

UNIVERGE BX800

Enterprise Session Border Controller



Secure Communication for **your Business**

The NEC UNIVERGE BX800 Enterprise Session Border Controller (E-SBC) offers a complete connectivity solution for small-to-medium sized enterprises.

The BX800 connects IP-PBXs to SIP trunk service providers, scaling up to 400 concurrent sessions. It offers superior performance and security in connecting SIP to SIP environment in a 19" 1RU platform.

The BX800 allows your employees to securely connect to your IP PBX platform from virtually anywhere using their smartphones, softphones or desk phones.

Advanced mediation and proven interoperability

The BX800 supports a wide range of voice encoders and is capable of transcoding between narrowband and wideband audio, providing SIP normalisation, fax handling, gain control and numerous additional media processing features. It offers certified interoperability with leading unified communications solutions and SIP trunk providers.

Security

The BX800 provides robust protection for the IP communications infrastructure, preventing Denial of Service (DoS), fraud and service theft guarding your organisation against cyber-attacks and other service-impacting events.

Reliability

The BX800 offers active / standby high availability and maintains voice quality to deliver reliable enterprise VoIP communications. Advanced call routing mechanisms, network voice quality monitoring and branch survivability capabilities result in minimum communications downtime.

Benefits

- > Fully integrated device for secured SIP trunk access
- > Extensive interoperability and partnerships that extend across multiple vendor devices and protocol implementations
- > Offers comprehensive security, interoperability and reliability
- > Delivers high service performance and voice quality
- > Branch office survivability in the event of a WAN outage

Key features

- > Rich and powerful SIP normalisation and routing mechanisms for seamless interoperability
- > Perimeter defence against denial of service, fraud and eavesdropping
- > VoIP quality monitoring and enforcement
- > High Availability using two box redundancy
- > Media Processing for transcoding, gain control, DTMF / Fax

Applications

- > SIP trunks
- > Hosted PBX & UC as a Service
- > Remote and mobile worker support
- > SIP mediation between UC and IP-PBX systems

Work anywhere, securely



Capacities	
Registered users	1,500
Media sessions	400 trunks only or 300 with mobile users
Transcoding	57

Network Interfaces	
Ethernet	> 4 x GbE + 8 x 100 Mb interfaces

Security / Management	
Access control	> DoS/DDoS line rate protection > Bandwidth throttling > Dynamic blacklisting
VoIP firewall	> RTP pinhole management > Rogue RTP detection and prevention > SIP message policy > Advanced RTP latching
Encryption / authentication	> TLS, DTLS, SRTP, HTTPS, SSH > Client / Server SIP Digest > RADIUS Digest
Privacy	> Topology hiding, User privacy
Traffic separation	> VLAN / Physical interface separation
Intrusion detection	> System Detection and prevention of VoIP attacks, theft of service and unauthorised access
Operation & Management	> Browser-based GUI, CLI, SNMP, INI Configuration file, REST API, EMS

Physical Specifications	
Dimensions	45 x 320 x 345 mm (H x W x D)
Mounting	1RU 19" Rack mount or Desktop
Weight	2.7 kg
Power supply	100 - 240 V AC (50 / 60 Hz) / 4A
Operating temperature	5°C - 40°C

SIP Routing	
Routing methods	> Request URL, IP address, FQDN, ENUM, advanced LDAP, 3rd party control via API
Advanced routing criteria	> QoS, bandwidth, SIP message (SIP request, codec type, etc.), Layer-3 parameters
Redundancy	> Detection of proxy failure / re-routing
Routing features	> Least-cost routing, call forking, load balancing, emergency call detection and prioritisation
SIPRec	> IETF standard SIP recording interface

Interoperability	
SIP B2BUA	> Full SIP transparency, stateful proxy
SIP interworking	> 3xx redirect, REFER, PRACK session timer, early media, call hold, delayed offer
Registration and authentication	> User registration restriction control > registration on behalf of users > SIP authentication server for SBC users
Transport mediation	> SIP over UDP/TCP/TLS/WebSocket > IPv4 / IPv6, RTP / SRTP (SDES/DTLS)
Message manipulation	> Ability to add/modify/delete SIP headers and message body using regex.
URI and number manipulation	> URI user and host name manipulations, ingress and egress digit manipulation
Transcoding and codecs	> Coder normalisation including transcoding, codec enforcement and re-prioritisation > G.711, G.723.1, G.726, G.729, GSM-FR, AMR-NB/WB, SILK-NB/WB, Opus-NB/WB
WebRTC controller	> Interworking between WebRTC devices and SIP networks > WebSocket, Opus, VP8 video codec, lite ICE, DTLS, RTP multiplexing, secure RTCP with feedback
NAT	> Local and far-end NAT traversal for support of remote workers

Voice Quality	
Call admission control	> Based on bandwidth, sessions, number of connections/registrations
Packet marking	> 802.1p/Q VLAN tagging, DiffServ, TOS
Impairment mitigation	> Packet Loss Concealment, Dynamic Jitter Buffer, Silence Suppression, Noise Generation, RTP redundancy, broken connection detection
Voice enhancement	> Transrating, Acoustic echo cancellation, replacing voice, Fixed & dynamic voice gain control
Direct media	> Hair-pinning of local calls
Voice quality monitoring	> RTCP-XR
High availability	> Two-box redundancy > active calls preserved
Quality of Experience	> Access control and media quality based on Quality of Experience (QoE) and bandwidth utilisation
Test agent	> Ability to remotely verify connectivity, voice quality and SIP message flow between SIP UA



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UNIVERGE BX800 Data Sheet | v.20180328

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