

Star One C3

Hybrid C-band and Ku-band Satellite for Star One S.A.



Mission Description

The Star One C3 satellite, being manufactured for Star One S.A., will carry a hybrid payload. The satellite's C-band payload will serve South America. The Ku-band payload will serve Brazil and other areas of South America.

Spacecraft

The Star One C3 satellite is based on Orbital's GEOSTar™ bus. The spacecraft will carry 28 active C-band transponders for coverage of South America, and 16 x 72 MHz Ku-band transponders with six switchable channels between Brazil and the Andean coverage region. The spacecraft will generate approximately five kilowatts of payload power and will feature two 2.3 meter deployable reflectors and one 1.4 meter earth deck-mounted antenna.

QUICK FACTS

Coverage:

Brazil, The Andes and South America

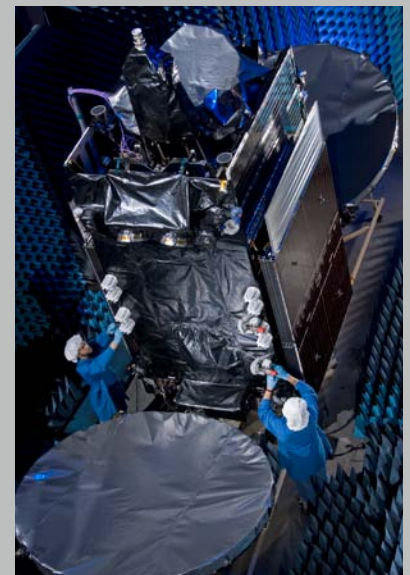


Mission:

C- and Ku-band communications for the South American Region

Customer:

Star One S.A. – Rio de Janeiro, Brazil



Star One C3 is based on Orbital's GEOSTar satellite platform, and will undergo integration and testing at Orbital's satellite manufacturing facility in Dulles, Virginia.

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:	2012

Mission Partners

Star One S.A.

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

Orbital Sciences Corporation

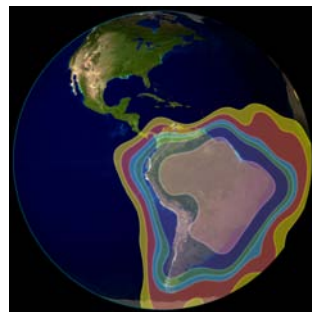
Prime contractor

Arianespace, S.A.

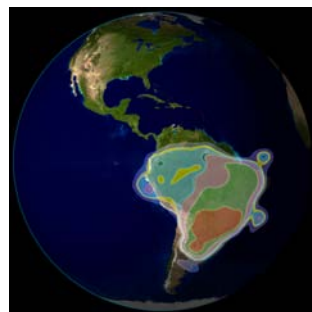
Launch provider

Coverage Contour Maps

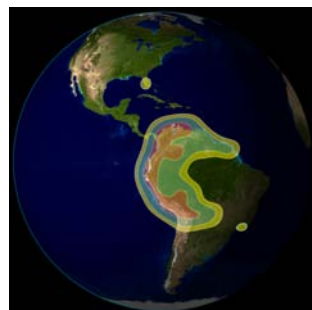
C-band Coverage



Ku-band Brazilian Coverage



Ku-band Andean Coverage



The GEOStar™ Advantage

Orbital'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 has also developed the higher-power GEOStar-3 spacecraft design, delivering the next increment of payload power for applications between 5.0 and 7.5 kilowatts, allowing Orbital to offer its innovative and reliable satellite design to the medium-class of communications satellites.



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