Rascal Interface Control Document

Saint Louis University

Rascal



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Table of Contents

[1. Interface Overview 4](#_Toc385973323)

[1.1. Primary-Secondary Spacecraft Interface Overview 4](#_Toc385973324)

# Interface Overview

This Interface Control Document (ICD) serves to define all relevant interfaces between the Space Systems Research Lab’s (SSRL) Rascal payload (consisting of a 3U secondary spacecraft and 1.5U propulsion/image processing unit) and Boeing’s Colony-II bus. These interfaces consist of two major types:

1. **Mechanical -** structural interfaces that involve the physical connections between SSRL-Boeing components.
2. **Electrical –** digital/analog interfaces that involve data communication and power transmission to and from SSRL-Boeing components.
3. **Radio –** RF interfaces that involve data transmission between the ground and the spacecrafts.

Beyond these two designations, each interface can be broken down into three general categories: those that interface the secondary spacecraft with the primary spacecraft, those that interface the image processing/propulsion unit with the rest of the primary spacecraft, and those that interface both spacecraft to the ground. Each of interfaces within these categories will be defined in the sections that follow.

## Primary-Secondary Spacecraft Interface Overview