

Team Mexico RoboCup 2015 Humanoid KidSize Robot Specifications

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Bogobot V2



Fig. 1. Bogobot V2, developed by ITESM

Height	52 cm	
Weight	3.5 kg	
Walking speed	20 cm/s	
DOF Leg	5	Dynamixel RX-28
DOF Arm	3	Dynamixel RX-24F
DOF Head	2	Dynamixel RX-24F
DOF Hip	0	
Total DOF	18	
Sensor	Camera	HD RocketFish webcam @ 25 fps
	Accelerometer	ADXL345
	Gyroscope	ITG-3200 dual-axis
Processing Unit	FitPC2	@2GHz, 2GB RAM, SSD, with WiFi

Cyberlords T4

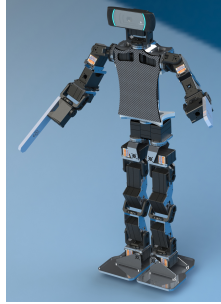


Fig. 2. Cyberlords T4, developed by Universidad La Salle

Height	58.5 cm	
Weight	2300 g	
Walking speed	15 cm/s	
DOF Leg	6	KRS-2572HV digital servomotors by Kondo (Metal gears), 9 V - 12 V operating range, 25 kg cm @ 11.1V (stall torque), 462°/s @ 11.1V (no load speed)
DOF Arm	3	KRS-2552HV digital servomotors by Kondo (Metal gears), 9 V - 12 V operating range, 14 kg cm @ 11.1V (stall torque), 429°/s @ 11.1V (no load speed)
DOF Head	2	KRS-2552HV
DOF Hip	1	KRS-2552HV
Total DOF	21	
Sensor	Camera	Logitech C920 Webcam 640 × 480 @ 30fps, YCbCr
	6 DOF IMU	3 accelerometer axes, 300mV/g sensitivity, ±3g range, 3 gyroscope axes, 0.83mV/°/s sensitivity, ±300°/s range
	9 DOF IMU	3 accelerometer axes resolution ±16g (I ² C interface), 3 magnetometer axes, magnetic field range ±80e (I ² C interface), 3 gyroscope axes range, ±2000°/s (I ² C interface)
Processing Unit	2 Gumstix Overo Fire COM with Summit board	based on TI OMAP 3530: ARM Cortex-A8 CPU + C64x+ DSP core, DVI-D, USB, 6 PWM, I2C port. SPI bus, 6 A/D, 802.11g

DARwIn-OP**Fig. 3.** DARwIn-OP, developed by ROBOTIS

Height	45.5 cm	
Weight	2.8 kg	
Walking speed	24 cm/s	
DOF Leg	6	Dynamixel MX-28+
DOF Arm	3	Dynamixel MX-28+
DOF Head	2	Dynamixel MX-28+
DOF Hip	0	
Total DOF	20	
Sensor	Camera	C905 HD webcam by Logitech, HD 1280×720 @ 30fps (max rate) YUV (color space)
	IMU	6 DOF IMU 3 accelerometer axes 3 gyroscope axes
Processing Unit	FitPC2i	by CompuLab, based on the Intel Atom Z530 microprocessor 1.6 GHz @533MHz FSB L2-512KB, 1GB DDR2 RAM, 2 USB, 4GB NAND flash disk, 802.11 b/g/n, 1 Gigabit Ethernet 5-7 W (power consumption) 104 mm × 96 mm × 23 mm, 92 g

NimbRo-OP**Fig. 4.** NimbRo-OP, developed by Universität Bonn

Height	90 cm	with modified head
Weight	6.6 kg	
DOF Leg	6	Dynamixel MX-106
DOF Arm	3	Dynamixel MX-64
DOF Head	2	Dynamixel MX-64
DOF Hip	0	
Total DOF	20	
Sensor	Camera	Logitech C905 with wide angle lens
	IMU	Inertial sensors in Robotis CM-730 controller, 3-axis accelerometer, 3-axis gyro
Processing Unit	Zotac ZBOX nano XS	Dual-Core PC, AMD E-450 processor (2x1.65GHz), 2GB RAM, 64GB SSD, USB 3.0, HDMI, Gigabit Ethernet, Memory card slot