CASE STUDY

Comba

ACTIVE SYSTEM DEPLOYMENT IN BRAZIL

Providing Ubiquitous In-Building Solution to Enhance Mobile Network Performance

BACKGROUND

Viracopos Airport stands out as a pivotal hub in Brazil, featuring expansive facilities including over 90,000 square meters of cargo terminal space, along with an additional 1,700 square meters dedicated to animal cargo and 1,480 cubic meters of refrigerated storage. Ranked fourth in the nation for passenger traffic and acclaimed as one of South America's premier air cargo centers.

Between 2008 and 2010, passenger numbers surged from 1.02 million to 7.5 million, marking a significant growth trajectory that has persisted annually, culminating in a total of 25 million passengers. This increase in traffic has underscored the need for expanded cellular coverage to meet the escalating demand for high-speed connectivity across various operational domains.

CHALLENGES

The project presented significant challenges owing to its scale, demanding meticulous planning for its execution.

The RF system design and coverage simulation required meticulous attention to detail, ensuring precision to align with the stringent quality standards mandated by the company. Simultaneously, it was imperative to achieve performance objectives while maintaining the aesthetic integrity of the installation sites.

90,000sqm
Cargo Terminal Space

25 Million
Annual Passengers

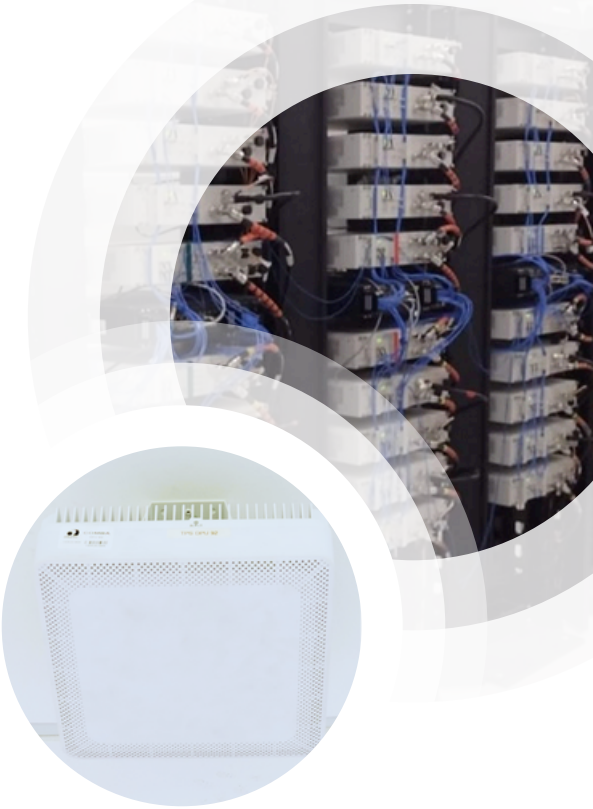
Pivotal Hub in Brazil

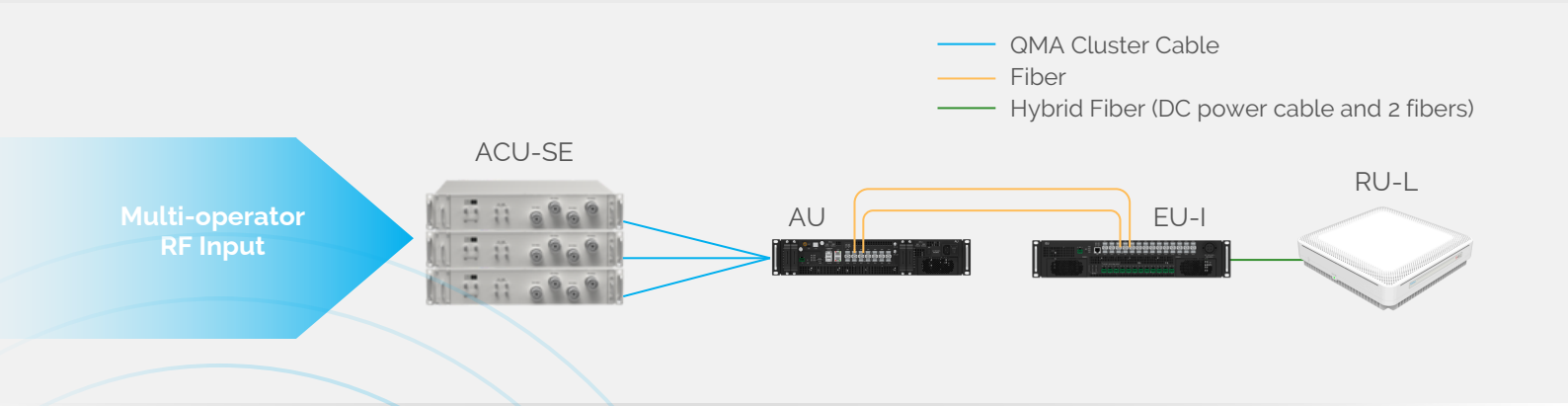
SOLUTION

The proposed solution for this scenario is the ComFlex Low Power, which supports 3500MHz 4T4R MIMO mode for 5G NR, along with 700MHz, 1800MHz, 2100MHz, and 2600MHz, and 2T2R MIMO mode for 4G LTE, all integrated into one box for 3 operators.

The ComFlex Low Power solution is specifically designed to tackle the installation challenges often encountered in traditional active setups. By eliminating passive components such as power splitters and couplers, the RU-L can be easily connected via fiber optic cable from the extension unit. This approach not only streamlines installation processes but also eradicates concerns regarding Passive Intermodulation (PIM), a common issue in passive configurations.

In the context of next-generation mobile communication, IBS must evolve to support multiple data streams seamlessly. In passive setups, achieving this entails installing multiple SISO antennas to create virtual MIMO coverage. The ComFlex Low Power offers a solution to this challenge, as the RU-L can support MIMO up to 4*4, ensuring high data throughput and efficient operation.





ENHANCED CONNECTIVITY AT VIRACOPOS AIRPORT

Comba and Highline's partnership at Viracopos Airport has revolutionized connectivity, setting new standards for mobile network infrastructure in Brazil and ensuring a seamless experience for passengers and employees.