

The Ribbon Communications

SBC 1000/2000 Session Border Controller



Ribbon Communications 會話邊界控制器 (SBC) 協助了全球領先的大型企業降低通信成本並實現統一通信 (UC)，同時也保護其網路免受基於互聯網協議 (IP) 的攻擊。現在，中、小型企業和分公司也可以擁有這業界領先的SBC技術。

SBC 1000會話邊界控制器是經過獨立第三方驗證的高效能SBC，在不同網路之間提供強大的安全功能和互操作性。SBC 1000配置設計便於部署和擴充。會話和端口的擴充都可以通過簡單的遠端授權啟用，無需人員到現場甚至停機重啟。SBC 1000還支援Microsoft®Skype®for Business，BroadSoft™和其他SIP / TDM / FXx客戶端的遠端存活能力，因此即使寬區域網路 (WAN) 出現故障。

System Capabilities

Sessions

- SIP → SIP 最大同時通話數
SBC 1000 : 192
SBC 2000 : 600
- TDM/FXx → SIP 最大同時通話數
SBC 1000 : 144
SBC 2000 : 480
- T1/E1 PRI 最大支援
SBC 1000 : 4
SBC 2000 : 16
- 最大同時通話數
SBC 1000 : 144
SBC 2000 : 480
- Maximum number of total concurrent calls: 192
SBC 1000 : 192
SBC 2000 : 600

Registrations

- 最大SIP註冊數為
SBC 1000 : 600
SBC 2000 : 1000

Encryption

- 最大TLS與SRTP通話數為
SBC 1000 : 192
SBC 2000 : 600

Business Continuity

- Bypass relays (PRI → PRI, FXS → FXO) for emergency calls (e.g., 911)
- Site survivability for SIP clients through built-in SIP registrar
- PSTN fallback when WAN is down
- Survivable Branch Appliance (SBA) for Skype for Business and Lync®
- 支援BroadWorks Local survivability
- 支援 Multiple SIP trunking service provider support for redundancy
- 支援Rapid Ethernet Port Fail-over, to maintain



in-progress calls in the event of an Ethernet port or switch problem

- 支援Multiple Spanning Tree Protocol, to prevent network routing loops

Management Capabilities

Operations, Administration and Management

- 單一, 安全, 即時監控的web-based管理介面
- 3步驟的快速設定部署包含:
 - SIP trunks → SIP phones, ISDN-based PBXs, and SIP-based PBXs such as the Avaya® Aura® Communication Manager and the Cisco® Unified Communications Manager
 - Microsoft Skype for Business → SIP trunks, ISDN trunks, or FXO ports
- 支援REST-based程式介面在遠端對多台 SBC 1000管理
- 支援SNMPv2c/v3使用第三方管理系統的網路管理
- 支援Configuration backup and restore; Configuration upload from one site to another; Partial configuration import export through REST
- 支援CDRreporting
- 支援Syslogs for troubleshooting, with support for free Ribbon LX syslog server and log parser tool
- 支援 Historical Stats and TCAs Authentication
- 支援Local user (User name/password)
- 支援網路障礙測試
- 支援RADIUS

Media Services

- 支援 G.711, G.722, G.722.2 (AMR-WB), G.723.1 (5.3 kbps, 6.3 kbps), G.726 (32 kbps), G.729A/B (8 kbps)
- Transcoding
- Video
- 支援 T.38 with CNG tone detection
- 支援 DTMF/RFC4733; Inband DTMF; SIP INFO/RFC-2833
- 支援 Voice Activity Detection (VAD)
- 支援 G.168 Echo Cancellation with standard 128 ms tail length
- 支援 Comfort noise generation and packet loss concealment
- 支援 Automatic call type detection — voice, fax or modem
- 支援 Music on hold
- 支援 Generate call progress tones — ringback, busy, reorder
- 支援 RTP inactivity monitoring (dead call detection)
- 支援 RTP pass-through and media bypass
- 支援 RTCP/RTCP-XR
- 支援 Caller ID

Signaling

- 最大支援 signaling groups: 100
- 支援 TDM Signaling (ISDN): AT&T 4ESS/5ESS, Nortel DMS-100, Euro ISDN (ETSI 300-102), QSIG, NTT InsNet (Japan), ANSI National ISDN-2 (NI-2)
- 支援 TDM Signaling (CAS): T1 CAS (E&M, Loop start); E1 CAS (R2)
- 支援 Back-to-Back User Agent (B2BUA)
- 支援 SIP (UDP/TCP/TLS) to/from SIP (UDP/TCP/TLS)
- 支援 SIP (UDP/TCP/TLS) to/from CAS/PRI/BRI/FXS/FXO
- 支援 CAS/PRI/BRI/FXS/FXO to/from CAS/PRI/BRI/FXS/FXO
- 支援 SIP Message Manipulation (SMM)
- 支援 FXS long loop support (up to 3km)

Protocol Support

- 支援 SNMPv2c, SNMPv3
- 支援 NTP
- 支援 HTTPS
- 支援 RTP/RTCP, SRTP/SRTCP
- 支援 SIP over UDP, TCP, TLS
- 支援 DNS
- 支援 IPv4, IPv6, and IPv4/IPv6 interworking
- 支援 RIPv2, OSPF as dynamic IP routing protocols
- 支援 DHCP server

- IP 取得方式支援靜態IP與動態IP
- 支援 Asynchronous DNS for SIP
- 支援 NAT
- 支援 Support for Reason Header

Routing/Policy

- 最大 call route entries: 1,000
- 支援 Active Directory/LDAP-based call routing
- 支援 Routing based on quality metrics
- 支援 Least cost routing
- Event-based action set
- 支援 On-board call forking (up to eight end points)
- 支援 Supplementary services
- Callhold
- Call transfer (blind & assisted)
- Callforward
- 支援 Embedded policy/routing engine
- 支援 Optional centralized policy/routing via Ribbon Centralized Policy Server (PSX Server) using SIP
- 支援 Screening, blocking, routing, presentation, call type filters
- Route prioritization
- 支援 Leading digit routing; International routing; URI-based routing
- 支援 Digit manipulation (name/number manipulation using regular expression and Active Directory lookup)
- 支援 One number fax support (single DID for voice and fax)
- 支援 SIP routing
- 支援 Based on source and destination IP address
- 支援 Fully Qualified Domain Name (FQDN)
- 支援 Detect proxy failure and route to alternate paths
- 支援 Re-route on failure based on full Cause Code re-routing on T1/E1 trunks
- 支援 Lync E911 support; SIP/PIDF-LO passthrough and ELIN Gateway

Security

- 支援 TLS 1.2 信令加密
- 支援 Secure RTP (SRTP) 媒體加密
- 支援內建 VoIP firewall
- 支援 Microsoft Windows® firewall for Application Solution Module to manage Lync SBA
- 支援 Topology hiding; User privacy
- 支援 Prevention of Denial-of-Service (DoS) and Distributed DoS (DDoS) attacks
- 關閉或開啟管理功能

- authentication
- 支援Traffic separation (VLAN interface separation)
- 支援Malformed packet protection
- 支援Access Control Lists (ACLs)
- 支援IPsec VPN tunnel
- 支援NAT/NAPT and port forwarding, NAT traversal
- 支援Duplicate IP detection on ASM/SBA
- 支援2 GB on-board eUSB memory for secure Active Directory replication

Quality of Service (QoS)

- 支援Bandwidthmanagement
- 支援Call Admission Control (CAC) (deny excessive calls based on static configuration for bandwidth management)
- 支援P-time mediation for rate limiting
- 支援Per-callstatistics
- 支援Diffserv/DSCPmarking

Packet Network Time Source

- 支援Network Time Protocol (NTP) per RFC1708

Microsoft Skype for Business Support

- 支援Qualified as a Survivable Branch Appliance (SBA) for Microsoft Lync 2010, Lync 2013, and Skype for Business deployments
- 支援Qualified as an Enhanced Gateway for Lync 2013, Lync 2010 & Skype for Business deployments
- 支援Lync 2013 and Lync 2010 qualified for SBC and E- 911 ELIN Gateway
- 支援Microsoft Office 365® Exchange Unified Messaging qualified
- 支援 Non-Lync SIP client user state reporting (e.g., presence, user busy, etc.) to Lync clients
- 支援Microsoft SCOM support
- 支援 Lync Quality of Experience (QoE) monitoring collects call RTP stream data and sends to Lync QoE server - Round Trip Delay
 - Jitter (max, mean)
 - Packet Loss (max, mean)
 - Packet Loss Rate (max, mean) — Burst (density, gap density) — MOS-LQ, MOS-CQ
 - Signal/Noise Level
- 支援Skype for Business SDN API 2.2 support
- 支援Integration with PeterConnects® Attendant, Directory, and Manager/Assistant (for SBA clients)
- 支援Integration with Nectar Unified Communications

- Management Platform (UCMP)
- 支援Integration with Event Zero UC Commander™ (for SBA clients)

Server Module

Memory

- 8 GB ,DDR4 ECC (Error-Correcting Code) CPU
- Intel® Pentium® Processor: Broadwell family, dual core, 4 threads, 2.20 GHz

Storage

- 256 GB SSD

Auto Configuration

- 自動下載設定檔案
- 更新失敗可自動讀取上一版
- 支援 XML 格式

Operating System

- Microsoft Windows Server® 2012 R2, Windows Server 2008 R2

Additional Hardware Specifications

Front Panel

- 狀態顯示LEDs可顯示- Power -Alarm - PeerNode -Ready 等狀態
- SBC 支援雙USB 2.0 介面
- ASM模組支援雙USB 2.0 介面 (選購)
- WAN and LAN 介面
 - 1000/100/10 Base-T Ethernet 介面 3 埠 (支援 VLAN)。
 - 1000/100/10 Base-T Ethernet 介面 (ASM模組使用)
 - 支援Auto-MDIX
- Physical PSTN 介面
 - 最大為2 T1/E1 CAS/PRI 介面

Rear Panel

- Physical PSTN Interfaces
 - 最大為2 T1/E1 CAS/PRI 介面
 - 最大為12 BRI 介面
 - 最大為24 FXS (Foreign eXchange Station) 介面

The Ribbon Communications SBC 1000™ Session Border

- 最大為12 globally compliant FXO (Foreign eXchange Office)介面

Chassis

- 1U機架式
- 尺寸:17.5英吋 (44.4 公分)寬 x 1.75英吋(4.4 公分)高 x 12 英吋(30.5公分) 深
- 2 GB on-board eUSB

Chassis Mounting Options

- EIA-standard 19" equipment rack with 2 or 4 posts

AC Power Option

- 輸入電壓：100~240 VAC nominal， auto-switching， 47-63 Hz。
- 最大輸入電流：1.25A at 115 VAC， 0.63A at 230 VAC。
- 輸入電壓：100~127 VAC， 200~240 VAC。
- 最大功耗：144W
- FCC Part 15

Cooling System

- 內部強制對流

Weight Maximum Fully Populated

- 12.5 磅 (5.67 公斤)

Environmental

- 工作溫度：5°C~40°C。
- 存貯溫度：-40° C 至70° C。
- 工作濕度：5-85%無凝結。

The Ribbon Communications SBC 1000™ Session Border

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

Microsoft Partner
Gold Communications

Voice
Unified Communications
Business Productivity Solutions
Midmarket Solution Provider

www.ribboncommunications.com © 2017 Ribbon Communications Inc. All rights reserved, v1217. The content in this document is for informational purposes only and is subject to change by Ribbon Networks without notice. While reasonable efforts have been made in the preparation of this publication to assure its accuracy, Ribbon Communications assumes no liability resulting from technical or editorial errors or omissions, or for any damages resulting from the use of this information. Unless specifically included in a written agreement with Ribbon Communications, Ribbon Communications has no obligation to develop or deliver any future release or upgrade, or any feature, enhancement, or function.

Ribbon Communications is a registered trademark of Ribbon Communications, Inc. All other trademarks, service marks, registered trademarks, or registered service marks may be the property of their respective owners.