

1 Robot Specification

Figure.1 is our **prototype** robot design. We **plan to upgrade** the hardware lighter and more robust. You can find more detail from the spec.

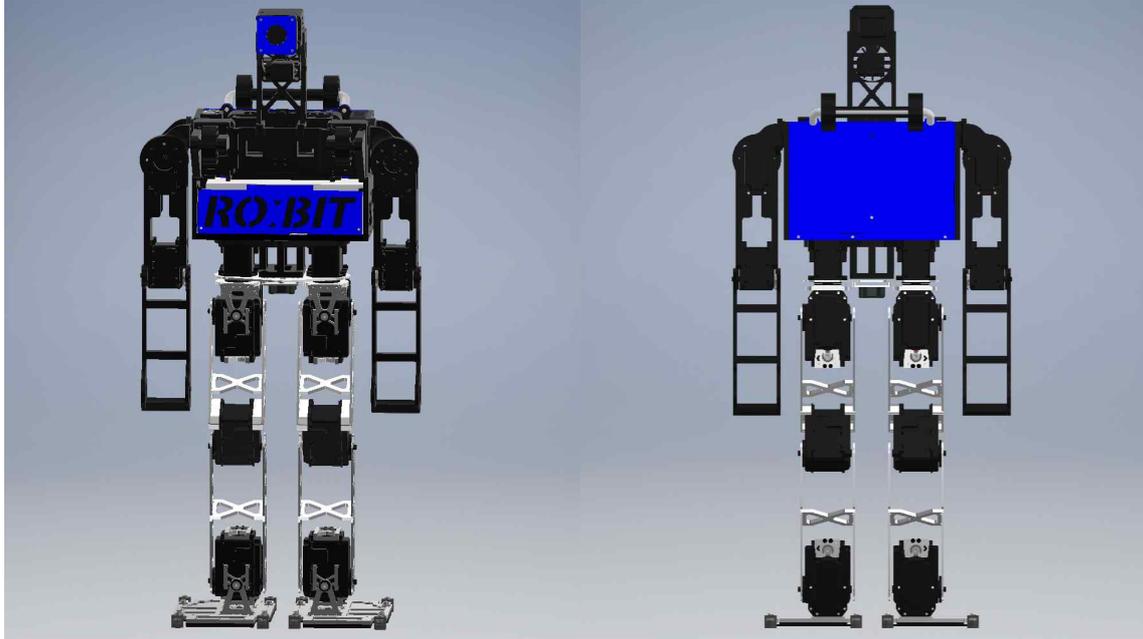


Figure.1 Unfinished Robot

ROBOT NAME	MINSU	
SIZE	Weight Height	5.86kg 640mm
Walking speed	30 cm/s	
Actuators	ROBOTIS Dynamixel MX series (MX-28, MX-64, and MX-106)	
Number of degrees of freedom and type of motors on each kinematic chain of the robot	All DOF	19 DOF
	HEAD	1 DOF (All 28)
	LEG	12 DOF (Pitch: 106, others: 64)
	ARM	6 DOF (Shoulder: 64, others: 28)
Computing units	NUC10i5FNK (Intel i5-10210U Quad Core 1.6~4.2 GHz), 8GB DDR4 RAM and 240GB of SSD ARM Cortex M4 STM32F303K8 MCU 72MHz	
Camera	Insta 360 Link	
Sensors	EBIMU-9DOFV5-R2 (Not using earth magnetic sensors) TAL230-50kg strain gauge	
Battery	Li-Po 6Cell 4200mAh	
OS/Development Platform	Linux Ubuntu 22.04/C,C++/ROS2	

Table 1 Specification of the Robot