

Hybrid E-SBC and Media Gateway

UNIVERGE BX500



Benefits

- Fully integrated device for secure SIP trunks 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 outage

Key features

- Rich and powerful SIP normalization and routing mechanisms for seamless interoperability
- Hybrid SBC enables seamless migration and PSTN fallback
- Support for BRI, FXS and FXO interfaces
- Perimeter defense against denial of service, fraud and eavesdropping
- VoIP quality monitoring and enforcement

The NEC UNIVERGE BX500 Enterprise Session Border Controller (E-SBC) and Media Gateway offers a compact, high performance VoIP connectivity solution for small to medium sized businesses and branch office locations.

Scaling up to 60 concurrent sessions, the UNIVERGE BX500 connects IP-PBXs to any SIP trunk service providers and offers superior performance in connecting any SIP to SIP environment. In addition, the BX500 offers versatile connectivity between TDM and VoIP networks, such as connecting legacy TDM PBX systems to IP networks and IP-PBXs to the PSTN.

Vast mediation capabilities and proven interoperability

The BX500 is capable of 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 UNIVERGE BX500 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 UNIVERGE BX500 offers 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 trunks
- 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	60
Max. Registered Users	200
Max. SRTP/RTP Sessions	60
Telephony Interfaces	
Analog	Up to 4 FXS and 4 FXA ports
Digital	2-4 BRI ports, network S/T interfaces, NT or TE termination
Clock source	5 ppm High Precision
Network Interfaces	
Ethernet	4GE interfaces configured in 1+1 redundancy or as individual ports
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, 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
Interoperability	
SIP B2BUA	Full SIP transparency, stateful proxy mode
SIP interworking	3xx redirect, REFER, PRACK, session timer, early media, call hold, delayed offer
Registration and Authentication	SIP Registrar, registration on behalf of users/servers, SIP Digest access authentication
Transport Mediation	SIP over UDP/TCP/TLS, IPv4/IPv6, RTP/SRTP (SDS)
Message Manipulation	Add/modify/delete SIP headers and message body using a simple WireShark-like language with powerful capabilities such as variables and utility functions
Number Manipulations	Ingress and egress digit manipulation
Signal Conversion	DTMF/RFC 2833/SIP, T.38 fax, T.38 V3 packet-time conversion
NAT	Local and far-end NAT traversal for support of remote workers
Voice Quality and SLA	
Call Admission Control	Limit number and rate of concurrent sessions and registers per peer for inbound and outbound directions
Packet marking	802.1p/Q VLAN tagging, DiffServ, TOS
Standalone Survivability	Maintains local calls in the event of WAN failure
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, packet loss concealment, dynamic programmable jitter buffer, silence suppression/comfort, noise generation, RTP redundancy, broken connection detection
Direct Media	Hair-pinning (no media anchoring) of local calls to avoid unnecessary media delays and bandwidth consumption
Test agent	Ability to remotely verify connectivity, voice quality and SIP message flow between SIP UAs
SIP Routing	
Routing Criteria	Incoming SIP trunk, DID ranges, host names, any SIP headers, codecs, QoS, bandwidth
Querying External Databases	Routing based on customized queries of ENUM, LDAP, HTTP server (REST API)
Advanced Routing Features	Alternative routes, load balancing, least-cost routing, call forking, E911 emergency call detection and prioritization
SIPREC	IETF standard SIP recording interface
Management Operation	
& Management	Browser-based GUI, CLI, SNMP, INI Configuration file, REST API, OVOC
Physical / Environmental	
Dimensions	51 x 296 x 160 mm (HxWxD)
Weight	670 g
Power Supply	Single universal AC power supply 100-240V, 50-60 Hz, 12V/3A or 12V/5A
Mounting	Desktop
Operating Temperature	5 to 40 °C (41 to 104 °F)

Some models are not available in all countries. Please contact your local NEC representative for availability in your country. For further information please contact your local NEC representative or:

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