

OmniHand Technical Specifications

		OmniHand 2025	OmniHand 2025(with Tactile)
Hardware	Weight (excluding wrist end cap and screws)	≤510g	≤520g
	Dimensions	180*85*38.5mm	
	Degrees of Active Freedom (DoA)	10	
	Degrees of Freedom (DoF)	16	
	Minimum opening/closing time (Typ.)	0.5s/0.5s	
	Fingertip repeat Positioning Accuracy (Typ.)	0.3mm	
	Five-finger grip force (hybrid force control mode)	≥ 5kg	
	Working Voltage	18-27V	
	Communication Interface	CAN-FD/RS485	
	Working Temperature Range	0~45°C	

	Online Upgrade	Supports OTA Upgrade	
Tactile Sensor	Force Detection	/	Fingertip + palm + hand back: One-dimensional force
	Array Resolution	/	0.1N
	Range of Perception	/	0~20N
	Maximum Acceptance(Undamaged)	/	200N

[1] The above parameters may vary in practical applications depending on different business scenarios and model configurations. Please refer to the actual specifications.

[2] The product appearance may be subject to upgrades and adjustments in the future. Please refer to the physical product delivered at the time of purchase.

[3] The five-finger grip force data represents the test results when the dexterous hand was operating in hybrid force-control mode.

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Joint Angle Range:

		Left		Right	
Finger	Joint	Min (°)	Max (°)	Min (°)	Max (°)
Thumb	thumb_roll_joint	-2	64	-64	2
	thumb_abad_joint	-94	3	-3	94
	thumb_mcp_joint	0	48	-48	0
	thumb_pip_joint	NA /Coupled joints, coupling relationship reference in the SDK.			
	thumb_dip_joint	NA /Coupled joints, coupling relationship reference in the SDK.			

Index Finger	index_abad_joint	-9	0	0	9
	index_pip_joint	0	85	0	85
	index_dip_joint	NA /Coupled joints, coupling relationship reference in the SDK.			
Middle Finger	middle_pip_joint	0	85	0	85
	middle_dip_joint	NA /Coupled joints, coupling relationship reference in the SDK.			
Ring Finger	ring_abad_joint	0	10	-10	0
	ring_pip_joint	NA /Coupled joints, coupling relationship reference in the SDK.			
	ring_dip_joint	0	85	0	85

Fifth Finger	pinky_abad_joint	0	11	-11	0
	pinky_pip_joint	0	85	0	85
	pinky_dip_joint	NA /Coupled joints, coupling relationship reference in the SDK.			

Please refer to the values in the table



