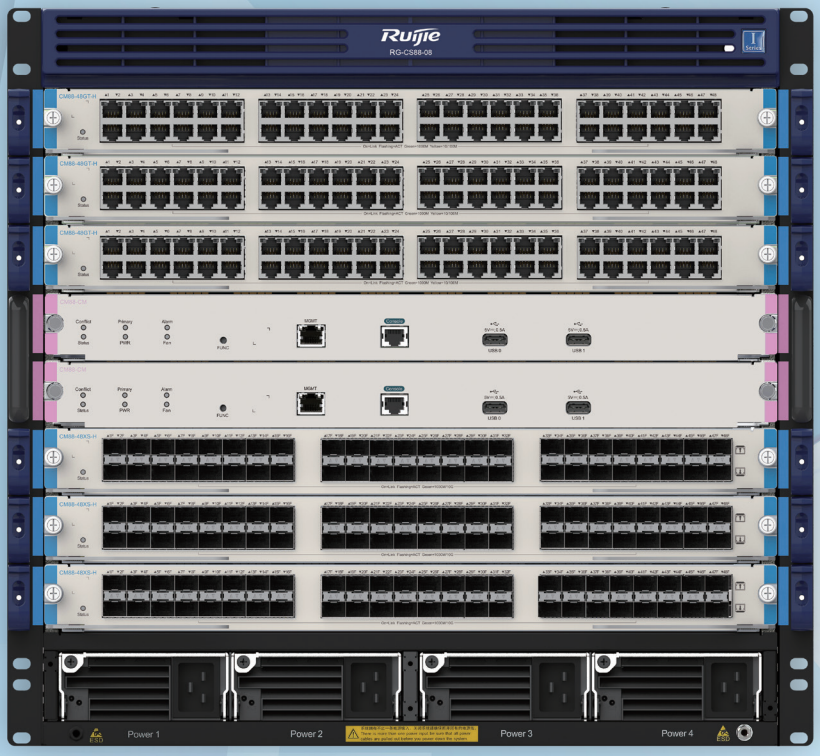
Datasheet



RG-CS88-08

Ruijie Cloud-managed High-performance Core Switch

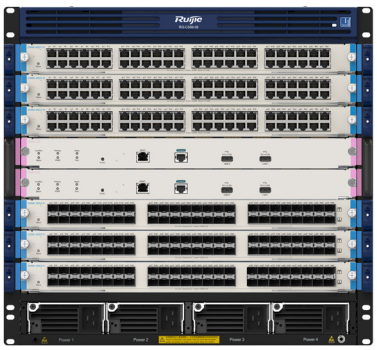
INNOVATION
Beyond Networks

Ruijie

01 Product Overview

The RG-CS88-08 switch is multi-service core switch released by Ruijie Networks for next-generation converged networks. The switch combines various features of campus networks and data centers. Using the RGOS12.X modular OS, the switch supports IPv4, IPv6, and other network services, meeting the application requirements of Ethernet in the future. The RG-CS88-08 switch can be deployed in campus networks, and data centers based on business requirements.

02 Product Appearance



RG-CS88-08

CM88-8CQ-H

CM88-48XS-H

CM88-48GT-H

CM88-48SFP-H

03 Product Features

Top performance meets network development in the next decade

RG-CS88-08 switch supports high-density 40GE and 100GE Ethernet ports, which can meet the sustainable development needs of cloud computing data centers and the requirements for core switches in the next decade of network development.

Carrier-Class High Reliability

The redundancy design is applied to all key components of the RG-CS88-08 switch, including 1+1 redundancy for supervisor modules, N+M redundancy for power modules, 1+1 redundancy for fans. All redundant components are hot-swappable, which maximizes the reliability and availability of the entire switch.

The RG-CS88-08 switch supports GR for OSPF/IS-IS/BGP and BFD for VRRP/OSPF/BGP4/ISIS/ISISv6/ static routing, and implement the fast fault detection mechanism through protocols, with the fault detection time less than 50 ms.

The hardware health status can be visualized so that users can monitor the fan status, power, temperature, and onboard voltage. Especially, users can identify voltage exceptions during routine inspection and handle the exceptions in a timely manner, thereby preventing system breakdown caused by voltage exceptions.

The switch employs the fault isolation technology to monitor the optical module status. If an optical module is faulty, the optical module is isolated and has no impact on the running of other ports or the

switch . After the faulty optical module is replaced, the corresponding port recovers immediately.

Sound QoS Policies

The RG-CS88-08 switch is capable of classifying and controlling various flows including MAC flows, IP flows, and application flows, to implement fine flow bandwidth control, forwarding priority, and other flow policies. Furthermore, the switch can provide services based on applications and characteristics of the service quality required by different applications.

The DiffServ-centered QoS guarantee system supports 802.1p, IP ToS, layer-2 to layer-7 traffic filtering, SP, WRR, and other QoS policies, and implements the QoS logic for multiple services throughout the network.

High Energy Efficiency

The RG-CS88-08 switch is equipped with modular power supplies to deliver power efficiently.

The multi-core CPU supports dynamic power consumption management, and all Ethernet ports support the Energy Efficient Ethernet (EEE) standard, reducing power consumption at low loads.

The smart fans support 256-level speed regulating and precise temperature control, saving energy and reducing noise. This allows the switch to run at a high temperature for a long time and adapt to severe environments, greatly lowering power consumption.

Flexible Device Management Modes

Ruijie Cloud Make Your Business Easy

The RG-CS88 series switches support Ruijie cloud APP to management, can bring customers simplified O&M management and user experience:

Ease of networking: Only a mobile phone available for Internet access is required to complete the device deployment. The switches support plug and play.

Ease of O&M: The O&M is simple. The network can be managed at any time, and you can manage the network wherever you go. VLAN visualized on Ruijie Cloud, lower technical barriers from configuration to management.

Ease of monitoring: You can view the network health and device details (system status, traffic trend, connectivity, power supply status, etc.) at any time. Faults and user network experience are visible, alarms are pushed in time once they are generated, and logs are generated to facilitate event traceback.

The RG-CS88 series switches also support the Simple Network Management Protocol (SNMP), Remote Network Monitoring (RMON), Syslog, Sampled Flow (sFlow), log and configuration backup using USB flash drives for routine network diagnosis and maintenance. Administrators can also use CLI, web-based management, telnet, CPE WAN Management Protocol (CWMP (TR069)) based zero configuration and other methods to manage and maintain devices conveniently.

04 Specifications

Hardware Specifications

Port Specifications

Port Specifications	RG-CS88-08
Module slot	2 x supervisor module slots 6 x line card slots 4 x power module slots 2 x fan module slots
Supervisor module	CM88-CM
Switch fabric module	CM88-CM (switch fabric module integrated with supervisor module)
Line card	CM88-48GT-H CM88-48SFP-H CM88-48XS-H CM88-8CQ-H
Power module	RG-PA600I-F RG-PA1600I-F
Fan module	M08-FAN (pre-installed 2)
Module service port	CM88-48GT-H: 48 x 10/100/1000BASE-T ports CM88-48SFP-H: 48 x 1GE SFP ports CM88-48XS-H: 48 x 1GE/10GE SFP+ ports CM88-8CQ-H: 8 x 40GE/100GE QSFP28 ports
Module management port	CM88-CM: • 1 x RJ45 console port • 1 x RJ45 MGMT port
USB	CM88-CM: 2 x USB 2.0 ports (No capacity limit. The 2G/4G/8G/16G/32G capacity is tested.)

System Specifications

System Specifications	RG-CS88-08
Switching capacity	9.6 Tbps
Packet forwarding rate	7200 Mpps
CPU	CM88-CM: quad-core processor, each core with the clock speed of 1.5 GHz Line card: quad-core processor, each core with the clock speed of 1.5 GHz
BootROM	CM88-CM: 16 MB (2 flash chips for 1+1 boot redundancy) Line card: 16 MB (2 flash chips for 1+1 boot redundancy)
Flash memory	CM88-CM: 8 GB Line card: 8 GB
Memory	CM88-CM: DDR4 4 GB Line card: DDR4 2 GB

System Specifications	RG-CS88-08
Switch buffer	Line card: 32 MB
MAC address table size	Number of global MAC addresses • CM88-48GT-H, CM88-48SFP-H: 80,000 • CM88-8CQ-H, CM88-48XS-H: 96,000 Number of static MAC addresses • CM88-48GT-H, CM88-48SFP-H: 4,000 • CM88-8CQ-H, CM88-48XS-H: 40,000
ARP table size	CM88-48GT-H, CM88-48SFP-H: • underlay: 30,000 • overlay: 0 CM88-8CQ-H, CM88-48XS-H: • underlay: 50,000 • overlay: 0 (default and recommended)
Number of IPv4 unicast routes	CM88-48GT-H, CM88-48SFP-H: 12,000 (default and recommended, shared with IPv6 routes) CM88-8CQ-H, CM88-48XS-H: 134,000 (default and recommended, shared with IPv6 routes)
Number of IPv4 multicast routes	CM88-48GT-H, CM88-48SFP-H: 8,000 CM88-8CQ-H, CM88-48XS-H: 16,000
Number of IPv6 unicast routes	CM88-48GT-H, CM88-48SFP-H: 6,000 (shared with IPv4 routes) CM88-8CQ-H, CM88-48XS-H: 50,000 (shared with IPv4 routes)
Number of IPv6 multicast routes	CM88-48GT-H, CM88-48SFP-H: 4,000 CM88-8CQ-H, CM88-48XS-H: 8,000
Number of ACEs	Ingress • CM88-48GT-H, CM88-48SFP-H: 5,000 • CM88-8CQ-H, CM88-48XS-H: 4,500 Egress • CM88-48GT-H, CM88-48SFP-H: 1,000 • CM88-8CQ-H, CM88-48XS-H: 2,000
Number of VSU members	2

Dimensions and Weight

Dimensions and Weight	RG-CS88-08
Unit dimensions (W x D x H)	442 mm x 465mm x 441.7 mm (17.40 in. x 18.31 in. x 17.39 in.)
Shipping dimensions (W x D x H)	710 mm x 590 mm x 617 mm (27.95 in. x 23.23 in. x 24.29 in.)
Rack height	10 RU
Unit weight	35.6 kg (78.48 lbs) (empty chassis with 2 fan modules)
Shipping weight	50.20 kg (110.67 lbs) (empty chassis with 2 fan modules)

Power Supply and Consumption

Power Supply and Consumption	RG-CS88-08
Power supply	4 x pluggable power modules
Power module redundancy	n+n power redundancy (The type of the power supply should be identical.)

Power Supply and Consumption	RG-CS88-08
Power input	RG-PA600I-F (AC input): • Rated input voltage: 100 V AC to 240 V AC, 50 Hz to 60 Hz • Maximum input voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz • Maximum input current: 10 A RG-PA1600I-F (AC input): • Rated input voltage: 100 V AC to 240 V AC, 50 Hz to 60 Hz • Maximum input voltage: 90 V AC to 264 V AC, 47 Hz to 63 Hz Maximum input current: 16A
Maximum output power	RG-PA600I-F: 600 W RG-PA1600I-F: • 100 V AC to 176 V AC: 1200 W • 176 V AC to 240 V AC: 1600 W
Module power consumption	Chassis RG-CS88-08 with 2 fan modules: < 176 W Supervisor module CM88-CM: < 50 W Line card: • CM88-48GT-H: < 75 W • CM88-48SFP-H: < 95 W • CM88-48XS-H: < 160 W • CM88-8CQ-H: < 130 W

Environment and Reliability

Environment and Reliability	RG-CS88-08
Temperature	Operating temperature: 0°C to 50°C (32°F to 122°F) Storage temperature: –40°C to +70°C (–40°F to +158°F)
Humidity	Operating humidity: 10% to 90% RH (non-condensing) Storage humidity: 5% to 95% RH (non-condensing)
Altitude	Operating altitude: –500 m to +5,000 m (–1640.42 ft. to +16404.20 ft.) Storage altitude: –500 m to +5,000 m (–1640.42 ft. to +16404.20 ft.)
Mean time between failure (MTBF)	216,000 hours (about 24 years)
Fan	2 x pluggable fan modules
Fan redundancy	1+1 redundancy
Heat dissipation	Supervisor module/line card: right-to-rear airflow System power module: front-to-rear airflow
Acoustic noise	27°C (80.6°F): 70 dB 45°C (113°F): 77 dB
Module hot swapping	Supported: supervisor modules, line cards
Power module hot swapping	Supported (Switch mode power supplies support hot-swapping power cords)
Fan module hot swapping	Supported
USB hot swapping	Supported
Cable hot swapping	All ports on line cards support hot-swapping cables.
Power supply monitoring	Monitoring of the power supply model, temperature, power, and voltage Power supply failure alarming Power-on control of line cards based on the supported power

Environment and Reliability	RG-CS88-08
Fan monitoring	Fan speed adjustment: 256 levels (Only automatic adjustment is supported.) Fan failure alarming
Temperature monitoring	Temperature monitoring, over-temperature alarming
ESD	ESD contact discharge/air discharge: 6 kV/ 8kV ESD immunity contact discharge/air discharge: 8 kV/15 kV
Surge protection	MGMT port : 4 kV Service port: 4 kV Power port: 6 kV

Certifications and Regulatory Compliance

Certifications and Regulatory Compliance	RG-CS88-08
Safety regulation	IEC 62368-1
EMC regulation	EN 300386, EN 55032 Class A, EN 55035, EN IEC 61000-3-2, EN 61000-3-3, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-11

Software Specifications

RG-CS88 Series	
Feature	**Description**
Ethernet Switching	Jumbo frame (maximum length: 9216 bytes)
	802.3az EEE
	Maximum number of VLANs that can be created: 4,094
	Super VLAN, Private VLAN
	MAC address-based, port-based, protocol-based, and IP subnet-based VLAN assignment
	GVRP
	Basic QinQ and selective QinQ
	STP (IEEE 802.1.d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s)
	ERPS (G.8032)
	LLDP/LLDP-MED
MPLS	MPLS IPv6
	MPLS L3VPN
	MPLS 6VPE
	MPLS MIB (RFC 1273, RFC 4265, and RFC 4382)

RG-CS88 Series	
Feature	**Description**
IP Service	Static and dynamic ARP
	DHCP client
	DHCP relay
	DHCP server
	DHCP snooping
	DNS
	DHCPv6 client, DHCPv6 relay, and DHCPv6 snooping
	GRE tunnel
	Manual tunnel, automatic tunnel, and ISATAP tunnel for IPv6
	Neighbor Discovery (ND) and ND snooping
IP Routing	Static routing
	RIP and RIPng
	OSPFv2 and OSPFv3
	IPv4/IPv6 IS-IS
	BGP4 and BGP4+
	IPv4/IPv6 VRF
	Policy-based routing (PBR)
	GR
	EVPN
Multicast	IGMP v1/v2/v3
	IGMP proxy
	IGMP snooping v1/v2/v3
	IGMP fast leave
	PIM-DM, PIM-SM, and PIM-SSM
	PIM-SSM for IPv4 and IPv6
	MSDP to achieve inter-domain multicast
	MLDv1 and MLDv2
	MLD v1/v2 snooping

RG-CS88 Series	
Feature	**Description**
Multicast	Multicast static routing
	Multicast source IP address check Multicast source port check
	PIM-SMv6
ACL and QoS	Standard IP ACLs (hardware ACLs based on IP addresses)
	Extended IP ACLs (hardware ACLs based on IP addresses or TCP/UDP port numbers)
	Extended MAC ACLs (hardware ACLs based on source MAC addresses, destination MAC addresses, and optional Ethernet type)
	Expert-level ACLs (hardware ACLs based on flexible combinations of the VLAN ID, Ethernet type, MAC address, IP address, TCP/UDP port number, protocol type, and time range)
	ACL80 and IPv6 ACL
	Applying ACLs globally (hardware ACLs based on flexible combinations of the VLAN ID, Ethernet type, MAC address, IP address, TCP/UDP port number, protocol type, and time range)
	ACL redirection
	Port traffic identification
	Port traffic rate limiting
	802.1p
	Traffic classification based on 802.1p priorities, DSCP priorities, and IP precedences
	Congestion management: SP, WRR, DRR, WFQ, SP+WRR, SP+DRR, and SP+WFQ
	Congestion avoidance: tail drop, RED, and WRED
	CAR
	Eight priority queues per port
Security	AAA
	RADIUS authorization and accounting
	TACACS+
	IEEE802.1X authentication, MAC address bypass (MAB) authentication, and interface-based and MAC address-based 802.1X authentication
	Web authentication
	Hypertext Transfer Protocol Secure (HTTPS)
	SSHv1 and SSHv2

RG-CS88 Series	
Feature	**Description**
Security	Global IP-MAC binding
	ICMP
	Port security
	IP source guard
	DAI
	SAVI
	ARP spoofing prevention
	CPU Protect Policy (CPP) and NFPP
	Various attack defense functions, including NFPP and ARP anti-attack
	uRPF
	Login authentication and password security
	Unknown multicast packets are not sent to the CPU, and unknown unicast packets can be suppressed.
Reliability	Rapid Ethernet Uplink Protection (REUP)
	Rapid Link Detection Protocol (RLDP), Layer 2 link connectivity detection, unidirectional link detection, and VLAN-based loop control
	Data Link Detection Protocol (DLDP)
	IPv4 VRRP v2/v3 and IPv6 VRRP
	VRRP for the super-VLAN
	BFD
	1+1 redundancy for supervisor modules and fan modules, and N+M redundancy for power modules
	Hot swapping of components
	Hot patch and online installation of patches
	GR for OSPF/IS-IS/BGP
	BFD for VRRP/OSPF/BGP4/ISIS/ISISv6/static routing
Device virtualization	VSU
NMS and maintenance	SPAN, RSPAN, and ERSPAN
	sFLOW
	NTP

RG-CS88 Series	
Feature	**Description**
NMS and maintenance	SNTP
	FTP and TFTP
	SNMP v1/v2/v3
	RMON (1, 2, 3, 9)
	NETCONF
	CWMP
	gRPC
	Cloud and SON
	Console/AUX Modem/Telnet/SSH2.0 CLI configuration
	Fault alarm and auto-recovery
	System operation logging

05 Protocol Compliance

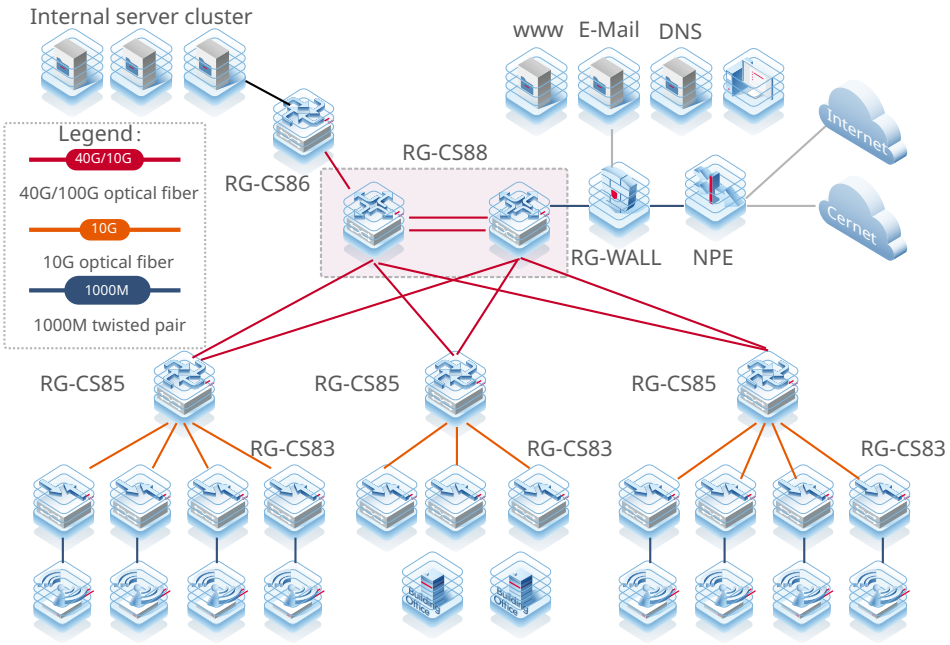
RG-CS88 Series	
Organization	**Standards and Protocol**
IETF	RFC 1058 Routing Information Protocol (RIP) RFC 1157 A Simple Network Management Protocol (SNMP) RFC 1305 Network Time Protocol Version 3 (NTP) RFC 1349 Internet Protocol (IP) RFC 1350 TFTP Protocol (revision 2) RFC 1519 CIDR RFC 1583 OSPF Version 2 RFC 1591 Domain Name System Structure and Delegation RFC 1643 Ethernet Interface MIB RFC 1757 Remote Network Monitoring (RMON) RFC 1812 Requirements for IP Version 4 Router RFC 1901 Introduction to Community-based SNMPv2 RFC 1902-1907 SNMP v2 RFC 1918 Address Allocation for Private Internet RFC 1981 Path MTU Discovery for IP version 6 RFC 1997 BGP Communities Attribute RFC 2131 Dynamic Host Configuration Protocol (DHCP) RFC 2132 DHCP Options and BOOTP Vendor Extensions RFC 2236 IGMP RFC 2328 OSPF Version 2 RFC 2385 Protection of BGP Sessions via the TCP MD5 Signature Option RFC 2439 BGP Route Flap Damping RFC 2460 Internet Protocol, Version 6 Specification (IPv6)

RG-CS88 Series	
Organization	**Standards and Protocol**
IETF	RFC 2461 Neighbor Discovery for IP Version 6 (IPv6) RFC 2462 IPv6 Stateless Address Auto configuration RFC 2463 Internet Control Message Protocol for IPv6 (ICMPv6) RFC 2545 Use of BGP 4 Multiprotocol Extensions for IPv6 Inter Domain Routing RFC 2571 SNMP Management Frameworks RFC 2711 IPv6 Router Alert Option RFC 2787 Definitions of Managed Objects for the Virtual Router Redundancy Protocol RFC 2863 The Interfaces Group MIB RFC 2865 Remote Authentication Dial In User Service (RADIUS) RFC 2918 Route Refresh Capability for BGP 4 RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only) RFC 2934 Protocol Independent Multicast MIB for IPv4 RFC 3046 DHCP Option82 RFC 3065 Autonomous System Confederation for BGP RFC 3101 OSPF Not so stubby area option RFC 3137 OSPF Stub Router Advertisement sFlow RFC 3417 (SNMP Transport Mappings) RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP) RFC 3509 Alternative Implementations of OSPF Area Border Routers RFC 3513 IP Version 6 Addressing Architecture RFC 3575 IANA Considerations for RADIUS RFC 3579 RADIUS Support For EAP RFC 3623 Graceful OSPF Restart RFC 3768 VRRP RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6 RFC 3973 PIM Dense Mode RFC 4022 MIB for TCP RFC 4213 Basic Transition Mechanisms for IPv6 Hosts and Routers RFC 4251 The Secure Shell (SSH) Protocol RFC 4252 SSHv6 Authentication RFC 4253 SSHv6 Transport Layer RFC 4254 SSHv6 Connection RFC 4271 A Border Gateway Protocol 4 (BGP 4) RFC 4273 Definitions of Managed Objects for BGP 4 RFC 4291 IP Version 6 Addressing Architecture RFC 4292 IP Forwarding Table MIB RFC 4293 Management Information Base for the Internet Protocol (IP) RFC 4360 BGP Extended Communities Attribute RFC 4419 Key Exchange for SSH RFC 4443 ICMPv6 RFC 4456 BGP Route Reflection: An Alternative to Full Mesh Internal BGP (IBGP) RFC 4486 Subcodes for BGP Cease Notification Message RFC 4552 Authentication/Confidentiality for OSPFv3 RFC 4601 PIM Sparse Mode RFC 4607 Source Specific Multicast for IP RFC 4724 Graceful Restart Mechanism for BGP RFC 4750 OSPFv2 MIB partial support no SetMIB RFC 4760 Multiprotocol Extensions for BGP 4 RFC 4861 IPv6 Neighbor Discovery RFC 4862 IPv6 Stateless Address Auto configuration RFC 4940 IANA Considerations for OSPF RFC 5065 Autonomous System Confederation for BGP RFC 5187 OSPFv3 Graceful Restart RFC 5340 OSPFv3 for IPv6 RFC 5424 Syslog Protocol RFC 5492 Capabilities Advertisement with BGP 4 RFC 5722 Handling of Overlapping IPv6 Fragments RFC 5798 VRRP RFC 5905 Network Time Protocol Version 4: Protocol and Algorithms Specification RFC 6020 YANG - A Data Modeling Language for the Network Configuration Protocol (NETCONF) RFC 6241 Network Configuration Protocol (NETCONF) RFC 6620 FCFS SAVI RFC 768 User Datagram Protocol (UDP) RFC 783 TFTP Protocol (revision 2)

RG-CS88 Series	
Organization	**Standards and Protocol**
IETF	RFC 792 Internet Control Message Protocol (ICMP) RFC 793 Transmission Control Protocol (TCP) RFC 826 Ethernet Address Resolution Protocol (ARP) RFC 854 Telnet Protocol Specification RFC 959 File Transfer Protocol (FTP)
IEEE	IEEE 802.2 Logical Link Control IEEE 802.1AB 2005 IEEE 802.1ab Link Layer Discovery Protocol IEEE 802.1ad Provider Bridges IEEE 802.1AX 2008 Link Aggregation IEEE 802.1ax/IEEE802.3ad Link Aggregation IEEE 802.1D MAC Bridges IEEE 802.1D Media Access Control (MAC) Bridges IEEE 802.1D Spanning Tree Protocol IEEE 802.1p Priority IEEE 802.1p Traffic Class Expediting and Dynamic Multicast Filtering IEEE 802.1Q Virtual Bridged Local Area Networks IEEE 802.1Q VLANs IEEE 802.1s Multiple Spanning Tree Protocol IEEE 802.1s Multiple Spanning Trees IEEE 802.1w Rapid Reconfiguration of Spanning Tree IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.1x Port based network access control protocol IEEE Std 802.3 CSMA/CD IEEE Std 802.3ab 1000BASE-T specification IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE Std 802.3ae 10GE WEN/LAN Standard IEEE Std 802.3x Full Duplex and flow control IEEE Std 802.3z Gigabit Ethernet Standard

06 Typical Applications

Serving as Core Devices on Medium-Sized or large-Sized Network



07 Ordering Information

Switch and Supervisor Module

Select the switch and supervisor module based on the specific product model.

Model	Description
RG-CS88-08	RG-CS88-08 switch, which can accommodate 6 service cards and 2 supervisor modules, and with 2 fans (Purchase at least one RG-PA600I-F/RG-PA1600I-F module.)
CM88-CM	CM88-CM new generation of high-performance supervisor module.

Power Modules and Fans

Select the power module based on power supply requirements. Note that at least one power module must be selected.

Model	Description
RG-PA600I-F	600 W AC power module, supporting redundancy
RG-PA1600I-F	1600 W AC power module, supporting redundancy
M08-FAN	CS88-08 fan: Each M08-FAN tray consists of two fan modules and one fan monitoring card. It blows air to the outside for convection. (This is a default configuration for the switches.)

Line Cards

Select the line card based on service requirements. Before ordering a line card, please contact the online customer service personnel for the details about the line card.

Model	Description
CM88-48GT-H	48 x10/100/1000BASE-T ports (RJ45)
CM88-48SFP-H	48 x 1GE SFP ports
CM88-48XS-H	48 x 1GE/10GE SFP+ ports
CM88-8CQ-H	8 x 40GE/100GE QSFP28 ports

Note:

- 48 x 1GE/10GE SFP+ ports support 1GE SFP transceivers and 10GE SFP+ transceivers.
- 8 x 40GE/100GE QSFP28 ports support 40GE QSFP+ transceivers and 100GE QSFP28 transceivers.

Optical Transceivers and Cables

1GE

Model	Description
MINI-GBIC-SX-MM850	1000BASE-SX, SFP transceiver, 850 nm, Duplex LC, 500 m over MMF
MINI-GBIC-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

Note: BiDi transceivers must be used in pairs. If one end uses GE-SFP-LX20-SM1310-BIDI, the other end must use GE-SFP-LX20-SM1550-BIDI.

10GE

Model	Description
XG-SFP-SR-MM850	10GBASE-SR, SFP+ transceiver, 850nm, Duplex LC, 300 m over MMF
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-ZR-SM1550	10GBASE-ZR, SFP+ transceiver, 1550nm, Duplex LC, 80 km over SMF
XG-SFP-AOC1M	10GBASE, SFP+ active optical cable (AOC), 1 m, including one cable and two optical transceivers

Model	Description
XG-SFP-AOC3M	10GBASE, SFP+ active optical cable (AOC), 3 m, including one cable and two optical transceivers
XG-SFP-AOC5M	10GBASE, SFP+ active optical cable (AOC), 5 m, including one cable and two optical transceivers

40GE

Model	Description
40G-QSFP-SR-MM850	40GBASE-SR, QSFP+ transceiver, 850 nm, MPO 1 x 12, 150 m over OM4 MMF, 100 m over OM3 MMF
40G-QSFP-LSR-MM850	40GBASE-LSR, QSFP+ transceiver, 850 nm, MPO 1 x 12, 400 m over OM4 MMF, 300 m over OM3 MMF
40G-QSFP-LR4-SM1310	40GBASE-LR4, QSFP+ transceiver, 1310 nm, Duplex LC, 10 km over SMF
40G-QSFP-iLR4-SM1310	40GBASE-iLR4, QSFP+ transceiver, 1310 nm, Duplex LC, 2 km over SMF
40G-QSFP-LX4-SM1310	40GBASE-LX4, QSFP+ transceiver, 1310 nm, Duplex LC, 150 m over OM3/OM4 MMF, 2 km over SMF
40G-AOC-5M	40GBASE, QSFP+ active optical cable (AOC), 5 m, including one cable and two optical transceivers
40G-AOC-30M	40GBASE, QSFP+ active optical cable (AOC), 30 m, including one cable and two optical transceivers

100GE

Model	Description
100G-QSFP-SR-MM850	100GBASE-SR, QSFP28 transceiver, 850 nm, MPO 1 x 12, 100 m over OM4 MMF, 70 m over OM3 MMF
100G-QSFP-LR4-SM1310	100GBASE-LR4, QSFP28 transceiver, 1310 nm, Duplex LC, 10 km over SMF
100G-QSFP-iLR4-SM1310	100GBASE-iLR4, QSFP28 transceiver, 1310 nm, Duplex LC, 2 km over SMF
100G-AOC-5M	100GBASE, QSFP28 active optical cable (AOC), 5 m, including one cable and two optical transceivers
100G-AOC-10M	100GBASE, QSFP28 active optical cable (AOC), 10 m, including one cable and two optical transceivers

08 Package Contents

Item	RG-CS88-08
Chassis	1
Fan module	2 (M08-FAN)
Chutes	12
M3*10 screw	14 (two redundant spares)
M6*16 screw	10 (two redundant spares)

Item	RG-CS88-08
M6 cage nut	10 (two redundant spares)
Antistatic wrist strap	1
Kelly earth wire external member	1
Network Product Warranty Manual & Hazardous Substance Content Statement (50 years)	1
Ruijie Networks Backbone Product Management Software BMS	1 (pre-installed)
Shipping dimensions (W x D x H)	710 mm x 590 mm x 617 mm (27.95 in.x 23.23 in. x 24.29 in.)
Shipping weight	50.20 kg (110.67 lbs)

You can retrieve product supporting documents at https://www.ruijienetworks.com/products.
Click **Support > Technical Documents**, and download the documents you need.

09 Warranty

For more information about warranty terms and period, contact your local sales agency:

- Warranty terms: https://www.ruijienetworks.com/support/servicepolicy
- Warranty period: https://www.ruijienetworks.com/support/servicepolicy/Service-Support-Summany/

Note: The warranty terms are subject to the terms of different countries and distributors.

10 More Information

For more information about Ruijie Networks, visit the official Ruijie website or contact your local sales agency:

- Ruijie Networks official website: https://www.ruijienetworks.com/
- Online support: https://www.ruijienetworks.com/support
- Hotline support: https://www.ruijienetworks.com/support/hotline
- Email support: service_rj@ruijienetworks.com

Notice

This content is applicable only to regions outside the China mainland. Ruijie Networks Co., Ltd. reserves the right to interpret this content.

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Website: https://www.ruijienetworks.com