



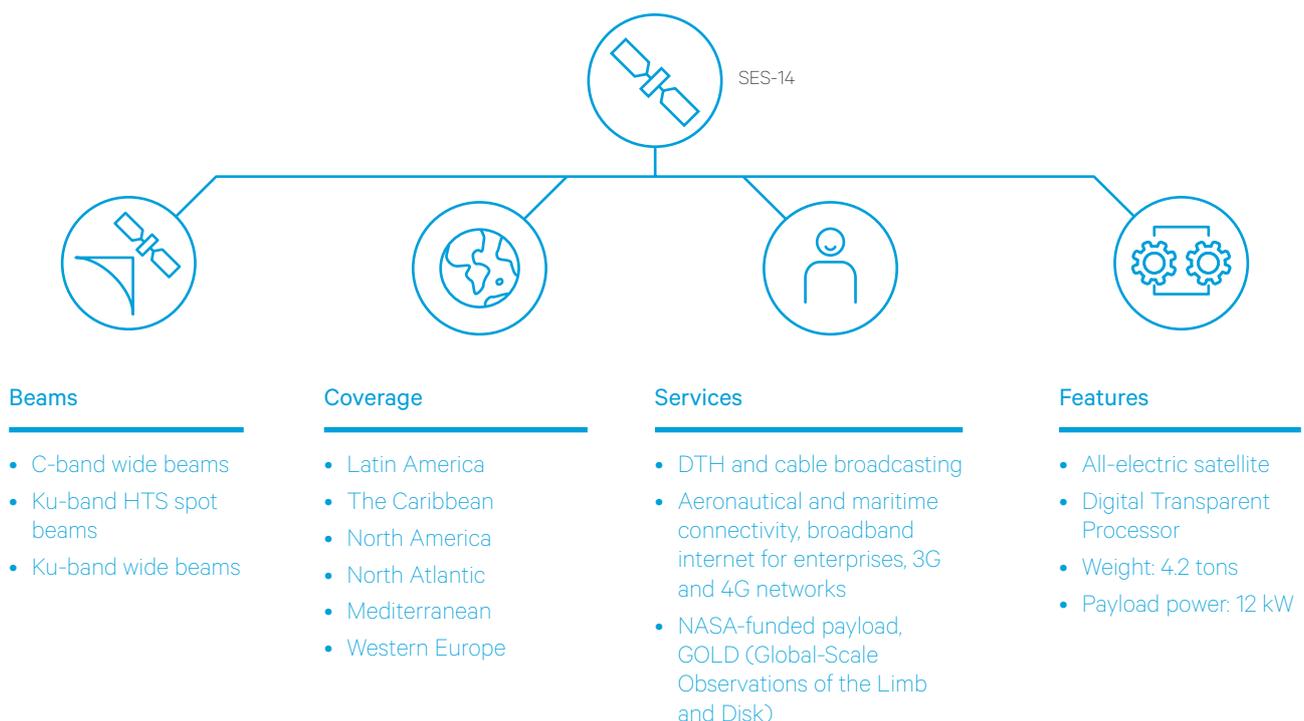
# SES-14

## REDEFINING BROADCASTING AND CONNECTIVITY ACROSS THE AMERICAS

In Q1 2018, SES will launch its hybrid satellite SES-14, which comprises a mix of wide beams and high throughput (HTS) spot beams to cover the entire Latin America region, the Caribbean, North America and the North Atlantic region.

Positioned at 47.5 degrees West, SES-14 will fulfil two primary missions: its C-band wide beams are specifically designed for SES's expanding cable neighbourhood in Latin America, while its Ku-band HTS spot beams will provide expansion capacity to serve the dynamic aeronautical and maritime market and other traffic-intensive applications such as cellular backhaul or broadband delivery services. SES-14's Ku-band wide beams will augment SES's ability to serve direct-to-home customers and provide connectivity in the Americas and the North Atlantic. The satellite will provide replacement and expansion capacity for NSS-806.

SES-14 will feature a Digital Transparent Processor that will enable more flexibility to route the spot beams and offer customised connectivity solutions that best fit customers' needs.





## C-BAND WIDE BEAMS

### Boosting digital cable and IPTV growth in Latin America

The C-band payload on SES-14 is dedicated to the expansion of SES's cable neighbourhood at 47.5 West, a growing video distribution platform in Latin America designed to help broadcasters grow their channel offerings, increase country-specific customised feeds, and deliver high definition (HD) channels. **Carrying premium channels such as Record, Viacom and Eurovision**, it serves over 20 million TV homes with 98% cable penetration<sup>1</sup>.

SES-14's ideal coverage over the region will help local cable operators gain more viewers and seize growth opportunities, as the number of cable and IPTV subscribers is expected to increase by 21% in the next five years<sup>2</sup>. The satellite will also enable cross-regional customers based in North America or in Europe to extend their reach into Latin America. In addition, as **80% of all TV households in the region is expected to have a HD flat screen (HD, FHD or UHD) by 2019<sup>3</sup>**, SES-14

will also help TV operators transition to HD and Ultra HD to deliver an immersive viewing experience.

In addition to the C-band hemi beams, global managed connectivity services can be delivered via the new global C-band beams, enabling any maritime vessel to provide broadband connectivity for internet access, voice, monitoring and tracking capabilities anywhere in the footprint so vessels, passengers and crew are always connected.

## HTS KU-BAND SPOT BEAMS

### Tailored for inflight connectivity, ideal for all data-hungry applications



The HTS Ku-band payload will serve all the data-hungry applications, such as aeronautical and maritime connectivity, broadband internet for enterprises, 3G and 4G networks.

The spot beams of SES-14 are designed to fulfil the exploding demand for inflight connectivity: the number of **commercial aircraft connected via satellite is expected to grow from 2,000 in 2016 to 6,500 by 2026<sup>4</sup>** in the Americas,

1 Lyngsat, SES Antenna programme 2017  
 2 Dataxis 2017  
 3 HIS, 2017  
 4 Euroconsult 2017

and capacity usage over the North Atlantic region should grow from 1.4 Gbps in 2016 to over 41 Gbps by 2026<sup>5</sup>. Three leading global inflight connectivity and entertainment providers, Global Eagle, Gogo and Panasonic, will rely on SES-14 to connect airplanes on the busiest aero routes.

In addition, the HTS coverage will be ideal for maritime customers in the

Americas to cater to the increasing number of **connected ships, which should nearly double to 207,000 by 2026 from 2016<sup>6</sup>**.

The same coverage will also help telco operators in Latin America deliver mobile broadband services, expected to grow to 79% penetration by 2020 from 62% in 2016<sup>7</sup>. **Data usage is expected to increase to**

**5.5 GB per user in 2021, nearly a six fold increase from 2016<sup>8</sup>**. It will also deliver broadband connectivity to enterprise and government networks.

The HTS Ku-band payload of SES-14 is designed to complement the HTS Ku-band payloads of SES-15 and SES-12 to provide comprehensive HTS Ku-band coverage.

## KU-BAND WIDE BEAMS

Supporting direct-to-home (DTH) customers and delivering connectivity

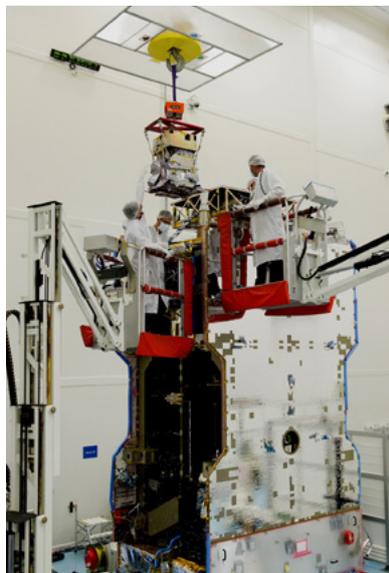
The Ku-band wide beams will bring incremental Ku-band capacity to help broadcasters and data customers grow their businesses, with a specific beam over Brazil and another over

Venezuela, Peru, Ecuador and Colombia. In addition, the coverage over the Atlantic Ocean will enable SES to serve ships and planes.

## GOLD HOSTED PAYLOAD

NASA's first mission to study the daily weather changes of the thermosphere-ionosphere

A NASA-funded payload, GOLD (Global-Scale Observations of the Limb and Disk) is also onboard the spacecraft. The GOLD mission aims to revolutionise scientists' understanding of the nearest reaches of space. It fills a critical gap in knowledge of the Sun-Earth connections by observing a dynamic area in Earth's upper atmosphere that responds both to space weather above, and the lower atmosphere below. GOLD will provide unprecedented imaging of the Earth's upper atmosphere from geostationary orbit. It will be NASA's first mission to study the daily weather changes of the thermosphere-ionosphere.



## SATELLITE MANUFACTURER AND LAUNCHER

SES-14 was built by Airbus Defence and Space and is designed to operate for 15 years in geostationary orbit.

Relying exclusively on electric propulsion for orbit raising, SES-14 is the first high-power satellite in the 4-tons class, taking advantage of the mass saving to combine two high-capacity missions into one single satellite.

This is the 12th Eurostar satellite and the second all-electric satellite ordered by SES to Airbus. It will have a take-off weight of 4.2 tons and an electric power of 12kW for the payload.

SES-14 will be launched on Ariane 5, from Guiana Space Center in Kourou.