

Nuera Session Border Controller (SBC) Products

GX-500

Session Border Controller



Benefits

- A highly integrated device for secured SIP Trunking and PSTN access, forming a single and managed point of demarcation for VoIP networks
- Compact, high performance VoIP connectivity device for small enterprises and branch offices
- Extensive interoperability and partnerships that extend across multiple vendor devices and protocol implementations
- Offers comprehensive security 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
- Support for E1/T1 digital TDM interface
- Supports remote workers and mobile SIP clients
- Perimeter defense against denial of service, fraud and eavesdropping
- VoIP quality monitoring and enforcement
- High Availability using two box redundancy

The **Nuera GX-500 Enterprise Session Border Controller (E-SBC)** is a compact, high performance VoIP connectivity solution for small enterprises and branch office locations. The GX-500 connects IP-PBXs and unified communications platforms 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 30 voice channels in a 1U platform. It also ensures secure and reliable communications for branch offices in distributed enterprise communications deployments.

Vast mediation capabilities and proven interoperability

The GX-500 includes comprehensive media security and SIP normalization capabilities. It offers full interoperability with an extensive list of IP-PBXs, unified communications solutions and SIP trunking provider networks.

Security

The GX-500 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 GX-500 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 result in minimum communications downtime.

Applications

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



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SPECIFICATIONS

Capacities

Max. Signaling/Media Sessions	250
Max. SRTP/RTP Sessions	180
Max. Registered Users	800

Telephony Interfaces

Digital	Single E1/T1 interface
Clock Source	5 ppm High Precision

Networking Interfaces

Ethernet	4 GE interfaces configured in 1+1 redundancy or as individual ports
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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
Encryption and 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 OAM interfaces
Intrusion Detection System	Detect and mitigate VoIP attacks, prevent Theft of Service and unauthorized access.

Interoperability

SIP B2BUA	Full SIP transparency, mature & broadly deployed SIP stack
SIP interworking	3xx redirect, REFER, PRACK, Session Timer, Early media, Call hold, Delayed offer
Registration	Registration and authentication on behalf of an IP-PBX
Transport Mediation	SIP over UDP to SIP over TCP or SIP over TLS, IPv4 to IPv6, RTP to SRTP, V.34 Fax
Header Manipulation	Ability to add/modify/delete headers using advanced regular expressions
URI and Number Manipulations	URI User and Host name manipulations. Ingress & Egress Digit Manipulation
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	Maintain local calls in the event of WAN failure. Outbound calls use PSTN fallback for external connectivity (including E911)
Transparent Media	Low latency, unprocessed payload transfer
Media De-anchoring	Hair-pinning of local calls to avoid unnecessary media delays and bandwidth consumption
Voice Quality Monitoring	Session Experience Manager (SEM)
Redundancy	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
Advanced Routing Criteria	QoE, bandwidth, SIP message (SIP request, Coder type etc)
Redundancy	Detect proxy failures and route to alternative proxies
Routing Features	Least cost routing, call forking, load balancing
SIPRec	IETF standard SIP recording interface

Physical / Environmental

Dimensions	43.7 (1U) x 310 x 210 mm (HxWxD)
Weight	4.4 lb (2.0kg)
Mounting	Desktop or 19" rack mount
Power	100-240V, 50-60 Hz, 0.8A
Environmental	Operational: 5 to 40 °C (41 to 104 °F) Storage: -25 to 85 °C (-13 to 185 °F) Humidity: 10 to 90% non-condensing

Regulatory Compliance

Safety and EMC	IEC60950-1, UL60950-1, FCC Part 15 Class A, EN55022 Class A, EN55024, EN300 386
Environmental Storage	ETS300019-2-1 class T1.2
Transportation	ETS300019-2-2 class T2.3
Operating	ETS300019-2-3

About Nuera Communications

Nuera Communications, designs, manufactures & sells packet voice gateways to communication service providers worldwide. These products work over any medium (cable, wireless, copper and fiber). Nuera's ORCA (Open Reliable Communications Architecture) product portfolio of VoIP gateways, softswitches, and management systems provide telephony solutions for cable and DSL networks, international long distance networks and enterprise networks. Nuera is a leader in the broadband telephony market.

Nuera Communications Inc. Asia Pacific / Middle East Office

31 Kaki Bukit Road 3,
Techlink, #06-19
Singapore 417818
Tel: +65-6493-6688
Fax: +65-6299-4925

US Office

27 World's Fair Drive, Somerset,
New Jersey 08873, USA
Tel: +1-800-966-8372
Fax: +1-732-301-9783

www.nuera.com

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