

CHAMP Series Joint Module

Powering Robots with Strength and Efficiency



About Us

Founded in 2023, Genisom AI focuses on the field of embodied intelligence, building a closed-loop technology ecosystem centered on independent R&D and supported by end-to-end capabilities—from core component development and full-machine manufacturing to scenario-based deployment.

The company has achieved breakthroughs in key technologies including bionic quadruped robots, full-size humanoid robots, and integrated joint modules, and has been deeply involved in national-level research projects. Its technologies have been validated by leading domestic and international clients. Genisom AI's joint modules have been mass-applied in its quadruped robot series, serving diverse fields such as education and scientific research, security patrol, power inspection, and emergency rescue.

Core Advantages



End-to-end R&D capabilities



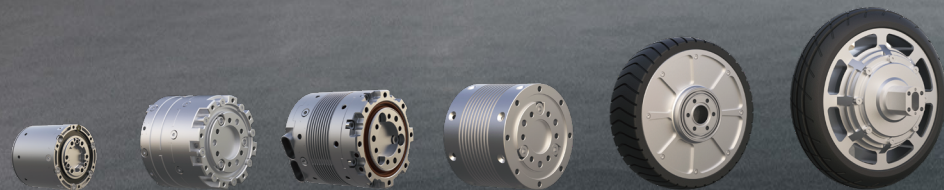
All-in-one integration



Stable operation in extreme conditions



High-power-density Motor



High Power Density, Ultra-Lightweight Precision Control, Stable and Reliable

Providing robots with powerful and efficient core power



Product Advantages

High-Strength Alloy



Self-developed high-strength, high-rigidity alloy ensures exceptional impact resistance and fatigue endurance, maintaining stable performance in complex environments to enhance system reliability.

High Performance



High-power-density motors paired with precision reduction systems deliver strong torque and reliable power, easily handling heavy loads and complex tasks.

Compact Design



Optimized structural and material design reduces weight while maintaining high strength, significantly improving flexibility and energy efficiency.

Dual-Encoder Drive



Dual encoders enable precise position and speed control with fast, stable response for smooth and accurate motion.

Full Protection



Industry-grade dust and water protection ensures reliable performance in harsh, dusty, or humid environments.

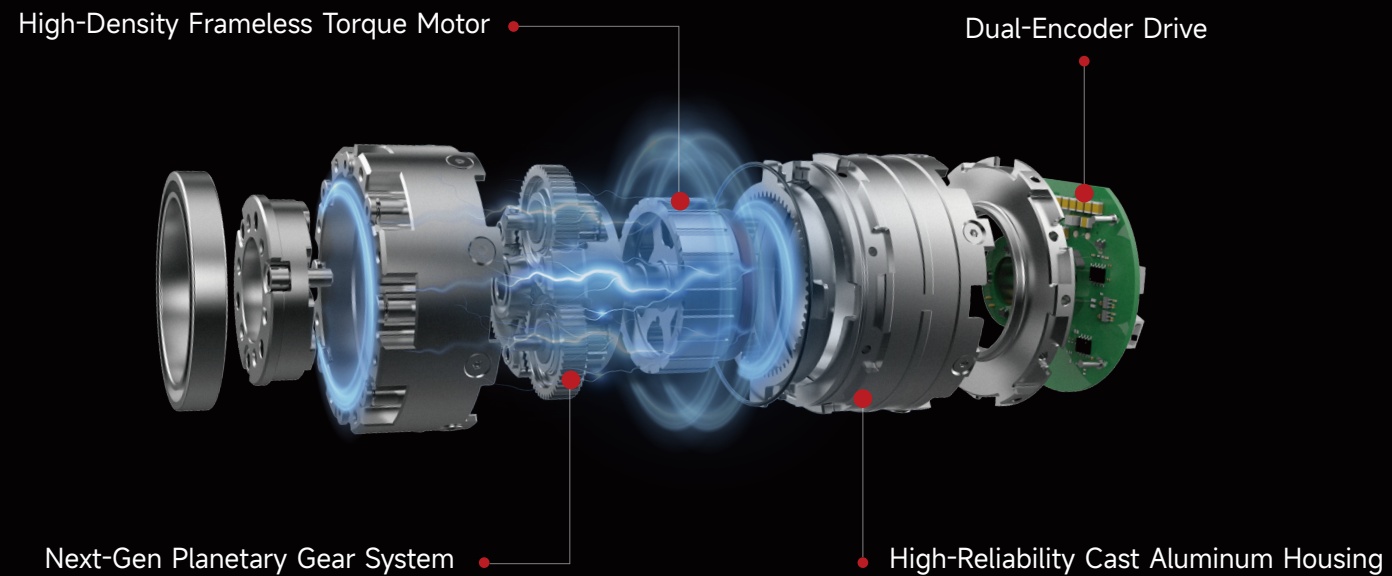
Specifications

	High Power-Density Joint Module				Wheel Hub Motor	
Modal	P55	P65	P65MAX-S	P85MAX-S	W150-S	W190-S
Outer Diameter (mm)	57	65	65	86	160	192
Height (mm)	50	61.8	64.3	66.9	58	82
Gearbox Type	Planetary	Planetary	Planetary	Planetary	/	Planetary
Rated Power (w)	181	330	269	706	500	660
Rated Torque (Nm)	6.5	11.5	23.3	54	3.5	8.4
Peak Torque (Nm)	20	48	70	155	11	28
Weight (g)	360	520	580	1000	1184 (Tires included)	1300 (Tires included)
Backlash (arcmin)	≤20	≤20	≤25	≤20	/	≤20
Operating Voltage (Typ.)	24~48(24)V	24~48(48)V	24~48(48)V	24~60(60)V	24~60(60)V	24~60(48)V
Encoder Type	Dual Encoder	Dual Encoder	Dual Encoder	Dual Encoder	Single Encoder	Single Encoder
IP Rating	IP54	IP54	IP67	IP67	IP67	IP67
Operating Temp. (°C)	-20~50	-20~50	-20~50	-20~50	-20~50	-20~50
Communication	CANFD	CANFD	CANFD	CANFD	CANFD	CANFD

*All parameters are validated in a laboratory environment. Specifications are subject to change and the final product datasheet shall prevail.

Hero Product CHAMP P65

Compact Power Ready for Any Challenge



Product Advantages

48 N·m
Peak Torque



Ultra-Light
520g



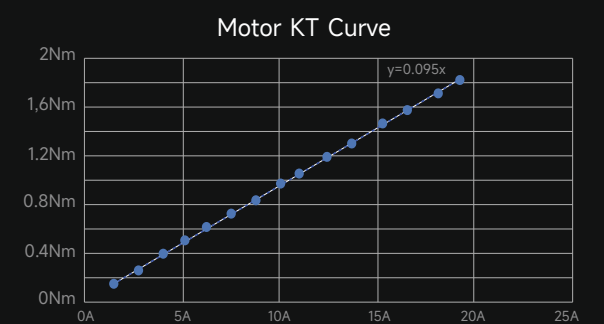
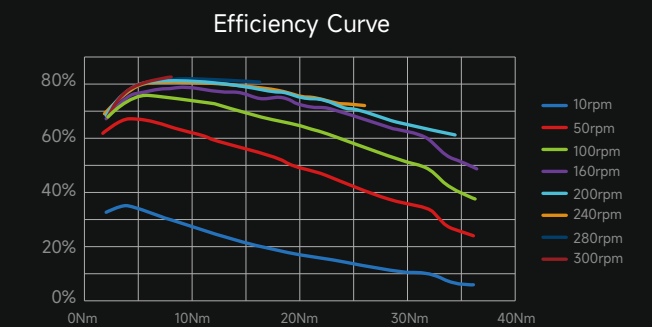
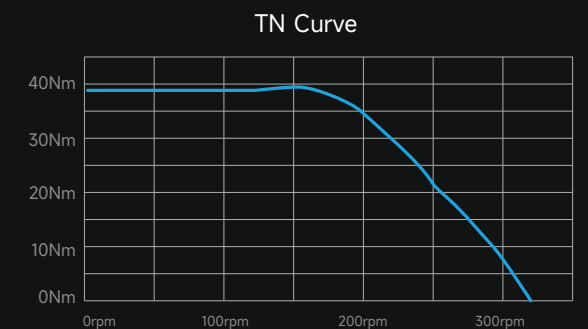
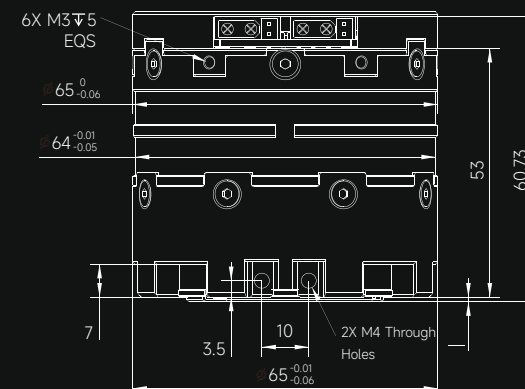
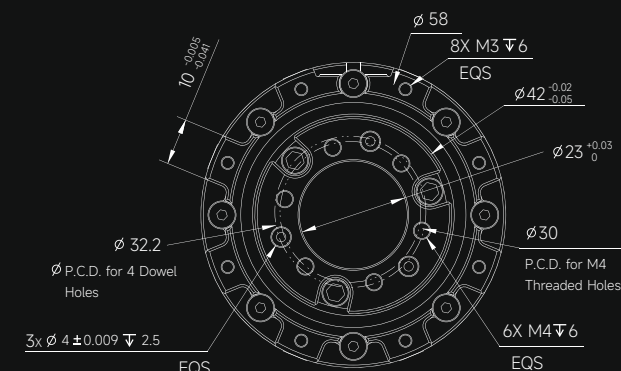
**IP54
Protection***



All-in-One Integration



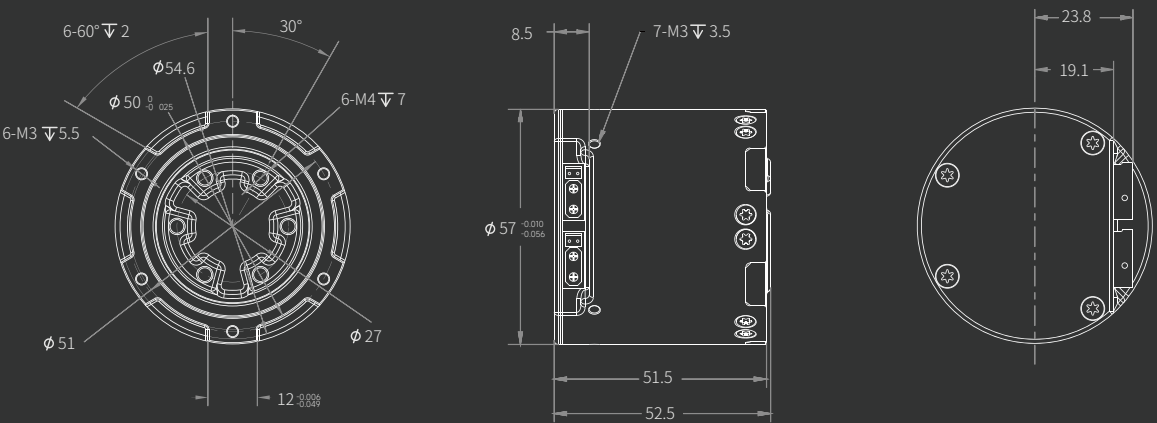
P65 Technical Parameters



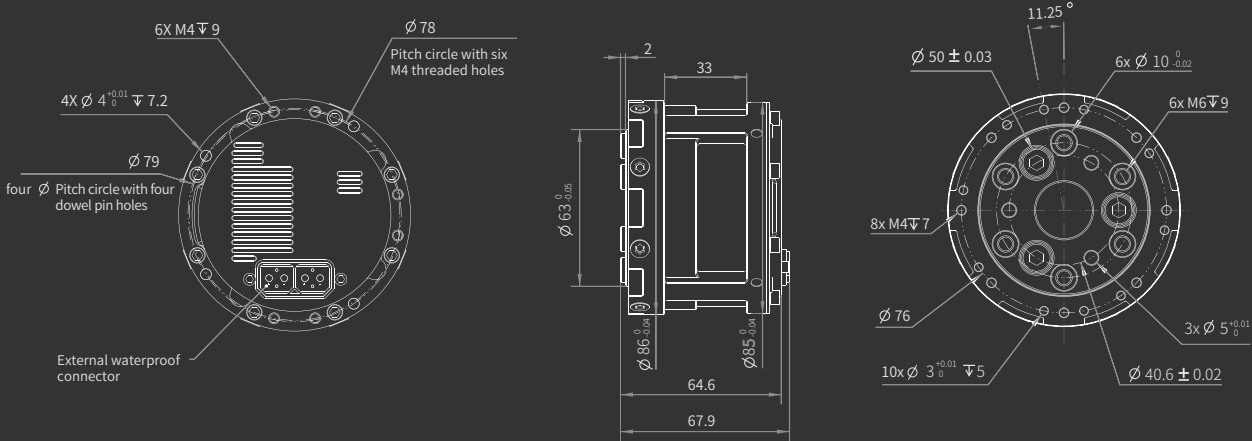
*IP54 relies on sealed PCB. IP55 protection is achievable with adapted joint design.

Technical Parameters

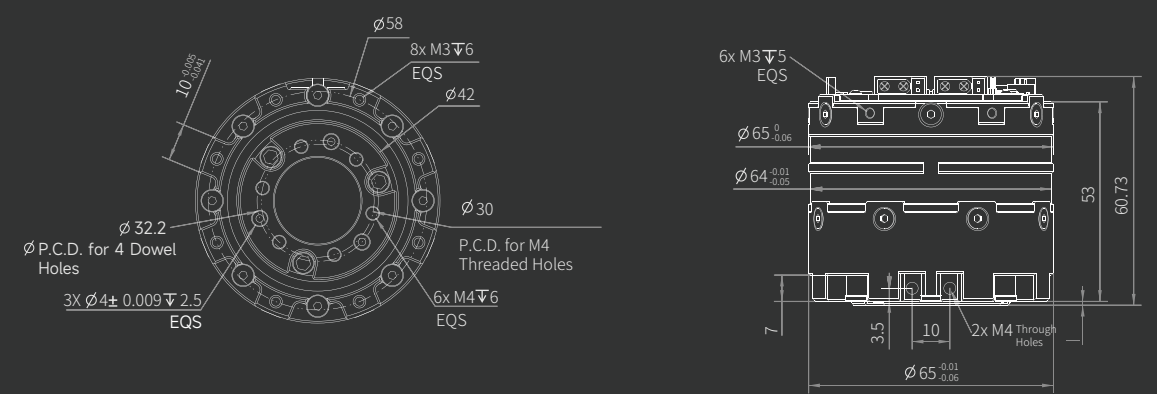
P55



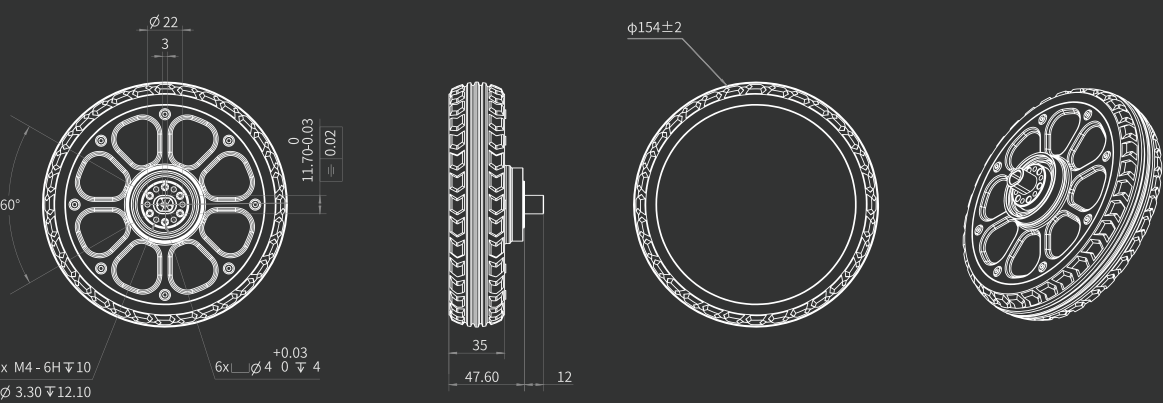
P85MAX-S



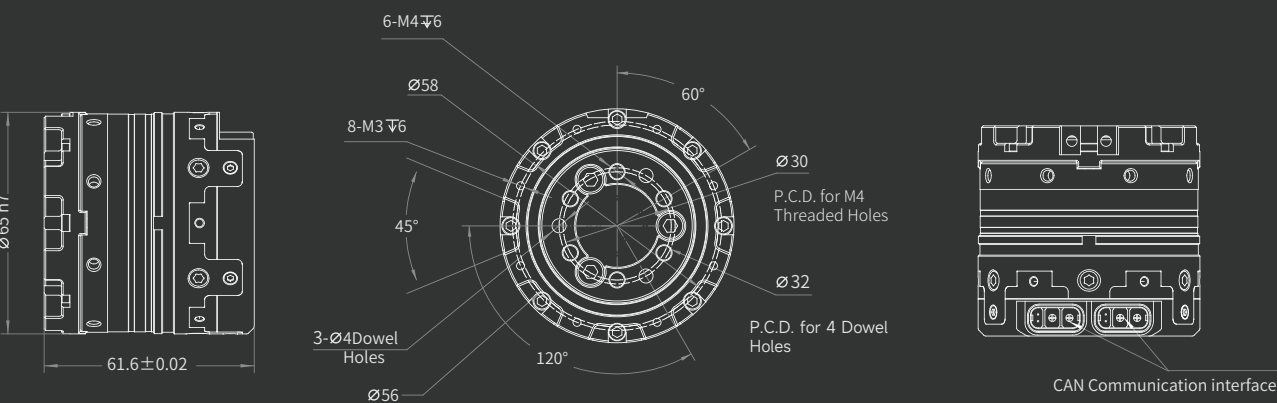
P65



W150-S



P65MAX-S



W190-S

