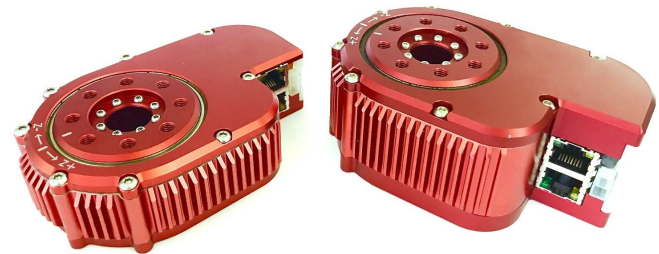


X-SERIES ACTUATOR[®]

This series of powerful robot actuators allows engineers, researchers, and industrial integrators to quickly and easily create world-class custom robots of any configuration. X-Series Actuators[®] are packed with sensors that enable controllable position, velocity, and sensitive torque control as well as three axis inertial measurement.

Each actuator is a series-elastic actuator that integrates a brushless motor, gear train, spring, encoders, and control electronics into a compact package that runs on anything from 18V-48V DC and communicates using standard 10/100Mbps Ethernet.



The X-Series Actuator[®] is designed to function as a full-featured robotic component as opposed to a simple servo motor. The output rotates continuously, requires no calibration or homing on boot-up, and contains a thru-bore for easy daisy-chaining and wiring. This enables these actuators to be used in everything from wheeled robots to multi degree of freedom collaborative robotic arms.

HEBI Robotics provides cross-platform software tools that make configuring and controlling the X-Series a breeze, with features such as live plotting, APIs for MATLAB, ROS, and C/C++.

Contact: info@hebirobotics.com

X-SERIES ACTUATOR[®] — TECHNICAL SPECIFICATIONS

CONFIGURATION	X5-1	X5-4	X5-9	X8-3	X8-9	X8-16
Peak Torque	2.5 N-m	7 N-m	13 N-m	7 N-m	20 N-m	38 N-m
Cont. Torque	1.3 N-m	4 N-m	9 N-m	3 N-m	8 N-m	16 N-m
Max Speed	90 RPM	32 RPM	14 RPM	84 RPM	30 RPM	15 RPM
Mass	315 g	335 g	360 g	460 g	480 g	500 g
Dimensions	43mm x 110mm x 73mm 15mm hollow bore			45mm x 110mm x 73mm 15mm hollow bore		
Power	18-48V DC (24V Nominal) Cont. Current: 0.8 A @ 24V Peak Current: 2.4 A @ 24V			18-48V DC (24V Nominal) Cont. Current: 2.0 A @ 24V Peak Current: 4.5 A @ 24V		
Temperature	-10°C to 50°C Ambient					
Communication	100 Mbps Ethernet (dual port)					
Angular Resolution	0.005°					
Torque Resolution	0.01 Nm					
Backlash	+/- 0.25°					
Sensing	Angular Position (multi-turn absolute, +/- 4 turns) Angular Velocity Output Torque 3-axis Accelerometer / Gyro Temperature Voltage Current					
API Support	MATLAB (Windows / Linux / OS X) ROS (Linux) Python (Windows / Linux / OS X) C/C++ (Windows / Linux / OS X) C# (Windows)					

Each individually purchased X-Series Actuator[®] includes a standard connection kit: 3' Ethernet cable, 12" power cable, 12" power pigtail and power splitter board.
 Updated on February 21, 2018. Specifications subject to change without notice.