

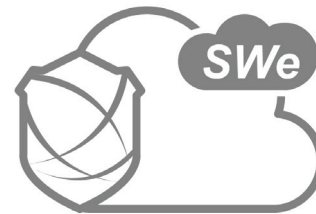
# Session Border Controller Software Edition (SBC SWe)



The Ribbon Communications Session Border Controller Software Edition (SWe) is the industry's only software-based, cloud native SBC 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 Controllers. The only difference is how customers choose to deploy it: as a Virtual Network Function (VNF) on industry-standard servers in a data center environment using a hypervisor, as a VNF in an OpenStack cloud infrastructure, or as a VNF on public cloud or hosted services including Amazon Web Services (AWS). 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. Ribbon's SBC SWe is the only SBC in the marketplace architected to enable and secure real-time communications in the cloud without compromising on performance or scale. Starting at 25 sessions, and scaling to tens of thousands, the unique architecture of the SBC SWe allows customers to define where on the performance curve their network needs to reside. The SBC SWe uses a microservices design to separate signaling, media and transcoding to optimize virtual network resources. It also supports on-demand auto-scaling, with a feedback loop using Key Performance Indicators and the Ribbon Virtual Network Function Manager (VNFM). 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 RTC performance with automated scale on demand in the cloud
- Be more responsive to your customers with optimized operations efficiency, turn up VNFs 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



- Network-wide licensing flexibility to deal with the varying traffic demands across the different interconnection points
- Independently scale in a microservices architecture and manage SBC signaling, media, and transcoding to optimize network investment

## Media Services

- Transcoding G.711, G.722, G.723, G.726, G.729A/B, AMR NB, AMR-WB, EVRCB0, EVRC0, iLBC, Opus
- 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
- SIPREC
- Message Session Relay Protocol (MSRP)

## Management Capabilities

- Graphical-based wizards for ease of configuration
- Virtual Network Function Manager (VNFM) for VNF life cycle management
- Integration with leading cloud orchestration vendors
- Secure embedded web-based management GUI
- Ribbon CLI, SSH
- Centralized support by Ribbon EMS
- 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)
- 1:1 High Availability
- Lawful Intercept provisioning

## 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)

## Protocol Support

- IPV4, IPV6, IPV4/IPV6 interworking
- SSH; SFTP
- SNMP; NETCONF; NTP
- HTTP/HTTPS
- RTP/RTCP
- UDP, TCP
- DNS, ENUM
- NTP per RFC-1708

## 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 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

## Minimum Requirements

- 4 Intel-based CPU cores
- 10GB of RAM
- 4 virtual NICs (vNICs)
- 100GB hard disk space

## Certifications

- Microsoft Skype for Business and Lync 2013
- BroadSoft BroadWorks Platform

## Software Platforms

- VMware 5.0 and higher
- KVM
- Amazon AWS
- OpenStack

## 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.

To learn more visit [RibbonCommunications.com](http://RibbonCommunications.com)

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Gold Communications

**Voice  
Unified Communications  
Business Productivity Solutions  
Midmarket Solution Provider**

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