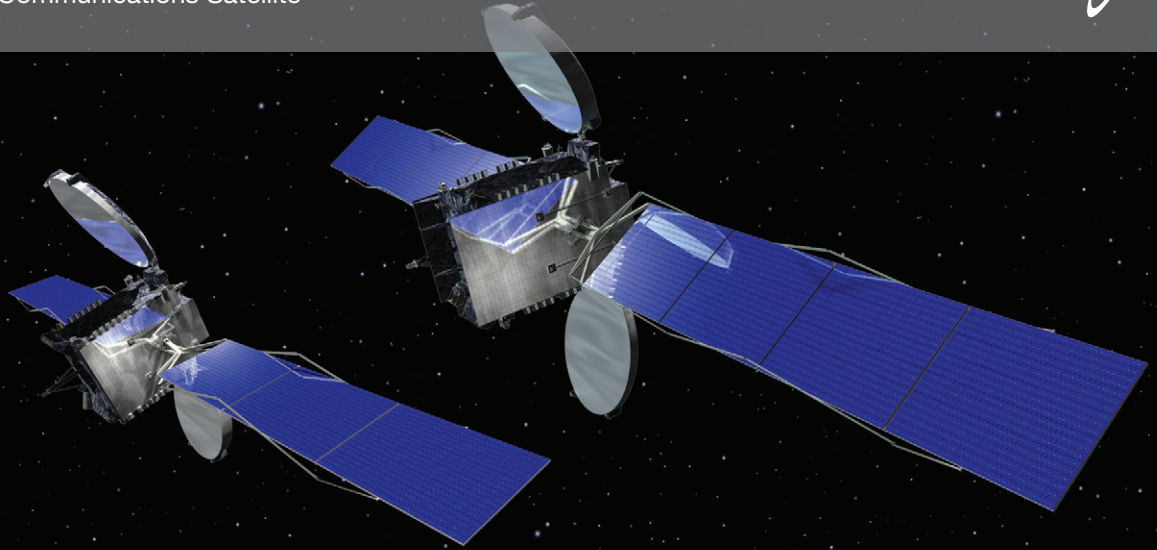


# Optus D1 and D2

Ku-band Commercial Communications Satellite



## Mission Description

Built for Australia-based Optus Networks Pty Limited, the Optus D-Series satellites provide Ku-band fixed communications and direct television broadcasting services to Australia and New Zealand. The Orbital ATK-built satellites satisfy Optus' need to replace aging on-orbit spacecraft as well as satisfy higher than anticipated demand for access to their C1 satellite. D1 was launched in October 2006 and replaced the Optus B1 satellite at 160 degrees East Longitude; D2 was launched in October 2007 and replaced the Optus B3 satellite at 152 degrees East Longitude.

## Spacecraft

The D-Series satellites are based on Orbital ATK's flight-proven GEOSTAR-2™ bus. Each satellite carries 24 active Ku-band transponders on a platform that is ideal for telephony, data and broadcasting applications. Both spacecraft generate approximately 3.8 kilowatts of payload power.

## FACTS AT A GLANCE

### Coverage:

Australia and New Zealand

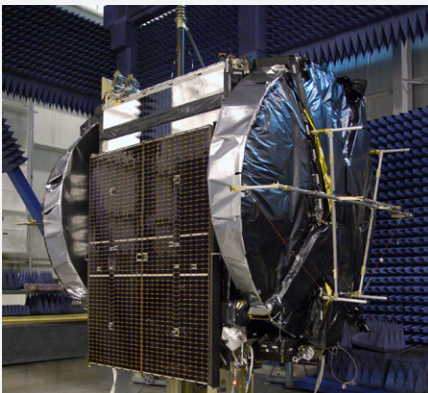


### Mission:

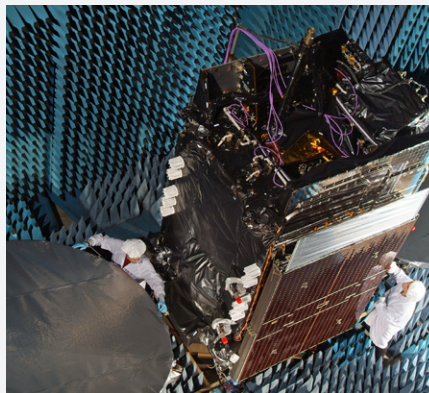
Ku-band fixed communications and direct television

### Customer:

Optus Networks, Pty.



Optus D1 in Orbital ATK's satellite manufacturing facility in Dulles, Virginia



Optus D2 in the Antenna Range at Orbital ATK's satellite manufacturing facility in Dulles, Virginia

# Optus D1 and D2

## Specifications

### Optus D1

#### Spacecraft

|                |  |
|----------------|--|
| Launch Mass:   | 2,300 kg (5,060 lb.)   |
| Solar Arrays:  | Three 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 4750 W-Hr capacity Li-Ion batteries (BOL)  |
| Mission Life:  | 15+ years  |
| Orbit:         | 160° East Longitude  |

#### Payload

##### Ku-band

|             |  |
|-------------|--|
| Repeater:   | 24 active transponders with 20-for-16 150 W TWTAs; 10-for-8 44 W TWTAs |
| TWTA Power: | 3.8 kW   |
| Antenna:    | Two 2.3 m deployable dual-shell grid shaped reflectors                 |

#### Launch

|                 |                       |
|-----------------|-----------------------|
| Launch Vehicle: | Ariane 5              |
| Site:           | Kourou, French Guiana |
| Date:           | October 13, 2006      |

### Optus D2

#### Spacecraft

|                |  |
|----------------|--|
| Launch Mass:   | 2,375 kg (5,225 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 4750 W-Hr capacity Li-Ion batteries (BOL)  |
| Mission Life:  | 15+ years  |
| Orbit:         | 152° East Longitude  |

#### Payload

##### Ku-band

|             |  |
|-------------|--|
| Repeater:   | 24 active transponders with 20-for-16 125 W TWTAs; 10-for-8 44 W TWTAs |
| TWTA Power: | 4.0 kW   |
| Antenna:    | Two 2.3 m deployable dual-shell grid shaped reflectors                 |

#### Launch

|                 |                       |
|-----------------|-----------------------|
| Launch Vehicle: | Ariane 5              |
| Site:           | Kourou, French Guiana |
| Date:           | October 5, 2007       |

## 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



Optus D1 was launched aboard an Ariane 5 rocket in 2006.



Optus D2 was launched aboard an Ariane 5 rocket in 2007.

Orbital ATK

[www.orbitalatk.com](http://www.orbitalatk.com)