



# RG-RSR20-14E

## Router Datasheet

Ruijie Networks Co., Ltd

For further information, please visit our website <http://www.ruijienetworks.com>

## Product Overview

The Ruijie RG-RSR20-14E Router provides a next-generation network solution for branch offices of medium and large-sized enterprises. Through the power of Ruijie's advanced software technology and hardware support, the Ruijie RG-RSR20-14E Router 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.

The Ruijie RG-RSR20-14E Router offers exceptional features as follows:

- Integration of Routing and Switching
- Built-in 2-port GE WAN and 24-port FE LAN
- IPv6 Support
- 3G/4G WAN Module Support
- Integrated VPN Features

The Ruijie RG-RSR20-14E Router delivers advanced performance with forwarding capacity up to 600Kpps and service-rich features including ACL, PBR (Policy Based Routing), NAT (Network Address Translation), etc. The Router also supports Ruijie's leading high-speed packet forwarding technology REF (Ruijie Express Forwarding) and 2 Gigabit WAN combo ports to align to the current network requirements and future expansion needs.

## Product Features

### Multi-Service and Multi-Function

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#### Integration of Routing and Switching

- The Ruijie RG-RSR20-14E Router provides 24 Layer 2 FE ports and 2 Layer 3 GE ports with a wide range of Layer 2 and Layer 3 switching features.
- All switching Ethernet ports can be configured to support Layer 2 or Layer 3 interfaces and Layer 3 applications such as ACL (access control list) and QoS (Quality of Service).

#### 3G/4G WAN Module Support

- With optional CDMA2000 and WCDMA 3G WAN SIC module and 4G TD-LTE and FDD-LTE WAN SIC module, the Ruijie RG-RSR20-14E Router meets the customer needs of deploying 3G/4G resilience or offload solution.
- Up to 2 3G/4G modules are supported in the Ruijie RG-RSR20-14E Router, and thus 2 different Mobile ISPs can be selected for additional resiliency.

#### Integrated Voice and Video Functions

- Provides IP phone modules including FXS and FXO.
- Supports standard SIP, H.323 protocol stacks and the GK interface.

#### Integrated Security Features

- Supports hardware-based encryption.
- Provides various security features including firewall, IPSec VPN, Secure Shell (SSH) protocol, intrusion protection, anti-DDoS and attack prevention.
- Supports Authentication, Authorization and Accounting (AAA), RADIUS, and TACACS+ authentication protocol.

### Integrated VPN Features

- Supports IPsec VPN and GRE VPN.
- Supports the VPDN applications of the L2TP/PPTP.
- Supports L2TP/PPTP penetration for NAT applications.

### Separate Management and Data Forwarding

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- With the advanced virtual CPU design concept adopted in the RGOS, the Ruijie RG-RSR20-14E Router can divide CPU resources into management resources and data forwarding resources which are allocated automatically based on the traffic.
- This guarantees the management applications like CLI (command-line interface) and SNMP (Simple Network Management Protocol) are protected against malicious attack traffic.

### Modular Design

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- Built in with 2 10/100/1000Base-T ports, 2 GE SFP combo WAN ports and 24 10/100Base-T LAN ports.
- Provides 4 slots for SIC network/voice modules to support diversified modules with various functions.

### High Performance

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- The forwarding capacity of the Ruijie RG-RSR20-14E Router is up to 600Kpps, which achieves high performance for all services such as ACL, PBR (Policy Based Routing), NAT (Network Address Translation), etc.
- The Ruijie RG-RSR20-14E Router is integrated with 2 Gigabit WAN combo ports, which can meet customers' current and future needs.
- The flow table technology is adopted such that when QoS, ACL, NAT and PBR services are enabled, the first packet is matched item by item, and the subsequent packets of the flow are matched according to the flow table. Thus, the processing performance is the same for any amount of ACLs and PBRs. This reduces the impact of ACL, QoS, PBR, and NAT services on the routing performance.
- Through the power of Ruijie's advanced software technology and hardware support, the Ruijie RG-RSR20-14E Router provides users with integrated data, security, voice, video and upper-layer applications.
- Supports current and future Internet applications without destructing the original data transmission functions.

### Efficient and Fast Forwarding

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- The Ruijie RG-RSR20-14E Router adopts REF (Ruijie Express Forwarding), a high-speed packet forwarding technology of Ruijie Networks, which optimizes the data forwarding efficiency and offers high performance.

## Advanced QoS Policies

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- Generic Traffic Shaping (GTS) can be activated using RGOS and the QoS queuing mechanism can be enabled, which supports the QoS on high-bandwidth MSTP links.
- Adopts the congestion management policies including PQ, CQ, FIFO, WFQ, CBWFQ, LLQ, and RTPQ.
- Adopts the congestion avoidance policy WRED.
- Supports GTS-based traffic shaping and CAR-based traffic policing.
- Provides QoS policies based on the CTCP and CRTP link efficiency.
- Supports voice packet priority.

## Flexible RGOS Platform

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### Unified RGOS Network Platform

- Operates on the advanced RGOS system to provide diversified functions and cater for different applications.

### Virtual Routing Forwarding (VRF)

- Supports VRF services to further reduce the capital investment on equipment and telecommunication resources.

## Ease of Use

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- Standard CLI is adopted in the Ruijie RG-RSR20-14E Router which simplifies the operation and minimizes the maintenance costs.
- Maintains configuration retrieval process with SNMP protocol and TFTP for easy network management.
- Supports Telnet/Console for convenient remote management and control.
- Provides various online upgrade methods to facilitate the RG-RSR20-14E future expansion needs.
- Provides improved stability with antistatic steel chassis and dustproof ventilation grid.

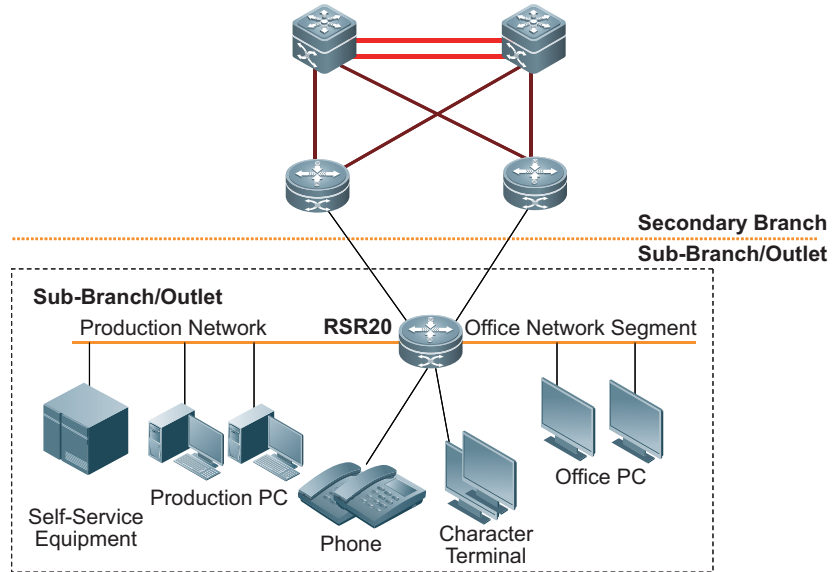
## Technical Specifications

Model	RG-RSR20-14E	
Fixed Ports	24 10/100Base-T LAN ports 2 10/100/1000Base-T ports 2 GE SFP Combo WAN ports 1 Console port 1 AUX port 1 USB2.0 port 1 SD slot	
Module Slots	4 SIC slots	
Flash	128MB	
Memory	512MB	
3G/4G Support	3G SIC card (WCDMA, CDMA2000) 4G SIC card (TD-LTE, FDD-LTE)	
Packet Forwarding Rate	600Kpps	
LAN Protocol	Ethernet, 802.1Q, AP, ARP	
WAN Protocol	PPPoE Client, FR, HDLC, MP, SIC-3G (WCDMA, CDMA2000), SIC-4G (TD-LTE, FDD-LTE), X.25, LAPB, SLIP	
Routing Protocol	Static routing, RIPv1/v2, OSPFv2, BGP4, IGMP v1/v2/v3, PIM-SM, PIM-DM, PIM-SSM, PBR	
IP Application	Ping, Trace, Telnet/Reverse 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, MQC
	Congestion Avoidance	WRED
	Flow Classifying	Standard ACL, extended ACL, DSCP, IP Precedence
	Flow Supervision	CAR, LCAR
	Flow Shaping	GTS
	Link Efficiency	CTCP, CRTP
	Others	VLAN sub-interface QoS, channelized interface, MP QoS
Network Security	AAA	Local User, RADIUS, TACACS+, IP Account
	SSH	SSH v1.5, SSH v2.0
	Firewall	Dynamic packet filter, state detection, attack defense, URL filtering
	NAT	NAT, NATP
	GRE	
	IPSec	

Model	RG-RSR20-14E	
IPSec	IPSec Tunnel	1K
	IPSec One-Way Forwarding Capacity (AES256)	Up to 310Mbps
	IPSec VPN QoS	Support
High Availability	VRRP, DLDP, BFD	
Management	SNMP v1/v2/v3, MIB, SYSLOG, Console login, Telnet (VTY) remote, SSH management	
Modules	SIC-1HS: 1-Port High-speed Synchronous Module SIC-1A: 1-Port Asynchronous Module SIC-8A: 8-Port Asynchronous Module SIC-1B-U: 1-Port ISDN Module (U Interface) SIC-1B-S/T: 1-Port ISDN Module (S/T Interface) SIC-1E1-F: 1-Port E1 Module SIC-1CE1: 1-Port E1 Module SIC-2FXS: 2-Port FXS Voice Module SIC-2FXO: 2-Port FXO Voice Module SIC-3G-WCDMA: 3G Wireless WAN Interface Module, WCDMA Mode SIC-3G-WCDMA-H-E: 3G Wireless WAN Interface SIC Module, HSPA+, WCDMA Mode SIC-3G-CDMA: 3G Wireless WAN Interface Module, CDMA2000 Mode	
Dimensions (D x W x H) (mm)	300 × 440 × 44	
Rack Height	1RU	
Weight (Maximum)	5kg	
MTBF	>140K hours	
Power Consumption (Maximum)	47W	
Input Voltage	110VAC to 240VAC	
Input Frequency	50Hz to 60Hz	
Temperature	0°C to 45°C	
Humidity	10% to 95%RH	

# Typical Applications

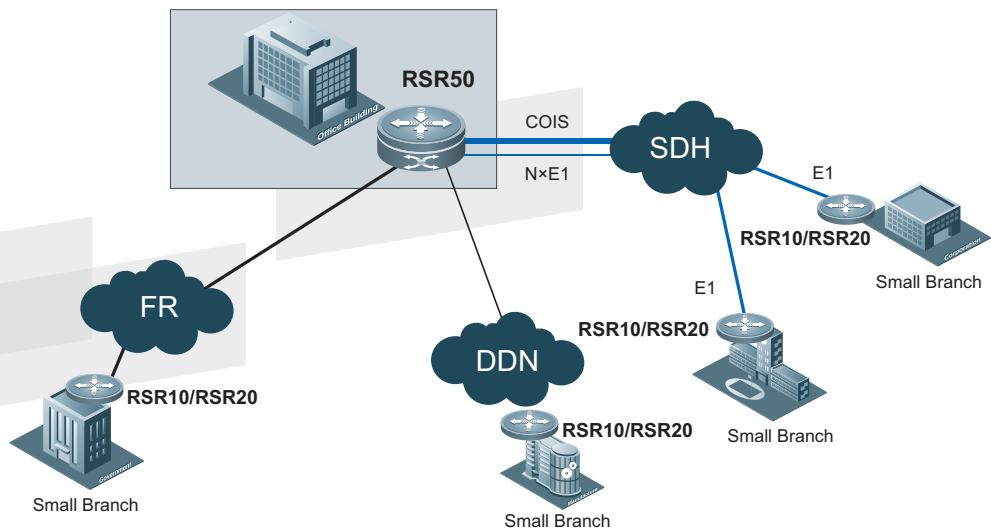
## Financial Outlets Access Application



### Application features:

- Adopts switch modules, voice modules, asynchronous port modules of the Ruijie RG-RSR20-14E Router to meet different application needs.
- Supports 4 to 52 IP terminals or PCs.
- Caters to different access lines of MSTP, E1, DDN, ISDN and dialup.

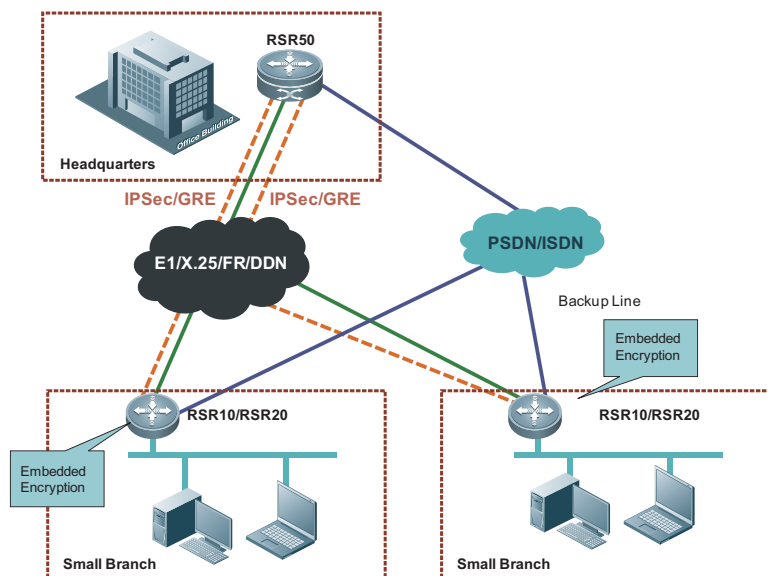
## Small Business Branches Edge Access



Application features:

- The headquarter can adopt the RG convergence routers such as the Ruijie RG-RSR50 router, and branches can adopt the Ruijie RG-RSR10 and RG-RSR20 routers.
- Supports various access modes including CPOS, FE, E1, V35, V24, ISDN, and dialup.
- Supports a wide range of link protocols including FR, PPP, ATM, HDLC, X25, and LAPB.
- Performs networking through various methods including DDN, frame relay, X.25, ADSL and ISDN.

## Small Branches Encryption Application



Application features:

- The headquarter can adopt the Ruijie convergence routers such as the Ruijie RG-RSR50 router, and branches can adopt the Ruijie RG-RSR10 and RG-RSR20 routers.
- The Ruijie RG-RSR10/20 router has embedded encryption engines which can build IPSec channel connecting the headquarter for enhanced security.
- The Ruijie RG-RSR10/20 router supports diversified access methods including MSTP, FR, X.25, E1, DDN, asynchronous dialup and ISDN.



## Ordering Information

Model	Description
RG-RSR20-14E	24-Port 10/100Base-T LAN, 2-Port 10/100/1000Base-T and 2 GE SFP Combo WAN, 1 Console Port, 1 AUX Port, 1 USB Port, 1 SD Slot, 4 SIC Slots
<b>RG-RSR20-14E Router SIC Modules</b>	
SIC-1HS	1-Port High-speed Synchronous Serial Port Interface Card
SIC-1B-U	1-Port ISDN Basic-Rate U Interface Card
SIC-1B-S/T	1-Port ISDN Basic-Rate S/T Interface Card
SIC-1E1-F	1-Port Non-channelized E1 Interface Card
SIC-1CE1	1-Port Channelized E1 Interface Card
SIC-1A	1-Port High-speed Asynchronous Serial Port Interface Card
SIC-8A	8-Port High-speed Asynchronous Serial Port Interface Card
SIC-2FXS	2-Port FXS Voice Interface Card
SIC-2FXO	2-Port FXO Voice Interface Card
SIC-4ESW	4-Port 100Base-T Fast-Ethernet Switching Interface Card
SIC-3G-WCDMA	3G Wireless WAN Interface SIC Module Card Supporting GPRS/EDGE/UMTS/HSPA
SIC-3G-WCDMA-H-E	3G Wireless WAN Interface SIC Module, HSPA+, WCDMA Mode
SIC-3G-CDMA	3G Wireless WAN Interface Module, CDMA2000 Mode
<b>RG-RSR20-14E Router Interface Accessories</b>	
Adapter/RJ45F-DB9F	RJ45F-DB9F Converter
Adapter/RJ45F-DB25M	RJ45F-DB25M Converter
Adapter/RJ45F-DB25F	RJ45F-DB25F Converter
Adapter/BNCF-BNCF/75ohm	BNCF-BNCF Converter
CAB-Dual core Multimode Fiber/LC-LC/3m	LC-LC Dual core Multimode Fiber
CAB-Asy/SCSIDB68-8*RJ45M/1.5m	68 Pin to 8 Male RJ-45 Router Asynchronous Card SCSI Interface Cable
CAB-Asy/SCSIDB68-8*RJ45F/1.5m	68 Pin to 8 Female RJ-45 Router Asynchronous Card SCSI Interface Cable
CAB-V.35DTE/POS26-34PM/3m	V.35DTE Cable/POS26-V.35
CAB-V.35DCE/POS26-34PF/3m	V.35DCE Cable/POS26-V.35
CAB-V.24DTE/POS26-DB25M/3m	232DTE Cable/POS26-DB25
CAB-V.24DCE/POS26-DB25F/3m	232DCE Cable/POS26-DB25
CAB-V.35DTE-V.35DCE/POS26-POS26/1m	Cable for Network Lab, V.35 DTE-V.35 DCE (POS26 at Both Ends), 1m

Model	Description
CAB-E1 balanced/DB9M-RJ45F/120ohm/3m	E1 Cable, DB9M/RJ-45F (120ohm), 3m
CAB-E1 unbalanced/DB9M-2*BNC/75ohm/3m	E1 Cable, DB9M/2*BNC (75ohm), 3m
CAB-E1 balanced/DB9M-RJ45M/120ohm/3m	E1 Cable, DB9M/RJ-45M (120ohm), 3m
CAB-E1 unbalanced/DB25M-8*BNC/75ohm/3m	E1 Cable, DB25M/8*BNC (75ohm), 3m
CAB-E1 balanced/DB25M-4*RJ45M/120ohm/3m	E1 Cable, DB25M/4*RJ-45M (75ohm), 3m
Mini-GBIC-SX	1000Base-SX SFP Transceiver, MM (850nm, 550m, LC)
Mini-GBIC-LX	1000Base-LX SFP Transceiver, SM (1310nm, 10km, LC)
Mini-GBIC-LH40	1000Base-LH SFP Transceiver, SM (1310nm, 40km, LC)
Mini-GBIC-ZX50	1000Base-ZX SFP Transceiver, SM (1550nm, 50km, LC)
Mini-GBIC-ZX80	1000Base-ZX SFP Transceiver, SM (1550nm, 80km, LC)
SDH155-SFP-SX-MM850	155M SFP Transceiver, MM (850nm, 1km, LC)
SDH155-SFP-SX-MM1310	155M SFP Transceiver, MM (1310nm, 2km, LC)
SDH155-SFP-LH80-SM1550	155M SFP Transceiver, MM (1550nm, 80km, LC)
ANT-RJ3G0MA-S	Spare Antenna for 3G Module (Omnidirectional Antenna, 824-960MHz, 1.8dBi/1710-2170MHz, 2.0dBi, SMA-J Interface)
ANT-RJ3G3MA	Omnidirectional Antenna, 824-960MHz/1710-2170MHz, 3.5dBi, Vertical Polarization, 50W, SMA-J Interface, Fixing by magnetic force, mobile terminal antenna, 3m Extension Cable



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