Netrix Voice/Data Aggregation Products
Satellite Application

NSGDatacom has a long history and solid reputation as a provider of leading edge voice compression technology to the Military and major Carriers (ref: VoIP Application Note – Ideal Solution for Bandwidth Challenged Environments).

Our experience in voice/data integration has resulted in the creation of unique, robust voice solutions that solve the problems inherent to using satellite connections for delivering converged voice and data services. The Netrix Network Exchange (Nx) 2205 product family maintains toll quality connections in the presence of varying data loads over one or several satellite hops and are proven to work with all satellite networks including DAMA and TDM/SCPC Systems. The Netrix Nx2205 products utilize proprietary vocoders that provide crystal clear voice communications in only 5Kbps per voice call. Independent testing and extensive deployments by major Carriers have proven the voice quality of the Netrix vocoder to be indistinguishable from the PSTN.
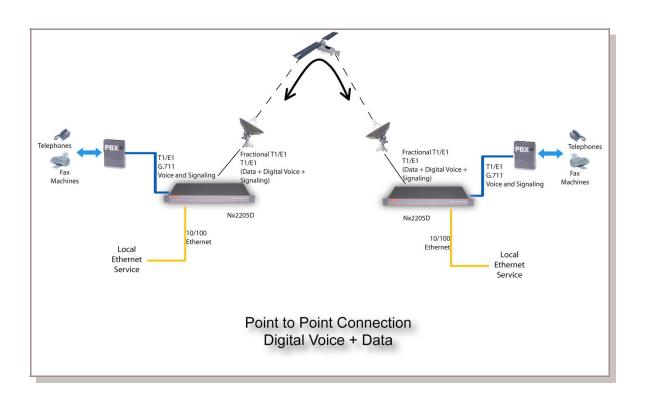
The following application diagrams show the Nx2205A and Nx2205D being used to aggregate voice and data over satellite network connections.

Toll Quality Voice over IP

Extensive Voice Feature Set

Advanced QOS Mechanisms

Soft Configurable Voice Ports

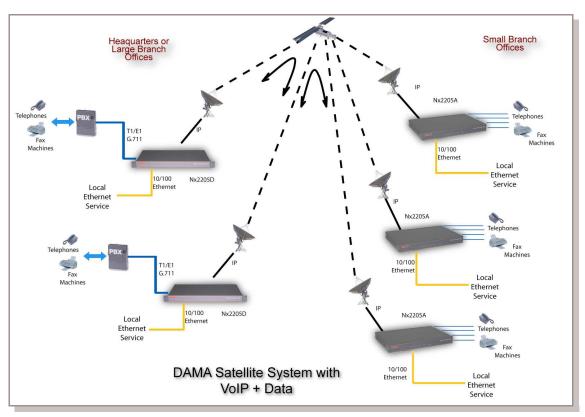Point to Point Connection
Digital Voice + Data

For satellite communications, the Nx2205 series products use sophisticated queue buffer, jitter buffer and echo cancellation mechanisms to maintain voice quality over circuits with long delays. The Nx2205's also support fax over satellite links without incurring timeout problems. On point-to-point satellite connections, the Nx2205 voice switches use a distributed routing protocol, which automatically updates connected units and allows voice calls to be established without using a centralized soft switch. This speeds up connection time and reduces transmission overhead. The system also reduces overhead associated with multiple calls to a single destination, thereby optimizing line utilization, such that genuine toll quality voice calls can be maintained in 5Kbps of satellite bandwidth.

Interoperability is also a key element in the Nx2205's design, which also conform to H.323 v2 and SIP, enabling inter-operation with soft switches, PC-based telephony and other gateways when necessary. Transparent or active handling of SS7 and other signaling protocols allows seamless interfacing to PSTN systems worldwide. Extending beyond the satellite connection itself, major savings can also be gained by routing telephone and fax calls between locations over terrestrial IP networks. Expensive long distance charges can be eliminated by connecting the terrestrial side of the equipment to both the PSTN and IP networks with pre-programmed metrics to determine the most cost effective route for each call.

On the data network side, the Nx2205's sophisticated traffic management, data compression and data acceleration capabilities preserve bandwidth efficiency without sacrificing functionality. The Nx2205 series products also support optional automated VPN security for the protecting sensitive traffic over public network. Our data switching technology can also be used to connect "legacy" host/terminal type systems over the same connections, eliminating additional line costs. Full protocol conversion and emulation modes of operation eliminate polling across the satellite link, reducing delays and contrary to most alternative solutions, improving data throughput performance while still maintaing high quality voice communications in high data traffic (ref. Application Note - Netrix Voice/Data Aggregation Products Enterprise Application).

The Nx2205A and Nx2205D are members of the extensive NSGDatacom range of products used worldwide for network solutions that scale from low-speed traffic to high-speed, ATM services.

DAMA Satellite System with VoIP + Data

About NSGDatacom
www.nsgdata.com

NSGDatacom designs, manufactures, sells and supports a wide range of voice and data products focused on real world business communication needs. Combining key strategic acquisitions with its own core development team, NSGDatacom utilizes a wide range of proven, stable technologies. NSGDatacom creates solutions with these technologies to maintain and preserve organizations' network investments and mission-critical applications while enabling a smooth migration to newer technologies.

NSGDatacom products are deployed worldwide in corporate, financial, government, utility, carrier, satellite, and cellular networks.

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