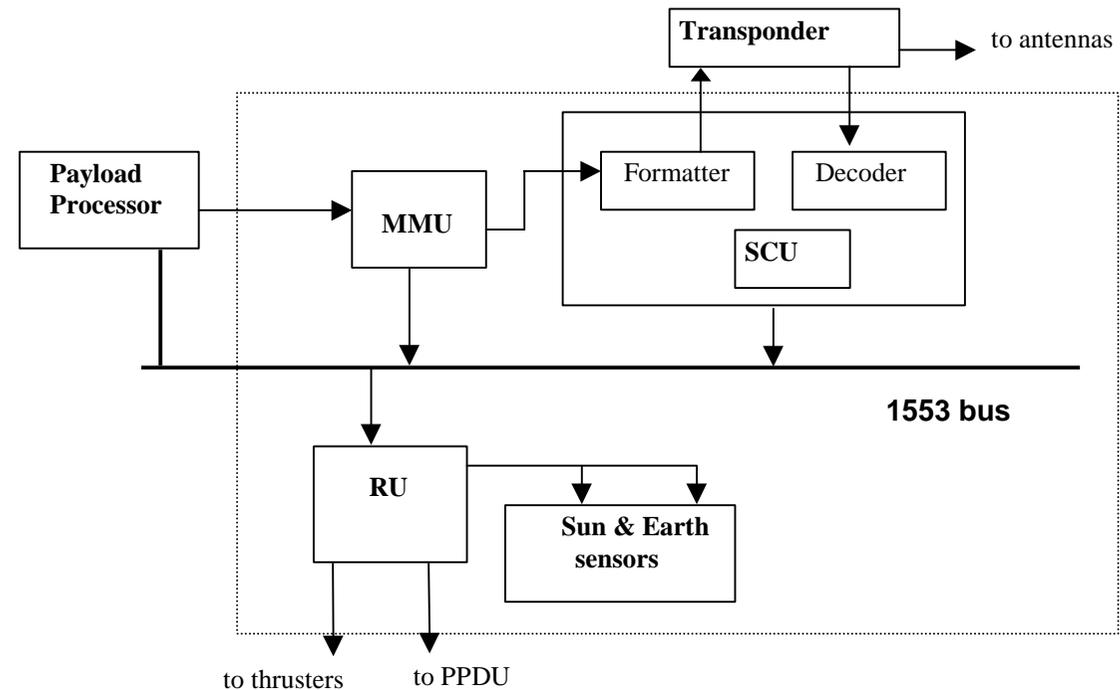## ON BOARD DATA HANDLING AND TELECOMMUNICATIONS

- Highly integrated payload data processing tasks are executed in a dedicated payload processor. Spacecraft data management is perfectly suited for the Integrated Control System architecture planned for the PRIMA bus

- The Spacecraft Control Unit handles the ground link and performs data management, fault detection and recovery, and pre-operational attitude control. Data are collected and commands distributed through a 1553 bus, and a Remote Unit is used for interfacing with attitude and other equipment



- Total data collection rate is 16 Mbit/orbit and an on-board mass memory sized for 24h autonomy would amount to 240 Mbit

- With an equatorial ground station (Malindi), data can be transmitted to ground once per orbit at 26 kbps, or even once per day at 0.5 Mbps

- The TT&C system is a standard architecture with one coherent transponder, two S-band antennas and a RDFU switch. The RF transmit power is < 1 W