

# Flight Software Development for KoDSat

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The KoDSat(KSLV-1 Demonstration Satellite) system performs primary mission for acquiring the vibration & acoustic data from KSLV-1(Korea Space Launch Vehicle-1), the separation images from fairing and the orbit insertion accuracy.

The KoDSat Flight Software execute in single-computer the spacecraft, the OBC(On-Board Computer). The software resides on 80386 processor and communicates the payload via RS-422. The software controls the hardware and instruments of the spacecraft, gathers the data from DAU(Data Acquisition Unit) and GPS(Global Positioning System) and transmits to the Ground System. To acquire the many data from the unis via RS-422, OBC executes the PingPong Buffering System. PingPong Buffering system stored the maximum 2 Kbytes via RS-422 and occurs the interrupts. When the interrupt occurs, the flight software gets the data, packetize the CCSDS Format and stores the Mass Memory.

The KoDSat Flight Software completes critical detail design and is testing in the ETB(Engineering Test Bed).