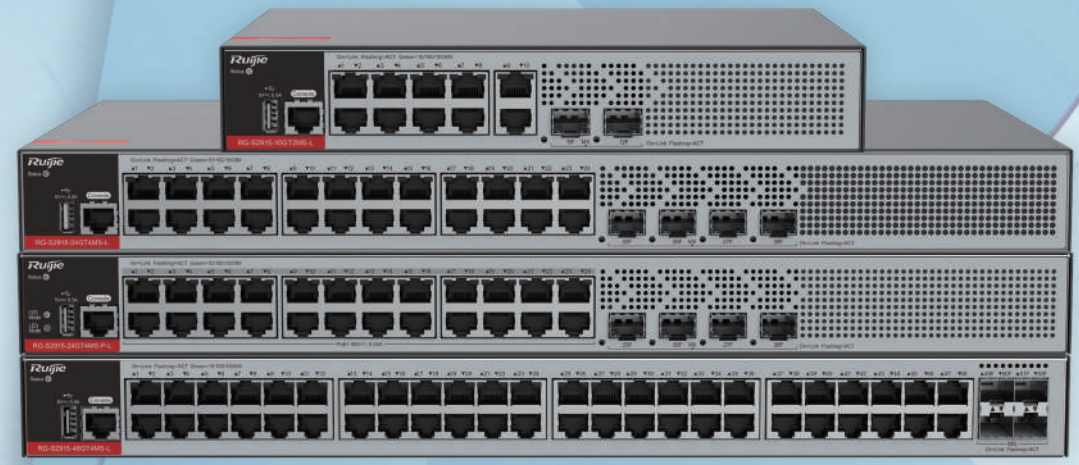
Datasheet



RG-S2915-L Series

Simplified Gigabit Switch

INNOVATION
Beyond Networks

Ruijie

01 Product Overview

RG-S2915-L series switches are next-generation cost-effective L3 access switches released by Ruijie Networks for commercial real estate customers, hotels, small- and medium-sized enterprises. The series include PoE and non-PoE product models and can meet requirements in wired network, wireless network, monitoring, and other scenarios.

02 Product Appearance

RG-S2915-10GT2MS-P-L

RG-S2915-24GT4MS-P-L

RG-S2915-24GT4MS-L

RG-S2915-48GT4MS-L

03 Product Features

Strong Surge Protection Capability

The switches are capable of suppressing 10 kV surge for ports. The strong surge protection capability reduces the probability that ports are damaged by surge and improves customer network stability.

Uplink 2.5GE Ports

On the network of a video surveillance system, a large amount of continuous video data needs to be transmitted and mass burst data is generated instantaneously. To deal with the data, switches need to have stable data forwarding and bandwidth redundancy capability. More cameras connected to a switch indicates that a greater amount of data flows through the switch. If the amount of camera data forwarded by a switch exceeds the forwarding capability of the uplink port on the switch, packet loss occurs on the port and videos may get stuck. The uplink ports of the RG-S2915-L series switches support the 2.5 Gbit/s rate. Compared with the 1 Gbit/s uplink rate, the switches can connect to more terminals in HD monitoring scenarios and has better ability to cope with sudden burst data.

High Reliability

The RG-S2915-L series switches support the Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), and Multiple Spanning Tree Protocol (MSTP), which help the switches achieve fast convergence, improve the fault tolerance capability, and ensure stable network operation and link load balancing. The switches utilize network channels appropriately to raise the utilization of aggregate links.

With the Rapid Link Detection Protocol (RLDP), the RG-S2915-L series 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-S2915-L series switches support the Ethernet Ring Protection Switching (ERPS) technology, which is an international L2 link redundancy backup protocol

designed for the core Ethernet. The loop blocking 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 implements link recovery within milliseconds in the ideal environment.

The RG-S2915-L series switches provide an advanced 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 also fully protects the CPU against illegitimate traffic occupancy, malicious attacks and resource consumption, thereby ensuring the CPU security and protecting the switches.

The RG-S2915-L series switches adopt the Network Foundation Protection Policy (NFPP) technology to limit the rate of ARP packets, ICMP requests, DHCP requests, and other packets sent from users to networks. The switches discard packets whose rate exceeds the threshold, identify attack behaviors, and isolate users who launch attacks. In this way, the basic networks are protected against network attacks, and therefore the network stability is guaranteed.

Quietness and Green Energy Saving

In response to China's call for green energy saving, Ruijie carries out an in-depth study on noise and energy consumption issues in conventional switches and integrates multiple energy-saving design ideas into the RG-S2915-L series switches. The switches fully get rid of loud noise produced by switches deployed in offices and excessive energy consumption arising from the mass deployment of access devices.

The energy efficient Ethernet (EEE) is another highlight of the RG-S2915-L series switches. If a port is always idle in a period of time, the system enables the port to enter the energy saving mode. When the port needs to receive or send a packet, the system resumes services on the port by periodically sending listening streams, achieving the effect of energy saving.

Some models of the RG-S2915-L series switches adopt the fanless design, which ensures no noise and no forced airflow, preventing dust and chemical pollutants in the air from entering the devices and causing corrosion and static electricity accumulation.

The products support intelligent fan speed regulating. With users' low noise requirements taken into full account, Ruijie designs the products to monitor the device temperature in real time, reduce the fan speed, prolong the fan service life, and reduce the noise pollution.

In the perception of noise, 30 dB to 40 dB is an ideal sound level for a quiet environment. Ruijie products are tested in accordance with the national standard GB/T 18313-2001 and the noise meets the standard of sleeping in the living room at night.

Ease of Network Maintenance

When a fault occurs on software, the devices automatically restart all processes for recovery.

The devices are equipped with standard USB ports and can be upgraded using USB flash drive.

Engineers can plug network cables into the switches to manage and configure the switches in Web mode without extra configuration.

The switches support remote management, configuration backup and restoration, remote fault diagnosis, and history log analysis.

The RG-S2915-L series switches support cloud management and can bring customers simplified O&M management and user experience:

Ease of networking: Only a PC or 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. You can manage the network wherever you go, and both the wired and wireless gateways are under your control.

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.

Ease of authentication: Relying on the cloud, the whole network can provide real-name authentication for Internet access, without any additional software and servers.

04 Technical Specifications

Hardware Specifications

Hardware Specifications	RG-S2915-48GT4MS-L	RG-S2915-24GT4MS-L	RG-S2915-24GT4MS-P-L	RG-S2915-10GT2MS-P-L
Interface Specifications				
Fixed Service Ports	48 × 10/100/1000Base-T Ethernet ports with auto-negotiation, 4 × 2.5GE/1GE SFP ports	24 × 10/100/1000Base-T Ethernet ports with auto-negotiation, 4 × 2.5GE/1GE SFP ports	24 ×10/100/1000Base-T Ethernet ports with auto-negotiation, 4 × 2.5G/1GE SFP ports	10 × 10/100/1000Base-T Ethernet ports with auto-negotiation, 2 × 2.5GE/1GE SFP ports
Power modules	1 fixed power module	1 fixed power module	1 fixed power module	1 fixed power module
Fans modules	2 fixed fans	0	2 fixed fans	1 fixed fans
Fixed management ports	1 × RJ45 Console, 1 × USB port	1 × RJ45 Console, 1 × USB port	1 × RJ45 Console, 1 × USB port	1 × RJ45 Console, 1 × USB port
System Specifications				
Packet forwarding rate	87 Mpps	51 Mpps	51 Mpps	22.5 Mpps
System Switching capacity	116Gbps	68Gbps	68Gbps	30Gbps
MAC Table Capacity	16,000	16,000	16,000	16,000
ARP table	512			
Routing Table Size (IPv4/IPv6)	64			
ACL entries	500			
Dimensions and Weight				
Dimensions (W x D x H)	440 mm × 220 mm × 43.5 mm (17.32 in × 8.66 in × 1.71 in), 1 RU	440 mm × 220 mm × 43.5 mm (17.32 in × 8.66 in × 1.71 in), 1 RU	440 mm × 292 mm × 43.6 mm (17.32 in × 11.50 in × 1.72 in), 1 RU	297 mm × 170 mm × 44.5 mm (11.69 in × 6.69 in × 1.75 in), 1 RU
Weight	2.8 kg (6.17 lbs)	2.5 kg (5.51 lbs)	2.8 kg (6.17 lbs)	2.5 kg (5.51 lbs)
CPU and Storage				
CPU	Built-in CPU, single-core processor, with the clock speed of 1.2 GHz			
Storage	SDRAM: 512 MB Flash Memory: 64 MB			
Power and Consumption				
Maximum power consumption	< 30 W	< 15.6 W	< 33 W (non-PoE) < 403 W (PoE full load)	< 16 W (non-PoE) < 141 W (PoE full load)
Rated input voltage	100 V AC to 240 V AC, 50 Hz to 60 Hz	100 V AC to 240 V AC, 50 Hz to 60 Hz	100 V AC to 240 V AC, 50 Hz to 60 Hz	100 V AC to 240 V AC, 50 Hz to 60 Hz
Maximum input voltage	90 V AC to 264 V AC, 50 Hz to 60 Hz	90 V AC to 264 V AC, 50 Hz to 60 Hz	90 V AC to 264 V AC, 50 Hz to 60 Hz	90 V AC to 264 V AC, 50 Hz to 60 Hz
Environment and Reliability				
MTBF	>200K	>200K	>200K	>200K

Hardware Specifications	RG-S2915-48GT4MS-L	RG-S2915-24GT4MS-L	RG-S2915-24GT4MS-P-L	RG-S2915-10GT2MS-P-L
Operating Temperature	0°C to 45°C (32°F to 113°F)			
Storage Temperature	-40°C to +70°C (-40°F to +158°F)			
Operating Humidity	10% to 90% RH (non-condensing)			
Storage Humidity	5% to 95% RH (non-condensing)			
Operating noise	≤ 37 dB	Fanless	≤ 39 dB	≤ 37 dB
Interface surge protection	Power port: 6 kV/2 kV Telecom port: 10 kV	Power port: 6 kV/2 kV Telecom port: 10 kV	Power port: 6 kV/2 kV Telecom port: 10 kV	Power port: 6 kV/2 kV Telecom port: 10 kV

Software Specifications

RG-S2915-L Series	
Feature	**Description**
Ethernet switching	Jumbo frame (maximum length: 9216 bytes)
	802.3az EEE
	IEEE 802.1Q (4,094 VLANs)
	Voice VLAN
	Port based VLAN
	Basic QinQ
	Selective QinQ
	STP (IEEE 802.1.d), RSTP (IEEE 802.1w), MSTP (IEEE 802.1s)
	ERPS (G.8032)
	LLDP/LLDP-MED
	LACP (IEEE 802.3ad)
IP service	ARP
	DHCP client, DHCP relay, and DHCP server
	DHCP snooping
	DNS
IP routing	Static routing
	RIP, RIPng
	OSPFv2
ACL and QoS	Standard IP ACLs Extended IP ACLs Extended MAC ACLs Expert-level ACLs ACL 80 IPv6 ACL
	ACL redirection

RG-S2915-L Series	
Feature	**Description**
ACL and QoS	Port traffic rate limiting
	802.1p, DSCP, IP precedence traffic prioritization (IEEE 802.1p) for real-time classification
	Congestion management: RR, SP, WRR, DRR, WFQ, SP+WRR, SP+DRR, and SP+WFQ
	Congestion avoidance: tail drop
	Eight priority queues per interface
Security	RADIUS and TACAS+
	Port-based and MAC-based 802.1x authentication
	Web authentication
	HTTPS
	SSHv1, SSHv2
	IGMP V1,V2 snooping
	IP Source Guard
	CPP and NFPP
Reliability	RLDP
	Hot swapping of power modules and cables
	Temperature Monitoring Temperature Alarm Overtemperature Protection
NMS and maintenance	RSPAN
	sFlow
	NTP
	TFTP client
	SNMP v1/v2c/v3
	CLI (telnet/console), syslog/debug, Web, MACC public cloud
	CWMP (TR-069) standard protocol
	gRPC
PoE	IEEE 802.3af and 802.3at Uninterruptible power supply upon hot start Port priority

05 Protocol Compliance

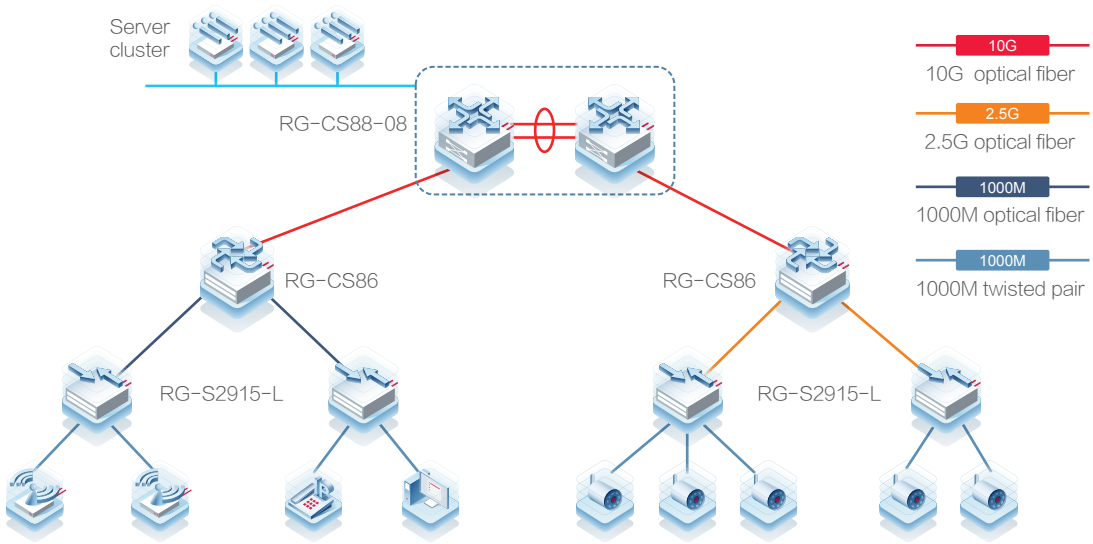
RG-S2915-L Series	
Organization	**Standards and Protocol**
IETF	RFC 1157 A Simple Network Management Protocol (SNMP) RFC 1305 Network Time Protocol Version 3 (NTP) RFC 1349 Internet Protocol (IP) RFC 1350 TFTP Protocol (revision 2) RFC 1519 CIDR RFC 1591 Domain Name System Structure and Delegation RFC 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 2131 Dynamic Host Configuration Protocol (DHCP) RFC 2132 DHCP Options and BOOTP Vendor Extensions RFC 2571 SNMP Management Frameworks RFC 2863 The Interfaces Group MIB RFC 2865 Remote Authentication Dial In User Service (RADIUS) RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only) RFC 3046 DHCP Option82 RFC 3417 (SNMP Transport Mappings) RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP) RFC 3575 IANA Considerations for RADIUS RFC 3579 RADIUS Support For EAP RFC 4022 MIB for TCP 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 813 Window and Acknowledgement Strategy in TCP RFC 815 IP datagram reassembly algorithms RFC 826 Ethernet Address Resolution Protocol (ARP) RFC 854 Telnet Protocol RFC 959 File Transfer Protocol (FTP) RFC 1981 Path MTU Discovery for IP version 6 RFC 2460 Internet Protocol, Version 6 (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 2711 IPv6 Router Alert Option RFC 3513 IP Version 6 Addressing Architecture RFC 1583 OSPF Version 2 RFC 2328 OSPF Version 2 RFC 1058 Routing Information Protocol (RIP)
IEEE	IEEE 802.2 Logical Link Control IEEE 802.1ab Link Layer Discovery Protocol IEEE 802.1ad Provider Bridges IEEE 802.1ax/IEEE802.3ad Link Aggregation IEEE 802.1D Media Access Control (MAC) Bridges IEEE 802.1D Spanning Tree Protocol IEEE 802.1Q Virtual Bridged Local Area Networks (VLAN) IEEE 802.1s Multiple Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE Std 802.3x Full Duplex and flow control IEEE 802.3af Power over Ethernet IEEE 802.3at Power over Ethernet

06

Typical Applications

Serving as Access Devices on Medium- and Small-sized Networks

The RG-S2915-L series switches feature universal adaptability and can be applied in various scenarios, including but not limited to offices of small- and medium-sized enterprises, small- and medium-sized hotels, primary and middle schools, and governments. In these scenarios, RG-S2915-L functions as an access switch to provide high-performance and large-capacity switching services. It also provides 2.5GE uplink ports and provide greater bandwidth for terminals.



07

Ordering Information

Model	Description
RG-S2915-48GT4MS-L	48 × 10/100/1000Base-T copper ports with auto-negotiation, 4 × 1GE/2.5GE SFP ports, fixed single AC power supply
RG-S2915-24GT4MS-L	24 × 10/100/1000Base-T copper ports with auto-negotiation, 4 × 1GE/2.5GE SFP ports, fixed single AC power supply
RG-S2915-24GT4MS-P-L	24 × 10/100/1000Base-T copper ports with auto-negotiation, 4 × 1GE/2.5GE SFP ports, fixed single AC power supply, PoE/PoE+ power supply, 370 W PoE power supply
RG-S2915-10GT2MS-P-L	10 × 10/100/1000Base-T copper ports with auto-negotiation, 2 × 1GE/2.5GE SFP ports, fixed single AC power supply, PoE/PoE+ power supply, 125 W PoE power supply
2.5G-SFP-LX03-SM1310-BIDI-I	SFP 2.5G BIDI transceiver-TX1310/RX1550, 3 km, LC
2.5G-SFP-LX03-SM1550-BIDI-I	SFP 2.5G BIDI transceiver-TX1550/RX1310, 3 km, LC
MINI-GBIC-SX-MM850	1000BASE-SX, SFP transceiver, SM (850 nm, 500 m, LC).
MINI-GBIC-LX-SM1310	1000BASE-LX, SFP transceiver, SM (1310 nm, 10 km, LC)
MINI-GBIC-LH40-SM1310	1000BASE-LH, SFP transceiver, SM (1310 nm, 40 km, LC)
MINI-GBIC-ZX80-SM1550	1000BASE-ZX80, SFP transceiver, SM (1550 nm, 80 km, LC)

Model	Description
GE-SFP-LX20-SM1310-BIDI	SFP BIDI Transceiver-TX1310/RX1550, 20 km, LC
GE-SFP-LX20-SM1550-BIDI	SFP BIDI Transceiver-TX1550/RX1310, 20 km, LC
GE-SFP-LH40-SM1310-BIDI	SFP BIDI Transceiver-TX1310/RX1550, 40 km, LC
GE-SFP-LH40-SM1550-BIDI	SFP BIDI Transceiver-TX1550/RX1310, 40 km, LC
Mini-GBIC-GT	1000BASE-TX, SFP transceiver (100 m)

08 Package Contents

Device	RG-S2915-48GT4MS-L	RG-S2915-24GT4MS-L	RG-S2915-24GT4MS-P-L	RG-S2915-10GT2MS-P-L
Host	1	1	1	1
Power Cord	1	1	1	1
Nylon buckle	1	1	1	1
Mounting bracket	2	2	2	2
Mounting Bracket Installation Guide	1	1	1	1
Warranty Manual and Network Product Hazardous Substance Statement	1	1	1	1
Cross recessed countersunk head screw, M4x8, GB819-85	8	8	8	8
Grounding wire	1	1	1	1
Rubber pad	4	4	4	/
Package dimensions (with five devices included) (W x D x H)	570 mm x 490 mm x 390 mm (22.44 in × 19.29 in × 15.35 in)	570 mm x 490 mm x 390 mm (22.44 in × 19.29 in × 15.35 in)	570 mm x 490 mm x 390 mm (22.44 in × 19.29 in × 15.35 in)	580 mm x 450 mm x 380 mm (22.83 in × 17.72 in × 14.96 in)
Package weight (with five devices included)	20.43 kg (45.04 lbs)	18.18 kg (40.08 lbs)	20.93 kg (46.14 lbs)	15.98 kg (35.23 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/service_41*

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

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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*

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