



## GS516PP and GS524PP Unmanaged Gigabit Ethernet PoE+ Switches

The GS516PP 16-port High-power PoE+ Gigabit Ethernet Unmanaged Switch and the GS524PP 24-port High-power PoE+ Gigabit Ethernet Unmanaged Switch join the NETGEAR Unmanaged switch family, adding full 16 and 24 port PoE+ support for flexible deployment of modern high-power PoE devices. Companies can now deploy denser PoE+ devices connected to a single switch instead of multiples with a total PoE power budget of 260W (GS516PP) and 300W (GS524PP). The quiet design makes the GS516PP and GS524PP ideal for any home or business environment.

## GS516UP and GS524UP Unmanaged Gigabit Ethernet High-power PoE+ switches with PoE++ ports

NETGEAR brings even larger PoE budgets on Unmanaged switches with Ultra60 PoE++ technology with two new 16-Port (GS516UP) and 24-port (GS524UP) Unmanaged Switches, ideal for powerful PoE+/PoE++ installations with impressive PoE budgets up to 380W and 480W, a compact size, plug-and-play installation, and reliable performance at affordable prices.

These switches can support all types of PoE for pre-bt devices that were created before installation with larger PoE budgets and ports that provide PoE+ and PoE++ power for up to 60W per port.

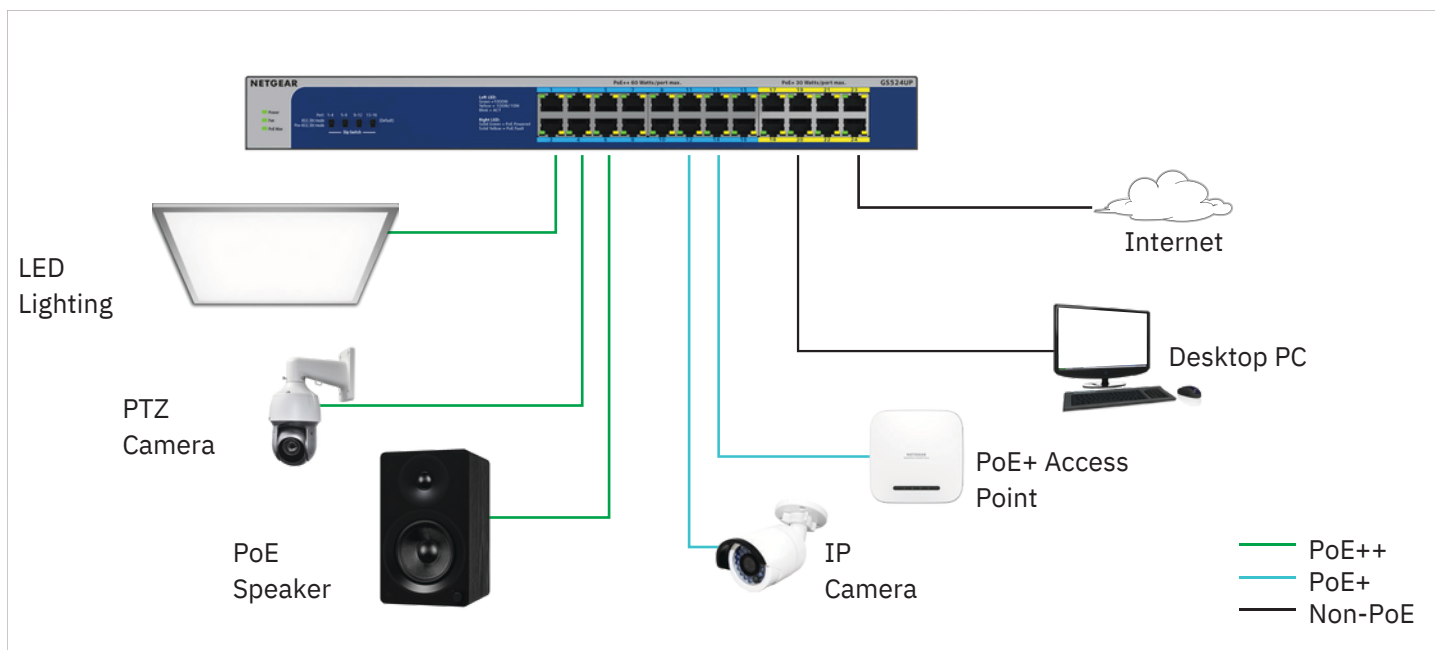
Standardized to IEEE 802.3bt, the Ultra60 PoE++ switches can deliver up to 60W of power per port, allowing the connections of higher power required devices, such as high performance 802.11ax wireless access points, PTZ and 4K IP surveillance cameras, PoE lighting, PoE-powered audio speakers, as well as other high-powered devices. The GS516UP and GS524UP has a PoE mode used to enable pre-802.3bt compatibility for pre-bt devices that were created before 802.3bt Standard was ratified.

## Highlights

- High-power PoE with impressive PoE budgets for all types of PoE installations
- Simple set up with no software or configuration needed
- Per port LEDs for port activity and speed
- Energy efficient technology for power savings
- Auto-negotiation for automatic connection at the highest common speed between switch and an end device
- 16 or 24 auto-sensing 10/100/1000 Mbps Gigabit Ethernet ports with up to 32 or 48Gb non-blocking switching
- Auto-MDI/MDIX eliminates the need for crossover cables
- Small, sturdy desktop metal case and quiet operation
- Ideal for small and medium offices
- Non-blocking switching architecture for maximum throughput at wire speed
- Standards-based technology ensures interoperability with any standards-based devices in the existing network
- Power up to 30W per device (GS516PP and GS524PP)
- Power up to 60W per device (GS516UP and GS524UP)
- Desktop and rack-mountable
- 802.3at Power Over Ethernet (PoE+) on all models for IP cameras, VoIP/Internet-based phones, wireless access points
- 802.3bt Power Over Ethernet (PoE++) on the GS516UP and GS524UP models for IP cameras, VoIP/Internet-based phones, wireless access points, smart building lighting, audio speakers and pan-tilt-zoom cameras
- Unique PoE technology automatically balances the PoE power based on the device needs independent of PoE class detected. The switches deliver the power the device needs, at the most granular level.
- Enable Pre-802.3bt devices using our PoE Mode

## Example Application

### Deploying NETGEAR Ultra60 PoE++



GS516UP and GS524UP can support, but are not limited to, power the devices shown in the above examples.

Technical Specifications	GS516PP	GS516UP	GS524PP	GS524UP
10/100/1000Mbps Ports (Auto Uplink)	16	16	24	24
Enclosure	Metal	Metal	Metal	Metal
Connector Type	Metal	Metal	Metal	Metal
Form Factor	Desktop/ Rack mount	Desktop/ Rack mount	Desktop/ Rack mount	Desktop/ Rack mount
Power On/Off Switch	N/A	N/A	N/A	N/A
<b>PoE Configuration</b>				
802.3at PoE+ Ports	16	8	24	8
802.3bt PoE++ Type 3 Ports	0	8	0	16
Pre-802.3bt compatible	N/A	Yes	N/A	Yes
PoE Max Power Per Port	30W	60W	30W	60W
Total PoE Power Budget	260W	380W	300W	480W
<b>Performance Specification</b>				
Bandwidth (Non-Blocking)	32 Gbps	32 Gbps	48 Gbps	48 Gbps
Packet Buffer Memory (Dynamically shared across only used ports)	192 KB	192 KB	192 KB	192 KB
Jumbo Frame Support	9,216 bytes	9,216 bytes	9,216 bytes	9,216 bytes
Queue WRR (Weighted Round Robin) Ratio	1:2:4:8	1:2:4:8	1:2:4:8	1:2:4:8
Forwarding Rate (using 64-byte packets) - 1000Mbps Port	1,448,000 pps	1,448,000 pps	1,448,000 pps	1,448,000 pps
Latency (using 64-byte packets) - 1000Mbps Port (average)	< 12 µsec	< 12 µsec	< 12 µsec	< 12 µsec
MAC Address Table Size	8K	8K	8K	8K
Auto MDI/MDI-X Cable Detection	Yes	Yes	Yes	Yes
Auto-sensing Half/Full Duplex Switched Ports	Yes	Yes	Yes	Yes
Mean Time Between Failures (MTBF) @ 25° C	2415333.9 hrs	1213791.0 hrs	1457063 hrs	809853.3 hrs
Acoustic noise level @ 25°C (dBA)	34.0 dBA	34.0 dBA	35.0dBA	35.0dBA
<b>LEDs</b>				
Per port	Speed, Link/ Activity, PoE	Speed, Link/ Activity, PoE	Speed, Link/ Activity, PoE	Speed, Link/ Activity, PoE
Per device	Power, PoE Max, Fan	Power, PoE Max, Fan	Power, PoE Max, Fan	Power, PoE Max, Fan
<b>Quality of Service (QoS)</b>				
802.1P Based (CoS) Supported	Ye	Ye	Ye	Ye
Honors DSCP (DiffServ) Tags	s	s	s	s
<b>Power Consumption</b>				
DC Input/Power In	Internal (100–240V ~ 50–60 Hz, 5A)	Internal (100–240V ~ 50–60 Hz, 8–4A)	Internal (100–240V ~ 50/60 Hz, 6A)	Internal (100–240Vac ~ 50–60 Hz, 8–4A)
Power Consumption (Max and Standby)	316.1W / 9.1W	456.8W / 14.9W	359.5W / 12.9W	578.8W / 24.4W
Heat Dissipation (Max and Standby) (BTU/Hr)	1079.1654BTU/ 31.0674BTU	1559.5152BTU/ 50.8686BTU	1227.333BTU/ 44.0404BTU	1976.0232BTU/ 83.3016BTU

Energy Efficiency	GS516PP	GS516UP	GS524PP	GS524UP
Energy Efficient Ethernet (EEE) IEEE 802.3az compliant	Yes	Yes	Yes	Yes
Auto Power Down	Yes	Yes	Yes	Yes
Short Cable Detection	Yes	Yes	Yes	Yes
Fan/Fanless	2 Fan	3 Fans	2 Fan	2 Fan
Power Supply	Internal 100-240V 50-60Hz 5A	Internal 100-240V 50-60Hz 8-4A	Internal 100-240V 50/60Hz 6A	Internal 100-240Vac 50-60Hz 8-4A
Physical Specifications				
Dimensions (W x D x H)	330 x 207 x 43 mm (12.99 in. x 8.15 in. x 1.7 in.)	330 x 207 x 43 mm (12.99 in. x 8.15 in. x 1.7 in.)	390 x 220 x 43 mm (15.4 in. x 8.7 in. x 1.7 in.)	390 x 220 x 43 mm (15.4 in. x 8.7 in. x 1.7 in.)
Weight	2.30 kg (5.07 lb)	2.60 kg (5.73 lb)	2.89 kg (6.37 lb)	3.10 kg (6.83 lb)
Environmental Specifications				
Operating				
Operating Temperature	32–122°F (0–50°C)			
Humidity	10%–90% relative humidity, noncondensing			
Altitude	3000 M			
Storage				
Storage Temperature	-20 ~ +70 °C			
Humidity (relative)	10%~95%, non-condensing			
Electromagnetic Emissions and				
Immunity				
Certifications	FCC 47 CFR Part15B (Class A) ICES-003 Class A EN 55024/55032/55035 (Class A) AS/NZS CISPR 32 VCCI BSMI CNS13438 KCC			
Safety				
Certifications	UL 62368-1 CB_IEC 60950-1 + IEC 62368-1 Ed-3 LVD EN60950-1+EN62368-1 Ed-2 Rpt AS/NZS 62368.1 Ed-2 BSMI CNS14336-1			
IEEE Network Protocols				
	IEEE 802.3ab 1000BASE-T Gigabit Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3i 10BASE-T Ethernet IEEE 802.3 CSMA/CD 802.3az Energy Efficient Ethernet			

Warranty and Support *	GS516PP	GS516UP	GS524PP	GS524UP
All Except China		Limited lifetime* warranty		
China		5-year warranty		
Next-Business-Day (NBD) Replacement		Limited lifetime*		
Technical Support (online, phone)		90 days free from date of purchase*		
24/7 Online Chat Technical support		Limited lifetime*		
ProSUPPORT OnCall 24x7 Service Plans		Category 2 PMB0312-10000S (1 yr) PMB0332-10000S (3 yrs) PMB0352-10000S (5 yrs)		
Package Content				
All Models		Unmanaged Gigabit Ethernet Switch Power cord (localized to country of sale) Rack mount kit Desktop rubber feet Insight Registration Flyer Installation Guide		
Ordering Information				
GS516PP				
GS516PP-100AJS		Australia and Japan		
GS516PP-100EUS		Europe, United Kingdom and Asia Pacific		
GS516PP-100NAS		North America and Asia Pacific		
GS516UP				
GS516UP-100AJS		Australia and Japan		
GS516UP-100EUS		Europe, United Kingdom and Asia Pacific		
GS516UP-100NAS		North America and Asia Pacific		
GS524PP				
GS524PP-100AJS		Australia and Japan		
GS524PP-100EUS		Europe, United Kingdom and Asia Pacific		
GS524PP-100NAS		North America and Asia Pacific		
GS524UP				
GS524UP-100AJS		Australia and Japan		
GS524UP-100EUS		Europe, United Kingdom and Asia Pacific		
GS524UP-100NAS		North America and Asia Pacific		