



## COMMERCIAL AND GOVERNMENT SATELLITES SES-15

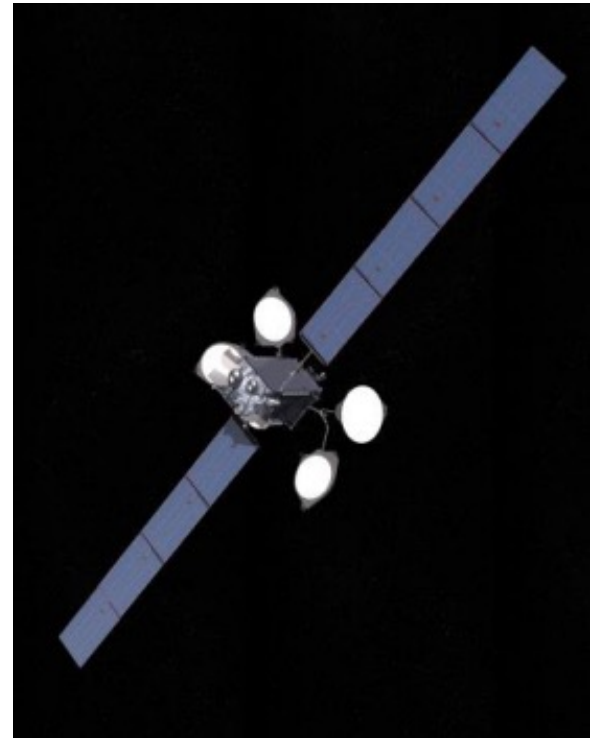
### DESCRIPTION & PURPOSE

In 2015, SES ordered a Boeing 702SP (small platform) all-electric propulsion satellite for its new orbital location to serve North America, Latin America and the Caribbean. The satellite was launched in May 2017, and has since enabled SES to serve its leading aeronautical customers in providing in-flight internet connectivity for aircraft and serve other traffic-intensive data applications such as government, VSAT networks and maritime.

### CUSTOMER

SES is the world-leading satellite operator and the first to deliver a differentiated and scalable GEO-MEO offering worldwide. SES focuses on value-added, end-to-end solutions in two key business units: SES Video and SES Networks. The company provides satellite communications services to broadcasters, content and internet service providers, mobile and fixed network operators, governments and institutions. The satellites are controlled from the SES ground stations in Betzdorf, Luxembourg; Woodbine, Maryland; and Gibraltar, United Kingdom. For more information on SES: [www.ses.com](http://www.ses.com). The O3b mPOWER preliminary design review (PDR) was successfully completed in June 2018, and the critical design review (CDR) was successfully completed in July 2019. The first three satellites are targeted for launch in 2022.

Continuing a relationship spanning more than 25 years, SES, has now ordered 25 satellites from Boeing. The O3b mPOWER satellites support the SES Networks business unit, which serves fixed data, mobility and government customers with high-performance data services. SES Networks is comprised of SES's existing data business and the recently acquired O3b Networks, the only operator of MEO satellites.



### GENERAL CHARACTERISTICS & BACKGROUND

Launched in May 2017, SES-15 is designed to generate up to 8 kilowatts of payload power during its 15-year design life. SES-15 carries a hybrid payload, with additional Ku-band wide beams and Ku- as well as Ka-band High Throughput Satellite (HTS) capability. The Boeing all-electric 702SP carries the xenon ion propulsion system (XIPS) for both orbit-raising and on-orbit maneuvering. In addition, SES-15 also carries a Wide-Area Augmentation System (WAAS) hosted payload for the U.S. Federal Aviation Administration (FAA) to enhance aviation safety.

The 702SP's lightweight system design accommodates launch on most commercial launch systems, including Falcon 9, Ariane 5, Sea Launch, Proton, Soyuz, Atlas 5 and Delta IV. Because of its lower mass and weight, in some cases two 702SP satellites can be orbited on a single launch vehicle, resulting in a cost savings when compared with existing single launch options.

## 702 BACKGROUND

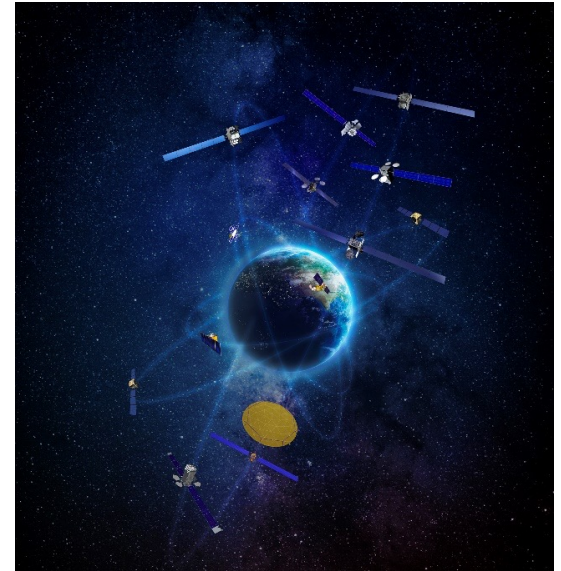
The scalable, flexible 702 product line is an orbit-proven platform that cost-efficiently serves a wide range of commercial and government customers. Boeing introduced the 702 spacecraft family in 1995, and today more than two dozen are on orbit, with almost a dozen more currently in production. The 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.

## FLEXIBLE SATELLITES FOR GOVERNMENT AND COMMERCIAL OPERATORS

Boeing builds adaptable satellites to meet changing business cases and fulfill even the most demanding missions. We're well into our sixth decade of providing advanced space and communications systems for military, commercial and scientific uses.

Boeing satellites reliably deliver digital communications, mobile communications, broadband internet connectivity, streaming entertainment, and direct-to-home entertainment around the world.

We continue to invest in and create a continuum of products across all orbits to give customers tiered options based on size, weight and power, to deliver the capability they need to their end-users.



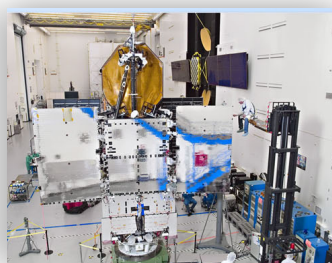
Artist rendering of Boeing satellites operating across all orbits

## MISSION ASSURANCE

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.



Exterior of Boeing Satellite Factory



High Bay



Thermal Vacuum



Payload Integration & Test

## STRONGER TOGETHER

In addition to Boeing's space capabilities, Spectrolab and Millennium are also a part of the Boeing team. Click on the company logos to learn more!



### MORE INFORMATION:

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