

LM 400 Payload Accommodation

INTRODUCTION

Lockheed Martin Space encourages payload providers and mission planners to create missions optimized for—or at least compatible with—our versatile and highly capable LM 400 LEO/GEO Small Satellite platform. Table 1 provides a summary of typical interfaces and performance capabilities provided by the LM 400 platform. These specifications serve as a guide to those interested in flying on this bus. An actual compatibility assessment is best done through an exchange of detailed information and interface requirements, as the LM 400 is quite flexible in configuration and capability. Figure 1 shows a nominal payload volume for an externally mounted payload with internal electronics, if required. In many cases, specific interface adaptations are easily accommodated.

Figure 1: LM 400 Payload Mounting

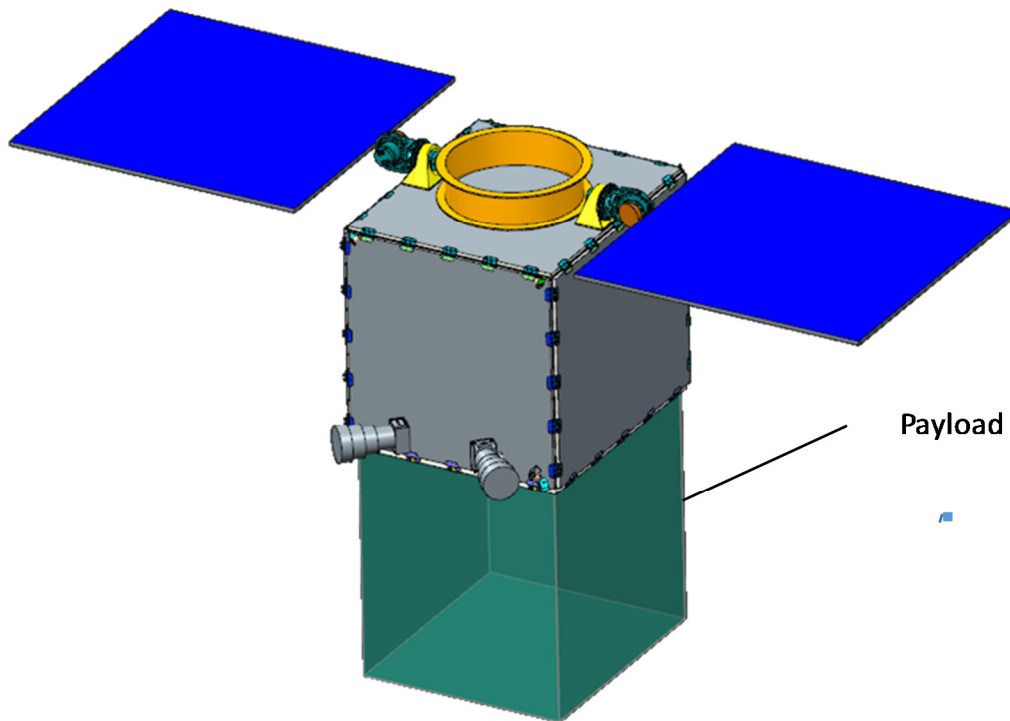


Table 1. LM 400 Hosted Payload Accommodation

Typical Hosted Payload Resource Allocations, Performance Characteristics and Interface Requirements	
Maximum Hosted Payload Resource Allocations	
Payload Mass Limit	175 kg
Payload Power	500 peak, 250 Watt orbital average
Payload Volume (contiguous)	1 cubic meter
Key Platform Performance Characteristics	
Attitude Control (Including Stationkeeping Maneuvers)	
Attitude Control System	3-axis stabilized
Orbital Maneuvering	Up to 600 m/s
Pointing Knowledge, 3 σ	0.0027 deg
Total Pointing Accuracy, 3 σ	<0.01 deg per Axis
Mission Parameters	
Orbit	LEO or GEO
Duration	5-7 years
Nominal Program Schedule	24-30 months
Key Platform Interface Characteristics	
Command and Data Handling Interfaces	
Standard Payload Data Bus	MIL-STD-1553B data bus
Alternate Serial Bus Interface(s)	RS-422 derived bi-directional serial bus
Telemetry Types	-32 V, 28V
Payload Downlink	Active analog, passive analog, discrete, serial (bidirectional serial bus), serial (1553), software 16 Bit / 32 Bit words, and memory dumps
	X-band or Ka-band downlink.
Power	
Main Bus Voltage (Standard)	28v +/-6v