

# Star One C3

Hybrid C-band and Ku-band Commercial Communications Satellite



## Mission Description

The Star One C3 satellite, manufactured for Star One, carries a hybrid payload. The satellite's C-band payload serves South America. The Ku-band payload serves Brazil and other areas of South America.

## 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:

Brazil, The Andes and South America



### Mission:

C- and Ku-band communications

### Customer:

Star One



Star One C3 in Orbital ATK's Dulles, Virginia satellite manufacturing facility

# Star One C3

## Specifications

### Spacecraft

Launch Mass:	<3,200 kg (<7,055 lb.)
Solar Arrays:	Four 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
Batteries:	Two >4840 W-Hr capacity Li-Ion batteries
Mission Life:	≥15 years

### Hybrid Payload

#### C-band

Repeater:	28 active transponders with two 16-for-14 TWTA interconnected rings
TWTA Power:	48 W RF
Antenna:	2.3 m dual grid deployable reflector

#### Ku-band

Repeater:	16 active transponders with two 10-for-8 TWTA rings
TWTA Power:	140 W RF
Antenna:	2.3 m dual grid deployable reflector; 1.4 m deck-mounted

### Launch

Launch Vehicle:	Ariane 5
Site:	Kourou, French Guiana
Date:	November 10, 2012

## Mission Partners

### Star One

An Embratel Company, Star One is Brazil's leading satellite communications service provider

### Orbital ATK

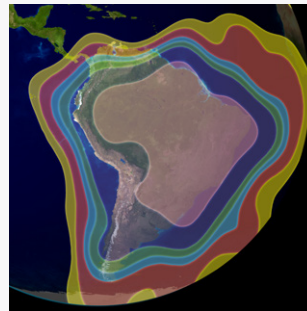
Prime contractor

### Arianespace

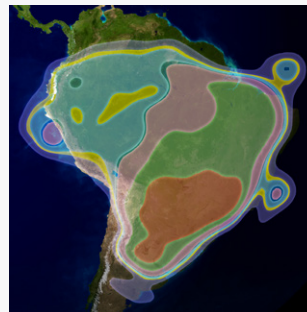
Launch provider

## Coverage Contour Maps

### C-band Coverage



### Ku-band Brazilian Coverage



### Ku-band Andean Coverage

