

IAF SPACE POWER SYMPOSIUM (C3)
Space Power Systems for Ambitious Missions (4)

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GENERIC HIGH POWER SYSTEM FOR MANNED MISSIONS TO THE MOON AND BEYOND

Abstract

Our company has developed the GHPS (Generic High Power System) the standard electronic product for exploration and crewed space station missions. Developed in the frame of the Gateway program, it provides scalable high power solutions for 120V platforms compliant with NASA manned missions requirements.

Easy in-flight maintainability, isolated bidirectional efficient power conversion, a wide range of power distribution elements for crew usage and on board equipment, 15 years life cycle and failure tolerance concept in line with having humans on board are some of the key features that set this technology apart.

This paper will focus on the key GHPS characteristics, whose inherent flexibility permits to configure energy management subsystems with multiple primary and secondary power buses covering all the energy needs of manned space stations. er converters and on the voltage regulation of the control loops devoted to main bus, battery and secondary buses.