

dotMEX 2013 (.MX) Humanoid Kid-Size Robot Specifications Page

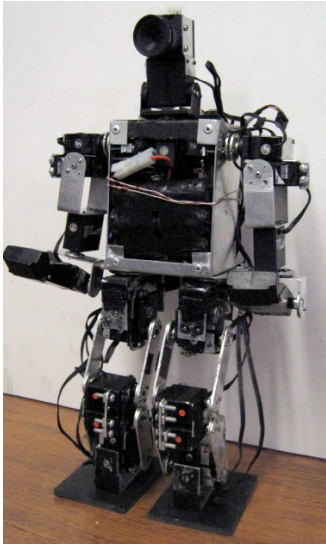
Fernando Arámbula², Héctor R. Arce², Luis García González⁴, Ángel D. Gómez¹, Eric Hernández¹,
Manuel E. Hunter¹, Juan M. Ibarra Zannatha¹, Alejandro J. Malo¹, Felipe J.K. Lara³, Jorge E.
Lavín¹, Ignacio López², Víctor J. Núñez Nalda⁴,
Sergio A. Orozco², Mario Peña Cabrera², Lauro Vázquez²


¹Centro de Investigación y de Estudios Avanzados del IPN


² Universidad Nacional Autónoma de México

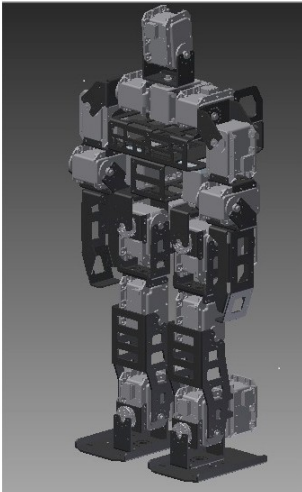
³Verstand Labs

⁴Universidad Politécnica de Sinaloa

1.-Robot Picture	
	Note: We have two robots with exactly the same characteristics and hardware
2.- Names	“ <i>Tuca</i> ” and “ <i>Brody</i> ”
3.- DOF	Total: 22. 7 in each leg.
4.-Computing Unit	Micom MR-C3000 with ATmega 128 MPU 8bit RISC at 7.3728Mhz, with 32K flash memory and a 1Gb SD Memory Card.
5.- Walking Speed	Walking: 0.09 m/s. Running: 0.24 m/s
6.- Camera	CMU Cam 3 camera. This camera is equipped with a Philips LPC2106 processor, 64 Kb RAM, 128 Kb ROM, serial port and SD card slot. It can grab RGB and YCrCb images up to 352 by 288 pixels at rates of 26 FPS.
7.- Sensors	M75501 gyroscope, GP1S036 tilt sensor, HMC6352 Spark Fun Compass, SparkFun Electronics - Triple Axis Accelerometer Breakout - ADXL330
8.- Other Specs	Height: 432 mm. HCOM : 225 mm, Weight: 2.4 kg. Foot Area: 60 cm ²

1.-Robot Picture	
2.- Name	AH1N1
3.- DOF	Total: 26. 6 in each leg.
4.-Computing Unit	RoBoard RB-100. Vortex86DX CPU – 1000 MHz, 256 MB RAM. Gumstix Overo Fire COM - ARM Cortex-A8 CPU – 720 MHz, C64x+ DSP, 256 MB RAM
5.- Walking Speed	Walking: 0.15 m/s.
6.- Camera	2 Point Grey Firefly MV, 1 MicroStrain 3DM-GX1,Color Stereoscopic Vision, 0.3 MP Resolution
7.- Sensors	1 MicroStrain 3DM-GX1, 8 Force Sensitive Resistor
8.- Other Specs	Height: 580 mm. HCOM : 280 mm, Weight: 4.5 kg. Foot Area: 100 cm ²

1.-Robot Picture	
2.- Name	"Hugol" (Darwin-OP).
3.- DOF	Total: 20. 6 in each leg. MX28 Robotis Servos.
4.-Computing Unit	FitPC2, Intel Atom Z530 CPU (clocked @ 1.6GHz). Robotis CM730 Servo Controller.
5.- Walking Speed	Walking: 0.25 m/s.
6.- Camera	Image (2MP Logitech C905) HD Camera
7.- Sensors	IMUs (3-axis accelerometers, 3-axis gyroscope, both intrgrated into sub controller)
8.- Other Specs	Height: 455 mm. HCOM : 230 mm, Weight: 2.8 kg. Foot Area: 66 cm ²

1.-Robot Picture	 <p data-bbox="580 853 1294 909">Note: We have two robots with exactly the same characteristics and hardware</p>
2.- Names	Darwin-MX 1 and 2 (Darwin-OP based).
3.- DOF	Total: 20. 6 in each leg. Robotis RX28 Servomotors.
4.-Computing Unit	FitPC2, Intel Atom Z530 CPU (clocked @ 1.6GHz). Robotis CM730 Servo Controller.
5.- Walking Speed	Walking: 0.25 m/s.
6.- Camera	Image (2MP Logitech C905) HD Camera
7.- Sensors	IMUs (3-axis accelerometers, 3-axis gyroscope, both intrgrated into sub controller)
8.- Other Specs	Height: 455 mm. HCOM : 225 mm, Weight: 2.8 kg. Foot Area: 66 cm ²