

NetBorder VoIP Gateway



16 or 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.

Introduce VoIP Telephony Services by Connecting a High-density VoIP Gateway to Your TDM Network

Sangoma's NetBorder VoIP Gateway (NVG) is a feature-rich, cost-effective solution that allows Telecom service providers to migrate from centralized legacy TDM networks to decentralized Voice-Over-IP (VoIP) networks, offering a more integrated telephony services.

The solution supports up to 32 E1/T1s using PRI or CAS MFCR2, providing SIP and T.38 fax connectivity in a 1U form factor. Built-in hardware transcoding also guarantees interoperability with all softswitches and compressed VoIP traffic to increase ROI.

The NetBorder VoIP Gateway is perfect for:

- » Migrating from legacy services to IP-centric architectures
- » Large enterprises and call-centers to deliver high-volume Sip trunking

NVG has been deployed in most regions world-wide, which can attest to its highly successful interoperability and integration with PRI/MFCR2 signaling and VoIP carriers as well as open-source PBXs and proprietary applications.

“Guarantee business continuity with built-in signaling link redundancy, SIP trunk failover and field-upgradable licensing.”

Quick Facts

- » Up to 32 Ports of E1/ T1 PRI & CAS MFCR2 Connectivity
- » Up to 960 Channels of VoIP Calls & T.38 Faxing
- » Flexible IP-TDM & IP-to-IP Interworking
- » Hardware-based Transcoding to Guarantee Softswitch Interoperability
- » Telco Grade Echo Cancellation
- » Fully-featured Web GUI for Configuration, Monitoring & Diagnostics
- » Optional Annual Support & Software Maintenance Plans

COST-EFFECTIVE & FLEXIBLE

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 Options

- » Carrier grade 8 port E1/T1 appliance



- » Carrier grade 16 / 32 port E1/T1 appliance



ADVANCED CAPABILITIES

Open, Non-proprietary Interfaces

All NetBorder VoIP Gateways Support the Following:

- » ETSI, VN4, ISDN
- » NI1, NI2, AT&T 5ESS, DMS100
- » ISO QSIG Basic Call and QSIG Feature Transparency
- » Channel Associated Signaling (CAS)
- » R2 MFC
- » All Vega gateways support SIP and T.38 Fax

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:

- » 8 port appliance
 - > 8 E1/T1 ports, or 240 channels
- » 16 port appliance
 - > 16 E1/T1 ports, or 480 channels
- » 32 port appliance
 - > 32 E1/T1 ports, or 960 channels

VoIP Protocols:

- » SIP V2 / RFC3261
- » SCTP RFC 2960
- » H.323

PSTN Protocols:

- » Primary Rate ISDN (PRI)
- » E1: Euro-ISDN, CAS MFCR2
- » 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
- » Remote firmware upgrade

Interfaces

PSTN Interfaces:

- » 8 port appliance
 - > 8 E1/T1; One 8-port telephony interface (RJ45 ports)
- » 16 port appliance
 - > 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 port appliance
 - > 32 E1/T1: Two 16-port telephony interfaces (16-port interface requires 68-pin SCSI type interface)

Network Interfaces:

- » 8 port appliance
 - > 5x LAN 10/100/1000 BaseT Ethernet ports
 - > IPV4, IPV6
 - > 1x IPMI remote management Interface
 - > 2x USB ports
 - > 1x console port
- » 16/32 port appliance
 - > 7x LAN 10/100/1000 BaseT Ethernet ports
 - > IPV4, IPV6
 - > 1x IPMI remote management Interface
 - > 2x USB ports
 - > 1x console port

Hardware

8 Port Appliance:

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

16/32 Port Appliance:

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