

# SES-17

## Press Factsheet

September 2021

### Experience Endless Connectivity

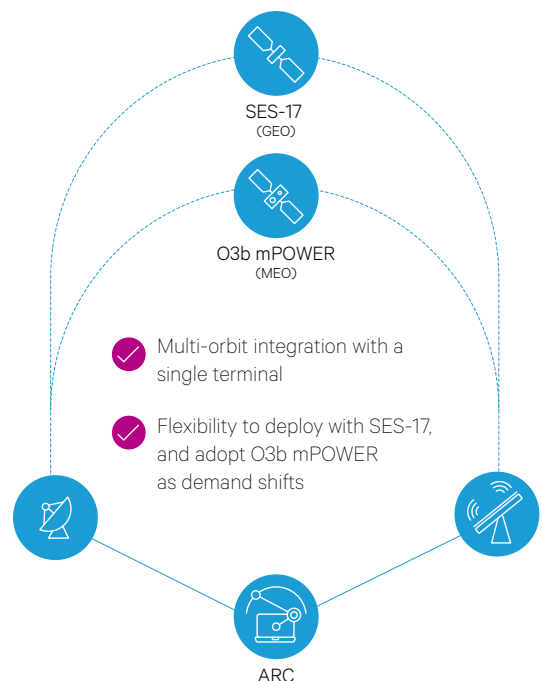
As access to reliable networks becomes crucial to empower business and communities globally, SES-17, the upcoming very high-throughput satellite, brings the most advanced, versatile, and powerful capabilities to address the demand for high-speed connectivity across South America, North America, the Atlantic Ocean and the Caribbean. The SES's first fully Ka-band geostationary (GEO) satellite will have a 200GHz of total processing capacity and feature a full digital payload connected to almost 200 beams, capable of maintaining up to 2Gbps per connection, making it ideal for applications within mobility, enterprise and government segments, as well as driving digital inclusion programmes.

Apart from its impressive size (46 meters wide and approximately 6,400 kg of mass), what sets SES-17 apart from other GEO satellites is the new technologies implemented in partnership with satellite manufacturer Thales Alenia Space, bringing power and flexibility to the spacecraft. SES-17 is the first SES satellite with a fully digital payload. It will embark a newly designed digital transparent processor (DTP), the most advance to ever be in orbit. DTP combined with other SES-17's cutting-edge high flexibility features allows the satellite to offer easy frequency conversions as well as unlimited gateway switching and traffic routing to meet dynamic data demands. SES-17 will also be the first satellite to feature an innovative thermal control, the Mechanically Pumped Loop (MPL), to evacuate the heat generated by such a powerful satellite.

### SES's Multi-Orbit Network

SES-17's flexibility is further enhanced by new software-based technologies that are introduced to the ground system. Just like SES's next generation Medium Earth orbit (MEO) system also operating in Ka-band – [O3b mPOWER](#), SES-17 will be leveraging [Adaptive Resource Controller \(ARC\)](#), a software solution that serves as the brain for the network, developed especially to enable dynamic and automatic traffic allocation in real-time, as well as orbit switching for complete interoperability between SES's MEO system and the GEO satellite. The launch of SES-17 and O3b mPOWER marks SES's first step in the deployment of an interoperable multi-orbit satellite network.

SES is also working with various technology partners to roll out next-generation terminals that could optimise bandwidth efficiently and dynamically across its satellites in the two orbits. Moreover, the advanced Ka-band flat panel antennas will interoperate with SES-17 and O3b mPOWER simultaneously, completing the synergies between the systems.



## Key Segments and Applications

- Maritime and Aeronautical**  
 SES-17's extensive footprint over the Americas, Atlantic and the Caribbean will enable delivery of high-speed connectivity services to air and sea passengers on some of the busiest shipping and aviation routes.
- Digital Divide**  
 SES-17's high-throughput spot beams can help bridge that divide by providing direct connectivity to schools, offices and households in unserved areas.
- Mobile Backhaul**  
 SES-17 can seamlessly extend the reach and capacity of cellular systems.
- Energy**  
 As mines and pipelines are often located in remote areas or in oceans where terrestrial coverage is not available, SES-17 creates opportunities for digital growth.
- Enterprise and Government**  
 With SES-17's high-capacity connections, facilities in remote regions can be offered the same bandwidth and therefore provide the same services as their urban counterparts.

## Key Technology Vendors and Customer



- Manufacturer**  
 The spacecraft is built by Thales Alenia Space (TAS) in Cannes, France.
- Launcher**  
 The spacecraft is scheduled for launch on 22 October 2021 by Arianespace from the Guiana Space Centre in Kourou, French Guiana.
- Anchor Customer**  
 Thales InFlyt Experience is the [anchor customer](#) on SES-17 and will deliver unrivalled connectivity for commercial airlines flying across the Americas.

## A Technical Overview

<b>Payload</b>	~ 200 Ka-band beams (includes spot and field-of-view beams)	<b>Power</b>	2 deployable solar arrays, batteries
<b>Data rate</b>	Up to 2Gbps per connection	<b>Lifetime</b>	15 years
<b>Configuration</b>	Spacebus-Neo	<b>Mass</b>	~ 6,400 kg
<b>Propulsion</b>	4x SPT-140 plasma thruster	<b>Orbit</b>	GEO