

When a bus becomes a satellite

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Alphabus service module and Alphasat repeater module stand side by side before the mating procedure which took place at Astrium facilities in Toulouse, France on 15 March. Credits: ESA

Alphabus has met Alphasat. Europe's largest telecom satellite is taking shape with final assembly and testing ready to begin in Toulouse, France.

Planned for launch in late 2012 on Ariane 5, Alphasat will provide advanced mobile communication links for commercial operator Inmarsat.

The Alphabus platform, developed by Astrium and Thales Alenia Space under a joint ESA and French space agency (CNES) contract, is Europe's coordinated response to the increased market demand for larger telecommunication payloads.

A wide range of commercial payloads to provide TV broadcast, broadband multimedia, Internet access and mobile and fixed telecommunication services can be accommodated on Alphabus. Inmarsat's Alphasat, developed in partnership with ESA, will be the platform's first mission.

The Alphabus service module was mated Tuesday with the Alphasat communications module at the Astrium facilities in Toulouse.

“The mating took place as planned, preparing the way for the upcoming [satellite](#) test campaign,” said Stéphane Lascar, Alphabus/Alphasat Programme Manager at ESA.

Alphabus is now on the commercial market to accommodate missions requiring up to 18 kW of payload power. Improvements will extend the range up to 22 kW.

Alphasat is the first satellite to use the Alphabus platform. It carries a new generation of advanced geomobile communications payload to augment Inmarsat's Broadband Global Area Network service, enabling communications across Europe, Asia, Africa and the Middle East with increased capacity.

Alphasat features a new-generation digital signal processor and a 12 m-diameter antenna. It also carries four technology demonstration payloads developed through ESA.

“The Alphabus/Alphasat Programme is a prime example of a public–private partnership, our new way of working that ESA is pursuing in telecoms,” said Magali Vaissiere, ESA Director of Telecommunications and Integrated Applications. “Such initiatives in partnership with satellite operators will foster the development of state-of-the-art technologies to serve the new needs of the worldwide market

and Europe’s citizens.”

Provided by European Space Agency

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