

# Thaicom 6

Hybrid C-band and Ku-band Commercial Communications Satellite



## Mission Description

Orbital ATK was selected by Thaicom PLC to build their sixth satellite, Thaicom 6. The Thaicom 6 satellite design is based on Orbital ATK's highly successful, flight-proven, GEOStar-2™ satellite platform, and was manufactured and tested at Orbital ATK's state-of-the-art manufacturing facility in Dulles, Virginia.

Thaicom 6 carries a hybrid Ku- and C-band payload operates on approximately 3.5 kilowatts of payload power. The Ku-band payload is comprised of eight active transponders (9 x 36 - MHz Transponder Equivalent) providing services to Thailand, Laos, Cambodia, and Myanmar. The C-band payload features 12 active C-band transponders providing services via a regional beam to Southeast Asia and six active C-band transponders (12 x 36 - MHz TPE) providing services to Africa.

## 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:

Thailand, Laos, Cambodia, Myanmar, Southeast Asia and Africa



### Mission:

C- and Ku-band communications

### Customer:

Thaicom PLC



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

# Thaicom 6

## Specifications

### Spacecraft

Launch Mass:	3,325 kg (7,330 lb.)
Payload Power:	3.7 kW
Solar Arrays:	Three panels per array, UTJ Gallium Arsenide cells
Stabilization:	3-axis stabilized; zero momentum
Propulsion:	Liquid bi-propellant transfer orbit system; monopropellant (hydrazine) on-orbit system
Batteries:	Li-Ion batteries
Mission Life:	≥15 years
Orbit:	78.5° East Longitude

### Hybrid Payload

#### C-band

C1 Repeater:	12 active C-band transponders
C1 Antenna:	2.3 m dual grid deployable reflector
C2 Repeater:	6 active C-band transponders
C2 Antenna:	1.4 m dual grid reflector Earth deck-mounted

#### Ku-band

Repeater:	8/9 active Ku-band transponders
Antenna:	2.5 x 2.7 m single offset super-elliptical deployable reflector

### Launch

Launch Vehicle:	Falcon 9
Site:	Cape Canaveral, Florida
Date:	January 6, 2014

## Mission Partners

Thaicom PLC

Orbital ATK

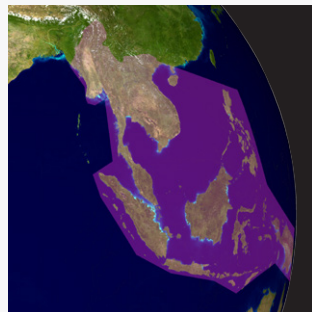
Design, integration and test of the Thaicom 6 Satellite

## Coverage Contour Maps

Ku-band Coverage Contour Map



C1 Beam Coverage Contour Map



C2 Beam Coverage Contour Map

