SMC ®
N e t w o r k s

USER GUIDE

EZ Switch™
5/8 port Gigabit Ethernet Switch

SMCGS501/SMCGS801

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Compliances

Federal Communication Commission Interference Statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. SMC is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

EC Declaration of Conformity

SMC contact for these products in Europe is:
  SMC Networks Spain, S.L.
  Edificio Conata II,
  Group CTSG
  Fructuos Gelabert 6-8 2o2a
  08970 Sant Joan Despi, Barcolona,Spain

This information technology equipment complies with the requirements of the Council Directive 2004/108/EC on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility and 2006/95/EC for electrical equipment used within certain voltage limits and the Amendment Directive 2006/95/EC. For the evaluation of the compliance with these Directives, the following standards were applied:

RFI Emission:

- Limit class A according to EN 55022: 2006(EMC)
- Limit class A for harmonic current emission according toEN 61000-3-2/2000+A2:2005
- Limitation of voltage fluctuation and flicker in low-voltage supply system according to EN 61000-3-3/1995+A1:2001+A2:2005

Immunity:

- Product family standard according to EN 55024:1998+A1:2001+A2:2003

- Electrostatic Discharge according to EN 61000-4-2: 2001 ED.1.2
  (Contact Discharge: ±4 kV, Air Discharge: ±8 kV)
- Radio-frequency electromagnetic field according to EN 61000-4-3: 2006 ED.3.0
  (80 - 1000 MHz with 1 kHz AM 80% Modulation: 3 V/m)
- Electrical fast transient/burst according to EN 61000-4-4: 2004 ED.2.0 (AC/DC
  power supply: ±1 kV, Data/Signal lines: ±0.5 kV)
- Surge immunity test according to EN 61000-4-5: 2005 ED.2.0
  (AC/DC Line to Line: ±1 kV, AC/DC Line to Earth: ±2 kV)
- Immunity to conducted disturbances, Induced by radio-frequency fields:
  EN 61000-4-6: 2006 ED.2.2 (0.15 - 80 MHz with 1 kHz AM 80% Modulation: 3
  V/m)
- Power frequency magnetic field immunity test according to
  EN 61000-4-8: 2001 ED.1.1 (1 A/m at frequency 50 Hz)
- Voltage dips, short interruptions and voltage variations immunity test according to
  EN 61000-4-11: 2004 ED.2.0 (>95% Reduction @10 ms, 30% Reduction @500 ms,
  >95% Reduction @5000 ms)

LVD:
- EN 60950-1:2006

FCC Certifications

This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

CE Mark Warning

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022 class A for ITE, the essential protection requirement of Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

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Introduction

SMCGS501/SMCGS801 is a powerful, high-performance Gigabit Ethernet switch, with 5/8 ports capable of 10/100/1000 Mbps auto-negotiation operation (NWay), which means the switch could automatically negotiate with the connected partners on the network speed and duplex mode. It is ideal for micro-segmenting large networks into smaller, connected subnets for improved performance, enabling the bandwidth demanding multimedia and imaging applications. Moreover, the 10/100/1000Mbps auto-sensing ability provides an easy way to migrate 10/100Mbps to 1000Mbps network. Compared to the shared 10Mbps or 100Mbps networks, the switch delivers a dedicated 10/100/1000Mbps connection to every attached client without bandwidth congestion issue. This switch also supports auto MDI/ MDI-X function. Each port could be used to connect to another switch or hub without crossover RJ-45 cable.

Store-and-forward switching mode promises the low latency plus eliminates all the network errors, including runt and CRC error packets. To work under full-duplex mode, transmission and reception of the frames can occur simultaneously without causing collisions as well as double the network bandwidth. Moreover, Pre-IEEE 802.3az Energy Efficient Ethernet is supported to save power consumption

The switch is plug and play without any software to configure and also fully compliant with all kinds of network protocols.

Before you start to install the switch, check the following contents in this package：

1. One 5/8–Port Gigabit Ethernet switch
2. One external power adapter
3. Four rubber feet
4. User's Manual
5. Warranty Card
6. Quick Install Guide

Key Features

✧ Complies with 10BASE-T specifications of the IEEE802.3 standard

✧ Complies with 100BASE-TX specifications of the IEEE802.3u standard

✧ Complies with 1000BASE-T specifications of the IEEE802.3ab standard

✧ 5/8 - 10/100/1000Mbps RJ-45 ports

✧ Supports MDI/MDI-X auto crossover

✧ Supports full and half duplex operation on all ports

✧ Supports back-pressure (half duplex) and full duplex flow control (IEEE 802.3x)

✧ Wire-speed packet filtering and forwarding rate

✧ Store-and-forward architecture filters fragment & CRC error packets

✧ Supports extensive LED indicators for network diagnostics

✧ Supports IEEE 802.1p QoS

✧ Supports Pre-IEEE 802.3az

LEDs Definition

The switch contains one power LED for the device, Link/Act LED for each port that shows the activities and information of the ports.

Please refer to the following table for LEDs definition:

LED	Status	Operation
Power	Steady Green	The switch is powered on
	Off	The switch is powered off
Link/ ACT	Steady Green	Valid port connection
	Blinking Green	Valid port connection and there is data transmitting/ receiving
	Off	Port disconnected

Station Connection

Connect each station to the switch by twisted-pair cable. Plug one RJ-45 connector into a RJ-45 port of the switch, and plug the other RJ-45 connector into the station's network adapter. Power on the switch and then system is ready.

Switches Connection

In making a switch interconnection, you could use any port to connect another switch with straight or crossover cable. As all the ports support auto MDI / MDI-X function, using a straight cable to make a switch-to-switch connection is allowed.

For cable selection, refer to the following table：

Network Speed	Cable Type	Max. Length
10Mbps	Cat. 3, 4, 5 UTP/STP	100 meters
100Mbps	Cat. 5 UTP/STP	100 meters
1000Mbps	Category 5e, 6 UTP/STP	100 meters

[Note] To make this switch perform well, we strongly recommend below installation environment:

1. SMCGS501/SMCGS801 is placed with appropriate ventilation environment. A minimum 25mm space around the unit is recommended.

2. SMCGS501/SMCGS801 and the relevant components are away from sources of electrical noise such as radios, transmitters and broadband amplifiers.

3. SMCGS501/SMCGS801 is away from environments beyond recommend moisture.

Product Specifications

Standard	IEEE802.3 10BASE-T IEEE802.3u 100BASE-TX IEEE802.3ab 1000BASE-T IEEE802.3x full duplex flow control Pre-IEEE 802.3az IEEE 802.1p QoS
Interface	5/8* 10/100/1000 Mbps RJ-45 ports
Network Data Rate	10/100/1000 Mbps Auto-negotiation
Transmission Mode	10/100Mbps: Full-duplex, Half-duplex 1000Mbps: Full-duplex
Switching Capacity	5 Port:10Gbps 8 Port:16Gbps
Switching Forwarding Rate	5 Port: 7.4Mpps 8 Port: 11.9Mpps
Buffer Memory	5/8 Port :128K bytes
MAC Address Table	5/8 Port :8K
Jumbo Frame	5/8 Port :9K bytes
Temperature	Operating: 0°C ~ 40°C (32°F ~104°F)
Humidity	10% to 90% non-condensing
LED Indications	System: Power Ports: Link/Act
Power Supply	5/8 Port :External power adapter 5V/1A
Dimensions	5 Port :121.0*75*26mm(4.84*3.0*1.0 in) 8 Port :154.5*85*26mm(6.18*3.4*1.0 in)
Weight	5 Port : 253g(0.12lbs) 8 Port : 355g(0.16lbs)
Emission	FCC, CE, VCCI Class A

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