



Network Exchange 2214

- **High density, modular chassis supports up to:**
 - 32 analog voice ports
 - 180 digital voice channels (7 X T1/6 X E1)
 - 4 Ethernet ports
 - 32 Serial ports
- **Chassis may be linked together for higher capacity**
- **Award-winning voice clarity over IP and Frame Relay**
- **Standards compliance ensures superior interoperability**
- **H.323 & SIP (with B2BUA) Compliant**
- **Soft configurable voice ports**
- **Extensive voice feature set**
- **Multi-protocol support including IP, ATM, FR, X.25, and SNA**
- **No moving parts**
- **Dual PSU**
- **-48 VDC support**

High Reliability Voice and Data Gateway

NSGDatacom's Network Exchange (Nx) 2214 is an IP and Frame Relay platform that delivers the benefits of voice, fax and wide area networking together with multi-protocol data support to enterprises and service providers alike. The Nx2214 offers a unique combination of switched compressed voice and data support in a single platform. As a stand-alone voice and data switch, or in conjunction with other NSGDatacom products, it gives your network unparalleled flexibility, scalability and efficiency.

The Nx2214 delivers high-quality, low-bandwidth compressed voice with connectivity for both analog and digital interfaces (T1/E1, PRI and BRI) over IP or Frame Relay, allowing enterprise and service providers to choose the most cost-effective transport for their voice and data traffic.

The Nx2214 allows calls to be switched from any port to any port across a public, private or hybrid network, whether Frame Relay or IP. The Nx2214's sophisticated traffic management capabilities achieve exceptional bandwidth efficiency without sacrificing quality or functionality. The Nx2214 is also able to "gateway" between the various voice over technologies switching voice calls from any port to any port over any protocol. In addition to voice support, the ability to detect fax modem tones at any stage of the call and on any port, and then carry that traffic across the network further enhances the Nx2214's flexibility.

The Nx2214 is able to deliver an industry-leading 10 voice/fax over IP calls over a single 64 Kbps link, and over 12 calls via Frame Relay. "Call flows" allows optimized line utilization for multiple calls to a single destination, thus reducing the overhead associated with Voice over IP and allowing bandwidth to be more efficiently used.

Delivering quality of service for all network calls, NSGDatacom's multi-class networking prioritizes calls on an individual basis, ensuring voice quality with sacrificing data performance.

The Nx2214 looks at the available bandwidth and traffic types present on a connection and shapes the traffic appropriately. Additionally, the Nx2214 supports the use of the Type of Service (TOS) bits or the Differentiated Services (DiffServ) octet within an IP packet, ensuring voice traffic is given priority across an IP network on a hop-by-hop basis.

Additional flexibility is offered by bandwidth-on-demand, provided automatically via ISDN or other dial services, depending upon traffic, network conditions or time of day.

The Nx2214 conforms to H.323 version 2 and SIP for Gateway and Gatekeeper functions, which permits integration into networks using other vendor's gateways, and PC-based telephony products such as Microsoft NetMeeting.

Communication solutions from

NSGDatacom

extend. evolve. innovate.



Network Exchange 2214



Product Features

Connectivity

- Voice/Fax
 - FXS/FXO/E&M
 - SIP, B2BUA, H.323 v2, H225.0 v2, Q.931, H.245 v4, RTP/RTCP, ETSI ISDN, NI 1/2, ISDN Cept, G.703, G.704, G.711, G.729a, G.732 @ 2.048 Mbps, AT&T DSX-1, D4, ESF, AMI, B8ZS, TDHS, CELP 4.8/7.4 kbps, ACELP 5.5/8.0 kbps
 - V.27 ter, V.29, Group III
- IP
 - VoIP, RIPv1/2, OSPF, static routing, SNMP
 - SIP, B2BUA, H.323
- Frame Relay
 - Frame Relay NNI, UNI, FRF4/ITU Q.933, Frame Relay Annex D, Annex G, LMI, Full FECN-BECN-DE
 - Switching and encapsulation
 - PVCs and SVCs
 - FRAD
- ISDN
 - Voice and Data
 - PRI and BRI S/T
- X.25 (1988ITU)
 - PAD and switch support
 - X.3/X.28/X.28/X.121
- X.75 (1988 ITU)
- SNA
 - SDLC/QLLC Master & Slave PU
 - PU/LU logical switching
 - SNA (RFC1490), HDLC/SDLC FRAD, SNA/SDLC, QLLC
- SFTM
- Digital cross-connect

Physical Interfaces

- T1/E1, ISDN PRI
- Analog Voice
 - 2-wire FXO loop/ground start, 4-wire E&M Type I, II and V
- ISDN BRI (4-ports)
- High-speed Serial, DTE/DCE to 2.04 Mbps
 - V.24/V.28, X.21, V.35, RS449, RS530
- Low-speed Serial, DTE/DCE to 64 Kbps
 - V.24 (8-ports, sync/async)
- Ethernet
 - 10/100Base-T

Management

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

Scalability & Flexibility

- Up to 11 interface cards
- Up to 64 serial data/trunk ports at speeds to 2.048 Mbps
- Over 180 voice channels
- Up to 4 LAN (10/100Base-T) ports
- Multiple units can be “clustered” to provide well over 2,000 simultaneous voice calls and extend reliability through distributed processing
- Ports can be independently configured for any subscriber or trunk protocol

Fault Resilient Chassis

- Dual power-sharing supplies
- 50MB solid state hard disk
- Smartwatch chassis monitoring system
 - Airflow, temperature, voltage and system status
 - Audible, visual, and electronic alarms

General

- **Physical**
 - Size: 19” Rack Mountable (4U) (8.75” H x 19” W x 26” D) (22.23 X48.26 X 66.04 cm)
 - Weight: 75 lbs (34.02 kg)
 - Power: 100-240 VAC, 50-60 Hz 960 Watts (8 Amps @ 115 VAC, 4 Amps @ 230 VAC)
 - DC Power: -48 VDC (400 Watts load shared, 12 Amps @ -48 VDC)
 - Heat: 3,276 BTU/hr
- **Environmental**
 - Temperature:
 - Operating 0°-50°F (32°-122°C)
 - Storage: -5°-70°F (23°-158°C)
 - Humidity:
 - Operating 10%-90%
 - Storage: 5%-95%
 - 20-95% non-condensing
 - MTBF: >65,000 hours @ 30°F(86°C)
- **Certifications:** FCCpart 15, US STD 1950, EC 60950, CAN/CSA C22.2 No. 950, CISPR 22)
- **Card Slots:** 4 PCI bus card slot for NIC 8 ISA bus card slots
- **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

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