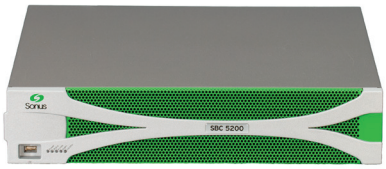
Sonus SBC 5200™ Session Border Controller

The Sonus SBC 5200 Session Border Controller is the first second-generation SBC for secure SIP communications. Designed for communications service providers and large enterprises, the SBC 5200 is powerful, compact and purpose-built for the multimedia communications of today and tomorrow. The Sonus SBC 5200 provides all of the features you need in an SBC today—robust security, sophisticated routing and policy management, overload controls, SIP normalization—plus the features you'll need tomorrow, like IPv4-IPv6 interworking, centralized policy management, built-in media transcoding and high performance under heavy traffic.



System Capabilities

- Sessions
  - 64,000 simultaneous sessions
  - Up to 17,200 transcoded sessions based on Codec
  - Up to 32,000 H.323 sessions
  - RTCP sessions scale 1:1 with RTP sessions
- Call Set-Up
  - Maximum call setup rate: 450 cps
  - Call latency = 30ms (@ 450 cps, 90% fall into this category)
- Registrations
  - Maximum new registration/sec: 1000
  - Maximum refreshes/sec: 5000
  - Total registered end point support: 256,000; up to 64,000 NATte'd end points
- Encryption
  - Maximum number of TLS sessions: 256,000
  - TLS set-up rate: 150/sec
  - Maximum # of IPsec tunnels: 2048 (4096 IPSec SAs)
  - IPsec (IKE) setup rate: 120/sec
  - Maximum # SRTP sessions: 64,000

Media Services

- Transcoding G.711, G.726, G.729A/B, G.723, iLBC, G.722, AMR-NB, AMR-WB, EVRCB0
- Wireline, wireless, wideband and clearchannel codec pass through
- T.38 compliant fax relay or fall back to G.711
- VAD, Silence Suppression, Dynamic Jitter Buffer, Fax/ Modem Detection, DTMF/Tone Relay/RFC2833/ RFC4733 interworking
- NAT/NAPT on media
- DTMF Trigger Detection and Notification
- Generic audio codec relay
- Tones & Announcements
- Local Ring Back Tone (LRBT) support with centralized PSX Policy Server
- RTP inactivity monitoring
- Video codec relay

Redundancy

- 1:1 Redundant Systems for Service Availability
- 1:1 Redundant Management/ Control Ports

Management Capabilities

- Graphical based wizards for ease of configuration
- Secure embedded web-based management GUI
- Sonus CLI, SSH
- Centralized support by Sonus Insight EMS
- SNMP V2 status and statistics
- Local logging of events, alarms, and traps; Call trace
- Sonus DSI Level 0 support for storing CDRs; RADIUS accounting records
- Live Software Update (LSWU)

Signaling

- Back to Back User Agent (B2BUA)
- SIP, SIP-I/ SIP-T, SIP/H.323; Sonus Gateway to Gateway Signaling
- SIP protocol normalization/ protocol repair; SIP message manipulation
- NAT/NAPT on signaling

Protocol Support

- IPV4, IPV6, IPV4/IPV6 interworking
- SSH; sFTP
- SNMP; NETCONF; NTP
- HTTP/HTTPS
- RTP/RTCP
- UDP, TCP
- DNS, ENUM

Routing/Policy

- Embedded policy/ routing engine
- Centralized support by Sonus PSX Policy/Route Server using DIAMETER+
- Screening, blocking, routing, presentation, call type filters
- Route prioritization
- Leading digit routing; International routing; URI based routing
- Digit/parameter manipulation
- E911 support; Priority Call handling

Security

- Session aware firewall; Topology Hiding
- Line rate DoS/ DDoS, and Rogue RTP protection
- Line rate malformed packet protection
- TLS, IPSec (IKEV1) for signaling encryption
- Secure RTP/RTCP for media encryption

Quality of Service (QoS)

- Bandwidth management
- Call admission control (CAC) per trunk group, per zone
- Per call statistics
- TOS/ COS packet marking

Packet Network Time Source

- Network Time Protocol (NTP) per RFC-1708

Hardware Specifications

Front Panel

- Status Indicators Front Panel LEDs:
  - Status
  - Critical
  - Major
  - Minor
  - User
  - Location
- Single USB V2.0 interface

Rear Panel

- Management Ports:
  - Two (single active, single passive) 10/100/1000 Ethernet RJ-45 ports
- Media Ports:
  - Four 1 Gbps Ethernet fiber or copper via SFP
- High Availability Ports:
  - Two 1 Gbps Ethernet multimode fiber via SFP
- Single Field Service port with RJ45 connector
- Locator LED
- Alarm port with DB15 connector
- Single serial craft DB9 port

Memory

- 24 Gbytes

Chassis

- 2U, rack mount
- Inches: 17.5" Wide x 3.5" High x 21" Deep
- Centimeters: 44.5 Wide x 8.8 High x 53.3 Deep
- Optional mounting brackets for 19" or 23" rack

Chassis Mounting Options:

- 19" or 23" Adjustable Brackets

Storage

- 256 Gbytes of Solid State Disk (SSD) storage

Hardware Specifications (cont.)

AC Power Option:

- RMS Input Voltage
  - Minimum 90 VAC
  - Nominal 100-240 VAC
  - Maximum 264 VAC
- RMS Current
  - 5.6A
- Input Frequency
  - Minimum 47 Hz
  - Nominal 50/60 Hz
  - Maximum 63 Hz

DC Power Option:

- Input: -40 to -72 VDC Redundant Inputs
- Peak Consumption: 18.8A

Operating Altitude:

- 6,000 Feet
- 1,800 Meters

Heat Dissipation

- Fully-Populated Maximum:
  - 1000 Watts
  - 3410 BTU per Hour
- Replaceable Filter

Weight Maximum Fully Populated

- 50 lbs. (22.68 kg)

Environmental:

- 5 to 40º C Operating
- -5 to 55º C Short Term
- 5 to 90% Non-Condensing Operating Humidity

Regulatory Compliance

EMI/EMC:

- CFR47 Part 15 Class A – United States
- ICES-03 – Canada
- CISPR22 Class A – International Standard
- VCCI Class A – Japan
- AS/NZ 3548 Class A – Australia & New Zealand
- CNS 13438; Taiwan (BSMI)
- ETSI EN 300 386 Electromagnetic Compatibility (EMC) requirements – Europe
- ETSI EN 300 386-2 Electromagnetic Compatibility (EMC) requirements
- EN 55022 Class A emissions
- EN 55024
- EN 6100-4-2; ESD Immunity
- EN 6100-4-3; Radiated immunity
- EN 6100-4-4; EFT/B Immunity
- EN 6100-4-5; Surges
- EN 6100-4-6; Conducted Immunity
- EN 6100-4-11; Voltage Dips and Interruptions
- EN 6100-3-3; Flicker
- EN 6100-6-2; Harmonics

Central Office Standards:

- DC Systems – SR-3580 NEBS Level 3
  - GR-1089-CORE
  - GR-63-CORE
- AC Systems – SR-3580 NEBS Level 3
  - GR-1089-CORE
  - GR-63-CORE

European Environmental Standards:

- ETSI EN 300 019-1-0 Part 1-0: Classification of environmental conditions, Introduction
- ETSI EN 300 019-1-1 Class 1.2 Part 1-1: Classification of environmental tests; Storage
- ETSI EN 300 019-2-1 Storage Class 1.2
- ETSI EN 300 019-1-2 Class 2.3 Part 1-2: Classification of environmental conditions; Transportation
- ETSI EN 300 019-2-2 V2.1.2 Transportation Class 2.2
- ETSI EN 300 019-1-3 V2.1.1 Class 3.2 Part 2-3: Classification of environmental conditions; Stationary Use at weather protected locations
- ETSI EN 300 019-2-3 V2.2.2 Stationary Use at weather protected locations Class 3.1E

Safety

- UL 60950-1 – United States
- CAN/CSA-C22.2 NO. 60950-1-03 – Canada
- IEC/ EN 60950-1 – European Union
- AS/NZS 60950:2000 – Australia & New Zealand
- NOM 019 – Mexico
- IEC 60950; IECEE CB Scheme – International

To learn more, call your Sonus sales representative or visit us online at www.sonusnet.com.

Table 1. Estimated Power Consumption (all power measurements taken with fans running high)

			AC Low Line Minimum: 90 Vrms Nominal: 100-120 Vrms Maximum: 140 Vrms		AC High Line Minimum: 180 Vrms Nominal: 200-240 Vrms Maximum: 264 Vrms		DC Minimum: 40 Vdc Nominal: 48 Vdc Maximum: 60 Vdc	
	SPS100	SPS100DB	Amps	Watts	Amps	Watts	Amps	Watts
SBC 5200	0	0	5.8	515	2.8	502	12.4	519
	1	0	6.7	604	3.3	595	14.8	589
	1	1	7.6	676	3.7	656	16.8	672
	1	2	8.5	755	4.1	731	18.8	751