

Backgrounder

Defense, Space & Security 929 Long Bridge Drive Arlington, VA 22202-4208 www.boeing.com

AMOS-17

Description and Purpose: In December 2016, Tel Aviv-based satellite operator Spacecom ordered AMOS-17, which will deliver satellite communications and broadcast services to parts of Europe, the Middle East and Africa, offering television, internet and data services. Launch is expected in August 2019 aboard a SpaceX Falcon 9 launch vehicle. The satellite will be stationed above Africa at 17 degrees east.



Customer: A leading global fixed-satellite operator and satellite service provider, Spacecom offers tailored end-to-end communication solutions to the media and broadband industries. Operating the AMOS satellite fleet, Spacecom provides broadcast and broadband satellite services with Pan-European, Pan-African, Middle Eastern, Russian and Asian coverage and cross region connectivity.

General Characteristics: Based on the 702 satellite bus, AMOS-17 will provide satellite communications and broadcast services in parts of Europe, the Middle East and Africa, offering television, internet and data services. This digitally channelized, wide-band payload includes multiple earth steerable beams and fixed beams. The digital channelization allows configurable channel size, channel power, and channel mapping between the beams to connect any uplink beam with any downlink beam. The combination of the inherent flexibility of the digital platform with the mix of fixed and steerable beams ensures fast response to changing customers' needs.

AMOS-17 will deliver services in C-, Ka- and Ku-bands:

- The Ka-band payload allows flexible and configurable communications through fixed and steerable spot beams.
- The satellite's two shaped Ku-band beams will serve South Africa and sub-Saharan Africa.
- Its 12 C-band spot beams will cover Africa.

Miscellaneous: AMOS-17 carries Boeing's first 3D-printed metal antenna as flight hardware. Its 3D-printed aft command antenna's purpose is to receive commands from the ground in Ku-band. This breakthrough will result in greater reliability thanks to the need for fewer parts because the one-piece unit replaces the multi-part assembly used

in heritage designs. That change also is expected to yield significant reduction in assembly time as well as reduce spacecraft mass.

Background: The scalable, flexible 702 product line is an orbit-proven platform that cost-efficiently serves a wide range of commercial and government customers. Boeing introduced the 702 spacecraft family in 1995, and today more than two dozen are on orbit, with almost a dozen more currently in production. The 702 family product line offers flexible designs supporting payload power levels from 3 to 25 kilowatts, meeting the needs of customers seeking satellites in wide power ranges.

Boeing's satellite systems business is located in El Segundo, Calif. The world's first geosynchronous communications satellite, Syncom, was built there by Boeing and launched in 1963. Since then, Boeing has delivered more than 300 satellites to more than 50 customers in more than 20 countries, and continues to design and build government and commercial satellites in its factory in El Segundo.

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