



# Ribbon SBC 5210™ Session Border Controller

Designed for communications service providers and large enterprises, the SBC 5210 Session Border Controller is a powerful, compact and purpose-built SBC for the multimedia communications of today and tomorrow. The Ribbon Communications' SBC 5210 provides all of the features you need in an SBC today—robust network security, sophisticated routing and policy management, overload controls, SIP normalization— plus the features you'll need tomorrow, like IPv4-IPv6 interworking, multi-modal communication, built-in media transcoding and assured performance and scale under heavy traffic. As a key component of Ribbon' award-winning SBC Core platform family, the SBC 5210 meets all of the security, scalability, availability, and management requirements of service providers and large enterprises.

## System Capabilities

### Sessions

- 64,000 simultaneous sessions
- Up to 40,000 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 registrations/sec: 1000
- Maximum refreshes/sec: 5000
- Total registered end point support: 256,000; up to 256,000 NAT'd end points

### Encryption

- Maximum number of TLS sessions: 256,000
- TLS set-up rate: 150/sec
- IPsec (IKE) setup rate: 120/sec
- Maximum # SRTP call legs: 128,000

### Media Services

- Transcoding G.711, G.726, G.728, G.729A/B, G.723, iLBC, G.722, G.722.1, AMR-NB, AMR-WB, EVRCB0, EVRC0, Opus
- 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
- Message Session Relay Protocol (MSRP)
- 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
- Supported video codecs: H.264 AVC, H.264 SVC, H.263+; H.263, H.261, VP8
- SIPREC



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### 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
- REST API
- SNMP V2/V3 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
- Binary floor control protocol (BFCP) Far-end camera control (FECC)

## 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 Ethernet RJ-45 ports
- Media Ports
  - Two 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

## DSP Expansion

- Model 5210: Modular DSP slots

## 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

## 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

- Peak Consumption: 17.3 A

## Operating Altitude

- 6,000 ft. (1,800 m.)

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

## Regulatory Compliance

### 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

| Configuration           | AC Low Line (W) |       | AC High Line (W) |       | DC (W) |       |
|-------------------------|-----------------|-------|------------------|-------|--------|-------|
|                         | Amps            | Watts | Amps             | Watts | Amps   | Watts |
| SBC 5210 - No DSP Cards | 5.7             | 512   | 2.9              | 516   | 12.6   | 502   |
| SBC 5210 +1 DSP25       | 6.4             | 576   | 3.2              | 582   | 14.0   | 559   |
| SBC 5210 +2 DSP25       | 7.2             | 644   | 3.6              | 647   | 14.9   | 594   |
| SBC 5210 +3 DSP25       | 7.8             | 702   | 3.9              | 702   | 17.0   | 678   |
| SBC 5210 +4 DSP25       | 8.5             | 761   | 4.2              | 763   | 17.3   | 692   |

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## About Ribbon Communications

Ribbon is a company with two decades of leadership in real-time communications. Built on world class technology and intellectual property, Ribbon delivers intelligent, secure, embedded real-time communications for today's world. The company transforms fixed, mobile and enterprise networks from legacy environments to secure IP and cloud-based architectures, enabling highly productive communications for consumers and businesses. With locations in 28 countries around the globe, Ribbon's innovative, market-leading portfolio empowers service providers and enterprises with rapid service creation in a fully virtualized environment. The company's Kandy Communications Platform as a Service (CPaaS) delivers a comprehensive set of advanced embedded communications capabilities that enables this transformation.

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