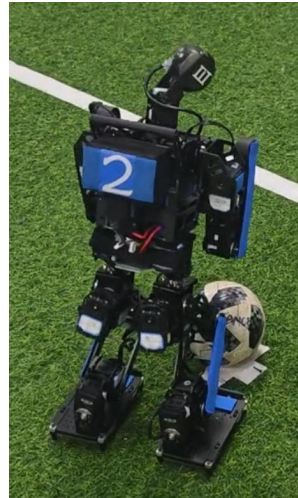
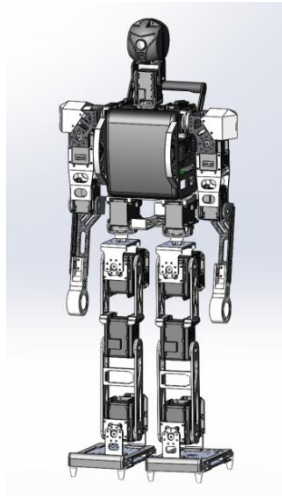


Hardware Specification of ZJUDancer

Robot Picture



Robot name: Robot 2~6

Height of the Robot: 673mm

Weight of the Robot: 4kg

Walking speed in cm/s: 2~8cm/s

Number of Degrees of Freedom: 20

Type of Motors on Each Kinematic Chain of the Robot

DYNAMIXEL MX-106, MX-64 and MX-28 with joint angle feedback.

Type of Sensors Used

- **IMU:** Analog device ADIS16355 featured with tri-axis gyroscope, and tri-axis accelerometer, which conduces to keep the balance of our robot.

- **Image sensor:** OmniVision OV2710 with 150-degree FOV, which provides a wider view angle, and improves the perception efficiency.

- **New Image sensor:** Some of the robots will be equipped with StereoLabs ZED X Camera, which ensures binocular vision ability.

Computing Unit: NVIDIA Jetson Orin NX

Materials

- **Leg and Thigh:** Aluminum 6061.
- **Lower arm and Rib cage side panel:** carbon fiber plate.
- **Rib cage front cover:** Nylon 3D printed.

Electronics

- STM32F405RGT for pre-processing of pressure.
- VL812-Q7/SL2.1A for quadrupling USB interface from main controller.
- CH340E/CH340N/FT232 for USB-to-UART conversion.
- MAX3443 for 485 communication with servos.
- K7805/MP1584/TPS7A for voltage reduction.

Battery: 4S 2200mAh XT60 50C, Dualsky