

Space-Rated Modular Robotic Arm System

Combining the high-reliability space flight elements and techniques utilized on the Mars 2020 Rover project with the cost-effective technologies developed for the ground-based RoboMantis line has resulted in the creation of the xLink Robotic Arm; a commercial and modular robotic arm system capable of supporting a variety of demanding customer applications across LEO, GEO and cis-lunar environments.

With flexibility in the arm Degrees of Freedom as well as the payload torque capability, the xLink configuration can be customized per customer specifications or application demands without significant non-recurring or lead-time impacts. The xLink Robotic Arm was developed by the same team that built the robotic arm for NASA/JPL's Mars 2020 Perseverance rover.

For requests or questions send to: info@motivss.com



(EDU Shown with optional Gripper End Effector)

Maximum Tip Loading	±60 N; ±12 N-m (Current FTS Limit, can be customized)
Integrated Sensing Capability	Localized Joint Torque Sensing Distal-End 6-DOF FTS
RA Mass	22.7 kg 24.9 kg (with Gripper End Effector)
Payload at Full Extension	6.2 kg 4 kg (with Gripper End Effector)
Workspace Radius	0.95 m Reachable; 0.36 m Dexterous 1.10 m Reachable; 0.21 m Dexterous (with Gripper End Effector)
Joint Ranges (customizable)	J1, J2, and J4: -165° - +165° J3 and J6: -185° - +145° J5: -225° - +105° J7: -105° - +225°
Maximum Speed	0.3 rad/s
Maximum Acceleration	0.2 rad/s ²
Stowed Footprint	460 x 660 x 455 mm 620 x 660 x 455 mm (with Gripper End Effector)
End Effector Services	Power: 28V, 6A and 12V, 6A (Max) Communication: RS422
Communication	Motiv GoBus Protocol (RS422)
Flight Unit Operational Temperature	-55° to +70° C
Power Supply Requirements (for EDU)	28V, 20A (Motor Power) 12V, 4A (Logic Power)
Operating System	ROS2 Humble