

PROJECT OVERVIEW

- Enhanced Category 5 PDS solution & Fibre Backbone
- 8400 voice and data points
- 28 floor office built to the international 5A intelligent standards

Bank of China

The Dalian Bank of China is located in the core section of Renmin Road in Dalian's Central Business District. Occupying a service area of 56500 square meters, the main building consists of 28 floors, two underground floors and two equipment floors on the top, covering 2920.8 square meters. The building comprises of 5A intelligent office functions, mainly banking sales and integrated office operations.

From its early development stages, the Bank of China building was designed to be a global first-class design, in both hardware and software. The building was built according to the international 5A intelligent standards: - building automation, office automation, communication automation, fire protection and monitoring automation and security automation. Hence, the Bank of China required that its Premise Distribution System adhere to the voice and data traffic transmission requirements of an international intelligent office.

Designing the Solution

A good Premise Distribution System (PDS) was essential for the Bank of China as it is the infrastructure for all communications within the building, from providing communication routing and routing management for communication systems, to computer networking systems and building automated management in the building. "Being the best intelligent building in the North East China region, there is a huge demand for the Bank of China to transmit massive data at great speed. There are stringent requirements for a reliable network infrastructure, particularly on speed, performance and flexibility. Molex Premise Networks fully meets our requirements on data integrity," said Professor Zhang Shaohua, Engineering Department, Bank of China.

Based on the buildings' functional characteristics, users' system requirements and future growth, a total of 8400 outlets were deployed in the Dalian Bank of China. This included 4200 voice outlets and 4200 data outlets, 6700 of which were Molex Enhanced Category 5E Unshielded PDS Solutions. The Molex CMR Riser-Rated Category 5E UTP cable was used to provide good fire-retardant performance. Under the conditions of fan forced air blow, the bundle of cables will self-extinguish when the flame spreads within 5 meters, which complies with the Bank of China's fire protection requirements.

After deciding on the number of outlets required in the building, determining the number and location of the floor wiring closets was based on the floor area and number and distribution of outlets. It was recommended that each floor wiring closet would manage 150 - 400 outlets. Considering the above factors and the actual needs of the building, one wiring closet was set up on each floor.

Every 8-12 square meters was defined as one work area with one data outlet and one voice outlet installed in each work area providing data and voice switching. A

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fibre cable was used between metro data network and the Bank of China building. Multi- Mode fibre cables were used in the building backbone providing up to 1000 Mbps LAN services. Voice backbone uses Category 3 feeder (50 pair) copper cables and 2 pair is configured in each voice outlet on and above Floor 3. The backbone is directly connected from floor wiring closets to the general voice wiring closet on the top floor. All horizontal cabling uses Enhanced Category 5E 8-position twisted pair to increase system flexibility, which meets data transmission requirements, supporting up to 200 Mbps of transmission rate in the horizontal subsystem.

The Dalian Bank of China also deployed Molex' high-density fibre distribution systems as it can accommodate up to 18 fibres in the smallest space. Using a mixture of fibre, UTP, ScTP and coax modules, this provided the most universal and compact fibre distribution system. The rear cable manager in the distribution system ensures proper bending radius and cables are protected and properly managed. This fully complies with the Dalian Bank Of China's stringent requirements in cabling maintenance and management.

The Molex cabling system provides strong support for various advanced communications, information systems and management equipment for the Bank of China. The system ensures a platform for future upgrades and the Molex cabling system provides an excellent infrastructure for the Dalian Bank of China, resulting in an efficient, comfortable and convenient environment. Professor Zhang Shaohua said, "Since the cabling system is a long-term investment for the Bank of China, we need an effective, reliable and easy to install cabling solution. The structured system of Molex Premise Networks is the ideal choice for the Bank of China."

The Dalian Bank of China deployed the Molex cabling system partly based on Molex' successful record of previous installations in the North East China region, including: -

- The Dalian Asia-Pacific International Financial Center (2000 outlets),
- Dalian Hilton Hotel (2600 outlets),
- Dalian Digital Plaza, Shenyang Jinsha Plaza (4800 outlets)
- Dalian Zhongshan Financial Center (2000 points)

The local office in Dalian provided excellent product and technical support. The local distributor, Dalian Zifeng Technology Co., Ltd. also provided quick response and ontime delivery of products. Molex has a lot of authorised installers with extensive technical strengths and rich engineering experience. These authorised installers provide high quality services to their customers, like the Dalian Lafayette Control Engineering Co., Ltd.

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Installation and Implementation

The total cabling system for the Dalian Bank of China was installed by Molex authorised installer, Dalian Lafayette Control Engineering Co., Ltd. During the design phase, the installer designed the system according to the needs of the Bank of China and recommended Molex' unique cabling solutions. In the initial engineering phase, the conduits and cabling were placed according to the design blueprints and detailed checks were conducted on run direction, placement, height, process and materials. Details on installing PDS were also closely monitored, ensuring organised cabling, reasonable layout and neat appearance, meeting all network communication and transmission requirements.

According to Professor Zhang Shaohua, "Molex PDS provides a complete end-to-end copper and fibre solution. Streamlined cabling management and modular patch panels combined with well-designed cabling system, effectively meets the electrical requirements. These systems are easy to install and helped us complete the installation smoothly."

The Dalian Bank of China project was completed very smoothly aided by the streamlined work schedule, experienced cabling engineers and technicians and the use of high quality components and materials. The Bank of China project passed the stringent installation testing based on the existing MII standards and EIA/TIA568, ISO11801 and other international Category 5E standards. Molex provides a Global 25-Year Product, System Performance and Application Assurance Warranty.

User Feedback

Professor Zhang Shaohua further commented, "The implementation of Molex PDS fully meets the high level requirements of all systems in the building. The building occupancy was already 70% when the installation was six months into completion. The Dalian Bank of China has become the classic standard in high-level office buildings in Dalian. The Molex system is excellent and all voice and data outlets have been provisioned. Molex products are of high quality and performance."

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