

With the Official Opening of Chengdu Tianfu International Airport, CommScope Helps the “Sun Bird” Take Off

Customer:

Chengdu Tianfu International Airport

Country/Region:

Sichuan, China

Here’s the great news! Chengdu Tianfu International Airport, which took 5 years to complete, was officially put into operation on June 27, 2021. Chengdu has become the third city in China mainland with two international hub airports following Beijing and Shanghai.

Located in Lujia Town, Jianyang City, Chengdu, Sichuan, Chengdu Tianfu International Airport is a 4F-class international airport, as well as the highest-ranking airport along the Belt and Road, and the main hub of South Asia international aviation hub. At present, there are two terminals at Chengdu Tianfu International Airport with an area of 600,000 square meters, which can handle 60 million passengers and 1.3 million tons of cargo and mail annually. The long-term goal is to handle 120 million passengers and 2.8 million tons of cargo and mail annually.

Chengdu Tianfu International Airport, which is full of futuristic technologies from construction to operation, is like a soaring “sun bird”. But one can hardly



imagine how the intelligent, green, safe and reliable structured cabling system weaves the wings of the “sun bird”.

The top choice for structured cabling

Chengdu Tianfu International Airport has a total investment of more than RMB 75 billion, with a huge building complex mainly including terminals, GTC Transfer Center, ITC Airport Field Command and Information Center, parking building, field service building and subway. The structured cabling system involved not only has longer optical cables, but also is complex to

deploy, which not only ensures the safe and stable operation of the business system, but also avoids possible damages such as fire and flood.

As a leader among many structured cabling manufacturers participating in the construction of Chengdu Tianfu International Airport, CommScope supported the structured cabling system construction of the main buildings with the largest scale, the highest reliability and safety requirements and the densest information points - T1, T2 Terminals, and ITC Airport Field Command and Information Center. These parts with the highest intelligent

degree of weak current are the business core and operation center of the whole airport. CommScope has deployed more than 40,000 information points, 4,200 km twisted pairs and more than 600 km optical cables, accounting for more than 80% of the data in the whole airport area.

If the construction of the structured cabling system in Chengdu Tianfu International Airport is compared to a battle, then CommScope is like a well-known and brave team with rich experience. Even under the influence of the COVID-19 epidemic, it still closely cooperated with the users and the general contractor to complete the established tasks and goals with reassured quality and quantity and built a high-grade structured cabling system that can make customers at ease.

Fully covering the core area of the airport to ensure safety and reliability

CommScope is a world-renowned structured cabling supplier and rich experience and cases of industry engineering. As the pioneer of the structured cabling system and the leading brand in the global wiring market, CommScope has all along been committed to the R&D, production and service of wiring products and solutions. It has many patents on structured cabling solutions, participates in and leads the development of wiring standards. In addition, CommScope has many years of practical experience in aviation, hotels, commercial centers, logistics and other fields, and the valuable experience has been fully applied to the construction of the structured cabling system in Chengdu Tianfu International Airport, which is helpful to improve the efficiency and engineering quality.

As we all know, the airport is an industry with special emphasis on safety. As early as at the end of 2006, CAAC proposed that information security is as important as air

defense security. The security of the structured cabling system is just one of the basic tasks of airport information security.

In view of the cable safety and flame retardant ability concerned by the airport, CommScope provides the high flame retardant solution for Plenum rated CMP copper cables and OFNP optical fiber. Chengdu Tianfu International Airport is also the first 4F-class international airport using plenum rated CommScope cables in China, which provides a useful reference for other airports planned or under construction in China in the near future.

Connecting two terminals to meet the advanced and forward-looking needs

Chengdu Tianfu International Airport has two terminals, T1 and T2, with a building area of 600,000 square meters, which also fully adopt CommScope's structured cabling solution. CommScope provided SYSTIMAX GigaSPEED XL® copper cable solution to fully meet the advanced and forward-looking requirements of Chengdu Tianfu International Airport for the structured cabling solution. The single performance of twisted pairs of copper cables and connecting devices included in the solution is much higher than the standard requirements for Cat6/ClassE wiring components.

At the same time, in view of the special circumstances such as the large horizontal area of the terminals and the long distance of the information points, CommScope SYSTIMAX GigaSPEED XL® copper cable solution supports the transmission distance of 117 meters on the 1GBase-T network, far exceeding the limit distance of 100 meters for the horizontal cable specified by the standard, which helps ensure applications work effectively over long-distance horizontal links, and can better protect user investment and realize high-speed network transmission

In terms of data backbone, SYSTIMAX TeraSPEED® single-mode zero-water peak solution is the leading optical cable to eliminate the water peak effect of single-mode transmission. Users can easily realize network transmission at any rate within 100Gb/s without considering the limitation of link distance.

From the point of view of application safety and convenience, the whole series of the SYSTIMAX TeraSPEED® single-mode zero-water peak solution meet ITU-T G.652.D single-mode standard and ITU-T G.657.A1 anti-bending standard, which can not only provide low-loss transmission performance, but also surround for 10 times with a bending radius of not more



than 15mm, thus greatly improving the safety of optical cable installation and providing good convenience for later operation and maintenance services.

Supporting the airport “super brain” to ensure far and fast network transmission

ITC Airport Field Command and Information Center is the “brain” of Chengdu Tianfu International Airport, which gathers and disseminates all information, and coordinates and controls the operation of the whole airport.

There are six data centers in ITC, which are the operation centers of dozens of core equipment of weak current information systems in the airport, and bear the core work of computing, storage, information exchange and sharing of the airport business system. In the data computer room, SYSTIMAX LazrSPEED® 550 multi-mode pre-terminated solution is deployed. All products are prefabricated in the factory, plug and play in the field, and no welding construction is needed, which greatly reduces the field workload and improves the work efficiency. At the same time, it also has many advantages, such as high performance, high reliability, ultra-low loss, rapid deployment, modularization and high density. It has a network transmission rate up to 100Gb/s and a transmission distance of 175 meters, far exceeding the limit distance of 150 meters specified by the data center standard.

In addition, the business support areas of Chengdu Tianfu International Airport, including three barriers of the airport (inspection and quarantine authority, border inspection station and customs), the fire command center of police and armed police, the freight logistics center, etc., and all of them also use CommScope’s structured cabling products. CommScope has end-to-end solutions with leading performance, high-quality products manufactured by the original factory, product certification of many authoritative third-party laboratories and professional technical service support team, which can meet the needs of Chengdu Tianfu International Airport for diversified, high-performance, safe and reliable structured cabling systems.



Witness of “China Speed”

Throughout the whole project, CommScope cooperated sincerely with its certified PartnerPRO® network partner, Beijing Zhonghang Electricity System Engineering Co., Ltd., to overcome the adverse impact of the COVID-19 epidemic, went deep into the front line of construction, and ensured the smooth deployment of large-scale, high-performance and end-to-end structured cabling system at Chengdu Tianfu International Airport with sufficient manpower and timely product delivery capability. The network connectivity, simplicity of management, stability and security of application have been fully verified, which can fully meet the needs of the airport in the future.

According to the 13th Five-Year Development Plan of General Aviation, 500 general airports are to be built in China. The successful experience of Chengdu Tianfu International Airport in the structured cabling system will set a new benchmark for the subsequent construction of other new airports. Chengdu Tianfu International Airport, as the aviation hub of South Asia, adopts the wiring system with the highest flame retardant rating in accordance with UL international standards, which has also played a good demonstration effect for the construction of other international airports in South Asia, and is beneficial for Chinese airport construction companies to go abroad, integrate with international standards and help the landing of the the Belt and Road Initiative.

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