# SBC SWe Datasheet

Session Border Controller Software Edition (SBC SWe)

**The Ribbon Session Border Controller Software Edition (SBC SWe) is architected to enable and secure real-time communications in the cloud without compromise. The SBC SWe features the same code base, resiliency, media transcoding, and security technology found in Ribbon's award-winning hardware-based SBC 5000 Series and SBC 7000 Session Border Controller - without the appliance. Customers can deploy the SBC SWe as a Virtual Machine (VM) on industry-standard servers in a data center environment, as a Virtual Network Function (VNF) in an OpenStack cloud infrastructure, or as a VNF in a public cloud, such as Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform (GCP). The SBC SWe operates seamlessly with the existing Ribbon SBC product portfolio.**


Ribbon's strategy capitalizes on its heritage of enabling secure, reliable, and scalable real-time communications, beginning with the transition from TDM to IP, and now into the cloud. Starting at 25 sessions, and scaling to hundreds of thousands, the unique architecture of the SBC SWe allows customers to define where on the performance curve their network needs to reside. Designed to be simple but robust, and agile but predictable, the SBC SWe makes it easy for customers to reach new markets and new revenues with secure SIP and Unified Communications (UC) services:

- Unleash real-time communications (RTC) performance with automated scale on demand in the cloud
- Be more responsive to your customers with optimized operations efficiency, VNF activation in minutes (auto configuration)
- Load-balance RTC traffic across the cloud for network efficiency
- Deploy SBC services into new regions without a truck-roll, reducing the delivery costs of real-time communications
- Integrated analytics of network traffic to drive orchestration of SBC VNFs
- Subscription licensing flexibility to deal with the varying traffic demands across the different interconnection points
- Lawful Intercept provisioning
- Flexible licensing model for elastic scaling
- Real time streaming of RTCP statistics for Ribbon Analytics
- APIs for call notification event and call termination
- Support for automated SBC VNF upgrades

## Media Services

- Transcoding G.711, G.722, G.722.1, G.723, G.726, G.729A/B, AMR-NB, AMR-WB, EVRC/EVRC0, EVRCB/EVRCB0, iLBC, Opus
- T.38, SILK, EVS, Linear PCM (16 bits)
- Wireline, wireless, clear channel codec and fax pass-through
- VAD, Silence Suppression, Dynamic Jitter Buffer, DTMF Tone Relay/ RFC2833/RFC4733 interworking
- NAT/NAPT on media
- DTMF Trigger Detection and Notification
- Tones & announcements
- Local Ring Back Tone (LRBT) support with centralized PSX Policy Server
- RTP inactivity monitoring
- Video codec pass-through: H.265, H.264 AVC, H.264 SVC, H.263+, H.263, H.261 and VP8, VP9
- Support up to 4 simultaneous SIPREC recordings per session
- Message Session Relay Protocol (MSRP) - MSRP B2BA,
- MSRP over TLS, and MSRP-CEMA
- T.140 Text over Internet Protocol (ToIP) to/from Baudot interworking for TTY/TDD (Telecommunications Device for the Deaf) equipment support

## Management Capabilities

- Graphical-based wizards for ease of configuration
- Secure embedded web-based management GUI
- CLI, SSH
- Centralized support by Ribbon RAMP (Ribbon Application Management Platform)
- SNMP V2/V3 status and statistics
- Local logging of events, alarms, traps, and call traces
- Ribbon DSI Level 0 support for storing CDRs, RADIUS accounting records
- Live Software Update (LSWU)
- 1:1 High Availability for integrated SBC

## Signaling
- Back-to-Back User Agent (B2BUA)
- SIP, SIP-I/SIP-T, SIP/H.323
- SIP protocol normalization/protocol repair, SIP Message Manipulation
- NAT/NAPT on signaling
- Binary floor control protocol (BFCP)
- Far-end camera control (FECC)
- SIP over WebSocket

## Protocol Support
- IPv4, IPv6, IPv4/IPv6 interworking
- SSH, SFTP
- SNMP, NETCONF, RESTCONF
- HTTP/HTTPS
- RTP/RTCP
- UDP, TCP
- DNS, ENUM
- NTP per RFC 1708

## Deployment Options
- 1:1 Integrated HA (High Availability) SBC
- N:1 SBC with High Availability (HA) SIP-aware Load Balancer

## Routing/Policy
- Embedded policy/routing engine
- Optional centralized policy/routing via Ribbon 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 handing
- Survivable service for SIP clients when primary SIP Registrar is unavailable
- Routing based on Active Directory lookup
- Call forking

## Security
- Session aware firewall, topology hiding
- Line rate DoS/ DDoS and rogue RTP protection
- Line rate malformed packet protection
- TLS, IPsec (IKEv1/v2, ESP tunnel/transport mode) for signaling encryption
- Secure RTP/RTCP for media encryption
- Support for STIR/SHAKEN Caller ID Authentication and Verification
- Voice analytics to identify voice campaigns

## Mobile Network Deployments
- P-CSCF
- AGW
- ATCF
- ATGW
- E-CSCF
- EATF
- IBCF

## Quality of Service (QoS)
- Bandwidth management
- Call Admission Control (CAC) per trunk group, per zone
- Per-call statistics
- TOS/COS packet marking

## Minimum Requirements
- 6 x86 virtual CPUs
- 10 GB of RAM
- 4 virtual NICs (vNICs)
- 100 GB hard disk space

## Software Platforms
- VMware 7.0 and higher
- KVM
- Amazon Web Services (AWS)
- Google Cloud Platform (GCP)
- OpenStack
- Microsoft Azure

## Certifications
- Microsoft Teams Direct Routing including media bypass and Local Media Optimization (LMO)
- Joint Interoperability Test Command (JITC)
- Federal Information Processing Standard (FIPS) 140-2, 140-3
  - Zoom Bring Your Own Carrier
  - Webex Calling
  - Zoom phone

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