## Space Systems & ISS Payload Integration

## ISS Payload Integration



## **INTEGRATION CAPABILITIES:**

- Payload Certification
  - Requirements Definition
  - Verifications
  - Safety Certification
- Mission Management
  - Mission Requirements Definition
  - Resource Planning
  - Program Liaison
  - ✤ Integrated Testing
- Physical Integration
  - Flight Manifesting
  - Ground & Flight Logistics
  - ✤ Vehicle Integration
  - Late and/or Cold Stowage Handling & Logistics
- Post Flight Payload Processing
  - Post Flight Hardware Recovery
  - Sample Return Logistics
- Implementation Partner Payload Services
  - Concierge type services for spaceflight
  - Educational & Public Outreach
  - Research & analysis



Our Payload Integration Team supports the of both pressurized integration and unpressurized spaceflight items, such as scientific payloads, ISS racks, logistics and assembly items, crew-related provisions, vehicle logistics hardware, research and development hardware, and spare/orbital replacement units. Our approach to ISS payload integration reduces the level of effort required through the use of in-house tools, templates and custom schedules which have been created to combine common products and data typically required for payloads.

ZIN is experienced in the flexible utilization of different launch and on-orbit carriers. We are able to customize a schedule fitting any level of complexity. Within the past 5-years, ZIN flew payload hardware on 31 of the 54 cargo and crew flights to ISS on 6 different types of Launch Vehicles (LV). The LV manifest is evolving and dynamic, consequently requiring a mature but flexible set of processes and tools. We also provided support to all of these vehicles for on-orbit operations.

- Payload Certification
- ISS COTS processes and requirements
- Verifications
- Fast track integration process
- Development of Integrated Safety, Operation, Stowage, and Training Documentation.
- Multi-Increment Planning
- Data Set Submittal
- Integration Working Groups and Panels
- Integration Documentation
- ISS Payload Advocacy
- Manifesting
- Physical Integration
- Post Flight Payload Processing







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