CASE STUDY
Intel® vPro™ Technology
Communications/Media
Remote Manageability

Advantech's Flight Information Display Systems (FIDS) Take Off at Busy Airport in China

Advantech's FIDS use Intel® vPro™ technology to manage IT assets and reduce TCO in providing instant broadcasts at Shanghai Hongqiao International Airport

ADVANTECH
Enabling an Intelligent Planet

Spotlight on Advantech Co. Ltd.

Advantech was founded in 1983 and is a leading provider of innovative embedded, automation products and solutions. The company offers comprehensive system integration, hardware, software, customer-centric design services, and global logistics support. In 2008, Interbrand, the world-renowned brand consulting firm, recognized Advantech as one of the Top 10 Taiwanese Global Brands.

To handle the increasing number of passenger arrivals and departures, Shanghai Hongqiao International Airport in China recently deployed a new flight information display system, or FIDS, developed by Advantech Co. Ltd. Based on Intel® Core™ processors with Intel® vPro™ technology, the system has cut down on the time and manpower needed to manage the complexity in thousands of display screens that travelers depend on every day at the airports.

CHALLENGES

- **Improve infrastructure efficiency.** Provide a solid foundation for remote management technology used in Advantech's FIDS, rapid provisioning and optimal use of all computing resources.
- **Reduce operational costs.** Enable customers to reduce time and manpower costs in discovering, healing, and protecting their networked computing assets.

SOLUTIONS

- **Use Intel® vPro™ technology.** Utilize Intel vPro technology in the company's FIDS products to enable remote management capabilities that enhance customer operations and efficiencies.

Impact

- **Easier maintenance, time and manpower savings.** Advantech's customers save on time and manpower, improving airport administration through remote management of their Flight Information Display systems.

FIDS at the airport

It is a very busy day at Shanghai Hongqiao International Airport, with planes landing or taking off over every few minutes. At the airport terminal, passengers are checking in while others check their flight schedules displayed on the large screens located across the arrival and departure halls. The displays are part of the FIDS the airport uses to keep passengers informed of their flight schedules. As a group of travelers walk by, they check one of the screens, and then head towards the boarding gate, confident of their boarding time and flight schedules. This scene is typical of many busy airports in China and around the world.

The FIDS is an important component of an airport's operation. Without FIDS, it would be nearly impossible to run a modern airport with millions of passengers and thousands of flights landing and taking off every year.

Challenges FIDS installations face

FIDS is a computer system used in airports to display flight information to passengers on display screens in real time. FIDSs are used to assist passengers during air travel and people who want to pick up passengers after the flight. Located in or around airport terminals, a FIDS screen shows important information on each line. This includes the airline name, city of origin or destination, expected arrival or departure time, gate number, check-in counter and the status of the flight. From a central control room, a FIDS server broadcasts information from a constantly updated database to multiple display screens placed strategically throughout passenger facilities.

With a growing number of passengers and flights in recent years, Hongqiao Airport requires reliable, low-maintenance FIDSs to manage increasing traffic and provide accurate, real time information to travelers.

Phil Chiu, Advantech's product manager, explains, "Imagine hundreds of displays spread across passenger lounges, check-in counters, and arrival and departure halls serving the thousands of passengers going through the airport every day. Travelers depend on real time information on the displays to keep updated on their flight times, boarding gates and flight status. You need a reliable FIDS system that runs 24/7. Any one of these going down could result in missed flights and frustrated passengers, thereby reducing the airport's quality of service."

Advantech's FIDS solution helps airports reduce maintenance costs and increase system uptime

"We use Intel Core processors with Intel vPro technology in our products as these meets our customers' need for performance, reliability and low-maintenance computing."

Phil Chiu
Product Manager
Advantech Co. Ltd.

In 2010, Hongqiao Airport handled over 31 million passengers, a growth of over 24 percent over 2009 making it the fourth busiest airport in China and 41st busiest in the world.[1] Considering the large amount of passenger traffic, top-notch solutions were deemed mission-critical. Any potential onsite technical problems could cause a series of consequences that might influence the operation of many other airports. The airport decided on Avantech's FIDS solution after having evaluated Advantech's FIDS installations at other major airports in China.

An important requirement of the system was the reliability and ease of maintenance of the FIDS solution. With a typical airport having hundreds of FIDS screens spread across the airport's terminals, keeping every display working 24/7 is a key issue. Up to two displays are connected to a compact embedded industrial PC (IPC), which are in turn connected to the FIDS' intranet and to the FIDS server in the control room. This back end system broadcasts flight information to all the IPCs, which display that information on the screens in real time.

The IPCs are powerful, compact PCs, and Advantech developed its ARK* series of IPCs as the ideal FIDS solution for airports. This is solution that was selected to be deployed at Hongqiao Airport.

"What our customers want in FIDSs is performance, reliability, and the ability to manage it all easily and conveniently from a single location," says Chiu. "This is why we decided to build our FIDS products based on Intel Core processors with Intel vPro technology."

Advantech's FIDS Intel® technology-based solution benefits

Advantech designed the system based on Intel® Core processors with Intel® vPro™ technology. Intel vPro technology provides hardware-assisted security and manageability to the embedded IPCs. A key feature of Intel vPro technology is Intel® Active Management Technology (Intel® AMT) which enables remote management capabilities. Using built-in platform capabilities and popular third-party management and security applications, Intel AMT allows the airport's IT staff to better discover, repair, and protect their networked computing assets. IT staff at the control room can at any time manage, configure, and even pre-empt problems that may occur at any one of the hundreds of embedded IPC displays, helping reduce downtime and site visits to the displays' locations. IT staff at the airport's central control room can schedule automated system patches, updates, and maintenance of the FIDS embedded IPCs during hours of low passenger traffic. An important function is also the capability to remotely diagnose and fix the IPCs, and even reboot or boot up the IPC directly from the control room.

Advantech's FIDS installation at Hongqiao Airport was successfully completed and the deployment has been meeting the airport's expectations. "Advantech's FIDS solution delivered that Hongqiao Airport needed—mission-critical reliability and ease of maintenance," says Chiu. "The Intel AMT remote management capability is helping them save time and manpower in FIDS server management and airport administration."

The success of this deployment also puts Advantech on a strong footing for future installations should the airport expand to cater for greater passenger traffic in the future.

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[1] ACI releases World Airport Traffic Report 2010,source: http://www.aci.aero/aci/aci/file/Press%20Releases/2011/PR_01082011_2010_WATR.pdf

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