

# PoE Series CS-1216G-16P CS-1224G-24P

16/24 Port 10/100/1000M Gigabit 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.

#### Trademarks:

All trade names and trademarks are the properties of their respective companies.  
Copyright © 2016, All Rights Reserved.

## 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-16P / CS-1224G-24P 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-16P

Power Consumption : 14.9 Watts

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



### CS-1224G-24P

Power Consumption : 17.9 Watts

Dimension & Weight : 441 x 281 x 44 mm (19 inch) / 3.71kg

## Introduction

The CERIO PoE Switch is a powerful high-performance 16/24 port PoE Gigabit switch and supports 2 Gigabit SFP uplink ports. The model is compliant with IEEE 802.3at and IEEE 802.3af standards, and defines new green power saving idea on the PSE Port. It's bundle 400 / 450watt internal power supply. All 16/24 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/at PoE standards.
- 16/24port 10/100/1000Mbps TX Auto-Negotiation Ethernet Switch, supports 16/24 Port Gigabit PSE/PoE function and compliant with IEEE 802.3af/at PoE standards.
- Supports 2 Gigabit SFP uplink ports and compliant with IEEE 802.3 1000Base-SX/LX standards.
- Supporting the power up to 30Watt /15.4Watt /7.5Watt /4Watt for each PSE/PoE port.
- **CS-1216G-16P** Built-in 400Watt power supply, supports a max PoE output budget of 350Watt, shared for 16 ports of PoE ports.
- **CS-1224G-24P** Built-in 450Watt power supply, supports a max PoE output budget of 400Watt, shared for 24 ports of 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.
- It supports the system loop detection function, and can detect each port automatically and flash the LED light to display of the port where the 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

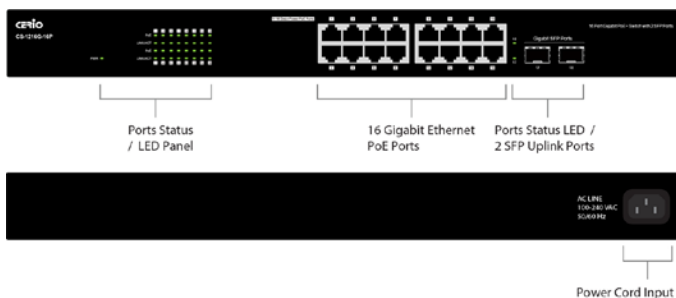
### Mounting Procedure

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

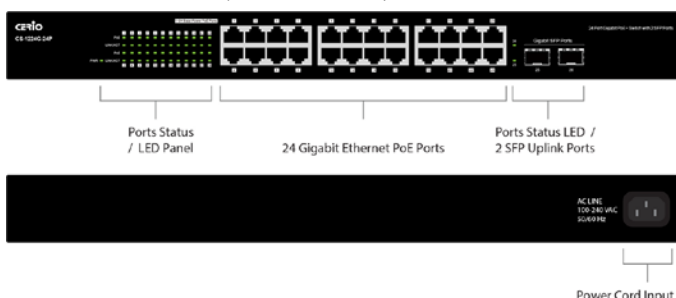
### Gigabit PoE Ports

These ports are 802.3af (PoE) and 802.3at(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) and 802.3at(PoE+) for Power over Lan devices on their network.

### Hardware Overview (CS-1216G-16P)



### Hardware Overview (CS-1224G-24P)



### 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.
-----------------------	---

## Product Specifications

### Standards & Hardware Specifications

<b>Standards Conformance</b>	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+)
<b>Port Configuration</b>	16/24port RJ-45 connectors for 10/100/1000Mbps (With PSE/ PoE+ function) 2 port Gigabit SFP Ports
<b>Media Access Protocol</b>	CSMA / CA
<b>Network Media</b>	10BASE-T: UTP Cat. 3 or up, 100BASE-TX: UTP Cat. 5 or up, 1000BASE-T: UTP Cat. 5 or up
<b>Transmission Method</b>	Store and Forward
<b>MAC Address Table</b>	8K
<b>Built-in Buffer</b>	4.1M bits
<b>Data Transfer Rate</b>	10/100/1000Mbps (Half-duplex), 20/200/2000Mbps (Full-duplex)
<b>Auto MDI /MDIX</b>	Yes
<b>LED Indicators</b>	Per Port : Link/ACT Status x 16 or 24 Per Port: PoE Status x 16 or 24 Per Unit : Power x 1 Per Unit : SFP x 2
<b>Internal Bus</b>	CS-1216G-16P : 36Gbps/26.784Mpps
<b>Speed/Exchange Rate</b>	CS-1224G-24P : 52Gbps/38.688Mpps

### Environmental & Mechanical Characteristics

<b>PoE Power Budget</b>	CS-1216G-16P : 350W shared for all PoE ports CS-1224G-24P : 400W shared for all PoE ports
<b>Power Consumption</b>	CS-1216G-16P : 14.9 Watt CS-1224G-24P : 17.9 Watt (without PoE Devices connected)
<b>PoE Power Output</b>	Up to 30W per port (1-16 or 24 port support PoE output)
<b>Power Type</b>	Power Cord: Internal Power supply
<b>Power Requirement</b>	AC 100~240V AC, 50-60Hz Auto-sensing
<b>Operating Temperature</b>	0° to 40° C
<b>Storage Temperature</b>	-40° to 70° C
<b>Operating Humidity</b>	10% to 90% non-condensing
<b>Storage Humidity</b>	5% to 90% non-condensing
<b>Dimension (W x H x D)</b>	441 x 281 x 44 mm
<b>Unit Weight</b>	CS-1216G-16P : 3.50kg CS-1224G-24P : 3.71kg
<b>Certification</b>	FCC, CE, RoHS compliant