

Next-generation Network high-performance cable management solution

CommScope provides most advanced optical cable rack solution for China's leading telecom operator

Customer

China telecommunication operator

Country/territory

China

Challenges to operator's central equipment room

- Centrally-procured ODF products bring uncertainty to the operational maintenance of the existing central equipment room as well as the evolution of future optical network structures.
- At present, optical cable routing can be confusing for centrally-procured ODF products. This results not only in low usage rates for devices' optical fiber ports, but also poses potential safety risks. This makes operation and maintenance more difficult, thus increasing operational and maintenance costs.
- Rapid increases in the capacity of optical fiber means current products will not be able to meet the future need for evolutionary changes in the central equipment room.
- There is therefore a pressing need for a high-density, large-capacity and scientific optical fiber management cable-distribution solution to provide high-quality, secure and reliable support for the city's urban network.

Solution

NGF high-density optical fiber cable management solution



The customer is responsible for providing and ensuring telecommunications services in the city and in areas under its jurisdiction. It provides both wired and wireless network and infrastructure service for international and domestic telecommunications. The client further provides voice, data, image and multimedia telecommunications and information services based on its wired telecommunications network. It also provides systems integration and technological development services relating to the telecommunications and information industries.

During the past few years, the customer has been devoted to building a large-scale, high-quality, reliable fully-optical fiber network that supports access to wireless

3G/4G and FTTH while also promoting the digital and IT development of the city—ensuring telecommunications access for development of the city's economy, politics, culture and urban for citizens' lives.

Enhancing the optical fiber network to an all-new level

With development of the customer's 3G and 4G wireless networks and fiber optics into the home, and creating a high-speed, high-bandwidth full-fiber network, the core central equipment room has faced numerous challenges. First of all, the operator's central procurement model has made it increasingly difficult for the customer to obtain high-quality

cable management solutions via standard, off-the-shelf procurement. Often products obtained under central procurement have single, limited functions, and are not equipped with the scientific cable management needed for future growth. They therefore cause considerable difficulty and even potent risk of breakdown for management and subsequent maintenance of the cables in the customer's central equipment room.

At the same time, the rapid increase in the capacity of optical fiber in the central equipment room; the increasing number of optical fiber ports; and the lack of optical cable management, leading to cluttered cables and low usage rate for device ports, have made it difficult for centrally-procured products to meet the development needs of the city's full-fiber network. With this urgent need to upgrade the central equipment room, a cable distribution system capable of high-density, large-capacity and quality cable management is therefore required. This will deliver a city-wide optical fiber network as well as elevate the optical fiber network management to an all-new level. This will also allow the customer to provide secure and reliable communication network for the BRIC Summit to be held in September 2017.

Adopting an advanced solution to the development of a next-generation network

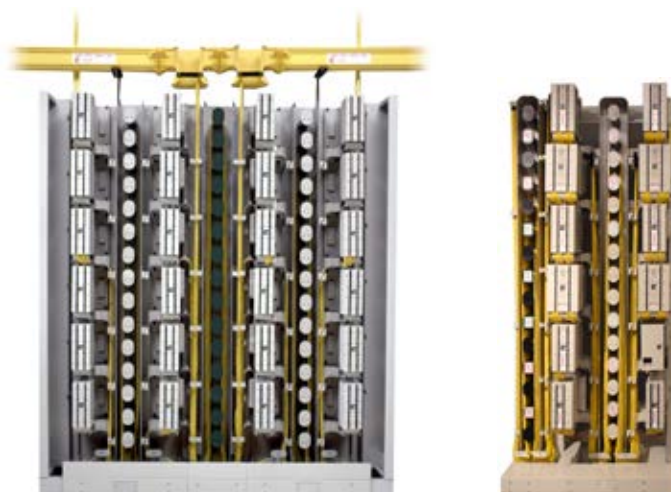
As early as 2000 the operator was already using CommScope's NGF high-density distribution rack (originally under the ADC brand). To date there are more than 100 NGF equipment racks in the network. Excellent long-term operating results have built customer trust in CommScope's NGF products.

The number of fiber patch cords increases continually as a result of business growth. With this, the shortcomings of centrally-procured products are becoming more apparent—not least reflected in congested patch cords, low rates of optical fiber port usage, and increases in malfunction risk. These issues are compounded by increasingly precious equipment room space. As a result, centrally-procured equipment cannot adequately meet the development needs of the fiber-optic network. CommScope NGF's high-density cable management and reliable connections have provided ample protection for the customer's fiber-optic network, follow-on maintenance, and future business growth.

One aspect of the central procurement model is the significant limitations placed on the customer's use of innovative solutions. Furthermore, owing to its design constraints and price pressure, the model has resulted in escalating subsequent maintenance costs. It is for these reasons that the customer has, with regard to the retrofitting and upgrading of the core central equipment room, selected a high-density cable distribution and management solution that is manageable and highly stable — CommScope's Next-Generation Frame System.

Handling a tight deadline and major events

There is a heightened sense of urgency for the construction of the telecommunications network, with the BRIC Summit just around the corner. The importance of reliability and security is tantamount. With these in mind, CommScope and its partners took the initiative to conduct a survey and measurements of the operator's central equipment room, for purposes of retrofitting and upgrade. CommScope



has also provided a comprehensive solution.

In view of the outstanding cable management ability and cabling proposal's potential in upgrading to CommScope's NGF, as well as its excellent service and past record, the customer ultimately selected NGF as the cabling solution for the BRIC Summit. The customer's choice reflects its trust in CommScope and its affirmation of its long-standing collaboration with the company.

Installation work was carried out by the customer's work team. Installation of NGF is closely related to its product features, not least because of the connector's prefabricated terminal module. The company would be required to know (before processing orders) the length of connector in the customer's respective equipment rooms; different equipment rooms would require connectors of different lengths, depending on their location in the equipment rack. CommScope's partner Xiamen Chengying therefore conducted a site survey on 15 central equipment rooms where NGF was to be installed. Accurate information on the customers' orders was thus obtained, thereby enabling the orders to be fulfilled without a hitch. In addition to the above, the situation was made all the more complex with the order for the project being a dozen times or greater than the usual. And the order had to be fulfilled within a strict deadline — a normal order would take more than three months to be fulfilled, as some NGF accessories have to be supplied from overseas. Following coordination and intervention by CommScope's customer service department, the majority of the orders were promptly delivered. The unique design of CommScope's NGF —such as the unified rack structure, modular design and factory-prefabricated connectors—enabled the construction team to install the product before the project deadline. This impressed the customer.

Looking to future deployments of fiber optic networking

The project's implementation fulfilled the operator's requirements for high density and horizontal cabling management for its equipment room. The effective cable management of CommScope's NGF—along with its potential for future upgrades—are in keeping with the customer's concepts for equipment room development. NGF has a choice of modules with high density. At present the customer is using a 96-core module, and, depending on future needs, may upgrade to 144-core. NGF allows the ability for an individual equipment rack to increase by as much as 40 percent without rack replacement. CommScope NGF solutions also provide value-added modules. Depending on customer needs, splitters, couplers and wavelength division multiplexers (WDM) can be used to achieve optical signal monitoring and signal testing on nondestructive optical channels, thereby enhancing the usage rate for fiber resources. Such value-added services help to maximize the value of the fiber network, and save operators fiber network construction and operating costs. In February 2017 CommScope received orders for retrofitting 17 central equipment rooms. All orders were promptly fulfilled by the end of June, thus ensuring that the customer's work was on schedule. The completion of installation of this CommScope NGF, with its quality and advanced cable management, ensures reliable, stable, secure and highly effective communication for the BRIC Summit to be held in September. It also contributes to the city aim of being a "full-fiber city."

To learn more about CommScope's NGF solution and its benefits for telecoms operators, please visit: [High-density, flexible optical distribution frames](#)



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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