**CERIO**
*Amplify your Wireless Network*

## CS-3424G-24P

**24 Port Gigabit Managed PoE+ L2/L3 Lite Switch with 4 Combo Gigabit Ports（400Watt Power）**

EAN Code : 4712757150148

## Introduction

**CERIO CS-3000 Series Model: CS-3424G-24P** is the latest powerful high-performance L2/L3 Lite 24 port Gigabit PoE switch, **supporting 4 Combo Gigabit** ports and compliant with **IEEE 802.3at/802.3af** standards. It includes 400watt internal power supply and **providing 360watt PoE power budget** and supports Remote on/off control, schedule of PoE power ports.

The **CS-3424G-24P** provides STP/ RSTP/MSTP functions and add ITU-T protocol industrial carrier grade G.8032 ERPS function to prevent broadcast storms. The management functions including IEEE 802.1Q Tag/Port Based VLAN functions, IEEE 802.1p-based/Port-based QoS bandwidth control, WRR flow control, IGMP Snooping, Link Aggregation Control Protocol (LACP). It can expand the interconnection between multiple devices into a backbone link channel, and at the same time control the bandwidth management of layer 2 and loop detection and prevention (Bandwidth control / Loop Detection) and other large-scale enterprise network security management. Using UTP cable to transmit network data and power to POE PD powered devices (such as AP, IP CAM, etc.), which can solve the limitation of the power outlet locations and offer the system relocation convenience.
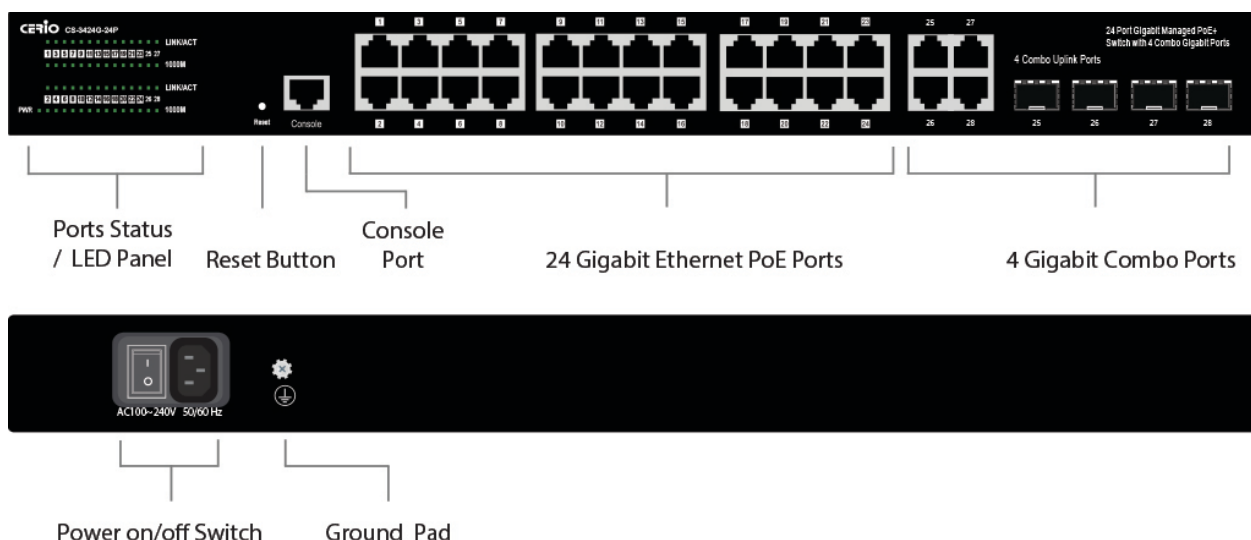
The **CS-3424G-24P** is designed for office deployment and can be upgraded to 1U" chassis for server room installation. It is ideal for micro-segmenting large network into smaller networks, connecting subnets for improved performance, and enabling the bandwidth demanded for multimedia and imaging applications. Built-in 4 Combo Gigabit ports make this device perfect for fiber or RJ45 Gigabit uplinks, while maintaining gigabit speeds for connected Ethernet devices. Providing enterprise grade function at a competitive price point. Deploying **CS-3424G-24P** in your network can provide network organization and improved efficiency for your devices and clients. Administrators using Cerio **CS-3424G-24P** can meet the increasing management requirements when deploying **Wireless AP or VoIP phone or IP Camera**. Cerio's web-managed switches offer convenient configuration, 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 802.3z 1000Base-SX/LX, IEEE 802.3af and IEEE 802.3at standards.

- 24port 10/100/1000Mbps TX Auto-Negotiation Ethernet Switch, Have 24 Port PSE/ PoE function, compliant with IEEE 802.3af and IEEE 802.3at standards.

- Supports 4 Combo Gigabit uplink ports for connecting Mini GBIC 1000Base-SX/LX fiber modules for long distance network application or RJ45 Gigabit uplinks.

- Supports Internal Bus Speed up to 56Gbps and the exchange rate over 41.664Mbps.

- 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 power up to 30W / 15.4W / 7.5W / 4W for each PSE/PoE port.

- Supports PoE Control with scheduling capabilities and port-based control.

- Internal 400 Watts power supply supports a maximum PoE power budget of 360 Watts.

- Supports remote power control of PoE powered devices (PD), allowing web-based on/off/reboot control.

- 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 10K Jumbo frames to improve network utilization of a large file transfers.

- Supports up to 8K MAC addresses and 4.1Mb Packet buffer.

- Supports Surge Protection 6KV on RJ45 to avoid the damage of the switch and connected devices.

- Supports VLAN and IEEE 802.1Q tag-base VLAN based on ports & VIDs; add/remove/modify tag.

- Supports Voice VLAN / MAC VLAN / Surveillance VLAN / Protocol VLAN and GVRP etc functions.

- Supports Broadcast / multicast / unknown unicast storm control.

- Provides IGMP snooping v1/v2/v3 function and supports MLD snooping and MVR functions.

- Supports IEEE 802.3ad Link Aggregation LACP function.

- 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 Address Table Management, It can grasp the MAC address which connected to the associated users and in case of  set in or specified Port and VLAN group situation bind the MAC Address of the user's PC or network host device.

- Supports MAC/IPv4 and DHCP Client and 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 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.
- Support setting the number of MAC users, IP and MAC binding and access control list (ACL), according to the limit of each port, which can be filtered by MAC and IP address.
- 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 IEEE 802.1D Spanning Tree Protocol (STP), including BPDU Filtering and BPDU guard functions and IEEE 802.1w Rapid Spanning Tree Protocol (RSTP), IEEE 802.1s Multiple Spanning Tree Protocol (MSTP).
- Supports Industrial Carrier Class ERPS（Ethernet Ring Protection Switching）helps to build a scalable Layer 2 converged network and achieve high reliability and network stability for service providers.
- RMON (Remote Network Monitoring) provides network administrators with the ability to select network-monitoring probes with features that meet their business network needs.
- Supports IPSG (IP Source Guard) provides source IP address filtering on a Layer 2 port to prevent a malicious host from impersonating a legitimate host by assuming the legitimate host's IP address.
- Supports UDLD (Unidirectional link detection), which can monitor the link status and prevent network problems.
- Support ACL (Access Control List), including MAC ACL, IPv4 ACL, IPv6 ACL and other security control functions.
- Supports local time and PC synchronization, also can manually setting. Supports SNTP time server and network time synchronization, automatically adjust the host and update, easy to understand the problem and restore.
- Supports Event Log, Alarm Log, Security Log, Network Log, and Protocol Log.
- 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.
- Software management service supports setting Console / CLI / Telnet / SSH / HTTP /HTTPS/SNMP.
- Supports Simple Network Management Protocol (SNMPv1/v2c/v3) Web-based management interface.
- Support DHCP Server advanced functions include DHCP IP Pool, DHCP VLAN IP Address group setting, Client Static Binding management and table control. And display DHCP client status list.
- Supports DNS Client and DNS Server functions, can be set to operate as a DNS Server at the same time.
- Support IPv4/IPv6 Static Route and Loopback local loopback port function. Which can take port virtualization as the specified loopback address required by the Layer 3 router function. It can be quickly completed the advanced application of the layer3 network setting.
- Supports Layer3 function ARP（Address Resolution Protocol）used to map MAC addresses to IP addresses.

## Hardware Overview



Ports Status / LED Panel    Reset Button    Console Port    24 Gigabit Ethernet PoE Ports    4 Gigabit Combo Ports



Power on/off Switch    Ground Pad

## Standards & Hardware Specifications

### Network Standards Conformance
IEEE 802.3 10Base-T
IEEE 802.3u 100Base-TX
IEEE 802.3ab 1000Base-T
IEEE 802.3z 1000Base-SX/LX
IEEE 802.3az EEE
IEEE 802.3x Flow Control
IEEE 802.1p QoS
IEEE 802.1Q VLAN Tag
IEEE 802.3ad Link Aggregation
IEEE 802.1x Authentication
IEEE 802.3af Power over Ethernet (15.4 Watt PoE)
IEEE 802.3at Power over Ethernet Plus(30 Watt PoE+)

### Port Configuration
24 ports RJ-45 connectors for 10/100/1000 BASE-T and PSE/ POE function
4 Combo Gigabit Uplink Ports
1 RJ45 Console Port

### Hardware Reset
Reset button for returning to factory settings

### Power Switch
Hardware power on/off switch design

### Grounding Port
Metal case design supports surge grounding and grounding port.

### Surge Protection
Supports 6kV surge protection on RJ45 port

### ESD Protection
Air : 15KV ，Contact : 8KV

### 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
4.1Mb

### Jumbo Frame
10K

### Data Transfer Rate
10/100/1000Mbps (Half-duplex),
20/200/2000Mbps (Full-duplex)

### Auto MDI/MDIX
Yes

### LED Indicators
| | |
|---|---|
| Per Port: Link/Activity Status | x24 |
| Per Port: 1000M/Gigabit Status | x24 |
| Gigabit Combo Port: Link/Activity Status | x4 |
| Gigabit Combo Port: 1000M/Gigabit Status | x4 |
| Per Unit: PWR | x1 |

### Internal Bus Speed/Exchange Rate
56Gbps/ 41.664Mbps

## Switch Specifications

| | |
|---|---|
| **Link Aggregation** | |
| IEEE 802.3ad LACP Link Aggregation Supported | |
| **Port Mirror** | |
| Supported | |
| **Quality of Service (QoS)** | |
| Supports IEEE 802.1p QoS, Port-based QoS | |
| **Bandwidth Control** | |
| Supported | |
| **UniDirectional Link Detection (UDLD)** | |
| Supported | |
| **Spanning Tree Protocol (STP)** | |
| IEEE 802.1D Spanning Tree Protocol (STP) | |
| IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) | |
| IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) | |
| **IGMP Snooping** | |
| Supports v1, v2, v3 and MVR | |
| **ACL Security Management** | |
| Supports IPv4 / IPv6 and MAC management | |
| **VLAN** | |
| IEEE 802.1Q Tagging VLAN , Port-Based ,Tag based VLAN | |
| **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 | |
| **Authentication Security Protocol** | |
| Supports RADIUS / TACACS+ and AAA | |
| **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 | |
| **Remote Network Monitoring (RMON)** | |
| Supported | |
| **SNMP** | |
| Supports SNMP v1/v2c/v3 | |
| **SNTP Time Server** | |
| Supported | |
| **Ethernet Ring Protection Switching (ERPS)** | |
| Supported | |

| | |
|---|---|
| **L3/Static Route** | |
| IPv4/IPv6 Static Route supported | |
| **L3/ Address Resolution Protocol (ARP)** | |
| Support ARP advanced setting | |
| **L3/DHCP Server/ DNS Server** | |
| IPv4 and IPv6 DHCP Server / DNS Server Supported | |

## Environmental & Mechanical Characteristics

| | |
|---|---|
| **Power Type** | |
| 400 Watts Internal Power Supply | |
| **PoE Power Budget** | |
| 360 Watts shared for all PoE ports | |
| **Power Consumption** | |
| 20 Watt (max. without PoE Device connected) | |
| **PoE Power Output** | |
| Up to 30W per port, 52V DC | |
| **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 )** | |
| 440 x 280 x 44 mm | |
| **Unit Weight** | |
| 3.84kg | |
| **Production Location** | |
| TW | |
| **Certifications** | |
| FCC, CE, RoHS-Compliant | |

## Package Contents

| Contents | |
|---|---|
| **CS-3424G-24P** Main Unit | x1 |
| Power Cord | x1 |
| Console Cable | x1 |
| 19" Rack Mount Brackets | 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 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 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 | |