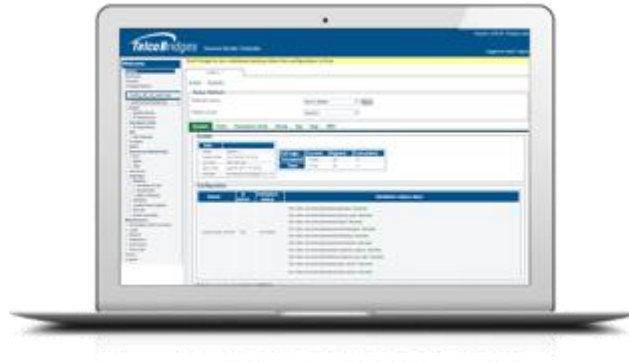


## TSBC-SW Session Border Controller



The TelcoBridges **TSBC-SW** is a carrier-grade session border controller designed for Network-to-network interface (NNI SBC), peering and access functions (access SBC).

Scalable from 100 to 60,000 sessions, the TSBC-SW software SBC is a flexible solution that can be installed seamlessly onto general purpose servers, virtualization platforms and TelcoBridges' certified servers giving access to an extensive set of call routing, network adaptation and policing features. Provided with TelcoBridges' TB Analytics integrated troubleshooting tools and field-proven SIP stack deployed in more than 100 countries, the TSBC-SW is the ideal choice for VoIP service providers handling small to large traffic loads.

### Product Characteristics:

- ✓ Back-to-back user agent (B2BUA)
- ✓ Line rate DOS/DDOS protection (64 bytes packets)
- ✓ Up to 60,000 simultaneous signaling and media sessions (with no transcoding) or up to 30,000 sessions (with all channels transcoded)
- ✓ Flexible and extensive routing capabilities
- ✓ Integrated network troubleshooting tools (traces, media/signaling recording, test call generation, etc)
- ✓ Installable on physical servers and virtualized environments
- ✓ Easy to deploy, operate and manage

## TSBC-SW Data Sheet

**TelcoBridges Inc.**  
91 de la Barre, suite 01  
Boucherville, QC  
J4B 2X6, CANADA

**Sales** +1.450.655.8993  
**TB Support** +1.866.438.4703

[info@telcobridges.com](mailto:info@telcobridges.com)  
[sbc.telcobridges.com](http://sbc.telcobridges.com)

## Network function

Back-to-back user agent (B2BUA)  
Overlapping IP realms  
SIP registration pass-through and offloading

## IP Network Security

Topology hiding  
Line-rate DOS/DDOS protection (64 bytes packets)  
Rogue RTP detection  
Dynamic blacklisting  
Access control list (ACL)  
Session admission control  
Session bandwidth control  
Call access based on successful registration

## Interoperability Functions

Extensive SIP header manipulation  
Error/cause code adaptation  
Local and remote NAT traversal adaptation  
SIP to SIP-I interworking  
SIP UDP/TCP interworking

## Transcoding and Media Adaptation (Using external TSBC-HW-TRANS)

DTMF transcoding (inband, INFO, RFC2833/4733)  
T.38 fax and video relay  
T.38 V.17 & V.34 fax conversion to pass-through  
NSE and VBD conversion  
Transcoding unit IPs invisible from WAN/LAN  
Media transcoding:  
G.711, G.723.1, G.726, G.729ab, G.729eg,  
Clear mode (RFC 4040), G.728, iLBC,  
G.722, AMR-NB, G.722.2 (AMR-WB),  
GSM FR/EFR, T38

## Voice services

(Using external TSBC-HW-TRANS)

Call progress tones  
Announcement prompts playback  
Call recording

## TB Routing (routing and policy)

Least cost routing  
Scheduled routing  
Class IV routing  
Load-balancing and percentage routing  
Routing customization through scripts  
SIP REFER/3xx based routing  
RADIUS based routing  
Routing alternate retry routes  
Digit/From/To matching and manipulation  
Call blocking  
Loop detection and prevention

## Quality of Service

Per session network quality analysis  
Per session statistics  
DSCP/TOS marking

## Management Capabilities

Provisioning and status graphical interface (GUI)  
HTTPS secured transport  
CLI interface for local and remote management  
RESTful northbound provisioning and status API  
Level-based user access  
Configuration change audit logging  
SSH, sFTP, NTP, DNS, DHCP  
SNMP v2, v3 GET, TRAPs (alarms)  
Extensive SNMP call statistics MIBs  
Configurable Call-detail-records (CDRs)  
Local text customizable format  
Customizable RADIUS accounting

## TB Analytics (network analytics)

Live session trace with protocol information (ladder)  
Raw signaling protocol capture (pcap format)  
Live test call with RTP (silence) media

(Using external TSBC-HW-TRANS)

Live test call with media playback (and recording)  
Live media call recording with selectable targets

## Supported platforms

Bare-metal 64 bits capable servers (iso image)  
 OpenStack with KVM hypervisor (qcow2 image)  
 Vmware 5/6 with vSphere hypervisor (ova image)  
 TSBC-HW-SRV-HIGH  
 TSBC-HW-SRV-MID

## High Availability & Redundancy

1+1 redundancy support (active/standby)  
 Ethernet port bonding support  
 Fault-tolerant software  
 Seamless software upgrade

## Regulatory

Lawful interception (ETSI 201 671)  
 Emergency routing

## Performance

Metrics	Hardware platforms	
	TSBC-HW-SRV-HIGH	OpenStack KVM <sup>1</sup>
Max. nb. of concurrent sessions (no transcoding)	60,000	16,000
Max. nb. of concurrent sessions (with 100% transcoding)	30,000	8,000
Max. nb. of completed sessions per seconds (CPS/CSPS)	1,100	600
Max. nb. of sessions attempts per seconds (CAPS/SAPS)		
when refused by routed destination endpoint	1,400	1,250
when refused by routing engine	2,000	1,920
when refused while in congestion	6,000	4,000
Max. nb. of registration per seconds (RPS)	4,700	3,400
Max. nb. of registration refresh per seconds (RRPS)	19,800	13,000
Max. nb. registered devices <sup>2</sup>	350,000	350,000

(1) As tested on TelcoBridges-installed 'OpenStack Newton' executing on Dell R410 (2.93GHz) with 4 vCPUs (directly pinned to pCPUs), 16GB RAM and SR-IOV access to one Intel X710DA-2 (10GE) SFP+ optical interface.

(2) With one contact per address-of-record (AOR)

Fill out the form at [sbc.telcobridges.com](http://sbc.telcobridges.com)  
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