



Voice Compression Gateway for IP Services

- **16:1 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 when broadband IP access is not available. In small office environments multiple VoIP calls can quickly use up the majority of available bandwidth and also generate a large volume of IP packets. With the Netrix Network Exchange (Nx) 2205D **VoIPZIP** from NSGDatacom, the throughput constraints are eliminated using our patented voice compression and IP frame packing techniques.

The Nx2205D **VoIPZIP** is an integrated VoIP compression gateway for SIP and MGCP. Simple to install at the customer premises, the **VoIPZIP** is configured to recognize all voice packets and compress them before onward transmission to the Service Provider. All other packets are forwarded over the network without being affected. A central site unit at the Service Provider's location reconstitutes the original voice packets. The **VoIPZIP** unit operates transparently to the user at all times.

For example, a typical T1 connection can support around 15 uncompressed VoIP calls (using 1.2Mbps) with minimal bandwidth available for IP data. Using the **VoIPZIP**, 15 toll quality voice calls only utilizes approximately 130Kbps of bandwidth, leaving over 90% of the T1 capacity still available for IP data or additional voice traffic. Alternative compression options including silence suppression can reduce the bandwidth required for voice by 16:1 or greater.

The **VoIPZIP** is designed for use over DSL or fractional T1/E1 links and also operates over wireless and satellite. Full network management provides full support for remote configuration, diagnosis and statistical call analysis. A range of **VoIPZIP** platforms are available for CPE and Central Office applications.

The reputation of the Netrix Nx2200 series products for outstanding voice clarity is continued in the **VoIPZIP**. With many voice compression implementations there is a trade-off between voice quality and data throughput efficiency; improve one and you negatively impact the other. Not so with the Nx2200 series. Independent testing and extensive deployments have proven the **VoIPZIP** codecs to be indistinguishable from the PSTN. High quality vocoders are only just the start for high quality voice over a converged network. Sophisticated queue buffer, jitter buffer and echo cancellation mechanisms are deployed to maintain this quality, particularly over circuits with long delays. Here again the Netrix heritage shows. Netrix's experience in voice and data integration has resulted in the creation of unique, robust solutions to the problems inherent to using IP services over multiple wireless or satellite hops.

On the data network side, sophisticated traffic management capabilities preserve voice clarity without sacrificing bandwidth efficiency. IP overhead associated with multiple calls to a single destination is eliminated, thereby optimizing line utilization. Additionally, QoS mechanisms (TOS & DiffServ) ensure voice traffic is given the required priority over other data. A clock recovery mechanism allows TDM link timing to be retained over an IP connection.

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



Communication solutions from

NSGDatacom

extend. evolve. innovate.



Nx 2205D VoIP Z IP

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
- Transparent TDM clock recovery over IP

Connectivity

- **Voice/Fax**
 - CAS/ISDN/E&M
 - H.323, SIP, B2BUA, G.711, G.729a, CELP 4.8/7.4 kbps, ACELP 5.5/8.0 kbps
 - 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

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

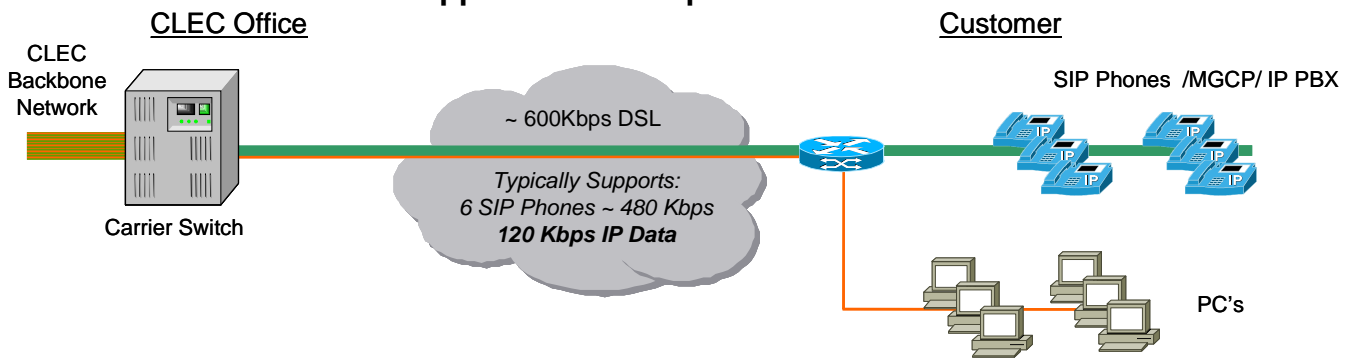
Management

- 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)

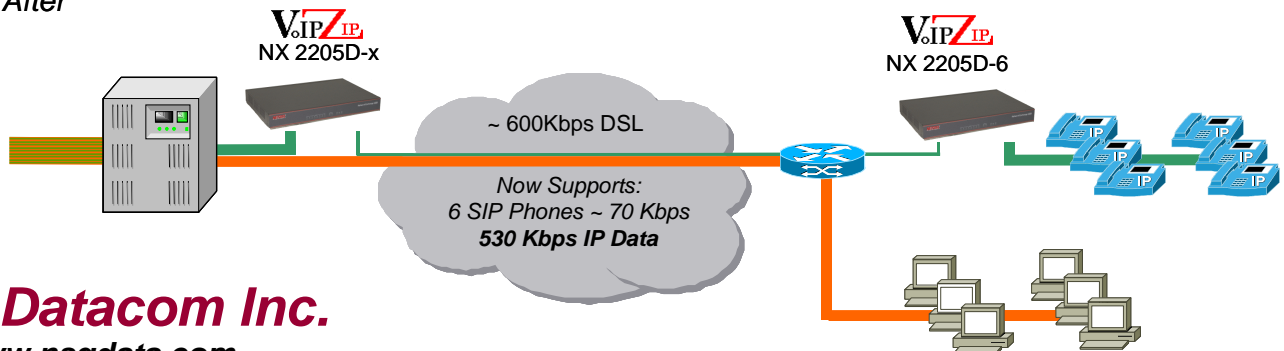
Flexibility

- From Five to Sixty compressed voice channels
- 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

Before



After



NSGDatacom Inc.

www.nsgdata.com

Chantilly VA, USA

703-793-2000

Specifications subject to change without notice

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