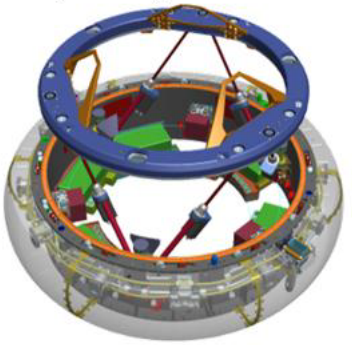
NASA Docking System (NDS) Block 0 Configurations

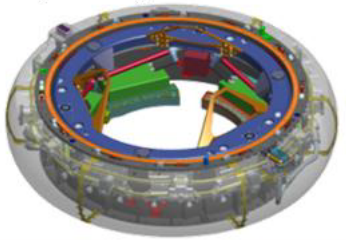
Dash Number	NDS (-301)	NDS (-302)	NDS (-303)	NDS (-304)
Configuration Differences				
Status	**In Development**	✓	**Avail on Request**	**Avail on Request**
Specification Max Weight (lb)	750	704*	✓	711
Host Power	120 VDC	✓	28 VDC	✓
NDS Tunnel Height (in.)	15	TBD	✓	✓
Dynamic Seal or Seal Surface	Seal	Seal Surface	✓	✓
Host Leak Check Port	NDS Tunnel	Host tunnel	✓	✓
Separator Striker Inteface	Integral to NDS	TBD	✓	✓
Power & Data Umbilical Interface	Integral to NDS	On Host Structure	✓	✓
SCS Magnet Striker	Yes	✓	✓	No
Hooks	12 Active/Passive	✓	✓	12 Active
Pyrotechnic Hook Release	Yes	No	✓	No
Electrical Boxes Mounting	Integral to NDS	Mounted to Host	✓	✓
Electrical Cable Length/Routing	Integral to NDS	Host specific routing	✓	✓
Hermetic Pass Thru for NDS control	Integral to NDS	In Host Structure	✓	✓
MMOD Shield	Integral to NDS	Host Provided	✓	✓
Passage Way Closeout	Integral to NDS	Host Provided	✓	✓
Life	231 days	15 Years	✓	✓
Active Docking Cycles	2	Future capability	✓	✓
Passive Docking Cycles	50	✓	✓	None
Other Key Interfaces				
S/W Interface to Host	EIA422 or MIL-STD-1553	✓	✓	✓
Comm Channels to Host (NDS control and heater control)	One comm channel for A & one for B	✓	✓	✓
Motorized Transfer Umbilicals	Power and Data	✓	✓	✓
Motorized Separation System	Yes	✓	✓	✓

Legend	✓	Indicates config is same as -301

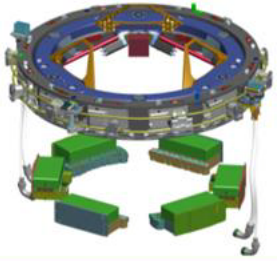
Ready to Dock (Active Mode)
Soft Capture System Extended



Ready to Dock/Launch
(Excluding -302 Passive Mode)
Soft Capture System Retracted



Ready to Dock/Launch
(-302 Passive Mode)
Electrical Boxes mounted in host



Configuration Description

- 301: Core: 120VDC power, integrated electronics
- 302: Short: Reduced height; electronics boxes remotely mounted
- 303: Low Voltage: Same as 301 except 28VDC power input
- 304: Abated: Same as 301 except reduced functionality/reduced mass, selected missions

*Complete -302 integration mass requires a host provided components of ~65 lb