

CASE STUDY

URUMQI DIWOPU INTERNATIONAL AIRPORT: NEW CAPACITY

Datwyler supplies the cabling solutions for the most important international air traffic hub in the Xinjiang region.

Urumqi, the capital of the Xinjiang Uyghur Autonomous Region, is the largest city in Central Asia with over four million inhabitants and the administrative centre for one sixth of the territory of the People's Republic of China. Urumqi's international airport is located in the township of Diwopu, just a few kilometres from the city centre. It is one of the most important national and international air traffic hubs in the country.

In 2019, the international airport handled 24 million passengers – eight million more than expected after the last expansion in 2007. For this reason, another expansion was started in 2022. It is scheduled to be completed by the end of 2023.

Massive expansion

The latest expansion is designed to handle a maximum of 63 million passengers and 750,000 tons of cargo per year. After the reconstruction, the flight operations area will reach the highest level 4F, which will also allow the Airbus A380 – the world's largest commercial aircraft to



take off and land. Datwyler supplies the cabling solutions for the most important international air traffic hub in the Xinjiang region.

The total investment is more than 42 billion renminbi. This includes the construction of Terminal 4 – the largest single building in Xinjiang at 500,000 square meters –, the construction of two runways, each 3,000 metres long, a traffic centre with 92,700 and a parking garage with almost 252,000 square metres and facilities for the electricity, heat and gas supply.

After extensive tests and assessments, both the airport operator and the general contractor came to the conclusion that Datwyler should receive the order for the structured cabling. Datwyler's solutions will be used in the new terminal, the IT centre, the traffic control centre, the freight yard, air traffic management and for the baggage system, among other things.

Urumqi Diwopu is not the first Chinese airport that Datwyler is supplying – on the contrary: the company has

already equipped more than 50 airports across the country with structured cabling solutions, including four of the top 5 flight hubs and as many as 16 of the 20 most important international airports in the People's Republic. In addition, Datwyler in China has repeatedly received awards as a top supplier for airport construction – for data centres as well as for structured cabling.

Higher reliability and transmission capacity

Of all the Chinese airports, Urumqi Diwopu will not only be equipped with the largest, but also with the most advanced Category 6A shielded cabling system to date. The installation includes more than 40,000 Category 6A data connection points. A U/FTP cable is used here, Datwyler's "CU 6502 4P", which, thanks to the shielding of the individual pairs of conductors, is clearly superior to the usual F/UTP cables in this category in terms of interference immunity and performance. With its AWG 23 conductor diameter, it can also transmit electrical power of up to 100 watts (4PPoE).

In addition, Datwyler is supplying the airport with around 1000 kilometres of fibre optic cable for indoor and outdoor use, as well as a pre-assembled OM4 MTP system

for the data centre. The special focus here was on flame-retardant cables according to IEC 60332-3.

Some of the fire control system is even equipped with fibre optic cables whose fire resistance meets the high requirements of the GB/T 18380.35 and IEC 60332-3C standards. The overall system meets the requirements of IEC 60331-25.

The Chinese Datwyler team was actively involved in the detailed planning of the structured cabling and also provides professional technical advice. For example, a team of technicians and product specialists was on site to provide training on the proper use and installation of the products.

In order to maximize the performance of the system solutions, Datwyler's experts will conduct further on-site training courses over the coming months and will provide the companies involved and those responsible on site with advice and assistance during installation, acceptance and commissioning.

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