Airborne GPS Test Plane

aviationGATE test environment in Germany using NovAtel’s EuroPak-15ab receivers

Galileo Status

The first GIOVE-A test satellite has been in orbit since December 2005 and the second GIOVE test satellite (GIOVE-B) was launched in April 2008. Galileo is expected to be fully operational in 2013 with up to 30 satellites orbiting the earth. It is designed for both civilian and government purposes with civil management.

NovAtel has devised an approach which allows independent tracking of the ‘PRN’ codes associated with Galileo E5a and E5b signals. The PRN code is a unique satellite identification reference that enables receivers to find the very low level satellite signal within background thermal noise.

EuroPak-15ab Overview

The EuroPak-15ab is a high-performance GPS, Galileo and GEO receiver capable of receiving and tracking 32 GPS L1, GPS L5, Galileo L1, Galileo E5a and Galileo E5b signals. Alternatively, four of the signals can be Satellite Based Augmentation System (SBAS) GEO L1 and SBAS GEO L5 signals. The EuroPak-15ab also frames the navigation signals.

Flight Institute Overview

The Institute of Flight Guidance and Control (IFF) is located at the Technical University of Braunschweig. The Institute provides technical consultation to the German Ministry of Transport, the International Civil Aviation Organisation (ICAO) and the European Space Agency (ESA) in the field of satellite navigation.

The role of the institute is to:

- Analyse final approaches for civil aviation under bad weather conditions
- Develop and apply an experimental, high precision, flight control system
- Automate landings with the experimental flight controller at civil airports
Summary

This case study presents an aviation application using NovAtel’s EuroPak-15ab receivers at the Technical University of Braunschweig in Germany. At the university’s Institute of Flight Guidance and Control, the EuroPak-15ab is proving itself onboard a Dornier 128-6 aircraft. Performance and test data will be available from the aviationGATE test environment in 2009.

This case study shows that people, organisations and companies can trust NovAtel’s receiver performance for testing and implementation of important commercial applications.