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NetBorder SS7 VoIP Gateways

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) and 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.

Hardware / Software Options

1 to 8 E1/T1 Port	8 to 32 E1/T1 Ports	64 E1/T1 Ports

Software
For integration within existing data center 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.

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.

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.

Diagnostic Tools
Onboard browser-based PCAP tracing, signaling and media – wireshark compatible.

Quick Facts

» Support for 1-64 E1/T1 Ports

» Integrated Signaling & 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

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

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, signaling 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

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; One 16-port telephony interface (16-port interface requires 68-pin SCSI type interface)
  - › 32 E1/T1; Two 16-port telephony interface (16-port interface requires 68-pin SCSI type interface)
  - › RFC2833 tone relay
- » 64 port appliance
  - › 64 E1/T1; Four 16-port telephony interfaces (16-port interface requires 68-pin SCSI type interface)
- » Dual 68-pin to RJ45 patch panels included with 8-32 port appliance and Quad 68-pin to RJ45 patch panels included with 64 port appliance

Network Interfaces:

- » Flexible 8 port appliance
  - › 6x LAN 10/100/1000 BaseT Ethernet ports
  - › IPV4, IPV6
  - › 1x VGA port
  - › 2x USB ports
  - › 1x serial console port
- » 8-32 port appliance
  - › 6x LAN 10/100/1000 BaseT Ethernet ports
  - › IPV4, IPV6
  - › 1x VGA port
  - › 2x USB ports
  - › 1x serial 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 520mm (D) x 44.5mm (H)
- » Weight: 6.35kgs (14lbs)
- » Dual internal 100~240V power supply

8-32 port appliance:

- » 1U: 430mm (W) x 520mm (D) x 44.5mm (H)
- » Weight: 6.35kgs (14lbs)
- » Dual internal 100~240V power supply

64 port appliance:

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

*Software Platform:

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

About Sangoma

Sangoma Technologies is a trusted leader in value-based Unified Communications solutions for SMBs, enterprises, OEMs, carriers, and service providers. Sangoma is the primary developer and sponsor of the Asterisk and FreePBX projects and offers Voice over IP systems which enable businesses to achieve enhanced levels of collaboration, productivity, and ROI.

Become a Sangoma Partner

Provide your customers with outstanding VoIP and Unified Communications quality products that deliver industry-leading value. As a Sangoma Partner, you'll get the help you need to grow your business and the incentives you want to make it easy to win sales. Discover more at: Sangoma.com/partner-program

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