

"Rosie"

Omni-Directional Mobile Base w/ 6-DoF Arm and Gripper

Rosie is a fully integrated mobile manipulation platform that is great for education and research.



Weight	16.5 kg (with four batteries)		
Linear Speed	0.5 meters per second (with X8-3s)		
Batteries	Grin Technologies, LiGo Battery (Fits up to 4)		
	36V 2.7Ah, 98Watt*Hrs, 10A Max		
Battery Life	1-2 Hours		
(Using 2 Batteries)	Ability to hot-swap batteries for uninterrupted use		
X-Series Actuators	HEBI Mounting Brackets and Wiring Included		
	3x X5-1 (Wrists) 1x X5-9 (Gripper)	3x X8-3 (Wheels)	
		2x X8-9 (Base and Elbow)	
		1x X8-16 (Shoulder)	
Accessories	3x 6" Omni-Wheels		
	1x HEBI Parallel Gripper Assembly		
Mechanical Interface	T-Slot Extrusion (80/20®)		
	Easy integration of additional components or sensors		
Integrated Electronics	Intel® NUC Computer	Wireless Access Point	
	Ethernet Switch	Power Electronics	
Bulkhead Connectors	1x HDMI to Computer	3x USB to Computer	
	Ethernet Port to Internal Switch	M-Stop Button	
	2x RF Antenna for Wireless Access Point		
	Anderson Powerpole Power Connectors for Batteries		
	Power Output for X-Series Actuator		
	Additional Power Outputs for 5V, 12V, and 24V (5A each)		
	Computer (White LED) and Actuator (Blue LED) Power Buttons		
Software	Joystick Control with HEBI Mobile I/O App (iOS and Android)		
	Example code currently available in MATLAB or ROS		

Arm and Gripper Configuration

Arm Max Reach	750 mm	Gripper Max Finger Torque (X5-9)	1.1 Nm
Arm Payload @ Max Reach*	0.6 kg	Gripper Max Finger Force (50mm from Pivot)	23 N
Arm Half Reach	375 mm	Parallel Gripper Stroke Length	82 mm
Arm Payload @ Half Reach*	3.5 kg	Arm and Gripper configuration are customizable upon request	

^{*} Payloads calculated with default 6-DoF Arm configuration and no gas spring*

