

Galaxy 12, 14 and 15

C-band Commercial Communications Satellites



Communications



Mission Description

The three Galaxy C-band satellites were Orbital ATK built for PanAmSat to distribute entertainment and information to cable television systems, TV broadcast affiliates, direct-to-home TV operators, Internet service providers, telecommunications companies and corporations. In July 2006, PanAmSat merged with Intelsat.

Spacecraft

The Galaxy satellites are based on Orbital ATK's highly successful Geosynchronous Earth Orbit (GEO) communications satellites which are able to accommodate all types of commercial communications payloads and are compatible with all major commercial launchers. The company's GEOStar™ product line includes the GEOStar-2 design, which is optimized for smaller satellite missions that can support up to 5.0 kilowatts of payload power. Orbital ATK has also developed the higher-power GEOStar-3 spacecraft design, delivering the next increment of payload power for applications between 5.0 and 8.0 kilowatts, allowing Orbital ATK to offer its innovative and reliable satellite design to the medium-class of communications satellites.

FACTS AT A GLANCE

Coverage:

CONUS, Alaska and Hawaii

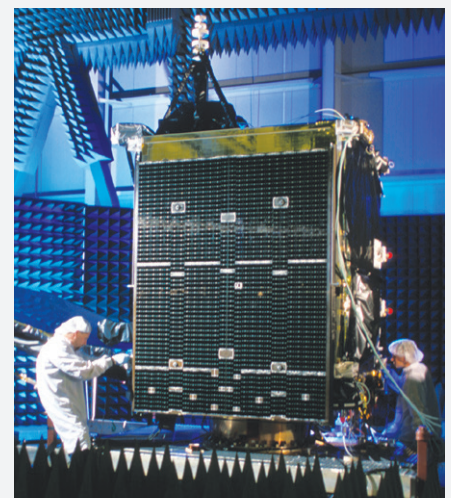


Mission:

C-band communications

Customer:

Intelsat



Galaxy 12

Galaxy 12, 14 and 15

Specifications

Spacecraft

Launch Mass:	Galaxy 12 and 14: 1,730 kg (3,814 lb.) Galaxy 15: 1,892 kg (4,171 lb.)
Solar Arrays:	Two panels per array, multi-junction Gallium Arsenide cells
Stabilization:	3-axis stabilized; zero momentum system
Propulsion:	Liquid bi-propellant transfer orbit system; Monopropellant (hydrazine) on-orbit system
Mission Life:	15 years (fueled for over 15 years)
Orbit:	Galaxy 12 and 14: 125° West Longitude Galaxy 15: 133° West Longitude

Payload

C-band

Repeater:	Two groups of 16-for-12 linearized TWTA's
Antenna:	2.0 m dual grid reflector with corrugated feed horn assembly

Launch

Launch Vehicle:	Galaxy 12: Ariane 5 Galaxy 14: Soyuz Galaxy 15: Ariane 5
Site:	Galaxy 12: Kourou, French Guiana Galaxy 14: Baikonur Cosmodrome, Kazakhstan Galaxy 15: Kourou, French Guiana
Date:	Galaxy 12: April 9, 2003 Galaxy 14: August 14, 2005 Galaxy 15: October 13, 2005

Galaxy 15 Hybrid Commercial/Government Payload Satellite

The Galaxy 15 satellite, which features a unique hybrid payload configuration, was launched on October 13, 2005. In addition to C-band commercial communications, the spacecraft also broadcasts Global Positioning System (GPS) navigation data using L-band frequencies as part of the Geostationary Communications and Control Segment (GCCS) implemented by Lockheed Martin for the U.S. Federal Aviation Administration (FAA).

GCCS is a GPS-based navigation and landing system for aviation use to provide precision guidance to aircraft at thousands of airports and airstrips where there is currently no precision landing capability. Orbital ATK engineered the payload and integrated it onto the existing Galaxy 15 satellite.

Mission Partners

PanAmSat

PanAmSat, a premier global provider of satellite-based communications services, merged with Intelsat in July 2006

Orbital ATK

Prime contractor for three PanAmSat C-band Galaxy satellites

Arianespace

Launch provider



Galaxy 14



Galaxy 15