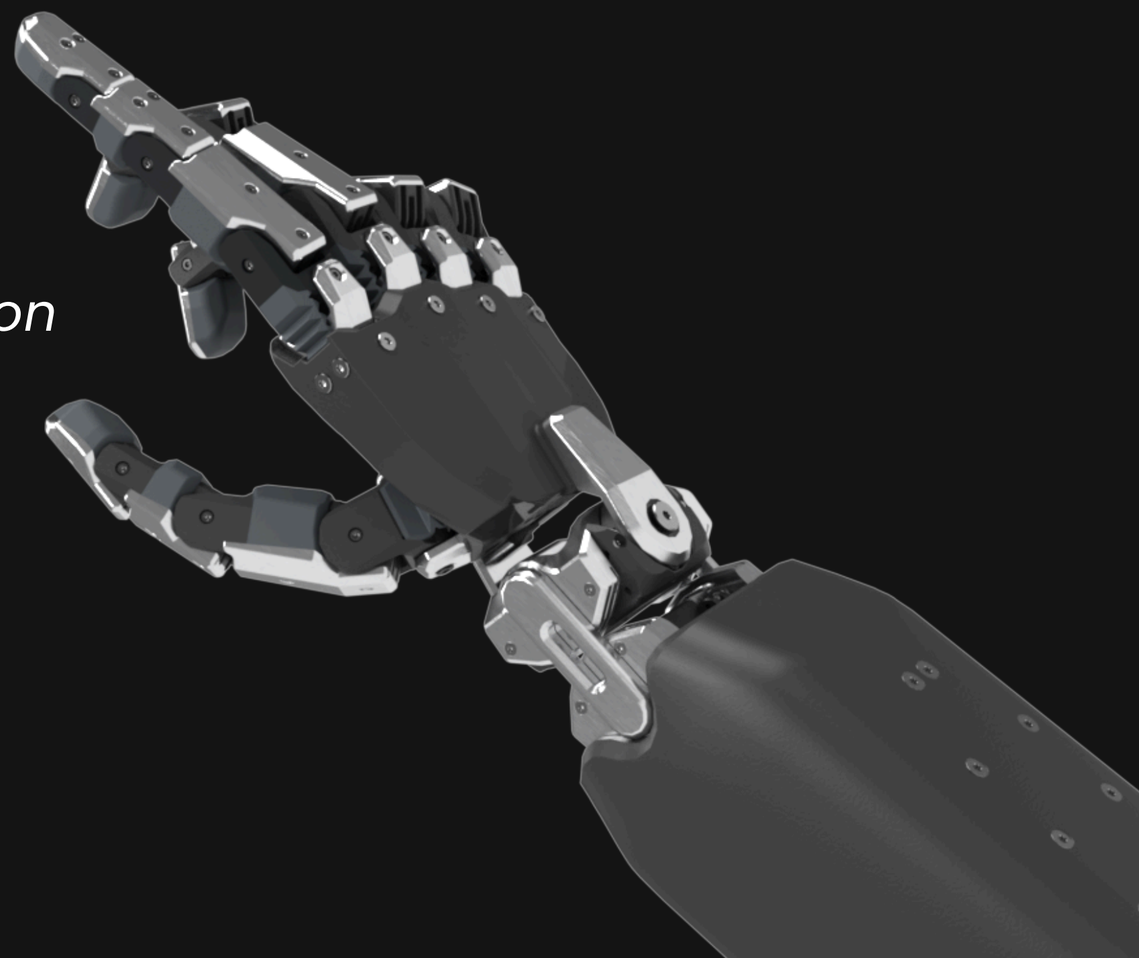
SARCOMERE DYNAMICS

ARTUS Dex

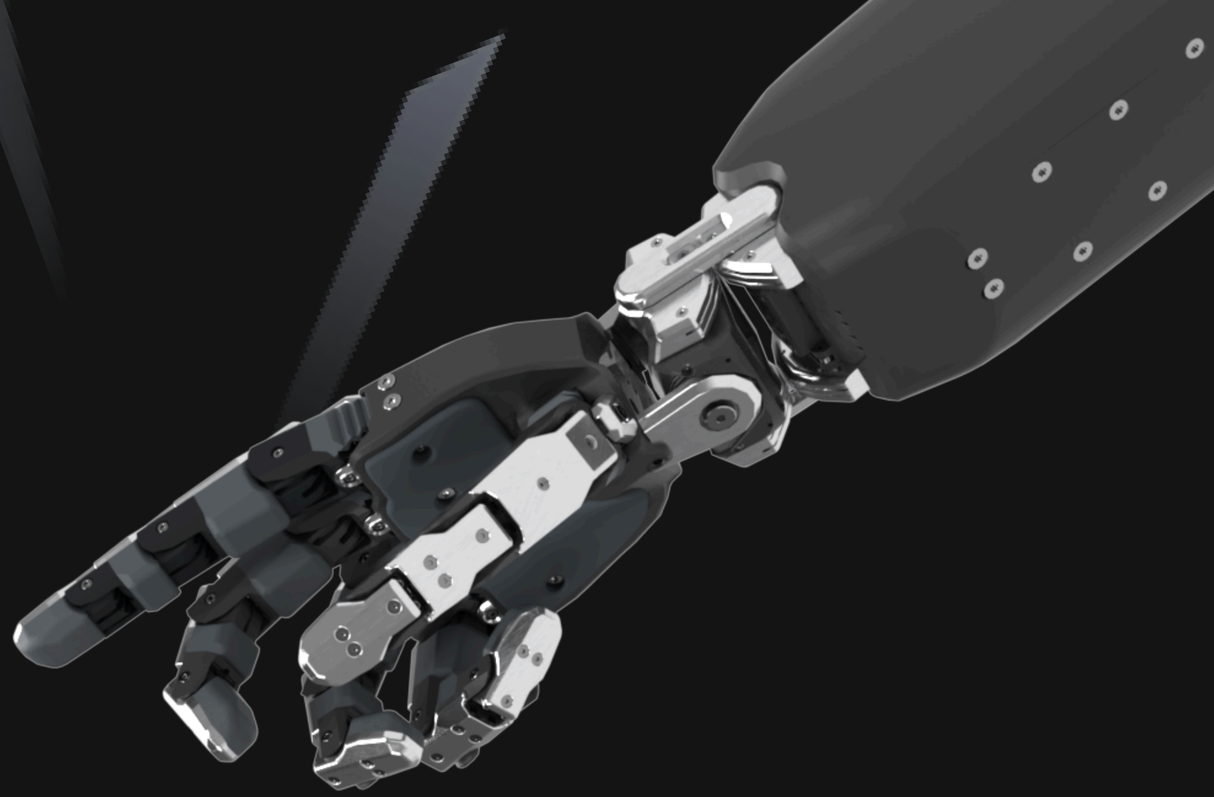
bringing near-human capability to automation



ARTUS Dex

Enabling embodied AI to interact naturally with a world designed by humans, for humans.

This ultimate, general purpose end-of-arm tool is engineered to replicate the capabilities of the human hand—empowering humanoid robots to perform intricate manipulation and non-routine tasks in unstructured environments.



ARTUS Dex Specifications

DEGREES OF FREEDOM	24	• 4 underactuated DoF for the distal phalange of the fingers • 2 DoF for the wrist
MAX PAYLOAD	10kg	• Payload for objects being manipulated. • Higher payloads are possible for pick and place (up to 20kg)
WEIGHT	2.3kg	
VOLTAGE & POWER	24V, 150W	• Peak Power draw will be 500W (all actuators drawing max power simultaneously)
FINGER CYCLING SPEED	1.5Hz	• This frequency describes how many times a finger joint can go from fully open, to fully closed, back to fully open
FORCE AT FINGERTIP	3.5kg	• Force at tip of fingertip during continuous operation • Intermittent forces up to 8kg are possible (double human capability)
WRIST PAYLOAD	5kg	• This describes continuous payload in the wrists reachable workspace • Intermittent payload up to 10kg

COMMUNICATION PROTOCOLS

- CAN, USB-C, Wifi , RS485, SPI,
- Ethernet and EtherCAT in development

MOUNTING INTERFACE

- ISO 9409-1-50-4-M6
- Customizable

CONNECTOR INTERFACE

Nano M8 4-pin connector: High Power
Nano M8 8-pin connector: Communication and Low Power

ARTUS Dex Features

FEATURES

- Lightweight
- Passive Cooling
- Quasi direct drive brushless actuators for fingers and wrist
- Robust design with Series Elastic actuators
- Replaceable Silicone grip pads
- Human form factor hand and forearm
- Water and dust resistant
- Cobot capabilities enable interaction with humans

SENSORS

- Absolute position sensors in finger joints
- Supports force sensors in fingertips（tactile arrays, shear force sensor, etc.）
- 6-axis IMU in palm and forearm
- Tension sensors provide joint torque information

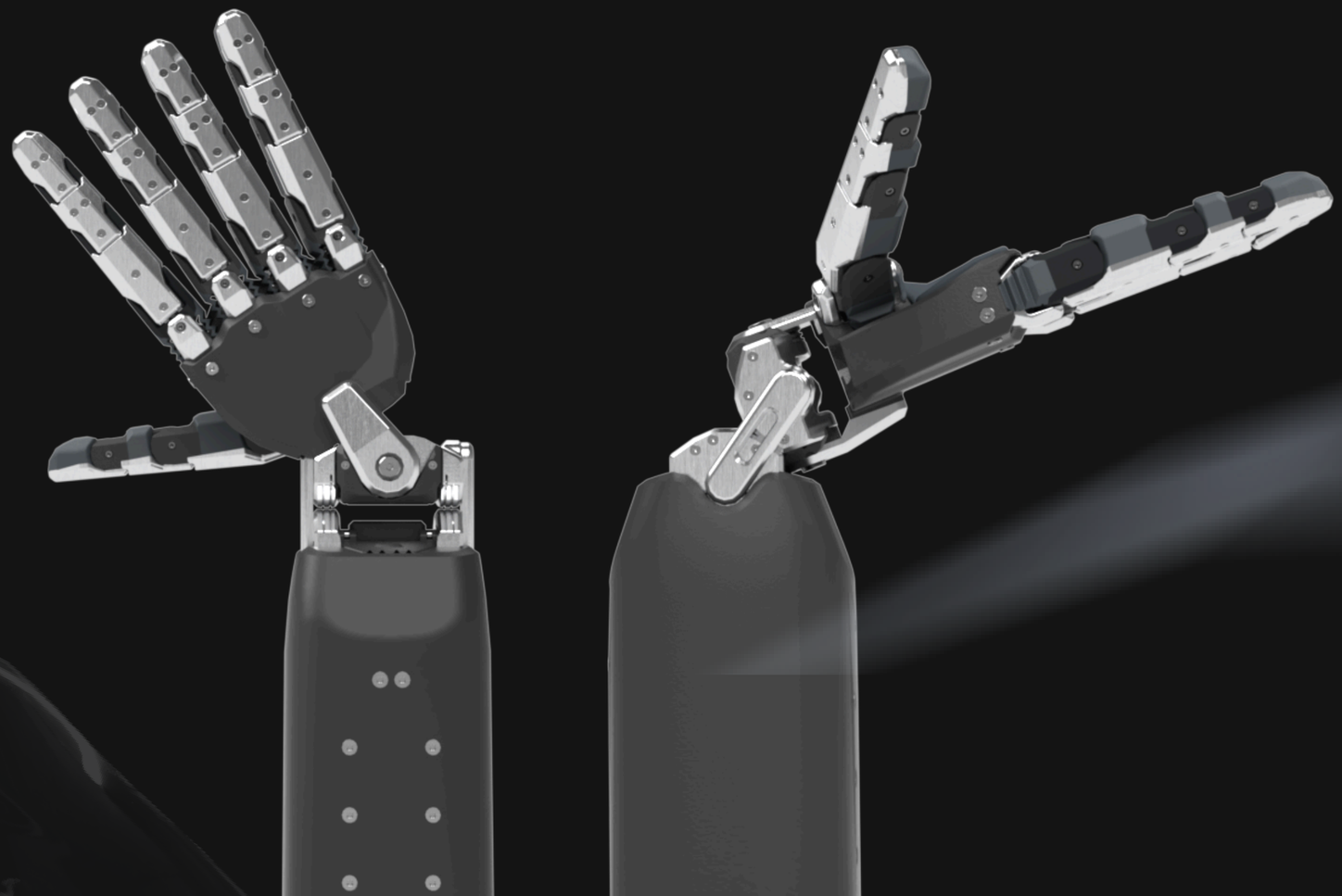
ARTUS Dex Hand ROM

THUMB JOINTS	Degrees	
	Min	Max
DISTAL PHALANGE	0	90
MIDDLE PHALANGE	0	90
PROXIMAL PHALANGE	10	90
KNUCKLE	-45	45

FINGER JOINTS	Degrees	
	Min	Max
DISTAL PHALANGE	0	90
MIDDLE PHALANGE	0	90
PROXIMAL PHALANGE	-2.5	90
KNUCKLE	-17	17

ARTUS Dex Wrist ROM

WRIST JOINTS	Degrees	
	Min	Max
WRIST PITCH	-60	60
WRIST YAW	-35	35



The future is here, and it is automated.

Web: sarcomeredynamics.com
Sales: info@sarcomeredynamics.com

SARCOMERE DYNAMICS

ARTUS Lite

bringing near-human capability to automation

ARTUS Lite

The ultimate general purpose end of arm tool, engineered to mirror the dexterity of the human hand. With unmatched precision, it handles tasks like assembling components and manipulating complex objects in unstructured environments—surpassing the capabilities of traditional grippers. We have two versions of the Artus Lite:

- **ARTUS Lite**
- **ARTUS Lite+ (with Contactile 3DFBS Sensors)**

ARTUS Lite

Option to buy it with contactile sensors

DEGREES OF FREEDOM	20
MAX. PAYLOAD	8 kg
WEIGHT	1.3 kg
CYCLING SPEED	0.8 Hz
VOLTAGE, POWER	24 V, 200 W
FORCE AT FINGERTIP	1 kg

COMMUNICATION PROTOCOLS

CAN, USB-C, Wifi , RS485

MOUNTING INTERFACE

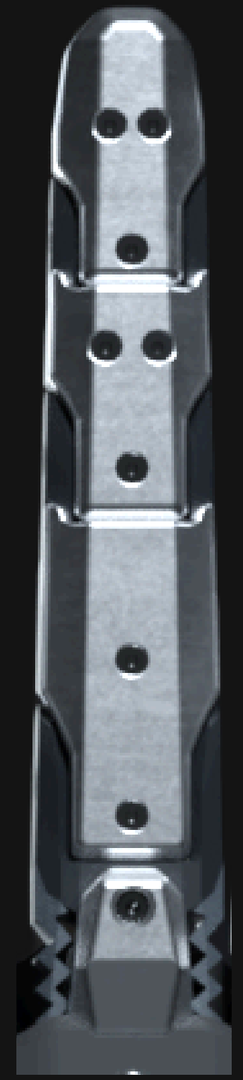
ISO 9409-1-50-4-M6

CONNECTOR INTERFACE

Nano M8 4-pin connector: High Power
Nano M8 8-pin connector:
Communication and Low Power

ARTUS Lite Range of Motion

Finger Joints	RoM (Degrees)		Tolerance (in mm)
	Min	Max	
D1 PITCH	0	90	+/- 0.025
D2 PITCH	0	90	+/- 0.025
D3 PITCH	0	90	+/- 0.025
D4 YAW FINGER	-17	17	0
D4 YAW THUMB	-45	45	0



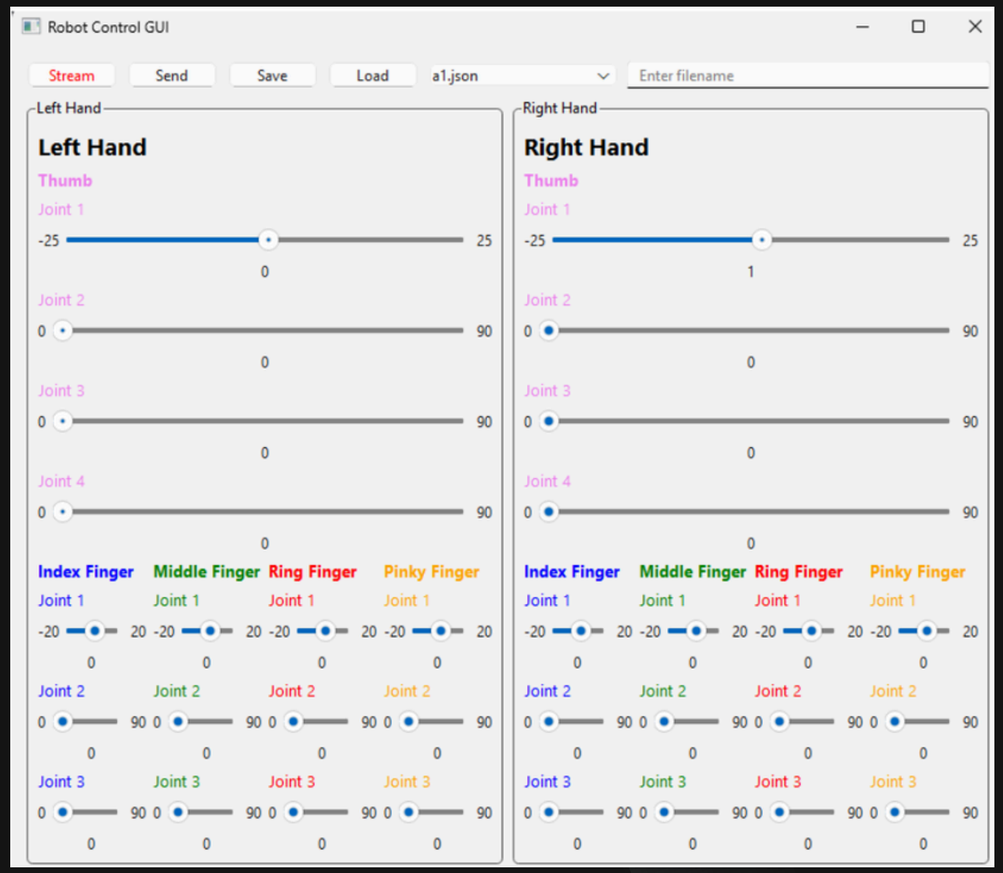
ARTUS Lite Feedback

- Passive Force Feedback
  - Indirect feedback from motor current
- Active Force Feedback (optional)
  - Force feedback from Contactile Sensors at each fingetip and thumb

Sarcomere Dynamics GUI

Control feedback from GUI:

- Joint Mode, Velocity, Position
- Motor Volatage and Current



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GitHub Repository

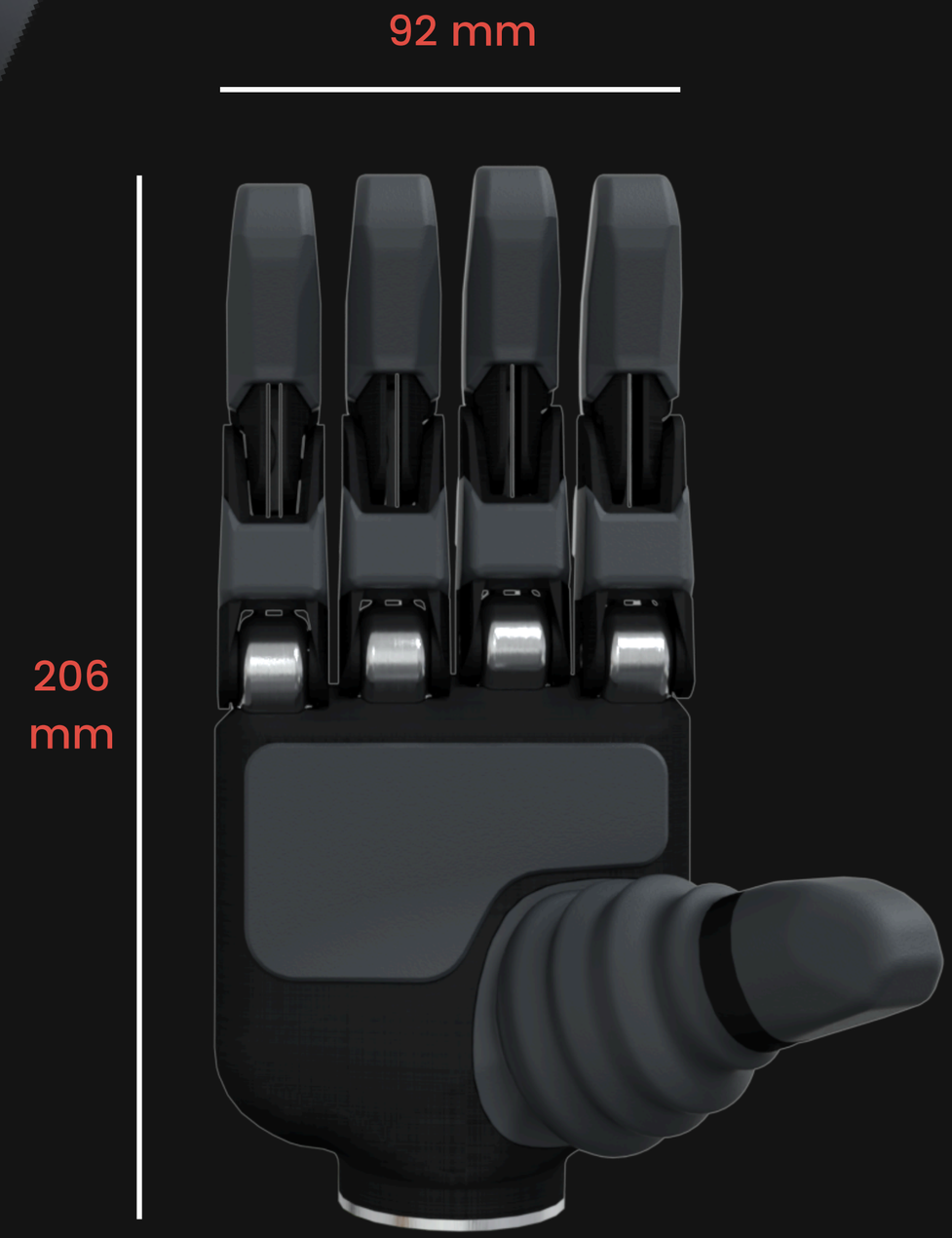
SARCOMERE DYNAMICS

Talos

essential dexterity for real-world automation.

Talos

A compact and affordable general-purpose end-of-arm tool, designed to emulate key aspects of human hand dexterity. Striking a balance between simplicity and functionality, it excels at tasks such as component assembly and object manipulation in unstructured environments—outperforming conventional grippers in versatility.



Talos

DEGREES OF FREEDOM	10 6 fully actuated + 4 underactuated
MAX. PAYLOAD	20 kg
WEIGHT	650 g
CYCLING SPEED	2 Hz
NOMINAL VOLTAGE, POWER	24 V, 40 W
MAX. POWER	120 W for high force grasping
FORCE AT FINGERTIP	20N (2 kg)

Note: Option to add Contactile sensors to the fingertips

COMMUNICATION PROTOCOLS

CAN, USB-C, Wifi , RS485

MOUNTING INTERFACE

Custom Mounting Interface for customers

CONNECTOR INTERFACE

Nano M8 4-pin connector: High Power
Nano M8 8-pin connector: Communication and Low Power

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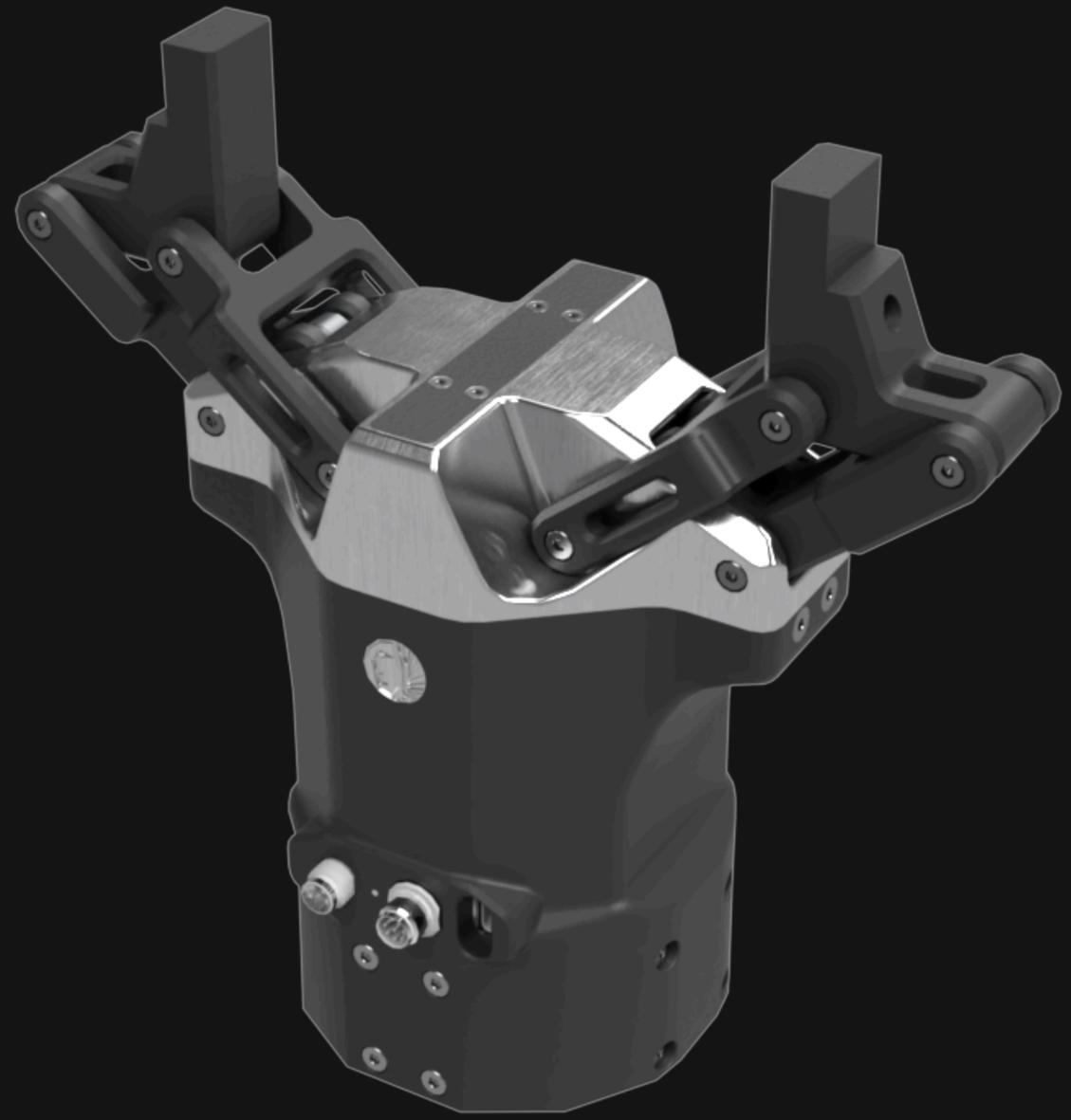
SARCOMERE DYNAMICS

Parallel Gripper



Parallel Gripper

Designed for cost-effective precision and versatility, this parallel gripper empowers robots to perform flawless pick-and-place operations in dynamic environments. Engineered for efficiency, it delivers reliable and adaptive grip strength, making it ideal for a wide range of applications while ensuring seamless interaction with the world around it.

Parallel Gripper Specifications

MAX PAYLOAD	10 kg	• Payload for objects being manipulated.
WEIGHT	850g	
VOLTAGE & POWER	24V, 41W	• Peak Power draw will be 48W
CLOSING SPEED	56 - 443 mm/s	• The closing speed is the rate at which the parallel gripper opens and closes. • It determines how quickly it can grasp or release an object.
GRIP FORCE	167 - 800N	• Force at tip of fingertip during continuous operation
STROKE	100 mm	• This describes the distance between the gripper tops when completely open

COMMUNICATION PROTOCOLS

- CAN, USB-C, Wifi , RS485, SPI,
- Ethernet and EtherCAT in development

MOUNTING INTERFACE

- ISO 9409-1-50-4-M6
- Customizable

CONNECTOR INTERFACE

Nano M8 4-pin connector: High Power
Nano M8 8-pin connector: Communication and Low Power

Backdriveable Parallel Gripper

MAX PAYLOAD	10 kg	• Payload for objects being manipulated.
WEIGHT	850g	
VOLTAGE & POWER	24V, 41W	• Peak Power draw will be 48W
CLOSING SPEED	140 - 1100 mm/s	• The closing speed is the rate at which the parallel gripper opens and closes. • It determines how quickly it can grasp or release an object.
GRIP FORCE	67 - 400 N	• Force at tip of fingertip during continuous operation
STROKE	100 mm	• This describes the distance between the gripper tops when completely open

COMMUNICATION PROTOCOLS

- CAN, USB-C, Wifi , RS485, SPI,
- Ethernet and EtherCAT in development

MOUNTING INTERFACE

- ISO 9409-1-50-4-M6
- Customizable

CONNECTOR INTERFACE

Nano M8 4-pin connector: High Power
Nano M8 8-pin connector: Communication and Low Power

TALOS Parallel Gripper Features

FEATURES

- Lightweight
- Ultra-long life
- Back-driveable configurations available on request
- Passive Cooling
- Robust design with brushless actuators
- Replaceable gripping tips
- Water and dust resistant
- Customizable colors

SENSORS

- Can be integrated with force sensors at grip tips

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