

Barelang FC Robot Specification

Humanoid Kid Size League of RoboCup 2020

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1. Barelang-1



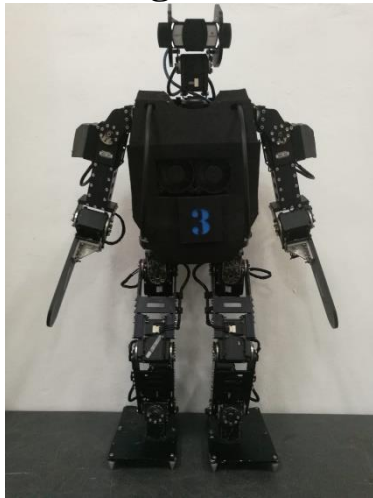
- **Robot name:** Barelang-1
- **Dimension:** 655 mm
 - Foot: 100 mm x 160 mm
 - Leg: 370 mm
 - Arm: 305 mm
 - Weight: 6.2 kg
- **Motors:** 20 DOF
 - Head: Dynamixel MX-28 (2 motors)
 - Arm: Dynamixel MX-64 (3 per arm)
 - Hip: Dynamixel MX-64 (1 per hip)
 - Leg: Dynamixel MX-106 (5 per leg)
- **Walking Speed:** 25 cm/s
- **Computing Units:**
 - Main Controller: Jetson-TX1/TX2
 - Sub Controller: CM730 (ARM CortexM3 STM32F103RE 720MHz)
- **Sensors:**
 - Gyroscope: LYPF540AH
 - Accelerometer: ADXL335
 - Camera: Logitech C930
- **Power:** Battery Lipo 4 Cell 2200 mAh

2. Bareleng-2



- **Robot name:** Bareleng-2
- **Dimension:** 655 mm
 - Foot: 100 mm x 160 mm
 - Leg: 370 mm
 - Arm: 305 mm
 - Weight: 6.2 kg
- **Motors:** 20 DOF
 - Head: Dynamixel MX-28 (2 motors)
 - Arm: Dynamixel MX-64 (3 per arm)
 - Hip: Dynamixel MX-64 (1 per hip)
 - Leg: Dynamixel MX-106 (5 per leg)
- **Walking Speed:** 25 cm/s
- **Computing Units:**
 - Main Controller: Jetson-TX1/TX2
 - Sub Controller: CM730 (ARM CortexM3 STM32F103RE 720MHz)
- **Sensors:**
 - Gyroscope: LYPF540AH
 - Accelerometer: ADXL335
 - Camera: Logitech C930
- **Power:** Battery Lipo 4 Cell 2200 mAh

3. Barelang-3



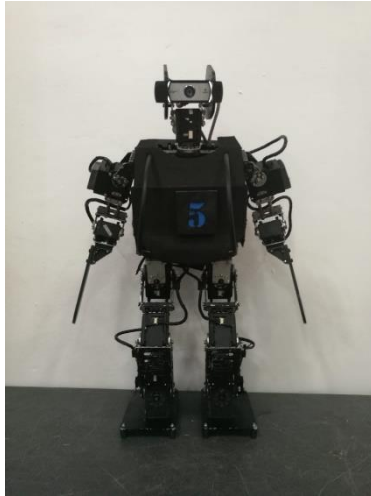
- **Robot name:** Barelang-3
- **Dimension:** 655 mm
 - Foot: 100 mm x 160 mm
 - Leg: 370 mm
 - Arm: 305 mm
 - Weight: 6.2 kg
- **Motors:** 20 DOF
 - Head: Dynamixel MX-28 (2 motors)
 - Arm: Dynamixel MX-64 (3 per arm)
 - Hip: Dynamixel MX-64 (1 per hip)
 - Leg: Dynamixel MX-106 (5 per leg)
- **Walking Speed:** 25 cm/s
- **Computing Units:**
 - Main Controller: Jetson-TX1/TX2
 - Sub Controller: CM730 (ARM CortexM3 STM32F103RE 720MHz)
- **Sensors:**
 - Gyroscope: LYPF540AH
 - Accelerometer: ADXL335
 - Camera: Logitech C930
- **Power:** Battery Lipo 4 Cell 2200 mAh

4. Bareleng-4



- **Robot name:** Bareleng-4
- **Dimension:** 655 mm
 - Foot: 100 mm x 160 mm
 - Leg: 370 mm
 - Arm: 305 mm
 - Weight: 6.2 kg
- **Motors:** 20 DOF
 - Head: Dynamixel MX-28 (2 motors)
 - Arm: Dynamixel MX-64 (3 per arm)
 - Hip: Dynamixel MX-64 (1 per hip)
 - Leg: Dynamixel MX-106 (5 per leg)
- **Walking Speed:** 25 cm/s
- **Computing Units:**
 - Main Controller: Jetson-TX1/TX2
 - Sub Controller: CM730 (ARM CortexM3 STM32F103RE 720MHz)
- **Sensors:**
 - Gyroscope: LYPF540AH
 - Accelerometer: ADXL335
 - Camera: Logitech C930
- **Power:** Battery Lipo 4 Cell 2200 mAh

5. Bareleng-5



- **Robot name:** Bareleng-5
- **Dimension:** 560 mm
 - Foot: 80 mm x 130 mm
 - Leg: 290 mm
 - Arm: 245 mm
 - Weight: 4.45 kg
- **Motors:** 20 DOF
 - Head: Dynamixel MX-28 (2 motors)
 - Arm: Dynamixel MX-28 (3 per arm)
 - Hip: Dynamixel MX-64 (1 per hip)
 - Leg: Dynamixel MX-64 (5 per leg)
- **Walking Speed:** 25 cm/s
- **Computing Units:**
 - Main Controller: Jetson-TX1/TX2
 - Sub Controller: CM730 (ARM CortexM3 STM32F103RE 720MHz)
- **Sensors:**
 - Gyroscope: LYPF540AH
 - Accelerometer: ADXL335
 - Camera: Logitech C930
- **Power:** Battery Lipo 4 Cell 2200 mAh