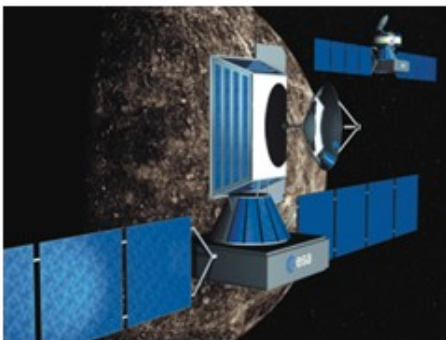




## BepiColombo Mercury Planetary Orbiter Remote Interface Unit (MPO RIU) and Mercury Transport Module Remote Interface Unit (MTM RIU)

The BepiColombo mission is the 5th cornerstone of the Cosmic Vision scientific programme of the European Space Agency (ESA). It is an interdisciplinary mission to Mercury in collaboration between ESA and ISAS (Institute of Space and Astronautical Science)/JAXA (Japan Space Exploration Agency) under the overall responsibility of ESA.

As part of the BepiColombo programme SEA has been contracted for the provision of all materials, manpower, facilities, supplies, tools, equipment, documentation and support services required to design, manufacture, assemble, test, and deliver the Mercury Planetary Orbiter Remote Interface Unit (MPO RIU) and the Mercury Transport Module Remote Interface Unit (MTM RIU).

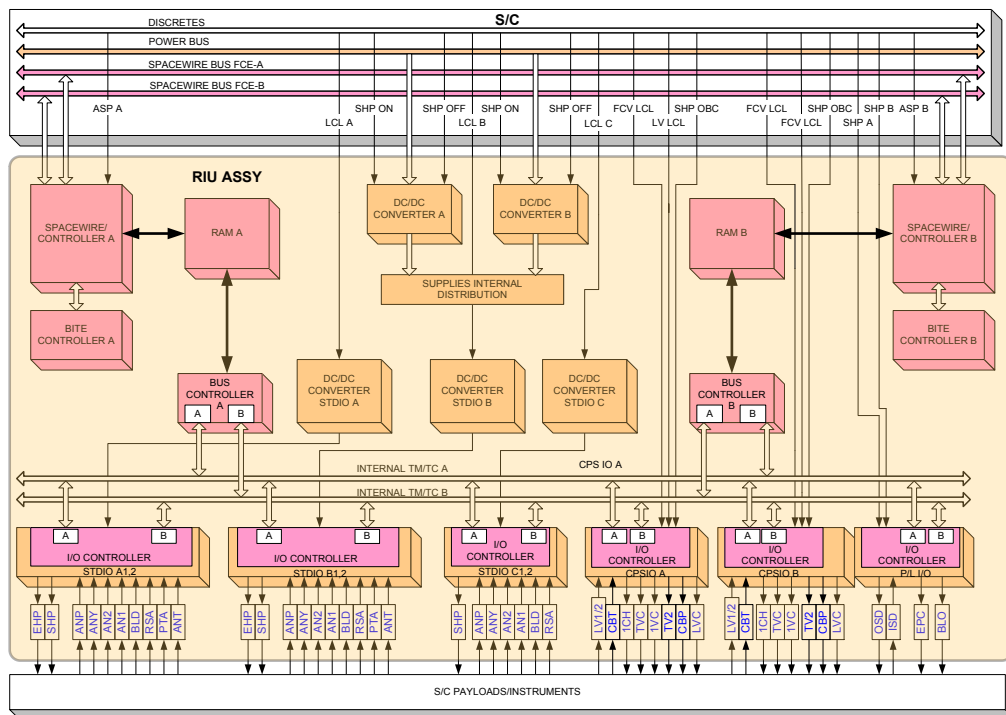


The MPO RIU and the MTM RIU will be used as stand-alone units in the BepiColombo Data Management System and will represent the central interface units of the satellite.

Each Remote Interface Unit will decouple the discrete interfaces from the On-Board Computer (OBC). In general the RIUs will provide interfaces with all BepiColombo units that cannot be addressed through the MIL-STD-1553B bus or SpaceWire links.

The SEA design is based on our significant experience in the delivery of space hardware and software plus substantial reuse of previously developed elements. These include two EarthCARE satellite items, the processor section from the

BroadBand Radiometer (BBR) and the redundancy/cross-strapping and LCL solutions from the Cloud Profiling Radar (CPR). In addition the A/D converter and FPGA from SEA's Micro Electro-Mechanical System (MEMS) Rate Sensor product will be used.



The RIU designs are based on an in-depth knowledge of space hardware, informed by a heritage of successful past projects and delivering a practical solution with regard to all project constraints