



Columbia's Airports - Air Traffic Control

Executive Summary

Challenge

Colombia's Air Traffic Control (ATC) authorities needed an extremely reliable data/voice/video network for aircraft and airports.

The Solution

The full turnkey solution consisted of a unique hybrid Star/Mesh VSAT system with diversely located redundant satellite uplinks, one in Barranquilla and the other in Bogota, 37 remote systems installed at airports nationwide, and on-site Managed Services during the first year of operation.

Benefits of Spacebridge

A unified Mesh and Star network for real-time mission-critical network. SpaceBridge developed a modification of its **U7400-M** VSAT terminal to provide a Local Terminal Redundancy and Geo-Redundancy Air Traffic Control Certified Equipment Integration with the aeronautical information management system supplied by Frequentis.



Introduction

Civil Aviation Columbia controls 37 airports in the country. The group sought to acquire more reliable voice and data connectivity for its mission-critical network. The multi-service network enhances productivity among airport tenants by providing stable connections allowing aircraft and airports to communicate with each other in real time.

Challenge

Modern airport operations are exceedingly complex. The combined needs of millions of passengers, thousands of employees, and sophisticated infrastructure place an enormous burden on their communications networks.

The Solution

Spacebridge created a Star/Mesh hybrid network that connects Columbia's airports to Air Traffic Control (ATC) centers based in Bogota and Barranquilla. SpaceBridge installed two geographically redundant VSAT HUBs, one in each city, and each equipped with a 4.5-meter C-band antenna and 1:1 redundant HPA, as well as two full new uplink systems. SpaceBridge managed the design, integration, installation and commissioning of the VSAT systems, including 37 airport terminals equipped with redundant SpaceBridge **U7400-M** Mesh/Star modems.

Benefits of Spacebridge

The network Spacebridge created for Civil Aviation Columbia is built to address the challenges associated with connecting modern airports. These include meeting strict uptime, availability, reliability and regulatory certification requirements, so passengers and air travel is safe and efficient. Spacebridge's unique system delivers a scalable, rapidly deployable, and robust solution, with terminals that provide unparalleled advanced redundancy.