

NETGEAR®

ProSAFE® Click Switches

Data Sheet

GSS108E/GSS108EPP/GSS116E



Your Ports and Cables Where You Want Them

Today's networks have increasing numbers of devices attached to them, both wired and wireless. As wired devices proliferate, it can be difficult to easily and neatly place networked ports where you want them.

NETGEAR® ProSAFE® Click Switches™ address this issue with an innovative and thoughtful hardware design, including the flexible **Virtually Anywhere™** Click mounting system. NETGEAR ProSAFE Web Managed Gigabit Ethernet Click Switches are uniquely designed with an industry-first, bracket mounting system for easy installation. Available in either 8-port (PoE and non-PoE) or 16-port configurations, their slim design and internal power supplies enable you to organize wires, secure cables, eliminate bulky power adapters, and improve the overall appearance of wiring closets, training facilities, lab benches, conference rooms, and even home entertainment centers that require multiple connected devices.

Highlights

Hardware Highlights

- Unique **Virtually Anywhere™** Click mounting system for flexible placement options
- Cable management with provided retaining strap
- Multi-directional power cable to optimize placement
- Internal power supply to eliminate power brick
- 2 USB ports for quick access to charging tablets or smartphones (GSS108E only)
- 4 PoE/PoE+ ports to power up Phones, Access Points, IP cameras (GSS108EPP only)
- Turn LED lights ON/OFF for non-distracting operation in dark environments such as next to a TV
- All models are fanless for silent operation

- Reinforced plastic (GSS108E) or metal case (GSS108EPP, GSS116E) for rugged durability

Software Highlights

- VLAN support for traffic segmentation
- Quality of Service (QoS) for traffic prioritization
- Auto Denial-of-Service (DoS) prevention (GSS108EPP and GSS116E only)
- Advanced per-port PoE controls (GSS108EPP only)
- 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. (GSS116E and GSS108EPP only)
- Jumbo frame support
- Energy Efficient Ethernet (IEEE 802.3az) support for maximum power savings
- Troubleshoot connection issues via cable test

Industry Leading Warranty



- LIFETIME Hardware Warranty*
- LIFETIME 24/7 Technical Support
- LIFETIME Next Business Day Replacement

Virtually Anywhere™ Click Mounting System



Vertical/side mount



Vertical/rear mount



Horizontal/side mount



Horizontal/rear mount

Hardware at a Glance

Model name	Form-Factor	10M/100M/1G Copper Ports	Internal Power Supply	USB Charging Ports	PoE/PoE+ ports	Case Material	Fans
GSS108E	Click Switch Virtually Anywhere™	8	Yes	2 ports 10W maximum per port 15W maximum total	N/A	Plastic	Fanless
GSS108EPP	Click Switch Virtually Anywhere	8	Yes	N/A	4 PoE+ (47W budget)	Metal	Fanless
GSS116E	Click Switch Virtually Anywhere	16	Yes	N/A	N/A	Metal	Fanless



- 8 x Gigabit Ethernet Copper Ports
- 2 x USB charging ports



- 8 x Gigabit Ethernet Copper Ports
- 4 x PoE/PoE+ capable ports



- 16 x Gigabit Ethernet Copper Ports

Software at a Glance

Management	VLANs	QoS	Port Trunking (Manual LAG)	IP Multicast Filtering	Rate Limiting & Priority Queueing	Jumbo Frame Support	IEEE (802.3az) Energy Efficient Ethernet
Web Browser-based GUI (HTTP), PC-Based ProSAFE Plus Utility	Port-based, IEEE 802.1Q-based, Voice ¹ (GSS108EPP Only)	Port-based, IEEE 802.1p/DSCP-based	Static LAG ² (GSS108EPP, GSS116E)	IGMP Snooping	Yes	Yes	Yes

Performance at a Glance

Model name	Fabric	Packet Buffer	Latency (Max Connection Speed)	VLANs	MAC Address Table	Priority Queues	Multicast IGMP Group	Packet Forwarding Rate (64 byte)	Jumbo Frames (bytes)
GSS108E	16Gbps line-rate	128KB	10Mbps: <79µs 100Mbps: <9.4µs 1000Mbps: <3.2µs	64	8K Entries (dynamic)	4 (WRR)	128	11.9 Mfps	up to 9K
GSS108EPP	16Gbps line-rate	192KB	10Mbps: <77µs 100Mbps: <8.9µs 1000Mbps: <2.6µs	64	4K Entries (dynamic)	4 (WRR)	128	11.9 Mfps	up to 9K
GSS116E	16Gbps line-rate	512KB	10Mbps: <110µs 100Mbps: <14.5µs 1000Mbps: <5.0µs	128	8K Entries (dynamic)	4 (WRR)	128	23.8 Mfps	up to 9K

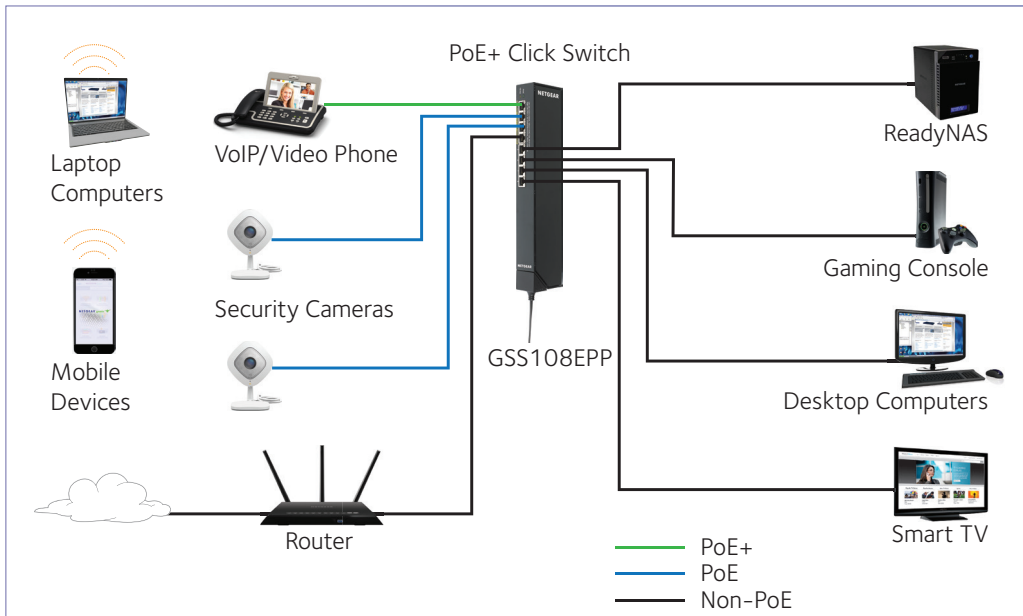
² Varies based on model. GSS108EPP supports 2 LAGs with max 4 members in each LAG. GSS116E supports 2 LAGs with max 8 members in each LAG.

Features and Benefits

Hardware Features	Benefits
Click Mounting System	The innovative Virtually Anywhere™ mounting system gives you the flexibility to place the ProSAFE Click Switches in locations where other switches cannot go. Whether it's directly on a wall, strapped to a pole, under the meeting table in a conference room or in a server closet, vertical or horizontal, flat or perpendicular, the Click Switch's unique mounting system allow you to control exactly how and where your ports and cables are deployed.
Easy Cable Management	Multi-directional power cable can be routed outwards or to suit most any mounting needs. Ethernet cables can be strapped to the bracket or mounting surface using the provided retaining strap.
PoE/PoE+ support (GSS108EPP only)	Power-Over-Ethernet (PoE) option available for powering IP Security Cameras, VOIP phones, wireless access points, and other PD-powered devices. 4 PoE+ ports (47W total) allows connection of up to 4 PoE/PoE+ (802.3af and 802.3at) devices and 4 additional non-PoE devices.
USB Charging ports (GSS108E only)	The GSS108E features two conveniently placed USB ports for users to charge their smartphones and tablets.
Software Features	Benefits
Port-based and 802.1Q-based VLANs	Segment network into smaller groups for more secure and efficient use of network resources.
Comprehensive QoS features: <ul style="list-style-type: none"> • Port-based or 802.1p-based prioritization • Layer 3-based (DSCP) prioritization • Port-based ingress and egress rate limiting 	Advanced controls for optimized network performance and better delivery of mission-critical traffic such as voice and video. Ingress and egress rate limiting allows for bandwidth shaping for mitigating network resources constraints or for optimizing guest access bandwidth on the network.
IGMP Snooping	For improved network efficiency on delivering multicast traffic. Save cost and improve network efficiency by ensuring multicast traffic only reaches designated receivers without the need of an extra multicast router.
Port trunking/Link Aggregation (Static Manual LAGs) (GSS116E/GSS108EPP only)	Build up bigger bandwidth to support aggregated uplink/downlink traffic or to provide redundant link(s) using Static Manual LAGs.
Advanced per-port PoE Controls (GSS108EPP Only)	Advanced per-port PoE controls for remote power management of PoE connected devices (eg. Wireless AP, IP security cameras, LED lighting, door locks, IoT devices...)
Voice VLAN (GSS108EPP Only)	The feature enables auto assignment of voice traffic (based on OUI) to a special VLAN (AKA Voice VLAN), allowing the assignment of special QoS parameters to that traffic, and tagging the port automatically, giving it high priority services. Voice VLAN must be enabled on a per port basis.
Loop detection and auto-DoS prevention (GSS108EPP and GSS116E only)	Detect accidental network loops and protect against DoS attacks.
Port Mirroring	For better and quicker network diagnostics and troubleshooting.
Energy Efficient Ethernet (IEEE 802.3az)	For maximum power savings and reduced energy costs.
Cable Test	Easily identify bad Ethernet cables.

Example Application

GSS108EPP In a Home Environment

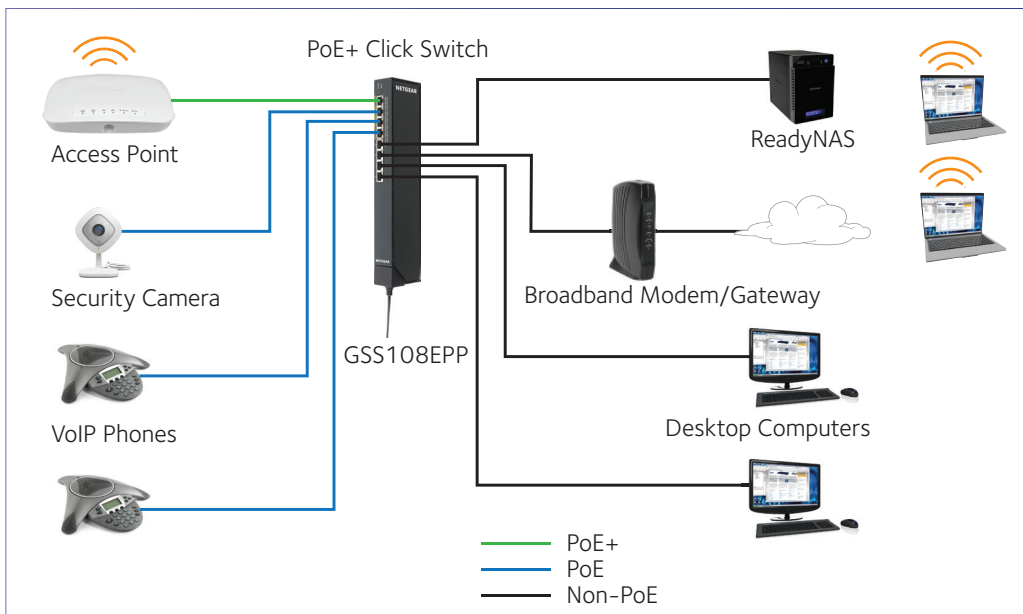


Why Click Switches and Why from NETGEAR?




Why the NETGEAR Click Switch is the ideal upgrade from Unmanaged Switches for SMB networks:

1. "Virtually Anywhere™" mounting system gets your PoE+ ports where you need them
2. 4-way placement of switch—vertical, horizontal, flat or perpendicular
3. 4 PoE+ (802.3at or 802.3af) and 4 non-PoE ports for flexible deployment (GSS108EPP only)
4. Fanless silent operation and Energy Efficient Ethernet
5. Lifetime limited warranty and lifetime support chat

GSS108EPP In a Business Environment



Technical Specifications

PRODUCT SPECIFICATIONS			
			
Product	GSS108E	GSS108EPP	GSS116E
100M/1G/10G RJ-45 copper ports	8		16
PoE/PoE+ ports	N/A	4 PoE+ (47W PoE Budget)	N/A
USB charging ports	2 ports 10W maximum per port 15W maximum total	N/A	N/A
PERFORMANCE SPECIFICATION			
Packet buffer memory (Dynamically shared across only used ports)	128KB	192KB	512KB
Forwarding modes	Store-and-forward		
Bandwidth (full-duplex fabric)	16Gbps	16Gbps	32Gbps
Priority queues	4		
Priority queuing	Weighted Round Robin (WRR)		
MAC address database size (48-bit MAC addresses)	8K	4K	8K
Multicast groups	128		
Number of VLANs	64	64	128
Packet forwarding rate (64 byte packet size) (Mfps or Mpps)	11.9Mfps	11.9Mfps	23.8Mfps
Speed/Latency	10Mbps: <79µs 100Mbps: <9.4µs 1000Mbps: <3.2µs	10Mbps: <77µs 100Mbps: <8.9µs 1000Mbps: <2.6µs	10Mbps: <110µs 100Mbps: <14.5µs 1000Mbps: <5.0µs
Jumbo frame support	Up to 9K packet size		
Acoustic noise level @ 25° C (dBA) (ANSI-S10.12)	0dB (Fanless)		
Mean Time Between Failures (MTBF) @ 25° C	1,031,177 hours	1,494,913 hours	721,479 hours
L2 SERVICES - VLANS			
IEEE 802.1Q VLAN tagging	Yes		
Port-based VLANs (physical)	Yes		
L2 SERVICES - AVAILABILITY			
Broadcast, multicast, unknown unicast storm control	Yes		
Link Aggregation/Port Trunking (Static Manual LAGs only)	N/A	2 LAGs with max 4 members in each LAG	2 LAGs with max 8 members in each LAG
IEEE 802.3x (full duplex and flow control)	Yes		
L2 SERVICES - MULTICAST FILTERING			
IGMP snooping (v1, v2 and v3)	Yes		
IGMP snooping queries	No		

Technical Specifications

Product	GSS108E	GSS108EPP	GSS116E
Block unknown multicast	Yes		
Static multicast router port	No		
L3 SERVICES - DHCP			
DHCP client	Yes		
LINK AGGREGATION			
Static Manual LAGs (Port Trunking)	No	Yes	Yes
# of Static LAGs/# of members in each LAG	N/A	2 LAGs with max 4 members in each LAG	2 LAGs with max 8 members in each LAG
NETWORK MONITORING AND DISCOVERY SERVICES			
Broadcast, multicast, unknown unicast storm control	Yes		
DoS attacks prevention	No	Yes	Yes
QUALITY OF SERVICE (QOS)			
Port-based rate limiting	Ingress and egress		
Port-based QoS	Yes		
IEEE 802.1p COS	Yes		
IPv4 DSCP	Yes		
IPv4 ToS	Yes		
TCP/UDP-based	No		
Weighted Round Robin (WRR)	Yes		
Strict Priority queue technology	No		
Voice VLAN	N/A	Yes, based on OUI bytes in the phone source MAC address	N/A
IEEE NETWORK PROTOCOLS			
<ul style="list-style-type: none">• IEEE 802.3 Ethernet• IEEE 802.3u 100BASE-TX• IEEE 802.3ab 1000BASE-T• IEEE 802.1Q VLAN Tagging	<ul style="list-style-type: none">• IEEE 802.3x Full-Duplex Flow Control• IEEE 802.1p Class of Service• IEEE 802.3az Energy Efficient Ethernet (EEE)	<ul style="list-style-type: none">• IEEE 802.3af Power-Over-Ethernet (PoE)• IEEE 802.3at Power-Over-Ethernet (PoE+)• IEEE 802.3ad Port Trunking (Static Manual LAG Only)	
MANAGEMENT			
Password management	Yes		
Web browser-based graphical user interface (GUI)	Yes		
ProSAFE Plus Configuration Utility (PCU) for multi-switch management	Yes		
Firmware upgrade	TFTP (Plus Utility) / HTTP (Web GUI)		
Config file transfers (backup, restore)	Plus Utility or Web GUI		
Firmware upgrade through Plus Utility (TFTP)	Yes		
Config download (to switch) through Plus Utility	Yes		
Config upload (to server) through Plus Utility	Yes		

Technical Specifications

Product	GSS108E		GSS108EPP	GSS116E
Firmware upgrade through web GUI (HTTP)	Yes			
Config download (to switch) through web GUI (HTTP)	Yes			
Config upload (to server) through web GUI (HTTP)	Yes			
Cable test utility	Yes			
Port mirroring	Yes			
Many-to-one port mirroring	1	1	15	
Mirroring port can still work normally?	Yes			
LEDs				
Per port	Speed, Link, Activity	Speed, Link, Activity (all) PoE Status (Ports 1~4)		Speed, Link, Activity
Per device	Power	Power, PoE Max		Power
POE CONFIGURATION				
Number of PoE/PoE+ ports	N/A	4 PoE+ (802.3at)		N/A
Total PoE power budget (watts)	N/A	47W		N/A
PHYSICAL SPECIFICATIONS				
Dimensions (W x D x H)	305 x 65 x 35mm (12 x 2.6 x 1.4in)	305 x 65 x 35mm (12 x 2.6 x 1.4in)		407 x 70 x 36mm (16 x 2.8 x 1.4in)
Weight	2.80kg (6.17lb)	3.20kg (7.07lb)		1.30kg (2.87lb)
POWER CONSUMPTION				
Power Supply	Fixed internal PSU, 100-240VAC, 50-60Hz, 1A max Power cord localized to country of sale	Fixed internal PSU, 100-240VAC, 50-60Hz, 1.4A max Power cord localized to country of sale		Fixed internal PSU, 100-240VAC, 50-60Hz, 1A max Power cord localized to country of sale
Max power (worst case, all ports used, line-rate traffic) (Watts)	4.2W (no USB charging) 20.2W (with USB charging)	5.3W (no PoE) 57.4W (with PoE max)		8.4W
Min power (link-down standby) (Watts)	1.2W	1.65W		3W
Heat Dissipation (max and min) (BTU/hr)	Max: 14.36 BTU/hr (no USB charging) Max: 69.08 BTU/hr (with USB charging) Min: 4.1 BTU/hr	Max: 195.79 BTU/hr Min: 5.63 BTU/hr		Max: 28.73 BTU/hr Min: 10.26 BTU/hr
Energy Efficient Ethernet (EEE) IEEE 802.3az	Yes			
Short cable power reduction	Yes			
Auto power-down	Yes			
Fan(s)	None (Fanless)			

Technical Specifications

Product	GSS108E	GSS108EPP	GSS116E
ENVIRONMENTAL SPECIFICATIONS			
Operating			
Operating Temperature	0° to 40°C (32° to 104°F)		
Humidity	90% maximum relative humidity (RH), non-condensing		
Altitude	10,000ft (3,000m) maximum		
Storage			
Storage Temperature	–20° to 70°C (– 4° to 158°F)		
Humidity (relative)	95% maximum relative humidity (RH), non-condensing		
Altitude	10,000ft (3,000m) maximum		
ELECTROMAGNETIC EMISSIONS AND IMMUNITY CERTIFICATIONS			
Certifications	47 CFR FCC Part 15, SubpartB, ClassB ICES-003:2016 Issue 6, ClassB ANSI C63.4:2014		
	EN 55022:2010 + AC:2011, Class A EN 55024:2010 EN 61000-3-2:2014, Class A EN 6100-3-3:2013		
	AS/NZS CISPR 22:2009 + A1:2010, Class B		
	VCCI V-3/2015.04, Class B V-4/2012.4		
	Russia EAC mark		
	Korea KC mark		
	CNS 13438		
Electromagnetic Compliance (Class A or B)	Class B		
SAFETY CERTIFICATIONS			
Certifications	CB mark, commercial IEC 60950-1:2005(ed.2) + A1:2009 + A2:2013		
	UL/cUL Listed (UL 60950-1)/CAN/CSA C22.2 No. 60960-1-07		
	EN 60950-1: 2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013		
	IEC 60950-1:2005 (ed.2)+A1:2009+A2:2013		
	AS/NZS 60950.1:2015		
	Russia EAC mark		
WARRANTY AND SUPPORT			
	ProSAFE Lifetime Warranty*		
	Lifetime Online Technical Support*		
	Lifetime Next-Business-Day (NBD) Replacement		
ProSUPPORT OnCall 24x7 Service Packs**	Category 1: PMB0311 (1 yr.) PMB0331 (3 yrs.) PMB0351 (5 yrs.)		

Ordering Information

PACKAGE CONTENTS	
All models	ProSAFE Click Web Managed (Plus) Switch
	Power cord (localized to country of sale)
	Virtually Anywhere™ Mounting Kit
	Cable retaining/pole mounting straps
	Quick Install Guide
	Resource CD with installation guide, ProSAFE Plus Utility software and links to additional online documentation including the Web browser-based management GUI User Manual and datasheet.
ORDERING INFORMATION	
GSS108E-100NAS	North America and Latin America
GSS108E-100EUS	Europe and United Kingdom
GSS108E-100JPS	Japan
GSS108E-100AUS	Australia
GSS108E-100PRS	China
GSS108EPP-100NAS	North America and Latin America
GSS108EPP-100EUS	Europe and United Kingdom
GSS108EPP-100JPS	Japan
GSS108EPP-100AUS	Australia
GSS116E-100NAS	North America and Latin America
GSS116E-100EUS	Europe and United Kingdom
GSS116E-100JPS	Japan
GSS116E-100AUS	Australia
GSS116E-100PRS	China

* 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. 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 (NBD) hardware replacement.

† NETGEAR #1 in Fixed Web(Smart)-Managed Worldwide Market Share according to IHS Infonetics Ethernet Switches Market Share and Forecast, 1Q16 Edition, June 2016. NETGEAR #1 in US Market Share according to NPD data for Unmanaged and Web/Smart Switches, June 2016.

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