



Ribbon SBC 5110™ Session Border Controller



For years, the world's largest service providers and enterprises have relied on Ribbon Communications' session border controllers (SBCs) for secure SIP-based communications. The SBC 5110 delivers all of the industry-leading capabilities of the Ribbon SBC 5210 and SBC 7000—robust security, flexible SIP session routing & policy management, system interworking and media transcoding—at a cost-effective price/performance point for Tier 2/3 service providers and medium-to-large enterprises. With the ability to easily scale from 250 to 10,000 concurrent sessions without any additional hardware, the SBC 5110 provides all the high-end features you won't find in other “mid-large sized” SBCs. By including the SBC 5110 into network designs, regional service providers and medium-to-large enterprises can deliver a rich world-class communications experience designed for their world.

System Capabilities

Sessions

- 10,000 sessions (SIP and/or H.323)
- 10,000 transcoded sessions (based upon codec type)
- RTCP sessions scale 1:1 with RTP sessions

Call Set-Up

- Maximum call setup rate: 150 cps

Registrations

- Maximum new registrations/sec: 400
- Maximum refreshes/sec: 1,700 per second
- Total registered end point support: 100,000; up to 100,000 NAT'd end points

Encryption

- Maximum number of TLS sessions: 100,000
- TLS set-up rate: 50 cps w/o mutual authentication
- IPsec (IKE) setup rate: 50 cps
- Maximum # SRTP call legs: 20,000

Media Services

- Transcoding up to 10,000 concurrent calls: 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 clear channel 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

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
- Ribbon CLI, SSH
- Centralized support by Ribbon Insight EMS
- REST API
- SNMP V2/V3 status and statistics
- Local logging of events, alarms, and traps; Call trace
- Ribbon 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; Ribbon 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)

Contact Us

We are here to help. Let us know if you are interested in a quote or if you have any questions.

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
- Optional centralized policy/routing via Sonus Centralized Policy Server (PSX 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

- 12 GB of RAM

DSP Expansion

- Model 5110: 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

- 128 GB of SSD storage

AC Power Option

- RMS Input Voltage
 - Minimum 90 VAC
 - Nominal 100-240 VAC
 - Maximum 264 VAC
- RMS Current
 - Low Line: 7.1A
 - High Line: 3.4A
- Input Frequency
 - Minimum: 47 Hz
 - Nominal: 50/60 Hz
 - Maximum: 63 Hz

DC Power Option

- Peak Consumption: 16.8A
- Number of power supplies, standard: 1 (Redundant dual power supply optional)

Operating Altitude

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

Heat Dissipation

- Fully-Populated Maximum:
 - 633 Watts
 - 2159 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

	AC Low Line (W)		AC High Line (W)		DC (W)	
	Minimum: 90 Vrms Nominal: 100-120 Vrms Maximum: 140 Vrms		Minimum: 180 Vrms Nominal: 200-240 Vrms Maximum: 264 Vrms		Minimum: 40 Vdc Nominal: 48 Vdc Maximum: 60 Vdc	
Configuration	Amps	Watts	Amps	Watts	Amps	Watts
SBC 5110	4.5	408	2.3	407	9.8	390
SBC 5110 + 1 DSP25	5.2	472	2.6	465	11.4	454
SBC 5110 +2 DSP25	5.9	530	2.9	525	12.8	512
SBC 5110 +3 DSP25	6.6	597	3.3	591	15.1	604
SBC 5110 +4 DSP25	7.4	667	3.6	654	16.8	673

Table 1. Estimated Power Consumption (power estimates with fans running at high speed)

About Ribbon

Ribbon Communications (Nasdaq: RBBN) delivers communications software, IP and optical networking solutions to service providers, enterprises and critical infrastructure sectors globally. We engage deeply with our customers, helping them modernize their networks for improved competitive positioning and business outcomes in today's smart, always-on and data-hungry world. Our innovative, end-to-end solutions portfolio delivers unparalleled scale, performance, and agility, including core to edge software-centric solutions, cloud-native offers, leading-edge security and analytics tools, along with IP and optical networking solutions for 5G. We maintain a keen focus on our commitments to Environmental, Social and Governance (ESG) matters, offering an annual Sustainability Report to our stakeholders. To learn more about Ribbon, please visit ribbon.com.

Contact Us

We are here to help. Let us know if you are interested in a quote or if you have any questions.

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