

NetBorder SS7 VoIP Gateway



4 to 32 Port E1/T1 Appliance

Although the telecommunications industry is rapidly adopting the Internet Protocol to provide Voice-over-IP (VoIP) services, the legacy PSTN network (using T1/E1 telco lines) is still prevalent for world-wide communication. As such there is a growing need for equipment that can seamlessly bridge legacy PSTN and VoIP services, whilst offering a variety of protocol support.

Effortless Connection Between PSTN SS7/TDM & VoIP Networks

Sangoma's NetBorder SS7 VoIP Gateway (NSG) is a feature-rich, cost-effective solution that allows telecom service providers to introduce VoIP in their networks along with full transcoding capabilities.

The solution supports up to 64 E1/T1 ports per appliance for a total of 1,920 channels in a compact all-in-one design minimizing the footprint and need to source components from multiple vendors.

The NetBorder SS7 VoIP Gateway is perfect for:

- » Tier 2/3 service providers connecting to larger incumbents
- » Value Added Services (VAS)
 - > Customer Ringback Tones (CRBT)
 - > SMS / MMS
 - > Presence
 - > Location-based services
 - > Voice over LTE
- » Expanding PRI services beyond 7 to 8 E1/T1 lines

NSG has been deployed globally, which can attest to its highly successful interoperability and integration with SS7 and VoIP carriers as well as open-source PBXs and proprietary applications.

"Guarantee business continuity with built-in SS7 link redundancy, SIP trunk failover and field-upgradable licensing."

Quick Facts

- » Support for 1-64 E1/T1 Ports
- » Integrated Signalling & Media Gateway Controller
- » SS7, PRI, MFCR2 Support
- » Telco Grade Echo Cancellation
- » Fully-featured Web GUI for Configuration, Monitoring & Diagnostics
- » Optional Annual Support & Software Maintenance Plans

COST-EFFECTIVE & FLEXIBLE

The Sangoma SS7 Media Gateway provides full call control routing for SS7 traffic without the need for third party media gateway controllers or protocol converters.

Full inter-working is supported across all VoIP and TDM protocols simultaneously, allowing this single multi-protocol TDM to VOIP gateway to be deployed in differing networks.

PLATFORMS

Hardware / Software Options

Hardware

- » Flexible carrier grade appliance from 1 to 8 E1/T1 ports
- » Carrier grade scalable appliance from 4 to 32 E1/T1 ports
- » High-density carrier grade 64 E1/T1 appliance

Software

For integration within existing data centre infrastructures, NSG is also offered in a software platform version which contains the same feature-rich capabilities as our scalable appliances and compatible in all commercially available servers and Linux distributions.

ADVANCED CAPABILITIES

SIGTRAN M2UA

- » Reduce costs of interconnecting with carriers and build out your network footprint by delivering quality SIP-over-IP VoIP services by backhauling SS7 signaling over IP

SNMP & Radius

- » An advanced web GUI delivers critical system and network information for easy monitoring and management of your services

H.323

- » Enables backward compatibility with older VoIP networks – no need for additional devices for interoperability

Diagnostic Tools

- » Onboard browser-based PCAP tracing, signaling and media – wireshark compatible

TECHNICAL SPECIFICATIONS

Features

Capacities:

- » Flexible 8 port appliance
 - > Up to 8 E1/T1 ports, or 240 channels
- » 8-32 port appliance
 - > Up to 32 E1/T1 ports, or 960 channels
- » 64 port appliance
 - > Up to 64 E1/T1 ports, or 1920 channels
- » Software platform
 - > Up to 64 E1/T1 ports, or 1920 channels

VoIP Protocols:

- » SIP V2 / RFC3261
- » SCTP RFC 2960
- » SIGTRAN M2UA RFC 3331
- » Megaco / H.248 and H.323

PSTN Protocols:

- » SS7-ISUP
 - > ITU, ANSI, Bellcore, UK, China, India, France and Russian variants
- » Up to 16 A or F signaling links & linksets
- » Up to 16 originating & destination point codes
- » ISUP relay for larger distributed network configurations
- » Primary Rate ISDN (PRI)
- » E1: Euro-ISDN, CAS MFCF2
- » T1: Q.931, NI2, 4ESS, 5ESS, DSM-100

Audio Codecs:

- » G.711
- » G.723.1
- » G.726
- » iLBC
- » G.729AB
- » GSM
- » G.722
- » AMR
- » G.722.1
- » Fax Support; T.38 Fax Relay

Echo Cancellation:

- » DTMF detection and generation:
 - > RFC2833 tone relay
 - > In-band
 - > SIP info
- » G.168-2002 with 128ms tail

Debugging:

- » Dedicated Browser interface for capturing full RTP media and signaling information
- » Onboard browser-based PCAP tracing, signalling and media – wireshark compatible
- » Large onboard storage capacity for long term tracing

Call Routing:

- » Configurable and extendable XML-based dial plan and routing rules

Management & Configuration:

- » Web GUI
- » Command line interface
- » Detailed logs with configurable file size and autorotation
- » SNMP
- » Radius
- » Call detail records in XML format

Interfaces

PSTN Interfaces:

- » Flexible 8 port appliance / 8-32 port appliance
 - > 4 E1/T1; One 4-port telephony interface (RJ45 ports)
 - > 8 E1/T1; One 8-port telephony interface (RJ45 ports)
 - > 16 E1/T1; Either two 8-port telephony interface (RJ45 ports) or one 16-port telephony interface (16-port interface requires 68-pin SCSI type interface)
 - > 32 E1/T1: Two 16-port telephony interfaces (16-port interface requires 68-pin SCSI type interface)
- » 64 port appliance
 - > 64 E1/T1; Four 16-port telephony interfaces (16-port interface requires 68-pin SCSI type interface)

Network Interfaces:

- » Flexible 8 port appliance
 - > 5x LAN 10/100/1000 BaseT Ethernet ports
 - > IPV4, IPV6
 - > 1x IPMI remote management Interface
 - > 2x USB ports
 - > 1x console port
- » 8-32 port appliance
 - > 7x LAN 10/100/1000 BaseT Ethernet ports
 - > IPV4, IPV6
 - > 1x IPMI remote management Interface
 - > 2x USB ports
 - > 1x console port
- » 64 port appliance
 - > 4x LAN 10/100/1000 BaseT Ethernet ports
 - > IPV4, IPV6
 - > 1x IPMI remote management Interface
 - > Video: 1x VGA port

Hardware & *Minimum Requirements

Flexible 8 port appliance:

- » 1U: 430mm (W) x 305mm (D) x 45mm (H)
- » 7.2kgs (16lbs)
- » 60W universal AC power

64 port appliance:

- » 2U: 723mm (W) x 347mm (D) x 89mm (H)
- » 40.8kgs (90lbs)
- » 1000W universal AC power

8-32 port appliance:

- » 1U: 430mm (W) x 470mm (D) x 45mm (H)
- » 15kgs (33lbs)
- » 250W universal AC power

*Software Platform:

- » Operating System: 32-bit and 64-bit Linux (CentOS recommended)
- » Server: Varies with size of deployment