

Optus D3

Ku-band Commercial Communications 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 ATK-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.

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:

Australia and New Zealand



Mission:

Ku-band fixed communications and direct television

Customer:

Optus Networks, Pty.



Optus D3 in Orbital ATK's Dulles, Virginia satellite manufacturing facility

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° East Longitude

Payload

Ku-band

Repeater:	24 active transponders with 28-for-24 125 W TWTAs (primary transponders); 10-for-8 44 W TWTAs (backup transponders)
Payload Power:	5.0 kW
Antenna:	Two 2.3 m dual grid shaped deployable reflectors

Launch

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

Mission Partners

Optus of Australia

A leader in providing integrated communications in Australia

Orbital ATK

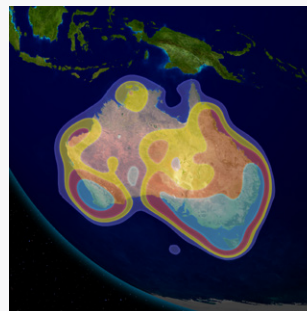
Prime contractor for three Optus Ku-band satellites

Arianespace

Launch provider

Coverage Contour Maps

Australia Antenna Pattern



New Zealand Antenna Pattern

