STELLA ROBOT

PANTHEON HAND 22

The World's Leading Forearm-Integrated High-DOF Tendon-Driven Dexterous Hand

22-DOF Full Tendon-Driven System · Full-Stack In-House R&D · Pioneering a New Era of Dexterous Manipulation



Product Overview

The Pantheon Hand 22 is a new-generation high-performance dexterous hand developed by Stella Robot. Its drive system is compactly integrated into the forearm, achieving 22 degrees of freedom and highly biomimetic dexterity within a smaller footprint. Leveraging the lightweight and compliant advantages of its tendon-driven structure, it combines human-like wrist flexibility, research-grade precision, and industrial-grade reliability–redefining the capabilities of humanoid robot upper limbs. We believe true intelligence begins with the most exquisite execution.

Core Advantages



Arm & Hand Integration, Ultra-Compact
Deeply integrated drive and forearm for enhanced compactness

Ultra-High Precision, Unmatched Accuracy
±1° angular accuracy, 0.17mm repeat positioning accuracy

Flexible Wrist, Human-like Interaction
2 wrist DoFs enable human-like hand movements

Robust & Durable, Widely Applicable
Impact-resistant structure, lifespan of hundreds of thousands of cycles

Feather-light. Power-packed
Ultra-lightweight design, delivering up to 30 kg gripping force per hand.

Fingertip Sensing, Safe Interaction
Self-developed 3D force/tactile sensing for compliant interaction

22 DoFs, Biomimetic Breakthrough
15 active DoFs + 5 passive DoFs + 2 wrist joint DoFs

Auto-Tensioning, Sustained Performance
Proprietary auto-tensioning algorithm ensures stable tendon tension

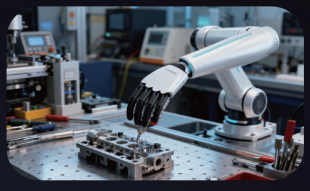
Application Value



Research & Education



Embodied Intelligence



Industrial Applications

Product Parameters

Items	Parameters	Items	Parameters	Items	Parameters
Number of Fingers	5	Transmission Type	Fully Tendon-Driven	Operating Voltage	12V-DC
DoFs	22 DoFs (17 active + 5 passive DoFs)	Maximum Dimensions	500*190*80	Max Current	6.0A
Hand only weight	300g	Interface Specification	XT30 2+2	Sensor Type	Magnetic Encoder Angle Sensor
Total Weight	2.26kg	Joint Angle Control Accuracy	Control Accuracy: 0.1°	Communication Protocol	CANFD

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