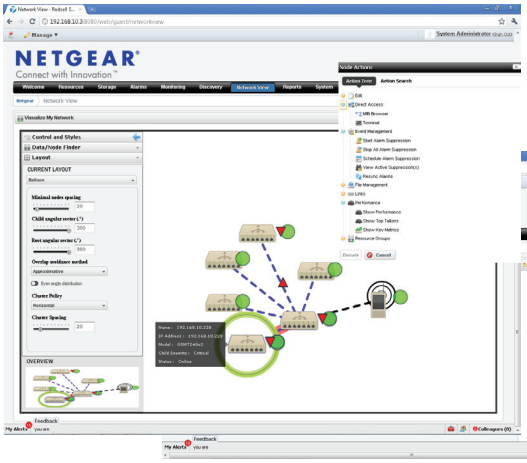
- Optimal Power® RPS unit certified by NETGEAR
- Includes the DC power cable for the Switch RPS connector (rear)
- Provides seamless redundant power to the Switch for interruptible powering
- 3-year warranty
- Ordering part number: **RPS5412-100NAS** (Americas) **RPS5412-100EUS** (Europe) **RPS5412-100AJS** (Asia)

Target Applications



These Fully Managed Switches are Lite L3 with PoE+ and complement GSM7224/GSM7248 Intelligent Edge with 64 IP interfaces for VLAN routing:

- Industry-standard CLI
- State-of-the-art L2/L3/L4 QoS and ACLs with 1Kbps ingress/egress for real-time Voice
- MVR (Multicast VLAN Registration) for IPTV and Video Surveillance streaming



NMS200

A single-pane-of-glass management platform – NMS200 – increases overall operational efficiency.




TECHNICAL SPECIFICATIONS	GSM5212P	GSM7212F	GSM7212P	GSM7224P
PHYSICAL INTERFACES				
Front				
• Auto-sensing RJ45 10/100/1000	12 ports	12 ports	12 ports	24 ports
• Shared SFP Fiber 100/1000	4 SFP ports	12 SFP ports	4 SFP ports	4 SFP ports
• USB (config/firmware/storage)	1 port	1 port	1 port	1 port
• Mini-USB RS-232 for console	1 port	1 port	1 port	1 port
Rear				
• Serial DB9 RS-232 for console	1 port	1 port	1 port	1 port
• Redundant Power Supply	PoE pass-through mode	1 connector for RPS	1 connector for RPS	1 connector for RPS
• Kensington Lock Slot	1 slot	1 slot	1 slot	1 slot
• Power Supply	1 fixed PSU (optional use)	1 fixed PSU	1 fixed PSU	1 fixed PSU
Total				
• Port Count	12 ports, total	12 ports, total	12 ports, total	24 ports, total
POE				
• Number of PoE+ ports	12 ports	4 ports	12 ports	24 ports
• PoE pass-through mode	Yes	No	No	No
• Number of PD ports (PoE in)	2 ports	-	-	-
• Number of PSE ports (PoE out)	10 ports	4 ports	12 ports	24 ports
• IEEE 802.3af (up to 15.4 Watts/port)	Yes	Yes	Yes	Yes
• IEEE 802.3at (up to 30 Watts/port)	Yes	Yes	Yes	Yes
• IEEE 802.3at Layer 2 (LLDP) method	Yes	Yes	Yes	Yes
• IEEE 802.3at 2-event classification	Yes	Yes	Yes	Yes
• PoE timer / schedule (week, days, hours)	Yes	Yes	Yes	Yes
TOTAL POE BUDGET				
AC Power Mode				
• Using built-in PSU	125 Watts	150 Watts	380 Watts	380 Watts
PoE Pass-Through Mode				
• PD Port 1 (15.4W)	0 Watts	-	-	-
• PD Port 1 (30W)	0 Watts	-	-	-
• PD Port 1 (15.4W) Port 2 (15.4W)	13 Watts	-	-	-
• PD Port 1 (30W) Port 2 (15.4W)	13 Watts	-	-	-
• PD Port 1 (30W) Port 2 (30W)	22 Watts	-	-	-
PROCESSOR / MEMORY				
• Processor	BCM53003 @ 600 MHz	BCM53003 @ 600 MHz	BCM53003 @ 600 MHz	BCM53003 @ 600 MHz
• System memory (RAM)	128 MB	128 MB	128 MB	128 MB
• Packet buffer memory	12 Mb	12 Mb	12 Mb	12 Mb
• Code storage (flash)	32 MB	32 MB	32 MB	32 MB
PERFORMANCE SUMMARY				
• Switching fabric	24 Gbps	24 Gbps	24 Gbps	48 Gbps
• Throughput	17.8 Mpps	17.8 Mpps	17.8 Mpps	35.7 Mpps
• Forwarding mode	Store-and-forward	Store-and-forward	Store-and-forward	Store-and-forward
• Latency (64-byte frames, 10 to 100 Mbps)	<9.0µs	<9.0µs	<9.0µs	<9.0µs
• Latency (64-byte frames, 1 Gbps)	<3.1µs	<3.1µs	<3.1µs	<3.1µs
• Addressing	48-bit MAC address	48-bit MAC address	48-bit MAC address	48-bit MAC address
• Address database size	16,000 MAC addresses	16,000 MAC addresses	16,000 MAC addresses	16,000 MAC addresses
• Number of VLANs (IEEE 802.1Q)	1,024 out of 4,093 VLAN IDs	1,024 out of 4,093 VLAN IDs	1,024 out of 4,093 VLAN IDs	1,024 out of 4,093 VLAN IDs
• Max number of Multicast groups for IGMP filtering	1,024	1,024	1,024	1,024
• Max number of Multicast groups for MVR	256	256	256	256
• Number of trunks (LAG)	12 trunks, 8-port per trunk	12 runks, 8-port per trunk	12 trunks, 8-port per trunk	12 trunks, 8-port per trunk
• Number of hardware queues for QoS	8 queues	8 queues	8 queues	8 queues
• Number of static routes	16	16	16	16
• Number of IP routing interfaces (port, VLAN)	64	64	64	64
• Jumbo frame support	up to 9K packet size	up to 9K packet size	up to 9K packet size	up to 9K packet size
• Min Acoustic noise (ANSI-S10.12) < 25°C ambient	19.8 dB	30 dB	35.8 dB	33.8 dB
• Max Acoustic noise (ANSI-S10.12) > 40°C ambient	35.1 dB	48 dB	50.3 dB	49.9 dB
• Heat dissipation	569 Btu/hr	548 Btu/hr	1,543 Btu/hr	1,820 Btu/hr
• Mean time between failures (MTBF)	766,618 hours (~87.5 yrs)	670,956 hours (~76.6 yrs)	422,436 hours (~48.2 yrs)	394,619 hours (~45 yrs)




TECHNICAL SPECIFICATIONS	GSM5212P	GSM7212F	GSM7212P	GSM7224P
L3 SERVICES – ROUTING (IPV4)				
• IPv4 static routing (Subnets, VLANs)	Yes	Yes	Yes	Yes
• IP routes, total	64	64	64	64
• IP interfaces (ports, VLAN)	64	64	64	64
• Static routes	16	16	16	16
• IP Source Guard	Yes	Yes	Yes	Yes
L3 SERVICES - DHCP (IPV4)				
• DHCP server (1,024 clients)	Yes	Yes	Yes	Yes
• DHCP L2 relay	Yes	Yes	Yes	Yes
• DHCP snooping	Yes	Yes	Yes	Yes
L3 SERVICES - MULTICAST (IPV4)				
• IGMP querier (v2)	Yes	Yes	Yes	Yes
L2 SERVICES – SWITCHING (IPV4/IPV6)				
• MAC Address table	16,000 MAC	16,000 MAC	16,000 MAC	16,000 MAC
• ARP cache size	512	512	512	512
• Proxy ARP	Yes	Yes	Yes	Yes
• Dynamic ARP Inspection	Yes	Yes	Yes	Yes
L2 SERVICES – VLANS (IPV4/IPV6)				
• IEEE 802.1Q static VLAN	1,024 out of 4,093 VLAN IDs	1,024 out of 4,093 VLAN IDs	1,024 out of 4,093 VLAN IDs	1,024 out of 4,093 VLAN IDs
• IEEE 802.1v Protocol VLAN	Yes	Yes	Yes	Yes
• Port-based VLAN	Yes	Yes	Yes	Yes
• MAC-based VLAN	Yes	Yes	Yes	Yes
• IP subnet-based VLAN	Yes (128)	Yes (128)	Yes (128)	Yes (128)
• Protocol-based VLAN	Yes	Yes	Yes	Yes
• Voice VLAN	Yes	Yes	Yes	Yes
• Guest/Unauthenticated VLAN (802.1x)	Yes	Yes	Yes	Yes
• Auto VLAN Assignment via RADIUS	Yes	Yes	Yes	Yes
• IEEE 802.1 Q-in-Q (Double-VLAN tagging)	Yes	Yes	Yes	Yes
• GARP with GVRP/GMRP	Yes	Yes	Yes	Yes
• Private VLAN groups	Yes	Yes	Yes	Yes
• Multicast VLAN Registration (MVR)	Yes	Yes	Yes	Yes
L2 SERVICES - AVAILABILITY (IPV4/IPV6)				
• IEEE 802.3ad Link Aggregation (Static or LACP)	12 trunks, 8-port per trunk	12 trunks, 8-port per trunk	12 trunks, 8-port per trunk	12 trunks, 8-port per trunk
• User selectable LAG hashing algorithm	Yes	Yes	Yes	Yes
• IEEE 802.1D Spanning Tree Protocol	Yes	Yes	Yes	Yes
• IEEE 802.1w Rapid Spanning Tree	Yes	Yes	Yes	Yes
• IEEE 802.1s Multiple Spanning Tree	Yes	Yes	Yes	Yes
L2 SERVICES – MULTICAST (IPV4/IPV6)				
Filtering				
• IGMP v1, v2, v3 snooping support	Yes	Yes	Yes	Yes
• IGMP querier mode support	Yes	Yes	Yes	Yes
• MLD snooping support	Yes	Yes	Yes	Yes
• Static Multicast filtering	1,024 multicast groups	1,024 multicast groups	1,024 multicast groups	1,024 multicast groups
MVR				
• Multicast VLAN Registration	Dynamic and Compatible	Dynamic and Compatible	Dynamic and Compatible	Dynamic and Compatible
• IGMP leave operating mode	Normal/immediate leave	Normal/immediate leave	Normal/immediate leave	Normal/immediate leave
• MVR max Multicast groups	256	256	256	256
L2/L3/L4 SERVICES – QOS (IPV4/IPV6)				
• L2/L3/L4 QoS Policies	MAC, IP, TCP/UDP ports	MAC, IP, TCP/UDP ports	MAC, IP, TCP/UDP ports	MAC, IP, TCP/UDP ports
• IEEE 802.1p Class of Service (CoS)	Yes	Yes	Yes	Yes
• DiffServ QoS (RFC 2998)	Yes	Yes	Yes	Yes
• Weighted round robin (WRR) queue technology	Yes	Yes	Yes	Yes
• Strict priority queue technology	Yes	Yes	Yes	Yes
• Rate limit in 1 Kbps increments	Yes	Yes	Yes	Yes
• Ingress and Egress traffic	Yes	Yes	Yes	Yes




TECHNICAL SPECIFICATIONS	GSM5212P	GSM7212F	GSM7212P	GSM7224P
L2/L3/L4 SERVICES – SECURITY (IPV4/IPV6)				
• Access control lists (ACL) L2/L3/L4	MAC, IP, TCP/UDP ports	MAC, IP, TCP/UDP ports	MAC, IP, TCP/UDP ports	MAC, IP, TCP/UDP ports
• MAC-based source/destination ACL	Yes	Yes	Yes	Yes
• IP subnet-based source/destination ACL	Yes	Yes	Yes	Yes
• Protocol-based source/destination ACL	Yes	Yes	Yes	Yes
• ACL over VLAN	Yes	Yes	Yes	Yes
• Dynamic ACLs	Yes	Yes	Yes	Yes
• Number of ACLs (any type)	100	100	100	100
• Number of ACL rules	512	512	512	512
• Network storm protection	Broadcast, Unicast, Multicast	Broadcast, Unicast, Multicast	Broadcast, Unicast, Multicast	Broadcast, Unicast, Multicast
• DoS	Yes	Yes	Yes	Yes
• ICMP throttling	Yes	Yes	Yes	Yes
• Protected ports	Yes	Yes	Yes	Yes
• Port MAC locking	4,096 (dynamic), 48 (static)	4,096 (dynamic), 48 (static)	4,096 (dynamic), 48 (static)	4,096 (dynamic), 48 (static)
• MAC filtering	Yes	Yes	Yes	Yes
• Port security	Yes	Yes	Yes	Yes
• DHCP snooping	Yes	Yes	Yes	Yes
• IP Source Guard	Yes	Yes	Yes	Yes
• Dynamic ARP inspection	Yes	Yes	Yes	Yes
• RADIUS (RFC 2865)	Yes	Yes	Yes	Yes
• RADIUS accounting (RFC 2866)	Yes	Yes	Yes	Yes
• IEEE 802.1x port access authentication (RADIUS)	Yes	Yes	Yes	Yes
• TACACS+	Yes	Yes	Yes	Yes
IEEE NETWORK PROTOCOLS				
• IEEE 802.3 Ethernet	Yes	Yes	Yes	Yes
• IEEE 802.3i 10BASE-T	Yes	Yes	Yes	Yes
• IEEE 802.3u 100BASE-T	Yes	Yes	Yes	Yes
• IEEE 802.3ab 1000BASE-T	Yes	Yes	Yes	Yes
• IEEE 802.3z Gigabit Ethernet 1000BASE-SX/LX	Yes	Yes	Yes	Yes
• IEEE 802.3af Power over Ethernet	Yes	Yes	Yes	Yes
• IEEE 802.3at Enhanced Power over Ethernet	Yes	Yes	Yes	Yes
• IEEE 802.3ad Trunking (LACP)	Yes	Yes	Yes	Yes
• IEEE 802.1AB LLDP with ANSI/TIA-1057 (LLDP-MED)	Yes	Yes	Yes	Yes
• IEEE 802.1D Spanning Tree (STP)	Yes	Yes	Yes	Yes
• IEEE 802.1s Multiple Spanning Tree (MSTP)	Yes	Yes	Yes	Yes
• IEEE 802.1w Rapid Spanning Tree (RSTP)	Yes	Yes	Yes	Yes
• IEEE 802.1p Quality of Service	Yes	Yes	Yes	Yes
• IEEE 802.1Q VLAN tagging	Yes	Yes	Yes	Yes
• IEEE 802.1v protocol-based VLAN	Yes	Yes	Yes	Yes
• IEEE 802.1X Radius Network Access Control	Yes	Yes	Yes	Yes
• IEEE 802.3x flow control	Yes	Yes	Yes	Yes
IETF RFC STANDARDS – SYSTEM FACILITIES				
• RFC 768 UDP	Yes	Yes	Yes	Yes
• RFC 783 TFTP	Yes	Yes	Yes	Yes
• RFC 791 IP	Yes	Yes	Yes	Yes
• RFC 792 ICMP	Yes	Yes	Yes	Yes
• RFC 793 TCP	Yes	Yes	Yes	Yes
• RFC 826 Ethernet ARP	Yes	Yes	Yes	Yes
• RFC 894 transmission of IP datagrams over Ethernet networks	Yes	Yes	Yes	Yes
• RFC 896 congestion control in IP/TCP networks	Yes	Yes	Yes	Yes
• RFC 951 BOOTP	Yes	Yes	Yes	Yes
• RFC 1321 message-digest algorithm	Yes	Yes	Yes	Yes
• RFC 1534 interoperation between BOOTP and DHCP	Yes	Yes	Yes	Yes
• RFC 2131 DHCP client/server	Yes	Yes	Yes	Yes
• RFC 2132 DHCP options & BOOTP vendor extensions	Yes	Yes	Yes	Yes
• RFC 2030 Simple Network Time Protocol (SNTP) version 4 for IPv4, IPv6 and OSI	Yes	Yes	Yes	Yes
• RFC 2865 RADIUS Client (both switch and management access)	Yes	Yes	Yes	Yes
• RFC 2866 RADIUS Accounting	Yes	Yes	Yes	Yes
• RFC 2868 RADIUS attributes for Tunnel Protocol support	Yes	Yes	Yes	Yes




TECHNICAL SPECIFICATIONS	GSM5212P	GSM7212F	GSM7212P	GSM7224P
IETF RFC STANDARDS – SYSTEM FACILITIES				
• RFC 2869 RADIUS Extensions	Yes	Yes	Yes	Yes
• RFC2869bis RADIUS support for Extensible Authentication Protocol (EAP)	Yes	Yes	Yes	Yes
• RFC 3164 The BSD Syslog Protocol	Yes	Yes	Yes	Yes
• RFC 3580 802.1X RADIUS usage guidelines (VLAN assignment via RADIUS, dynamic VLAN)	Yes	Yes	Yes	Yes
IETF RFC STANDARDS – QOS				
• RFC 2474 definition of the Differentiated Services Field (DS Field) in the IPv4 and IPv6 headers	Yes	Yes	Yes	Yes
• RFC 2475 an architecture for differentiated services	Yes	Yes	Yes	Yes
• RFC 2597 Assured Forwarding PHB Group	Yes	Yes	Yes	Yes
• RFC 3246 An Expedited Forwarding PHB (Per-Hop Behavior)	Yes	Yes	Yes	Yes
• RFC 3260 New Terminology and Clarifications for DiffServ	Yes	Yes	Yes	Yes
• RFC 3289 Management Information Base for the Differentiated Services Architecture (read-only)	Yes	Yes	Yes	Yes
• Private MIBs for full configuration of DiffServ, ACL and CoS functionality	Yes	Yes	Yes	Yes
IETF RFC STANDARDS – MANAGEMENT				
• RFC 854 Telnet	Yes	Yes	Yes	Yes
• RFC 855 Telnet Option	Yes	Yes	Yes	Yes
• RFC 1155 SMI v1	Yes	Yes	Yes	Yes
• RFC 1157 SNMP	Yes	Yes	Yes	Yes
• RFC 1212 Concise MIB Definitions	Yes	Yes	Yes	Yes
• RFC 1867 HTML/2.0 Forms with file upload extensions	Yes	Yes	Yes	Yes
• RFC 1901 Community-based SNMP v2	Yes	Yes	Yes	Yes
• RFC 1908 Coexistence between SNMP v1 & SNMP v2	Yes	Yes	Yes	Yes
• RFC 2068 HTTP/1.1 protocol as updated by draft-ietf-http-v11-spec-rev-03	Yes	Yes	Yes	Yes
• RFC 2271 SNMP Framework MIB	Yes	Yes	Yes	Yes
• RFC 2295 Transparent Content Negotiation	Yes	Yes	Yes	Yes
• RFC 2296 Remote Variant Selection; RSVA/1.0 State Management "cookies" – draft-ietf-http-state-mgmt-05	Yes	Yes	Yes	Yes
• RFC 2576 Coexistence between SNMP v1, v2 and v3	Yes	Yes	Yes	Yes
• RFC 2578 SMI v2	Yes	Yes	Yes	Yes
• RFC 2579 Textual Conventions for SMI v2	Yes	Yes	Yes	Yes
• RFC 2580 Conformance statements for SMI v2	Yes	Yes	Yes	Yes
• RFC 3410 Introduction and Applicability Statements for Internet Standard Management Framework	Yes	Yes	Yes	Yes
• RFC 3411 An Architecture for Describing SNMP Management Frameworks	Yes	Yes	Yes	Yes
• RFC 3412 Message Processing & Dispatching	Yes	Yes	Yes	Yes
• RFC 3413 SNMP Applications	Yes	Yes	Yes	Yes
• RFC 3414 User-based Security Model	Yes	Yes	Yes	Yes
• RFC 3415 View-based Access Control Model	Yes	Yes	Yes	Yes
• RFC 3416 Version 2 of SNMP Protocol Operation	Yes	Yes	Yes	Yes
• RFC 3417 Transport Mappings	Yes	Yes	Yes	Yes
• RFC 3418 Management Information Base(MIB) for the Simple Network Management Protocol (SNMP)	Yes	Yes	Yes	Yes
• SSL 3.0 and TLS 1.0	Yes	Yes	Yes	Yes
- RFC 2246 The TLS Protocol, Version 1.0	Yes	Yes	Yes	Yes
- RFC 2818 HTTP over TLS	Yes	Yes	Yes	Yes
- RFC 2346 AES Ciphersuites for Transport Layer Security	Yes	Yes	Yes	Yes
• SSH 1.5 and 2.0	Yes	Yes	Yes	Yes
- RFC 4253 SSH Transport Layer Protocol	Yes	Yes	Yes	Yes
- RFC 4252 SSH Authentication Protocol	Yes	Yes	Yes	Yes
- RFC 4254 SSH Connection Protocol	Yes	Yes	Yes	Yes
- RFC 4251 SSH Protocol Architecture	Yes	Yes	Yes	Yes
- RFC 4716 SECSH Public Key File Format	Yes	Yes	Yes	Yes
- RFC 4419 Diffie-Hellman Group Exchange for SSH	Yes	Yes	Yes	Yes
- Transport Layer Protocol	Yes	Yes	Yes	Yes




TECHNICAL SPECIFICATIONS	GSM5212P	GSM7212F	GSM7212P	GSM7224P
SUPPORTED MIBS				
• RFC 1757/2819 – RMON-MIB Remote Network Monitoring Management Information Base	Yes	Yes	Yes	Yes
• RFC 1213 – RFC1213-MIB Management Information Base for Network Management of TCP/IP-based internets: MIB-II	Yes	Yes	Yes	Yes
• RFC 1493 – BRIDGE-MIB Definitions of Managed Objects for Bridges (dot1d)	Yes	Yes	Yes	Yes
• RFC 2674 – QBRIDGE-MIB The VLAN Bridge MIB module for managing Virtual Bridged Local Area Networks	Yes	Yes	Yes	Yes
• RFC 2737 – Entity MIB (Version 2)	Yes	Yes	Yes	Yes
• RFC 2863 – The Interfaces Group MIB using SMIv2	Yes	Yes	Yes	Yes
• RFC 3635 – Etherlike-MIB Definitions of Managed Objects for the Ethernet-like Interface Types	Yes	Yes	Yes	Yes
• NETGEAR-REF-MIB – NETGEAR Reference	Yes	Yes	Yes	Yes
• SNMP-COMMUNITY-MIB – support SNMPv1, SNMPv2, and SNMPv3.	Yes	Yes	Yes	Yes
• SNMP-FRAMEWORK-MIB – The SNMP Management Architecture MIB	Yes	Yes	Yes	Yes
• SNMP-MPD-MIB – The MIB for Message Processing and Dispatching	Yes	Yes	Yes	Yes
• SNMP-NOTIFICATION-MIB – The Notification MIB Module	Yes	Yes	Yes	Yes
• SNMP-TARGET-MIB – The Target MIB Module	Yes	Yes	Yes	Yes
• SNMP-USER-BASED-SM-MIB – The management information definitions for the SNMP User-based Security Model	Yes	Yes	Yes	Yes
• SNMP-VIEW-BASED-ACM-MIB – The management information definitions for the View-based Access Control Model for SNMP	Yes	Yes	Yes	Yes
• LAG-MIB – The Link Aggregation module for managing IEEE 802.3ad	Yes	Yes	Yes	Yes
• RFC 1213 – Management Information Base for Network Management of TCP/IP based internets: MIB-II	Yes	Yes	Yes	Yes
• RFC 1493-BRIDGE-MIB – Definitions of Managed Objects for Bridges (dot1d)	Yes	Yes	Yes	Yes
• RFC 2674-P-BRIDGE-MIB – The Bridge MIB Extension module for managing Priority and Multicast Filtering, defined by IEEE 802.1D-1998.	Yes	Yes	Yes	Yes
• RFC 2674-Q-BRIDGE-MIB – The VLAN Bridge MIB module for managing Virtual Bridged Local Area Networks	Yes	Yes	Yes	Yes
• RFC 2737 – Entity MIB (Version 2)	Yes	Yes	Yes	Yes
• RFC 2863 – The Interfaces Group MIB using SMIv2	Yes	Yes	Yes	Yes
• RFC 3635 – Definitions of Managed Objects for the Ethernet-like Interface Types	Yes	Yes	Yes	Yes
• NETGEAR-SWITCHING-MIB – NETGEAR Switching – Layer 2	Yes	Yes	Yes	Yes
• NETGEAR-INVENTORY-MIB – Unit and Slot configuration	Yes	Yes	Yes	Yes
• NETGEAR-PORTSECURITY-PRIVATE-MIB – Port Security MIB.	Yes	Yes	Yes	Yes
• IEEE8021-PAE-MIB – Port Access Entity module for managing IEEE 802.1X	Yes	Yes	Yes	Yes
• NETGEAR-RADIUS-AUTH-CLIENT-MIB – NETGEAR Radius MIB	Yes	Yes	Yes	Yes
• RADIUS-ACC-CLIENT-MIB – RADIUS Accounting Client MIB	Yes	Yes	Yes	Yes
• RADIUS-AUTH-CLIENT-MIB – RADIUS Authentication Client MIB	Yes	Yes	Yes	Yes
• NETGEAR-MGMT-SEC URITY-MIB – The NETGEAR Private MIB for Mgmt Security	Yes	Yes	Yes	Yes
• IANA-ADDRESS-FAMILY-NUMBERS-MIB – Address-Family Numbers textual convention	Yes	Yes	Yes	Yes
• NETGEAR-QOS-MIB – NETGEAR Flex QOS Support	Yes	Yes	Yes	Yes
• NETGEAR-QOS-ACL-MIB – NETGEAR Flex QOS ACL	Yes	Yes	Yes	Yes
• DIFFSERV-MIB - RFC 3289 Management Information Base for the Differentiated Services Architecture	Yes	Yes	Yes	Yes
• NETGEAR-QOS-DIFFSERV-EXTENSIONS-MIB – NETGEAR Flex QOS DiffServ Private MIBs' definitions	Yes	Yes	Yes	Yes




TECHNICAL SPECIFICATIONS	GSM5212P	GSM7212F	GSM7212P	GSM7224P
SUPPORTED MIBS				
• NETGEAR-QOS-DIFFSERV-PRIVATE-MIB – NETGEAR Flex QOS DiffServ Private MIBs'definitions	Yes	Yes	Yes	Yes
• LLDP-MIB – Management Information Base module for LLDP configuration, statistics, local system data and remote systems data components	Yes	Yes	Yes	Yes
• LLDP-EXT-DOT3-MIB – The LLDP Management Information Base extension module for IEEE 802.3 organizationally defined discovery information	Yes	Yes	Yes	Yes
• LLDP-EXT-MED-MIB – The LLDP Management Information Base extension module for TIA-TR41.4 Media Endpoint Discovery information	Yes	Yes	Yes	Yes
• TACACS-CLIENT-MIB – Management Information Base pertaining to TACACS+ client configuration.	Yes	Yes	Yes	Yes
MANAGEMENT (IPV4/IPV6)				
• SNMP v1, v2c, v3 with multiple IP addresses	Yes	Yes	Yes	Yes
• Port mirroring support (many-to-one)	Yes	Yes	Yes	Yes
• Flow-based mirroring	Yes	Yes	Yes	Yes
• Syslog	Yes	Yes	Yes	Yes
• File transfer (configuration, firmware)	HTTP, TFTP	HTTP, TFTP	HTTP, TFTP	HTTP, TFTP
• Secure file transfer (configuration, firmware)	HTTPS, SCP, SFTP	HTTPS, SCP, SFTP	HTTPS, SCP, SFTP	HTTPS, SCP, SFTP
• Runtime image download (TFTP)	Yes	Yes	Yes	Yes
• Port description	Yes	Yes	Yes	Yes
• sFlow®	Yes	Yes	Yes	Yes
• Web-based graphic user interface (GUI)	Yes	Yes	Yes	Yes
• Command Line interface (CLI)	Yes	Yes	Yes	Yes
• IPv6 Management	Yes	Yes	Yes	Yes
• Cable test utility	Yes	Yes	Yes	Yes
• SSLv3/TLSv1.0 Web security for the GUI	Yes	Yes	Yes	Yes
• Secure Shell (SSHv1, v2) for CLI	Yes	Yes	Yes	Yes
• Telnet sessions for management CPU (5 sessions)	Yes	Yes	Yes	Yes
• Configurable management VLAN	Yes	Yes	Yes	Yes
• Auto Install	Yes	Yes	Yes	Yes
• Admin access control via RADIUS or TACACS+	Yes	Yes	Yes	Yes
• Dual Image (firmware and configuration)	Yes	Yes	Yes	Yes
PHYSICAL SPECIFICATIONS				
• Dimensions (w x d x h) - mm	331 x 208 x 44 mm	440 x 257 x 44 mm	440 x 257 x 44 mm	440 x 257 x 44 mm
• Dimensions (w x d x h) - in	13.03 x 8.19 x 1.73 in	17.32 x 10.12 x 1.73 in	17.32 x 10.12 x 1.73 in	17.32 x 10.12 x 1.73 in
• Weight	2.596 kg (5.73 lb)	3.665 kg (8.08 lb)	4.021 kg (8.86 lb)	4.368 kg (9.63 lb)
POWER CONSUMPTION				
• Max AC Current (with max PoE)	1.72 A	1.67 A	4.79 A	5.59 A
• Max AC Watts (with max PoE)	166.6W	160.6W	452W	533W
• Heat dissipation	569 Btu/hr	548 Btu/hr	1,543 Btu/hr	1,820 Btu/hr
ENVIRONMENTAL SPECIFICATIONS				
Operating				
• Temperature	32° to 122°F (0° to 50°C)	32° to 122°F (0° to 50°C)	32° to 122°F (0° to 50°C)	32° to 122°F (0° to 50°C)
• Humidity	90% maximum relative humidity, non-condensing	90% maximum relative humidity, non-condensing	90% maximum relative humidity, non-condensing	90% maximum relative humidity, non-condensing
• Altitude	10,000 ft (3,000 m) max	10,000 ft (3,000 m) max	10,000 ft (3,000 m) max	10,000 ft (3,000 m) max
Storage				
• Temperature	– 4° to 158°F (–20° to 70°C)	– 4° to 158°F (–20° to 70°C)	– 4° to 158°F (–20° to 70°C)	– 4° to 158°F (–20° to 70°C)
• Humidity	95% maximum relative humidity, non-condensing	95% maximum relative humidity, non-condensing	95% maximum relative humidity, non-condensing	95% maximum relative humidity, non-condensing
• Altitude	10,000 ft (3,000 m) max	10,000 ft (3,000 m) max	10,000 ft (3,000 m) max	10,000 ft (3,000 m) max
ELECTROMAGNETIC EMISSIONS AND IMMUNITY				
• CE mark, commercial	Yes	Yes	Yes	Yes
• FCC Part 15 Class A, VCCI Class A	Yes	Yes	Yes	Yes
• Class A EN 55022 (CISPR 22) Class A	Yes	Yes	Yes	Yes
• Class A C-Tick	Yes	Yes	Yes	Yes
• EN 50082-1	Yes	Yes	Yes	Yes
• EN 55024	Yes	Yes	Yes	Yes




TECHNICAL SPECIFICATIONS	GSM5212P	GSM7212F	GSM7212P	GSM7224P
SAFETY				
• CE mark, commercial	Yes	Yes	Yes	Yes
• CSA certified (CSA 22.2 #950)	Yes	Yes	Yes	Yes
• UL listed (UL 1950)/cUL IEC 950/EN 60950	Yes	Yes	Yes	Yes
PACKAGE CONTENT				
• Switch	GSM5212P	GSM7212F	GSM7212P	GSM7224P
• Power cord	Yes	Yes	Yes	Yes
• Rubber footpads for tabletop installation	Yes	Yes	Yes	Yes
• Rubber caps for the SFP sockets	Yes	Yes	Yes	Yes
• Mounting kit	Wall mount kit	Rack mount kit	Rack mount kit	Rack mount kit
• Mini-USB to USB cable for console	Yes	Yes	Yes	Yes
• Resource CD	Yes	Yes	Yes	Yes
• ProSafe NMS200 Network Management System DVD	Yes	Yes	Yes	Yes
WARRANTY AND SUPPORT				
• ProSafe Lifetime Warranty+	Lifetime	Lifetime	Lifetime	Lifetime
• ProSupport Lifetime 24x7 Advanced Technical Support*	Lifetime	Lifetime	Lifetime	Lifetime
• Next business day onsite hardware replacement**	3 years included**	3 years included**	3 years included**	3 years included**
MODULES & ACCESSORIES				
• AFM735 (100BASE-FX SFP GBIC)	Yes	Yes	Yes	Yes
• AGM731F (1000BASE-SX SFP GBIC)	Yes	Yes	Yes	Yes
• AGM732F (1000BASE-LX SFP GBIC)	Yes	Yes	Yes	Yes
• RPS5412 (Optimal Power® External Redundant Power Supply)	No	Yes	Yes	Yes
• 420-10043-01 (Rack Mount Kit for GSM5212P)	Yes	No	No	No
ORDERING INFORMATION				
• Americas / Europe	GSM5212P-100NES	GSM7212F-100NES	GSM7212P-100NES	GSM7224P-100NES
• Asia	GSM5212P-100AJS	GSM7212F-100AJS	GSM7212P-100AJS	GSM7224P-100AJS
PROSUPPORT SERVICE PACKS				
• XPressHW (3-year next-business day hardware replacement contract, applicable where next business day onsite hardware replacement is not available)	Category 2: PRR0332	Category 2: PRR0332	Category 2: PRR0332	Category 2: PRR0332

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* 24x7 Lifetime Advanced Technical Support includes Remote Diagnostics performed by our technical experts for prompt resolution of technical issues.

** 3-year Next business day onsite hardware replacement support included: see http://onsite.netgear.com for coverage, availability and terms and conditions.

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

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