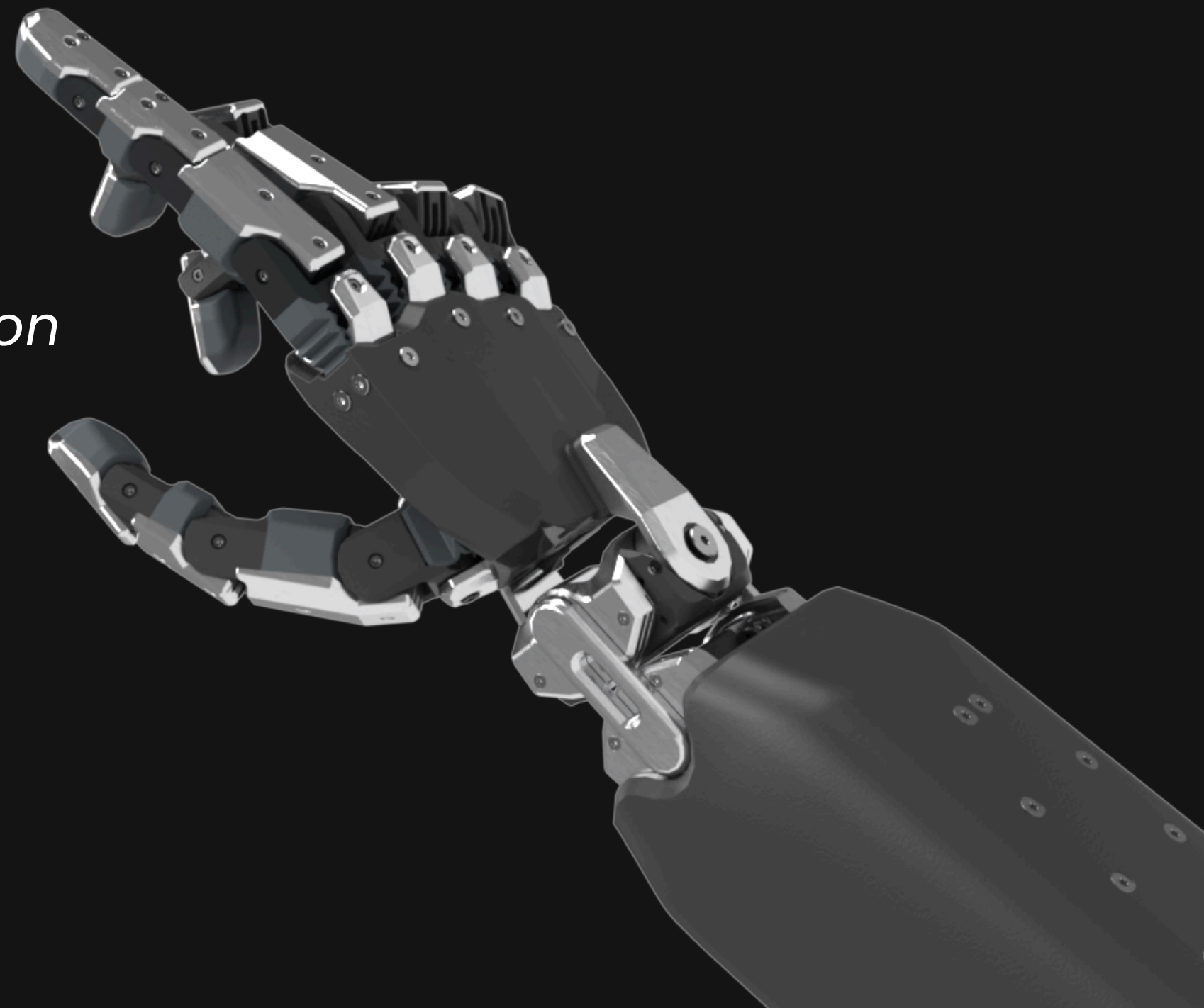




**SARCOMERE**  
DYNAMICS

# ARTUS Dex

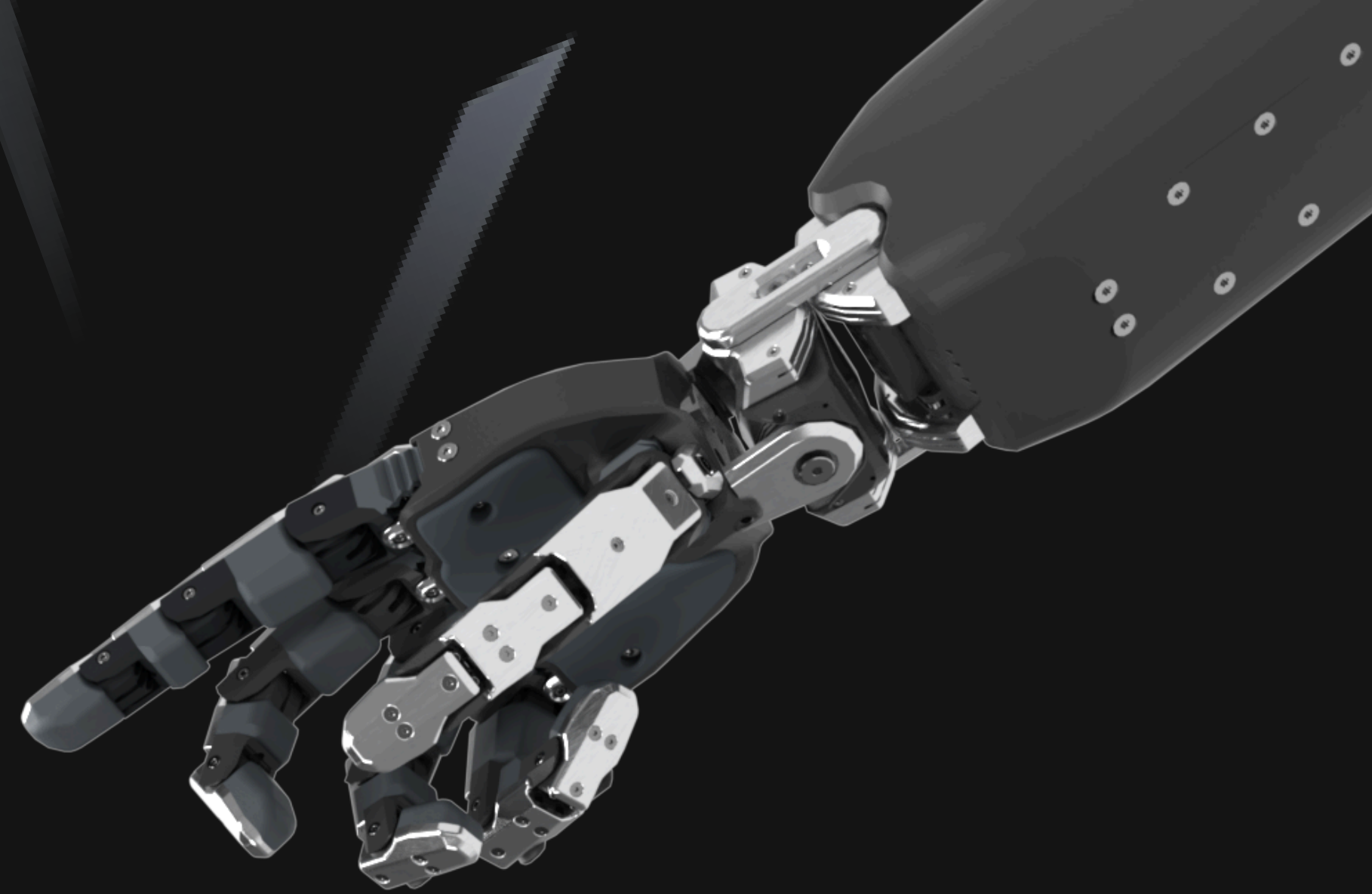
*bringing near-human capability to automation*



# 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	22	<ul style="list-style-type: none"><li>• 4 underactuated DoF for the distal phalange of the fingers</li><li>• 2 DoF for the wrist</li></ul>
MAX PAYLOAD	10kg	<ul style="list-style-type: none"><li>• Payload for objects being manipulated.</li><li>• Higher payloads are possible for pick and place (up to 20kg)</li></ul>
WEIGHT	2.3kg	
VOLTAGE & POWER	24V, 150W	<ul style="list-style-type: none"><li>• Peak Power draw will be 500W (all actuators drawing max power simultaneously)</li></ul>
FINGER CYCLING SPEED	1.5Hz	<ul style="list-style-type: none"><li>• This frequency describes how many times a finger joint can go from fully open, to fully closed, back to fully open</li></ul>
FORCE AT FINGERTIP	3.5kg	<ul style="list-style-type: none"><li>• Force at tip of fingertip during continuous operation</li><li>• Intermittent forces up to 8kg are possible (double human capability)</li></ul>
WRIST PAYLOAD	5kg	<ul style="list-style-type: none"><li>• This describes continuous payload in the wrists reachable workspace</li><li>• Intermittent payload up to 10kg</li></ul>

## 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

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- 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

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- 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

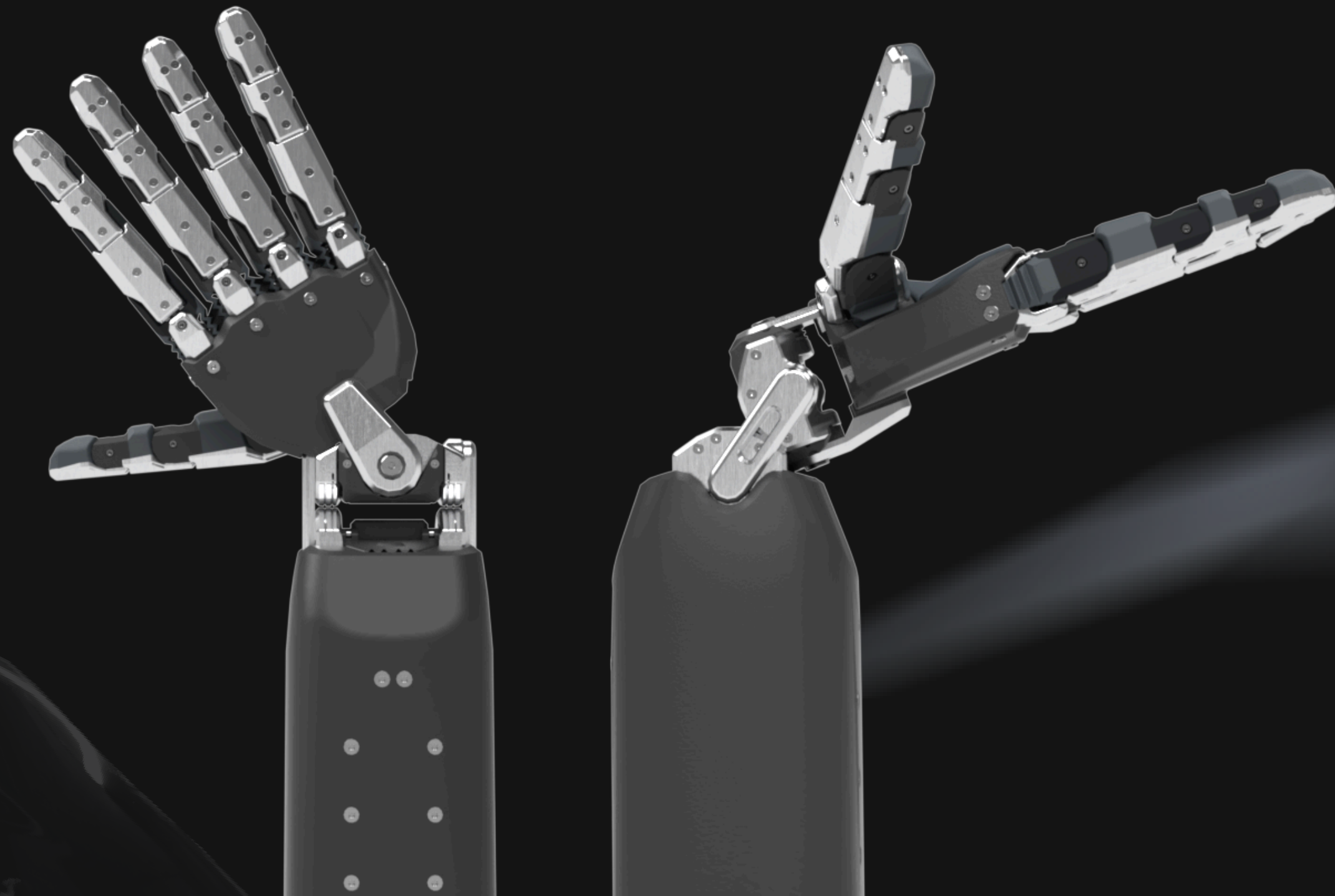
# ARTUS Dex Hand ROM

THUMB JOINTS			FINGER JOINTS		
Degrees			Degrees		
	Min	Max		Min	Max
DISTAL PHALANGE	0	90	DISTAL PHALANGE	0	90
MIDDLE PHALANGE	0	90	MIDDLE PHALANGE	0	90
PROXIMAL PHALANGE	10	90	PROXIMAL PHALANGE	-2.5	90
KNUCKLE	-45	45	KNUCKLE	-17	17



# ARTUS Dex Wrist ROM

WRIST JOINTS	Degrees	
	Min	Max
WRIST PITCH	-70	70
WRIST YAW	-35	35



# The future is here, and it is automated.

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