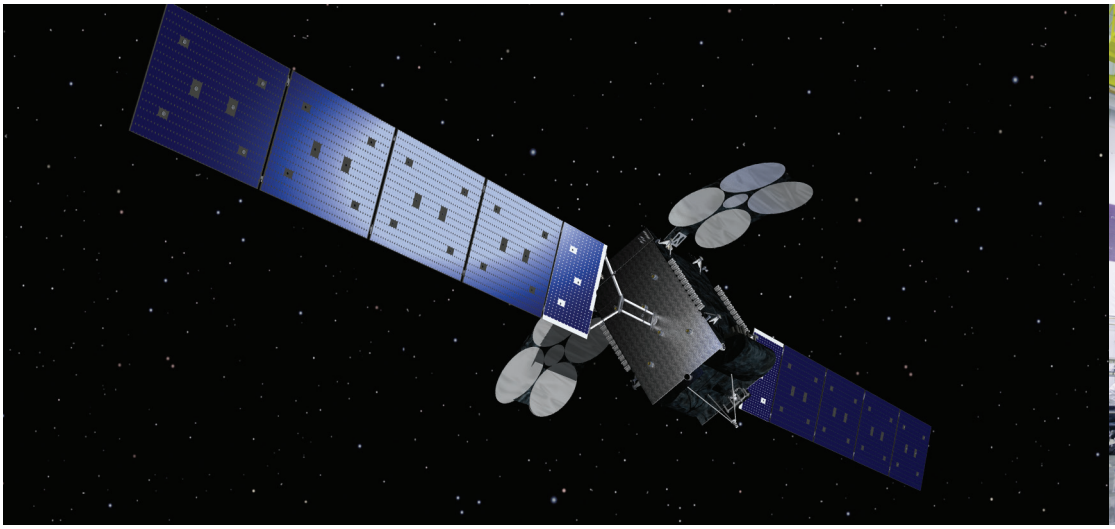
Al Yah 3

Ka-band Commercial Communications Satellite

FACT SHEET



Mission Description

The Al Yah 3 satellite carries 53 active Ka-band user beams and four gateway beams, and produces approximately 7.5 kilowatts of payload electrical power. The Ka-band spot beams provide two-way communications services to facilitate high-speed delivery of data to end-user applications such as broadband Internet and corporate networking as well as IP backhaul for telecommunications service providers. Using the Al Yah 3 spacecraft, Yahsat will provide its services to Africa and Brazil.

Orbital Sciences Corporation was selected by Yahsat to build Al Yah 3. The Al Yah 3 satellite design is based on Orbital's GEOStar-3™ satellite platform, and will be manufactured and tested at Orbital's state-of-the-art satellite manufacturing facility in Dulles, Virginia.

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 8.0 kilowatts, allowing Orbital to offer its innovative and reliable satellite design to the medium-class of communications satellites.

FACTS AT A GLANCE

Coverage:
Brazil and Africa

Mission:
Ka-band Fixed Satellite Services (FSS) communications

Customer:
Yahsat

Al Yah 3

Specifications

Spacecraft

Launch Mass:	3,540 kg
Solar Arrays:	Four panels per array, XTJ Gallium Arsenide cells
Stabilization:	3-axis stabilized, zero momentum biased
Propulsion:	Liquid bi-propellant transfer orbit system; Xenon Hall current thruster orbit topping; Hybrid Xenon Hall current thruster/hydrazine monopropellant on-orbit system
Batteries:	Li-Ion batteries
Mission Life:	15 years

Payload

Ka-band

Repeater:	53 operational user beams, 4 operational gateway beams
Antenna:	8 payload reflectors on deployable pallets

Launch

Launch Vehicle:	Ariane 5
Site:	Kourou, French Guiana
Date:	4Q, 2016

Mission Partners

Yahsat

Providing multipurpose satellite solutions for broadband, broadcast, government and communications use across the Middle East, Africa, Europe, Central and South west Asia, in addition to future coverage over Latin America in 2016

Orbital Sciences Corporation

Design, integration and test for the Al Yah 3 satellite

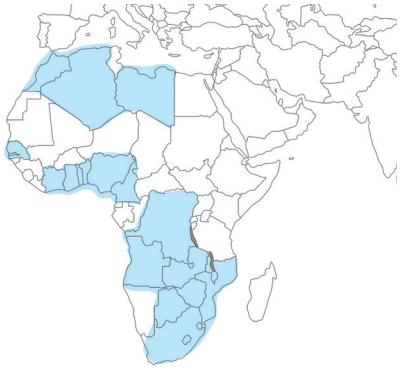
Arianespace

Launch provider

Coverage Contour Maps*

Brazil

Africa



*Maps are for illustrative purposes only to show general commercial Ka-band coverage areas. This does not depict exact service locations