



Pointer Sciences

Pointing Innovation Forward

Statement of Capabilities

Integrated Spacecraft Software - Progressive Verification - RPO - Mission Operations

We develop flight software, ground software, and command & telemetry definitions in a unified engineering environment - keeping spacecraft and ground interfaces synchronized from development through verification and mission operations.

Integrated Flight & Ground Software Engineering

UNIFIED DEVELOPMENT ENVIRONMENT		
Flight Software Onboard applications Command handling Telemetry generation RPO / mission algorithms	Shared C&T Definition Common command & telemetry Consistent interfaces Synchronized changes Configuration control	Ground Software Command generation Telemetry processing Mission applications Operator interfaces

Customer value: Developing flight software, ground software, and operational data definitions together reduces interface drift, propagates changes consistently, and enables integrated testing earlier in the lifecycle.

Core Capabilities

Flight & Ground Software Flight software architecture, command & telemetry handling, ground applications, interfaces, integration, requirements traceability, configuration management, and synchronized data definitions.	RPO & Relative Navigation Rendezvous and proximity operations using visible cameras, IR cameras, and LiDAR, with image/sensor processing, target extraction, relative-state estimation, and mission-specific navigation algorithms.
Progressive Verification & FlatSat Unit test on the development platform, model-level system test, FlatSat-level system test. Support software verification, interface checks, timing, data flow, command/telemetry, scenarios, and regression testing.	Mission Applications & Operations Mission applications, command and test sequences, procedures, mission planning and rehearsal, launch/early-orbit support, in-orbit test, commissioning, anomaly troubleshooting, software patches, and on-orbit operations.

Progressive Verification - Increasing Fidelity, Reducing Risk

1. UNIT TEST PC / Development Environment Verify units and low-level logic.	2. SYSTEM TEST - MODEL PC + Spacecraft Models Verify integrated end-to-end behavior.	3. SYSTEM TEST - FLATSAT COTS Hardware Prototype Verify against spacecraft-representative hardware.
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End-to-End Capability: concept & requirements, unified flight/ground development, synchronized C&T, progressive verification, RPO/relative navigation, mission applications, on-orbit operations.