# HS-2 CDR CDH Block Diagram

The following diagrams illustrate the design of the Command and Data Handling (CDH) subsystem for HuskySat-2.

Figure 1 provides an overview of the CDH hardware architecture, showing which pieces of hardware it is interacting with. The Flight Computer and Payload PCBs serve as the primary components of the CDH subsystem, providing command execution, data processing, and storage capabilities.

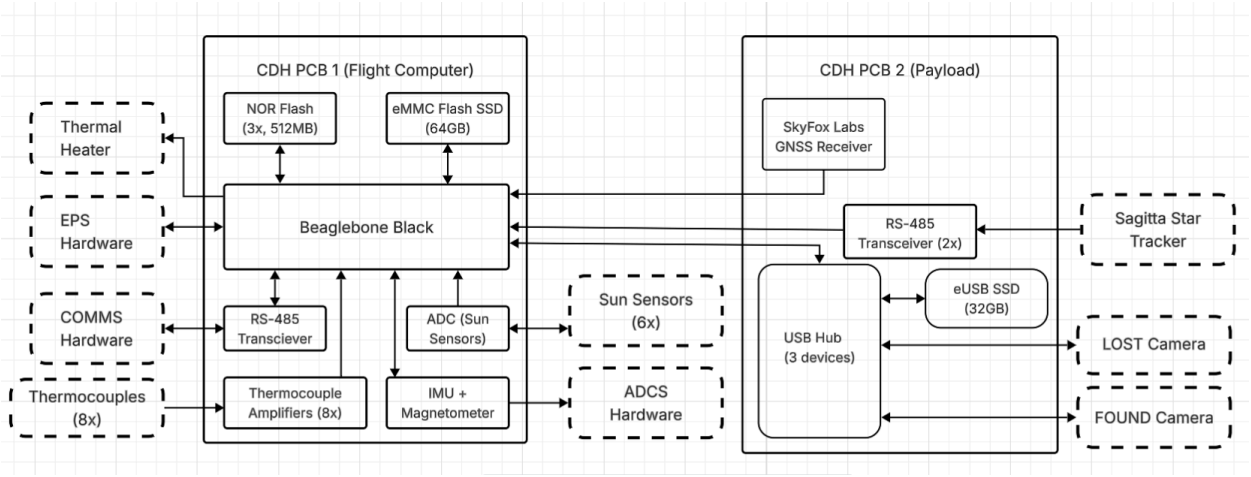



**Figure 1**

Figure 2 illustrates the hardware interfaces between the CDH subsystem and the other spacecraft subsystems, along with the telemetry, command, and data pathways that enable spacecraft operation. Note that interfaces within other PCBs are simplified for the purposes of seeing what CDH sends and receives.

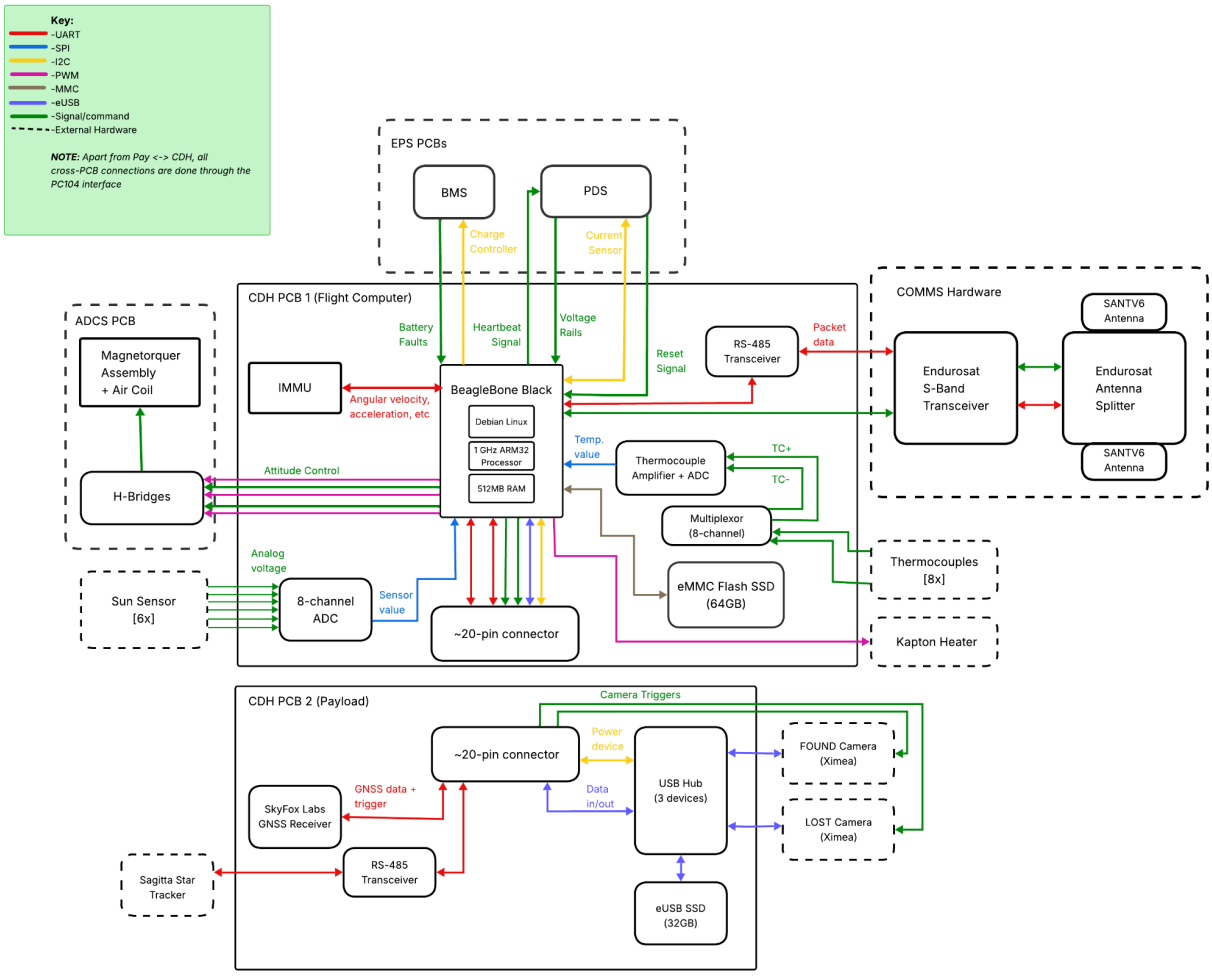



**Figure 2**

Figure 3 showcases the top-level topology of the software system on the satellite, mainly showcasing how the top-level state machine interacts with each subsystem (application layer) software, and how faults are handled through the provided FatalHandler component.

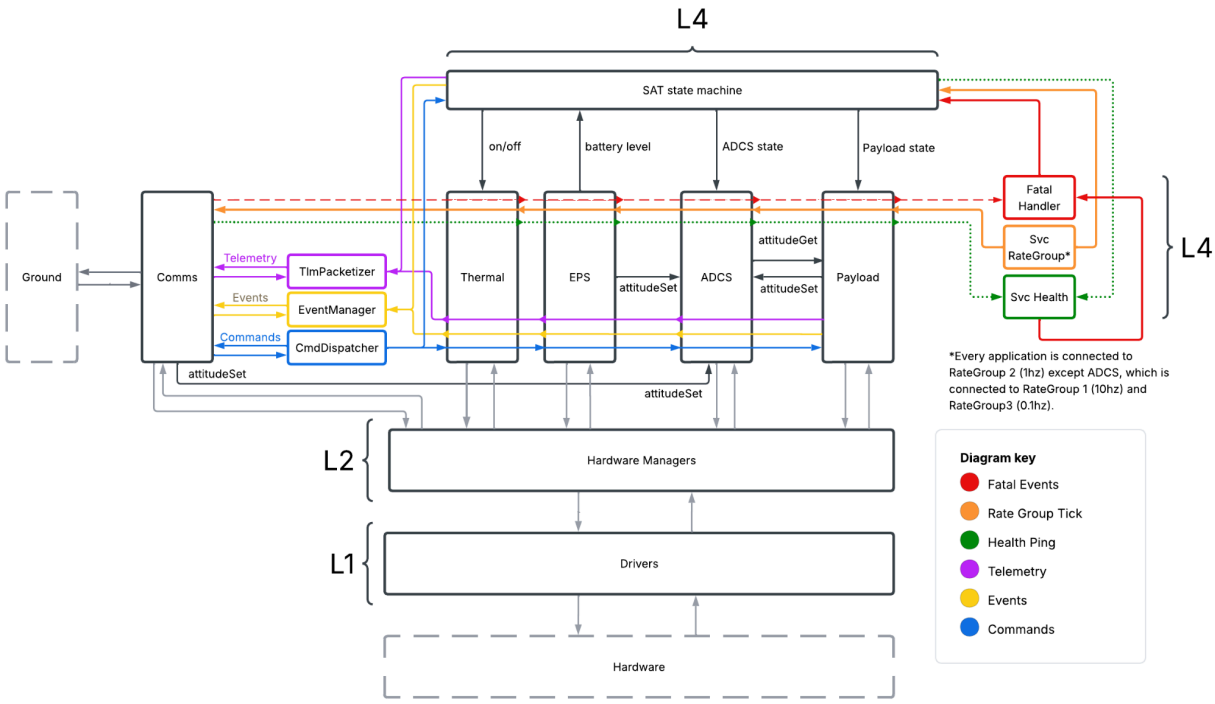



**Figure 3**

Figure 4 shows the state diagram for the top-level state machine, including transitions and the conditions for them between each state. Information about each state can be found in the Mission Design Document and Software Design Document.

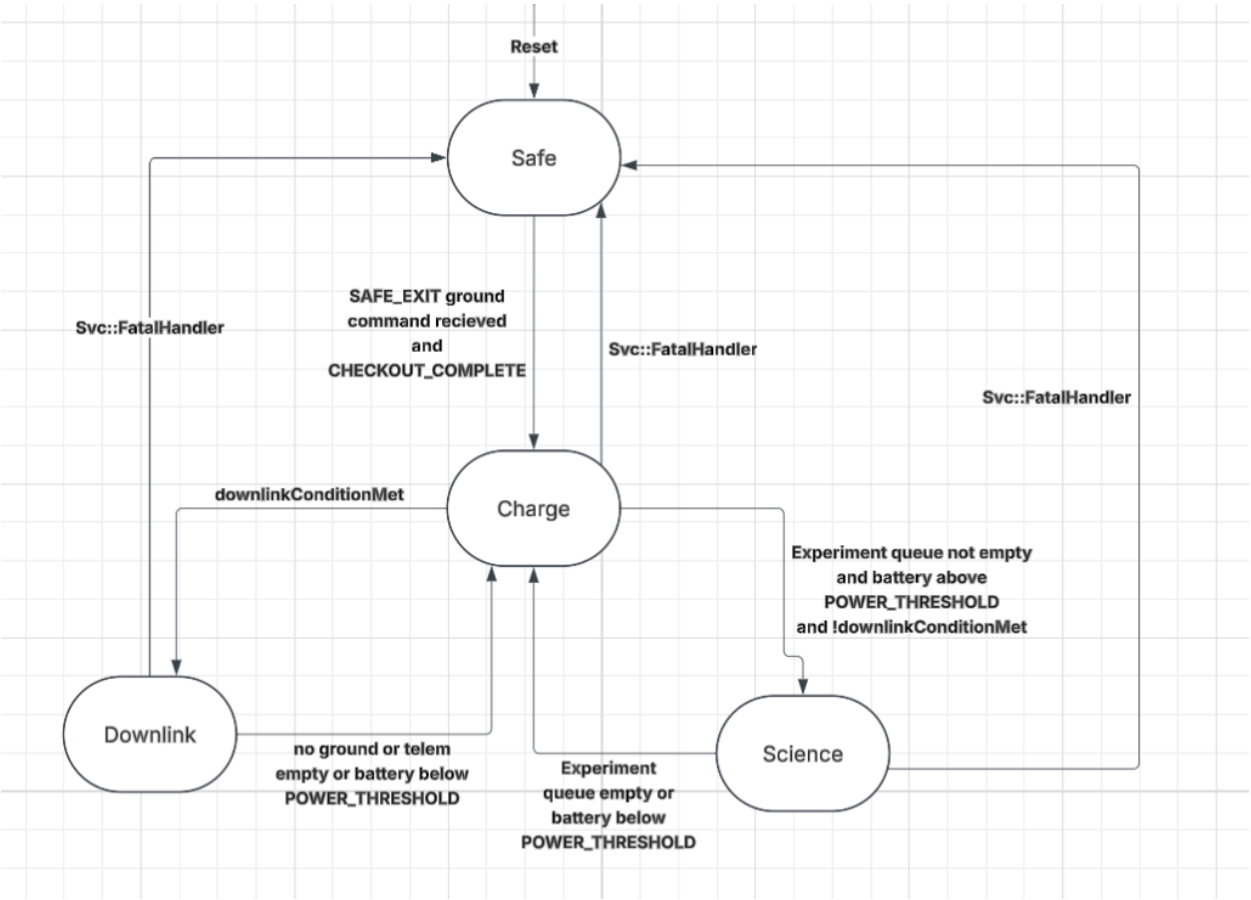



**Figure 4**