

NimbRo TeenSize Robot Data Sheet

Marcell Missura, Philipp Allgeuer, Michael Schreiber, Cedrick Münstermann,
Max Schwarz, Sebastian Schueller, and Sven Behnke

Rheinische Friedrich-Wilhelms-Universität Bonn
Computer Science Institute VI: Autonomous Intelligent Systems
Friedrich-Ebert-Allee 144, 53113 Bonn, Germany
{ missura | pallgeuer | schreiber | behnke } @ ais.uni-bonn.de
<http://www.nimbro.net>

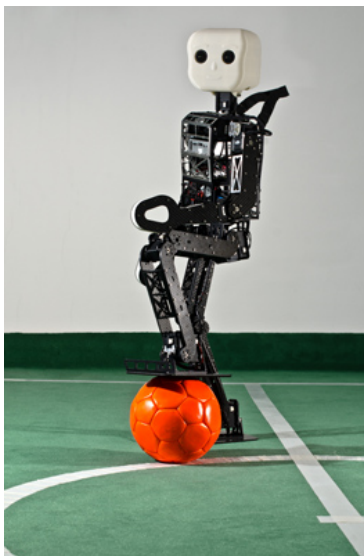


Fig. 1. TeenSize robot NimbRo-OP.

- **Robot name:** NimbRo-OP
- **Number of degrees of freedom:** 20 DOF: 6 per leg, 3 per arm, 2 in head (pan-tilt)
- **Type of motors:** Robotis Dynamixel MX-106 and MX-64
- **Computing unit:** Zotac Zbox nano XS PC, Dual-Core AMD E-450 1.65GHz
- **Walking speed:** TBD, omnidirectional walking
- **Cameras:** Logitech C905 USB camera with a custom wide-angle lens
- **Sensors:** Robotis CM730 with onboard 3-axis accelerometer, gyroscope and magnetometer
- **Other specs:** size 95cm, weight 6.6kg



Fig. 2. NimbRo TeenSize robot Copedo.

- **Robot name:** Copedo
- **Number of degrees of freedom:** 17 DOF: 5 per leg, 3 per arm, 1 head pan
- **Type of motors:** Robotis Dynamixel EX-106+, EX-106, RX-64, and RX-28
- **Computing unit:** Sony VAIO UX1XN ultra mobile PC, Intel 1.3GHz Core Solo
- **Walking speed:** up to 40cm/s, omnidirectional walking
- **Cameras:** WVGA USB2.0 camera IDS uEye UI-1226LE with wide-angle lens
- **Sensors:** dual-axis accelerometer (ADXL203, $\pm 1.5g$) and two gyroscopes (ADXRS, $\pm 300^\circ/s$)
- **Other specs:** size: 114cm, weight: 8kg.



Fig. 3. NimbRo TeenSize robot Dynaped.

- **Robot name:** Dynaped
- **Number of degrees of freedom:** 13 DOF: 5 per leg, 1 per arm, 1 head pan
- **Type of motors:** Robotis Dynamixel EX-106 and RX-64
- **Computing unit:** Sony VAIO UX1XN ultra mobile PC, Intel 1.3GHz Core Solo
- **Walking speed:** up to 40cm/s, omnidirectional walking
- **Cameras:** WVGA USB2.0 camera IDS uEye UI-1226LE with wide-angle lens
- **Sensors:** dual-axis accelerometer (ADXL203, $\pm 1.5g$) and two gyroscopes (ADXRS, $\pm 300^\circ/s$)
- **Other specs:** size: 105cm, weight: 7.5kg.