

# NovAtel Inc. Ships New Generation WAAS-GII Receivers and Signal Generators

NovAtel Inc. announced the start of a new era in Wide Area Augmentation System (WAAS) receivers and L1/L5 Signal Generators, as the first units were shipped to Raytheon Company for the US WAAS Final Operational Capability (FOC) program and the Geostationary Communications & Control Segment (GCCS), respectively.

NovAtel has been working with the US Federal Aviation Administration (FAA) and Raytheon Company for the last several months to engineer and produce this new generation of key WAAS ground network and Ground Uplink System (GUS) equipment. The WAAS-GII receiver will be initially fielded to expand the existing ground network in Alaska, Canada and Mexico. NovAtel estimates the total value of the WAAS-GII contract to be up to US\$ 3.0 million, and of the L1/L5 Signal Generator to be up to US\$ 1.6 million. The L1/L5 Signal Generator will be initially used in the development of the GUS for the new WAAS Geostationary Satellite.

The FAA's WAAS uses a system of widely dispersed ground stations to provide integrity continuity, availability and improved accuracy to the Global Positioning System (GPS) Standard Positioning System (SPS) navigation signal. The system of precisely surveyed ground reference stations positioned across the conterminous US, as well as Alaska, Hawaii, and Puerto Rico, are utilized to collect GPS satellite data. Using this information, WAAS generates signal error correction and integrity messages and then broadcasts these messages via GEO satellites to receivers onboard aircraft. WAAS will support both en-route and vertical guidance (down to a 250 foot decision height) phases of flight for users with certified WAAS avionics. The Wide Area Augmentation System is also being used extensively in other applications requiring improved accuracy without a local base station, such as agriculture, GIS and marine use.

The FAA also determined that additional Geostationary Earth Orbit (GEO) satellite services for the Wide Area Augmentation System (WAAS) were needed to provide the necessary coverage, availability and improved continuity of service to the aviation user. A contract was then awarded to Lockheed Martin and its team members Raytheon and Boeing for additional WAAS GEO satellites, with Raytheon receiving a subcontract for the ground based signal generator subsystem. NovAtel is building the Signal Generator for this WAAS ground system.