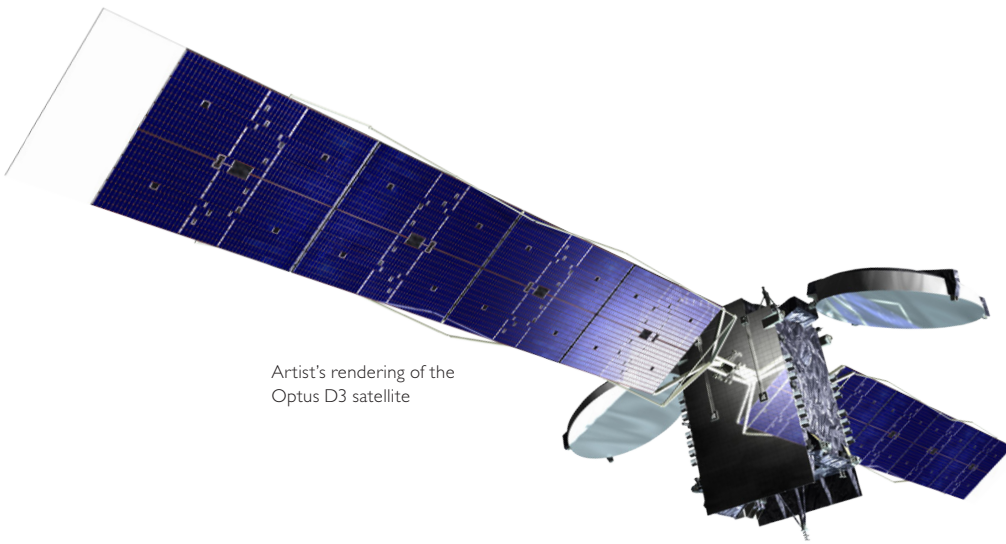




# Optus D3

Ku-band Communications and Broadcasting for Australia and New Zealand



Artist's rendering of the  
Optus D3 satellite

## Mission Description

Built for Australia-based Optus Networks Pty Limited, Optus D3 provides Ku-band fixed communications and direct television broadcasting services to Australia and New Zealand. The Orbital-built satellite is providing further market expansion at the same orbital slot as the Optus C1 satellite which was launched in 2003 and is located at 156 degrees East Longitude. Optus D3 carries 24 active Ku-band transponders and generates approximately 5.0 kilowatts of payload power.

## Spacecraft

Orbital GEO communications satellites are based on Orbital's STAR™-2 spacecraft platform, lightweight geosynchronous buses that provide high reliability, performance and capacity in a relatively low-cost system. These platforms can accommodate up to 42 transponders, provide up to 7.5 kilowatts of payload power and operate over a 15-year life – ideal for telephony, data and broadcasting applications. STAR GEO satellites are smaller and less costly to build and launch than those offered by the industry's traditional suppliers.

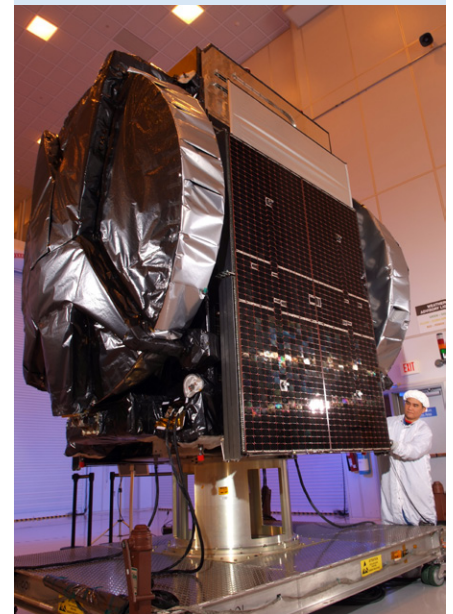
## QUICK FACTS:



**Coverage:**  
Australia and New Zealand

**Mission:**  
Ku-band fixed communications and direct television to Australia and New Zealand

**Customer:**  
Optus Networks, Pty. - Sydney, Australia



Optus D3 in Orbital's Satellite Manufacturing Facility in Dulles, VA

# Optus D3

## Specifications

### Spacecraft

Launch Mass:	2,500 kg (5,500 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 5140 W-Hr capacity Li-Ion batteries (BOL)
Mission Life:	15 years
Orbit:	156 degrees East Longitude

### Payload

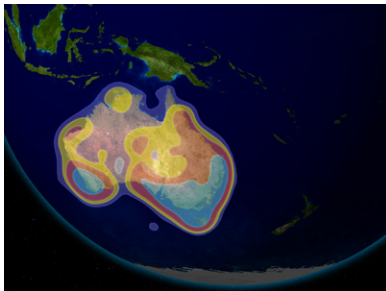
Frequency:	Ku-band
Repeater:	24 active transponders with 28-for-24 125 W TWTA's (primary transponders) and 10-for-8 44 W TWTA's (backup transponders)
Payload Power:	5.0 kW
Antenna:	Two 2.3 m deployable dual-shell gridded shaped reflectors

### Launch

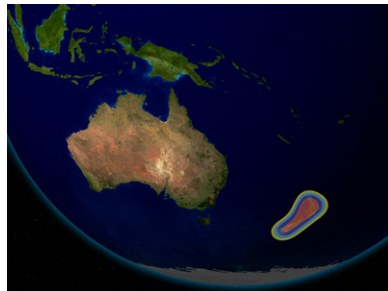
Launch Vehicle:	Ariane 5
Site:	Kourou, French Guiana
Date:	August 21, 2009

## Coverage Contour Maps

Australia Antenna Pattern



New Zealand Antenna Pattern



## Mission Partners

### Optus of Australia

A leader in providing integrated communications in Australia

### Orbital Sciences Corporation

Prime contractor for three Optus Ku-band satellites

### Arianespace, S.A.

Launch provider



Optus D3 was launched into orbit on an Ariane 5 launch vehicle in 2009