

# 16-Port Gigabit Easy Smart Switch with 8-Port PoE+

MODEL: TL-SG1016PE Datasheet



## Overview

The TL-SG1016PE is a 16-port Gigabit Easy Smart Switch with 8 PoE ports, represents a powerful upgrade from an unmanaged switch. It is designed for small businesses specially that require simple network management and PoE function. The TL-SG1016PE can connect and power up to 8 PoE devices, such as wireless access points (APs), IP cameras, and IP phones. Through its web-based use interface and management utility, the TL-SG1016PE offers a variety of useful features, including network monitoring, traffic prioritization, and enhanced QoS. Additionally, with port-based, tag-based and MTU VLAN, TL-SG1016PE can improve security and meet more network segmentation requirements.

## Power Over Ethernet

8 of the 16 Auto-Negotiation RJ45 ports (port 1 to port 8) of the switch support Power over Ethernet (PoE) function. These PoE ports can automatically detect and supply power with those IEEE 802.3af/at compliant Powered Devices (PDs).

## Overload Arrangement

TL-SG1016PE has the priority function which will help protect the system when the system power is overloaded. If all PoE PDs power consumption is  $\geq 150\text{ W}^*$ , a priority will be arranged among the PoE ports, then the system will cut off the power of the lowest-priority port.

## Port Priority Function

Priority (Port 1 > Port 2 > Port 3 > Port 4 > Port 5 > Port 6 > Port 7 > Port 8): This function will help protect the system if the system power becomes overloaded. For example, Port 1, 2, 3, 4, and 6 are using 30 W (maximum power per port is 30 W), the system power is  $150\text{ W}^*$  in total. If there is an additional PD inserted to Port 5 with 20 W, then the system will cut off Port 6 to protect the system, this means Port 1, 2, 3, 4 will use 30 W, and Port 5 will use 20 W, and no power will be supplied to Port 6.

## Effective Management

TP-Link Gigabit Easy Smart switch, TL-SG1016PE offers network monitoring for users to observe traffic behavior. With Port Mirroring, Loop Prevention and Cable Diagnostics features, TL-SG1016PE can identify and even locate connection problems on your business network. Moreover, administrators can designate the priority of the traffic based on Port Priority/ 802.1P Priority and DSCP QoS, to ensure that voice and video are always clear, smooth and lag-free. Additionally, to improve security and network performance, TL-SG1016PE supports MTU VLAN, port-based VLAN and 802.1Q-based VLAN functions. TL-SG1016PE is an upgrade from the plug-and-play Unmanaged Switch, delivering great value while empowering your network and similarly delivering great value to the end user.

## Go Green With Your Ethernet

You now have the choice to go green when upgrading to a gigabit network! This new generation TL-SG1016PE 16-Port Gigabit Easy Smart Switch features the latest innovative energy-efficient technologies that can greatly expand your network capacity with much less power. It automatically adjusts power consumption according to the link status and cable length to limit the carbon footprint of your network.

## Power down idle Ports

When a computer or network equipment is off, the corresponding port of a traditional switch will continue to consume considerable amounts of power. The TL-SG1016PE can automatically detect the link status of each port and reduce the power consumption of ports that are idle.


# Power Budget According to Cable Length

Ideally, shorter cables would use less power because of less power degradation over their length; this is not the case with most devices as they will use the same amount of power across the cable regardless of whether it is 10 or 50 meters in length. The TL-SG1016PE analyzes the length of the Ethernet cable connected and adjusts the power usage accordingly, rather than keeping the power consumption in a conventional solution.

## Easy to Use

TL-SG1016PE is easy to use and manage. Auto MDI/MDI-X crossover on all ports eliminate the need for crossover cables or uplink ports. Auto-negotiation on each port senses the link speed of a network device (either 10, 100, or 1000 Mbps) and intelligently adjusts for compatibility and optimal performance. Compact size shell make it ideal for desktops with limited space while it is also Rackmountable, convenient and safe. Dynamic LED lights provide real-time work status display and basic fault diagnosis.

## Specifications

Hardware Features & Performance		
Product Picture		
Model	TL-SG1016PE	
Hardware Features		
General	Interface	16 10/100/1000 Mbps RJ45
Performance	Switching Capacity	32 Gbps
	Forwarding Rate	23.8 Mpps
	MAC Address Table	8 K
	Packet Buffer Memory	4.1Mbits
	Jumbo Frame	10 KB
Physical & Environment	Power Supply	100-240 V, 50/60 Hz
	PoE Ports (RJ45)	Standard: 802.3af/at compliant PoE Ports: Port 1- Port 8 PoE Power Budget: 150 W
	Max Power Consumption	8.8 W (220 V/50 Hz. with no PD connected) 172.26 W (220 V/50 Hz. with 150W PD connected)
	Max Heat Dissipation	30.01 BTU/h (220 V/50 Hz. with no PD connected) 587.41 BTU/h (220 V/50 Hz. with 150 W PD connected)
	Dimensions(W*D*H)	11.6 * 7.1 * 1.7 in. (294 * 180 * 44 mm), 13-inch Rack mount Steel Case, 1U Height
	FAN Quantity	1
	Operating Temperature	0°C~50°C (32°F~122°F)
	Storage Temperature	-40°C~70°C (-40°F~158°F)
	Operating Humidity	10% ~ 90%RH, non-condensing
	Storage Humidity	5%~90%RH, non-condensing
	Certification	CE, FCC

# Specifications

## Software Features

L2 Features	<ul style="list-style-type: none"> <li>• IGMP Snooping               <ul style="list-style-type: none"> <li>- IGMP v1/v2/v3 Snooping</li> <li>- Supports 128 Groups</li> </ul> </li> <li>• Link Aggregation               <ul style="list-style-type: none"> <li>- Supports static link aggregation</li> <li>- Supports up to 8 aggregation groups, containing 4 ports per group</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Port Mirroring               <ul style="list-style-type: none"> <li>- One to One</li> <li>- Many to One</li> </ul> </li> <li>• Cable Test</li> <li>• Loop Prevention</li> </ul>
VLAN	<ul style="list-style-type: none"> <li>• Supports up to 32 VLANs (out of 4K VLAN IDs)</li> <li>• MTU/Port/802.1Q tag VLAN</li> </ul>	
Quality of Service (QoS)	<ul style="list-style-type: none"> <li>• Support Port-based/802.1p/DSCP priority</li> <li>• Support 4 priority queues</li> </ul>	<ul style="list-style-type: none"> <li>• Rate Limit</li> <li>• Storm Control</li> </ul>
PoE	<ul style="list-style-type: none"> <li>• PoE Management</li> <li>• PoE Auto Recovery</li> <li>• Extend Mode</li> </ul>	
Management	<ul style="list-style-type: none"> <li>• Easy Smart Conguration Utility               <ul style="list-style-type: none"> <li>- Central Management</li> <li>- Friendly user interface</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Web-based Graphic User Interface (GUI)</li> </ul>
Ethernet Protocols	<ul style="list-style-type: none"> <li>• IEEE 802.3i 10BASE-T</li> <li>• IEEE 802.3u 100BASE-TX/FX</li> <li>• IEEE 802.3ab 1000BASE-T</li> </ul>	<ul style="list-style-type: none"> <li>• IEEE 802.3x Flow Control</li> <li>• IEEE 802.1q VLANs/VLAN tagging</li> <li>• IEEE 802.1p QoS</li> </ul>

Note:

\* PoE budget calculations are based on laboratory testing. Actual PoE power budget is not guaranteed and will vary as a result of client limitations and environmental factors.

\*\*The speed of the ports which are under extend mode will be downgraded to 10Mbps. Actual transmission distance may vary from the quality of the cables.