

# SSR100 LINE OF ROUTERS DATASHEET



## Product Overview

*SSR Series Routers enable enterprises to build service-centric fabrics for any size of distributed enterprise. Powered by [Session Smart](#) technology, the purpose-built, high-performance branch routers are preloaded with Juniper Session Smart software (subscription licenses sold separately), allowing businesses to build networking environments that deliver the agility they need to move with their customers and outpace their competitors.*

## Product Description

Juniper® SSR Series Routers offer purpose-built, high-performance platforms that enable enterprises to build service-centric fabrics for distributed enterprises of any size.

The Juniper SSR120 Session Smart™ Router and SSR130 Session Smart Router provide the hardware foundation for Juniper SD-WAN driven by Mist AI™. When deployed at branch offices, the SSR100 line of routers provide a service-centric control plane and service-aware data plane that offer IP routing, feature-rich policy management, improved visibility, and proactive analytics. The result is a next-generation SD-WAN solution that supports the evolving needs of cloud-enabled enterprise networks.

For features and benefits of Juniper Session Smart Routers, as well as ordering information, see the [Session Smart Routing Data Sheet](#).

## Architecture and Key Components

By combining the Mist AI in Juniper Mist™ WAN Assurance with the SSR Series routers, enterprises gain industry-leading automation and insight to ensure the best user, device, and application experiences in branch and remote locations. The Juniper WAN Assurance cloud service enables simpler operations, provides better visibility into end-user experiences, and reduces mean time to repair SD-WAN issues. For detailed features and benefits of Juniper Mist WAN Assurance, see the [WAN Assurance Data Sheet](#).



SSR120 Session Smart Router: Small Branch Model



SSR130 Session Smart Router: Medium-Sized Branch Model

The Juniper Networks SSR100 line of routers provides a service-centric control plane and service-aware data plane that offer IP routing, feature-rich policy management, improved visibility, and proactive analytics.

The fixed configuration appliances in the SSR100 line are:

- The **SSR120** for small branches
- The **SSR130** for medium branches

These appliances run the FIPS 140-2 Level 1 compliant Session Smart Router software, which provides secure and resilient [WAN](#) connectivity.

For more detailed information on basic configuration procedures for these platforms, see:

- [SSR120 Hardware Guide](#)
- [SSR130 Hardware Guide](#)

## SSR120: Small Branch Routers



The SSR120 Router is ideal for small branches

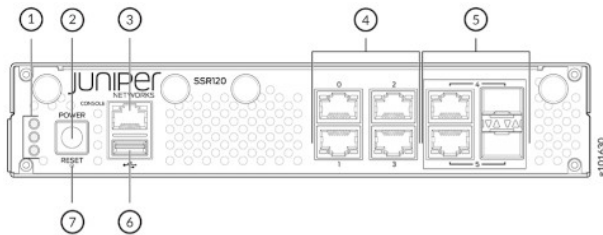


Figure 1: Front Panel Components of SSR120

### SSR120 Front Panel Components

1. Chassis LEDs
2. Power button
3. Console port
4. 1 GbE Ethernet ports (0 through 3)
5. 1 GbE RJ-45/SFP ports (4 & 5)
6. USB 3.0 port
7. Reset button

## SSR120 LTE Variants (SSR120-AA and SSR120-AE)

The SSR120 LTE variants (SSR120-AA and SSR120-AE) have antenna connectors for LTE.

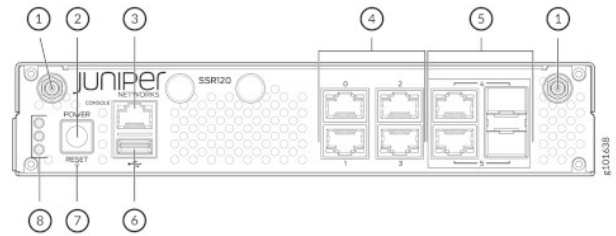


Figure 2: Front Panel Components of SSR120-AA and SSR120-AE

### SSR120-AA and SSR120-AE Front Panel Components

1. Antenna connectors for LTE
2. Power button
3. Console port
4. 1 GbE Ethernet ports (0 through 3)
5. 1 GbE RJ-45/SFP ports (4 & 5)
6. USB 3.0 port
7. Reset button
8. Chassis LEDs

The SSR120 supports:

- 4 x 1GbE RJ-45 ports
- 2 x 1GbE RJ-45/SFP ports
- Console and USB ports

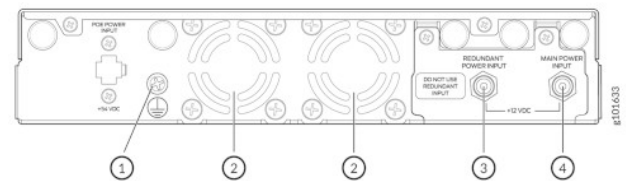


Figure 3: Rear Panel Components of SSR120

### SSR120 Rear Panel Components

1. Ground terminal
2. Fan
3. Redundant power input (unsupported – do not use)
4. Main power input

## SSR130: Medium Branch Routers



The SSR130 Router is ideal for medium branches

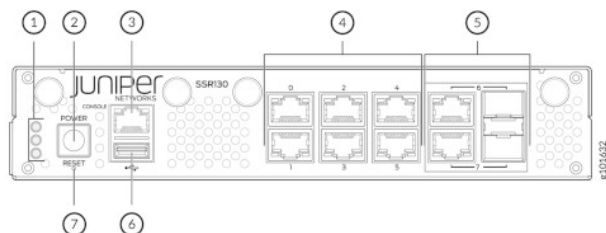


Figure 4: Front Panel Components of SSR130

### SSR130 Front Panel Components

1. Chassis LEDs
2. Power button
3. Console port
4. 1 GbE Ethernet ports (0 through 5)
5. 1 GbE RJ-45/SFP ports (6 & 7)
6. USB 3.0 port
7. Reset button

The SSR130 supports:

- 6 x 1GbE RJ-45 ports
- 2 x 1GbE RJ-45/SFP ports
- Console and USB ports

## SSR130 LTE Variants (SSR120-AA and SSR120-AE)

The SSR130 LTE variants (SSR130-AA and SSR130-AE) have antenna connectors for LTE.

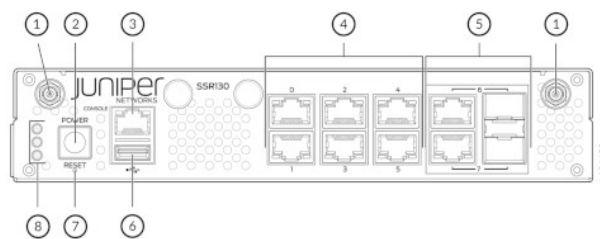


Figure 5: Front Panel Components of SSR130-AA and SSR130-AE

### SSR130-AA and SSR130-AE Front Panel Components

1. Antenna connectors for LTE
2. Power button
3. Console port
4. 1 GbE Ethernet ports (0 through 5)
5. 1 GbE RJ-45/SFP ports (6 & 7)
6. USB 3.0 port
7. Reset button
8. Chassis LED

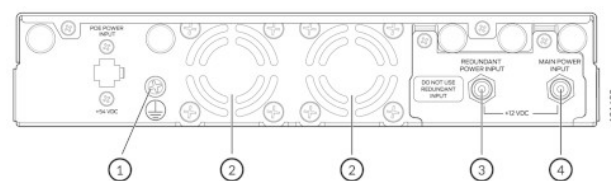


Figure 6: Rear Panel Components of an SSR130

### SSR130 Rear Panel Components

1. Ground terminal
2. Fans
3. Redundant power input (unsupported – do not use)
4. Main power input

## Features and Benefits

### Zero Trust Security

The SSR100 line of routers ensures Zero Trust security by authenticating all routes and encrypting all session traffic. Applications, devices, and users cannot initiate any session that does not comply with the authentication policies and access rules. These appliances support Layer 2 through Layer 5 stateful firewall functions, including denial of service (DoS) and distributed denial of service (DDoS) protection, Network Address Translation (NAT), encryption, VPN, and traffic filtering.

### Adaptive Encryption

The SSR100 line of routers automatically detects traffic encrypted using HTTPS or IPsec and does not re-encrypt such traffic. This capability results in improved performance and reduced overhead due to double encryption.

### Simplified Onboarding and Monitoring with Juniper Mist WAN Assurance

You can quickly onboard SSR100 appliances to the Juniper Mist cloud using the claim code or QR code on the device. This helps reduce operational complexity and simplifies the deployment and configuration process. For more information regarding onboarding, configuration, and management of SSR Series devices, see the [WAN Assurance Data Sheet](#).

## Specifications

### SSR120 and SSR130 Session Smart Routers Specifications

|   |              | SSR120                         | SSR130                         |
|---|--------------|--------------------------------|--------------------------------|
| <b>Performance</b><br>(as observed on Session Smart Router Software v5) |              |                                |                                |
| Encrypted + HMAC<br>(aggregate)   | (IMIX)       | 250 Mbps                       | 1 Gbps                         |
|   | (1500 Bytes) | 500 Mbps                       | 1.8 Gbps                       |
| Encrypted only<br>(aggregate)   | (IMIX)       | 750 Mbps                       | 1.8 Gbps                       |
|   | (1500 Bytes) | 2 Gbps<br>(Line rate on ports) | 2 Gbps<br>(Line rate on ports) |
| Unencrypted<br>(aggregate)  | (IMIX)       | 1.5 Gbps                       | 2 Gbps<br>(Line rate on ports) |
|   | (1500 Bytes) | 2 Gbps<br>(Line rate on ports) | 2 Gbps<br>(Line rate on ports) |

|   | SSR120 for Small Branches   | SSR130 for Medium-Sized Branches  |
|---|---|---|
| <b>Connectivity</b>                       |   |   |
| Onboard RJ-45 ports                       | 4 x 1GbE RJ-45  | 6 x 1GbE RJ-45  |
| Onboard RJ-45/SFP transceiver combo ports | 2 x 1GbE RJ-45/SFP combo  | 2 x 1GbE RJ-45/SFP combo  |
| LTE modules                               | Single integrated module, not field configurable. Refer to appliance SKUs below: <ul style="list-style-type: none"> <li>SSR120-AA: Appliance with LTE for APAC</li> <li>SSR120-AE: Appliance with LTE for AMER/EMEA</li> <li>SSR120-AE-TAA: TAA-compliant appliance with LTE for AMER/EMEA</li> </ul> | Single integrated module, not field configurable. Refer to appliance SKUs below: <ul style="list-style-type: none"> <li>SSR130-AA: Appliance with LTE for APAC</li> <li>SSR130-AE: Appliance with LTE for AMER/EMEA</li> <li>SSR130-AE-TAA: TAA-compliant appliance with LTE for AMER/EMEA</li> </ul> |
| Console                                   | 1 x 1GbE RJ-45  | 1 x 1GbE RJ-45  |
| USB                                       | 1 x USB3.0  | 1 x USB3.0  |
| PoE+ ports                                | Not supported   | Not supported   |

## Memory and Storage; Dimensions and Power

|                                    | SSR120 for Small Branches  | SSR130 for Medium-Sized Branches                                     |
|------------------------------------|--|--|
| <b>Memory and Storage</b>          |  |  |
| System memory (RAM)                | 8 GB (ECC)   | 16 GB (ECC)  |
| Storage (SSD)                      | 120 GB   | 120 GB   |
| <b>Dimensions and Power</b>        |  |  |
| Form factor                        | Desktop:<br>Rackmount kit (SSR100-RMK) available and sold separately | Desktop:<br>Rackmount kit (SSR100-RMK) available and sold separately |
| Size (W x D x H)                   | 8.74 x 9.48 x 1.73 in (222 x 241 x 44 mm)                            |  |
| Weight                             | 3.68 lb (1.67 kg)  |  |
| Power supply                       | AC (external adapter)  | AC (external adapter)  |
| External power adapter input (AC)  | 100-240 V AC, 50-60 Hz, 2 A  | 100-240 V AC, 50-60 Hz, 2 A  |
| External power adapter output (DC) | 12V DC, 5 A  | 12V DC, 5 A  |
| Maximum power draw (estimated)     | 32.5 W   | 41.5 W   |
| Acoustic noise level               | 19.5 dBA (normal traffic conditions and ambient temperature 27C)     | 23.4 dBA (normal traffic conditions and ambient temperature 27C)     |
| Power cord                         | Available for all homologated countries                              | Available for all homologated countries                              |

## Environmental Parameters

|  | SSR120 for Small Branches   | SSR130 for Medium-Sized Branches  |
|--|---|---|
| <b>Environmental, Compliance, and Safety Certification</b> |   |   |
| Operating temperature                                      | 32° F to 104° F (0° C to 40° C)   | 32° F to 104° F (0° C to 40° C)   |
| Storage temperature  | -4° F to 158° F (-20° C to 70° C)   | -4° F to 158° F (-20° C to 70° C)   |
| Mean time between failures (MTBF)                          | 192,918 hours   | 219,792 hours   |
| TAA compliance   | Refer to TAA-compliant appliance SKUs below: <ul style="list-style-type: none"> <li>SSR120-TAA: TAA-compliant appliance without LTE</li> <li>SSR120-AE-TAA: TAA-compliant appliance with LTE for AMER/EMEA</li> </ul> | Refer to TAA-compliant appliance SKUs below: <ul style="list-style-type: none"> <li>SSR130-TAA: TAA-compliant appliance without LTE</li> <li>SSR130-AE-TAA: TAA-compliant appliance with LTE for AMER/EMEA</li> </ul> |
| FIPS 140-2   | Level 1 (through SSN software)  | Level 1 (through SSN software)  |

## LTE Model Specifications

|                            | SSR1x0-AE Model                                     | SSR1x0-AA Model                               |
|----------------------------|---|---|
| <b>4G/LTE Capabilities</b> |   |   |
| Modem                      | Sierra Wireless EM7455                              | Sierra Wireless EM7430                        |
| Geography                  | AMER and EMEA                                       | APAC (incl. ANZ)                              |
| LTE category               | Cat-6   | Cat-6   |
| Carrier aggregation        | Yes   | Yes   |
| SIM type                   | Micro-SIM   | Micro-SIM                                     |
| LTE bands                  | 1, 2, 3, 4, 5, 7, 8, 12, 13, 20, 25, 26, 29, 30, 41 | 1, 3, 5, 7, 8, 18, 19, 21, 28, 38, 39, 40, 41 |
| Antennas                   | Main and AUX (via SMA connectors)                   | Main and AUX (via SMA connectors)             |

## Juniper Care Support Services Definitions

Juniper Networks includes an Enhanced Limited Lifetime Warranty (eLLW) for the SSR100 and SSR1000 line of routers by default. The offering provides next-day shipping of hardware replacements for the lifetime of the appliances and supports the entitlements offered under the previous Juniper Care Core and Juniper Care Core Plus contract service levels. For more information on eLLW, please refer to: <https://support.juniper.net/support/warranty/>

## Juniper Care Next-Day Delivery

Juniper will deliver FRU replacements to the ship-to address in advance of receiving returned defective hardware on the next business day, provided the RMA is issued by 3:00 p.m. local time (based on ship-to address), on a business day. If the RMA is issued after 3:00 p.m., Juniper will deliver the replacement FRU on the second business day. "Next-day delivery" is subject to availability.

## Juniper Care Same-Day

Juniper Networks will deliver FRU replacements to the ship-to address within four hours of issuance of RMA in advance of receipt of defective hardware. "Same-day delivery" is subject to availability.

For additional information on Juniper Care Services, refer to the [Juniper Care Service Description](#).

## SSR120 Session Smart Router Service Options

| Hardware SKU | Juniper Care Next-Day Support          | Juniper Care Same-Day Support          |
|--------------|--|--|
| SSR120       | SVC-ND-SSR120                          | SVC-SD-SSR120                          |
| SSR120-AE    | SVC-ND-SSR120-AE<br>(US and EMEA only) | SVC-SD-SSR120-AE<br>(US and EMEA only) |
| SSR120-AA    | SVC-ND-SSR120-AA<br>(APAC only)        | SVC-SD-SSR120-AA<br>(APAC only)        |

## SSR130 Session Smart Router Service Options

| Hardware SKU | Juniper Care Next-Day Support          | Juniper Care Same-Day Support          |
|--------------|--|--|
| SSR130       | SVC-ND-SSR130                          | SVC-SD-SSR130                          |
| SSR130-AE    | SVC-ND-SSR130-AE<br>(US and EMEA only) | SVC-SD-SSR130-AE<br>(US and EMEA only) |
| SSR130-AA    | SVC-ND-SSR130-AA<br>(APAC only)        | SVC-SD-SSR130-AA<br>(APAC only)        |

## SSR120-TAA Service Options

| Hardware SKU  | Juniper Care Next-Day Support           | Juniper Care Same-Day Support           |
|---------------|---|---|
| SSR120-TAA    | SVC-ND-SSR120-TAA                       | SVC-SD-SSR120-TAA                       |
| SSR120-AE-TAA | SVC-ND-SSR120-AET<br>(US and EMEA only) | SVC-SD-SSR120-AET<br>(US and EMEA only) |

## SSR130-TAA Service Options

| Hardware SKU  | Juniper Care Next-Day Support           | Juniper Care Same-Day Support           |
|---------------|---|---|
| SSR120-TAA    | SVC-ND-SSR120-TAA                       | SVC-SD-SSR120-TAA                       |
| SSR120-AE-TAA | SVC-ND-SSR120-AET<br>(US and EMEA only) | SVC-SD-SSR120-AET<br>(US and EMEA only) |

## Ordering Information

To order Juniper Networks SSR Series Routers and to access software licensing information, please visit the [How to Buy page](#).

| SKU  | Description   |
|--|---|
| <b>SSR120 Session Smart Router: Small Branch Model</b>                 |   |
| SSR120   | Small branch appliance (2x1GbE combo RJ-45/SFP, 4x1GbE RJ-45) without LTE*                    |
| SSR120-AE  | Small branch appliance (2x1GbE combo RJ-45/SFP, 4x1GbE RJ-45) with LTE for Americas and EMEA* |
| SSR120-AA  | Small branch appliance (2x1GbE combo RJ-45/SFP, 4x1GbE RJ-45) with LTE for APAC*              |
| <b>SSR120-TAA Session Smart Router: Small Branch Model for Federal</b> |   |
| SSR120-TAA   | Small branch appliance (2x1GbE combo RJ-45/SFP, 4x1GbE RJ-45) without LTE*, TAA-compliant     |

| SKU   | Description   |
|---|---|
| SSR120-AE-TAA   | Small branch appliance (2x1GbE combo RJ-45/SFP, 4x1GbE RJ-45) with LTE for Americas and EMEA*, TAA-compliant        |
| <b>SSR130 Session Smart Router: Medium-Sized Branch Model</b>                 |   |
| SSR130  | Medium-sized branch appliance (2x1GbE combo RJ-45/SFP, 6x1GbE RJ-45) without LTE*                                   |
| SSR130-AE   | Medium-sized branch appliance (2x1GbE combo RJ-45/SFP, 6x1GbE RJ-45) with LTE for Americas and EMEA*                |
| SSR130-AA   | Medium-sized branch appliance (2x1GbE combo RJ-45/SFP, 6x1GbE RJ-45) with LTE for APAC*                             |
| <b>SSR130-TAA Session Smart Router: Medium-Sized Branch Model for Federal</b> |   |
| SSR130-TAA  | Medium-sized branch appliance (2x1GbE combo RJ-45/SFP, 6x1GbE RJ-45) without LTE*, TAA-compliant                    |
| SSR130-AE-TAA   | Medium-sized branch appliance (2x1GbE combo RJ-45/SFP, 6x1GbE RJ-45) with LTE for Americas and EMEA*, TAA-compliant |
| <b>Accessories</b>  |   |
| SSR100-RMK  | Rackmount kit for SSR100 line of Session Smart branch routers   |

| SKU           | Description   |
|---------------|---|
| SSR100-PS     | AC-DC power adapter for SSR100 line of Session Smart branch routers; excludes country-specific power cord |
| <b>Optics</b> |   |
| EX-SFP-1GE-SX | Small form-factor pluggable 1000BASE-SX gigabit Ethernet optics   |
| EX-SFP-1GE-LX | Small form-factor pluggable 1000BASE-LX gigabit Ethernet optics   |

\*Session Smart networking software subscription license, optics, and rackmounts sold separately.

## About Juniper Networks

Juniper Networks believes that connectivity is not the same as experiencing a great connection. Juniper's AI-Native Networking Platform is built from the ground up to leverage AI to deliver the best and most secure user experiences from the edge to the data center and cloud. Additional information can be found at Juniper Networks ([www.juniper.net](http://www.juniper.net)) or connect with Juniper on X (Twitter), LinkedIn, and Facebook.

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