

Powered by CommScope, a century-old hospital in China reinvents itself

Customer

The Number 4 Affiliated Hospital of China Medical University

Country

China

Challenges

The Number 4 Affiliated Hospital of China Medical University needed to bring its medical care and physician education capabilities into the 21st century, with a new level of data center capability and connectivity to support it. For their new state-of-the-art building, the hospital tapped CommScope to deploy the advanced data center infrastructure cabling and management solutions that will meet the needs of today while providing the foundation for future expansion.

Committed to continuous improvement in medical care and education

The Number 4 Affiliated Hospital of the China Medical University is a large general first-class tertiary hospital combining medical treatment, education and scientific research under one roof. Built in 1909,



the hospital's name and ownership have changed many times over the years. In 2004, it was officially transferred back to the China Medical University and became its fourth clinical academy and fourth affiliated hospital, signifying a brand-new start for the century-old institution.

With a designated total capacity of 1,800 beds, the hospital consists of the Chongshan Campus (main office), Heping Campus and Qipanshan Campus. To advance its goal of continuously improving its overall medical services capabilities, the hospital is committed to using advanced

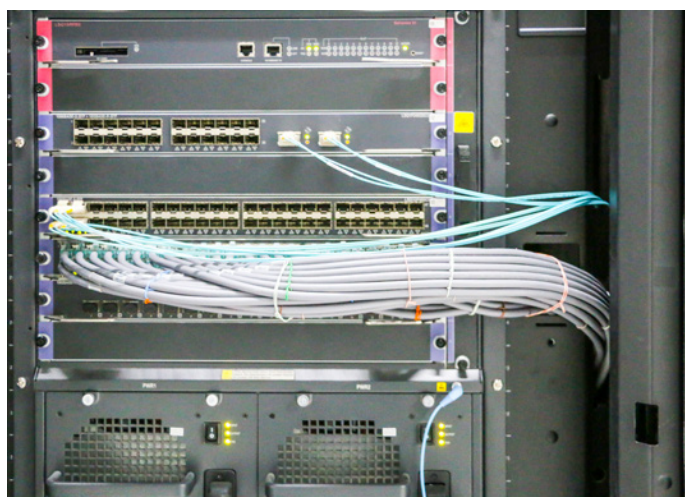
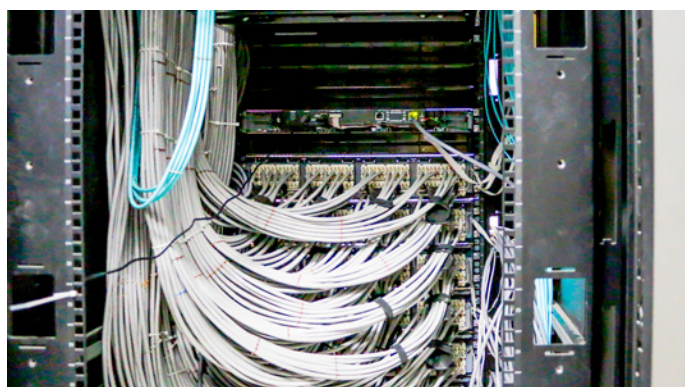
technology to improve patient care and develop outstanding medical professionals.

A new hospital building designed around advanced technology

For many years the hospital had been plagued by a shortage of clinical wards, an inadequate medical care environment and an insufficient data center, all of which severely impeded the hospital's ability to grow. To prepare for future expansion, increase operating efficiency and improve the hospital's image, management

"With our innovative technology and proven design, installation, delivery, training and service processes, CommScope's cabling solutions and imVision® intelligent cabling management system were the clear choices for the China Medical University Number 4 Affiliated Hospital's new, advanced data center infrastructure."

Laura Chen,
Regional Sales Director, North Asia, CommScope



decided to construct a new building, designed to international standards with the capability to become a fully digital hospital—a total transformation into a major medical center and a premier university-affiliated teaching hospital.

Begun in 2012 and completed in 2015, the new building has 16 floors with 64,000 square meters of usable space, adding nearly 1,000 patient beds and increasing the data center's capacity to meet anticipated demand for the next 20 years—a quantum leap forward in the use of information technology to deliver better medical care.

CommScope provides the foundation for a fully-digitized hospital

Considering the IT requirements set by international standards organizations such as TIA and ISO, as well as actual testing, the hospital selected CommScope to provide network and data center infrastructure for its new building that will support it today and into the future.

The CommScope infrastructure solution adopted by the hospital features main trunk 40G/100G fiber-optic cabling and pre-heading joints, supported by the SYSTIMAX® imVision® intelligent wiring management system. The solution was installed by Schneider Beijing Great Wall Engineering Co., Ltd., which has strong experience in the implementation of data center projects for a wide range of industries across China.

Cabling solutions: The MPO pre-heading joint of OM4 multimode fiber lays a solid foundation for transmissions on the hospital's 40G/100G fiber-optic Ethernet. 10G six-core non-sheathed copper bundle provides 500 MHz transmission Ethernet (POE) for terminal devices. The MPO pre-heading joint and Category 6A copper cabling include flame-retardant CMP sheathing, while the OM4 multimode fiber-optic cabling is sheathed with fluororesin, a material used for non-stick pans that meets OFNP fire resistance standards.

imVision system: CommScope's imVision system, combined with panel monitoring hardware and system software, provides a wide range of features and functionality to improve cabling management and lower maintenance costs. All information points in the hospital are under imVision monitoring, displaying end-to-end information on the entire physical chain to provide real-time malfunction alarms and enable the rapid identification and repair of breakdowns. A significant advantage of the imVision system is its ability to support normal short-circuiting so the system will not be interrupted during normal maintenance.



Improved data center performance, security and fire safety

Since opening its new building in 2015, the Number 4 Affiliated Hospital has experienced several key benefits from the deployment of CommScope solutions:

Optimization of network performance: High-quality products, plus the imVision cabling management system, combine to deliver best-in-class performance for the hospital's data center. The infrastructure's superior cabling and components ensure optimal performance, while imVision makes it possible to identify and remedy breakdowns throughout the hospital's technical and physical chain, and also to take preventive measures to help keep the system up and running at all times.

Integration and security: The imVision system also integrates with the hospital's other building intelligence systems. For example, with its ability to provide real-time breakdown alarm and location information, imVision can be connected to the site's security equipment to send a signal to a security camera in the event of a short circuit or a plug being inadvertently removed, enabling the security staff to identify the location of the incident and even the person involved.

Fire safety and prevention: To maximize patient and staff safety, the hospital pays utmost attention to fire prevention. CommScope's flame-retardant CMP copper cable sheathing is compliant with Class A of national electrical specifications GB50174-2008 and the fiber-optic sheathing meets OFNP fire resistance standards, creating a safer medical care environment for doctors and patients. The imVision system also provides critical real-time information and alarms about problems that could pose a fire hazard.

Collaboration sets the stage for future projects

By going beyond the supplier role to that of an actively engaged collaborator, CommScope's design and sales team enabled the Number 4 Affiliated Hospital to clearly understand the direction of its future applications and the infrastructure needed to support it now and for decades to come. As one executive from the hospital said: "We do not only see CommScope as a vendor—we see it as a reliable design consultant."

Following the success of this project, the China Medical University has indicated that it will strongly consider partnering with CommScope again and deploying CommScope solutions in future projects.

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