

ESA and Inmarsat prepare for Alphasat

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Artist's impression of Alphasat configured for the Inmarsat XL mission. Credits: ESA - J. Huart

Today at the Paris Air Show, ESA and Inmarsat moved closer to the implementation of Alphasat, the first satellite based on Alphabus, the new European telecommunications platform.

Alphabus is a programme initiated by ESA and CNES to jointly develop a product through a project industrial team made of EADS Astrium and Thales Alenia Space. It is a new multi-purpose platform for the high-power payload communications satellite market.

Alphasat will be the satellite using the Alphabus proto-flight platform, achieving in-orbit validation of the platform through a commercial operator.

At Le Bourget, ESA and Inmarsat announced the signature of a Memorandum of Understanding (MoU), which is a step towards confirming Inmarsat as the first customer for the Alphasat platform.

Inmarsat intends to fly an extended L- band payload, in parallel to and supporting its existing world-leading global mobile satellite services. This Inmarsat mission definition is based around multimedia mobile services already provided by the current Inmarsat IV satellites through Broadband Global Area Network (BGAN)

The satellite will be positioned at 25 degrees east, with its coverage centred over Africa and providing additional coverage to Europe, the Middle-East and parts of Asia.

Implementation of this Geo-mobile application will use the Alphasat platform design in a configuration that requires a 90 degree change to the satellite flight orientation to improve accommodation of the feed/reflector configuration and allow the embarkation of a large deployable reflector. Both of these capabilities will be offered as options in the Alphasat portfolio.

In addition, Alphasat will embark three ESA-provided technology demonstration payloads: an advanced star tracker using active pixel technology, an optical laser terminal for geostationary to low-Earth orbit communication at high data rates, and a dedicated payload for the characterisation of transmission performance in the Q-V band in preparation for possible commercial exploitation of these frequencies.

The Alphasat programme meets the diverse but mutually compatible goals of all the parties, such as the first flight and in-orbit verification of Alphasat and the implementation of an advanced L-band operational payload, which will supplement the existing Inmarsat satellite constellation and offer the opportunity for new and advanced services.

Negotiations to conclude the contract are continuing and are intended to allow the commencement of the Alphasat programme by the third quarter of 2007 with a launch targeted by 2011.

Source: ESA

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