

CommScope helps keep world's premier aviation show flying high

Customer

Zhuhai Mobile (part of China Mobile Group Guangdong Co., Ltd.)

Country

Zhuhai, Guangdong Province, China

Venue

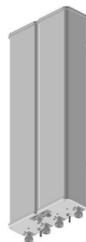
- China International Aviation Exhibition Center
- 350,000 square meters
- Home to the biennial Airshow China, with more than 400,000 attendees

Challenges

- Provide indoor antenna assemblies to support the expected surge in bandwidth demand during the 2016 Airshow China
- Collaborate with 14 other project partners to complete the project within a compressed timeframe
- Maintain military-grade network security

Solutions included

- Cell-Max™ high-capacity in-building MIMO antennas
- SureFlex® one-meter jumpers
- Outdoor, single-band quad antennas
- Outdoor, single-band, 65° horizontal beamwidth antennas
- 2X triplexers: 1710–1880/1920–2170/2300–2600 MHz
- Twin diplexers: 1800–2100/2300–2600 MHz
- Air-dielectric, 555–2700 MHz hybrid couplers
- 0–3000 MHz termination loads



Antenna



Jumpers



Diplexers



Coupler

Airshow China is among the world's premier international aviation exhibitions. Once every two years, the world's aviation community—along with hundreds of thousands of enthusiastic spectators—descend on the city of Zhuhai in Guangdong Province to see the latest military and civilian aviation technology. The 2014 event drew more than 400,000 attendees to the China International Aviation Exhibition Center. On display inside the 350,000-square-meter venue were 700 exhibitors from 42 countries and 130 full-size aircraft.

Each day during the weeklong event, from 10 a.m. to 6 p.m., the exhibition halls also serve as an international communications hub where attendees stream live video, upload images and communicate with offices around the world. In addition to the sheer volume of data traffic, there are also special security requirements due to the presence of sensitive military technologies.

The China International Aviation Exhibition Center has existing indoor wireless capabilities, provided by Zhuhai Mobile, part



of China Mobile, the nation's (and world's) largest mobile carrier. But, after the 2014 show, Zhuhai Mobile realized the event's popularity would soon outgrow the venue's indoor wireless capacity. So, in July 2016, Zhuhai Mobile selected CommScope as its integrated communications solution provider.

Turning up the capacity with integrated antenna solutions

Specifically, Zhuhai Mobile relied on CommScope for the end-to-end indoor antenna solutions critical to the project's success. CommScope's recommended solution featured 30 Cell-Max™ directional in-building antennas and 60 SureFlex® one-meter jumpers with N male and 7-16 DIN male interfaces. The Cell-Max antennas are dual-band, MIMO-enabled, high-capacity antennas designed for excellent PIM performance in the 698-960 MHz and 1710-2700 MHz frequency range.

CommScope also designed and provided outdoor antenna assemblies to boost the wireless capabilities of communication trucks used during the show. Large communication vehicles were equipped with single-band 1710-2690 MHz antennas, jumpers, top and bottom combiners, 555-2700 MHz hybrid couplers, and load terminations. Assemblies for smaller vehicles featured 2 x 1710-2690 MHz quad antennas, jumpers, 555-2700 MHz hybrid couplers, and load terminations.

As a long-time partner with China Mobile and many of its subsidiaries, CommScope is known for its technical expertise and project accountability. In its letter of commendation, Zhuhai Mobile cited CommScope's ability to provide a high-quality integrated solution. The entire project included 15 technology partners, so the ability to work well together within a compressed timeframe was also important.

The ability to meet mobile demand for years to come

Coordinated by Zhuhai Mobile, the project came together seamlessly and within the accelerated timeframe. More importantly, the improved indoor mobile solution performed flawlessly. The added capacity provided attendees and exhibitors with dependable high-speed mobile service through the exhibition halls and outside during airshow demonstrations. Meanwhile, the system maintained excellent security.

The meteoric rise in the success of Airshow China has planners wondering how they will be able to top their 2016 efforts. They will have two years to figure it out. One thing they will not have to worry about is meeting the equally explosive growth in mobile connectivity demands during the 2018 show and beyond. Anchored by CommScope's advanced antenna solutions and the working partnership with Zhuhai Mobile, the wireless coverage system will keep the venue flying high for years to come.



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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