Small satellites, including CubeSats, are known for their potential to provide value added science as rideshares on larger vehicles. However, there is a known technology gap between the current capabilities of many small satellites and what is needed to support a high profile multi-year interplanetary exploration mission. This presentation will review the challenges in radiation tolerance, thermal stabilization, and commercial parts as they relate to interplanetary small satellites. The state of the art and current capabilities will be briefly surveyed and compared to the needs for a typical multi-year interplanetary science mission. Possible design solutions and technology development plans will be recommended as a means of motivating further research into high return areas for advancing small satellite capabilities to support future interplanetary space missions.