



ORBiT Avionics II System Architecture

Sys-Arch

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1 ORBiT Avionics II On Board Part (OA-II OBP) System Architecture

1.1 System Description

1.2 Software System Architecture

The software system for OA-II can be divided to three layer: physics layer, system layer, and application layer.

Physics Layer

The physics layer program is program that directly interact with hardware memory. It include driver for different buses. It also include the program that directly execute on processor.

System Layer

The system layer program is program what connect between physics level and application level. It receive data from different physics layer source and group them. It will feed all the grouped data to relative application program. It also provide critical control before and during the fly. In the same time, it also record all the data to on board storage.

Application Layer

The application layer program is use to process data that provided by the system and provide infomation that will send back to OA-II BSP.

1.3 Hardware System Architecture

Mission Platform Container (MPC)

Swappable Mission Platform

Swappable Computing Module (SCM)

Swappable Telemetry Module (STM)

Swappable Actuator Module (SAM)

Adaptable Rockets

1.4 PCB Layout and Manufacture Description

PCB Layout

PCB Manufacture Requirement

2 ORBiT Avionics II Base Station Part (OA-II BSP) System Architecture

2.1 System Description

2.2 Software System Architecture

Physics Layer

System Layer

Application Layer

2.3 Hardware System Architecture

3 ORBiT Avionics II Backplane System (OA-II BPS) System Architecture

3.1 System Description

3.2 Software System Structure

3.3 Hardware System Structure

4 ORBiT Avionics II Wireless System (OA-II WLS) System Architecture

4.1 System Description