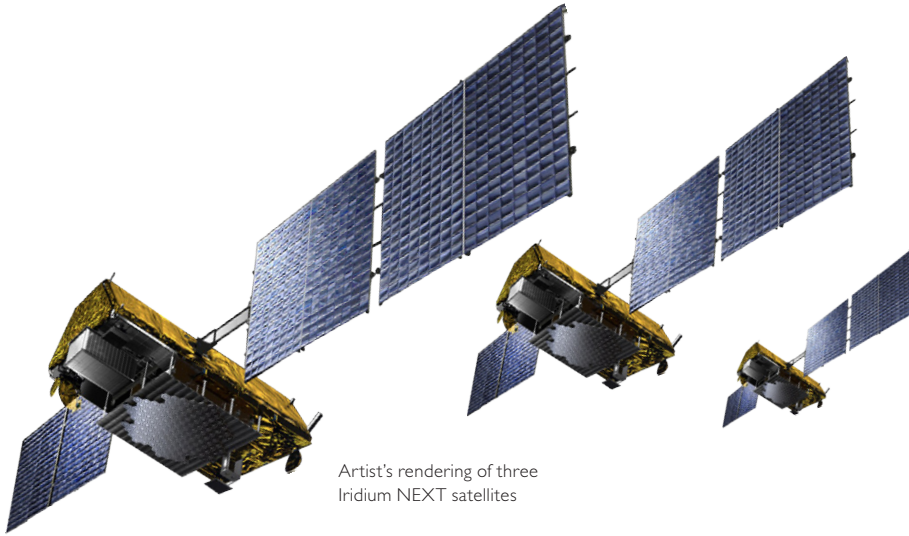




Iridium NEXT

The next-generation satellite constellation of Iridium Communications Inc.



Artist's rendering of three Iridium NEXT satellites

Mission Description

Orbital has been selected by Thales Alenia Space to Assemble, Integrate, and Test (AI&T) 81 spacecraft for the Iridium NEXT program including 66 operational spacecraft, six on-orbit spares, and nine ground-backup spacecraft. Orbital's responsibilities also include Ground Support Equipment (GSE), payload integration, including hosted payloads, shipment, and launch integration services.

Each spacecraft employs an L-band phased array antenna for generation of the 48-beam, 4,700 km diameter cellular pattern on the Earth's surface for communication with subscribers/users. Ka-band links are also provided for communications with ground-based gateways and for crosslinks with adjacent spacecraft in orbit. The cross-linked 66 satellite constellation forms a global network in space allowing communications from a ground or airborne user from any location on Earth to virtually anywhere else on Earth.

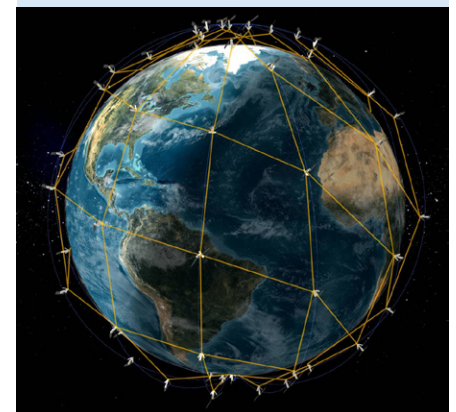
QUICK FACTS:



Coverage:
Worldwide

Mission:
Global Mobile Communications
via The World's Furthest Reaching
Satellite Network

Customer:
Thales Alenia Space - Cannes, France
(Prime contractor)
Iridium Communications Inc. -
McLean, VA



Artist's rendering of the Iridium NEXT constellation of satellites

Iridium NEXT

Specifications

Spacecraft

Launch Mass:	800 kg (1,764 lb.)
Solar Array:	2,000 W
Orbital Altitude:	780 km (485 mi)
Stabilization:	2-axis
Mission Life:	10 year design and 15 year mission life

Communications

Regenerative processing payload with On-Board Processor (OBP)

L-band

- Single 48-beam transmit/receive phased array antenna
- Time-Division Duplex (TDD) architecture

Ka-band

- Two 20/30 GHz steerable feeder links to terrestrial gateways
- Four 23 GHz crosslinks to adjacent Iridium NEXT satellites for relay communications
 - Two steerable, two fixed antennas
 - Time-Division Duplex (TDD) architecture

TT&C

- 20/30 GHz links via omni antennas

Launch

Launch Vehicle:	TBD
Site:	TBD
Date:	2015 - 2017

Mission Partners

Iridium Communications Inc

Owner/operator of the Iridium System

Thales Alenia Space

Prime contractor for the Iridium NEXT satellite system

Orbital Sciences Corporation

Assembly, integration and test of the 81 satellites including primary and hosted payloads, shipment and launch integration services

Hosted Payloads ¹

The Iridium NEXT spacecraft design allows for up to a 50-kilogram hosted payload. Hosted payloads enjoy the interconnectivity of the 66 satellite Iridium network and near-real time relay of data to and from space, providing the end user global coverage at a fraction of the price of a dedicated mission. The end user receives hosted payload data via an IP interface to Iridium facilities, which obviates the need for any customer owned ground stations. Additional benefits to hosted payload missions include persistence, revisit capabilities and resilience.

Total Mass:	Up to 50kg
Dimensions:	30 x 40 x 70 cm
Power:	50 W Average, 200 W Peak
Data Rate:	Up to 1 Mbps

For more information about Hosted Payloads:

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¹. Specifications are approximate and subject to change