

Boeing Defense, Space & Security  
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## 702SP Spacecraft

**Description and Purpose:** In 2012 Boeing introduced the newest satellite design in its product portfolio, the Boeing 702SP (Small Platform). The 702SP is an evolution of the Boeing 702 satellite, and continues Boeing's five decades of designing and delivering satellite systems that fulfill customer requirements. The 702SP couples proven technology from Boeing's previous designs with next-generation technology and processes, resulting in an affordable, lightweight alternative design to meet customer needs. The 702SP passed its critical design review in May 2013, moving the satellites into production.



**Customer(s):** In March 2012, a joint procurement by ABS and Eutelsat (Satmex was acquired by Eutelsat in January 2014), resulted in Boeing's first order for the 702SP. The agreement consisted of four satellites, including ABS-3A and EUTELSAT 115 West B, with options for four additional satellites. In July 2013, ABS confirmed that the third satellite would be ABS-2A, while Eutelsat confirmed that the fourth satellite in the original order would become EUTELSAT 117 West B. EUTELSAT 117 West B will also carry a Wide-Area Augmentation System (WAAS). The WAAS hosted payload will enable the U.S. Federal Aviation Administration (FAA) to enhance aviation safety. ABS-3A and EUTELSAT 115 West B were launched on March 1, 2015. SES of Luxembourg is the third commercial satellite customer for the 702SP. SES contracted Boeing to build SES-15 in February 2015.

**General Characteristics:** The 702SP operates in the low- to mid-power ranges of 3 to 9 kilowatts, and expands the capability of the 702 satellite family to power ranges from 3 to 18 kilowatts. The 702SP features all-electric propulsion, which minimizes spacecraft launch mass and maximizes available payload. Able to accommodate up to five reflectors, the 702SP provides additional mission flexibility to its operators and broader services to users. It also features a next-generation avionics architecture, which simplifies operations and provides improved access to data for evaluation of the spacecraft's health.

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, two 702SP satellites can be launched



on a single launch vehicle, resulting in a cost savings of up to 20 percent when compared with existing launch options.

The Boeing 702SP can operate in the S-, X-, C-, Ku, and Ka-band frequencies and, as with all Boeing 702s, is designed to provide 15 or more years of satellite service with additional fuel capacity to enable multiple station changes over the life of the satellite. The 702 family of vehicles is designed to accommodate hosted payloads, such as sensors, UHF, military Ka-band and navigation L-band, resulting in additional flexibility for customers.

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