

Document title: Robotic Actuation Hardware — HEBI Robotics
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Robotic Building Blocks

Modularity at the Joint Level

HEBI's growing line of actuation hardware and supporting components has everything you need for the foundation of your robot. Each actuator contains an on-board processor for low level control, supports standard Ethernet and power, and contains a wealth of sensors. Our hardware platform makes it easy to assemble a robot that's both effective and adaptable.

X-SERIES

R-SERIES

PASSIVE KNUCKLE

For Indoor Use

X-Series Actuator[®]

HEBI Robotics' X-Series Actuators[®] allow engineers, researchers, and industrial integrators to quickly and easily create

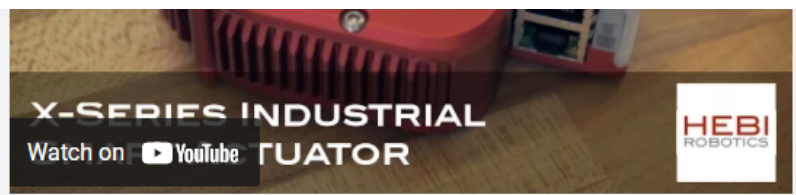


Actuator[®]

HEBI Robotics' X-Series Actuators[®] allow engineers, researchers, and industrial integrators to quickly and easily create custom, world-class robots of any configuration. These professional-grade actuators are packed with **sensors that enable simultaneous control of position, velocity, and torque** as well as three axis inertial measurement.

Each module is a series-elastic actuator that integrates a brushless motor, geartrain, spring, encoders, and control electronics into a compact package that **runs on anything from 18V to 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. The modules can be used in everything from wheeled robots to multi-degree-of-freedom, collaborative robotic arms.

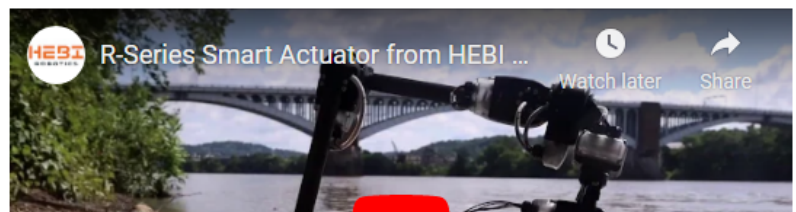


BUY ONLINE

Specifications

- [X-Series Actuator[®] Datasheet](#)
- [X5 Actuator - Mechanical Dimensions](#)
- [X8 Actuator - Mechanical Dimensions](#)
- [Technical Documentation](#)

Ruggedized for Wet and Dirty Environments



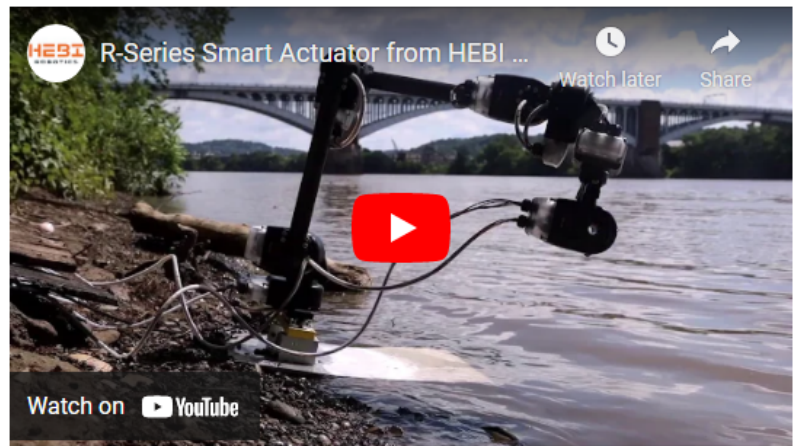
Ruggedized for Wet and Dirty Environments

R-Series Actuator®

HEBI's R-Series allows engineers and industrial integrators to **quickly create custom robots that can be deployed directly into wet, dirty, or outdoor environments.** The R-Series offers all of the benefits of the X-Series, along with a sealed robotics solution for rugged, industrial applications.

Each R-Series Actuator® is **sealed to IP67** and designed with a lightweight form factor that allows them to be used in **challenging field applications.** They are **packed with sensors** that enable simultaneous control of position, velocity, and torque as well as three-axis inertial measurement.

Each actuator integrates a brushless motor, gear reduction, force-sensing, encoders, and control electronics into a compact package that runs on anything from 24V-48V DC and communicates using standard 100Mbps Ethernet. This, along with an internal pressure sensor, keeps the overall robotic system **lightweight, low-power, simple, and safe.**



BUY ONLINE

Specifications

- [R-Series Actuator® Datasheet](#)
- [R8 Mechanical Dimensions](#)
- [Technical Documentation](#)
- [Sealing Documentation](#)
- [R-Series Connection Toolbox](#) (Sold Separately)

lightweight, low power, simple, and safe.

For Advanced Position Control

Passive Encoder Knuckles

Sometimes in order to make your robot a solution, you need more than actuation. HEBI's passive encoder knuckles were developed as part of our Modular Absolute Positioning System (MAPS) kit for industrial inspections, and can be used to create passive arms for position detection. Each 2 DoF is a continuous rotation absolute encoder with accuracy of +/- 0.1°, and is fully supported by HEBI's APIs.

Common applications include position detection (useful, for example, in industrial inspections) and master control arm for tele-op systems.



REQUEST A QUOTE

Specifications

- [Passive Encoder Knuckles Specs sheet](#)

Sign up with your email address to receive news and updates.

HEBI's APIs.

Common applications include position detection (useful, for example, in industrial inspections) and master control arm for tele-op systems.

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