

# Ruijie RG-WALL 1600

## Next-Generation Firewall Series Datasheet

Ruijie RG-WALL 1600 Firewall Series is a collection of next-generation firewall offering security, routing and switching features all in one with extensive interface varieties and flexible configuration. The firewall is an ideal partner for government, medical, enterprise, network operator, finance, education and military network deployments. Teaming up with Ruijie's leading switch and router series, the firewall can act as a network gateway and provide a secure connection between different policy areas, providing users with an end-to-end solution that best fits their actual needs.

### HIGHLIGHTS

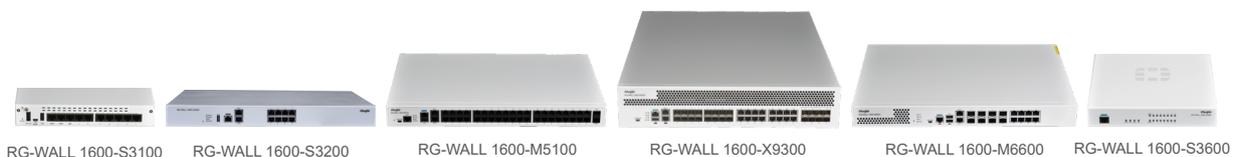
- Hardware Acceleration with Superior Performance (From 1.5Gbps to 80Gbps FW Throughput)
- Built-in Advanced Firewall, IPS, Anti-X Features Protection
- Security, Switching & Routing All-In-One (Up to 42 GE Ports & 8 10GE Ports)
- Comprehensive Logs and Audits (With Internal Storage)

### Hardware Acceleration with Outstanding Performance

With ASIC hardware chip acceleration technology, the firewall's performance is independent of the number of policies and dialogues. The internal core layer at the same time handles all the reception, categorization, forwarding of packets to fully eliminate network traffic bottleneck. The firewall greatly enhances the processor performance on the application layer security inspection. Various modules such as anti-virus, IPS, behavior monitoring and anti-spam are available to enhance the overall performance.

### Feature-rich Security Device

The RG-WALL 1600 Firewall Series enables user-based, intelligent network deployment and access control in terms of users, resources and applications. The feature-rich firewall offers in-depth status inspection, defense against external attacks, intranet security, traffic control, email filtering, website filtering, application filtering, etc. The firewall also delivers an extensive library of smart analysis and management features, supporting email alerts and various system logs for streamlined operation. Multiple forms of VPN deployment are enabled with GRE, L2TP and IPsec supporting features. The firewall sustains exceptional routing performance for NAT, static/RIP/OSPF routing policies. It also supports hot backup of dual devices, allowing Active/Active and Active/Standby modes and comprehensive QoS features. The RG-WALL 1600 Firewall Series fully meets the demands of high network reliability.



## Integration of Security, Switching & Routing for Cost Saving

The security, routing and switching all-in-one product supports a wide range of firewall features such as security policies, NAT, VPN and web protection. The firewall also delivers various switching interfaces, which enable direct firewall deployment for government branch offices, hospitals, primary and secondary schools, enterprise branches and settings alike. Deploying as network gateway, the RG-WALL 1600 Firewall Series is an ideal replacement for router and hence offers exceptional cost savings.

## PRODUCT FEATURES

### Hardware Acceleration with Superior Performance

The RG-WALL 1600 Firewall Series deploys ASIC hardware chip acceleration technology to achieve isolated processing of application recognition, anti-virus and traffic control modules. The feature speeds up the operation efficiency of multiple modules running simultaneously, enhancing the overall device performance.

### New Security & Protection Features

The firewall achieves access control based on users, resources and applications. The versatile product supports integration with user authentication system for unified policy configuration. The feature hence enables visualized security management in a faster and more efficient manner. Full multi-service protection is hence available for firewall, VPN and UTM. The excellent performance of anti-virus, IPS, flow control and web filtering offers comprehensive network security. Extra protection features include DoS/DDoS protection, MAC and IP addresses binding, intelligent anti-worm technology, protection against ARP attacks, labeling TCP packet as illegal attacks and protection against super large ICMP packet attacks. The firewall supports hot backup of dual devices, and Active/Active and Active/Passive modes for load balancing and service backup. It supports synchronization of signature library and policy database and also enables dual deployment of configuration documents.

### Unsurpassed Multi-service Protection

The RG-WALL 1600 Firewall Series deploys a unified database of signatures and an engine for analytics. The features thereby enhance the operation efficiency of multi-service modules running at the same time. The device also maintains premier performance even when all functions are in full operation, fulfilling user demands on high performance and security.

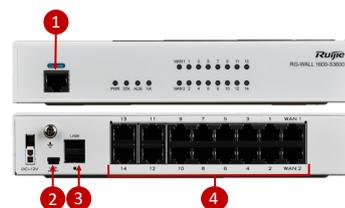
### Unified & Simplified Management

The firewall enables configuration of all features in a single page including policy, time, anti-virus, IPS and flow control, which greatly reduces the workload of network management, avoids network fault caused by policy conflicts and achieves the user-oriented configuration management concept.

### Security, Switching & Routing All-in-One

To offer all-rounded protection, the Firewall Series provides up to 42 GE ports, 16 SFP ports and 8 SFP+ ports to meet the access requirements at different scenarios with no additional equipment required. The routing features of the firewall can also be implemented at the network gateway for Internet connection, further maximizing cost savings.

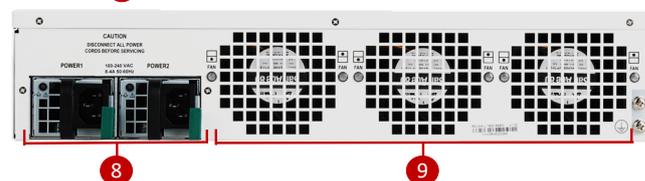
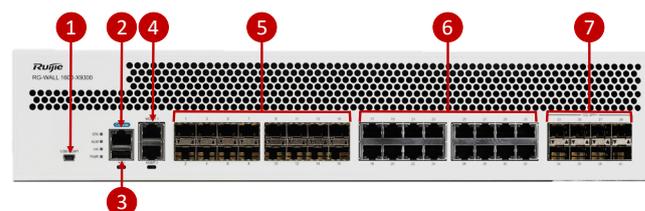
### Hardware Highlights



RG-WALL 1600-S3600

### Interfaces

1. Console Port
2. USB Management Port
3. 2 USB Ports
4. 16 GE Ports



RG-WALL 1600-X9300

### Interfaces

1. USB Management Port
2. Console Port
3. USB Port
4. 2 Management Ports
5. 16 SFP Ports
6. 18 GE Ports (Including 2 Management Ports)
7. 8 SFP+ Ports
8. Dual Power Supply
9. 3 Fan Trays

## Comprehensive Logs and Audits

The firewall offers a broad spectrum of logs, traffic statistics and analysis functions. It also provides event monitoring, statistical features, email alerts, working with the log management system to complete log record, enquiry and analytics.

## In-depth User / Application Detection

With the next-generation application recognition engine, the firewall can detect and analyze network traffic without latency. Based on user/ application in-depth fine-grained recognition, the

firewall minimizes the number of protection policies, achieves comprehensive security protection for mobile office and application detection of smart devices.

## Advanced Energy Efficiency

The firewall deploys a market-leading chip delivering unequalled energy and noise reduction. The modular power supply highly enhances energy efficiency, supporting long-hour operation in harsh environment.

## TECHNICAL SPECIFICATIONS

Model		RG-WALL 1600-S3100	RG-WALL 1600-S3200	RG-WALL 1600-S3600	RG-WALL 1600-M5100	RG-WALL 1600-M6600	RG-WALL 1600-X9300
Hardware Specifications	Fixed Ports	10 GE ports (RJ45)	10 GE ports (RJ45)	16 GE ports (RJ45)	42 GE ports (RJ45), 2 SFP ports	10 GE ports (RJ45), 8 SFP ports	18 GE ports (RJ45), 8 SFP+ ports, 16 SFP ports
	Console Port	1					
	USB Port	1 for client, 1 for server	1	1 for client, 2 for server	1 for client, 1 for server	1 for client, 2 for server	1 for client, 1 for server
	Flash & Storage	Flash:4GB Storage: NA	Flash:8GB Storage: NA	Flash:2GB HD:32GB	Flash:16GB HD:64GB	Flash:16GB Storage: NA	Flash:32GB HD:240GB
	Memory	DDR3 2GB	DDR3 2GB	DDR3 2GB	DDR3 4GB	DDR3 8GB	DDR3 16GB
Performance and Capacity	Firewall Throughput (64/ 512/ 1518 bytes)	Up to 1.5Gbps	Up to 3.5Gbps	Up to 3.5Gbps	Up to 4Gbps	Up to 16Gbps	Up to 80Gbps
	Firewall Latency	4μs	4μs	4μs	6μs	3μs	3μs
	Maximum Concurrent Sessions	500K	1Mil	1.5Mil	3.2Mil	6Mil	12Mil
	New Sessions/ Sec	Up to 4K	Up to 10K	Up to 4K	Up to 77K	Up to 200K	Up to 250K
	IPsec VPN Throughput	1Gbps	2Gbps	1Gbps	1.3Gbps	14Gbps	50Gbps
	IPsec Tunnels	200	200	200	2K	2K	10K
	IPS Throughput	200Mbps	500Mbps	275Mbps	2.1Gbps	2.8Gbps	11Gbps
Deployment Mode	Transparent Mode	Support					
	Routing Mode	Support					
	Hybrid Mode	Support					
	NAT (Network Address Translation)	Support					
Firewall Features	MAC/IP Binding	Support					

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Routing Features	OSPF Dynamic Routing	Support					
	RIP Dynamic Routing	RIPv1/v2 support					
	Static Routing	Support					
	H.323 over NAT	Support					
	Policy-Based Routing, Rule-based Routing	Support					
	DHCP	Support DHCP Server, DHCP Client, DHCP Relay					
	PPPoE	Support					
VPN Features	VPN Tunnels	Flexible on-demand configuration					
	Types of VPN Supported	GRE, L2TP, PPTP, IPsec					
	Encryption Standard	DES, 3DES, AES					
	Authentication Algorithm	SHA1, MD5					
	Perfect Forward Secrecy (PFS)	Support					
	IPsec Protocol	Support					
	Manual Key, IKE	Support					
	Peer Authentication	Extensible Authentication Protocol Support					
	IPsec NAT Traversal	Support					
	Dynamic VPN Access	Support					
	QoS	Support					
Collaboration With Other Mainstream VPN Devices	Support						
Content Filtering	URL Filtering	Support					
	Web Content Filtering	Support					
	Script, Cookie Filtering	Support					
	Web Proxy Filtering	Support					
	Anti-Spam	Support					
	Email Address Filtering	Support					
	Email Attachments Shield	Support					
	Email Size Filtering	Support					
	Policy-Based Content Filtering	Support					

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Anti-Virus	Virus Filtering Based on HTTP\FTP\SMTP\POP3\IMAP Protocol	Support					
	Virus Filtering for IM File Transfers	Support					
	VPN Traffic Virus Filtering	Support					
	Blocking Specific File Types	Support					
	Online Virus Database Updates	Support					
Intrusion Detection and Prevention	Self-Recognition Protocol	Support					
	Attack Signature Database	Support					
	Anti Worms, Backdoor Trojans, Phishing and Other Attacks	Support					
	Multiple Policy Sets	Support					
	Signature Database Upgrade	Support					
	Customized Signature Database	Support					
IPv6	IPv6 Ready Certificate	Support					
	IPv4/IPv6 Dual Stack	Support					
	Policy/Content Filtering/IPS Inspection/Traffic Control/VPN	Support					
	Static Route/RIPng/OSPFv3	Support					
	IP-based Traffic Control	Support					
	DHCPv6 Server and Relay	Support					

Model		RG-WALL 1600-S3100	RG-WALL 1600-S3200	RG-WALL 1600-S3600	RG-WALL 1600-M5100	RG-WALL 1600-M6600	RG-WALL 1600-X9300
Internet Behavior Management	IM Software Login and File Transfer Control	Support					
	Speed Control of P2P Software	Support					
	Streaming Media Software Speed Control	Support					
	Online Game Control	Support					
	Stock Software Control	Support					
System Management	Local Administrator Database	Support					
	Restrictive Management Network	Support					
	Administrators Classification	Support					
	Software and Signature Updates	Support					
	Time Synchronization	Support					
	Configuration Changes	Support web, command line					
	Certificate Authentication	Support					
	Management Methods	Support web, command line					
	Standard MIB or Private MIB	Support					
	SNMP	Support SNMPv1/v2/v3					
	Centralized Management	Support					
	Local Management	Support					
	Remote Management	Support					
	Shell Session	Support					
Virus Database Updates	Support						
Logs Monitoring	Internal Log Database	Support					
	External Log Server	Support					
	Remote System Log Server	Support					
	Real-Time Statistics	Support					
	Log Level	Support					
	Log Backup	Support					
	System Status Display	Support					
	Alarm Mode	Support					

Model		RG-WALL 1600-S3100	RG-WALL 1600-S3200	RG-WALL 1600-S3600	RG-WALL 1600-M5100	RG-WALL 1600-M6600	RG-WALL 1600-X9300
High Availability	HA Mode	Support routing mode and transparent mode HA					
	Configuration File/ Change Synchronization	Support configuration and status synchronization					
	Signature Database Synchronization	Support					
	HA Device Authentication	Support					
	HA Data Encryption	Support					
Dimensions (W x D x H) (mm)		216 x 148 x 38	432 x 252 x 44	216 x 223 x 44	432 x 298 x 44	432 x 322 x 44	438 x 554 x 89
Weight		0.9kg	3.3kg	1.6kg	4.2kg	4.9kg	14.7kg
Power Redundancy		N/A	N/A	N/A	Support (External FRPS-100)	Support (External FRPS-100)	Support (built-in)
Power Consumption		14W	25.5W	22W	98W	202W	406W
Temperature		Operating Temperature: 0°C to 40°C					
		Storage Temperature: -25°C to 70°C					
Humidity		Storage Humidity: 20% to 95%					

## TYPICAL APPLICATIONS

The Ruijie RG-WALL 1600 Firewall Series offers strengthened security protection with integrated features such as the built-in anti-virus, intrusion detection and prevention. The advanced firewall with high-performance hardware platform achieves fast safety inspection and control, enhancing access efficiency of key services. Business-based security policies are also available to guarantee the legitimacy of business access and to enhance the accuracy of safety logs. The Ruijie RG-WALL 1600 Firewall Series allows unified management features such as real-time monitoring of device operation status, integrated log reports and centralized distribution of policies for comprehensive network protection.

### Data Center Edge Security

The next-generation firewall can be deployed with data center switches through Gigabit or 10 Gigabit ports to achieve a fully non-blocking data center network, ensuring network security and flexible service deployment. The following values can be achieved:

- High-performance packet inspection ensures the access performance of the data center
- The virtual firewall enables server resources migration protection
- Fine-grained application protection against security threats such as viruses and attacks

### Campus Network Gateway Security

The firewall can be deployed as the campus network gateway to meet the application requirements of the campus network, enhance information security and offer protection for the campus network services. The following values can be achieved:

- Effectively protect key services from intrusion and viruses
- Auto switching of multiple links to achieve high resiliency and operation continuity
- Real-time surveillance for transparent security management

### University Campus Network Gateway

The next-generation high-performance data center firewall provides better support for IPv6 to meet the university campus network requirements and enhance information security for the campus network, thereby offering the following values:

- Deliver up to 80Gbps high-performance throughput to better meet the university campus network requirement of large number of users
- Support IPv6 features including IPv6 traffic control and security policies to provide security protection for the IPv6 services and applications of the university
- Enable virtualized firewall for enforcing security policies for different services

## ORDERING INFORMATION

Model	Description
RG-WALL 1600-S3100	RG-WALL 1600-S3100 Next-Gen Firewall (10 GE ports, 1U)
RG-WALL 1600-S3200	RG-WALL 1600-S3200 Next-Gen Firewall (10 GE ports, 1U)
RG-WALL 1600-S3600	RG-WALL 1600-S3600 Next-Gen Firewall (16 GE ports, 1U)
RG-WALL 1600-M5100	RG-WALL 1600-M5100 Next-Gen Firewall (42 GE ports, 2 SFP ports, 1U)
RG-WALL 1600-M6600	RG-WALL 1600-M6600 Next-Gen Firewall (10 GE ports, 8 SFP ports, 1U)
RG-WALL 1600-X9300	RG-WALL 1600-X9300 Next-Gen Firewall (18 GE ports, 8 SFP+ ports, 16 SFP ports, 2U)
<b>License</b>	
RG-WALL 1600-S3100-LIS-1Y	RG-WALL 1600-S3100 Anti-Virus Signature Database, IPS Signature Database, Application Signature Database, Spam Database and Website Classification Database 1-Year License
RG-WALL 1600-S3200-LIS-1Y	RG-WALL 1600-S3200 Anti-Virus Signature Database, IPS Signature Database, Application Signature Database, Spam Database and Website Classification Database 1-Year License
RG-WALL 1600-S3600-LIS-1Y	RG-WALL 1600-S3600 Anti-Virus Signature Database, IPS Signature Database, Application Signature Database, Spam Database and Website Classification Database 1-Year License
RG-WALL 1600-M5100-LIS-1Y	RG-WALL 1600-M5100 Anti-Virus Signature Database, IPS Signature Database, Application Signature Database, Spam Database and Website Classification Database 1-Year License
RG-WALL 1600-M6600-LIS-1Y	RG-WALL 1600-M6600 Anti-Virus Signature Database, IPS Signature Database, Application Signature Database, Spam Database and Website Classification Database 1-Year License
RG-WALL 1600-X9300-LIS-1Y	RG-WALL 1600-X9300 Anti-Virus Signature Database, IPS Signature Database, Application Signature Database, Spam Database and Website Classification Database 1-Year License
<b>Optional Accessories</b>	
RG-RPS 100M	External Redundant Power System (RPS) System for RG-Wall 1600-M5100 and M6600 series firewall

