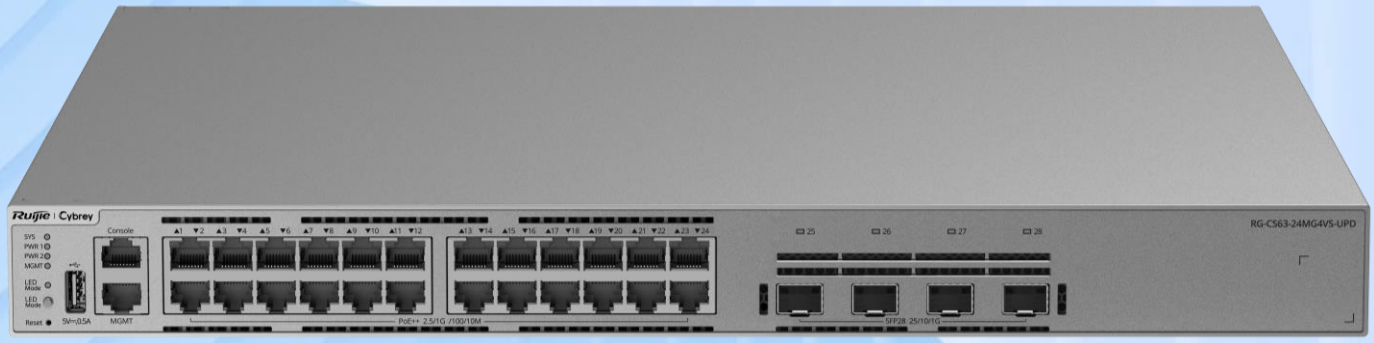
Ruijie | Cybrey




# RG-CS63 Series

Datasheet

# RG-CS63 Series Datasheet

## Overview

The RG-CS63 series are next-generation multi-GE switches launched by Ruijie Cybrey. With advanced hardware architecture and the latest ROGS modular operating system, the RG-CS63 series deliver fast hardware processing performance and an enhanced operation experience.

## Features

**High-Power PoE Power Supply**: The switch series complies with IEEE 802.3bt. A single PoE port delivers an output of up to 90 W. This enables remote power supply to PTZ cameras, high-power APs, and other devices without the need for additional power cabling.

**Virtual Switch Unit (VSU)**: The switch series supports the VSU technology to virtualize up to eight physical devices into one logical device, enabling flexible and simplified network deployment and management.

**Layer 3 Protocols:** The switch series supports multiple Layer 3 routing protocols, including BGP, OSPF, RIP, and IS-IS, as well as multicast capabilities, providing flexible network interconnection and service delivery capabilities.

**Strong Surge Protection Capability**: RJ45 ports on this switch series provide up to 10 kV surge protection, depending on the device model. This effectively reduces the risk of surge-induced port damage and improves network stability.

**Hardware-level Startup Redundancy**: The switch series uses two flash memory chips to store the startup software (bootloader), achieving hardware-level startup redundancy and preventing a startup failure due to the fault of a single flash memory chip.

**Sound Security Protection Policies**: The switch series implements multi-layer security mechanisms, including CPU Protection Policy (CPP), Network Foundation Protection Policy (NFPP), Access Control Lists (ACLs), and user binding, effectively defending against attacks and controlling access.

**Energy-Saving Design**: The switch series adopts intelligent variable-speed fan modules to reduce operating noise and power consumption, and supports Energy Efficient Ethernet (EEE). It can enter energy-saving mode based on port traffic status, enabling quiet operation and energy efficiency.

**Flexible Device Management Modes**: Administrators can manage and maintain the switch series using Ruijie Reyee App, CLI, web-based management, SNMP, and other methods.

# Hardware Specification

## Port Specifications

| Port Specifications | RG-CS63-24MG4XS-UPD |
|---|---|
| Fixed service port | 24 x 10/100/1000/2.5G BASE-T ports (all ports support PoE/PoE+/PoE++)<br>4 x 1GE/10GE SFP+ ports |
| Console port | 1 |
| MGMT port | 1 |
| USB port | 1 |

## System Specifications

| System Specifications | RG-CS63-24MG4XS-UPD |
|---|---|
| Switching capacity | 200Gbps (Gbit/s) |
| Packet forwarding rate | 148.8 Mpps |
| CPU | Quad-Core ARM A55 CPU frequency up to 1.2 GHz |
| Bootrom | 16 MB |
| Flash Memory | 512 MB |
| SDRAM | 2 GB+4 bit ECC |
| Switch buffer | 64 Mbit |

## Dimensions and Weight

| Dimensions and Weight | RG-CS63-24MG4XS-UPD |
|---|---|
| Product dimensions (W x D x H) | 442mm x 420mm x 43.6mm |
| Rack height | 1 RU |

## Power Supply and Consumption

| Power Supply and Consumption | RG-CS63-24MG4XS-UPD |
|---|---|
| Power supply | 2 x pluggable power modules (no pre-installed modules) |
| Power input | RG-PA600I-P-FC (AC input):<br>• Rated input voltage: 100 V AC to 240 V AC, 50 Hz to 60 Hz<br>• Maximum input voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz<br>• Maximum input current: 8 A<br>RG-PA1000I-P-FC (AC input 1):<br>• Rated input voltage: 100 V AC to 130 V AC, 50 Hz to 60 Hz<br>• Maximum input voltage: 90 V AC to 143 V AC, 47 Hz to 63 Hz<br>• Maximum input current: 12 A<br>RG-PA1000I-P-FC (AC input 2):<br>• Rated input voltage: 200 V AC to 240 V AC, 50 Hz to 60 Hz<br>• Maximum input voltage: 180 V AC to 264 V AC, 47 Hz to 63 Hz<br>• Maximum input current: 8 A |
| PoE | Supported |
| PoE budget per port | 90 W |
| PoE budget | The PoE budget varies depending on the power supply:<br>• 1 x RG-PA600I-P-FC: 470W<br>• 1 x RG-PA1000I-P-FC: 800W<br>• 2 x RG-PA600I-P-FC: 940 W<br>• 2 x RG-PA1000I-P-FC: 1600 W<br>• **Note:** The mixed use of RG-PA600I-P-FC and RG-PA1000I-P-FC will be supported after a future software update. |
| Maximum power consumption | TBD |

## Environment and Reliability

| Environment and Reliability | RG-CS63-24MG4XS-UPD |
|---|---|
| Hot swapping of power modules | Supported |

| | |
|---|---|
| Hot swapping of cables | Supported |
| Heat dissipation | Air cooling, front-to-rear airflow + left-to-rear airflow |
| Power redundancy | Supported |
| Fan | 3 x fixed fans |
| Surge protection | Service port: ±10 kV for common mode<br>MGMT port: ±10 kV for common mode<br>Power connector: ±6 kV for common mode and ±6 kV for differential mode |
| ESD | Contact discharge: 6 kV<br>Air discharge: 8 kV |
| Temperature monitoring and protection | Temperature monitoring, temperature alarm, and over temperature protection |
| Fan monitoring | Fan failure alarming |
| Power supply monitoring | Monitoring of power supply model and status<br>Power supply failure alarming |
| Energy saving | Supported |
| Acoustic noise | 27°C (80.6°F) < 60 dB |
| Operating temperature | 0°C to 50°C (32°F to 122°F) |
| Storage temperature | -40°C to +70°C (40°F to +158°F) |
| Operating humidity | 10% RH to 90% RH (non-condensing) |
| Storage humidity | 5% RH to 95% RH (non-condensing) |
| Operating altitude | 0 m to 5,000 m (0 ft. to 16,404.20 ft.) |
| MTBF | TBD |

# Software Specification

## ACL and QoS

| **ACL and QoS** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| | |

| | |
|---|---|
| ACL | • ACL80<br>• ACL-based redirection<br>• IPv6 ACL<br>• Standard ACL<br>• Extended IP ACL<br>• Extended MAC ACL<br>• Extended time range-based ACL<br>• Extended expert ACL |
| QoS | • Congestion Avoidance (Tail Drop)<br>• DRR<br>• SP<br>• SP+DRR<br>• SP+WFQ<br>• SP+WRR<br>• WFQ<br>• WRR<br>• Inbound or outbound rate limiting based on interface traffic |

## Interface Features

| **Interface Features** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| Aggregate Port | LACP |
| Mirror | RSPAN |

## Layer 2 Features

| **Layer 2 Features** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| VLAN | • Voice VLAN<br>• GVRP<br>• IP-Subnet based VLAN<br>• MAC VLAN<br>• Port based VLAN<br>• Private VLAN |

| | |
|---|---|
| | • Protocol based VLAN<br>• Super VLAN |
| Basic QinQ | Supported |
| LLDP | • LLDP<br>• LLDP-MED |
| Spanning Tree | • IEEE802.1d STP<br>• IEEE802.1w RSTP<br>• standard 802.1s MSTP |

## Layer 3 Features

| **Layer 3 Features** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| ARP | anyIP |
| ND | Neighbor Discovery |
| VRF | IPv4 and IPv6 VRF |

## IP Application Protocol Features

| **IP Application Protocol Features** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| DHCPv4 Client | Supported |
| DHCPv4 Relay | Supported |
| DHCPv4 Server | Supported |
| DHCPv4 Snooping | Supported |
| DHCPv6 Client | Supported |
| DHCPv6 Relay | Supported |
| DHCPv6 Snooping | Supported |
| DNS Client | Supported |
| DNSv6 Client | Supported |

| | |
|---|---|
| FTP | • FTP Client<br>• FTP Server |
| ND Snooping | Supported |
| NTP | • NTP Client<br>• NTP Server |
| SNTP | SNTP Client |
| TFTP | • TFTP Client<br>• TFTP Server |

## Multicast Features

| **Multicast Features** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| IGMP | • IGMP Proxy<br>• IGMP V1,V2,V3 |
| IGMP Snooping | • IGMP v1,v2 Snooping<br>• IGMP V3 Snooping |
| MLD | MLD v1, v2 |
| MLD Snooping | • MLD Snooping<br>• MLD Snooping V2 |
| MSDP | Supported |
| PIM-DMv4 | Supported |
| PIM-SMv4 | • PIM-SMv4<br>• PIM-SSMv4 |
| PIM-SMv6 | • PIM-SMv6<br>• PIM-SSMv6 |

## High Availability

| **High Availability** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| DLDP | Supported |

| | |
|---|---|
| VRRP | • IPv4 VRRP v2<br>• IPv4 VRRP v3<br>• IPv6 VRRP |
| VRRP+ | • IPv4 VRRP+<br>• IPv6 VRRP+ |

## Management Features

| **Management Features** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| gRPC | Supported |
| NETCONF | Supported |
| sFlow | Supported |
| SNMP | RMON (1, 2, 3, 9) |
| SSH | • SSHv1<br>• SSHv2 |

## OAM Features

| **OAM Features** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| PoE | • PoE Port priority<br>• Uninterruptible power supply upon warm start |

## Routing Protocol Specification

| **Routing Protocol Specification** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| BGP4 | Supported |
| BGP4+ | Supported |
| IS-ISv4 | Supported |
| IS-ISv6 | Supported |
| OSPFv2 | Supported |

| | |
|---|---|
| OSPFv3 | Supported |
| RIP | • RIP<br>• RIPv2 |
| RIPNG | Supported |

### Security Features

| **Security Features** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| 802.1X | • MAC-based 802.1x authentication<br>• Port-based 802.1x authentication |
| AAA | Supported |
| CPP | Supported |
| IP SOURCE GUARD | • IP SOURCE GUARD<br>• IPv6 SOURCE GUARD |
| SAVI | Supported |
| TACACS+ | Supported |
| Web-based authentication | • HTTP Web-based authentication<br>• HTTPS Web-based authentication |
| Global IPv4 MAC binding | Supported |

### System Features

| **System Features** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| USB | USB 2.0 |

## Capacity Specification

### ACL and QoS

| **ACL and QoS** | **RG-CS63-24MG4XS-UPD** |
|---|---|

| | |
|---|---|
| Number of ACEs | Egress: 1000<br>Ingress: 4500 |

## High Availability

| **High Availability** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| VSU | Number of VSU members: 8 |

## Layer 2 Features

| **Layer 2 Features** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| Ethernet | Jumbo frame length: 9600 |
| G.8032 | Layer 2 traffic convergence time: <=200ms |
| MAC | Number of Global MAC Addresses : 64000 (for default) |

## Layer 3 Features

| **Layer 3 Features** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| ARP | Maximum number of ARP entries: 30000 (for default) |

## Multicast Features

| **Multicast Features** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| Mcast | Number of IPv4 multicast routes: 4000 |
| Mcastv6 | Number of IPv6 multicast routes: 4000 |

## Routing Protocol Specification

| **Routing Protocol Specification** | **RG-CS63-24MG4XS-UPD** |
|---|---|
| IPv4 routing | IPv4 routing table size: 32000 |
| | |

| | |
|---|---|
| IPv6 routing | IPv6 routing table size: 8000 (shared resources with IPv4 routes) |

# Order Information

The switch, expansion module, power module, and other components can be ordered as needed. Before ordering an expansion module or power module, please contact the online customer service personnel for the latest support information about the module.

## Switches and Power Module

| Model | Description |
|---|---|
| RG-CS63-24MG4XS-UPD | 24 x 100/1000/2.5GBASE-T ports, supporting PoE/PoE+/PoE++<br>4 x 1GE/10GE SFP+ ports<br>Fixed fan<br>2 x pluggable power modules, requiring at least one RG-PA600I-P-FC/RG-PA1000I-P-FC power module |
| RG-PA600I-P-FC | 600 W AC power module |
| RG-PA1000I-P-FC | 1000 W AC power module |

## Optical Transceivers and Cables

### 1GE

| Model | Description |
|---|---|
| Mini-GBIC-GT | 1000BASE-X to 1000BASE-T, copper SFP transceiver, RJ45, 100 m over Cat 5e/6/6a Mini-GBIC-GT. The port needs to be configured with auto-negotiation |
| CO-GE-SFP-SX-MM850 | 1000BASE-SX, SFP transceiver, 850 nm, Duplex LC, 500 m over MMF |
| CO-GE-SFP-LX-SM1310 | 1000BASE-LX, SFP transceiver, 1310 nm, Duplex LC, 10 km over SMF |
| MINI-GBIC-LH40-SM1310 | 1000BASE-LH, SFP transceiver, 1310 nm, Duplex LC, 40 km over SMF |

| | |
|---|---|
| MINI-GBIC-ZX80-SM1550 | 1000BASE-ZX, SFP transceiver, 1550 nm, Duplex LC, 80 km over SMF |
| GE-SFP-LX20-SM1310-BIDI | 1000BASE-LX, SFP transceiver, Tx1310/Rx1550, BiDi LC, 20 km over SMF |
| GE-SFP-LX20-SM1550-BIDI | 1000BASE-LX, SFP transceiver, Tx1550/Rx1310, BiDi LC, 20 km over SMF |
| GE-SFP-LH40-SM1310-BIDI | 1000BASE-LH, SFP transceiver, Tx1310/Rx1550, BiDi LC, 40 km over SMF |
| GE-SFP-LH40-SM1550-BIDI | 1000BASE-LH, SFP transceiver, Tx1550/Rx1310, BiDi LC, 40 km over SMF |

### 10GE

| Model | Description |
|---|---|
| CO-XG-SFP-SR-MM850 | 10GBASE-SR, SFP+ transceiver, 850nm, Duplex LC, 300m over MMF |
| CO-XG-SFP-LR-SM1310 | 10GBASE-LR, SFP+ transceiver, 1310nm, Duplex LC, 10 km over SMF |
| XG-SFP-ER-SM1550 | 10GBASE-ER, SFP+ transceiver, 1550nm, Duplex LC, 40 km over SMF |
| XG-SFP-AOC1M | 10GBASE, SFP+ active optical cable (AOC), 1m, including one cable and two optical transceivers |
| XG-SFP-AOC3M | 10GBASE, SFP+ active optical cable (AOC), 3m, including one cable and two optical transceivers |
| XG-SFP-AOC5M | 10GBASE, SFP+ active optical cable (AOC), 5m, including one cable and two optical transceivers |


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