

NEOX NPG1000 PRI Trunk Gateway



The **Neox NPG1000 Intelligent VoIP Gateway** is a next-generation solution designed to seamlessly connect SIP networks with traditional signaling protocols like SS7 and PRI and delivers **carrier-grade VoIP and FoIP services**, enabling enterprises, telecom operators, and various industries to build a **cost-effective and future-ready communication network**.

With **advanced features** such as smart voice recognition, signal encryption, and modem support, the NPG1000 ensures **high-quality voice communication** and optimizes the utilization of trunking resources. Its flexible routing capabilities allow seamless integration with PBX/IP-PBX systems and traditional networks, minimizing the need for additional infrastructure investments. The NPG1000 offers **scalable connectivity, high integration, and reliable performance**, making it a robust solution for modern access networks.

Key Features

Wide Codec Compatibility: Supports multiple codecs, including G.711A/U, G.723.1, G.729A/B, and iLBC, ensuring high-quality voice transmission.

Compact High-Capacity Build: Offers 1 to 2 E1 ports (upto 60 Channels) within a 1U chassis, ensuring space efficiency and scalability.

Carrier-Grade Design: Features 1+1 hot-swappable power supply for enhanced reliability and uninterrupted operation.

Advanced Networking Support: Supports 802.1p/q VLAN tagging for efficient traffic management and is compatible with IPv4, IPv6, and routing protocols such as static routes, PPP, PPPoE, and Frame Relay.

Customizable Dialing Rules: Allows users to configure flexible dialing rules tailored to diverse operational requirements.

Physical Interfaces

E1/T1 Ports: 1/2 E1/T1 ports, RJ48 interface with 120 Ω impedance.

Ethernet Interfaces:

GE1: 10/100/1000 Base-T Adaptive Ethernet.

GE0: 10/100/1000 Base-T Adaptive Ethernet.

Serial Port: 1 RS232 port, supporting 115200bps.

Calling Features

Caller and Called Number Modification for seamless integration

Supports up to **256 routing rules per direction**

Flexible routing between **PSTN-PSTN, PSTN-IP, and IP-PSTN** connections

Time-Based Call Routing for efficient scheduling

Dynamic Routing Methods with intelligent call handling

Prefix-Based Routing for Caller and Called numbers

PSTN Protocols and Features

ISDN PRI: 23B+D (T1), 30B+D (E1), NT or TE modes, compliant with ITU-T Q.921, Q.931, and Q.SIG.

SS7 (Optional): ITU-T, ANSI

MTP1/MTP2/MTP3, TUP/ISUP protocols.

E1/T1 Frame Types:

E1: DF, CRC-4, CRC_ITU, line codes (NRZ, CMI, AMI, HDB3).

T1: 4-Frame Multi-frame (F4, FT), 2-Frame Multi-frame (F12, D3/4), Extended Super-frame (F24, ESF), Remote Switch Mode (F72, SLC96), line codes (NRZ, CMI, AMI, B8ZS).

Clock Source: Supports both local and remote synchronization options.



Voice Capabilities

Codecs Supported: G.711a/μ-law, AMR, G.723.1, G.729AB, iLBC, AMR

Enhancements:

Silence Suppression and Comfort Noise Generation.

Voice Activity Detection (VAD).

Echo Cancellation (G.168) with adaptive support up to 128ms.

Dynamic Buffer and Voice/Fax Gain Control.

FAX (T.38 and Pass-through), Modem/POS support.

DTMF Modes: RFC2833, SIP Info, In-band, Clear Channel, Clear Mode.

Maintenance and Management

Configuration Interfaces: Web GUI (HTTP/HTTPS), centralized management system.

Diagnostics:

PSTN and SIP trunk call statistics.

Firmware upgrades via TFTP/FTP/Web.

Network capture and Syslog (debug, info, error, warning, notice, Call History via syslog).

SNMP v2

Event Management NTP synchronization

Backup and Restore: Data backup/restore functionality.

Environmental Specifications

Redundant Power Supply (1+1)

Power:

Adapter: 100-240VAC 50-60 Hz.

Power Consumption: 15W.

Operating Conditions:

Temperature: 0°C to 45°C (operating), -20°C to 80°C (storage).

Humidity: 10%-90% non-condensing.

Dimensions: 436mm (W) × 300mm (D) × 44.5mm (H).

Weight: 2.0 kg.

Compliance: CE, FCC.

VoIP Protocols

SIP v2.0 (UDP/TCP), RFC3261, SDP, RTP (RFC2833).

SIP-T, RFC3372, RFC3204, RFC3398.

RTP/RTCP (RFC2198, 1889), TLS/SRTP.

SIP Trunk Work Modes: Peer/Access.

SIP/IMS Registration: Up to 256 SIP accounts.

NAT: Dynamic NAT, Remort port(RFC 3581)

RFC Compliance:

RFC 2833, 3262, 3263, 3264, 3265, 2976,3311



Advanced Software Features

IP Trunk Group Management with flexible configuration
Access Rule Lists for secure and controlled access
Whitelist and Blacklist Management for both caller and called numbers
Configurable IP Trunk Priority for optimized call routing
Overlapping Dialing functionality
Support for Voice Codec Groups
Configurable Dialing Rules with a capacity of up to 2000 entries
Local and Transparent Ringback Tone support
PSTN Grouping by E1 port or E1 timeslot

Why STL-Neox?

Trusted Globally: CCaaS/UCaaS solution with 500+ customers worldwide

Certified Excellence: Made in India, Gartner-reviewed, ISO 27001/14001, CMMi Level 5, DOT-TRAI tested

All-in-One Platform: Unifies all communication needs on a single platform

Open SIP Protocol: Avoids vendor lock-in

In-House Development & Customization: Tailored to meet specific client needs

24x7 Professional Support: Strong post-sales service for seamless operations

Value for Govt. Helplines, Telcos, Data Centers, and Enterprises

Multi-Vendor Compatibility: Interoperable with various systems

Compliance-Ready: Meets data privacy and security standards

About Sterlite Technologies Ltd. (STL)

STL is a leading global optical and digital solutions company providing advanced offerings to build 5G, Rural, FTTx, Enterprise, and Data Centre networks. The company, driven by its purpose of 'Transforming Billions of Lives by Connecting the World', designs and manufactures in 4 continents with customers in more than 100 countries. Telecom operators, cloud companies, citizen networks, and large enterprises recognize and rely on STL for advanced capabilities in Optical Connectivity, Global Services, and Digital and Technology solutions to build ubiquitous and future-ready digital networks. STL's business goals are driven by customer-centricity, R&D and sustainability. Championing sustainable manufacturing, the company has committed to achieving Net Zero emissions by 2030.

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