

Starkit – Robot Specification

Humanoid Soccer Competition KidSize, RoboCup 2022 Bangkok

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1 Robot Specification



Robot name: SAHR (based on Sigmaban S+)

Height: 64 cm

Weight: 6.5 kg

Walking speed: 35 cm/s

Motors: 20 DOF

- **Neck:** Dynamixel MX-64 (2 motors)
- **Upper Body:** Dynamixel MX-64 (2 per arm) and Dynamixel MX-106 (1 per arm)
- **Lower Body:** Dynamixel MX-106 (6 per leg)

Sensors:

- **Camera:** 2 FLIR Blackfly S GigE (Stereo vision)
- **IMU:** 9 Degrees of Freedom – GY-88
- **Foot Pressure:** 4 strain Gauge Sensors per foot

Computing units:

- **Low-level:** ARM7 (stm32) 72MHz (Maple mini)
- **High-level:** Intel NUC
 - Intel Core i7 gen9
 - 8GB RAM
 - SSD 256Go

Operating System: Linux (Ubuntu 18.04 Bionic)