Ribbon Session Border Controllers for Enterprises

ribbon

Accelerating Network Transformation

The ABCs of SBCs

Session Border Controllers (SBCs) work behind the scenes to ensure that voice, video and data communications flow smoothly and securely between clouds and across networks, to where people work. An SBC is part voice firewall, protecting the networks and users from IP-based attacks; part traffic cop, policing traffic to prevent overloads and directing it over lower cost paths to save money; and part peacemaker, ensuring that networked devices from different vendors all speak the same language.

Why Does Your Organization Need an SBC?

Organizations need an SBC to provide the requisite security, control and interoperability required for modern, IP-based communications. As communications move to the cloud there are more ways for bad actors to attack an organization and greater requirements for interoperability with legacy products that must remain on-site. Ribbon SBCs assure that communications are secure and that only authorized users have access to an organization's wider data network.

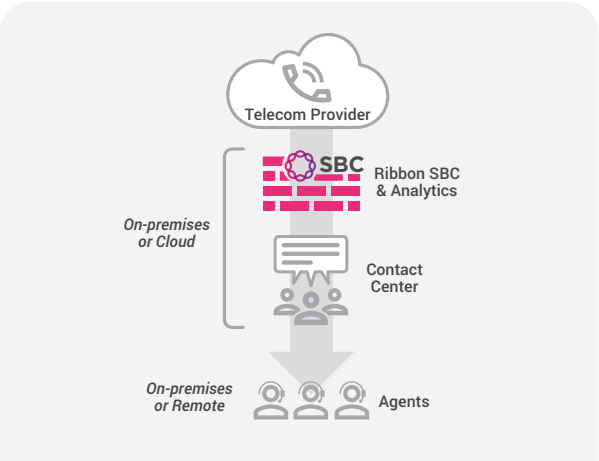
Tested and Certified with Leading Solutions

Ribbon SBCs are certified with leading cloud-based services such as Microsoft Teams, Zoom Phone, Webex, Google Voice, Ring Central, Cisco, Genesys, Five9, Nice CXone, Talkdesk, Mida, AnyWhere365, and more. They are also tested with leading on-premises PBX and contact center platforms, analog devices and hundreds of telecom providers globally. Ribbon does extensive testing to assure interoperability with all manner of services and devices. Additionally, customers benefit from the fact that so many cloud providers and telecom providers use Ribbon SBCs in their own networks, meaning that an organization's Ribbon SBC is often connected to their provider's Ribbon SBC.

SBC Use Cases

Securing Contact Centers

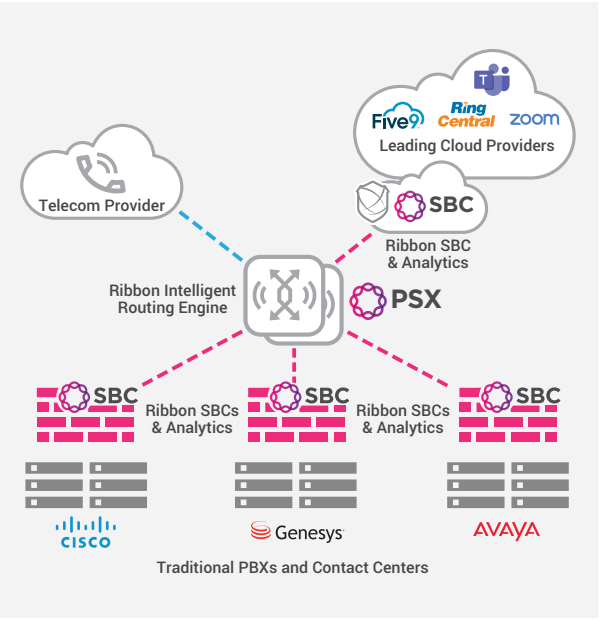
Contact centers, whether they are inside a private network or delivered from a cloud-based service, are frequently targets of attacks. Bad actors commonly attempt to overwhelm data networks or busy-out phone lines to disrupt customer engagement. Ribbon SBCs protect services and employees using encryption, topology hiding, traffic policing, and call admission control. They thwart denial of service attacks for both signaling and media. And Ribbon SBCs do this with no impact on performance, even at scale for the largest enterprises. It's no wonder some of the largest contact centers in the world depend on Ribbon.



Unified Communications - Cloud Migrations

Ribbon solutions integrate and secure communication assets across on-premises and cloud infrastructure. They also ensure interoperability between cloud services, legacy PBXs, analog devices and telecom providers.

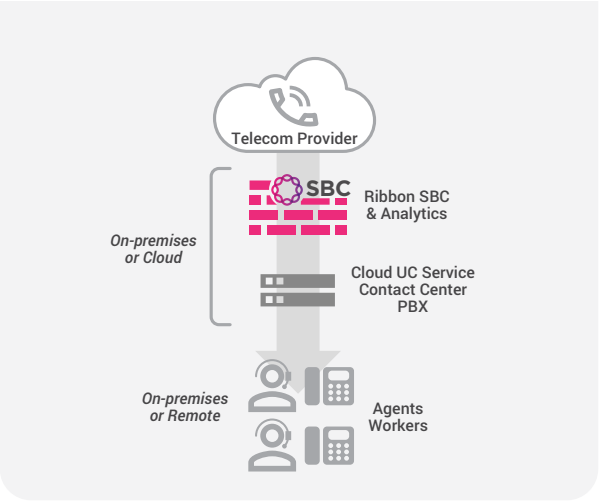
Ribbon's intelligent session control normalizes IP communications across disparate elements. It simplifies end user migration from legacy PBXs to unified communications with dial plan management and integration with Microsoft Active directory. It can dynamically routing calls to the right endpoint every time, transforming fractured multi-vendor, multi-site, telephony environments into a cohesive enterprise-wide unified communications system. At the same time, Ribbon solutions reduce employee labor costs for moves, adds, and changes.



SIP Trunking – Security and Interoperability

Ribbon SBCs are the key to multi-site security and interoperability for SIP trunking. Ribbon SBCs deliver signaling and media path security, including encryption, topology hiding, traffic policing, call admission control and mitigation of DDoS attacks. Ribbon provides session mediation and protocol normalization for seamless interoperability with premises equipment or cloud-based services. Ribbon SBCs also manage a wide range of VoIP codecs and transcoding plus legacy support for DTMF, tones & announcements, and fax interworking.

Ribbon SBCs are widely deployed in telecom providers worldwide. That means that in many cases a Ribbon SBC deployed by your organization is connecting to a Ribbon SBC deployed in your telecom provider.



Scalable Solutions for a Large Enterprise Network Core

Common Attributes of Ribbon SBC Core Portfolio

Ribbon's SBC core portfolio shares a common code base, so all the advanced features and functionality operate the same on each of the SBCs. When deployed in a large enterprise's core network, customers instantly leverage the SBC's carrier-grade heritage, taking advantage of seamless failovers, robust network and application layer security, sophisticated routing and policy enforcement, overload controls, SIP normalization, SIP Recording, IPv4-IPv6 interworking, and multi-codec audio transcoding. The primary differences lie in the deployment choice, scalability, and some capabilities that can only be delivered via virtualized software.

Ribbon SBC Cloud Native Edition (SBC CNe)

Architected from the ground up to be aligned with key Cloud Native Computing Foundation cloud native design and implementation principles, the SBC CNe delivers scalable SBC services (up to 500,000 concurrent calls) that are simultaneously resilient, manageable, and observable. The SBC CNe can be deployed in public, private, and hybrid cloud environments and is orchestrated by out of the box Kubernetes for cloud infrastructure abstraction, horizontal autoscaling, microservices redundancy, high availability & automated software upgrades.

SBC CNe

Ribbon SBC Software Edition (SBC SWe)

SBC SWe

The Ribbon SBC Software Edition (SWe) is architected to secure communications across a wide variety of network environments. As such, its designed for diverse virtual or cloud environments. Leveraging a microservices design, customers can optimize resource allocation, enable dynamic scaling using automated lifecycle management tools, ensure high-availability, provide robust network security, and perform multi-codec audio transcoding. The SBC SWe can be deployed on KVM, VMware, and OpenStack environments as well as public clouds from Amazon, Google, and Microsoft. There is no restricted limit on how many instances can be created so scalability is only limited by the customer's requirements.

Ribbon SBC 5400

Designed for mid-large enterprises, the SBC 5400 is a powerful, compact, purpose-built SBC. It easily scales up to 75,000 sessions and supports the ability to shift between 1GB and 10GB of multimedia traffic with just a software license change. The Ribbon SBC 5400 provides the protection organizations need — robust network security, overload controls, interworking simplicity with SIP normalization—plus the capabilities required to thrive in diverse deployment environments such as IPv4-IPv6 interworking, multi-modal communication, built-in media transcoding, and assured performance and scale under heavy traffic.

SBC 5400

SBC 7000

Ribbon SBC 7000

The Ribbon SBC 7000 is an appliance-based solution with industry-leading performance and scale that delivers increased operational efficiency and uncompromised quality of service to help the largest enterprise customers securely and efficiently handle massive amount of audio, video and collaboration traffic crossing their networks. The SBC 7000 can scale up to 150,000 sessions via simple software licenses, allowing operational teams to expand capacity in minutes. The SBC 7000's massive scale empowers organizations to leave behind traditional "racking and stacking" of small capacity SBCs to accommodate growth, resulting in faster deployments and reduced operational expenses.

Flexible and Easy to Deploy Solutions for a Small to Medium Business or Branch Offices

SBC SWe Edge

Ribbon SBC Software Edition Edge (SWe Edge)

The SBC SWe Edge has an extremely compact footprint that makes it easy to deploy and configure in almost any environment, be it a white box server at the edge, a shared server in a data center or as a virtual machine in a public or private cloud. The SBC SWe Edge protects communications infrastructure from Denial of Service (DoS)/Distributed DOS (DDoS) attacks, maintains privacy, encrypts calls, and interworks with a wide variety of third-party SIP and legacy voice infrastructure devices/services, all while providing reliable, scalable performance that ensures maximum uptime and service availability. SBC SWe Edge is deployable on Microsoft® Hyper-V®, VMware® vSphere® hypervisor and Linux® KVM as well as on Azure or AWS.

- Intuitive local and/or centralized management via the Ribbon Application Management Platform
- Available in High Availability (HA) configurations
- Supports an additional virtual machine to enable Teams Survivable Branch Appliance (SBA)

Ribbon Edge 8100, Edge 8300 & Edge 8500

Ribbon's Edge 8000 family is Ribbon's latest Intelligent Edge solutions that include routing, session border controller, and gateway services in a single appliance. Edge 8000 appliances can be deployed in High Availability (HA) configurations.

Edge 8100

The Edge 8100, Edge 8300 and Edge 8500 are ideally suited for today's cloud-first enterprises that rely on cloud-based UC and contact center solutions. Ribbon's SBC SWe Edge software runs on the platforms to fully secure up to 960 concurrent voice conversations. The platform delivers all of the SBC SWe Edge services, including the option to deploy Microsoft SBA for local survivability. The Edge 8000 family all have a built-in router that supports up to 10 Gb of bandwidth, and the platform integrates

Edge 8300

In addition, the Edge 8300 and Edge 8500 offer analog (FXO/FXS) and PRI (E1/T1) gateways, making it possible to accommodate legacy PBXs, contact centers and analog devices, The Edge 8500 offers modular gateways so organizations can use the platform's 4 slots for:

- Up to 96 ports of analog stations (FXS)
- Up to 16 PRI ports
- Up to 16 Analog lines (FXO) phones, etc.

Edge 8500

SBC 1000

Ribbon SBC 1000

Ribbon's SBC 1000 is an ideal solution for small businesses or branch offices that need a traditional SBC appliance to deliver security along with analog and/or digital connectivity (BRI/PRI). They also provide local survivability options, including support for Microsoft's Survivable Branch Appliance (SBA) as well as built-in services in case of a WAN failure.

The SBC 1000 is well-suited for environments where premises hardware is still required or where SIP trunks are not available. The devices are managed from menu-based web interfaces that include configuration wizards. The wizards are pre-populated with popular cloud UC services, PBXs/contact centers, and telecom providers to dramatically simplify deployments.

- Ports for traditional connections, including fax machines, lobby phones, etc.
- Optional on-board Application Server Module to support Teams Survivable Branch Appliance (SBA)

Ribbon SBCs are critical to network security serving as foundational element of a wider plan to integrate locations and generations of communications technology. Multi-site and multi-nation organizations will appreciate that Ribbon's portfolio provides solutions and toolsets to truly unify communications, so employees can be more engaged, more productive and better connected to their co-workers and customers. Ribbon complementarity solutions include:

Centralized Policy and Routing

Ribbon's Policy and Routing Server, PSX, rationalizes the complexities of integrating multiple networks and multiple sites, unifying different brands and generations of communications technology. The PSX brings policy and routing decisions together in one scalable, highly reliable solution. It manages sessions across all the SBCs in the organization and dramatically simplifies dial plan management as well as call routing decisions for both internal and external calls. It unifies multiple services, including the latest cloud services, SIP trunks, and legacy PBXs or contact centers.

Centralized Management

Ribbon Application Management Platform (RAMP) delivers scalable and automated management, enabling an organization to quickly configure large numbers of Ribbon SBCs, as well as the PSX, from a single interface (across all software and/or hardware-based deployments). RAMP offers fault management, configuration, accounting, performance, and security solution in one solution, to help identify and remediate issues. RAMP improves the customer experience and reduces operational costs.

For large, multi-site organizations, RAMP can be deployed in public or private cloud environments in standalone or high availability configurations, including options for geographic redundancy.

Analytics and Voice Threat Prevention

Unified communications users and contact center agents are now communicating with their colleagues or customers anywhere in the world. Meetings and collaboration happen over cloud –based tools like Microsoft Teams or Zoom and typically include employees working from home.

Even if an organization has invested in security solutions to protect their data network and business applications, voice and video services may still be vulnerable. Bad actors can attack communication services and attempt to use that access disrupt services or to access other parts of your organization.

Ribbon Analytics and Ribbon Reputation Scoring Service can identify potential attacks and determine the level of threat associated with illegal robocalls, fraud attempts, or Telephony Denial of Service attacks. It can proactively respond in real-time to threats by providing mitigation instructions to Ribbon or 3rd party network elements to thwart business disruptions and poor customer experiences.

The World's Most Reliable, Secure SBCs

What makes Ribbon SBCs stand apart from the competition? Maybe it's because the world's most demanding networks have trusted Ribbon to deliver high-quality SIP communications for more than 20 years. Or maybe it's because we offer more choices than anyone else, with virtualized software, hardware appliances and cloud-native software that scale from small businesses to the world's largest companies. But more than likely it comes down to something simple: Ribbon SBCs simply work, no matter what kind of network you have today and no matter where that network evolves in the future. Ribbon SBC options include:

	SBC 1000	Edge 8300	Edge 8500	SBC SWe Edge	SBC 5400	SBC 7000	SBC SWe	SBC CNe
Platform	Hardware Appliance	Hardware Appliance	Hardware Appliance	Virtualized Software	Hardware Appliance	Hardware Appliance	Virtualized Software	Cloud-native Software
Session Count	192	960	960	1,200	75,000	150,000	Server Dependent	Server Dependent
Analog/TDM Ports	√	√	Modular	X	X	X	X	X
Microsoft, Zoom, Webex, Google & Ring Central Certified	√	√	√	√	√	√	√	√
Encryption (TLS, SRTP, IPsec)	√	√	√	√	√	√	√	√
DoS/DDoS protection	√	√	√	√	√	√	√	√
Integrated with Ribbon Analytics	√	√	√	√	√	√	√	√
Managed by Ribbon Application Management Platform	√	√	√	√	√	√	√	√

SBC Implementation Services from Ribbon

Whether you need a little help or a lot, onsite support or remote assistance, count on Ribbon Global Services to be there for your business. We offer flexible SBC implementation services to help enterprises get more from their SBCs in less time:

- SBC Implementation Services, featuring planning, configuration and testing; and
- Supplemental SBC Services, including design consulting, technical support and project management

Trusted Partners Across the Globe

Ribbon has development centers, sales offices and support staff across the globe. With nearly 4,000 employees, Ribbon does business in over 140 countries. In addition, we have a network of authorized and fully trained business partners that extend that reach. They can combine their Ribbon expertise with other technology partners in their portfolio to deliver custom solutions, architected to meet your organizations unique communications needs and to create solutions that give your organization a competitive advantage.

Contact Us Contact us to learn more about Ribbon solutions.

Microsoft Partner
Gold Communications

Voice
Unified Communications
Business Productivity Solutions
Midmarket Solution Provider

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 visit rbbn.com.