

# YYC CALGARY INTERNATIONAL AIRPORT

Providing in-building wireless network coverage and capacity, as well as enhanced public safety coverage.

## BACKGROUND

YYC Calgary International Airport is operated by the Calgary Airport Authority as part of Transport Canada's National Airports System. It serves Calgary, Alberta, Canada, and the surrounding region. The Calgary International Airport is considered Canada's fourth-busiest airport in terms of passenger traffic, serving 15,680,616 passengers in 2016 alone, and third busiest by aircraft movements.

In 2000, Calgary International Airport began work on a major expansion with its construction of a new 2 million-square-foot, 24-gate international terminal. The terminal officially opened on October 31, 2016.

Gap Wireless, experts in RF designs and deployments, was tasked with ensuring adequate commercial and public safety wireless communication coverage and capacity in the new international terminal. To meet those goals, it proposed a solution for the Commercial bands and another solution for the facilities workers and public safety bands.

## SOLUTION

The two solutions deployed to

resolve the Calgary International Airport's coverage and capacity requirements both utilized Bird fiber distributed antenna system (DAS) products. The wireless operators utilized base station feeds to add coverage and capacity on the commercial system, while Bird repeaters were used to feed the fiber-optic DAS to add coverage for facilities workers and public safety.

*"As the exclusive distributor for Bird's DeltaNode product line in Canada, we felt confident that its fiber DAS solutions were the ideal answer to the coverage and capacity challenges facing the Calgary International Airport," said Marc Landry, product line manager & director of sales, wireless infrastructure, Gap Wireless. "What's more, the versatility and easy upgradeability of those solutions guarantee that the airport has what it needs to address their changing coverage and capacity needs well into the future."*

The commercial system comprises a neutral host DAS with multiple bands and sectors, which was designed and installed by the lead operator. The solution covers all areas for passengers, ground crews, baggage handling, and security. It

## COVERAGE/CAPACITY CHALLENGES

Modern airports are bustling centers of communications, with an increasing number of people using mobile devices on the go and expecting anytime, anywhere connectivity. Further taxing wireless networks are airport facilities workers and public safety activities. What makes that communication so challenging is the airport's large coverage area and high-capacity requirements. Such issues make providing adequate coverage and capacity for all users an elusive goal.

That's exactly the challenge YYC Calgary International Airport faced when it began building its new international terminal. The airport had virtually no commercial or public safety coverage from the macro, and as a result, the new international terminal faced both coverage and capacity issues.

is expandable, allowing more frequencies, coverage areas, or sectors to be added as needed. Additionally, it was designed to easily add bands, resectorize or expand coverage. The solution allows base station feeds to be utilized for added capacity.

The other system provides coverage for airport facilities and public safety utilizing Bird repeaters with 150-, 450, 700-, and 800-MHz frequencies on a dedicated system. As with the prior solution, it covers all areas for passengers, ground crews, baggage handling, and security, and can be expanded to add more frequencies and coverage areas as needed.



Bird, based in Solon, OH, manufactures radio frequency measurement and management equipment and systems, and provides educational solutions and other services. With six locations worldwide (Solon; Angola, NY; Reston, VA; Singapore; Stockholm, Sweden; and London, England), Bird serves broadcast, cellular, government, land mobile radio, medical, military, and semiconductor markets. Bird provides the physical infrastructure used by government agencies, public safety forces, and the private sector. Bird sells its products through a global network of distributors and sales representatives. Learn more at [www.birdrf.com](http://www.birdrf.com).

