N-TRON
THE INDUSTRIAL NETWORK COMPANY

Remote security cameras and alarm equipment surround the Chongging Jiangbei International Airport perimeter. N-Tron's industrial 7506GX2 switches were selected to create a highly-reliable, redundate Ethernet network for the project.

N-Tron Switches Keep Airport Perimeter Security Network on Watch Around the Clock

In a post 9/11 world, passenger and cargo security is the top priority for airport managers. Efforts go on round-the-clock at every level of operation. Perhaps the most important area of concern for operators is the protection of ground-based facilities from malicious activity.

With this in mind, the management of the modern Chongging Jiangbei International Airport recently decided to upgrade its perimeter security. The focus of the project was to enhance surveillance capabilities around runways and remote locations on the property. Plans for the upgraded security network called for the use of new high-resolution video cameras, perimeter sensors, warning sirens and alarm strobes. N-Tron switches were selected to form the backbone of the installation.

N-Tron offered many advantages for project planners including product reliability, advanced high-speed ring technology, easy software integration and mission-critical gigabit capacity. In addition, N-Tron's reputation for high-quality products and application expertise were important factors in the decision.

The project required that all switches endure a variety of challenging physical demands while providing mission-critical dependability. These included intense vibrations from jet take-offs and landings, radar EMI interference, and environmental temperature swings. None of these factors posed a problem for the N-Tron products.

N-TRON 7506GX2 Industrial Ethernet Switch

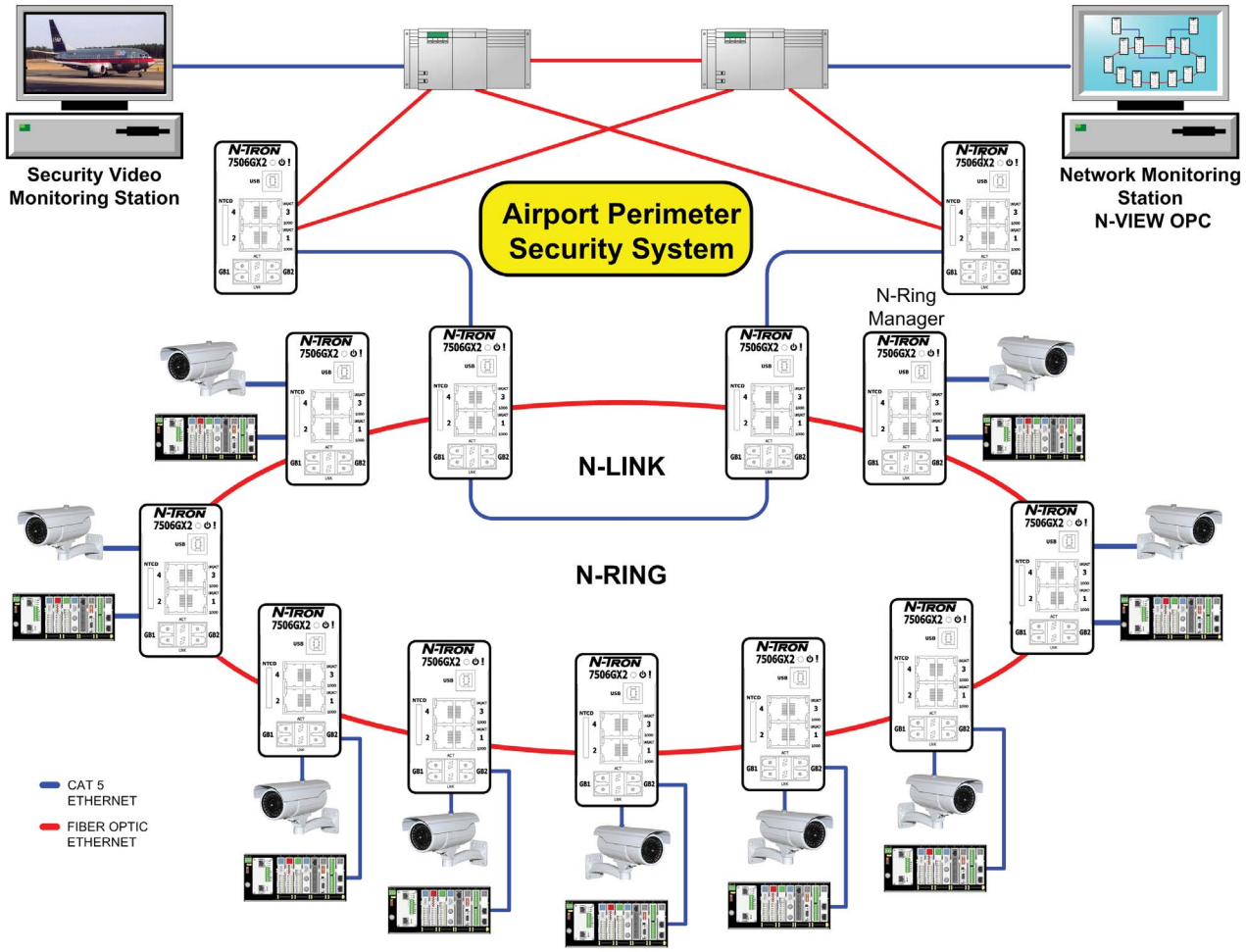
Facts

- Availability of affordable technology has supported the expansion of monitoring applications into industrial, institutional, commercial and municipal settings.
- Reliability and bandwidth are key factors to the success of any surveillance implementation.
- Market experts predict that 2011 is the year that IP cameras will surpass CCTV cameras as the dominant technology used for security and monitoring applications.
- Human safety and property security are top reasons cited to employ monitoring systems. Process control monitoring and remote management are increasingly named as decision points for new systems.

In fact, N-Tron products are designed for these conditions and feature extensive shock/vibration tolerances, expansive EMF noise immunity and the ability to handle a huge range of ambient temperature fluctuations. The 7506GX2 switch also carries a rating of more than two million hours MTBF.

High-Speed Ring Redundancy Technology

A critical factor in the team's product selection was redundancy technology. N-Tron's advanced high-speed N-Ring network solution and highly-reliable redundancy capabilities offered clear advantages over competitive equipment. Advanced N-Ring technology provides expanded capacity, detailed fault diagnostics, and fast 30ms healing times in rings composed of N-Tron managed switches. The integrity of the N-Ring is continually monitored for error conditions. If a fault is detected, the ring converts to a linear topology within ~30ms, restoring communications in an instant. For convenience, users can easily access a detailed ring map and fault location chart through the ring manager's web browser or the OPC server. N-Ring's N-Link capability provides an easy-to-use interface to create multiple N-Rings, creating additional pathways to critical applications and increasing overall network resiliency.

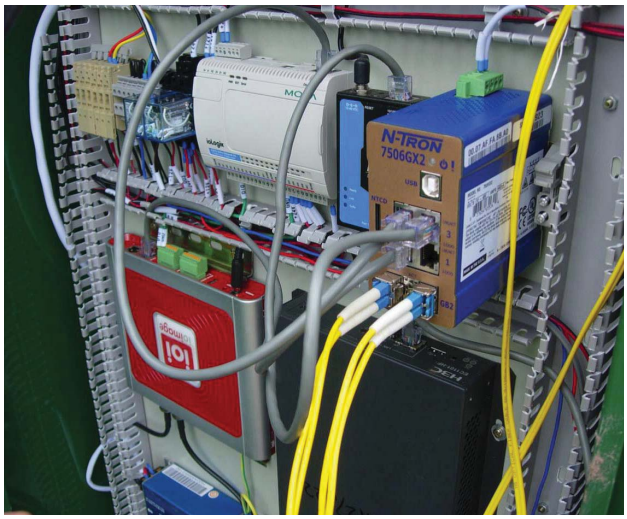


N-Ring was used to create a gigabit fiber optic ring topology around the perimeter of the airport. Perimeter control points interconnect through 7506GX2 switches.

All security points were outfitted with an equipment enclosure to house controls for perimeter sensors, warning sirens and flashing strobe alarms. A high-resolution IP video camera (with night vision and pan/tilt controls), along with an N-Tron 7506GX2 gigabit switch, completed the configuration. The 7506GX2 was selected for its jumbo frame capability needed to handle large data packets generated by high-resolution cameras. Additionally, the 7506GX2's advanced software enhanced throughput by providing automatic IGMP Snooping (Internet Group Management Protocol) to reduce multicast traffic in the network.

N-View OPC Monitoring

Since installation, airport security and IT officials are able to use N-Tron's N-View OPC to provide status of the new equipment. N-View offers over 40 parameters of activity for each port—including bandwidth, packet traffic, port setup and errors conditions—with minimal impact on network overhead. These data points can be viewed through N-View's interface window or integrated with most Windows-based HMI packages to monitor, trend and alarm the incoming data.



Each security point has its own equipment enclosure to house the controls for sensors, sirens, flashing strobe alarms and a high-resolution camera. All components connect to the network through the N-Tron 7506GX2.

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