

Robot Specification

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Robot Name:

Height of the robot: Weight of the robot: Materials:

Walking speed: Number of degrees of freedom: Type of motors: Type of sensors used:

Computing units:

Number and Type of Buses: Battery: OpenSource Software: ALICE 4th generation (Artificial Learning Intelligent robot for Culture and Entertainment) 160 cm 45 kg AL6061, AL5051 for legs and body ABS, TPU 3D printed parts for external cover (Omnidirectional) 1.0 m/s* 41 DoF [6 per leg, 7 per arm, 2 per head, 1 per waist, 6 per hand] AeiROBOT Linear Actuators & ROBOTIS Dynamixel ZED X Stereo Camera Lord 3DM-GX4-25 IMU Sensor Force Sensor [4 per foot] [Control Unit] i7-1370PE [AI Unit] Nvidia Jetson Orin NX 3 TCP/IP, 1 EtherCAT, 3 RS485 4x140.4Wh [120A Max Discharge Rate with Safety Protection] OSQP1 / pinocchio2 / microstrain mips³ / BehaviorTree.CPP 4.4⁴

^{*} This specification is subject to change as it is still under development.

¹ https://www.behaviortree.dev/

² https://github.com/stack-of-tasks/pinocchio

³ https://github.com/ros-drivers/microstrain_mips

⁴ https://github.com/tier4/osqp_vendor/tree/main/