COMMSCOPE®

Bank of China Tianjin achieves 100G networking by leveraging CommScope connectivity solutions

Customer

Bank of China Tianjin

Country

China

Challenges

To support its advanced data center, banking applications and intelligent building systems, the bank wanted a high-performance intelligent network infrastructure.

CommScope solution

iPatch® intelligent infrastructure manages preterminated OM4 LazrSPEED® fiber and GigaSPEED® copper cabling for a 12,600-outlet network.

"We are very proud of the excellent end-to-end performance achieved in this complex installation —and of the management and security benefits that iPatch provides. It is an indication of the bank's satisfaction with this installation that it now plans to install our SYSTIMAX solutions in even more office locations."

—Chen Lan, Enterprise Solutions regional sales director, Greater China, CommScope

Bank of China's new office in Tianjin is a key part of its national business network. To support its advanced data center, banking applications and intelligent building systems, the bank wanted a high-performance, intelligent network infrastructure. CommScope delivered this with its range of SYSTIMAX® solutions, combining performance and reliability with ease of installation and management.

Bank of China is one of the world's top ten banks, providing a full range of financial services in China and 31 other countries. The bank offers corporate, investment and personal banking, and financial market facilities as well as fund management, aircraft leasing and insurance services through wholly-owned subsidiaries.

State of the art throughout

Tianjin is in northern China, and, as the country's sixth largest city, is a major business center for Bank of China. The scale of the bank's new office in the city reflects its importance, with 90,000 square meters of high-quality workspace in a 25-floor tower and six-floor adjacent building.

The Tianjin building is state of the art throughout, featuring intelligent building systems and an advanced data center. These facilities, like all the building's data and voice systems, depend on a world-class network infrastructure with more than 12,000 information outlets.

During planning of the Tianjin office and its systems, selecting the best network infrastructure solutions was a priority. The bank required industry-leading performance combined with the highest level of reliability; it also wanted a supplier with a global reputation for quality and technical support.

Among the alternatives considered, CommScope stood out for its excellent product range and its record of success with large-scale installations. Its banking customers in China already included Shanghai Bank, Union Pay and Bank of China's own Shanghai data center, Beijing Heishanhu data center, Shanxi branch, Hebei branch and numerous others.

Demanding requirements

Specifications for the Bank of China installation were particularly demanding. They required a single integrated copper and fiber infrastructure that could support the data center, intelligent building systems and advanced banking applications. Among the more specific requirements: optical fiber cabling must achieve a loss of less than 2 dB in a five-connector channel.

To monitor and manage the network physical layer, Bank of China wanted an intelligent infrastructure that would improve security and make troubleshooting easier. It also needed to cut the time and cost of making moves, additions and changes to the network.

All this had to be achieved by an infrastructure that could be installed in a very tight schedule. The data-center component of the infrastructure, for example, had to be completed in only a month.

CommScope and its local partners met these needs with its SYSTIMAX portfolio of solutions. As one of the world's leading structured cabling brands for more than three decades, it continues to lead the industry in performance and innovation.

Less downtime

Included in the SYSTIMAX range is CommScope's advanced iPatch intelligent infrastructure solution, which gives system managers knowledge and visibility of the physical layer that enables them to optimize network utilization and uptime. When changes are implemented, it helps technicians complete moves, additions and updates faster—with fewer errors.

Both copper and fiber connections are routed through iPatch patching panels that connect via rack manager units to PCs on system managers' desks. Managers can monitor connections and connected devices in real time and receive instant alerts of any unauthorized changes. They can also raise change orders on their

iPatch PC software and display instructions to technicians using iPatch screens on the patching frames.

Managers are notified as soon as changes are correctly completed and network diagrams in the iPatch database are automatically updated. This makes allocating new connections much easier and enables instant location of connection problems.

By avoiding human error and making accurate information on connections immediately available, the iPatch solution reduces network downtime. At the same time, it improves network security, which is critical in banking applications.

An added advantage of the iPatch solution is that it makes the bank less dependent on the specialized knowledge of individual technicians. Since complete and accurate data on all connections and connected devices is instantly available, new managers and technicians can quickly become familiar with the network.

Fast fiber installation

The LazrSPEED 550 cabling used in network backbones was the first multimode fiber solution to meet the OM4 standard. It enables data transmission speeds of 10 Gbps over 550 meters and supports 40/100G Ethernet over shorter distances. Its laser-optimized design can achieve this without expensive electronics, improving savings on overall infrastructure cost.

For fast installation, Bank of China chose the factory-preterminated InstaPATCH version of LazrSPEED. Compared with on-site termination, this solution fulfills their high-bandwidth needs while also protecting up to approximately 50 percent of their investment on fiber cabling infrastructure. The small size and low loss of InstaPATCH connections makes them ideal for the high connector densities required in data centers.

Horizontal connections to outlets in office areas use the GigaSPEED XL® copper solution. This exceeds specifications of Category 6 cabling standard by 6 dB, allowing 1 Gbps data transmission over 100 meters with up to six connectors in the channel. This extra performance ensures the bank's large, complex infrastructure will deliver the end-to-end data speeds users need.

Quality design and installation

In total, the project team connected 12,600 outlets inside offices and the data center, using more than 450 kilometers of GigaSPEED XL cabling. In the network backbone and risers, they installed six kilometers of LazrSPEED 12-fiber optical fiber nonconductive riser (OFNR) cables.

The LazrSPEED backbone cable connects two main distribution frames to 25 satellite distributors located throughout the building. From these satellite frames, the GigaSPEED cabling is run under floors and above ceilings to outlets in the work areas.

Commenting on the installation, Chen Lan, CommScope's Enterprise Solutions regional sales director, Greater China, said, "We were able to deliver material quickly from our local warehouses so our partners could complete the job on schedule. As a result, we offered a complete, integrated solution to support all the bank's needs to complete the project.

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Everyone communicates. It's the essence of the human experience. *How* we communicate is evolving. Technology is reshaping the way we live, learn and thrive. The epicenter of this transformation is the network—our passion. Our experts are rethinking the purpose, role and usage of networks to help our customers increase bandwidth, expand capacity, enhance efficiency, speed deployment and simplify migration. From remote cell sites to massive sports arenas, from busy airports to state-of-the-art data centers—we provide the essential expertise and vital infrastructure your business needs to succeed. The world's most advanced networks rely on CommScope connectivity.

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