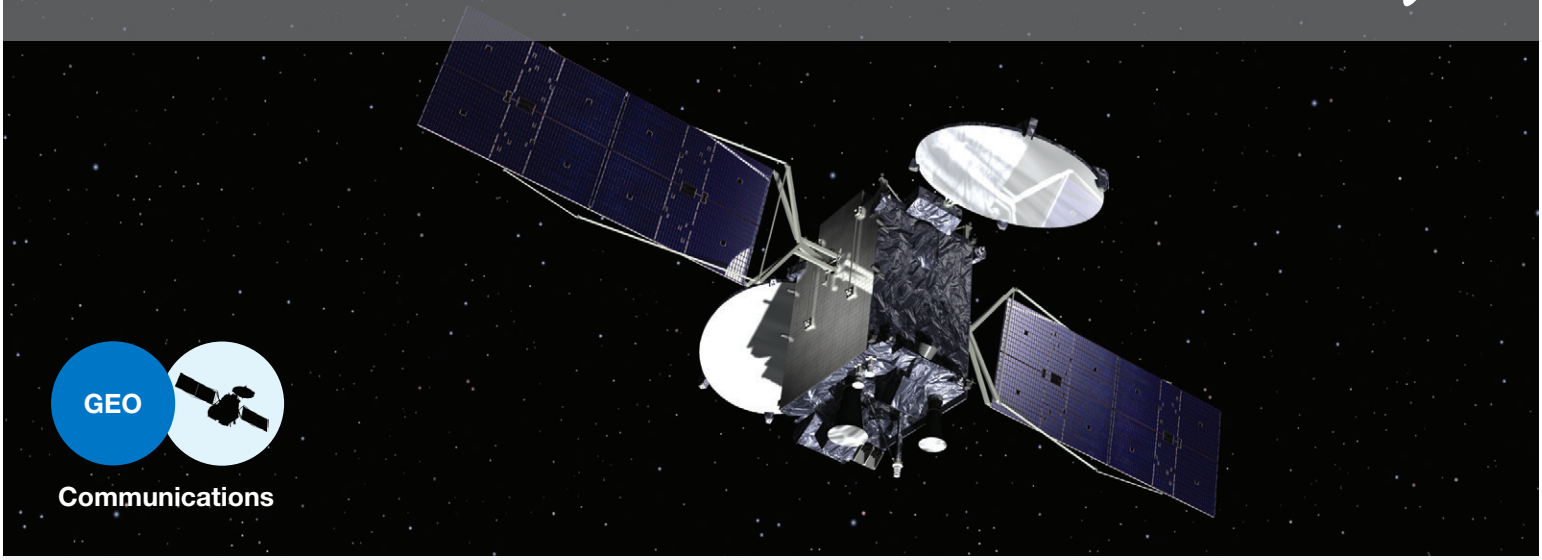
NSS-9

C-band Commercial Communications Satellite



Mission Description

Orbital ATK built the NSS-9 C-band satellite for SES, and it is positioned at the orbital location of 183 degrees East Longitude, allowing NSS-5 to be re-deployed to a new orbital slot. NSS-9 carries 28 active C-band transponders and features three beams that can be interconnected on a transponder-by-transponder basis: a global beam providing coverage of the entire earth visible from 183 degrees East Longitude, a West Hemi beam (covering Australia, Indonesia, the Philippines, Japan, China, Korea and the Pacific Islands) and an East Hemi beam (providing coverage and connectivity to the U.S., Hawaii and Polynesia). The satellite will provide a minimum service life of 15 years.

The GEOStar™ Advantage

Orbital ATK's highly successful Geosynchronous Earth Orbit (GEO) communications satellites are based on the company's GEOStar spacecraft platform, which is able to accommodate all types of commercial communications payloads and is 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:
Asia Pacific and United States

Mission:
C-band satellite service

Customer:
SES

NSS-9 in Orbital ATK's Dulles, Virginia satellite manufacturing facility

NSS-9

Specifications

Spacecraft

Launch Mass:	2,230 kg (4,915 lb.)
Solar Arrays:	Two panels per array, UTJ 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
Orbit:	183° East Longitude

Payload

C-band

Repeater:	28 active transponders with 32-for-28 linearized TWTAs
TWTA Power:	2.3 kW
Antenna:	Two 2.3 m shaped-beam reflectors, one global horn

Launch

Launch Vehicle:	Ariane 5
Site:	Kourou, French Guiana
Date:	February 12, 2009

Mission Partners

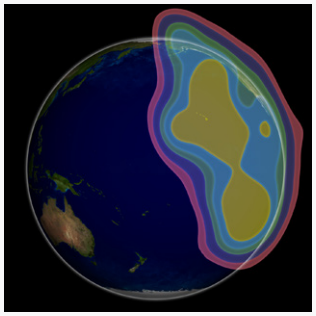
SES
A leading satellite operator

Orbital ATK
Prime contractor

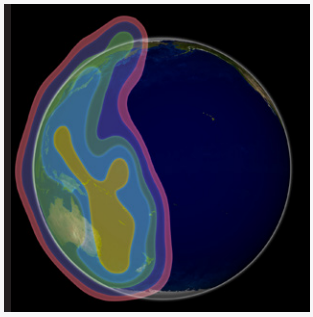
Arianespace
Launch provider

Coverage Contour Maps

EH Contours



WH Contours



Orbital ATK

www.orbitalatk.com

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