

seed robotics

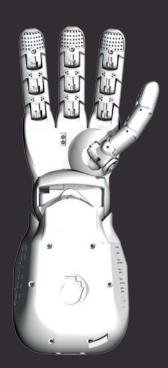


We love everything Robotic and we work to make it happen.

Seed Robotics is commited to empowering Researchers and Robot creators with tools to build the next generation of Humanoid Robots.

Safe . Robust . Social

www.seedrobotics.com



SR-RH4D Ares Hand



Built for Robustness, Reliability and overall Heavy Duty¹ tasks

The Ares hand introduces a magnetic detachment system that protects finger joints in the event of impacts. On 80% of the time it is capable of self-recovery without user intervention.

The reinforced shell design offers a robust elbow coupling and an overhanging guard to protect from severe impacts. The guard doubles as a support when the robot is getting up from the floor.

Easy to use with Advanced sensing capabilities

The under actuated design conforms to objects of different shapes and sizes, an efficient approach for motion that simplifies the design of control algorithms.

All actuated joints have force sensing and a palm sensor can detect the presence of objects. These enable advanced manipulation capabilities and safe interaction with the environment.

Sensing

Palm optical distance sensor Force sensing on actuated joints Position feedback on actuated joints

Control

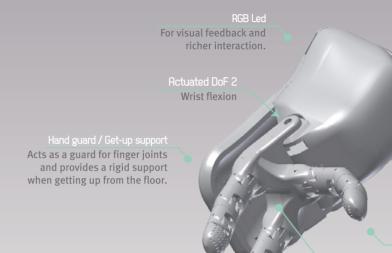
Dynamixel Protocol 1.0 & 2.0 Seed Robotics SHSP Protocol Robotis Darwin OP/2 Framework ROS² PvPot²

Actuation

Total degrees of freedom: 11 Actuated degrees of freedom: 4 Powerful actuators: Stall torque 60Ncm

Technical Data

Cortex M4 @ 96Mhz Power: 9V-24V. Weight: 220g Half Duplex TTL/RS485 or Full Duplex TTL interface up to 4.5Mbps USB Interface up 10 Mbps



For increased sturdiness, fingers attach by means of a magnetic link.

If excessive lateral force is applied,

re-attach.

fingers are released and subsequently

Actuated Dof 1: Elbow Rotation

Multiple assembly options.
Compatible with Robotis Darwin
OP/OP2 elbow brackets.

3 segments (DoF) perh Finger

90º flex on each joint Underactuated to conform to objects of multple sizes and shapes.

Actuated DoF 4: Opposable thumb
Thumb closes between index

fingers.

Detects proximity and presence of objects

Actuated DoF

Closing of the index fingers.



 $^{^{1}}$ Within mechanical and safety limits as per the specifications. 2

² ROS and PyPot are supported using third-party libraries