

Red Canyon cFS Product Suite

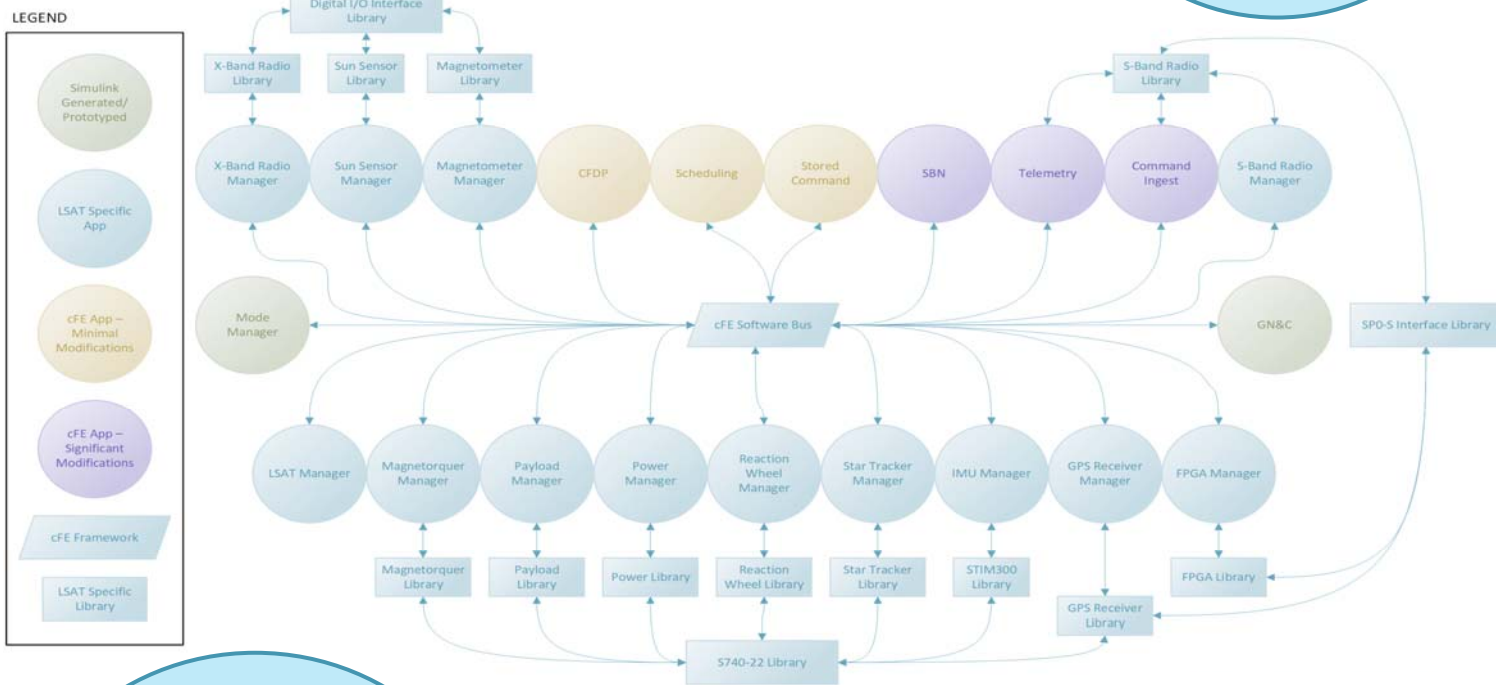
Red Canyon (RC) deploys its customized version of NASA Goddard Space Flight Center's (GSFC) core Flight System (cFS) flight software (FSW) to provide customers with a low-cost, high-quality, fast, and flexible solution for diverse space FSW platforms resulting in reduced technical, schedule, and cost risks

Features of RC's cFS Product Suite:

- For deployment on avionics hardware, real time operating systems, and customer-specific mission scenarios
- Layered architecture fosters portability of applications across operating systems and on-board computers
- Simplified integration on spacecraft HW
- Full dynamic simulation, modeling, and closed-loop testing prior with HWIL
- MATLAB/Simulink-generated C code integration with cFS enabling direct GN&C math modeling

cFS app product lines for standard spacecraft software subsystems like:

- GN&C
- Star Trackers
- IMUs
- Magnetometers
- Magnetorquers



cFS Missions:

- LADEE
- LRO
- GPM
- RBSP
- MMS
- Morpheus
- Solar Probe Plus
- Mighty Eagle Lander
 - CPST
- Orion backup computer

Advantages of cFS:

- Facilitate formalized software reuse on every spacecraft for common functions
- Provide a platform for advanced concepts and prototyping
- Provide an up-front architectural framework and services needed commonly across spacecraft/real-time embedded command/control applications *

*<https://cfs.gsfc.nasa.gov/introduction.html>

