

## Netrix Airport Communications Solution

### ***The Challenge***

The Air Traffic Management Bureau (ATMB) under the General Administration of Civil Aviation of China (CAAC) was looking to build a network that was reliable for the transmission of their highly critical operations, such as voice, radar, telex, hotline, and various administrative and maintenance applications. A dramatic increase in air traffic over recent years made it necessary to modernize the airspace management system to support the current level of activity and provide for future growth.



### ***The Solution***

Like many organizations facing the dilemma of efficiently and reliably providing voice and data services, the Southern Region ATMB Controller decided to create a combined voice and data network. The Netrix Network Exchange 2210 was selected as the building block for the network between all the airports in this region, including Hong Kong SAR and two of the four busiest airports in China: Guangzhou and ShenZhen. The topology chosen was a redundant star, with the hub at Guangzhou BAI YUN Airport, and spokes running over terrestrial and satellite circuits.

The Netrix Network Exchange 2210 product was chosen because it provided a number of significant benefits:

Combined voice and data over frame relay and IP. The 2210 can use frame relay or IP trunks, allowing voice and data to come in on one protocol and go out on another, without any degradation of service. In addition, trunks of one protocol can be backed up by trunks of the other. (Although not used in this application, ISDN and ATM trunks are also supported.)

Guaranteed data delivery. Using X.25 and the 2210 trunking protocol, data delivery is guaranteed, even with failures in the network. The inherent error detection and correction in X.25 ensures data integrity end-to-end. During a network failure the 2210 re-routes virtual circuits automatically, without data loss.

Flexible voice support. The 2210 product handles various voice requirements such as "hoot and holler" and "auto ring down".

Industry leading voice quality. The 2210 product provides excellent voice quality along with high bandwidth efficiency

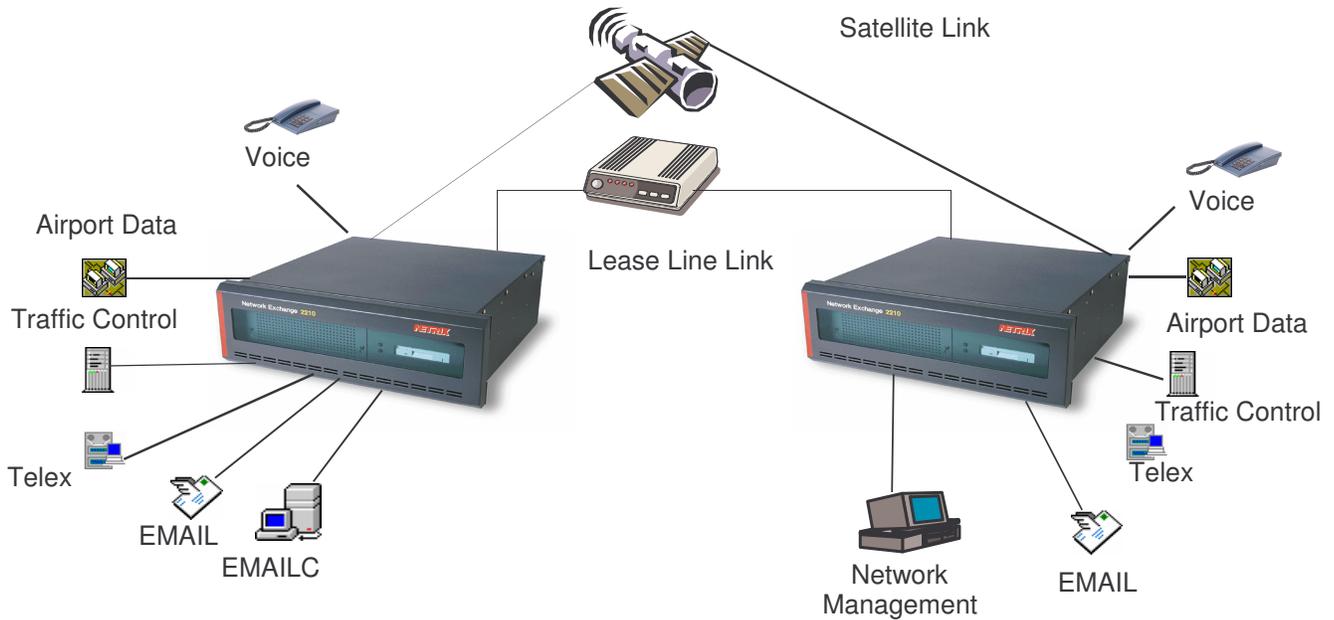
Scalable and Flexible. Supporting data rates from 600bps to 2M, the 2210 provides connectivity for a wide range of applications while providing the flexibility for the ATMB to migrate to Frame Relay and IP. With a capacity for 180 voice calls, 4 Ethernet port and 64 serial ports, the 2210 is able to cope with rapid growth by the ATMB.

***Combined Voice  
and Data  
Network***

***Flexible Voice  
Support***

***Guaranteed  
Data Delivery***

## Network Diagram



## Summary

The Netrix Network Exchange 2210 product combines high quality voice and reliable data transmission on a single platform, making it the ideal solution for the transmission of highly critical airport operations.

Flexibility and scalability features built into the 2210 protect network investments by providing an unrestricted migration path for future growth.

The comprehensive network management system offers the control center the ability to configure, monitor, and troubleshoot the 2210 over public, private or hybrid networks.

This Southern region of China network has been in place for more than five years, carrying highly mission-critical RADAR and air traffic signals.

## About NSGDatacom

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, military, carrier, satellite, and cellular networks.

# NSGDatacom

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