

Modular Power Bus for Space Vehicles (MPBus)

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Abstract : The rapid growth of the private satellite launchers sector is leading the space race. Hence, with the privatization of the sector, all the companies are racing for a more efficient and reliant way to set satellites in orbit. Having detected the current needs for power management in the launcher vehicle industry, the Modular Power Bus is proposed as a technology to revolutionize power management in current and future Launcher Vehicles. The MPBus Project is committed to develop a new power bus architecture combining ejectable batteries with the main bus through intelligent nodes. These nodes are able to communicate between them and a battery controller using an improved, data over DC line technology, expected to reduce the total weight in two main areas: improving the use of the batteries and reducing the total weight due to harness. This would result in less weight for each launch stage increasing the operational satellite payload and reducing cost. These features make the system suitable for a number of launchers.

Keywords : modular power bus, Launcher vehicles, ejectable batteries, intelligent nodes

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