

Wuxi is the First International Airport in China to Adopt Intelligent Infrastructure Solutions from CommScope

SYSTIMAX® iPatch® System complements LazrSPEED®, TeraSPEED® and VisiPatch® Solutions in business- and safety-critical airport systems



Network connectivity plays a key part in the expansion of Wuxi Shuo Fang Airport in China's Jiangsu Province. By choosing advanced SYSTIMAX cabling infrastructure, the airport has optimized throughput of passengers and cargo, and gained a lead over other world airports.

With the completion of its new, 42,000 m² terminal, Wuxi will be one of the largest and most efficient airports in Jiangsu Province. Within the terminal building, the all-important communications network is managed using the SYSTIMAX® iPatch® System to provide vision, knowledge and control over the physical layer.

The System gives managers real-time information on every move made in an infrastructure that supports two key networks: data communication and voice communication. Better information, in turn, improves security and saves time on managing the networks.

The data communication network handles the airport's most vital applications including flight information display, departure control and security systems, and the voice network supports internal and external telephones.

Other applications running on the same cabling infrastructure include multi-media devices and management information systems that assist in timely decision making.

"All these systems demand a network physical layer that is highly reliable and manageable as well as offering high performance," said Mr. Ni, Director of the IT Department at Wuxi Airport. "We envisage throughput of travellers reaching three million a year and freight rising to 100,000 tonnes annually - so the network will have to handle rapidly growing demands without loss of responsiveness or reliability."

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For longer backbone connections, including those between buildings, the network uses the SYSTIMAX TeraSPEED singlemode fiber solution. Backbones and other high bandwidth connections within buildings use LazrSPEED multimode fiber cables that fully meet the OM3 cabling standard.

The LazrSPEED Solution can transmit data at speeds up to 10Gb/s over distance up to 300 meters without need for expensive singlemode electronics. At Wuxi Airport, this performance is used to support high bandwidth applications including digital signage and streaming video. The singlemode, zero water peak TeraSPEED fiber can support 100G data transmission over long distances of campus.

“These SYSTIMAX solutions offer some important business advantages,” said Mr. Ni. “As well as having a wide bandwidth, they are tested well beyond the highest international standards including those of the TIA, ISO and CENELEC.

“The low smoke zero halogen cabling we are using also meets the most stringent fire safety standards - in an airport environment serving thousands of people every day, this is critical. In addition, we have the confidence of knowing that SYSTIMAX infrastructure has proved its safety, reliability and performance at many other airports around the world.”

Installation of the fiber cabling, together with the iPatch System and SYSTIMAX GigaSPEED XL copper cabling, took just three months. A 50-strong team from these organizations designed and built a network with 2,100 outlets using 150km of Low smoke Zero Halogen, Category 6, GigaSPEED XL cable. The team also installed 2km of LazrSPEED OM3 fiber and 15km of TeraSPEED singlemode fiber.

In the airport's five communications rooms, SYSTIMAX VisiPatch® patching hardware is installed alongside the iPatch System. With its innovative reverse connectors, the VisiPatch System leaves the front of patch panels free from “patch cord spaghetti”. This ensures port labelling is clearly visible and makes moves, adds and changes (MACs) easier to complete without errors.

The iPatch system also makes MACs in data and voice connections quicker by giving technicians guidance on changes required via a display on the panel. This allows valuable time savings to be made when meeting the rapidly changing needs of tenants in the airport buildings.

In addition, the iPatch System gives technicians one-button tracing of connections and will show network administrators details of all connected network devices. Administrators and managers can also raise change orders electronically and makes them immediately accessible to technicians. A full record of changes and an up-to-the-minute map of current network connections is maintained automatically.

Features such as these are an important factor in network security, ensuring that correct connections are maintained and that unauthorized connections prevented. The system can provide managers with real-time alerts whenever there is an attempt to access the network without permission.

“Few network applications are more critical than supporting systems at an international airport,” said Charles Wong, Regional Director of Greater China, CommScope Enterprise Solutions. “To minimize the risk of service interruption, the physical layer infrastructure must not only offer high performance and reliability, it must be closely managed. Even with a top quality network, services can be disrupted by errors and delays in moves, adds and changes, or by unauthorized interference. The iPatch System provides a level of physical layer management that minimises these risks.”



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