

## CS-2648XG-48P

**48 Port 10/100/1000M Gigabit Web Managed PoE+ Switch with 6 SFP+ 10Gigabit Ports ( 960 Watt Power )**

EAN Code : 4712757159950



### Introduction

**CERIO CS-2000 Series Model: CS-2648XG-48P** is the latest powerful high-performance **48 port Gigabit PoE+ switch, supporting 6 SFP+ 10Gigabit Uplink Ports**, and is compliant with **IEEE 802.3at and 802.3af standards**. This layer 2 Web Management switch includes a **960watt internal power supply**, providing 800watt PoE power budget, and supports Remote on/off control of PoE power ports.

The **CS-2648XG-48P** layer 2 functions include Spanning Tree and Rapid Spanning Tree Protocol, IEEE 802.1Q Tag/Port Based VLAN functions, IEEE 802.1p-based/Port-based QoS bandwidth control, IGMP Snooping, Link Aggregation Control Protocol (LACP), and much more. This device can solve the limitation of the power outlet locations and offer the system relocation convenience.

**CERIO's CS-2648XG-48P** is designed for office deployment and can be upgraded to 1U" chassis for server room installation. 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 built-in 6 SFP+ 10Gigabit ports make this device perfect for 10G fiber uplinks, while maintaining gigabit speeds for connected Ethernet devices.

The **CS-2648XG-48P** is a feature packed web managed gigabit PoE+ switch, providing enterprise grade function at a competitive price point. Deploying **CERIO CS-2648XG-48P** in your network can provide network organization and improved efficiency for your devices and clients. Administrators using **CS-2648XG-48P** can meet the increasing management requirements when deploying **Wireless AP or VoIP phone or IP Camera**. Cerio's web-managed switches offer convenient configuration which ultimately provides premium performance, easy installation, and is sure to meet the increasing demands of growing networks.

### Highlight Features

- Complying with IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T, IEEE 802.3ae SFP+, IEEE 802.3af PoE, IEEE 802.3at POE+ standards.
- 48port 10/100/1000Mbps TX Auto-Negotiation Ethernet Switch, Have 48 Port PSE/ PoE function, compliant with IEEE 802.3af class3 /class2/class1 and IEEE 802.3at standards.
- Supports 6 SFP+ 10Gigabit uplink ports for connecting 10G SFP+ fiber modules for long distance application.

- Supports power of up to 30Watt /15.4Watt /7.5Watt/4Watt for each PSE/PoE port.
- Supports PoE Green Power Energy Saving function to automatically detect connected devices and smartly direct necessary output wattage to only those ports to achieve green power saving.
- Supports PoE Control with scheduling capabilities and port-based control.
- Internal 960 Watt power supply supports a maximum PoE power budget of 800 Watt to share for 48port 10/100/1000M Gigabit PoE ports.
- Support system overheating or voltage error safety mechanism through LED alarm.
- Supports system has reached the maximum POE power load warning function through the LED alarm.
- Supports remote power control of PoE powered devices (PD), allowing web-based on/off/reboot control and supports monitoring of individual port PoE consumption (wattage).
- Supports PoE Power Priority per port with three priority options and support per port PoE power delay function.
- Full/Half-Duplex capability on each TX port, Auto-learning networking configurations.
- Supports store & forward operation.
- Supports flow control: back pressure for Half-duplex and IEEE 802.3x for Full-duplex mode.
- 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.
- Provides 12K Jumbo frames to improve network utilization of a large file transfers.
- Supports up to 32K MAC addresses and 16Mb Packet buffer.
- VLAN and IEEE802.1Q tag-base VLAN based on ports & VIDs; add/remove/modify tag.
- Supports Voice VLAN / MAC VLAN / Surveillance VLAN / Protocol VLAN and GVRP etc.
- Supports Broadcast / multicast / unknown unicast storm control.
- Provides IGMP snooping v1/v2/v3 and supports MLD snooping and MVR functions.
- Supports IEEE802.3ad Link Aggregation LACP.
- Supports 802.1x protocol to support CHAP, EAP mode and port/MAC based network access control.
- Supports RADIUS/TACACS+ and AAA Certificate function.
- Supports MAC Table Management.
- Supports MAC/IPv4 and IPv6 ACL (Access Control List) security management.
- Supports IPv6 Internet Protocol, IPv6 Auto-configuration mechanism and DHCPv6 Client and other functions to facilitate the setting and management of IP addresses.
- Supports DoS (Denial of Service) Defense for enhanced network security.
- Firewall Dos supports POD, LAND, UDP Blat, TCP Blat, Null /X-Man Scan Attack, TCP SYN-FIN/SYN-RST Attack, Smurf Attack and other defense function.
- Supports Dual Image function, which can shorten the downtime during the switch firmware upgrade or downgrade, and supports Active firmware image, Backup firmware image security backup mechanisms.
- Supports Link Layer Discovery Protocol (LLDP) and LLDP-MED.
- Supports DHCP Snooping function to prevent access by unauthorized hosts and DHCP servers and supports DHCP Option 82 and Option82 Circuit ID provides additional security.
- Each port supports limiting the number of MAC Addresses with IP and MAC address Binding.

- Supports QoS Quality of Service, Port-based QoS bandwidth management, 802.1q priority Tag based with 8 priority Queues and 8 Weights.
- Supports bandwidth control to set control traffic limits (inflow and outflow) for each port.
- Supports Port Mirroring function.
- Supports Spanning Tree Protocol (STP) , Rapid Spanning Tree Protocol (RSTP) and Multiple Spanning Tree Protocol (MSTP).
- Supports UDLD (Unidirectional link detection), which can monitor the link status and prevent network problems.
- Support proxy DNS server, SNTP time server network time synchronization function, it can automatically adjust the host to update the time, easy to understand the problem and restore.
- Supports Event Log, Alarm Log, Security Log, Network Log, and Protocol Log.
- Supports file backup and recovery.
- Software management service supports setting Console / Telnet / SSH / HTTP /HTTPS/SNMP.
- Supports GUI display for monitoring network data status by port, traffic analysis by port, and device CPU and Memory loading for convenient administrative network analysis and management.
- Supports Simple Network Management Protocol (SNMPv1/v2c/v3) Web-based management interface.
- Support PoE Watchdog function, which can perform online or offline detection for each PD device that is powered, also can re-send the power (PoE) to PD device or warning notification according to the corresponding mechanism.

## Hardware Overview



Reset Button / LED Panel

Ports Status LED / 48 Gigabit Ethernet PoE Ports

Ports Status LED / 6 x 10Gb SFP+ Ports



Console Port

Power Cord Input

### Standards & Hardware Specifications

#### Network Standards Conformance

IEEE 802.3 10Base-T  
 IEEE 802.3u 100Base-TX,  
 IEEE 802.3ab 1000Base-T,  
 IEEE 802.3ae SFP+  
 IEEE 802.3x Flow Control  
 IEEE 802.1p QoS  
 IEEE 802.3az EEE  
 IEEE 802.1Q VLAN Tag  
 IEEE 802.3ad Link Aggregation  
 IEEE 802.3af Power over Ethernet(15.4Watt PoE)  
 IEEE 802.3at Power over Ethernet Plus(30Watt PoE+)

#### Port Configuration

48 ports RJ-45 connectors for 10/100/1000 BASE-T and PSE/ PoE function  
 6 SFP+ 10Gigabit Uplink Ports  
 1 RJ45 Console Port

#### Hardware Reset

Reset button for returning to factory settings

#### LED Display Control DIP Switch

Port LED and PoE LED display

#### 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

#### Support 10G Fiber Type

SFP+ SR, SFP+ LR

#### Transmission Method

Store and Forward

#### MAC Address Table

32K

#### Built-in Buffer

16Mb

#### Jumbo Frame

12K

#### Data Transfer Rate

10/100/1000Mbps (Half-duplex),  
 20/200/2000Mbps (Full-duplex)  
 10/20Gbps (Full-duplex)

#### Auto MDI/MDIX

Yes

#### LED Indicators

|  |     |
|--|-----|
| Per Port: Link/POE Status                    | x48 |
| SFP+ 10G Port: SFP+ Connection Status        | x6  |
| Per Unit: (ALH) Overheating/Volt error Alarm | x1  |
| Per Unit: (MAX) Max PoE Alarm                | x1  |
| Per Unit: (PWR)                              | x1  |

Per Unit: (SYS)

x1

#### Internal Bus Speed

216Gbps

### Switch Specifications

#### Link Aggregation

IEEE802.3ad LACP Link Aggregation Supported

#### Port Mirror

Supported

#### Quality of Service (QoS)

Supports IEEE 802.1p QoS, Port-based QoS

#### Bandwidth Control

Supported

#### Spanning Tree(STP)

Supported

#### Rapid Spanning Tree(RSTP)

Supported

#### Multiple Spanning Tree Protocol (MSTP)

Supported

#### IGMP Snooping

Supports v1, v2, v3 and MVR

#### ACL Security Management

Supports IPv4 / IPv6 and MAC management

#### DHCP Security Detection

Supports DHCP Snooping / DHCP Option 82/  
 Option82 Circuit ID

#### IPv6 Management Function

Supports IPv6 Internet Protocol, IPv6 Auto-configuration mechanism and DHCPv6 Client

#### Dual Image Function

Supports Dual image, Active firmware image and Backup firmware image

#### SNTP Time Server

Supported

#### VLAN

IEEE802.1Q Tagging VLAN , Port-Based ,Tag based VLAN

#### SNMP

Supports SNMP v1/v2c/v3

#### Authentication Security Protocol

Supports RADIUS / TACACS+ and AAA

#### Virtual Network Management VLAN

Supports Voice VLAN / MAC VLAN / Surveillance VLAN / Protocol VLAN and GVRP

#### Port Security Management

Supports Broadcast / multicast / unknown unicast storm control



### Environmental & Mechanical Characteristics

#### Power Type

960Watt Internal Dual Power Supply

#### PoE Power Budget

800 Watt shared for all PoE ports

#### Power Consumption

47 Watt (max. with no PoE Device connected)

#### PoE Power Output

Up to 30W per port

#### Power Requirements

AC 100~240VAC, 50-60Hz Auto-sensing

#### Operating Temperature

0° to 50° C

#### Storage Temperature

-40° to 70° C

#### Operating Humidity

10% to 90% non-condensing

#### Storage Humidity

10% to 90% non-condensing

### Dimensions ( W x D x H )

441 x 330 x 44 mm

### Unit Weight

6.02kg

### Production Location

TW or CN

### Certifications

FCC, CE, RoHS-Compliant




### Package Contents

#### Contents





|                                |    |
|--------------------------------|----|
| <b>CS-2648XG-48P</b> Main Unit | x1 |
| 19" Rack Mount Brackets        | x1 |
| Power Cord                     | x2 |
| Console Cable                  | x1 |
| Warranty Card                  | x1 |

### SFP / SFP+ / RJ45 Copper Transceiver Module

#### 1.25Gbps/Gigabit SFP/RJ45 Series

| Model No.  | Photo   | Description                                    | Compatible Switch   |
|------------|---|--|---|
| SRJ-GT     |  | 1000BASE-T SFP Copper RJ45 Transceiver<br>100m | CS-1224G<br>CS-2424G<br>CS-2208G-8P<br>CS-2424G-24P<br>CS-3416G-16P<br>CS-3424G-24P |
| SLC-GSXM   |  | 1.25Gbps SFP SX 850nm 550m LC Multi-Mode DDM   |   |
| SLC-GLXS10 |  | 1.25Gbps SFP LX 1310nm 10KM LC Single-Mode DDM |   |

#### 10Gbps SFP+/RJ45 Series

| Model No.    | Photo   | Description   | Compatible Switch          |
|--------------|---|---|----------------------------|
| SRJ-10GT     |  | 10GBASE-T SFP+ Copper RJ45 Transceiver<br>30m         | CS-2648XG<br>CS-2648XG-48P |
| SLC-10GSRM   |  | 10GBASE-SR SFP+ 850nm 300m LC Multi-Mode DDM          |                            |
| SLC-10GLRS10 |  | 10GBASE-LR SFP+ 1310nm 10KM LC Single-Mode DDM        |                            |
| AOC-10G01    |  | 1M 10GBASE-T SFP+ to SFP+ Active Optical Cables Cable |                            |