ALLNET®

ALL-SG8205PD

5 Port unmanaged Gigabit Switch with 1 Port PD and 2 Ports PoE

USER MANUAL

FCC Warning

This Equipment has been tested and found to comply with the limits for a Class B 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 $C\,\epsilon$

This equipment complies with the requirements relating to the EMC Directive 2004/108/EC, the Low Voltage Directive 2006/95/EC, and the RoHS Directive 2011/65/EU.

ALLNET Computersysteme GmbH has an on-going policy of upgrading its products and it may be possible that information in this document is not up-to-date. Please check with your local distributors for the latest information. No part of this document shall be copied or reproduced in any form without written consent from the company.

Trademarks:

All trade names and trademarks are the properties of their respective companies.

Copyright © 2014, All Rights Reserved.

Unpacking Information

Thank you for purchasing this product. Before installation, please verify that your package contains the following items:

1. **One Gigabit Ethernet Switch ALL-SG8205PD**
2. **Rubber feet *4**
3. **User Manual**
4. **One DC power adapter (optional)**
5. **One power cord (optional)**

Introduction

General Description

The device is a powerful, high-performance Gigabit Ethernet Switch, with all 5 ports capable of 10/100/1000Mbps 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 with no pain.

This switch supports PoE pass-through, having both PD (Powered Device) and PSE (Power Sourcing Equipment) features in one single device, which means the switch could get power from the PD port by connecting to a PSE device and supply power on the 2 PSE ports for connected devices via CAT 5e or better twisted cables. By integrating the data transmitting cable and power cord, it eliminates the effort constructing your network. You could easily connect a Wireless AP or a VoIP phone (PD devices) to this switch without looking outlets for them. Over current protection and circuit shorting protection are also supported to ensure the safety.

The switch is plug-n-play without any software to configure and also fully compliant with all kinds of network protocols. Moreover, the rich diagnostic LED indicators on the front-panel provide the operating status of individual port and whole system.

Key Features

- Provide 5x 10/100Mbps auto-detect half/full and 1000Mbs full duplex switch ports (IEEE802.3/ 802.3u/ 802.3ab)
- Supports MDI/MDI-X auto crossover
- Supports one port PD power input complying with IEEE802.3 at and an optional DC power input in 48V (Power Adaptor).
- Provides 2 PSE ports complying with IEEE802.3 af with classification identify
- Supports over current protection and circuit shorting protection
- Supports up to 4K MAC address table
- Supports maximum 9216 bytes jumbo packet length forwarding at wire speed
- Supports 128 K Bytes frame buffer
- Non-blocking switching performance
- Supports IEEE 802.3x back-pressure flow control for full duplex
- Operation Temperature: 0~50℃
- Humidity: 10%~90%RH, non-condensing
- EMC: CE/FCC Class B
- Safety: EN 60950-1

The Front Panel

The front panel consists of LED indicators.
For detailed LED definition, please refer to
the next paragraph.
The front panel of the switch is shown as
below:

LED Definition

LED indicators for the device:

Feature	Description
PWR LED	The switch is powered by the external power adapter (DC 48V).
PD LED	The switch is powered by the PD port. (IEEE 802.3af/at).
Uplink LED	It indicates the connection status of the uplink port. A

	green LED indicates a valid data connection from the uplink port.
PoE LED	It indicates the PoE connection status of the port 1 and port 2. A steady green LED indicates that a valid PD device is connecting to the PoE port, while a blinking LED indicates no valid PD device been connected to the PoE port.
LNK/ACT LED	- Steady green: Valid port connection. - Blinking green: Valid port connection and there is data transmitting/ receiving. - Off: Port disconnected.

The Rear Panel

There are a DC jack for external power adapter (optional) and 5 Ethernet ports for local switching on the rear panel. All Ethernet

ports feature 10/100/1000 Mbps with auto-negotiation and auto MDI-X. The rear panel of the switch is shown as below:
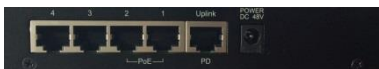
The rear panel port description:

Feature	Description
Power DC 48V	The DC 48V power adapter is optional if local network could supply power to PD port
Uplink/PD	10/100/1000 Mbps Ethernet ports feature with auto-negotiation and auto MDI-X also could receive power from Ethernet cable (IEEE 802.3af/at support).
Port 1~2 w/ PoE	10/100/1000 Mbps Ethernet ports feature with auto-negotiation and auto MDI-X also with power supply

	provide (IEEE 802.3af support).
Port 3~4	10/100/1000 Mbps Ethernet ports feature with auto-negotiation and auto MDI-X.

Power could be provided on port 1~2 if there is sufficient power available on the system.

This switch can power these combinations of devices:

- One class 0,3 PD device (15.4W) or
- Two class 1 PD devices (2x4W) or
- Two class 2 PD devices (2x7W) or
- One class 1 PD device and One class 2 PD devices (1x4W +1x7W)

Note:

A Powered Device (PD) device is able to receive power through an Ethernet cable connecting to its PD port.

Installation

Before installing the switch, we strongly recommend:

1. The switch is placed with appropriate ventilation environment. A minimum 25mm space around the unit is recommended.

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

3. The switch is away from environments beyond recommend moisture.

Steps of Installation

1. Attach the provided robber feet to the bottom of the switch to keep the switch from slipping. The recommend position has been square-marked.

2. Install the switch on a level surface that can support the weight of the unit and the relevant components.

3. Plug the switch with the Ethernet Cable on the PD port, which is connecting to a PSE or Plug the female end of the power adaptor on DC Jack to get power.

Network Cables Installation

1. **Crossover or straight-through cable**: All the ports on the switch support Auto-MDI/MDI-X functionality. Both straight-through or crossover cables can be used to connect the switch with PCs as well as other devices like switches, hubs or router.

2. **Category 3, 4, 5, 5e or 6 UTP/STP cable**: To make a valid connection and obtain the optimal performance. Appropriate cables corresponding to different transmitting/receiving speed is required. To choose a suitable cable, please refer to the following table:

Media	Speed	Wiring
10/100/1000 Mbps ports	10 Mbps	Category 3,4,5 UTP/STP
	100 Mbps	Category 5 UTP/STP
	1000 Mbps	Category 5e, 6, 7 UTP/STP
Ports that support PoE (Port 1~Port 2)	10/100/1000 Mbps	Category 5, 5e, 6, 7 UTP/STP or better

Application Scenario

The following diagrams display the recommended installation. However you may combine such applications according your plan on network topology.

Application 1:

You may connect any port of this switch to a work station, a PC, a laptop, a router or a NAS via the RJ-45 LAN cables, if the external power supply is connected:

Application 2:

You may connect the Uplink/PD port of this switch to a PoE switch or PoE injector via the RJ-45 LAN cable.

In such application, the external power adapter won't be necessary, but the total output power of the PoE ports 1~2 will be limited and depend on the power getting from the Uplink/PD port:

PoE Switch (IEEE 802.3AT)

PoE Injektor (IEEE 802.3AT)

ALLNET IP Kamera
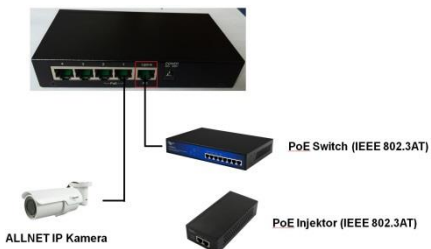
Product Specifications

Standard	IEEE802.3 10BASE-T IEEE802.3u 100BASE-TX IEEE802.3ab 1000BASE-T IEEE 802.3af/at PoE standard (DTE power via MDI) IEEE802.3x flow control
Interface	5 * 10/100/1000 Mbps auto MDI/MDI-X RJ-45 ports (Port Uplink/PD support PoE power receiving, Port 1~2 support PoE power feeding)
Network Data Rate	10/100/1000Mbps Auto-negotiation
Transmission	10/100Mbps: Full-duplex, Half-duplex

Mode	1000Mbps Full-duplex
LED Indications	System: PWR, PD Ports: Uplink, LNK/ACT, PoE
Memory	4K MAC address table 9216 bytes jumbo packet length 128K bytes buffer Memory
EMC	CE/FCC Class B
Safety	EN 60950-1
Operating Temperature	$0^0 \sim 50^0$C ($32^0 \sim 122^0$F)
Operating Humidity	10% - 90%(non-condensing)
Power Supply	48V0.75A Power Adaptor (Optional)

CE Declaration of Conformity

For the following equipment:

5-Port Gigabit Ethernet Switch
ALL-SG8205PD

$ C \in $

The safety advice in the documentation
accompanying the products shall be obeyed.

The conformity to the above directive is
indicated by the CE sign on the device.

The Allnet ALL-SG8205PD conforms to the
Council Directives of 2004/108/EC.

This equipment meets the following
conformance standards:

EN 55022: 2010 / AC: 2011 Class B
EN 61000-3-2: 2006 + A1: 2009 + A2: 2009
EN 61000-3-3: 2013
EN 55024: 2010

IEC 61000-4-2: 2008
IEC 61000-4-3: 2006 + A1: 2007 + A2: 2010
IEC 61000-4-4: 2012
IEC 61000-4-5: 2005
IEC 61000-4-6: 2008
IEC 61000-4-8: 2009
IEC 61000-4-11: 2004

This equipment is intended to be operated in
all countries.

This declaration is made by
ALLNET GmbH Computersysteme
Maistraße 2
82110 Germering
Germany

Germering, 12.09.2014

_____
Wolfgang Marcus Bauer
CEO