NETGEAR®

ProSAFE® Gigabit Plus Switches

Data Sheet

5/8/16/24 Gigabit Ports with PoE options

More Capabilities beyond Plug-and-play Connectivity

Today's growing businesses demand and rely more on their network to carry out mission-critical business activities. Companies are putting more network traffic and applications on their Ethernet infrastructure. For example, the increasing deployments of VoIP phones and IP cameras require more than simple plug-and-play connectivity. It needs the network intelligence to separate the voice and video traffic from data, and prioritize them accordingly. Additionally, Internet-based applications such as Hotmail and Google Calendaring have made keeping the network up a business-critical need. However, companies do not necessarily have more money or advanced training to deal with complex managed switches. The NETGEAR ProSAFE Plus Switches meet this growing need by providing fundamental network features that will help optimize the performance of business networks. ProSAFE Plus Switches also offer traffic monitoring for users to observe traffic behavior. If there are connectivity issues, these switches can identify and even locate connection problems via cable diagnostic test. To optimize traffic through the switches, ProSAFE Plus Switches offer both port and tag-based prioritization to keep latency-sensitive traffic moving ahead of less critical packets. Also, ProSAFE Plus Switches offer port and 802.1Q-based VLAN as a means of improving security and network performance. ProSAFE Plus Switches are an upgrade from the plug-and-play Unmanaged Switch, delivering great value for empowering your network, delivering great value to the end user.

Features

- Enable network configuration and management at the price point of Unmanaged Switches
- Gigabit connection deliver up to 2000 Mbps of dedicated, non-blocking bandwidth per port
- Simple, yet useful network set-up on top of plug-and-play connectivity
- 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 prevention 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
- Port trunking for bigger uplink bandwidth
- Flexible management options via web-based GUI or PC-based Utility Tool
- Jumbo frame support
- Energy Efficient Ethernet (IEEE802.3az) support for maxium power savings

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LIFETIME WARRANTY

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Hardware at a Glance

Model name	Form-Factor	FRONT		REAR	
		10/100/1000 Base-T RJ45 ports	PoE 802.3af	Power Supply	PoE budget
GS105E	Desktop	5	N/A	External Power Adapter	N/A
GS105PE	Desktop	5	2	PoE powered via 1 PD port	up to 22w
GS108E	Desktop	8	N/A	External Power Adapter	N/A
GS108PE	Desktop	8	4	External Power Adapter	46w
GS116E	Desktop	16	N/A	External Power Adapter	
JGS516PE	Rackmount	16	8	Internal	85w
JGS524E	Rackmount	24	N/A	Internal	N/A
JGS524PE	Rackmount	24	12	Internal	100w

Software at a Glance

Management	IP Multicast filtering	EEE (802.3az) Auto-EEE	VLANs	QoS	Port Trunking	Rate Limiting	Jumbo Frame Support
PC Utility Tool Web GUI	IGMP Snooping v1, v2 and v3	Yes	Port-based, IEEE802.1Q-based VLANs	Port-based, IEEE802.1p-based	Yes	Yes	Yes

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Features and Benefits

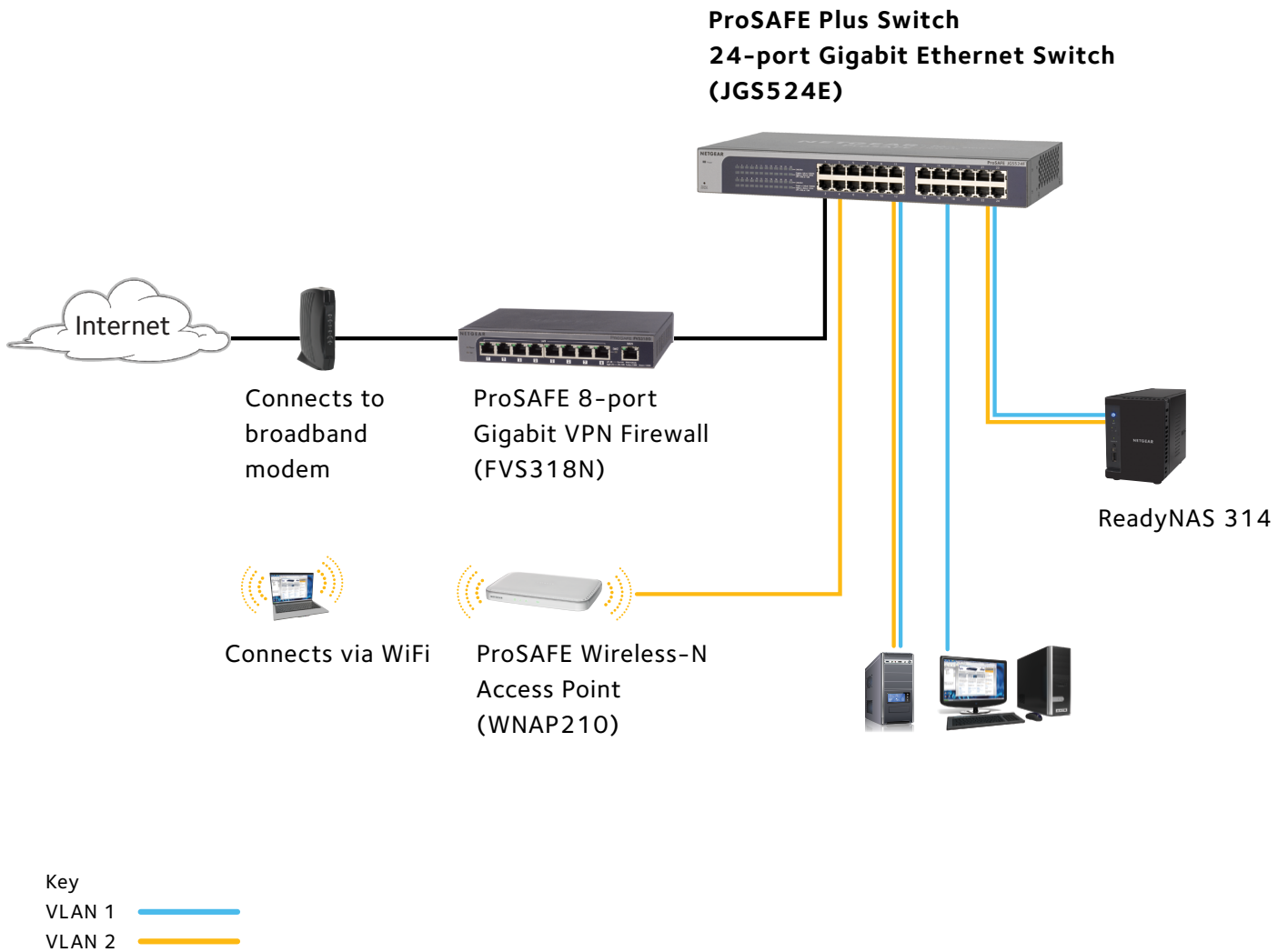| Hardware Features	Benefits
All Gigabit models	• Making Plus Switch an ideal upgrade for SMB network combining management capability with higher speed and better performance
PoE offerings in Plus Switches	• With half of the ports capable of supporting PoE, these PoE Plus models are the most cost-efficient Gigabit Ethernet solution for converaged network where PoE support is needed, but isn't necessary on all ports
Desktop and rackmount	• Flexibile 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
Port Trunking	• Build up a bigger bandwidth to support aggregated uplink traffic
Port Mirroring and Cable Test	• For better and quicker network diagnotics and troubleshooting

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Target Application

SMB Network Application

Why the NETGEAR Gigabit 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

ProSAFE Plus Switch
24-port Gigabit Ethernet Switch
(JGS524E)

Internet

Connects to broadband modem

ProSAFE 8-port Gigabit VPN Firewall (FVS318N)

ReadyNAS 314

Connects via WiFi

ProSAFE Wireless-N Access Point (WNAP210)

Key
VLAN 1
VLAN 2

Technical Specifications

PRODUCT SPECIFICATIONS								
Product	GS105Ev2	GS105PE	GS108Ev2	GS108PEv2	GS116Ev2	JGS516PE	JGS524Ev2	JGS524PE
Gigabit ports	5	5	8	8	16	16	24	24
# of PoE ports		2		4		8		12
Total PoE Power budget (Watts)		PoE pass-thru: 20W with AT in, 8W with AF in.		45		85		100
Max MAC entries	8K	8K	4K	4K	16K	16K	16K	16K
Buffer size			192KB	192KB	6Mbit per system	6Mbit per system	6Mbit per system	6Mbit per system
Energy Efficient Enthernet (IEEE802.3az complaint)	Yes							
PERFORMANCE SPECIFICATION								
Forwarding modes	Store-and-forward							
Bandwidth	10 Gbps	10 Gbps	16 Gbps	16 Gbps	32 Gbps	32 Gbps	48 Gbps	48 Gbps
Priority queuing	Weighted Round Robin (WRR), Strict or both							
Jumbo frame support	up to 9K packet size							
Acoustic noise (ANSI-S10.12)	0	0	0	0	24.5	0	24.4	0
Mean Time Between Failures (MTBF)			5,701,574	3,649,507	504,993	840,354	243,476	643,506
L2 SERVICES – VLANS								
VLAN (# Supported)	64	64	32	32	100	100	100	100
IEEE 802.1Q VLAN Tagging	Yes							
Port-based VLAN	Yes							

ProSAFE® Gigabit Plus Switches

Technical Specifications

Product	GS105Ev2	GS105PE	GS108Ev2	GS108PEv2	GS116Ev2	JGS516PE	JGS524Ev2	JGS524PE
L2 SERVICES – AVAILABILITY								
Manual	No	No	No	No	Yes	Yes	Yes	Yes
Number of LAGs & # of members					8 LAGs & 2 to 4 members	8 LAGs & 2 to 4 members	8 LAGs & 2 to 4 members	8 LAGs & 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
Block unknown Multicast	Yes							
Supported Mulitcast groups	128	128	128	128	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
IEEE 802.1p COS	Yes							
Port–based VLAN	Yes							
TOS	Yes	Yes	No	No	Yes	Yes	Yes	Yes
WRED (Weighted Deficit Round Robin)	Yes							
Strict Priority queue technology	Yes							

ProSAFE® Gigabit Plus Switches

Technical Specifications

Product	GS105Ev2	GS105PE	GS108Ev2	GS108PEv2	GS116Ev2	JGS516PE	JGS524Ev2	JGS524PE
IEEE NETWORK PROTOCOLS								
IEEE 802.3 Ethernet	IEEE 802.1p Class of Service							
IEEE 802.3i 10BASE-T	IEEE 802.3 af (PoE)							
IEEE 802.3u 100BASE-T	IEEE 802.1Q VLAN Tagging							
IEEE 802.3ab 1000BASE-T	IEEE 802.3x full-duplex flow control							
MANAGEMENT								
System Password	Yes							
Web-based graphical user interface (GUI)	Yes (available soon)							
PC Utility	Yes							
Port Mirroring	Yes							
Max number of source ports allowed (many to 1)	4	4	7	7	15	15	23	23
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							

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Technical Specifications

Product	GS105Ev2	GS105PE	GS108Ev2	GS108PEv2	GS116Ev2	JGS516PE	JGS524Ev2	JGS524PE
MISCELLANEOUS FEATURES								
Loop Detection	Yes							
DoS Prevention	Yes							
Broadcast Storm Control	Yes							
EEE (Energ	Yes							
LEDs								
Per port	Speed, Link, Activity							
Per device	Power, Fan and PoE Power Status							
PHYSICAL SPECIFICATIONS								
Dimensions	94x101x26	158x 105x27	158x 105x27	235x 103x27	286x 101x26	328x 169x43mm	328x 170x43	328x 169x43mm
Weight	0.27Kg	0.45Kg	0.55Kg	0.726Kg	0.84Kg	1.67 Kg	1.4Kg	1.84Kg
Fan	0	0	0	0	0	1	0	1
Power Consumption (when all ports used, line-rate traffic and max PoE)								
Worst case, all ports used, line-rate traffic, max PoE	3	25	4	51.1	10	110	13.8	123
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							

ProSAFE® Gigabit Plus Switches

Technical Specifications

Product	GS105Ev2	GS105PE	GS108Ev2	GS108PEv2	GS116Ev2	JGS516PE	JGS524Ev2	JGS524PE
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
Safety								
Certifications	CE mark, commercial CSA certified (CSA 22.2 #950) UL listed (UL 1950)/cUL IEC 950/EN 60950							
WARRANTY AND SUPPORT								
Warranty	Lifetime on switch and 2-year on Power adapter	Lifetime on switch and 2-year on Power adapter	Lifetime on switch and 2-year on Power adapter	Lifetime on switch and 2-year on Power adapter	Lifetime on switch and 2-year on Power adapter	Lifetime	Lifetime	Lifetime
Support Package	PRR0331 and PMB0331	PRR0331 and PMB0331	PRR0331 and PMB0331	PRR0331 and PMB0331	PRR0331 and PMB0331	PRR0331 and PMB0331	PRR0331 and PMB0331	PRR0331 and PMB0331
PACKAGE CONTENT								
All models	ProSAFE® Gigabit Plus Switch Power cord or power adapter (depending on models) Rack-mounting kit Quick Install Guide Resource CD with PC Utility software							
Support Package	PRR0331 and PMB0331	PRR0331 and PMB0331	PRR0331 and PMB0331	PRR0331 and PMB0331	PRR0331 and PMB0331	PRR0331 and PMB0331	PRR0331 and PMB0331	PRR0331 and PMB0331

Ordering Information

ORDERING INFORMATION	
GS105E-200NAS	for North America and Latin America
GS105E-200PES	for Europe
GS105E-200AUS	for Australia
GS105E-200UKS	for United Kingdom
GS105PE-100NAS	for North America and Latin America
GS105PE-100EUS	for Europe
GS105PE-100AJS	for Asia Pacific
GS105PE-100NAS	for Europe
GS108E-100NAS	for North America and Latin America
GS108E-100PES	for Europe
GS108E-100AUS	for Australia
GS108E-100UKS	for United Kingdom
GS108E-100PRS	for China
GS108PE-100NAS	for North America and Latin America
GS108PE-100EUS	for Europe
GS108PE-100AJS	for Asia Pacific
GS116E-200NAS	for North America and Latin America
GS116E-200PES	for Europe
GS116E-200AUS	for Australia
GS116E-200UKS	for United Kingdom
GS116E-200JPS	for Japan
GS116E-200PRS	for China

JGS516PE-100NAS	for North America and Latin America
JGS516PE-100EUS	for Europe
JGS516PE-100AJS	for Asia Pacific
JGS516PE-100PRS	for China
JGS524E-200NAS	for North America and Latin America
JGS524E-200EUS	for Europe
JGS524E-200AJS	for Asia Pacific
JGS524E-200PRS	for China
JGS524PE-100NAS	for North America and Latin America
JGS524PE-100EUS	for Europe
JGS524PE-100AJS	for Asia Pacific
JGS524PE-100PRS	for China

*   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.

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