

Abstract: **RTU extension: Full step motor driver and high voltage DCDC**

Development of two modules for the TASinB RTU. Both GIM and FSMOT modules have been designed on existing and new building blocks with the aim to immediately arrive at a flight compatible design.

Therefore, the design took all flight-related constraints into account to allow for immediate and direct transfer to flight grade manufacturing. The EM prototypes that were built have been tested at extended temperature range and all flight-related analyses have been performed, serving as direct input to the CDR of the first-use project, being RIDU ESPRIT. The exact PCB routing has been used for FM manufacturing within that project and the EM prototypes have even been transferred to RIDU ESPRIT to serve in the EM RIDU, successfully in use for more than a year now. This was only possible due to the achieved functional and physical compliance of the EM prototypes with the target application. It can be concluded that the RTU portfolio extension was successful and immediately found its application in a first flight project.
