

CUSTOMER SUCCESS STORY

CUSTOMER: AIRPORT IN CHINA
INDUSTRY: TRANSPORTATION
REGION: CHINA
PRODUCT: iES26GF & iES10G-S

THE CHALLENGE

iS5 Communications' customer, a global leader in airport solutions for traffic safety, operates in 70 countries worldwide and provides the airport industry with efficient solutions for safer aircraft and vehicle movements. This includes operations, control and handling of aircraft on the ground, airborne aircraft close to the airport, and ground vehicles at the airport. The customer approached iS5Com with a project for an Airport Parking Guidance system in the Terminals of a major airport in China. The goal of the project was to assist in guiding planes on the runway and the gates along with on-ground vehicles at the airport. They needed real-time traffic information back to their control center to ensure seamless operations.

THE SOLUTION

iS5Com proposed a new network design that integrated their Assisted Video Guidance System (AVGS) to replace its existing network infrastructure. This project was implemented in 3 new airports across China.

The new network design was implemented using iS5Com's iES26GF and iES10G-S ethernet switches. The switches have been specifically designed for critical infrastructures in harsh environments. The design consisted of a major ring and sub rings connecting their AVGS with roughly 80 switches. iS5Com provided a redundant network design at their control tower and airfield. The recovery time needed to be less than 20 milliseconds from their AVGS back to their air traffic control. The ring protocols identify one switch as the master of the network and then automatically blocks packets from travelling through any of the networks redundant loops. If one branch of the ring gets disconnected from the rest of the network, the protocol automatically re-adjusts the ring so that part of the network that was disconnected may re-establish communications with the rest of the network. The redundant ring design allowed for re-establishing communications should the ring get disconnected from the rest of the network.

Figure 1 - Network Design



BENEFITS

- **100% redundant** – all AVGS are connected via a redundant link to the control tower in a ring network for first traffic switching.
- **100% visibility** to airport data traffic systems through their network management systems.
- **100% availability** to CCTV surveillance cameras and their AVGS.
- **100% reliability** – meets or exceeds the standards set out in IEC 61850-3 and IEEE 1613 for industrial communication equipment.
- **Secure remote access** to the iES26GF and iES10G-S devices. Configuration is facilitated through SSH and HTTPS.

ABOUT iS5 COMMUNICATIONS INC.

iS5 Communications Inc. (“iS5Com”) is a global provider of integrated services and solutions, and manufacturer of intelligent Industrial Ethernet products. Our products are designed to meet the stringent demand requirements of utility sub-stations, roadside transportation, rail, and industrial applications. iS5Com’s services and products are key enablers of advanced technology implementation such as the Smart Grid, Intelligent Transportation Systems, Intelligent Oil Field, and Internet of Things. All products have the ability to transmit data efficiently without the loss of any packets under harsh environments and EMI conditions.



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