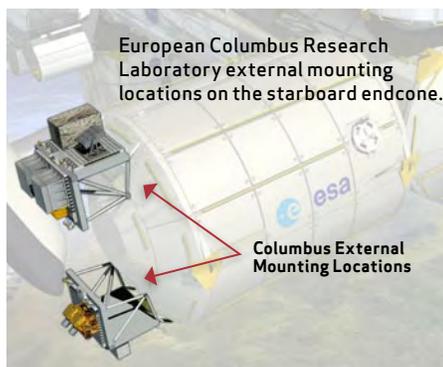




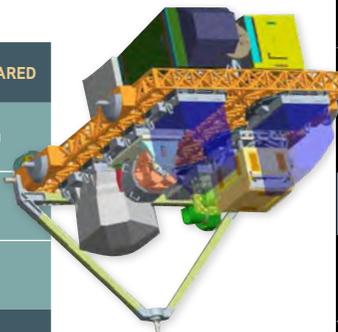
External Research Accommodations

Many locations are available for the mounting of payloads or experiments on the outside of the Station: on the U.S. Truss, on the Russian elements, and additional accommodations will be provided when the Japanese Experiment Module (JEM) Exposed Facility (EF) and Columbus modules are attached.



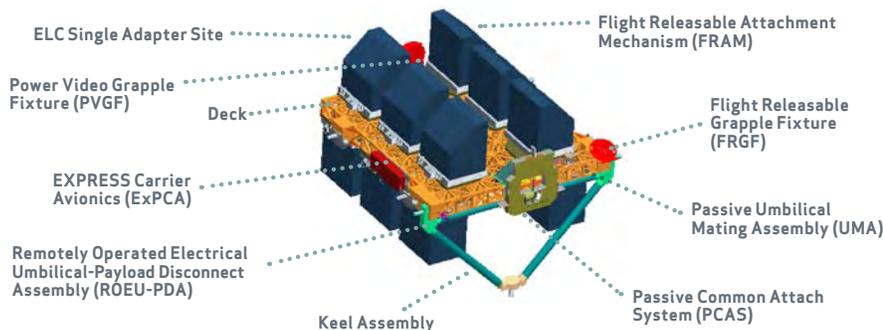
External Research Locations

EXTERNAL UNPRESSURIZED ATTACHMENT SITES	STATION-WIDE	U.S. SHARED
U.S. Truss	10	10
Japanese Exposed Facility	10	5
European Columbus Research Laboratory	4	0
Total	24	15



External Payload Accommodations

External payloads may be accommodated at several locations on the U.S. S3 and P3 Truss segments. External payloads are accommodated on an Expedite the Processing of Experiments to the Space Station racks (EXPRESS) Logistics Carrier (ELC). Mounting spaces are provided, and interfaces for power and data are standardized to provide quick and straightforward payload integration. Payloads can be mounted using the Special Purpose Dexterous Manipulator (SPDM), Dextre, on the Station's robotic arm.



Express Logistics Carrier (ELC) Resources

Mass capacity	4,445 kg (9,800 lb)
Volume	30 m ³
Power	3 kW maximum, 113-126 VDC
Low-rate data	1 Mbps (MIL-STD-1553)
High-rate data	95 Mbps (shared)
Local area network	6 Mbps (802.3 Ethernet)

ELC Single Adapter Resources

Mass capacity	227 kg (500 lb)
Volume	1 m ³
Power	750 W, 113-126 VDC 500 W at 28 VDC per adapter
Thermal	Active heating, passive cooling
Low-rate data	1 Mbps (MIL-STD-1553)
Medium-rate data	6 Mbps (shared)

JEM-EF Resources

Mass capacity	550 kg (1,150 lb) at standard site 2,250 kg (5,550 lb) at large site
Volume	1.5 m ³
Power	3-6 kW, 113-126 VDC
Thermal	3-6 kW cooling
Low-rate data	1 Mbps (MIL-STD-1553)
High-rate data	43 Mbps (shared)

European Columbus Research Laboratory Resources

Mass capacity	230 kg (500 lb)
Volume	1 m ³
Power	2.5 kW total to carrier (shared)
Thermal	Passive
Low-rate data	1 Mbps (MIL-STD-1553)
Medium-rate data	2 Mbps (shared)