

Ruijie RG-RSR30-44

Multi-Service Router Datasheet

Ruijie Networks Co., Ltd.

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1 Product Images



Figure1-1 The front view of RG-RSR30-44



Figure1-2 The rear view of RG-RSR30-44

2 Overview

The Ruijie RG-RSR30-44 Router provides a next-generation network solution for medium to large-sized enterprises. Through the power of Ruijie's advanced software technology and hardware support, the Ruijie RSR30-44 offers superior manageability and reliability for enterprise edge networks at minimum costs. The Router provides a consolidated service infrastructure that enables scalable deployment of new applications to better address the diversified demands for future business development.

Integrated with rich network applications, such as routing, switching, security, transmission, and video, RSR30-44 router is capable of customized requirements of different application environments. The colorful software features support VoIP, VPN, IPv6, MVRP, MPLS, and multicast technologies, as well as various backup solutions and QoS features, applying to the solutions of data and video access to services.

Designed with a modular structure, the RSR30-44 is a new-generation high-performance router that features high performance, modular design, high security, ease of use, and close to services. Its built-in hardware encryption engine can provide the function of high-speed and secure data encryption.

RSR30-44 adopts the network processor with high performance. Together with the RGOS operating system, the independent intellectual property of Ruijie Networks, it is equipped with high-speed IP address forwarding, multi-service processing and high-performance data encryption.

RSR30-44 can serve as the core router of small- and medium-sized enterprise networks as well as the edge or convergence access equipment of large finance and government portrait networks.

Feature highlights of RG-RSR30-44 Router:

- Multi-Service Integration
- Separate Management and Data Forwarding
- Multi-service Line Rate Concurrence
- Advanced QoS Policies

3 Product Features

3.1 Multi-Service Integration

Integration of Routing and Switching

- RSR30-44 provides rich switching modules and can provide 48 L2 switching interfaces to effectively combine the L2 switch and the router so that it completes the functions of a router while satisfying the users' requirements for LAN construction with routers to complete L2 data switching.
- The router and the switch are integrated in the same physical device, which reduces the number of equipment nodes, improves reliability and reduces the physical space taken up by two pieces of equipment.
- The Ethernet switching module provides perfect features of the L2 Ethernet switch and supports relevant protocols, such as VLAN, MAC address management, spanning tree protocol, port convergence, 802.1X, QoS and ACL.

Comprehensive Security Features

- With the built-in encryption engine for CPU, the encryption/decryption can be directly performed. This feature of RSR30-44 greatly improves the encryption/decryption performance and meets the encryption needs for large volume of data such as multimedia, to ensure the high performance in forwarding and encryption synchronization while saving the interface slots and decreasing the purchasing cost of users.
- RSR30-44 provides a full array of security functions, including IPSec VPN, Secure Shell (SSH) protocol, protection of intrusion and DDoS.
- RSR30-44 supports the Authentication, Authorization and Accounting (AAA) and supports the RADIUS, TACACS+ authentication protocol.

Integrated VPN Feature

- RSR30-44 supports the VPN functions such as IPSec, GRE, L2TP/PPTP and etc.
- RSR30-44 supports MPLS VPN and Multi-VRF functions.
- RSR30-44 supports the NAT Aware VRF function for the NAT application.

3.2 Separate Management and Data Forwarding

- RGOS adopts the advanced V-CPU design idea. The CPU resources are divided into management resources and data forwarding resources. The CPU resources can be automatically allocated between the two resources according to the busy condition, so that the management applications like CLI, SNMP, TELNET, and routing protocols

are not affected during the packet attacks and data forwarding of any densities.

3.3 Multi-service Line Rate Concurrency

- Using the traffic table technology. When the QoS, ACL, NAT, and PBR services are enabled, the packets are matched from the first packet. The subsequent packets of the same flow are matched by the traffic table without querying one by one. Based on the flow processing, the performance for processing 100 ACL and PBR packets is the same as that for processing 1000 packets. Enabling the ACL, QoS, PBR, and NAT services has little impact on the overall performance of the router.
- Organically integrated the new hardware architecture and structured software system, this function provides the services integrated with data, security, video and various upper-layer applications, to meet the current and future networking applications without affecting the existing data transmission of the router.
- Designed with the high-performance network processor, meeting the efficient data processing, supporting the high-density ports application, to ensure the network applications in high-speed environments.

3.4 Advanced QoS Policies

- With high bandwidth control accuracy of the QoS, the error is less than 1%.
- Supporting the congestion management and queuing policies such as PQ, FIFO, WFQ, CBWFQ, LLQ, and RTPQ.
- Supporting the congestion avoidance policies such as RED.
- Supporting the GTS traffic shaping policies.
- Supporting the CAR traffic monitoring policies.
- Providing small and medium-sized enterprises with high performance-cost-ratio multi-functional service platforms.

3.5 Rich Software Features

Unified RGOS Network Platform

- All the RSR series routers are operated with the advanced RGOS operating system, which provides rich and complete function to meet different applications.

Perfect IPv6 Protocol Solution

- The RSR series routers fully support the IPv4 and IPv6 dual protocol stacks, and support the protocols such as common IPv4 routing protocol, IPv6 routing protocol, multicast routing protocol, and static routing.

- The RSR series routers provide the rich migration solutions from IPv4 to IPv6, including the dual-stack technologies and tunneling technologies.

Creative Virtual Router Function (VRF)

- VRF can divide a router to multiple virtual routers logically. With the separate routing table and the corresponding interface participating in the data forwarding, each virtual router works like an independent router and the services of different virtual routers are isolated. This solves the problem to be isolated when multiple-type services are coexistence in a same physical device, further saves the investment on devices and telecommunication resources for the user.

MPLS Support

- The MPLS combines the L2 switching and L3 routing technologies. The MPLS VPN is increasingly popular for enterprise interconnection and provision of various new services, becoming an important means for IP network operators to provide value-added services.
- The RSR series routers support following functions: MPLS functions, LDP protocol (RFC3036), MPLS forwarding function, MPLS L3 VPN (RFC 2547 and 4364) and etc.

3.6 Fully Modular Design, Easy and Flexible

- The 2GE (Optical/electrical multiplexed) fast Ethernet L3 routing service interface is fixed on the RSR30-44.
- RSR30-44 provides 4 NMX module slots and 4 SIC module slots.
- RSR30-44 supports a broad range of high-density network modules that deliver varied functions to implement more combination applications.

3.7 Ease of Use and Management

- Using standard CLI for easier operation, to lower the cost for learning, using and maintenance.
- Supporting the SNMP protocol and the TFTP upload/download of the configuration files for easier network management.
- Supporting the Telnet/Console to implement the remote management and control conveniently.
- Diversified online upgrade for future functionality expansion.
- Providing two USB2.0 interfaces, for conveniently configuring the files on the device, file backup of the operation system and copy operation.

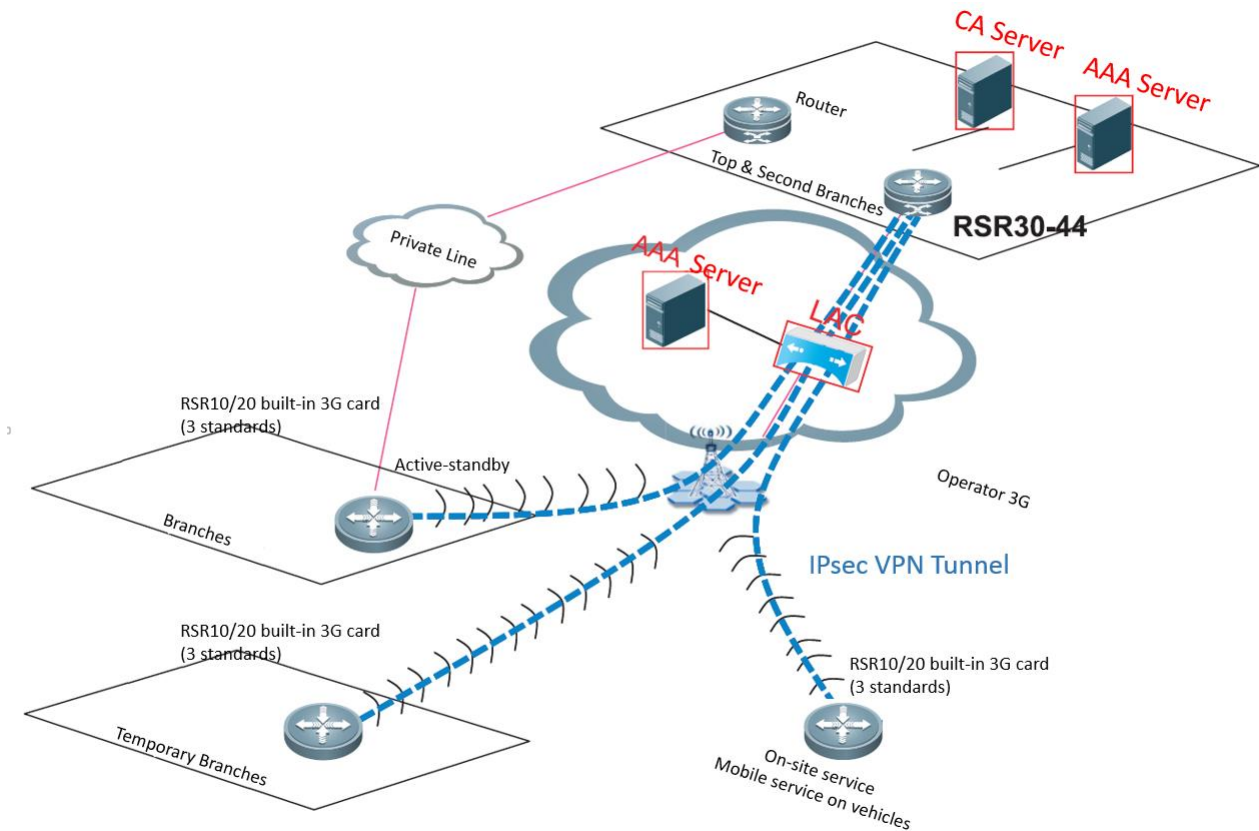
4 Technical Specifications

Model	RG-RSR30-44	
Fixed Ports	2 GE SFP Combo Ports 1 Console Port 1 AUX Port 2 USB2.0 Ports	
Module Slots	4 SIC Slots 4 NMX Slots	
Flash	512MB	
Memory	512MB	
Packet Forwarding Capacity	1Mpps	
LAN Protocol	Ethernet, 802.1Q, ARP	
WAN Protocol	HDLC, PPP, PPPoE Client, MP, , Frame Relay,	
Routing Protocol	Static Routing	
	Dynamic Routing	RIPv1/v2, OSPF, BGP4
	Multicast	IGMP v1/v2/v3, PIM-SM, PIM-DM, PIM-SSM
	PBR	
IPv6	Basic IPv6 Functions	IPv6 Forwarding, , IPv6 ACL, IPv6 Ping, IPv6 Tracert
	IPv6 Transition Technology	Manual tunnel, Auto tunnel, GRE tunnel, 6to4 tunnel, ISATAP tunnel
IP Application	Ping, Trace, Telnet, DNS Client, DDNS, NTP Server/Client, SNTP, DHCP Server/DHCP Relay/DHCP Client, uRPF, UDP Helper	
QoS	Congestion Management	FIFO, PQ, WFQ, CBWFQ, LLQ, RTPQ,
	Congestion Avoidance	RED
	Flow Classifying	Standard ACL, Extended ACL,
	Flow Supervision	CAR

Model	RG-RSR30-44	
	Flow Shaping	GTS
	Others	VLAN sub-interface QoS, channelized interface, MP QoS
Network Security	AAA	Local User, RADIUS,
	SSH	SSH v1.5, SSH v2.0
	NAT	NAT, NATP
	VPDN	L2TP, PPTP
	ACL	Standard ACL, extended ACL
	GRE IPIP IPSec	
IPSec	IPSec One-way Forwarding Capacity (AES256)	Up to 150Mbps
	IPSec VPN QoS	Support
High Availability	VRRP DLDP BFD	
Management	SNMP v1/v2/v3, MIB, Syslog, Console login, Telnet (VTY) remote, SSH management	
Dimensions (D x W x H)	412mm X 440mm X 160mm	
Rack Height	4U	
Weight	30kg	
MTBF	>200K hours	
Power Consumption	150W	
Input Voltage	100 VAC to 240 VAC	
Input Frequency	50Hz to 60Hz	
Power Redundancy	1+1	
Temperature	Operating temperature: 0°C to 40°C Storage temperature: -40°C to 55°C	
Humidity	Operating humidity: 10% to 90% RH Storage humidity: 5% to 90% RH	

5 Typical Application

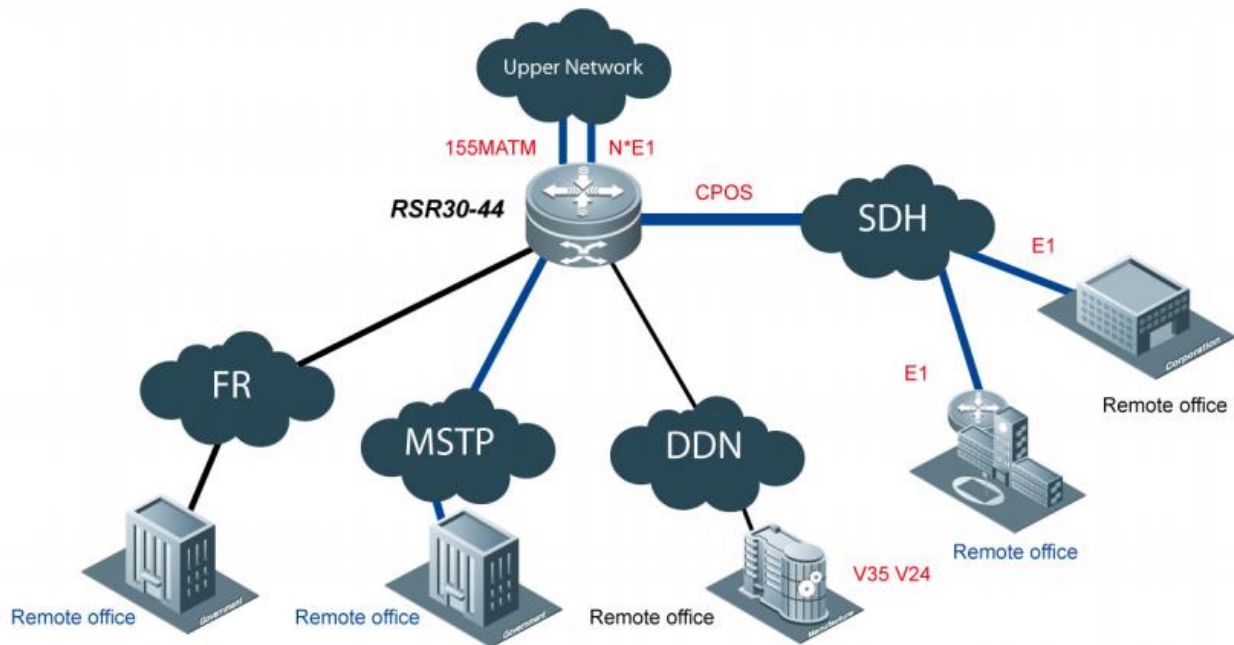
3G Wireless Secure Network



Application features:

- Ruijie RG-RSR30-44 is deployed at the core as aggregation router to support L2TP and IPsec VPN features.
- The SM1 hardware encryption card in RG-RSR30-44 supports high-performance IPsec VPN data encryption and decryption.

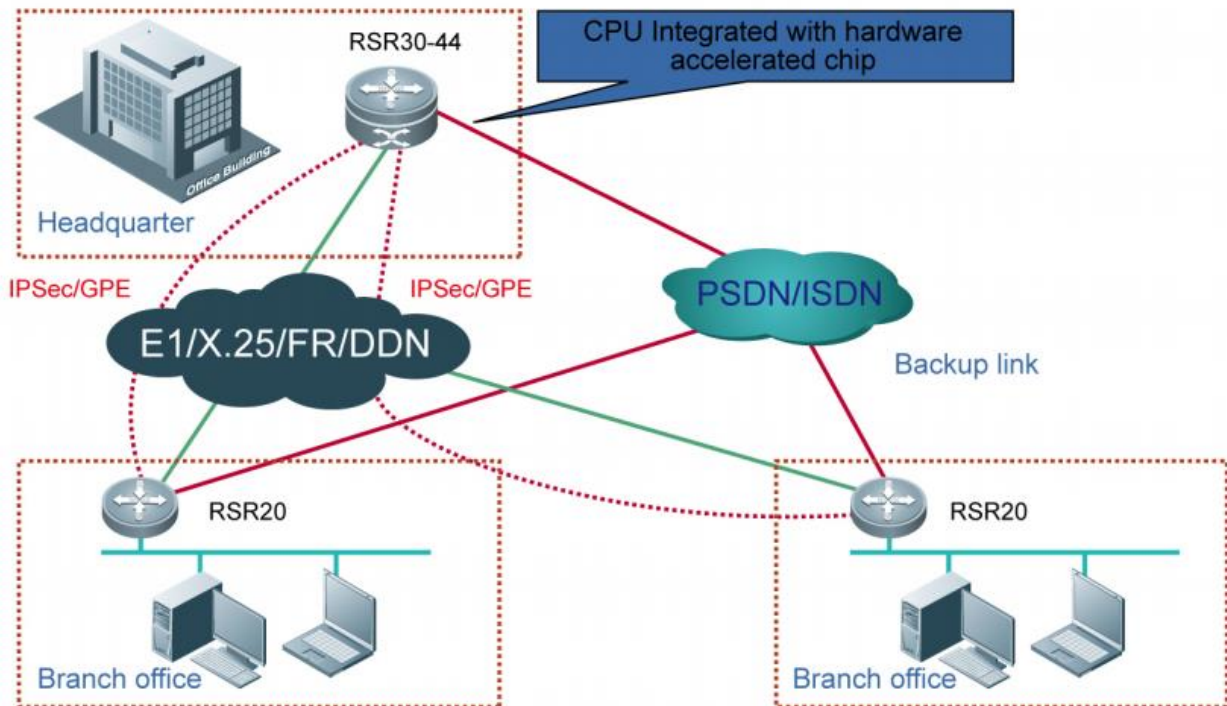
Networking with the Convergence Routers for the Private Network of Financial Institutions and Government Agencies



Application features:

- The center adopts the convergence router RSR30-44 provided by Ruijie, the access unit uses the RSR20 series routers.
- It supports multiple-type access methods like CPOS/POS/ATM/GE/FE/E1/V35/V24/ISDN/etc.
- It supports a full range of link protocols like ATM/FR/PPP/ATM/HDLC/X25/LAPB.
- It supports the networking in several ways such as ATM, SDH, MSTP, DDN, frame relay, X.25, ADSL, ISDN and etc.

Encrypted Secure Networking of the Center and Branches



Application features:

- The center uses the convergence routers RSR30-44. The branches can use RSR10 and RSR20 series routers.
- The built-in hardware encryption engine of the CPU on RSR30-44 can provide high-performance encryption/decryption requirements for the packets.
- RSR30-44 supports multiple-type access methods such as 155MPOS/CPOS, 155M ATM, MSTP, FR, X.25, E1, DDN, ISDN, etc.

6 Ordering Information

Basic Components for RG-RSR30-44 Router	
RG-RSR30-44	2-Port 10/100/1000Base-T, 2-Port GE SFP Combo, 1 RCM Slot, 4 NMX Slots, 4 SIC Slots, 1 USB Port, 1 Console Port, 1 AUX Port, 512MB DDRAM, 512MB Flash, RCM & FAN included, AC
RG-PA240R	RG-RSR30-44 power module
RG-RSR30-44 Router Interface Modules	
SIC-1E1-F	1-Port Non-channelized SIC Module (E1-F)
SIC-1CE1	1-Port Channelized E1 SIC Module
RG-RSR30-44 Router Interface Accessories	
Adapter/BNCF-BNCF/75 ohm	BNCF-BNCF Converter
CAB-Dualcore Multimode Fiber/LC-LC/3m	LC-LC Dual core Multimode Fiber
CAB-E1 balanced/DB9M-RJ45F/120 ohm/3m	E1 Cable, DB9M/RJ-45F (120ohm), 3m
CAB-E1 unbalanced/DB9M-2*BNC/75 ohm/3m	E1 Cable, DB9M/2*BNC (75ohm), 3m
CAB-E1 balanced/DB9M-RJ45M/120 ohm/3m	E1 Cable, DB9M/RJ-45M (120ohm), 3m
MINI-GBIC-SX-MM850	1000BASE-SX SFP Transceiver MM (850nm, 550m, LC)
MINI-GBIC-LX-SM1310	1000BASE-LX SFP Transceiver SM (1310nm, 10km, LC)
MINI-GBIC-LH40-SM1310	1000BASE-LH SFP Transceiver SM (1310nm, 40km, LC)
MINI-GBIC-ZX50-SM1550	1000BASE-ZX SFP Transceiver SM (1550nm, 50km, LC)
MINI-GBIC-ZX80-SM1550	1000BASE-ZX SFP Transceiver, SM (1550nm, 80km, LC)

7 More Information

For more information about the Ruijie RG-RSR30-44 Reliable Multi-Service Router, please visit <http://www.ruijienetworks.com> or contact your local Ruijie sales representative.



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