



### 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® ProSAFE® Gigabit Web 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. ProSAFE Web Managed (Plus) switches come in a variety of configurations ranging from 5 port desktop to 24 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. ProSAFE Web 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 ProSAFE Plus 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
- Port trunking 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  |

### Software at a Glance

| Management                 | IP Multicast filtering      | IEEE 802.3az Auto-EEE | VLANs                                  | QoS                              | Port Trunking <sup>1</sup> | Rate Limiting | Jumbo Frame Support |
|----------------------------|-----------------------------|-----------------------|--|----------------------------------|----------------------------|---------------|---------------------|
| PC Utility Tool<br>Web GUI | IGMP Snooping v1, v2 and v3 | Yes                   | Port-based,<br>IEEE 802.1Q-based VLANs | Port-based,<br>IEEE 802.1p-based | 16 & 24-port models only   | Yes           | Yes                 |

<sup>1</sup> Supported on 16-port and 24-port models only (GS116E, JGS516E, JGS524E, JGS524PE)

### Features and Benefits

| Hardware Features                            | Benefits   |
|--|--|
| All Gigabit models                           | Making Web 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 Web 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 <sup>††</sup>          | 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  |
| Port Trunking <sup>1</sup>                   | Build up a 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  |

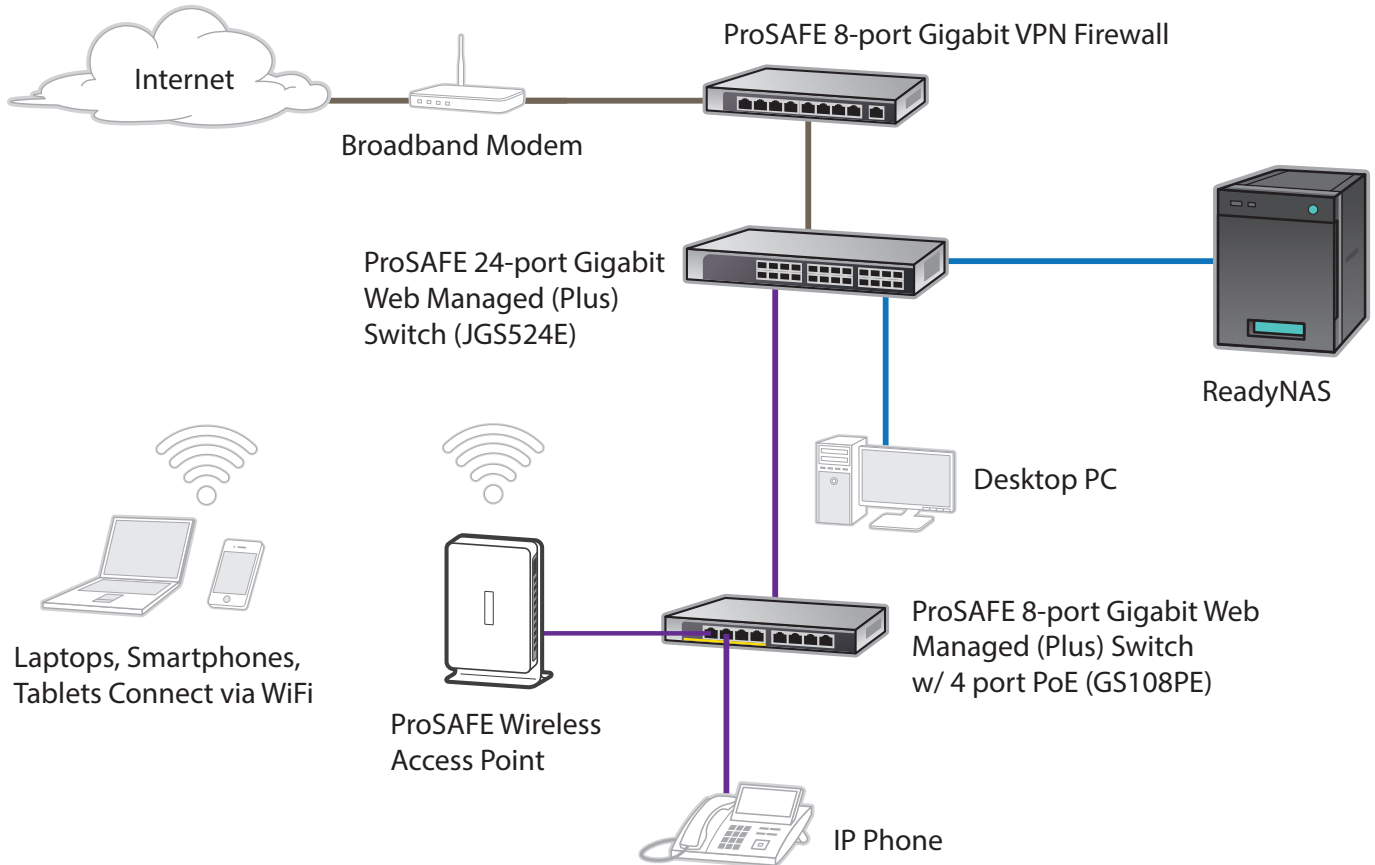
<sup>1</sup> Supported on 16-port and 24-port models only (GS116E, JGS516E, JGS524E, JGS524PE)

### Target Application

#### SMB Network Application

Why the NETGEAR Gigabit Web 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



### Technical Specifications

| PRODUCT SPECIFICATIONS                             |  |   |           |           |          |          |           |          |
|--|--|---|-----------|-----------|----------|----------|-----------|----------|
| Product  | GS105Ev2   | GS105PE   | GS108Ev2  | GS108PEv3 | GS116Ev2 | JGS516PE | JGS524Ev2 | JGS524PE |
| Gigabit ports                                      | 5  | 5   | 8         | 8         | 16       | 16       | 24        | 24       |
| # of PoE ports                                     | N/A  | 2   | N/A       | 4         | N/A      | 8        | N/A       | 12       |
| Total PoE power budget (watts)                     | N/A  | PoE pass-thru:<br>19W with<br>802.3at/<br>7.9W with<br>802.3af input<br>power | N/A       | 53        | N/A      | 85       | N/A       | 100      |
| Max MAC entries                                    | 8K   | 8K  | 4K        | 4K        | 16K      | 16K      | 16K       | 16K      |
| Buffer size  | 128KB  | 128KB   | 192KB     | 192KB     | 768KB    | 768KB    | 768KB     | 768KB    |
| Energy Efficient Ethernet (IEEE 802.3az) compliant | Yes  |   |           |           |          |          |           |          |
| PERFORMANCE SPECIFICATION                          |  |   |           |           |          |          |           |          |
| Forwarding modes                                   | Store-and-forward                                    |   |           |           |          |          |           |          |
| Bandwidth  | 10Gbps   | 10Gbps  | 16Gbps    | 16Gbps    | 32Gbps   | 32Gbps   | 48Gbps    | 48Gbps   |
| 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     |
| 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  |
| 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 | GS108PEv3 | GS116Ev2                | JGS516PE                | JGS524Ev2               | JGS524PE                |
|--|----------|---------|----------|-----------|-------------------------|-------------------------|-------------------------|-------------------------|
| <b>L2 SERVICES - AVAILABILITY</b>        |          |         |          |           |                         |                         |                         |                         |
| Port Trunking <sup>1</sup>               | No       | No      | No       | No        | Yes                     | Yes                     | Yes                     | Yes                     |
| Number of LAGs & # of members            | N/A      | N/A     | N/A      | N/A       | 8 LAGs & 2 to 4 members | 8 LAGs & 2 to 4 members | 8 LAGs & 2 to 4 members | 8 LAGs & 2 to 4 members |
| <b>L2 SERVICES - MULTICAST FILTERING</b> |          |         |          |           |                         |                         |                         |                         |
| IGMP Snooping (v1, v2 and v3)            | Yes      |         |          |           |                         |                         |                         |                         |
| IGMP Snooping queries                    | No       | No      | No       | No        | Yes                     | Yes                     | Yes                     | Yes                     |
| Block unknown Multicast                  | Yes      |         |          |           |                         |                         |                         |                         |
| Supported Multicast groups               | 128      | 128     | 128      | 128       | 64                      | 64                      | 64                      | 64                      |
| <b>L3 SERVICES - DHCP</b>                |          |         |          |           |                         |                         |                         |                         |
| DHCP client                              | Yes      |         |          |           |                         |                         |                         |                         |
| <b>QUALITY OF SERVICE (QOS)</b>          |          |         |          |           |                         |                         |                         |                         |
| 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                     |
| WRR (Weighted Round Robin)               | Yes      |         |          |           |                         |                         |                         |                         |
| Strict Priority queue technology         | Yes      |         |          |           |                         |                         |                         |                         |

<sup>1</sup> Supported on 16-port and 24-port models only (GS116E, JGS516E, JGS524E, JGS524PE)

### Technical Specifications

| Product  | GS105Ev2 | GS105PE | GS108Ev2  | GS108PEv3 | GS116Ev2 | JGS516PE   | JGS524Ev2 | JGS524PE |  |
|--|----------|---------|---|-----------|----------|--|-----------|----------|--|
| <b>IEEE NETWORK PROTOCOLS</b>  |          |         |   |           |          |  |           |          |  |
| <ul style="list-style-type: none"> <li>• IEEE 802.3 Ethernet</li> <li>• IEEE 802.3i 10BASE-T</li> <li>• IEEE 802.3u 100BASE-T</li> </ul> |          |         | <ul style="list-style-type: none"> <li>• IEEE 802.3ab 1000BASE-T</li> <li>• IEEE 802.1p Class of Service</li> <li>• IEEE 802.3af (PoE)</li> </ul> |           |          | <ul style="list-style-type: none"> <li>• IEEE 802.1Q VLAN Tagging</li> <li>• IEEE 802.3x Full-duplex Flow Control</li> </ul> |           |          |  |
| <b>MANAGEMENT</b>  |          |         |   |           |          |  |           |          |  |
| 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       |  |
| 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      |         |   |           |          |  |           |          |  |
| <b>MISCELLANEOUS FEATURES</b>  |          |         |   |           |          |  |           |          |  |
| Loop Detection   | Yes      |         |   |           |          |  |           |          |  |
| DoS Prevention   | Yes      |         |   |           |          |  |           |          |  |
| Broadcast Storm Control  | Yes      |         |   |           |          |  |           |          |  |
| Energy Efficient Ethernet (EEE)  | Yes      |         |   |           |          |  |           |          |  |

### Technical Specifications

| Product   | GS105Ev2                                      | GS105PE    | GS108Ev2   | GS108PEv3  | GS116Ev2   | JGS516PE   | JGS524Ev2  | JGS524PE   |
|---|---|------------|------------|------------|------------|------------|------------|------------|
| <b>LEDs</b>   |   |            |            |            |            |            |            |            |
| Per port  | Speed, Link, Activity                         |            |            |            |            |            |            |            |
| Per device  | Power, Fan and PoE Power Status               |            |            |            |            |            |            |            |
| <b>PHYSICAL SPECIFICATIONS</b>  |   |            |            |            |            |            |            |            |
| Dimensions (mm)   | 94x100x27                                     | 158x100x27 | 158x101x29 | 158x101x29 | 286x101x26 | 328x170x43 | 328x170x43 | 328x170x43 |
| Weight (kg)   | 0.25  | 0.47       | 0.50       | 0.54       | 0.84       | 1.67       | 1.40       | 1.84       |
| Fan   | 0   | 0          | 0          | 0          | 0          | 1          | 0          | 1          |
| <b>POWER CONSUMPTION (WHEN ALL PORTS USED, LINE-RATE TRAFFIC AND MAX POE)</b>   |   |            |            |            |            |            |            |            |
| 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      |
| <b>ENVIRONMENTAL SPECIFICATIONS</b>   |   |            |            |            |            |            |            |            |
| <b>Operating</b>  |   |            |            |            |            |            |            |            |
| 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                   |            |            |            |            |            |            |            |
| <b>Storage</b>  |   |            |            |            |            |            |            |            |
| 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                   |            |            |            |            |            |            |            |
| <b>Electromagnetic Emissions and Immunity</b>   |   |            |            |            |            |            |            |            |
| 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          |



### Technical Specifications

| Product  | GS105Ev2   | GS105PE   | GS108Ev2                                    | GS108PEv3 | GS116Ev2 | JGS516PE  | JGS524Ev2 | JGS524PE |
|--|--|-----------|---|-----------|----------|-----------|-----------|----------|
| 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   | Switch: Lifetime*<br>Power adapter: 2 years  | Lifetime* | Switch: Lifetime*<br>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.)<br>PMB0331 (3 yrs.)<br>PMB0351 (5 yrs.)  |           |   |           |          |           |           |          |
| PACKAGE CONTENTS                                   |  |           |   |           |          |           |           |          |
| All models   | ProSAFE® Gigabit Web Managed (Plus) Switch<br>Power cord or power adapter (depending on model; GS105PE has no power supply or power cord)<br>Quick Install Guide<br>Resource CD with PC Utility software<br>Rackmount kit (JGS516PE, JGS524Ev2, and JGS524PE only) |           |   |           |          |           |           |          |

### Ordering Information

| ORDERING INFORMATION  |  |   |  |
|---|--|---|--|
| <b>GS105E</b><br>North America and Latin America<br>Europe<br>Australia<br>United Kingdom                   | GS105E-200NAS<br>GS105E-200PES<br>GS105E-200AUS<br>GS105E-200UKS                                   | <b>JGS516PE</b><br>North America and Latin America<br>Europe<br>Asia Pacific<br>China | JGS516PE-100NAS<br>JGS516PE-100EUS<br>JGS516PE-100AJS<br>JGS516PE-100PRS |
| <b>GS105PE</b><br>Worldwide   | GS105PE-10000S   | <b>JGS524E</b><br>North America and Latin America<br>Europe<br>Asia Pacific<br>China  | JGS524E-200NAS<br>JGS524E-200EUS<br>JGS524E-200AJS<br>JGS524E-200PRS     |
| <b>GS108E</b><br>North America and Latin America<br>Europe<br>Australia<br>United Kingdom<br>China          | GS108E-100NAS<br>GS108E-100PES<br>GS108E-100AUS<br>GS108E-100UKS<br>GS108E-100PRS                  | <b>JGS524PE</b><br>North America and Latin America<br>Europe<br>Asia Pacific<br>China | JGS524PE-100NAS<br>JGS524PE-100EUS<br>JGS524PE-100AJS<br>JGS524PE-100PRS |
| <b>GS108PE</b><br>North America and Latin America<br>Europe<br>Asia Pacific<br>China                        | GS108PE-300NAS<br>GS108PE-300EUS<br>GS108PE-300AJS<br>GS108PE-300PRS                               |   |  |
| <b>GS116E</b><br>North America and Latin America<br>Europe<br>Australia<br>United Kingdom<br>Japan<br>China | GS116E-200NAS<br>GS116E-200PES<br>GS116E-200AUS<br>GS116E-200UKS<br>GS116E-200JPS<br>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 ProSAFE products purchased prior to 06/2014, also includes next business day hardware replacement.

† 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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