

Hybrid E-SBC and Media Gateway

UNIVERGE BX800



Benefits

- Fully integrated device for secured SIP trunking and PSTN access
- Hybrid SBC and Media Gateway platform lowers CAPEX and reduces space and power footprints
- 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 outag

Key features

- Rich and powerful SIP normalization and routing mechanisms for seamless interoperability
- Hybrid SBC that connects to PSTN / PBX trunks for fallback and gradual enterprise migration to SIP
- Support for analog (FXO, FXS) and digital (PRI, BRI) interfaces
- Perimeter defense 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, etc.

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

The BX800 connects IP-PBXs to any SIP trunking service provider, scaling up to 250 concurrent SBC sessions. It offers superior performance in connecting any SIP to SIP environment, legacy TDM-based PBX systems to IP networks, and IP-PBXs to the PSTN, supporting up to 60 voice channels in a 1U platform.

Vast mediation capabilities and proven interoperability

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

Security

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

Reliability

The BX800 offers active/standby high availability and maintains high voice quality to deliver reliable enterprise VoIP communications. Advanced call routing mechanisms, network voice quality monitoring and branch survivability capabilities (including PSTN fallback with E911) result in minimum communications downtime.

Applications

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

Specifications

| Capacities | | | |
|-----------------------------------|---|------------------------|--|
| Max. Signaling/Media Sessions | 250 | Max. SRTP/RTP Sessions | 250 |
| Max. Transcoding Sessions | 57 | Max. Registered Users | 1500 |
| Telephony Interfaces | | | |
| Analog | 4 FXS/FXO interfaces | | |
| Digital | Two E1/T1 interfaces with an option for PSTN Fallback / 4 Basic Rate interfaces | | |
| Digital PSTN Protocols | Supporting various ISDN PRI protocols such as EuroISDN, North American NI-2, Lucent™ 4/5ESS, Nortel™ DMS-100 and others. It also supports different variants of CAS protocols, including MFC R2, E&M immediate start, E&M delay dial / start and others | | |
| Network Interfaces | | | |
| Ethernet | 4GE or 4GE + 8FE interfaces configured in 1+1 redundancy or as individual port | | |
| Security | | | |
| 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 authentication, RADIUS Digest | | |
| Privacy | Topology hiding, user privacy | | |
| Traffic Separation | VLAN/physical interface separation for multiple media, control and OAMP interfaces | | |
| Intrusion Detection | System Detection and prevention of VoIP attacks, theft of service and unauthorized access | | |
| Interoperability | | | |
| SIP B2BUA | Full SIP transparency, mature and broadly deployed SIP stack, stateful proxy mode | | |
| SIP interworking | 3xx redirect, REFER, PRACK, session timer, early media, call hold, delayed offer | | |
| Registration and Authentication | User registration restriction control, registration and authentication 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 advanced regular expressions (regex) | | |
| URI and Number Manipulations | URI user and host name manipulations, ingress and egress digit manipulation | | |
| Transcoding and Vocoders | Coder normalization including transcoding, coder enforcement and re-prioritization, extensive vocoder support: G.711, G.723.1, G.726, G.729, GSM-FR, AMR-NB/WB, AMR-NB, AMR-WB (G.722.2), SILK-NB/WB, Opus-NB/WB | | |
| Signal Conversion | DTMF/RFC 2833/SIP, T.38 fax, T.38 V3, V.34, packet-time conversion V150.1 | | |
| WebRTC Controller | Interworking between WebRTC devices and SIP networks Supports WebSocket, Opus, VP8 video coder, lite ICE, DTLS, RTP multiplexing, secure RTCP with feedback | | |
| NAT | Local and far-end NAT traversal for support of remote workers | | |
| Voice Quality and SLA | | | |
| Call Admission Control | Based on bandwidth, session establishment rate, number of connections/registrations | | |
| Packet marking | 802.1p/Q VLAN tagging, DiffServ, TOS | | |
| Standalone Survivability | Maintains local calls in the event of WAN failure. Outbound calls can use PSTN fallback for external connectivity (including E911) | | |
| Impairment Mitigation | Packet Loss Concealment, Dynamic Programmable Jitter Buffer, Silence Suppression/Comfort, Noise Generation, RTP redundancy, broken connection detection | | |
| Voice Enhancement | Transrating, RTCP-XR, Acoustic echo cancellation, replacing voice profile due to impairment detection, Fixed & dynamic voice gain control | | |
| Direct Media (No Media Anchoring) | Hair-pinning of local calls to avoid unnecessary media delays and bandwidth consumption | | |
| Voice Quality Monitoring | RTCP-XR | | |
| High Availability (Redundancy) | SBC high availability with two-box redundancy, active calls preserved | | |
| Quality of Experience | Access control and media quality enhancements based on QoE and bandwidth utilization | | |
| Test agent | Ability to remotely verify connectivity, voice quality and SIP message flow between SIP UAs | | |
| SIP Routing | | | |
| Routing Methods | Request URL, IP address, FQDN, ENUM, advanced LDAP, third-party routing control through REST API | | |
| Advanced Routing Criteria | QoE, bandwidth, SIP message (SIP request, coder type, etc.), Layer-3 parameters | | |
| Routing Features | Least-cost routing, call forking, load balancing, E911 gateway support, emergency call detection and prioritization | | |
| SIPRec | IETF standard SIP recording interface | | |
| Management | | | |
| OAM&P | Browser-based GUI, CLI, SNMP, INI Configuration file, REST API | | |
| Physical / Environmental | | | |
| Dimensions | 1U x 320mm x 345mm (HxWxD) | Weight | Approx. 5.95lb (2.7kg) loaded with OSN |
| Mounting | Desktop or 19" rack mount | Power | 100-240V 4A 50-60 Hz |
| Environmental | Operational: 5 to 40 °C (41 to 104 °F); Storage: -25 to 85 °C (-13 to 185 °F) Relative Humidity: 10 to 90% non-condensing | | |

About NEC Corporation - NEC Corporation is a leader in the integration of IT and network technologies that benefit businesses and people around the world. By providing a combination of products and solutions that cross utilize the company's experience and global resources, NEC's advanced technologies meet the complex and ever-changing needs of its customers. NEC brings more than 100 years of expertise in technological innovation to empower people, businesses and society. For more information, visit NEC at <http://www.nec.com>
Please note that not all features described are necessarily available in all regions.

Corporate Headquarters (Japan)
NEC Corporation
www.nec.com

Asia Pacific
NEC Asia Pacific
www.nec.com.sg

Australia
NEC Australia Pty Ltd
au.nec.com

Americas (US, Canada, Latin America)
NEC Corporation of America
www.necam.com

EMEA (Europe, Middle East, Africa)
NEC Enterprise Solutions
www.nec-enterprise.com