



VoIP Packet Optimization Gateway

- **50:1 packet compression for SIP and MGCP**
- **2 Switched Ethernet 10/100 ports**
- **Optional high-speed serial interfaces**
- **Point to Point or Mesh networks**
- **Operates over Wireless and Satellite Networks**
- **Extensive Voice Feature Set**
- **Advanced Quality of Service Mechanisms**
- **Fully Network Manageable**
- **Standards Compliance for Interoperability**

The wide deployment of VoIP as an alternative to conventional telephony brings with it some unanticipated challenges for Service Providers. Multiple VoIP calls can quickly generate a large volume of IP packets creating a problem for some networks with packet throughput constraints. The Netrix Network Exchange (Nx) 2205D **VoIPAK** from NSGDatacom, eliminates these throughput constraints using our patented IP packet compression and overhead elimination techniques.

The Nx2205D **VoIPAK** is a packet optimization gateway for trunking multiple SIP and MGCP calls. Simple to install, the **VoIPAK** combines voice packets from multiple VoIP calls destined for the same location into a single IP packet. A **VoIPAK** unit at the recipient location reconstitutes the original voice packets for forwarding to the end destination. The **VoIPAK** units work in both point to point and fully meshed applications and operate completely transparently to users at all times.

For example, a typical VoIP connection generates between 50 and 100 packets per second. A circuit carrying just 20 simultaneous VoIP calls can easily generate 1000 packets per second and possibly as many as 2000 packets per second, exceeding the switching capacity of some access devices. Using **VoIPAK**, the total number of packets per second can be reduced to 100 or less, regardless of the number of calls in progress.* Additionally, since the IP overhead associated with each VoIP call is eliminated, additional bandwidth savings are created of up to 3:1, depending on the VoIP parameters used.

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** platforms are available for CPE and Central Office applications which are fully interoperable with other products in the Netrix **VoIPZIP** and **Network Exchange** product line.

Installed in many mission critical networks worldwide, Nx2200 series products continue to provide dependable voice and data transmission in call centers, military, transaction processing, financial, airport, service provider, and other enterprise applications.

* Note: A single compressed output packet stream may contain up to 50 or more simultaneous VoIP calls depending on the configurations of the calls. A single card DTE **VoIPAK** unit supports a total input packet stream of between 5,000 and 10,000 pps, depending on configuration. Multi-card 19" rack-mount units from 1U high are available.



Communication solutions from

NSGDatacom
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Nx 2205D VoIPAK

Product Features

Physical Interfaces

- **LAN Connectivity**
 - Two integrated switched Ethernet interfaces
 - Auto sensing, 10BaseT or 100BaseT user or hub connection independently on each Ethernet connection RJ-45 physical interface
- **High Speed Serial Interface**
 - One optional high-speed serial interface, internal or external clocking to 2.048 Mbps
 - Software configurable DTE/DCE, V.24/RS-232/V.35/RS-449,/X.21 Speeds from 1200 bps to 2.048 Mbps
- **Optional Digital I/F**
 - Two T1 or E1 voice and/or data
 - Full drop and insert for all DS0/ timeslots between interfaces
 - CAS and ISDN fully supported

- Transparent pass through for signaling including SS7
- Optional Transparent TDM clock recovery over IP

Connectivity

- **Voice/Fax**
 - CAS/ISDN/E&M
 - V.27ter, V.29, Group III
- **IP**
 - VoIP, MGCP, RIPv1/2, OSPF, Static Routing, SNMP, SFTM
 - H.323, SIP, B2BUA
- **Frame Relay**
 - Frame Relay NNI, UNI, FRF4/ITU Q.933, Frame Relay Annex D, LMI
 - PVC and SVC support

Management

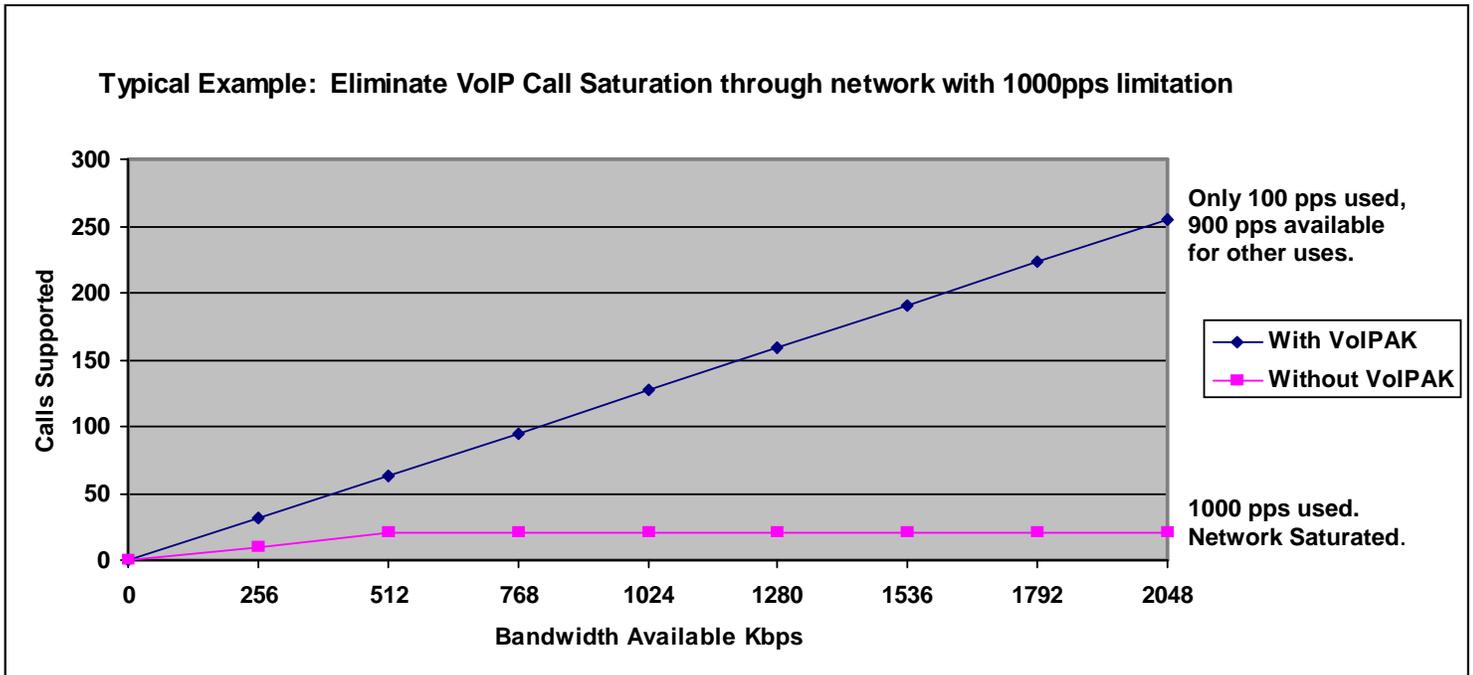
- Graphical User Interface (GUI) hosted by Microsoft Windows® PC.
- Configuring, monitoring and troubleshooting over public, private or hybrid networks.
- Distributed management of existing equipment via Simple Network Management Protocol (SNMP)

General

- **Physical**
 - Size: 17.25"W x 10"D x 1.75"H (43.8 W x 25.4 D x 4.5 H cm)
 - Weight: 2.25—3.25 lbs (1.0 kg—1.5 kg)
 - Power: 100-240 VAC, 50-60 Hz 18 VA
- **Environmental**
 - Temperature:
 - Operating - 32°-122°F (0°-50°C)
 - Storage: 23°-158°F (-5°-70°C)
 - Humidity: 20-95% non-condensing
 - MTBF: >65,000 hours @ 86°F(30°C)
- **Approvals**
 - Safety: UL, CSA, IEC 950, EN 60950 (73/23/EEC), CE Mark
 - Telecom: 91/263/EEC, EMC: FCC Part 15 Class A, VCCI Class 1
 - Immunity: 89/336/EEC

Flexibility

- Other Central Site models available
- Supports Meshed Networks
- High quality, low bandwidth compressed voice and data over IP or Frame Relay
- All ports and channels are software configurable via the GUI



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Specifications subject to change without notice

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