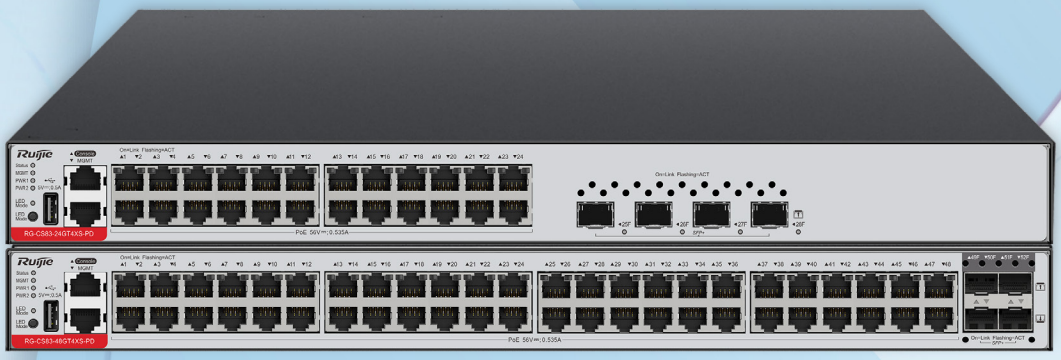
Datasheet



RG-CS83-PD Series

Switches

INNOVATION
Beyond Networks

Ruijie

01 Product Overview

The RG-CS83-PD series are next-generation gigabit Ethernet switches launched by Ruijie according to its design philosophy of security, high efficiency, energy saving, and independent innovation. This series can provide full gigabit access and flexibly extensible 10GE uplink data exchanges. With a new hardware architecture and Ruijie's latest RGOS12.X modular OS, the RG-CS83-PD series are capable of providing more resource entries, faster hardware processing, and better user experience.

02 Product Appearance

RG-CS83-24GT4XS-PD

RG-CS83-48GT4XS-PD

03 Product Features

Sound Security Protection Policies

Address Resolution Protocol (ARP) viruses or attacks are a type of common and influential network attack. The RG-CS83-PD series switches support ARP spoofing prevention in multiple modes. Regardless of whether clients automatically obtain addresses from the DHCP server or use static IP addresses, the RG-CS83-PD series switches record clients' authentic IP+MAC addresses and compare addresses in ARP packets with recorded IP+MAC addresses when switch ports receive the ARP packets from hosts. The switches forward only ARP packets whose addresses match the recorded IP+MAC addresses and discard fake ARP packets. In this way, ARP spoofing is shielded outside the network and network users are protected from ARP virus attacks.

The RG-CS83-PD series switches are capable of actively defending against various Distributed Denial of Service (DDoS) attacks on networks. Computers may be infected with viruses due to network openness or attackers may launch attacks on network devices and servers for various purposes, resulting in network unavailability. The common ARP flooding attacks can lead to the failure of the gateway to respond to requests. ICMP flooding attacks can paralyze network devices due to high CPU load. DHCP request flooding attacks deplete addresses of the DHCP server, and users cannot obtain IP addresses for network access.

The RG-CS83-PD series switches provide an industry-leading hardware CPU protection mechanism: CPU Protect Policy (CPP). It classifies data traffic sent to the CPU, processes the traffic by queue priority, and limits the bandwidth rate as required. This protection mechanism fully protects the CPU against illegitimate traffic occupancy, malicious attacks, and

resource consumption, thereby ensuring the CPU security and protecting the switches.

The RG-CS83-PD series switches adopt the innovative Network Foundation Protection Policy (NFPP) technology to limit the rate of ARP packets, ICMP requests, DHCP requests, and other packets sent to networks. The switches discard packets whose rate exceeds the threshold, identify attack behaviors, and isolate users launching attacks. In this way, the basic networks are protected from network attacks, and therefore the network stability is guaranteed.

DHCP snooping enables the RG-CS83-PD series switches to receive DHCP responses only from trusted ports and prevent spoofing from unauthorized DHCP servers. With DHCP snooping, the switches dynamically monitor ARP packets, check users' IP addresses, and discard illegitimate packets that do not match bound entries, thereby effectively preventing ARP spoofing and source IP address spoofing.

Virtual Switching Unit

The RG-CS83-PD series switches support the Virtual Switching Unit (VSU), in which multiple physical devices are connected and virtualized into one logical device. The devices use the same IP address, Telnet process, and command line interface (CLI) for management and support automatic version check and automatic configuration. Users need to manage only this logical device to enjoy the work efficiency and use experience brought by multiple devices.

Simplified management: Administrators can manage multiple switches in a unified manner, with no need to connect to each switch for configuration and management.

Simplified network topology: A VSU serves as a switch on a network and connects to peripheral devices through aggregate links. Therefore, no Layer 2 loop exists and the Multiple Spanning Tree Protocol (MSTP) does not need to be configured. Various control protocols run on the VSU.

Fault recovery within milliseconds: A VSU connects to peripheral devices through aggregate links. If one device or member link in the VSU malfunctions, data and services can be switched to another member link within only 50–200 milliseconds.

High scalability: User devices can be added to or removed from a virtualized network in a "hot swap" manner, without affecting normal operation of other devices.

Increase in return on investment: Aggregate links used for connecting the VSU to peripheral devices not only provide redundancy links but also implement load balancing. All network devices and bandwidth resources are fully leveraged. Any 10GE port can be used to build a VSU virtual network through data transmission cables. No additional cables and expansion cards are required, and the types of ports and cables are not limited. Therefore, the return on investment is best protected.

High Reliability

The Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), and MSTP help the RG-CS83-PD series switches achieve fast convergence, improve the fault tolerance capability, and ensure stable network operation and load balance of links. The switches utilize network channels appropriately to raise the utilization of redundant links.

The Virtual Router Redundancy Protocol (VRRP) helps the switches effectively ensure the network stability.

With the Rapid Link Detection Protocol (RLDP), the switches can quickly detect the link connectivity and unidirectional optical fiber links. The port loop detection function helps the switches prevent network failures caused by loops resulting from unauthorized port connection to hubs.

The RG-CS83-PD series switches support the Ethernet Ring Protection Switching (ERPS) technology, which is an international Layer 2 link redundancy backup protocol designed for the core Ethernet. The loop block and link recovery of ERPS are implemented on the controlling device, and non-controlling devices directly report their link status to the controlling device, without processing from other non-controlling devices. Therefore, loop disruption and recovery time of ERPS is faster than that of STP. Based on the above differences, ERPS supports link recovery within milliseconds in the ideal environment.

When STP is disabled, the Rapid Link Protection Protocol (RLDP) can still provide basic link redundancy and millisecond-level fault recovery faster than STP.

With the Bidirectional Forwarding Detection (BFD), the switches are able to detect links within milliseconds, and quickly converge routing and other services through the correlation with upper-layer routing protocols, ensuring the continuity of services.

Energy Efficiency

In response to China's call for energy efficiency, Ruijie deeply studies noise and energy consumption issues of conventional switches and integrates multiple energy-saving design ideas into the RG-CS83-PD series switches. The switches reduce loud noise produced by deployment in offices and solve excessive energy consumption resulted from the large-scale deployment of access devices.

In addition, the RG-CS83-PD series adopt the next-generation hardware architecture as well as advanced energy-efficient circuit design and components, to significantly save energy and lower noise. The entire series are equipped with variable-speed axial fans to intelligently control the fan speed based on the ambient temperature, which reduces the power consumption and noise while ensuring stable operation of the devices.

In the PoE networking environment, the RG-CS83-PD series provide automatic PoE mode and energy-saving PoE mode to meet needs of users.

Flexible Device Management Modes

Ruijie Cloud Make Your Business Easy- Mobile way

The RG-CS83-PD 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-CS83-PD 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.

IPv4/IPv6 Dual-stack Multi-layer Switching

The hardware of the RG-CS83-PD series switches supports line-rate IPv4/IPv6 dual-stack multi-layer switching, distinguishes and processes IPv4 and IPv6 protocol packets. In that case, the switches can plan networks or maintain the network status based on IPv6 network requirements, and flexibly create IPv6 network communication solutions. The RG-CS83-PD series switches support a wide range of IPv4 routing protocols, including static routing, RIP, OSPFv2 and IS-ISv4. Users can select appropriate routing protocols based on network environments to flexibly build networks. The RG-CS83-PD series switches also support abundant IPv6 routing protocols, including static routing, Routing Information Protocol next generation (RIPng), OSPFv3, and IS-ISv6, which can be selected flexibly to either upgrade the existing network to an IPv6 network or build a new IPv6 network.

04 Specifications

Hardware Specifications

Port Specifications

Port Specifications	RG-CS83-24GT4XS-PD	RG-CS83-48GT4XS-PD
Fixed service port	24 x 10/100/1000BASE-T ports, supporting PoE/PoE+ 4 x 1GE/10GE SFP+ ports	48 x 10/100/1000BASE-T ports, supporting PoE/PoE+ 4 x 1GE/10GE SFP+ ports
Module slot	2 x power module slots	
Power module	RG-PA600I-P-F RG-PA1000I-P-F	
Fixed management ports	1 x RJ45 console port 1 x RJ45 MGMT port	
USB	1 x USB port	

System Specifications

System Specifications	RG-CS83-24GT4XS-PD	RG-CS83-48GT4XS-PD
Packet forwarding rate	96 Mpps	132 Mpps
Switching capacity	128 Gbps	176 Gbps
CPU	Dual-core CPU, each core with the clock speed of 1.2 GHz	
BootROM	16 MB	
Flash memory	2 GB	
Memory	1 GB	
Switch buffer	3 MB	
MAC address table size	32,000	
ARP table size	4,000	
Number of IPv4 unicast routes	8,000	
Number of IPv4 multicast routes	2,500	
Number of IPv6 unicast routes	4,000	
Number of IPv6 multicast routes	1,200	

System Specifications	RG-CS83-24GT4XS-PD	RG-CS83-48GT4XS-PD
Number of ACEs	Ingress: 3,500 Egress:1,500	
Number of VSU members	4	
VLAN translation	4,094	

Dimensions and Weight

Dimensions and Weight	RG-CS83-24GT4XS-PD	RG-CS83-48GT4XS-PD
Unit dimensions (W x D x H)	442 mm x 420 mm x 43.6 mm (17.40 in.x 16.54 in.x 1.72 in.)	
Shipping dimensions (W x D x H)	570 mm x 565 mm x 172 mm (22.44 in. x 22.24 in. x 6.77 in.)	
Rack height	1 RU	
Unit weight	4.3 kg (9.48 lbs)	4.6 kg (10.14 lbs)
Shipping weight	6.78 kg (14.95 lbs)	6.98 kg (15.39 lbs)

Power Supply and Consumption

Power Supply and Consumption	RG-CS83-24GT4XS-PD	RG-CS83-48GT4XS-PD
Power supply	2 x pluggable power modules	
Power module redundancy	For dual power supplies, 1+1 power redundancy is supported only when the total PoE load of the device is less than the PoE output power of a single power supply.	
Power input	RG-PA600I-P-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: 8 A RG-PA1000I-P-F (AC input 1): • Rated input voltage: 100 V AC to 130 V AC, 50 Hz to 60 Hz • Maximum input voltage: 90 V AC to 143 V AC, 47 Hz to 63 Hz • Maximum input current: 12 A RG-PA1000I-P-F (AC input 2): • Rated input voltage: 200 V AC to 240 V AC, 50 Hz to 60 Hz • Maximum input voltage: 180 V AC to 264 V AC, 47 Hz to 63 Hz • Maximum input current: 8 A	
Maximum output power	RG-PA600I-P-F: 600 W RG-PA1000I-P-F: • 100 V AC to 130 V AC: 930 W • 200 V AC to 240 V AC: 1000 W	
Maximum power consumption	65 W (non-PoE) 810 W (full PoE load)	75 W (non-PoE) 1570 W (full PoE load)
PoE port	All RJ45 ports support PoE/PoE+ (IEEE802.3af/at) power supply	
PoE power cable pairs	Mode A (1-2, 3-6 pairs)	

Power Supply and Consumption	RG-CS83-24GT4XS-PD	RG-CS83-48GT4XS-PD
PoE output power	Each PoE port provides up to 30 W of power The maximum power depends on the configured power supply • 1 x RG-PA600I-P-F: 370 W • 2 x RG-PA600I-P-F: 740 W; 1 x RG-PA1000I-P-F: 740 W; 2 x RG-PA1000I-P-F: 1480 W; a maximum output of 720 W over 24 ports (30 W x 24)	Each PoE port provides up to 30 W of power The maximum power depends on the configured power supply • 1 x RG-PA600I-P-F: 370 W • 2 x RG-PA600I-P-F: 740 W • 1 x RG-PA1000I-P-F: 740 W • 2 x RG-PA1000I-P-F: 1480 W, a maximum output of 1440 W over 48 ports (30 W x 48)
Energy saving	Supported	

Note: The maximum number of powered devices supported by the switch is determined by the available power of the switch and the actual power consumption of each device.

Environment and Reliability

Environment and Reliability	RG-CS83-24GT4XS-PD	RG-CS83-48GT4XS-PD
Temperature	Operating temperature: 0°C to 45°C (32°F to 113°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: 0 m to 5,000 m (0 ft. to 16,404.20 ft.) Storage altitude: 0 m to 5,000 m (0 ft. to 16,404.20 ft.)	
Mean time between failure (MTBF)	356,000 hours (about 41 years, dual power modules) 208,000 hours (about 24 years, single power module)	315,000 hours (about 36 years, dual power modules) 193,000 hours (about 22 years, single power module)
Fan	1 x fixed fan module	
Heat dissipation	Left-to-right and front-to-right airflow	
Acoustic noise	27°C (80.6°F): 51.6 dB 45°C (113°F): 57.4 dB	27°C (80.6°F): 51.6 dB 45°C (113°F): 58.3 dB
Power module hot swapping	Supported	
USB hot swapping	Supported	
Cable hot swapping	Supported	
Power supply monitoring	Monitoring of power supply model and status Power supply fault alarming	
Fan monitoring	Fan speed adjustment: 3 levels Automatic speed adjustment Fan failure alarming	
Temperature monitoring	Temperature monitoring, over-temperature alarming If the ambient temperature exceeds a certain value, the device will perform reset protection	
ESD	ESD contact/air discharge: 6 kV/8 kV ESD susceptibility contact/air discharge: 8 kV/15 kV	
Surge protection	MGMT port: 4 kV Service port: 10 kV Power port: common mode 6 kV, differential mode 6 kV	
Conformal coating	Conformal coating supported (key components only)	

Certifications and Regulatory Compliance

Certifications and Regulatory Compliance	RG-CS83-24GT4XS-PD	RG-CS83-48GT4XS-PD
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	
Communication standard	IEEE 802.3-2005 Ethernet standard IEEE 803.ab, IEEE 802.3af, IEEE 802.1d, IEEE 802.1q, IEEE 802.3-2005 (802.3ae), and IEEE 802.3ba (2010) standards, supporting 802.1X authentication	

Software Specifications

RG-CS83-PD Series	
Feature	**Description**
Ethernet switching	Jumbo frame (maximum length: 9216 bytes)
	IEEE 802.1Q (4K VLANs)
	Voice VLAN
	Super VLAN and private VLAN
	MAC VLAN, port-based VLAN, protocol-based VLAN, and IP-subnet based VLAN
	GVRP
	Basic QinQ Selective QinQ
	STP, RSTP, and MSTP
	ERPS (G.8032)
	LLDP/LLDP-MED
	LACP (IEEE 802.3ad)
IP service	ARP
	DHCP client, DHCP relay, and DHCP server
	DHCP snooping
	DNS
	DHCPv6 client and DHCPv6 relay
	DHCPv6 snooping
	Neighbor Discovery (ND) and ND snooping
IP routing	Static routing
	RIP, RIPng
	OSPFv2, OSPFv3, IS-ISv4, ISv4, and IS-ISv6

RG-CS83-PD Series	
Feature	**Description**
IP routing	BGP4 and BGP4+
	IPv4 and IPv6 VRF
	IPv4 and IPv6 PBR
Multicast	IGMP v1/v2/v3, and IGMP proxy
	IGMP v1/v2/v3 snooping
	PIM-DM, PIM-SM, and PIM-SSM
	MSDP
	MLD v1/v2
	MLD snooping v1/v2
	PIM-SMv6, PIM-SSM v6
ACL and QoS	Standard IP ACLs Extended IP ACLs Extended MAC ACLs ACL80 IPv6 ACL
	ACL redirection
	Port traffic identification
	Port traffic rate limiting
	802.1p/DSCP/ToS traffic classification Eight priority queues per interface
	Traffic policing: CAR
	Congestion management: RR, SP, WRR, DRR, WFQ, SP+WRR, SP+DRR, and SP+WFQ
	Congestion avoidance: tail drop, RED, and WRED
	Rate limiting in each queue
Security	Multiple AAA modes
	RADIUS and TACAS+
	Port-based and MAC-based 802.1x authentication
	Web authentication
	Allowlist
	HTTPS
	SSHv1, SSHv2
	Global IP-MAC binding
	ICMP
	Port isolation and port security
	IP Source Guard

RG-CS83-PD Series	
Feature	**Description**
Security	SAVI
	Gateway ARP anti-spoofing
	CPP(CPU Protection Policy
	NFPP(Network Foundation Protection Policy
	Strict and loose RPF uRPF ignoring default routes
Reliability	REUP, RLDP, DLDP
	IPv4 VRRP v2/v3 and IPv6 VRRP
	BFD
	Link tracing, fault notification, and remote loopback based on 802.3ah (EFM)
	Hot swapping of power modules and cables
	3-level fan speed adjustment Fan fault alarm
Device virtualization	Virtual Switching Unit (VSU)
NMS and maintenance	SPAN, RSPAN, and ERSPAN
	sFlow
	NTP and SNTP
	FTP and TFTP
	SNMP v1/v2/v3
	RMON (1, 2, 3, 9)
	NETCONF
	CWMP (TR-069) standard protocol
	gRPC
	Cloud and SON
PoE	IEEE 802.3af and 802.3at Uninterruptible power supply upon hot start Port priority

05 Protocol Compliance

RG-CS83-PD 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) 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

RG-CS83-PD Series	
Organization	**Standards and Protocol**
IETF	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) 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 Link Layer Discovery Protocol IEEE 802.1ad Provider Bridges IEEE 802.1AX 2008 Link Aggregation 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 802.1s Multiple Spanning Tree Protocol 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

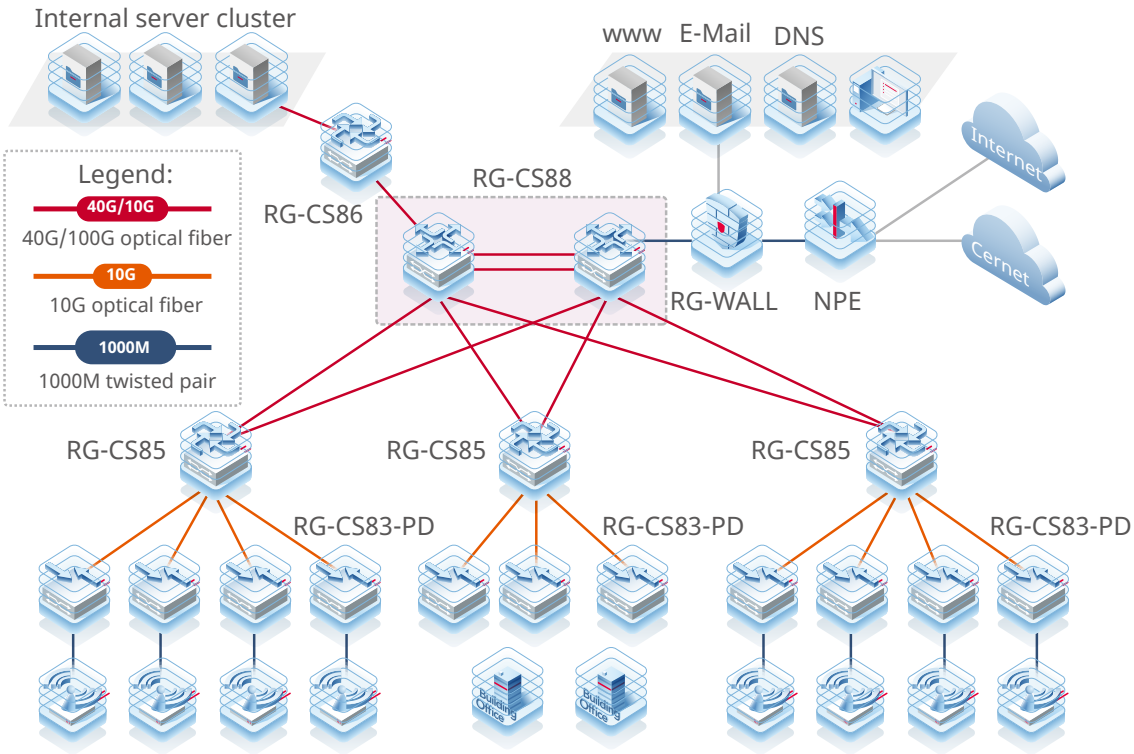
Typical Applications

With the highlights of high security, high efficiency, intelligence, and energy saving, the RG-CS83-PD series can fully meet networking requirements in the following scenarios:

- Full gigabit access to LANs of large enterprises, institutions, and campuses, such as the LANs in government buildings, universities, and large manufacturing/energy/metallurgy/other organizations;
- Gigabit access to business systems related to medical care, libraries, exhibition centers, and websites;
- Access to IP phones, WLAN access points, and HD cameras;
- Gigabit access to server clusters and uplink access over 10G bandwidth;
- Requirements for flexible and diversified security control policies to prevent and contain network viruses and network attacks, and to provide secure access for users.

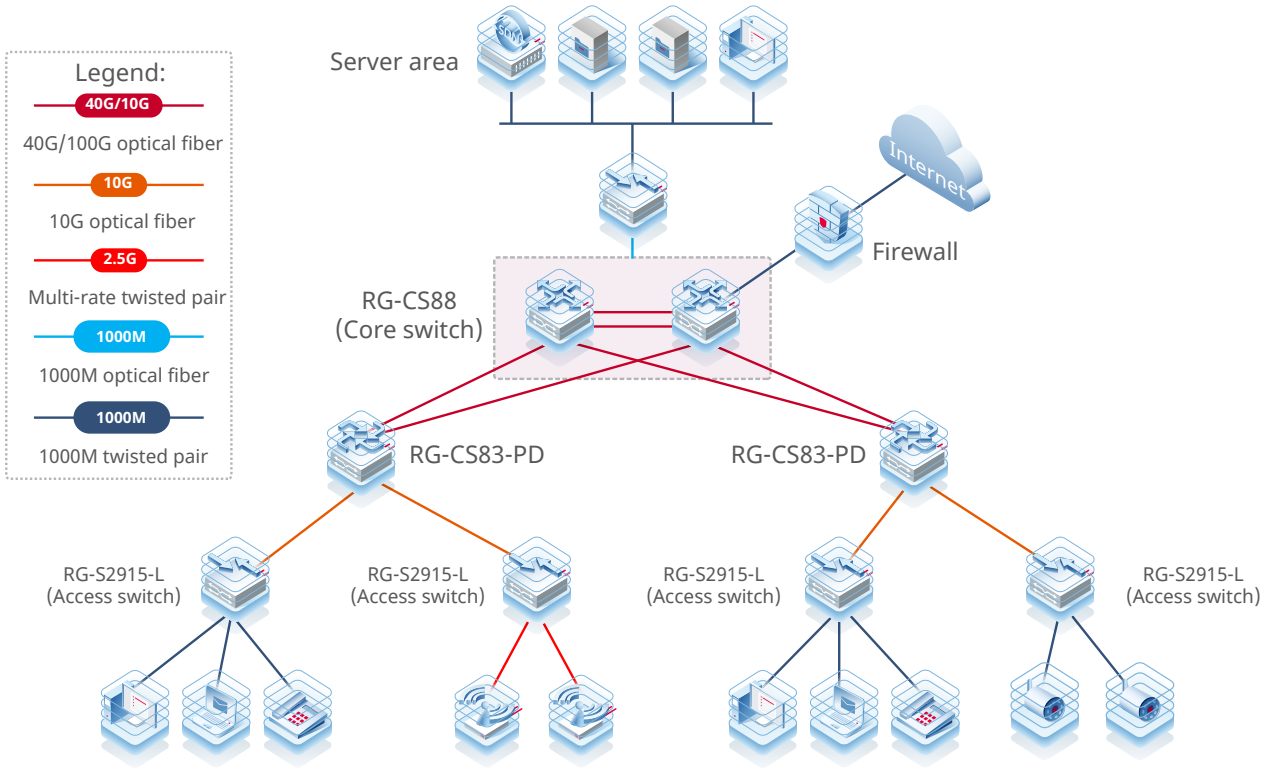
Scenario 1

The RG-CS83-PD series serve as access switches. They network with aggregation switches deployed for buildings (RG-CS85 series) and core switches deployed for campus networks (RG-CS88 series) to provide high-performance 1000M links to the desktop and 10GE links from the aggregation layer to the core layer, so as to cope with the increasing information of access users.



Scenario 2

The RG-CS83-PD series serve as distribution switches. They network with the indoor access switches (RG-S2915-L series) and core switches (RG-CS88 series) to build a cost-effective, high-performance, and high-bandwidth network. This network provides 1000M links to the desktop and 10G links from the distribution layer to the core layer, so as to cope with the increasing information of access users.



07 Ordering Information

Switches and Power Modules

Model	Description
RG-CS83-24GT4XS-PD	24 x 10/100/1000BASE-T ports, 4 x 1GE/10GE SFP+ ports, supporting PoE remote power supply and the maximum PoE output power of 740 W. (Purchase at least one RG-PA600I-P-F/RG-PA1000I-P-F module.)
RG-CS83-48GT4XS-PD	48 x 10/100/1000BASE-T ports, 4 x 1GE/10GE SFP+ ports, supporting PoE remote power supply and the maximum PoE output power of 1480 W. (Purchase at least one RG-PA600I-P-F/RG-PA1000I-P-F module.)
RG-PA600I-P-F	600 W AC power module, PoE power module
RG-PA1000I-P-F	1000 W AC power module, PoE power module

Note: 4 x 1GE/10GE SFP+ ports support 1GE SFP transceivers and 10GE SFP+ transceivers.

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 The port needs to be configured with auto-negotiation
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-AOC1M	10GBASE, SFP+ active optical cable (AOC), 1 m, including one cable and two optical transceivers
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

08 Package Contents

Item	RG-CS83-24GT4XS-PD	RG-CS83-48GT4XS-PD
Chassis	1	1
Grounding wire	1	1
Mounting bracket	2	2
Rubber pad	4	4
Cross recessed countersunk head screw, M4x8, GB819-85	8	8
Mounting Bracket Installation Guide	1	1
Warranty Manual and Network Product Hazardous Substance Statement	1	1
Ruijie Networks Access Product Management Software	1 (pre-installed)	1 (pre-installed)
Shipping dimensions (W x D x H)	570 mm x 565 mm x 172 mm (22.44 in. x 22.24 in. x 6.77 in.)	570 mm x 565 mm x 172 mm (22.44 in. x 22.24 in. x 6.77 in.)
Shipping weight	6.78 kg (14.95 lbs)	6.98 kg (15.39 lbs)

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