

# 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 in a highly economical manner.

## 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 retail offices with up to 50 users, 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 250 Mbps IPsec VPN in a single, consolidated, cost-effective networking and security platform.
- **SRX320:** Securely connecting small distributed enterprise locations consisting of up to 50 users, 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 250 Mbps IPsec VPN in a single, consolidated, cost-effective networking and security platform.
- **SRX340:** Securely connecting midsize distributed enterprises consisting of up to 100 users, 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 500 Mbps IPsec VPN in a single, consolidated, cost-effective networking and security platform.
- **SRX345:** Best suited for midsize to large distributed enterprise locations consisting of up to 200 users, 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 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. Combining application information and user context information, the SRX300 line can generate bandwidth usage reports, enforce access control policies, and prioritize and rate-limit traffic going out of WAN interfaces. 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.

SRX300 services gateways run Juniper Networks Junos operating system, the proven OS used by core Internet routers in all of the top 100 service providers around the world. The rigorously tested carrier-class routing features of 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                            | <ul style="list-style-type: none"> <li>Supports up to 200-user branch office size</li> <li>Addresses future needs for scale and feature capacity</li> </ul>  |
| Business continuity      | Stateful high availability (HA), IP monitoring                              | <ul style="list-style-type: none"> <li>Uses stateful HA to synchronize configuration and firewall sessions</li> <li>Supports multiple WAN interface with dial-on-demand backup</li> <li>Route/link failover based on real-time link performance</li> </ul>                             |
| End-user experience      | App visibility and control  | <ul style="list-style-type: none"> <li>Detects 3,500+ Layer 3-7 applications, including Web 2.0</li> <li>Controls and prioritizes traffic based on application and use role</li> <li>Inspects and detects applications inside the SSL encrypted traffic</li> </ul>                     |
| Highly secure            | IPsec VPN, Media Access Control Security (MACsec)                           | <ul style="list-style-type: none"> <li>Creates secure, reliable, and fast overlay link over public internet</li> <li>Uses MACsec to secure the point-to-point LAN/WAN communication</li> <li>Employs anti-counterfeit features to protect from unauthorized hardware spares</li> </ul> |
| Threat protection        | IPS, antivirus, anti-spam, Spotlight Secure, Sky Advanced Threat Prevention | <ul style="list-style-type: none"> <li>Enables zone-based stateful firewall by default</li> <li>Protects from malware and attacks with IPS and antivirus</li> <li>Integrates open threat intelligence platform with third-party feeds</li> </ul>                                       |
| Easy to manage and scale | On-box GUI, Security Director   | <ul style="list-style-type: none"> <li>Includes centralized management for auto-provisioning, firewall policy management, Network Address Translation (NAT), and IPsec VPN deployments</li> <li>Includes simple easy-to-use on-box GUI for local management</li> </ul>                 |
| Minimize TCO             | Junos OS  | <ul style="list-style-type: none"> <li>Integrates routing, switching, and security in a single device</li> <li>Reduces operation expense with Junos automation capabilities</li> </ul>   |



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
- 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
- Spanning tree protocols (STP, RSTP)
- Link aggregation, Link Layer Discovery Protocol (LLDP), 802.1X

### Advanced Routing Services

- BGP
- IS-IS
- 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

### 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

### 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

### Application Security Services

- Application visibility and control
- Application-based firewall
- Application QoS
- User-based firewall
- Intrusion prevention
- Antivirus
- Antispam
- Category/reputation-based URL filtering
- SSL inspection

## Threat Defense and Intelligence Services

- Spotlight Secure threat intelligence
- Protection from botnets (command and controls)
- Adaptive enforcement based on GeoIP
- Sky Advanced Threat Prevention to detect and block zero-day attacks

## Management, Logging, and Reporting

- SSH, Telnet, SNMP
- Smart image download
- Juniper CLI and Web UI
- Junos Space and Security Director
- Application and bandwidth usage reporting
- Auto installation

## Hardware Specifications

| Specification  | SRX300   | SRX320   | SRX340  | SRX345  |
|--|--|--|---|---|
| <b>Connectivity</b>  |  |  |   |   |
| 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   |
| Gigabit-Backplane Physical Interface Module (GPIM) WAN slots | 0  | 0  | 0   | 0   |
| Console (RJ-45 + miniUSB)                                    | 1  | 1  | 1   | 1   |
| USB 2.0 ports (type A)                                       | 1  | 1  | 1   | 1   |
| Optional PoE+ ports  | N/A  | 6 <sup>1</sup>   | 0   | 0   |
| <b>Memory and Storage</b>                                    |  |  |   |   |
| 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   |
| <b>Dimensions and Power</b>                                  |  |  |   |   |
| Form factor  | Desktop  | Desktop  | 1 U   | 1 U   |
| Size (WxHxD)   | 12.63 x 7.52 x 1.37 in.<br>(32.08 x 19.10 x 3.47 cm) | 11.81 x 7.52 x 1.73 in.<br>(29.99 x 19.10 x 4.39 cm)           | 17.36 x 14.57 x 1.72 in.<br>(44.09 x 37.01 x 4.36 cm) | 17.36 x 14.57 x 1.72 in.<br>(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) <sup>2</sup> / 3.4 lb (1.55 kg) <sup>3</sup> | 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 <sup>3</sup>  | N/A   | N/A   |
| Average power consumption                                    | 15.4 W   | 27 W <sup>2</sup> /112 W <sup>3</sup>                          | 122 W   | 122 W   |
| Average heat dissipation                                     | 85 BTU/h   | 157 BTU/h <sup>2</sup> /755 BTU/h <sup>3</sup>                 | 420 BTU/h   | 420 BTU/h   |
| Maximum current consumption                                  | 0.254 A  | 0.473 A <sup>2</sup> /2.07 A <sup>3</sup>                      | 1.364 A   | 1.364 A   |
| Acoustic noise level   | 0dB (fanless)  | 35 dBA <sup>2</sup> /40 dBA <sup>3</sup>                       | 35 dBA  | 35 dBA  |
| Airflow/cooling  | Fanless  | Front to back  | Front to back   | Front to back   |
| <b>Environmental, Compliance, and Safety Certification</b>   |  |  |   |   |
| 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                              |  |   |   |
| Meantime between failures (MTBF)                             |  |  |   |   |
| FCC classification   | Class A  | Class A  | Class A   | Class A   |
| RoHS compliance  | RoHS 2   | RoHS 2   | RoHS 2  | RoHS 2  |

<sup>1</sup> PoE ports on SRX320 available as a separate SKU SRX320-POE

<sup>2</sup> SRX320 non POE model

<sup>3</sup> SRX320-POE with 6 ports POE+ model

## Performance and Scale\*

| Parameter   | SRX300          | SRX320          | SRX340        | SRX345      |
|---|-----------------|-----------------|---------------|-------------|
| Routing/firewall (64 B packet size) in Kpps <sup>4</sup>    | 200             | 200             | 350           | 700         |
| Routing/firewall (IMIX packet size) <sup>4</sup>            | 500 Mbps        | 500 Mbps        | 1 Gbps        | 2 Gbps      |
| Routing/firewall (1,518 B packet size) in Gbps <sup>4</sup> | 1               | 1               | 3             | 5           |
| IPsec VPN (IMIX packet size) in Mbps <sup>4</sup>           | 80              | 80              | 150           | 300         |
| IPsec VPN (1,400 B packet size) in Mbps <sup>4</sup>        | 250             | 250             | 500           | 800         |
| Application visibility and control <sup>5</sup>             | 500 Mbps        | 500 Mbps        | 1 Gbps        | 2 Gbps      |
| Recommended IPS in Mbps <sup>5</sup>                        | 100             | 100             | 250           | 500         |
| Next-generation firewall in Mbps <sup>5</sup>               | 50              | 50              | 100           | 200         |
| Route table size (RIB/FIB) (IPv4 or IPv6)                   | 256,000/256,000 | 256,000/256,000 | 1 mil/600,000 | 2 mil/1 mil |
| Maximum concurrent sessions (IPv4 or IPv6)                  | 64,000          | 64,000          | 256,000       | 512,000     |
| Maximum security policies                                   | 1,000           | 1,000           | 2,000         | 4,000       |
| Connections per second                                      | 5,000           | 5,000           | 10,000        | 20,000      |
| 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                                     | 16              | 128             | 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      |

<sup>4</sup> Throughput numbers based on UDP packets and RFC2544 test methodology

<sup>5</sup> Throughput numbers based on HTTP traffic with 44 KB transaction size

## 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    |
| 16 port PoE Ethernet GPIM        | No     | No     | No     | No     |
| 8 port SFP Ethernet GPIM         | No     | No     | No     | No     |
| 2/4 port T1/E1 GPIM <sup>6</sup> | No     | No     | No     | No     |
| 1 port DS3 GPIM <sup>6</sup>     | No     | No     | No     | No     |

<sup>6</sup> Not ROHS2 compliant, not available in EU countries

## 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](http://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](http://www.juniper.net).

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