

PoE Series CS-1216G-8P8T

16Port 10/100/1000M Gigabit PoE++ (8 Port AT PoE + 8 Port BT PoE) Switch with 2 SFP Ports



User's Guide

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 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

Company 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 can be copied or reproduced in any form without written consent from the company.

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Unpacking Information

Thank you for purchasing our PoE series products. Before installation, please check that your package contains the following items.

Open the shipping cartons of the switch and carefully unpack its contents. The carton should contain the following items:

1. **CS-1216G-8P8T Main Unit x 1**
2. **Power Code x 1**
3. **User's Guide x 1**
4. **19" Rack Mount Brackets x 1**
5. **Warranty Card x 1**



CS-1216G-8P8T

Power Consumption : 14.9 Watts

Dimension & Weight : 441 x 281 x 44 mm (19 inch) / 3.50kg

Introduction

The CERIO CS-1216G-8P8T is the latest powerful high performance 16 port PoE Gigabit switch and supports 2 Gigabit SFP uplink ports. It is including 8ports of AT PoE and 8ports of BT PoE and compliant with IEEE 802.3bt, IEEE 802.3at and 802.3af PoE standards. It defines new green power saving idea on the PoE/PSE Port. It's built-in 450watt internal power supply. All 16 ports capable of 10/100/1000Mbps auto-negotiation operation (NWay). This means the switch could automatically negotiate with connected partners on the network speed and duplex mode.

It is designed for SMB deployment and can also be upgraded to 1U" chassis for standard rack mounting. It is ideal for micro-segmenting large network into smaller networks, connecting subnets for improved performance, and enabling the bandwidth demanded for multimedia and imaging applications.

The hardware utilizes a metal housing, making it a durable and safety PoE solution for homes and businesses. By integrating the data transmitting cable and power cord, it eliminates the hassle of constructing your network. You could easily connect Wireless AP or VoIP phone or IP Camera to this switch without looking for power outlets. Over current protection and circuit shorting protection are also supported to ensure product safety.

Key Features

- Complying with IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T, IEEE 802.3af PoE, IEEE 802.3at PoE+ and IEEE 802.3bt PoE++ standards.
- 16port 10/100/1000Mbps TX Auto-Negotiation Ethernet Switch, supports 16 Port Gigabit PSE / PoE function and compliant with IEEE 802.3af/at/bt PoE standards.
- Supports 2 Gigabit SFP uplink ports and compliant with IEEE 802.3z 1000Base-SX/LX standards.
- Supporting 8ports AT PoE power up to 30Watt and 8ports BT PoE power up to 90Watt.
- Built-in 450 Watt power supply, supports a maximum PoE output budget of 400 Watt, shared for 16 ports of 10/100/1000M PoE ports.
- Full/Half-Duplex capability on each TX port, Auto learning networking configurations.
- Supports Store & Forward architecture and performs forwarding and filtering.
- Flow control: back pressure for Half-duplex and IEEE 802.3x for Full-duplex mode.
- Support Jumbo Frame 9K.
- Non-blocking & Non-head-of-line blocking full-wire speed forwarding.
- Supports TP interface Auto MDIX function for auto TX/RX swap.
- Automatic Source MAC Address Learning and Aging. Supports up to 8K MAC addresses, Up to 4.1Mbits buffer.
- Supports hardware LED Loop Detectors function, the system can quickly display color differences of LED according to any connection port where a loop occurs ◦

Installation

Please make sure that there is proper heat dissipation from and adequate ventilation around the Switch. Do not place heavy objects on the Switch

Desktop / Rack Installation

This switch can be easily installed on a desktop or rack and allow easy device access for connecting cables and to the power button. A minimum of 25mm around the device is recommended for product safety.

Desktop Installation

1. Attach the Rubber feet provided with the switch to ensure minimal movement of the device
2. Keep the switch away from devices such as radios, broadband amplifiers, other transmitters that might cause signal interferences.
3. Distancing the device from moisture is also highly recommended

Rack Installation

The Switch can be mounted on a standard 19" rack to allow for convenient placement and device safety. The switch is supplied with rack mounting brackets and screws for optional installation.

Required Mounting Materials

1. Two mounting brackets
2. 6pcs of M3 flathead screws

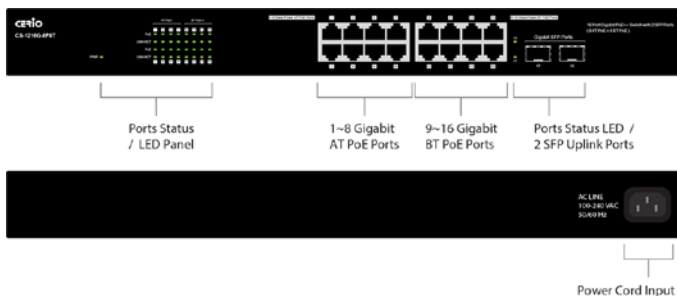
Mounting Procedure

1. Disconnect all cables from the device
2. Place device on a hard surface, the front of the device must be facing you.
3. Locate mounting holes on the sides of the unit
4. Install mounting brackets using M3 flathead screws on both sides of the device
5. Place unit onto the rack and secure with proper screws Reconnect all the cables

Gigabit PoE Ports

8ports are complying with 802.3bt (PoE++), 802.3at (PoE+) and 802.3af (PoE), and 8ports are complying with 802.3at (PoE+) and 802.3af (PoE), the PoE port will automatically activate when a compatible terminal is identified. The PoE switch will distribute power through the Gigabit ethernet ports to the connected PoE device. For devices that are not compatible, the PoE port will not supply the power to this device. This feature allows user's to freely and safely utilize the 802.3af (PoE) , 802.3at(PoE+) and 802.3bt (PoE++) for Power over Lan devices on their network.

Hardware Overview (CS-1216G-8P8T)



Rear Panel (Power)

AC Input : (100~240V/AC, 50~60Hz)



LED Indicator:

Complete LED indicators displays the status of the PoE Switch and network status

The front panel LEDs provides instant status feedback, and assists to monitor and troubleshoot when required.

Power LED (Power Indicator)

On	Power On
Off	Power Off

PoE LEDs (PoE Status)

Green	When the PoE powered device (PD) is connected and the port distributes power successfully
Off	When the PoE port has failed, possible reason are: PoE Power circuit shortage Power over current: over the power current of PD's classification Out of PoE voltage of 44 ~ 57 VDC output No PoE power device (PD) connected

LINK/ACT Status LEDs

Amber :	10/100M Link / Act connected.
Green :	1000M Link / Act connected.
Blinking :	Data Transmitting / Receiving.

Loop Detection Status LEDs

Amber/Green Crosswise	When a Looping occurs, the Link/Act LED will flash amber and green crosswise.
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Product Specifications

Standards & Hardware Specifications

Standards Conformance	IEEE 802.3i 10Base-T IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T IEEE 802.3x Flow Control IEEE 802.3az Energy Efficient Ethernet-EEE IEEE 802.3af Power over Ethernet(PoE) IEEE 802.at Power over Ethernet Plus (PoE+) IEEE 802.3bt Power over Ethernet Plus Plus (PoE++) 16 port RJ-45 connectors for 10/100/1000Mbps (With 8ports of AT PoE and 8ports of BT PoE function)
Port Configuration	2 port Gigabit SFP Ports
Media Access Protocol	CSMA / CD
Network Media	10BASE -T: UTP Cat. 3 or up, 100BASE-TX: UTP Cat. 5 or up, 1000BASE-T: UTP Cat. 5 or up
Transmission Method	Store and Forward
MAC Address Table	8K
Built-in Buffer	4.1M bits
Data Transfer Rate	10/100/1000Mbps (Half-duplex), 20/200/2000Mbps (Full-duplex)
Auto MDI /MDI X	Yes
LED Indicators	Per Port : Link/ACT Status x 16 Per Port: PoE Status x 16 Per Unit : Power x 1 Per Unit : SFP x 2
Internal Bus Speed/Exchange Rate	36Gbps/26.784Mpps

Environmental & Mechanical Characteristics

PoE Power Budget	400W shared for all PoE ports
Power Consumption	14.9 Watt (without PoE Devices connected)
PoE Power Output	Up to 30W per port (1-8 port support AT PoE output) Up to 90W per port (9-16 port support BT PoE output)
Power Type	Power Cord: Internal Power supply
Power Requirement	AC 100~240V AC, 50-60Hz Auto-sensing
Operating Temperature	0° to 40° C
Storage Temperature	-40° to 70° C
Operating Humidity	10% to 90% non-condensing
Storage Humidity	5% to 90% non-condensing
Dimension (W x H x D)	441 x 281 x 44 mm
Unit Weight	3.62kg
Certification	FCC, CE, RoHS compliant