

SRX300 Line of Services Gateways for the Branch



Product Overview

The SRX300 line of services gateways combines security, routing, switching, and WAN interfaces with next-generation firewall and advanced threat mitigation capabilities for cost-effective, secure connectivity across distributed enterprise locations. By consolidating fast, highly available switching, routing, security, and next-generation firewall capabilities in a single device, enterprises can remove network complexity, protect and prioritize their resources, and improve user and application experience while lowering total cost of ownership (TCO).

Product Description

Juniper Networks® SRX300 line of services gateways delivers a next-generation networking and security solution that supports the changing needs of cloud-enabled enterprise networks. Whether rolling out new services and applications across locations, connecting to the cloud, or trying to achieve operational efficiency, the SRX300 line helps organizations realize their business objectives while providing scalable, easy to manage, secure connectivity and advanced threat mitigation capabilities. Next-generation firewall and unified threat management (UTM) capabilities also make it easier to detect and proactively mitigate threats to improve the user and application experience.

The SRX300 line consists of four models:

- **SRX300:** Securing small branch or retail offices, the SRX300 Services Gateway consolidates security, routing, switching, and WAN connectivity in a small desktop device. The SRX300 supports up to 1 Gbps firewall and 300 Mbps IPsec VPN in a single, consolidated, cost-effective networking and security platform.
- **SRX320:** Securely connecting small distributed enterprise branch offices, the SRX320 Services Gateway consolidates security, routing, switching, and WAN connectivity in a small desktop device. The SRX320 supports up to 1 Gbps firewall and 300 Mbps IPsec VPN in a single, consolidated, cost-effective networking and security platform.
- **SRX340:** Securely connecting midsize distributed enterprise branch offices, the SRX340 Services Gateway consolidates security, routing, switching, and WAN connectivity in a 1 U form factor. The SRX340 supports up to 3 Gbps firewall and 600 Mbps IPsec VPN in a single, consolidated, cost-effective networking and security platform.
- **SRX345:** Best suited for midsize to large distributed enterprise branch offices, the SRX345 Services Gateway consolidates security, routing, switching, and WAN connectivity in a 1 U form factor. The SRX345 supports up to 5 Gbps firewall and 800 Mbps IPsec VPN in a single, consolidated, cost-effective networking and security platform.

SRX300 Highlights

The SRX300 line of services gateways consists of secure routers that bring high performance and proven deployment capabilities to enterprises that need to build a worldwide network of thousands of remote sites. Ethernet, serial, T1/E1, xDSL, and 3G/4G LTE wireless are all available options for WAN or Internet connectivity to link sites. Industry best, high-performance IPsec VPN solutions provide comprehensive encryption and authentication capabilities to secure intersite communications. Multiple form factors with Ethernet switching support on native Gigabit Ethernet ports allow cost-effective choices for mission-critical deployments. Juniper Networks Junos® automation and scripting capabilities and Junos Space Security Director reduce operational complexity and simplify the provisioning of new sites.

The SRX300 line of devices recognizes more than 3,500 Layer 3-7 applications, including Web 2.0 and evasive peer-to-peer (P2P) applications like Skype, torrents, and others. Correlating application information with user contextual information, the SRX300 line can generate bandwidth usage reports, enforce access control policies, prioritize and rate-limit traffic going out of WAN interfaces, and proactively secure remote sites. This optimizes resources in the branch office and improves the application and user experience.

For the perimeter, the SRX300 line offers a comprehensive suite of application security services, threat defenses, and intelligence services. The services consist of intrusion prevention system (IPS), application security user role-based firewall controls, and on-box and cloud-based antivirus, anti-spam, and enhanced Web filtering, protecting networks from the latest

content-borne threats. Integrated threat intelligence via Juniper Networks Spotlight Secure offers adaptive threat protection against Command and Control (C&C)-related botnets and policy enforcement based on GeoIP. Customers can also leverage their own custom and third-party feeds for protection from advanced malware and other threats.

The SRX300 line enables agile SecOps through automation capabilities that support Zero Touch Deployment, Python scripts for orchestration, and event scripting for operational management.

SRX300 services gateways run Juniper Networks Junos operating system, a proven, carrier-hardened network OS that powers the top 100 service provider networks around the world. The rigorously tested, carrier-class, rich routing features such as IPv4/IPv6, OSPF, BGP, and multicast have been proven in over 15 years of worldwide deployments.

Features and Benefits

Business Requirement	Feature/Solution	SRX300 Advantages
High performance	Up to 5 Gbps of routing and firewall performance	• Best suited for small, medium and large branch office deployments • Addresses future needs for scale and feature capacity
Business continuity	Stateful high availability (HA), IP monitoring	• Uses stateful HA to synchronize configuration and firewall sessions • Supports multiple WAN interface with dial-on-demand backup • Route/link failover based on real-time link performance
End-user experience	App visibility and control	• Detects 3,500+ Layer 3-7 applications, including Web 2.0 • Controls and prioritizes traffic based on application and use role • Inspects and detects applications inside the SSL encrypted traffic
Highly secure	IPsec VPN, Media Access Control Security (MACsec)	• Creates secure, reliable, and fast overlay link over public internet • Uses MACsec to secure the point-to-point LAN/WAN communication • Employs anti-counterfeit features to protect from unauthorized hardware spares
Threat protection	IPS, antivirus, anti-spam, Spotlight Secure	• Enables zone-based stateful firewall by default • Protects from malware and attacks with IPS and antivirus • Integrates open threat intelligence platform with third-party feeds
Easy to manage and scale	On-box GUI, Security Director	• Includes centralized management for auto-provisioning, firewall policy management, Network Address Translation (NAT), and IPsec VPN deployments • Includes simple easy-to-use on-box GUI for local management
Minimize TCO	Junos OS	• Integrates routing, switching, and security in a single device • Reduces operation expense with Junos automation capabilities



SRX300



SRX320



SRX340



SRX345

SRX300 Specifications

Software Specifications

Routing Protocols

- IPv4, IPv6, ISO, Connectionless Network Service (CLNS)
- Static routes
- RIP v1/v2
- OSPF/OSPF v3
- BGP with Route Reflector
- IS-IS
- Multicast: Internet Group Management Protocol (IGMP) v1/v2, Protocol Independent Multicast (PIM) sparse mode (SM)/dense mode (DM)/source-specific multicast (SSM), Session Description Protocol (SDP), Distance Vector Multicast Routing Protocol (DVMRP), Multicast Source Discovery Protocol (MSDP), Reverse Path Forwarding (RPF)
- Encapsulation: VLAN, Point-to-Point Protocol (PPP), Frame Relay, High-Level Data Link Control (HDLC), serial, Multilink Point-to-Point Protocol (MLPPP), Multilink Frame Relay (MLFR), and Point-to-Point Protocol over Ethernet (PPPoE)
- Virtual routers
- Policy-based routing, source-based routing
- Equal-cost multipath (ECMP)

QoS Features

- Support for 802.1p, DiffServ code point (DSCP), EXP
- Classification based on VLAN, data-link connection identifier (DLCI), interface, bundles, or multifield filters
- Marking, policing, and shaping
- Classification and scheduling
- Weighted random early detection (WRED)
- Guaranteed and maximum bandwidth
- Ingress traffic policing
- Virtual channels

Switching Features

- ASIC-based Layer 2 Forwarding
- MAC address learning
- VLAN addressing and integrated routing and bridging (IRB) support

Firewall Services

- Stateful and stateless firewall
- Zone-based firewall
- Screens and distributed denial of service (DDoS) protection
- Protection from protocol and traffic anomaly
- Unified Access Control (UAC)
- Network Address Translation (NAT)
- Source NAT with Port Address Translation (PAT)
- Bidirectional 1:1 static NAT
- Destination NAT with PAT
- Persistent NAT
- IPv6 address translation
- User role-based firewall

VPN Features

- Tunnels: Generic routing encapsulation (GRE), IP-IP, IPsec
- Site-site IPsec VPN, auto VPN, group VPN
- IPsec crypto algorithms: Data Encryption Standard (DES), triple DES (3DES), Advanced Encryption Standard (AES-256)
- IPsec authentication algorithms: MD5, SHA-1, SHA-128, SHA-256
- Pre-shared key and public key infrastructure (PKI) (X.509)
- Perfect forward secrecy, anti-reply
- IPv4 and IPv6 IPsec VPN
- Multi-proxy ID for site-site VPN
- Internet Key Exchange (IKEv1, IKEv2), NAT-T
- Virtual router and quality-of-service (QoS) aware
- Standard-based dead peer detection (DPD) support

Network Services

- Dynamic Host Configuration Protocol (DHCP) client/server/relay
- Domain Name System (DNS) proxy, dynamic DNS (DDNS)
- Juniper real-time performance monitoring (RPM) and IP-monitoring
- Juniper flow monitoring (J-Flow)

High Availability Features

- Virtual Router Redundancy Protocol (VRRP)
- Stateful high availability
 - Dual box clustering
 - Active/passive
 - Active/active
 - Configuration synchronization
 - Firewall session synchronization
 - Device/link detection
- Dial on-demand backup interfaces
- IP monitoring with route and interface failover

Management, Automation, Logging, and Reporting

- SSH, Telnet, SNMP
- Smart image download
- Juniper CLI and Web UI
- Junos Space and Security Director
- Python
- Junos OS event, commit, and OP script
- Application and bandwidth usage reporting
- Auto installation
- Debug and troubleshooting tools

Advanced Routing Services¹

- MPLS (RSVP, LDP)
- Circuit cross-connect (CCC), translational cross-connect (TCC)
- L2/L3 MPLS VPN, pseudowires
- Virtual private LAN service (VPLS), next-generation multicast VPN (NG-MVPN)
- MPLS traffic engineering and MPLS fast reroute

¹ Available as part of Juniper Secure Edge (JSE) software package.

Application Security Services²

- Application visibility and control
- Application-based firewall
- Application QoS
- SSL inspection

Threat Defense and Intelligence Services³

- Intrusion prevention
- Antivirus
- Antispam
- Category/reputation-based URL filtering
- Spotlight Secure threat intelligence

Hardware Specifications

Specification	SRX300	SRX320	SRX340	SRX345
Connectivity				
Total onboard ports	8x1GbE	8x1GbE	16x1GbE	16x1GbE
Onboard RJ-45 ports	6x1GbE	6x1GbE	8x1GbE	8x1GbE
Onboard small form-factor pluggable (SFP) transceiver ports	2x1GbE	2x1GbE	8x1GbE	8x1GbE
MACsec ports	2x1GbE	2x1GbE	16x1GbE	16x1GbE
Out-of-band (OOB) management ports	0	0	1x1GbE	1x1GbE
Mini PIM (WAN) slots	0	2	4	4
Console (RJ-45 + miniUSB)	1	1	1	1
USB 2.0 ports (type A)	1	1	1	1
Optional PoE+ ports	N/A	6 ⁴	0	0
Memory and Storage				
System memory (RAM)	4 GB	4 GB	4 GB	4 GB
Storage (flash)	8 GB	8 GB	8 GB	8 GB
SSD slots	0	0	1	1
Dimensions and Power				
Form factor	Desktop	Desktop	1 U	1 U
Size (WxHxD)	12.63 x 7.52 x 1.37 in. (32.08 x 19.10 x 3.47 cm)	11.81 x 7.52 x 1.73 in. (29.99 x 19.10 x 4.39 cm)	17.36 x 14.57 x 1.72 in. (44.09 x 37.01 x 4.36 cm)	17.36 x 14.57 x 1.72 in. (44.09 x 37.01 x 4.36 cm)
Weight (device and PSU)	4.38 lb (1.98 kg)	3.28 lb (1.51 kg) ⁵ / 3.4 lb (1.55 kg) ⁶	10.80 lb (4.90 kg)	10.80 lb (4.90 kg)
Redundant PSU	No	No	No	No
Power supply	AC (external)	AC (external)	AC (internal)	AC (internal)
Maximum PoE power	N/A	90 W ⁶	N/A	N/A
Average power consumption	15.4 W	27 W ⁵ /112 W ⁶	122 W	122 W
Average heat dissipation	85 BTU/h	157 BTU/h ⁵ /755 BTU/h ⁶	420 BTU/h	420 BTU/h
Maximum current consumption	0.254 A	0.473 A ⁵ /2.07 A ⁶	1.364 A	1.364 A
Acoustic noise level	0dB (fanless)	35 dBA ⁵ /40 dBA ⁶	35 dBA	35 dBA
Airflow/cooling	Fanless	Front to back	Front to back	Front to back
Environmental, Compliance, and Safety Certification				
Operational temperature	32° to 104° F (0° to 40° C)			
Nonoperational temperature	4° to 158° F (-20° to 70° C)			
Operating humidity	10% to 90% noncondensing			
Nonoperating humidity	5% to 95% noncondensing			
Mean time between failures (MTBF)	44.5 years	32.5 years ⁵ / 26 years ⁶	27 years	27.4 years
FCC classification	Class A	Class A	Class A	Class A
RoHS compliance	RoHS 2	RoHS 2	RoHS 2	RoHS 2

² Available as part of Juniper Secure Edge (JSE) software package or advanced security subscription licenses.³ Offered as advanced security services subscription licenses.⁴ PoE ports on SRX320 available as a separate SKU SRX320-POE⁵ SRX320 non POE model⁶ SRX320-POE with 6 ports POE+ model

Performance and Scale*

Parameter	SRX300	SRX320	SRX340	SRX345
Routing/firewall (64 B packet size) in Kpps ⁷	200	200	350	550
Routing/firewall (IMIX packet size) ⁷	500 Mbps	500 Mbps	1 Gbps	1.7 Gbps
Routing/firewall (1,518 B packet size) in Gbps ⁷	1	1	3	5
IPsec VPN (IMIX packet size) in Mbps ⁷	100	100	200	300
IPsec VPN (1,400 B packet size) in Mbps ⁷	300	300	600	800
Application visibility and control ⁸	500 Mbps	500 Mbps	1 Gbps	1.7 Gbps
Recommended IPS in Mbps ⁸	200	200	400	600
Next-generation firewall in Mbps ⁸	100	100	200	300
Route table size (RIB/FIB) (IPv4 or IPv6)	256,000/256,000	256,000/256,000	1 mil/600,000 ⁹	1 mil/600,000 ⁹
Maximum concurrent sessions (IPv4 or IPv6)	64,000	64,000	256,000	375,000
Maximum security policies	1,000	1,000	2,000	4,000
Connections per second	5,000	5,000	10,000	15,000
NAT rules	1,000	1,000	2,000	2,000
MAC table size	15,000	15,000	15,000	15,000
IPsec VPN tunnels	256	256	1,024	2,048
GRE tunnels	256	256	512	1,024
Maximum number of security zones	16	16	64	64
Maximum number of virtual routers	32	32	64	128
Maximum number of VLANs	1,000	1,000	2,000	3,000
AppID sessions	16,000	16,000	64,000	64,000
IPS sessions	16,000	16,000	64,000	64,000
URLF sessions	16,000	16,000	64,000	64,000

⁷ Throughput numbers based on UDP packets and RFC2544 test methodology

⁸ Throughput numbers based on HTTP traffic with 44 KB transaction size

⁹ Route scaling numbers are with enhanced route-scale features turned on

WAN Interface Support Matrix

WAN Interface	SRX300	SRX320	SRX340	SRX345
1 port T1/E1 MPIM	No	Yes	Yes	Yes
1 port VDSL2 Annex A/M MPIM	No	Yes	Yes	Yes
1 port serial MPIM	No	Yes	Yes	Yes

Ordering Information

To order Juniper Networks SRX Series Services Gateways, please visit the [How to Buy](#) page.

Juniper Networks Services and Support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit www.juniper.net/us/en/products-services.

*All performance and scaling numbers are based on ideal lab test conditions.

About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at www.juniper.net.

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