

[ZETIN Hardware Specification]

- **Robot Name:** ZETIN
- **Height:** 1280 mm
- **Weight:** 30 Kg
- **Degrees of Freedom:** 12 DoF total
 - Legs: 3 DoF x 2 (MJ-YZ)
 - Arms: 2 DoF x 2 (AK 70-10, AK 60-6)
 - Head: 2 DoF (AK40-10)
- **Actuators:**
 - MJ-YZ (Input 48 V, Output: 1,000 W)
 - AK70-10 (Input: 24 V, Output: 500 W)
 - AK60-6 (Input: 24 V, Output: 100 W)
 - AK40-10 (Input: 24 V, Output: 60 W)
- **Sensors:**
 - Camera: Intel Realsense D435i
 - IMU: High-Performance Industrial-Grade 6-Axis Integrated IMU
- **Computing Unit:** NVIDIA Jetson Orin Nano (8GB RAM)
- **Materials:** 3D Printed PLA (Body), Aluminum Alloy + Industrial Plastic (lower)
- **Electronics:** Intel 12th Gen i3 CPU / 16GB RAM [tron1 controller]
STM32G474 Nucleo Board (Low-level motor control)
- **Battery:** Ternary Lithium Battery(240Wh) [for tron1], PT-B6300-FX45 (22.2V, 6S1P, 45C) [for upper body]

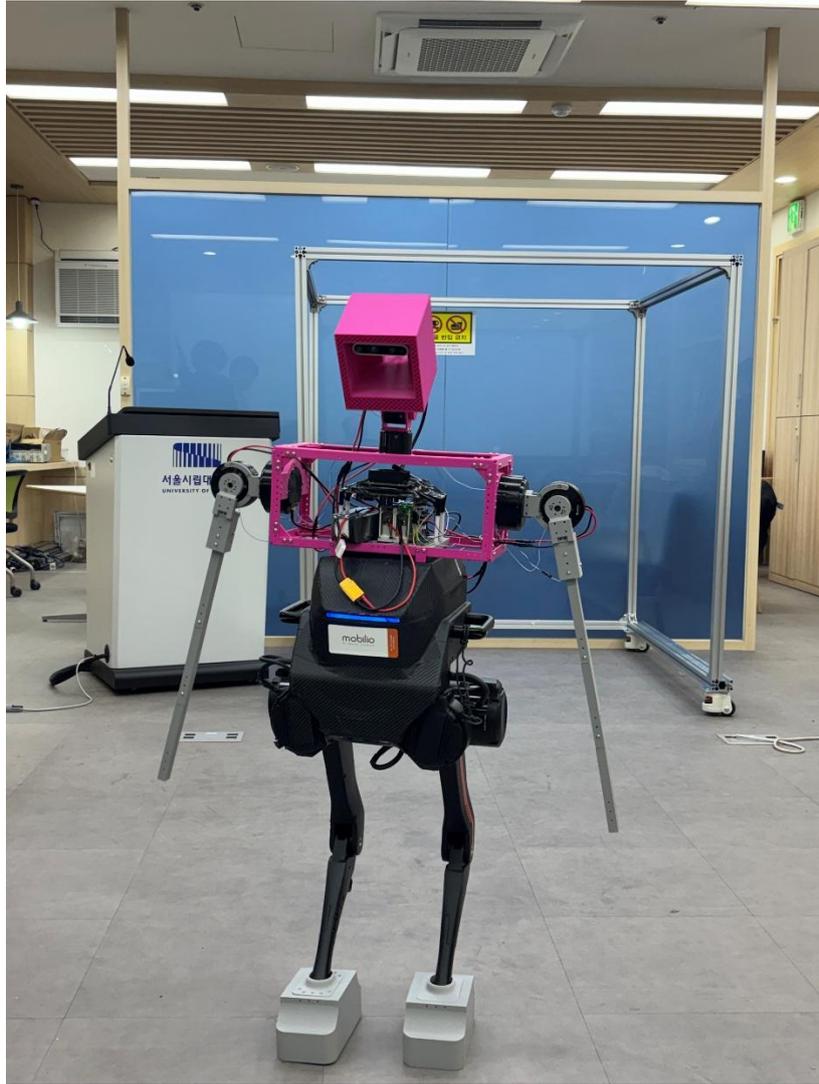


Figure 1 Robot picture