

D1 MaxPro四足机器人产品参数表

分类	规格	说明
基础信息	材质信息	铝合金+高强度工程塑料
	站立尺寸（长 × 宽 × 高）	1270mm×520mm×730mm
	趴地尺寸（长 × 宽 × 高）	1360mm×570mm×300mm
	整机重量（含电池）	68±1kg
	自由度	整机自由度12，单腿自由度3
	工作温度	-20℃ ~55℃
	防护等级	IP67
	算力模组	117TOPS算力GPU、ARM CPU
	电池	电量2081Wh，额定容量45±1Ah，电压48V±2V
	充电时长	约4.5h（电量10%-90%）
	续航时间 ⁽¹⁾	空载5.5h，负载50kg下2h
	续航里程	空载21±1km，满载11±1km
性能参数	持续行走速度	0-1.2m/s
	最大空载速度 ⁽²⁾	3m/s
	额定负载	50kg
	连续攀爬楼梯高度	30cm
	最大爬坡角度	45°
整机关节参数	最大关节扭矩	最大扭矩300N·m，软件限制180N·m
	关节运动空间（机身）	-45°~45°
	关节运动空间（大腿）	-200°~20°
	关节运动空间（小腿）	30°~160°
传感单元	激光雷达	前置一个96线激光雷达，覆盖角度360°* 90°，覆盖直径范围120m，精度1.5cm
	广角相机	前后各一个广角相机，工业级200万像素，视场角：DFOV150°，HFOV130°，VFOV73°，帧率30fps
	IMU	数量1个，车规级
功能列表	标准动作	站立、趴下、阻尼、卸力；上下楼梯、越障
	实时图像传输	支持
	二次开发	目前SDK支持基于TCP和ROS两种通信方式，提供X86及ARM架构的SDK包
	通讯功能	支持WIFI6.0，WiFi频段2.4GHz，WiFi发射功率72dBm。蓝牙5.2，4G模块可选
	功能拓展接口	通讯接口为千兆网口*3、USB3.0*2、百兆网口*1、串口。供电接口12V、24V、48V，最大输出功率720w。充电接口支持电池直插充电
配件	适配器	标配
	电池充电转接头	标配
	遥控器	带屏遥控器，带手动急停模式，最大遥控距离500m
	自主充电桩	选配

注释说明

- (1)由于测试方法不同以及工作环境不同，空载实际续航时间为5.5h±0.5h；
- (2)该数据为实验室环境下极限测试得到，处于安全考虑已进行软件限制，实际产品限速至2m/s；
- (3)以上参数为实验室测试数据，实际表现可能因使用环境、操作方式等因素有所差异，请以实际为准；
- (4)功能拓展接口使用说明，详见拓展说明手册；
- (5)详细的保修条款，详见产品保修手册；

D1 MaxPro Quadruped Robot — Technical Specification Sheet

Category	Specification	Description
Basic Information	Material	Aluminum alloy with high-strength engineering plastic
	Standing Dimensions (L × W × H)	1270 mm × 520 mm × 730 mm
	Lying Down Dimensions (L × W × H)	1360 mm × 570 mm × 300 mm
	Total Weight (with battery)	68±1kg
	Degree of Freedom	Entire machine: 12, Each leg: 3
	Operating Temperature	-20°C ~55°C
	Ingress Protection Rating	IP67
	Computing Modules	117 TOPS GPU, ARM CPU
	Battery module	battery capacity: 2081Wh, Rated capacity: 45±1Ah, Voltage:48 V±2V
	Charging Duration	about 4.5 h (Battery level: 10%–90%)
Performance Parameters	Battery Life (Operating time)	5.5 h at no-load, 2 h loaded with 50kg
	Operating Range	21±1 km at no load, 11±1km at full load
	Continuous walking speed	0-1.2 m/s
	Empty load Maximum Speed ⁽¹⁾	3 m/s
	Effective Payload	50kg
Joint Parameters	Continuous Stair-Climbing Height	30 cm
	Maximum Climbing Angle	45°
	Maximum Joint Torque	Maximum torque: 300 N·m; software-limited torque: 180 N·m
	Joint Range of Motion (Body)	-45°~45°
	Joint Range of Motion (Thigh)	-200°~20°
Sensors	Joint Range of Motion (Calf)	30°~160°
	Lidar	One front-mounted 96-line LiDAR with a 360° × 90° coverage angle, 120 m detection range, and 1.5 cm accuracy
	Camera FOV	One industrial-grade 2 MP wide-angle camera at the front and one at the rear; field of view: DFOV 150°, HFOV 130°, VFOV 73°, Frame rate: 30 fps
	IMU	1, automotive grade
Function List	Standard Actions	Standing, lying down, bracing, unloading; Climbing stairs and clearing obstacles
	Real-Time Image Transmission	Supported
	Secondary Development (SDK)	The SDK currently supports communication via TCP and ROS protocols, offering SDK packages for both x86 and ARM architectures.
	Communication Features	Supported WiFi 6.0, The Wi-Fi frequency band is 2.4 GHz, Wi-Fi transmission power is 72 dBm. Bluetooth 5.2, with optional 4G module
	Functional Expansion Ports	Communication interfaces include three Gigabit Ethernet ports, two USB 3.0 ports, one Fast Ethernet port, and serial port. Power interfaces support 12 V, 24 V, 48 V, with a maximum output of 720 W. Charging interface supports direct battery plug-in charging.
Accessories	Power Adapter	Standard
	Battery Charging Adapter	Standard
	Remote Control	Screen Remote Control, with manual emergency stop mode, Maximum remote control range: 500 m
	Autonomous Charging Dock	Optional

Notes:

- (1) Due to differences in testing methods and operating environments, the actual battery life under no-load conditions is 5.5 hours ± 0.5 hours;
- (2) These figures were obtained from extreme testing conducted in a laboratory setting. For safety reasons, software limitations have been applied; the actual product is limited to a speed of 2 m/s;
- (3) The above parameters are based on laboratory test data; actual performance may vary depending on factors such as the operating environment and usage methods. Actual results may differ;
- (4) For instructions on using the expansion interfaces, please refer to the expansion manual;
- (5) For detailed warranty terms, please refer to the product warranty manual;