

KOREASAT 6

Ku-band Commercial Communications Satellite



Mission Description

Orbital ATK teamed with Thales Alenia Space of France to supply the KOREASAT 6 commercial communications satellite for KT Corporation of the Republic of Korea. Orbital ATK provided its GEOSTAR-2™ satellite platform; carried out engineering, manufacturing, integration and final spacecraft testing at its satellite manufacturing facility located in Dulles, Virginia; and performed launch site operations in Kourou, French Guiana. Thales Alenia Space was prime contractor for the project and provided the communications payload. In addition, the team delivered a ground system to support on-orbit operations of the satellite. Orbital ATK provided six months of on-site support after the satellite was handed over to the customer.

KOREASAT 6 carries 24 Ku-band channels to provide Fixed Satellite Services (FSS) and six channels for Direct Broadcast Services (DBS) to the people of Korea. The spacecraft generates 3.4 kilowatts of payload power and has a 15-year on-orbit mission life. KOREASAT 6 was launched in December 2010 to a final orbital slot at 116 degrees East Longitude.

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:
Korea



Mission:

Ku-band communications to provide Direct Broadcast Services (DBS) and Fixed Satellite Services (FSS)

Customer:

KT Corporation
(Thales Alenia Space – Prime Contractor)



KOREASAT 6 in Orbital ATK's Dulles, Virginia satellite manufacturing facility

KOREASAT 6

Specifications

Spacecraft

Launch Mass:	2,622 kg (5,780 lb.)
Solar Arrays:	Three panels per array, UTJ Gallium Arsenide cells
Stabilization:	3-axis stabilized
Propulsion:	Monopropellant (hydrazine) on-orbit system
Batteries:	Two >4840 W-hr capacity Li-ion batteries
Mission Life:	15 years (fueled for >16 years)
Orbit:	116° East Longitude

Payload

Ku-band

Repeater:	30-for-24 FSS TWTAs, 9-for-6 DBS TWTAs
TWTA Power:	130 W RF and 50 W RF
Antenna:	One 2.3 m single shell deployable; one 2.3 m dual grid array deployable reflector

Launch

Launch Vehicle:	Ariane 5
Site:	Kourou, French Guiana
Date:	December 29, 2010

Mission Partners

KT Corporation

Korea's leading integrated communications service provider

Thales Alenia Space

Prime contractor for KOREASAT 6 and provider of the communications payload

Orbital ATK

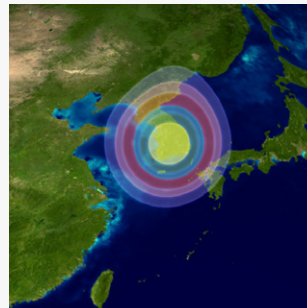
Orbital ATK provided the satellite bus; carried out engineering, manufacturing, integration and final spacecraft testing; and provided six months of on-site support after the satellite was handed over to the customer

Arianespace

Launch provider

Coverage Contour Maps

FSS Beam



DBS Beam

