# NETRIX

## VoIPAK-TURBO

# VoIPAK *TURBO* Gateway for IP

- *Greatly Reduces Network costs*

- *Improves voice Quality*

- *Reduces Network Latency and Jitter*

- *Full Mesh networks supported*

- *Operates over Wireless and Satellite links*

- *Increases network Security*

- *Fully Network Managable*

NSGDatacom's **VoIP-TURBO** is a low-cost, high-performance, Voice, Fax and Data gateway for IP based services including Wireless and Satellite data networks.

The Netrix Network Exchange **VoIPAK software** from NSGDatacom runs on the **TURBO Gateway** and is VoIP packet optimization software for trunking multiple SIP and MGCP calls. Easy to install and configure, the **VoIPAK TURBO Gateway** combines voice packets from multiple VoIP calls destined for the same location into a single IP packet. A **VoIPAK** device at the recipient location reconstitutes the original voice packets and forwards them to the end destination. The **VoIPAK** software reduces the effects of network latency and jitter, greatly improving the reliability and audio quality of VoIP calls. It works in both point to point and fully meshed applications and operates completely transparently to users at all times.

By using **VoIPAK software** bandwidth optimization the capacity of an IP data link carrying G.729/A, G.723 or other compressed VoIP traffic is at least doubled and may easily be increased to over three times its original capacity:

| Bandwidth Available | Standard VoIP | Using VoIPAK* |
|---|---|---|
| 64 Kbps | 2 calls | 4 calls |
| 256 Kbps | 8 calls | 23 calls |
| 512 Kbps | 17 calls | 47 calls |

*Even for a single voice call the bandwidth used may be reduced by more than 50% without any loss of audio quality.*

The **VoIPAK** is designed for use over all satellite, wireless and terrestrial links. Fully supported by the **NetrixView** Network Management System, the NMS interface provides GUI support for remote configuration, diagnosis, statistical call analysis and other management functions. A range of **VoIPAK** hardware platforms are also available for CPE and Central Office applications which are fully interoperable with other products in the Netrix **VoIPZIP** and **Network Exchange** product line.

**VoIPAK software** is easy to install and automatically operates in point to point and full mesh network topologies. Voice and IP data can be transmitted on the same links without negatively impacting voice quality.

Originally developed for use by the US Military, **VoIPAK** technology is currently installed in many mission critical networks worldwide. The Netrix series products continue to provide dependable voice and data transmission in call centers, military, transaction processing, financial, airport, service provider, and other enterprise applications.

Netrix **VoIPAK software** operates with all other standard VoIP packets, including G.711 and G.729.

*Communication solutions from*

# NSGDatacom

*extend. evolve. innovate.*

# NETRIX

## VoIPAK-TURBO

### Physical Interfaces

- **LAN Connectivity:**
  - Two 10/100 Base-T switched Ethernet Interfaces on RJ45
  - ANSI T1.617IEEE 802.3, 802.1p/Q
  - Autosensing Switched Ethernet auto-sensing MDI/MDIX (auto-polarity)
- **Console Interface:**
  - One V.24/RS-232 physical level on DB9 connector for local console
  - Supports Asynchronous data from 1200bps to 115.2Kbps.
- **Optional WAN Interface:**
  - One EIA-232, EIA-442/449, EIA-530, ITU X.21, ITU V.35 physical level on DB25 connector (replaces DB9 Console).
  - Supports Synchronous data to 2.048 Mbps.
  - Supports Asynchronous data from 1200bps to 115.2Kbps.

### Connectivity

- TCP, UDP/RTP Data Transport
- Packet Optimization
- VoIPAK up to 60 channels
- VoIP/SIP Gateway functions
- IP Static Routing
- NAT/PAT
- VLAN
- DNS
- DHCP Host/Client
- Telnet (Client or Server)
- RIP configuration
- TCP Port configuration

### Management

- NMS Manageable via SNMP
- Configuration, Monitoring and troubleshooting over public or private IP networks
- Menu Driven Console Interface
- Remote or Local Access
- Compatible with NetrixView Network Management System

### System Features

- Central time keeping system
- Closed User Groups
- Date, Time processing
- Alarms
- Password Security for MMI
- User Friendly Man/Machine interface

### Reporting Features

- Alarm Reports
- CDR call logging

### Security

- Authentication
- MMI User Passwords
- Optional Encryption

### Administrative Options

- DTR/DCD Handshake
- Network User ID (NUI)
- Logon with NUI Required
- TCP Configuration

### Networking

- Fully Compatible with the Netrix Exchange Products for Point to Point and Mesh Network Configurations.
- Provides Gateway functions between Private, PTSN and SIP Networks
- VoIPAK ™ mesh networking for SIP circuits

### Operation

- IP Wireless
- Cellular Data (Supports multiple hops)
- IP Satellite
- Terrestrial IP
- Private or Public Networks
- **Safety**
  - FCC 47 CFR part 68,
  - IC CS-03,
  - IEC 950,
  - EN 60950,
  - ANSI/UL 60950-1-2002,
  - CAN/CSA-C22.2 No. 50950-1-03,
  - Telecordia GR-63,
  - Telecordia GR-1089
- **Other**
  - Telecordia GR-1244, Telecordia GR-3108 (OSP, 07-2004)

### Electrical Specifications

- **Power:**
  - External Power Block 5V DC, 10 Watt max (typical 3W).
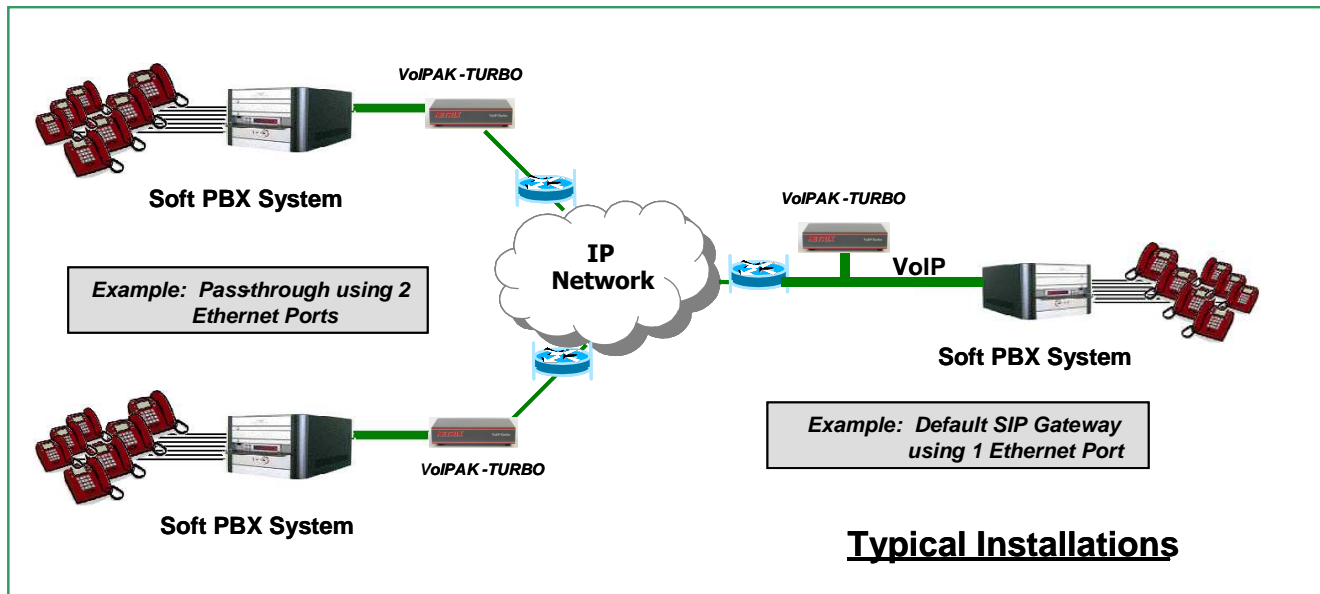  - Input 100/250 VAC @ 50/60 Hz

### Physical

- **Size:**
  - Desktop: 1.25" H x 5.5" W x 3.75" D
- **Environment:**
  - Operating Temperature: 0º to 40º C (32º to 104º F)
  - Storage Temperature: -20º to 70º C (-4º to 158º F)
  - Humidity: 95% non-condensing
- **MTBF**
  - >65,000 hours @ +45C

*NETRIX IS A DIVISION OF NSGDATACOM INC*

## NSGDatacom

**www.nsgdata.com**



VoIPAK -TURBO

**Soft PBX System**

*Example: Passthrough using 2 Ethernet Ports*

**IP Network**

VoIPAK -TURBO

VoIP

**Soft PBX System**

*Example: Default SIP Gateway using 1 Ethernet Port*

VoIPAK -TURBO

**Soft PBX System**

## Typical Installations

*Specifications subject to change without notice*