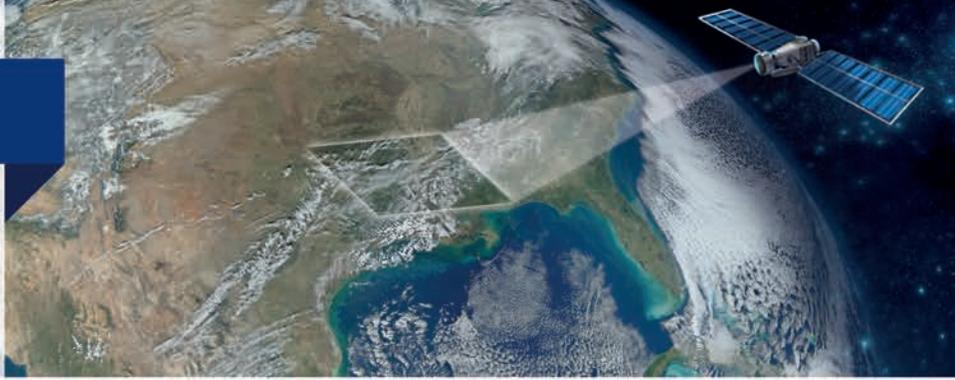


# ORBIT Case Study

SPACEFLIGHT  
INDUSTRIES



## Background

Spaceflight, a next-generation, integrated space services company, is revolutionizing the business of spaceflight by delivering a new customer-centric model for accessing space. A full service launch provider, the company provides a straightforward, cost-effective, and comprehensive suite of products and services including state-of-the-art satellite infrastructure, rideshare capabilities, and global communications networks that enable commercial and government entities to achieve their mission goals. Headquartered in Seattle, Washington, Spaceflight provides its services through a global network of partners, ground stations and launch vehicle providers.



## The Challenge

New opportunities for earth observation have the potential to affect many aspects of our lives, with applications ranging from weather monitoring to disaster control, space research, oil & gas exploration and defense intelligence. As the need for instant access to up-to-date data and images from small satellites has increased, so has the requirement for a fast and reliable communication link between orbiting satellites and ground stations.

In 2015, Spaceflight wanted to expand its ground station network, which is dedicated to cost-effective spacecraft communications and operations for small-satellite customers, to New Zealand. Each of the company's ground stations are sighted to minimize communications latency and data throughput while offering the most comprehensive global coverage. The company was looking for a reliable earth observation ground station solution, the Gaia-100 3.7m (12.1 feet) system suited their requirement perfectly.

## The Solution

The Gaia-100 series is a high-performance ground station solution for tracking and communication with Low Earth Orbit (LEO) satellites for earth observation and remote sensing applications. Its small footprint and radome coverage provide an environmentally shielded system, performing in X & S frequency bands and implementing 3-axis design which eliminates the key-hole phenomenon. Based on proven technology and an affordable system, the Gaia 100 offers an excellent price performance. These were the main features that Spaceflight was looking for when selecting the Gaia-100/3.7 as their ground station.

Gaia is designed to withstand extreme weather conditions and to handle a broad range of challenging applications. ORBIT's unique Advanced Control Loop™ algorithm guarantees unsurpassed accuracy, and enables Gaia ground stations to meet the most rigorous accuracy standards. The prediction algorithm embedded into the control loop mechanism guarantees high pointing accuracy and maximum G/T over the tracking period without degradation of gain performance.



## Delivery & Installation

ORBIT delivered its standard system to Spaceflight as scheduled in early August 2015. Upon delivery, teams from ORBIT and Spaceflight collaborated to install, test and deploy the system. After the installation and testing process, which only took few days, the system was approved for operation.



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## The Customer's Point of View



ORBIT's versatile ground station solutions have been critical to expanding the capability of our network of ground stations. Their solution helps us to enable reliable communications between satellites and ground users and furthers our vision to add more capacity across more continents to satisfy customer demand. ”

Jason Andrews, Chief Executive of Spaceflight



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