# NETGEAR®

## ProSAFE® Gigabit Plus Switches

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

LIFETIME WARRANTY

# NETGEAR®

## ProSAFE® Gigabit Plus Switches

## 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 |

**ProSAFE® Gigabit Plus Switches**

## Features and Benefits

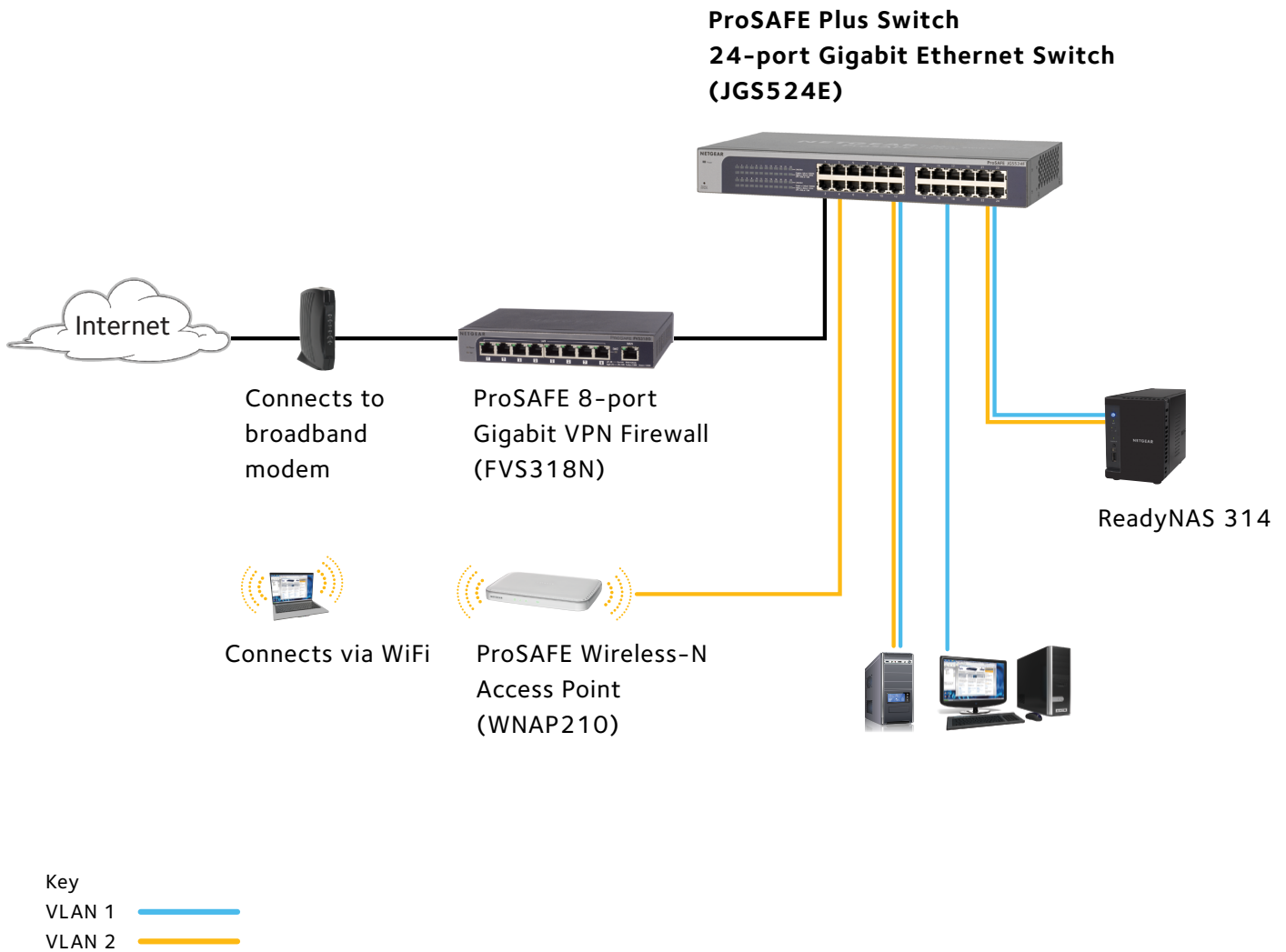| Hardware Features | Benefits |
| --- | --- |
| All Gigabit models | • Making Plus Switch an ideal upgrade for SMB network combining management capability with higher speed and better performance |
| PoE offerings in Plus Switches | • With half of the ports capable of supporting PoE, these PoE Plus 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 |

# NETGEAR®

## ProSAFE® Gigabit Plus Switches

Data Sheet

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

## 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

Page 4 of 11

**ProSAFE® Gigabit Plus Switches**  Data Sheet

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

## 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 | | | | | | | |

## 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 | | | | | | | |

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

## 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 | | | | | | | |

# NETGEAR®

## 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 | | | | | | | |

## 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<br>CSA certified (CSA 22.2 #950)<br>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<br>Power cord or power adapter (depending on models)<br>Rack-mounting kit<br>Quick Install Guide<br>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 |

## ProSAFE® Gigabit Plus Switches

## 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.