

MTG – PF/PL architecture and interfaces

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The MTG Imager satellite architecture is presented for avionics, command-control and mission data handling. It focus on platform to payload interfaces : command-control is performed through PL and PF specific 1553 buses, PL mission data distribution and configuration is performed through a SpW network and avionics is ensuring fine pointing mode performance by AOCS a-priori compensation of instrument's scan perturbation using a pre-defined law stored in mass memory. The rationale of these interface choices was to define a common platform for imaging and sounding missions with the objective to segregate command-control and mission data flows and to minimize the PF/PL interactions for parallel developments of the 4 PL/PF modules and software. The FDIR strategy chosen for PF/PL dependency is also addressed. A lesson learn in between PDR and CDR, lists the pros and cons and underlines some improvements. The distribution of the SAVOIR functional blocks is highlighted and the list of PL/PF interfaces with protocols and main performance figures are provided.