SSR100 LINE OF ROUTERS DATASHEET

Product Overview

SSR Series Routers enable enterprises to build service-centric fabrics for any size distributed enterprise. Powered by [Session Smart](#) technology, the purpose-built, high-performance branch routers support the software for [Juniper SD-WAN driven by Mist AI](#). The 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.

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 the branch office, the SSR100 line of routers provide a service-centric control plane and service-aware data plane that offers 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 offers 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
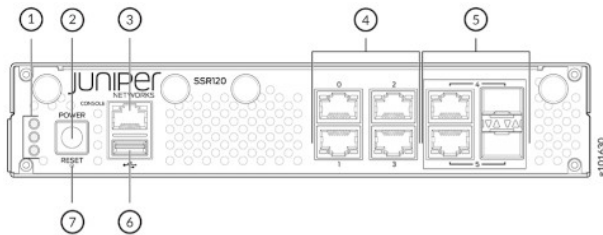

The SSR120 Router is ideal for small branches

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

The SSR120 supports:

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

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

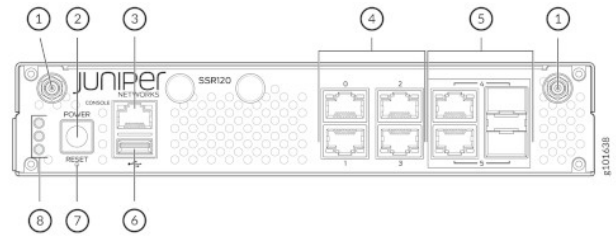The SSR120 LTE variants (SSR120-AA and SSR130-AE) have antenna connectors for LTE.

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

Figure 3: Real 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

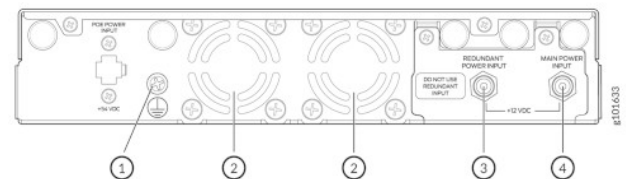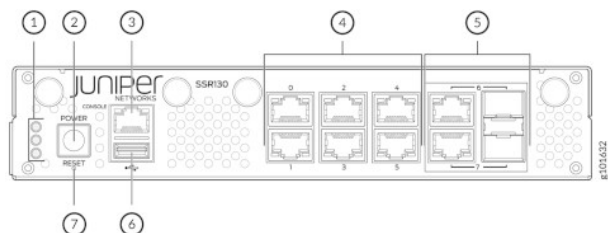## SSR130 LTE Variants (SSR120-AA and SSR120-AE)

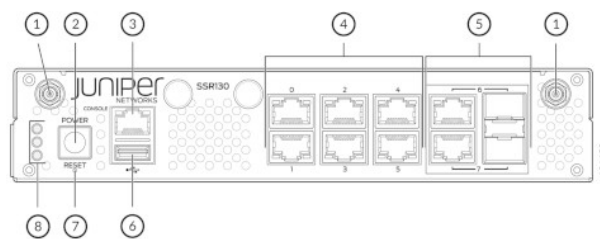The SSR130 LTE variants (SSR130-AA and SSR130-AE) have antenna connectors for LTE.

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

SSR130-AA and SSR130-AE Front Panel Components

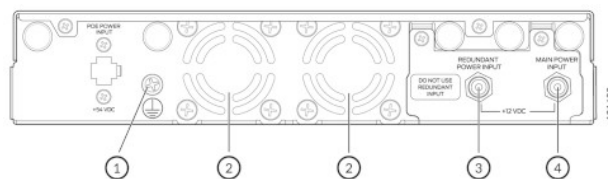| |
|---|
| 1. Antenna connectors for LTE |
| 2. Power button |
| 3. Console port |
| 4. 1 GbE Ethernet ports (0 through 5) |
| 5. 1 GbE RJ-45/SFP ports (6 & 7) |
| 6. USB 3.0 port |
| 7. Reset button |
| 8. Chassis LED |

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, or 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 datasheet.

Specifications

SSR120 and SSR130 Session Smart Routers Specifications

		SSR120	SSR130
Performance (as observed on Session Smart Router Software v5.4.4)			
Encrypted + HMAC (aggregate)	(IMIX)	250 Mbps	1 Gbps
	(1500 Bytes)	500 Mbps	1.8 Gbps
Encrypted only (aggregate)	(IMIX)	750 Mbps	1.8 Gbps
	(1500 Bytes)	2 Gbps (Line rate on ports)	2 Gbps (Line rate on ports)
Unencrypted (aggregate)	(IMIX)	1.5 Gbps	2 Gbps (Line rate on ports)
	(1500 Bytes)	2 Gbps (Line rate on ports)	2 Gbps (Line rate on ports)

	Juniper SSR120	Juniper SSR130
Scale (as observed on Session Smart Router Software v6.1.0)		
Peer Paths (in peer paths)	120	960
Max Sessions (in sessions)	85,400	294,200
Waypoint default overload (in waypoints)	50,000	50,000
Max Waypoints Overload (in waypoints)	250,000	250,000
BGP Routing Table Size (in routes)	20,100	75,100
OSPF Routing Table Size (in routes)	20,100	75,100

	SSR120 for Small Branches	SSR130 for Medium-Sized Branches
Connectivity		
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

	SSR120 for Small Branches	SSR130 for Medium-Sized Branches
LTE modules	Single integrated module, not field configurable. Refer to appliance SKUs below: • SSR120-AA: Appliance with LTE for APAC • SSR120-AE: Appliance with LTE for AMER/EMEA • SSR120-AE-TAA: TAA-compliant appliance with LTE for AMER/EMEA	Single integrated module, not field configurable. Refer to appliance SKUs below: • SSR130-AA: Appliance with LTE for APAC • SSR130-AE: Appliance with LTE for AMER/EMEA • SSR130-AE-TAA: TAA-compliant appliance with LTE for AMER/EMEA
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
Memory and Storage		
System memory (RAM)	8 GB (ECC)	16 GB (ECC)
Storage (SSD)	120 GB	120 GB
Dimensions and Power		
Form factor	Desktop: Rackmount kit (SSR100-RMK) available and sold separately	Desktop: 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
Environmental, Compliance, and Safety Certification		
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: • SSR120-TAA: TAA-compliant appliance without LTE • SSR120-AE-TAA: TAA-compliant appliance with LTE for AMER/EMEA	Refer to TAA-compliant appliance SKUs below: • SSR130-TAA: TAA-compliant appliance without LTE • SSR130-AE-TAA: TAA-compliant appliance with LTE for AMER/EMEA
FIPS 140-2	Level 1 (through SSN software)	Level 1 (through SSN software)

LTE Model Specifications

	SSR1x0-AE Model	SSR1x0-AA Model
4G/LTE Capabilities		
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 Enhanced Limited Lifetime Warranty (eLLW) for SSR100 and SSR1000 Line of Routers by default. The offering provides next day ship hardware replacement for the lifetime of the appliances and support the entitlements offered under the previous Juniper Care Core and Juniper Care Core Plus contract service levels. For more information on eLLW, please refer: 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 p.m. local time (based on ship-to address), on a business day. If the RMA is issued after 3 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, 24 hours a day, 7 days a week, within 4 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 (US and EMEA only)	SVC-SD-SSR120-AE (US and EMEA only)
SSR120-AA	SVC-ND-SSR120-AA (APAC only)	SVC-SD-SSR120-AA (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 (US and EMEA only)	SVC-SD-SSR130-AE (US and EMEA only)
SSR130-AA	SVC-ND-SSR130-AA (APAC only)	SVC-SD-SSR130-AA (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 (US and EMEA only)	SVC-SD-SSR120-AET (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 (US and EMEA only)	SVC-SD-SSR120-AET (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 at https://www.juniper.net/us/en/how-to-buy/form.html.

SKU	Description
SSR120 Session Smart Router: Small Branch Model	
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*
SSR120-TAA Session Smart Router: Small Branch Model for Federal	
SSR120-TAA	Small branch appliance (2x1GbE combo RJ-45/SFP, 4x1GbE RJ-45) without LTE*, TAA-compliant
SSR120-AE-TAA	Small branch appliance (2x1GbE combo RJ-45/SFP, 4x1GbE RJ-45) with LTE for Americas and EMEA*, TAA-compliant
SSR130 Session Smart Router: Medium-Sized Branch Model	
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, 6x1GbR 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*
SSR130-TAA Session Smart Router: Medium-Sized Branch Model for Federal	
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
Accessories	
SSR100-RMK	Rackmount kit for SSR100 line of Session Smart branch routers
SSR100-PS	AC-DC power adapter for SSR100 line of Session Smart branch routers; excludes country-specific power cord
Optics	
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

At Juniper Networks, we are dedicated to dramatically simplifying network operations and driving superior experiences for end users. Our solutions deliver industry-leading insight, automation, security, and AI to drive real business results. We believe that powering connections will bring us closer together while empowering us all to solve the world's greatest challenges of well-being, sustainability, and equality.

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