

# Blenders Football Club: Robot Specification

## RoboCup Humanoid KidSize Soccer 2024

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## 1 Specifications

Blenders F.C. is composed of 4 OP3 humanoid robots from ROBOTIS, shown in figure 1. They all share specifications (described in ROBOTIS e-manual [1]), most relevant are detailed in table 1.



Fig. 1. Robotis OP3

Table 1. Robot specifications.

Aspect	Description
Robot name	Robotis OP3
Height	510 mm
Weight	3.2 kg
Walking speed	7.14 cm/s
Degrees of Freedom	20 total, Legs: 6 each, Arms: 3 each, Head: 2
Computing unit	INTEL NUC i3 Intel Core i3 processor dual core 8GB RAM
Electronics	OpenCR powered by STMicroelectronics Cortex-M7 32F746GT6
Camera	Logitech C920 HD Pro Webcam (1920x1080)
Sensors	3-Axis Gyroscope, 3-Axis Accelerometer IMU (MPU9250)
Battery	Lipo 3cell 11.1v 1800mA
Actuators	DYNAMIXEL XM430-W350-R
Materials	Metal case with integrated assembly bolt taps

## References

1. ROBOTIS OP3. (2019)  
<https://emanual.robotis.com/docs/en/platform/op3/introduction/>