NAG2500-48S Analog VoIP Gateway

Making every conversation count

The **NAG2500 Series** is a high-performance analog voice gateway designed to connect **analog phones, fax machines, and PBX systems** to **VoIP networks**. Its **compact 1U chassis** supports **48 FXS ports** with **RJ45/RJ21 interfaces**, delivering efficient, high-quality voice and fax communication.

Ideal for **service providers, enterprises, call centers, and residential deployments**, the NAG2500 ensures reliable, scalable, and future-ready IP voice services.

Key Features

- **High Density and Compact Design**: Supports **48 FXS ports** in a **1U chassis** with **RJ45/RJ21 interfaces**.
- **Protocol and Platform Compatibility**:
    - Compliant with **SIP v2.0 and RTP/RTCP** protocols.
    - Fully compatible with **IMS/NGN softswitch platforms** and IPPBX systems.
- **Network Support**: Dual **IPv4/IPv6** support ensures seamless integration in modern networks.
- **Extended Line Reach**: Supports up to **5 km line length**, offering flexibility in deployments.
- **High-Performance Voice Processing**:
    - Advanced codecs: **G.711A/U, G.723.1, G.729A/B, and iLBC**.
    - Low-latency processing with **T.38 fax relay** for reliable fax transmission.
- **Management and Monitoring**: Supports **SNMP and TR069** for remote provisioning, monitoring, and maintenance.
- **Enterprise Branch Connectivity**: Facilitates **inter-branch communication**, providing scalable and cost-effective voice solutions

Voice and Fax Processing

Audio Codecs: G.711A/U, G.723.1, G.729A/B, G.726, iLBC, AMR, AMR-GSM

Fax/Modem Support: T.38 Fax Relay, Pass-through, Modem/POS compatibility

Voice Optimization:
Silence Suppression, Comfort Noise Generation (CNG)

Voice Activity Detection (VAD), Packet Loss Concealment
Adaptive (Dynamic) Jitter Buffer, Programmable Gain Control
Echo Cancellation (G.168) with 128 ms tail length
DTMF Modes: Signal, RFC2833, INBAND

Network Maintenance and Management

Monitoring and Configuration:
SNMP, TR069, NTP, Daylight Saving Time, Syslog (Debug, Info, Error, Warning)
Remote Provisioning via HTTP/HTTPS/TFTP/FTP
Network Capture, Ping/Traceroute Test, CDR, GR909 Outward Line Test

Management Platforms: Local IVR Maintenance, Cloud-Based Management (NMS), RADIUS Authentication
Backup and Upgrades: Configuration Backup/Restore, Firmware Upgrade

Call Handling Features

Advanced Call Control:

Call Waiting, Holding, Blind and Attended Transfer

Call Forwarding: Busy, No Reply, Unconditional

Flexible Routing: Caller/Called Number Manipulation, Routing Policies

Ring Groups, Hotline, Abbreviated Dialing, PBX IVR

3-Way Conferencing, Early Media, Early Answer

SIP Registration to Multiple Servers

User-Centric Features:

Custom IVR, Voicemail, Do-Not-Disturb (DND), Digit Map, Action URL

SIP PnP Auto Provisioning

Security and QoS

Encryption: TLS, SRTP for signaling and voice security

Access Control: Web ACL, SSH ACL, RADIUS
Authentication

Service Isolation: Network Port Modes
(Isolated/Bond/Bridge)

Quality of Service: Layer 3 QoS for prioritized
voice traffic

FXS Line Specifications

Interface: RJ45 or RJ21

Maximum Line Length: 5 km

Dial Mode: DTMF/Pulse (10/20 PPS)

Caller ID: DTMF/FSK CLI Presentation

Advanced Features:

Reversed Polarity, Programmable Call Progress
Tone

Environmental and Physical Specifications

Power: 100-240 VAC, 50/60Hz (Dual power supply for
NXS2500-48S)

Power Consumption: Max 95W

Operating Conditions:

Temperature: 0°C to 45°C (Operating), -20°C to 80°C (Storage)

Humidity: 10%–90% (Non-Condensing)

Dimensions: 440x328x44mm (1U Rack Mount)

Weight:

NXS2500-48S: 4.1 kg

Compliance: CE, FCC

VoIP Protocols and Standards

Signaling: SIP v2.0 (UDP/TCP), RFC3261

Media Protocols: SDP (RFC2327), RTP/RTCP (RFC2833, RFC2198), NAT Traversal (STUN, Static/Dynamic)

Advanced SIP Features:

Master/Slave Servers, Outbound Proxy, RFC3581 NAT (rport), RFC4028 Session Timer

RFC2806 TEL URI, DNS SRV/A Query/NATPR Query

Network Features: IPv4/IPv6, VLAN Tagging (802.1P/Q)

Physical Interfaces

Phone Connectivity:

NXS2500-48S: 48 FXS, RJ45 or RJ21 (50-pin)

Console Port: 1x RS232 (115200 bps)

Network Ports:

2x 10/1000Base-T Ethernet

1x 10/100Base-T Ethernet

Why STL-Neox?

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

Certified Excellence: Make 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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