



Control and Configure Beyond Plug-and-Play Connectivity

Today's growing businesses rely more on their network to carry out mission-critical business activities. Deployment of VoIP and IP surveillance needs the network intelligence to separate the voice and video traffic from data, and prioritize them accordingly. However, companies do not necessarily have more money or advanced training to deal with complex managed switches.

NETGEAR® Smart Managed Plus Switches meet this growing need by providing fundamental network features such as VLANs, QoS, and IGMP Snooping that will help optimize the performance of business networks. Smart Managed Plus Switches come in a variety of configurations ranging from 5 port desktop to 48 port rackmount. Some models support Power-over-Ethernet (PoE) and can power devices such as IP phones, IP surveillance cameras and wireless access points with just an Ethernet cable; perfect for low cost PoE deployments. Smart Managed Plus Switches are the perfect upgrade from the plug-and-play unmanaged switch, delivering essential networking features at a very affordable price.

Highlights

- Enable network configuration and management at the price point of Unmanaged Switches
- Gigabit connection delivers up to 2000 Mbps of dedicated, non-blocking bandwidth per port
- Simple, yet useful network set-up on top of plug-and-play connectivity
- Flexible management via easy-to-use web browser-based management GUI or using the PC-based Utility application
- VLAN support for traffic segmentation
- Quality of Service (QoS) for traffic prioritization
- Auto "denial-of-service" (DoS) prevention
- Troubleshoot connection issues via cable test
- Loop detection and broadcast storm controls
- IGMP snooping v1, v2 and v3 support for multicast optimization
- Rate limiting for better bandwidth allocation
- Port mirroring for network monitoring
- Link aggregation/port trunking (static manual LAGs only***) for bigger uplink bandwidth (16-port and 24-port models only)
- Jumbo frame support
- Energy Efficient Ethernet (IEEE 802.3az) support for maximum power savings
- LIFETIME Hardware Warranty* (excludes external power adapters on applicable models)
- LIFETIME 24/7 Technical Support*
- LIFETIME Next-Business-Day Replacement*

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Hardware at a Glance

Model name	Form-Factor	FRONT		REAR	INTERNAL
		10/100/1000 Base-T RJ45 ports	PoE 802.3af Ports	Power Supply	PoE budget
GS105E	Desktop	5	N/A	External Power Adapter	N/A
GS105PE	Desktop	5	2	NO POWER SUPPLY - must be powered from another PoE device	PoE pass-thru: 19W with 802.3at/7.9W with 802.3af input power
GS108E	Desktop	8	N/A	External Power Adapter	N/A
GS108PE	Desktop	8	4	External Power Adapter	53W
GS116E	Desktop	16	N/A	External Power Adapter	N/A
JGS516PE	Rackmount	16	8	Internal	85W
JGS524E	Rackmount	24	N/A	Internal	N/A
JGS524PE	Rackmount	24	12	Internal	100W
GS750E	Rackmount	48 Copper and 2 SFP	N/A	Internal	N/A

Software at a Glance

Management	IP Multicast filtering	IEEE 802.3az Auto-EEE	VLANs	QoS	Port Trunking ¹ (Static Manual LAGs only***)	Rate Limiting	Jumbo Frame Support
PC Utility Tool Web GUI	IGMP Snooping v1, v2 and v3	Yes	Port-based, IEEE 802.1Q-based VLANs	Port-based, IEEE 802.1p-based	16 & 24-port models only	Yes	Yes

¹ Static manual LAGs only; supported on 16-port and 24-port models only (GS116E, JGS516E, JGS524E, JGS524PE)

Features and Benefits

Hardware Features	Benefits
All Gigabit models	Making Smart Managed Plus Switch an ideal upgrade for SMB network combining management capability with higher speed and better performance
PoE offerings in Web Managed (Plus) Switches	With half of the ports capable of supporting PoE, these PoE Smart Managed Plus models are the most cost-efficient Gigabit Ethernet solution for converged networks where PoE support is needed, but isn't necessary on all ports
Desktop and rackmount ^{††}	Flexible deployment for either desktop placement, undertable mount, wall mount as well as rackmount
Software Features	Benefits
VLAN	Segment network into smaller groups for more secure and efficient use of network resources
QoS	For optimized network performance and better delivery of mission-critical traffic such as voice and video
IGMP Snooping	For improved network efficiency on delivering multicast traffic
Link Aggregation/ Port Trunking ¹ (Static Manual LAGs only)	Build up bigger bandwidth to support aggregated uplink traffic (GS116E, JGS516PE, JGS524E, JGS524PE only) ^{****}
Port Mirroring	For better and quicker network diagnostics and troubleshooting
Cable Test	Easily identify bad Ethernet cables

¹ Static manual LAGs only; supported on 16-port and 24-port models only (GS116E, JGS516E, JGS524E, JGS524PE)

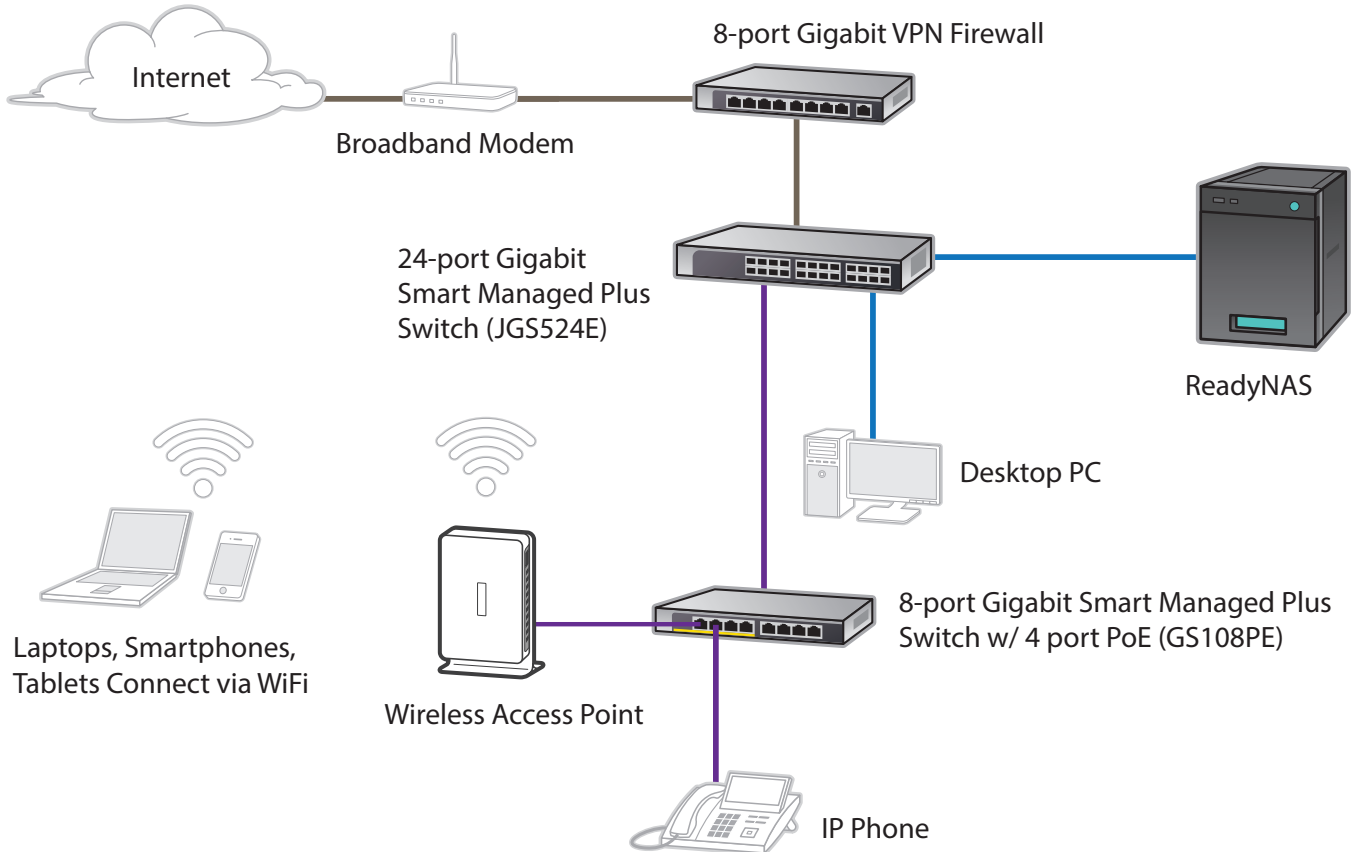
Target Application

SMB Network Application

Why the NETGEAR Gigabit Smart Managed Plus Switch is the ideal upgrade from Unmanaged Switches for SMB networks:

- Configurable with simple set-up
- Build multiple user groups
- Prioritize voice and video traffic
- Monitor and troubleshoot

Key
VLAN 1 
VLAN 2 



Technical Specifications

PRODUCT SPECIFICATIONS									
Product	GS105Ev2	GS105PE	GS108Ev3	GS108PEv3	GS116Ev2	JGS516PE	JGS524Ev2	JGS524PE	GS750E
Gigabit ports	5	5	8	8	16	16	24	24	48
Fiber ports	0	0	0	0	0	0	0	0	2 SFP
# of PoE ports	N/A	2	N/A	4	N/A	8	N/A	12	N/A
Total PoE power budget (watts)	N/A	PoE pass-thru: 19W with 802.3at/ 7.9W with 802.3af input power	N/A	53	N/A	85	N/A	100	N/A
Max MAC entries	8K	8K	4K	4K	16K	16K	16K	16K	16K
Buffer size	128KB	128KB	192KB	192KB	768KB	768KB	768KB	768KB	1.5MB
Energy Efficient Ethernet (IEEE 802.3az) compliant	Yes								
PERFORMANCE SPECIFICATION									
Forwarding modes	Store-and-forward								
Bandwidth	10Gbps	10Gbps	16Gbps	16Gbps	32Gbps	32Gbps	48Gbps	48Gbps	100Gbps
Priority queuing	Weighted Round Robin (WRR), Strict Priority, or both								
Jumbo frame support	Up to 9K packet size								
Acoustic noise (dB) (ANSI-S10.12)	0	0	0	0	0	24.5	0	24.4	0
Mean Time Between Failures (MTBF) (hrs)	2,531,294	1,685,972	2,525,259	1,242,394	504,993	840,354	243,476	643,506	1,031,177
L2 SERVICES - VLANS									
VLAN (# Supported)	64	64	32	32	100	100	100	100	4000
IEEE 802.1Q VLAN Tagging	Yes								
Port-based VLAN	Yes								

Technical Specifications

Product	GS105Ev2	GS105PE	GS108Ev3	GS108PEv3	GS116Ev2	JGS516PE	JGS524Ev2	JGS524PE	GS750E
L2 SERVICES - AVAILABILITY									
Link Aggregation/ Port Trunking ¹	No	No	No	No	Static Manual LAGs only	Static Manual LAGs only	Static Manual LAGs only	Static Manual LAGs only	Static and LACP
Number of Static Manual LAGs and # of members	N/A	N/A	N/A	N/A	8 LAGs and 2 to 4 members	8 LAGs and 2 to 4 members	8 LAGs and 2 to 4 members	8 LAGs and 2 to 4 members	8 LAGs and 2 to 4 members
L2 SERVICES - MULTICAST FILTERING									
IGMP Snooping (v1, v2 and v3)	Yes								
IGMP Snooping queries	No	No	No	No	Yes	Yes	Yes	Yes	Yes
Block unknown Multicast	Yes								
Supported Multicast groups	128	128	128	128	64	64	64	64	64
L3 SERVICES - DHCP									
DHCP client	Yes								
QUALITY OF SERVICE (QOS)									
Rate limiting	Yes								
DSCP	Yes	Yes	No	No	No	No	No	No	Yes
IEEE 802.1p COS	Yes								
Port-based VLAN	Yes								
TOS	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
WRR (Weighted Round Robin)	Yes								
Strict Priority queue technology	Yes								

¹ Static manual LAGs only; supported on 16-port and 24-port models only (GS116E, JGS516E, JGS524E, JGS524PE)

Technical Specifications

Product	GS105Ev2	GS105PE	GS108Ev3	GS108PEv3	GS116Ev2	JGS516PE	JGS524Ev2	JGS524PE	GS750E
IEEE NETWORK PROTOCOLS									
<ul style="list-style-type: none"> • IEEE 802.3 Ethernet • IEEE 802.3i 10BASE-T • IEEE 802.3u 100BASE-T • IEEE 802.3ab 1000BASE-T • IEEE 802.1p Class of Service • IEEE 802.3af (PoE) • IEEE 802.1Q VLAN Tagging • IEEE 802.3x Full-duplex Flow Control 									
MANAGEMENT									
System Password	Yes								
Web browser-based management GUI	Yes								
PC Utility	Yes								
Port Mirroring	Yes								
Max number of source ports allowed (many to 1)	4	4	7	7	15	15	23	23	47
Many-to-One Port Mirroring	Yes								
Cable Test utility	Yes								
FW upgrade thru Plus Utility (TFTP)	Yes								
Config download (to Switch) thru Plus Utility	Yes								
Config upload (to Server)	Yes								
MISCELLANEOUS FEATURES									
Loop Detection	Yes								Loop Prevention
DoS Prevention	Yes								
Broadcast Storm Control	Yes								
Energy Efficient Ethernet (EEE)	Yes								

Technical Specifications

Product	GS105Ev2	GS105PE	GS108Ev3	GS108PEv3	GS116Ev2	JGS516PE	JGS524Ev2	JGS524PE	GS750E
LEDs									
Per port	Speed, Link, Activity								
Per device	Power, Fan and PoE Power Status								
PHYSICAL SPECIFICATIONS									
Dimensions (mm)	94x100x27	158x100x27	158x101x29	158x101x29	286x101x26	328x170x43	328x170x43	328x170x43	440x204x43
Weight (kg)	0.25	0.47	0.50	0.54	0.84	1.67	1.40	1.84	3.25
Fan	0	0	0	0	0	1	0	1	0
POWER CONSUMPTION (WHEN ALL PORTS USED, LINE-RATE TRAFFIC AND MAX POE)									
Worst case, all ports used, line-rate traffic, max PoE (W)	2.6	22.0	4.5	60.0	10.0	110.0	13.8	123.0	11.38
Heat Dissipation Max/Standby (BTU/hr)	Max: 8.9 Min: 2.2	Max: 6.7 Min: 1.2	Max: 15.2 Min: 4.9	Max: 205.2 Min: 3.7	Max: 34.2 Min: 13.3	Max: 34.2 Min: 14.4	Max: 47.2 Min: 19.6	Max: 78.7 Min: 19.8	Max: 102.7 Min: 38.9
ENVIRONMENTAL SPECIFICATIONS									
Operating									
Operating temperature	32° to 122°F (0° to 50°C)								
Humidity	90% maximum relative humidity, non-condensing								
Altitude	10,000 ft (3,000 m) maximum								
Storage									
Storage temperature	- 4° to 158°F (-20° to 70°C)								
Humidity	95% maximum relative humidity, non-condensing								
Altitude	10,000 ft (3,000 m) maximum								

Technical Specifications

Product	GS105Ev2	GS105PE	GS108Ev3	GS108PEv3	GS116Ev2	JGS516PE	JGS524Ev2	JGS524PE	GS750E
Electromagnetic Emissions and Immunity									
Certifications Class (including but not limited to CE mark, commercial, FCC Part 15, VCCI, EN55022 (CISPR 22), C-Tick, EN50082-1, EN55024, CCC)	B	B	B	A	A	A	A	A	A
Safety									
Certifications	CE mark, commercial CSA certified (CSA 22.2 #950) UL listed (UL 1950)/cUL IEC 950/EN 60950								
WARRANTY AND SUPPORT									
Warranty	Switch: Lifetime* Power adapter: 2 years	Lifetime*	Switch: Lifetime* Power adapter: 2 years			Lifetime*			
Technical support	Lifetime Tech Support* via chat, 90 day tech support via email								
Next-Business-Day (NBD) Replacement	Lifetime*								
ProSUPPORT OnCall 24x7, Category 1** Service Packs	PMB0311 (1 yr.) PMB0331 (3 yrs.) PMB0351 (5 yrs.)								
PACKAGE CONTENTS									
All models	Smart Managed Plus Switch Power cord or power adapter (depending on model; GS105PE has no power supply or power cord) Quick Install Guide Resource CD with PC Utility software Rackmount kit (JGS516PE, JGS524Ev2, JGS524PE and GS750E only)								

Ordering Information

ORDERING INFORMATION			
GS105E North America and Latin America Europe Australia United Kingdom Japan	GS105E-200NAS GS105E-200PES GS105E-200AUS GS105E-200UKS GS105E-200JPS	JGS516PE North America and Latin America Europe Asia Pacific/Japan China India	JGS516PE-100NAS JGS516PE-100EUS JGS516PE-100AJS JGS516PE-100PRS JGS516PE-100INS
GS105PE Worldwide	GS105PE-10000S	JGS524E North America and Latin America Europe Asia Pacific/Japan China	JGS524E-200NAS JGS524E-200EUS JGS524E-200AJS JGS524E-200PRS
GS108E North America and Latin America Europe Australia United Kingdom China India Japan	GS108E-300NAS GS108E-300PES GS108E-300AUS GS108E-300UKS GS108E-300PRS GS108E-300INS GS108E-300JPS	JGS524PE North America and Latin America Europe Asia Pacific/Japan China India	JGS524PE-100NAS JGS524PE-100EUS JGS524PE-100AJS JGS524PE-100PRS JGS524PE-100INS
GS108PE North America and Latin America Europe Asia Pacific/Japan China India	GS108PE-300NAS GS108PE-300EUS GS108PE-300AJS GS108PE-300PRS GS108PE-300INS	GS750E North America and Latin America Europe Asia Pacific/Japan	GS750E-100NAS GS750E-100EUS GS750E-100AJS
GS116E North America and Latin America Europe Australia United Kingdom Japan China	GS116E-200NAS GS116E-200PES GS116E-200AUS GS116E-200UKS GS116E-200JPS GS116E-200PRS		

* This product comes with a limited warranty that is valid only if purchased from a NETGEAR authorized reseller, and modifications to product may void the warranty; covers hardware, fans, and internal power supplies—not software or external power supplies; see <http://www.netgear.com/about/warranty/> for details. 2-year warranty on power adapters on applicable models. Lifetime technical support includes basic phone support for 90 days from purchase date and lifetime online chat support when purchased from a NETGEAR authorized reseller.

** The NETGEAR OnCall 24x7 contract provides unlimited phone and email technical support for your networking product. For products purchased prior to 06/2014, also includes next business day hardware replacement.

*** GS750E supports Static LAG and LACP

† NETGEAR #1 in Fixed Web (Smart)-Managed Worldwide Market Share according to IHS Infonetics Ethernet Switches Market Share and Forecast, 1Q15 Edition, June 2015. NETGEAR #1 in US Market Share according to NPD data for Unmanaged and Web/Smart Switches, April 2015.

†† Only JGS516PE, JGS524E, and JGS524PE are rack-mountable.

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