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FUTURE TECHNOLOGY MEETS NEW COMMUNICATION STRATEGIES - THE HEINRICH HERTZ SATELLITE MISSION

Abstract

In July 2017 the contract for the Phase C/D of the German national telecommunication mission Heinrich Hertz was awarded to OHB System AG. The objective of the mission is twofold:

- On the one hand a total of 10 new equipment for telecommunication satellites will gain their flight heritage on Heinrich Hertz. These equipment are forming together a high end communication payload to provide new communication strategies and services.
- On the other hand a dedicated communication package is installed to provide communication service for the German Bundeswehr.

With this mission, Germany aims at consolidating their leading role in today's satellite telecommunication industry. The mission will be conducted in geostationary orbit with a projected lifetime of 15 years and a launch scheduled for end of 2021. The OHB SmallGEO platform has been selected for the mission and thereby becomes the 4th SmallGEO telecommunication contract after the ESA missions H36W-1, EDRS-C and Electra. Compared to its predecessors H36W-1 and EDRS-C the Heinrich Hertz mission faces increased demands for accommodation space, antenna configuration, mass and operational flexibility. The SmallGEO for the Heinrich Hertz mission now accommodates a total of eight reflector antennas; has improved the payload accommodation space and includes a hybrid propulsion system using the novel High-Efficiency Multistage Plasma Thruster as the primary thruster for North/South Station Keeping.

The paper will present an overview of the finalized satellite design and highlight a selected number of mission specific features and services that characterize the Heinrich Hertz satellite and the OHB SmallGEO product line.