


Hardware Spec. - Controller

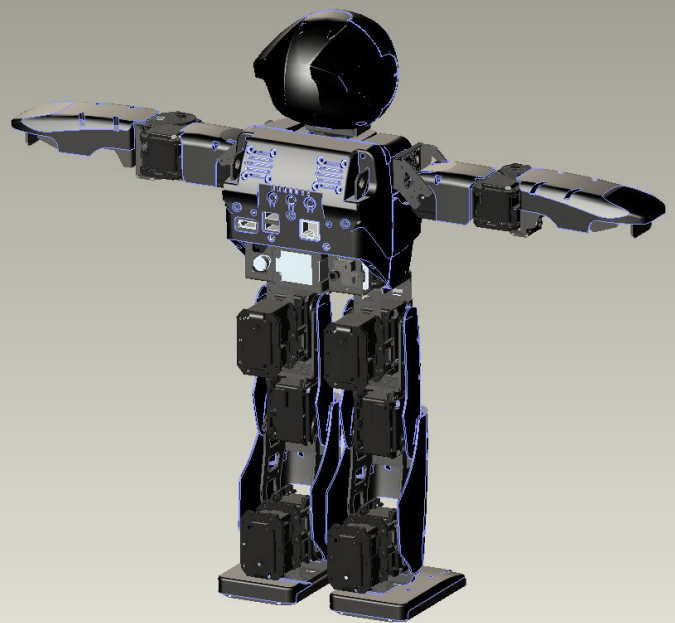
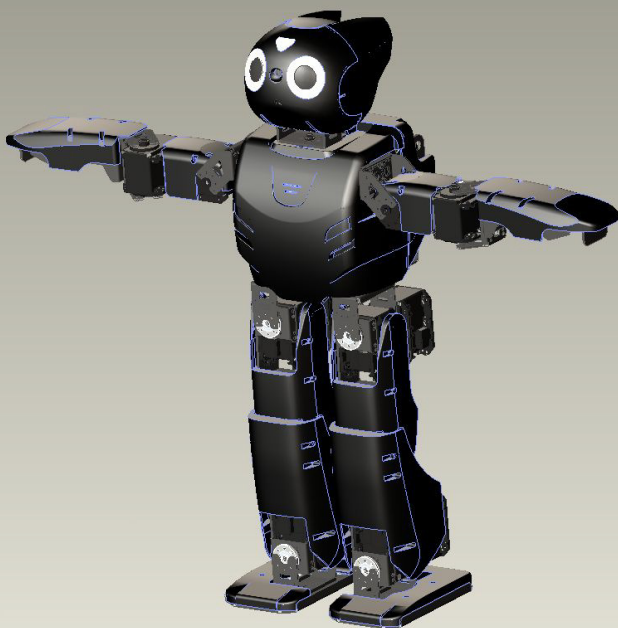
Main Controller SBC-fitPC2i 	CPU	Intel Atom Z530 CPU @1.6GHz
	Chipset	Intel US15W
	RAM	1GB DDR2
	Disk	4GB Flash Disk
	External Video Port	HDMI
	Audio Port	HD Audio, line-out 2.0 / MIC in / Line in
	Ethernet Port	1000 BaseT
	WiFi	802.11b/g/n
	USB Port	2 x USB2.0
	External Storage	miniSD
	BIOS	Phoenix
	OS	Linux, Windows XP, Windows 7
Sub Controller CM-730 	CPU	ARM 32-bit Cortex-M3 STM32F103RE
	Frequency	72MHz
	Performance	1.25 DMIPS/MHz (Dhrystone 2.1)
	Flash Memory	512KB
	SRAM	64KB
	Peripheral	5 x USARTs 4 x 16-bit timers, 2 x basic timers 3 x SPIs, 2 x I2Ss, 2 x I2Cs USB, CAN, 2 x PWM timers 16 x 12-bit ADCs, 2 x 12-bit DACs 1 x SDIO
	Communication	TTL / RS-485

Hardware Spec. - Device

Actuator RX-28M	Holding Torque	24kgf.cm @ 12V
	Speed	45RPM @ No Load
	Motor	Maxon Coreless DC Motor
	Position Sensor	Magnetic Potentiometer
	Gear Ratio	1 : 193
	Resolution	0.29°
	Size	35.5mm x 50.8mm x 41.8mm
	Weight	72g
	Network Interface	TTL / Up To 4.5MBPS
	Feedback	Position / Speed / Temperature / Alarm
Sensor	Gyroscope	3-Axis LYPR540AH
	Accelerometer	3-Axis ADXL335
	Pressuremeter	2 x 4 FSR in Foot
	Camera	2MP HD Logitech C905 Camera
Sound	Speaker	8ohm 1W 1 x MIC in Body
	MIC	2 x MIC in Ear / 1 x MIC in Head
Display	Head LED	1 x RGB LED
	Eye LED	1 x RGB LED
	Body LED	6 x LED, 2 x RGB LED
Button & Switch	Body Button	3 x Push Button
	Power Switch	1 x Toggle Switch
Power	SMPS	in 100V-240V 50/60Hz / out 12V 5000mA
	Battery	Li-Po 3CELL 11.1V 1000mA

Hardware Spec. - Mechanics

Dimension	Height	454mm
	Foot	66mm x 104mm
	Leg	250mm
	Arm	214mm
	Weight	2.76Kg
DOF	Head	2 DOF
	Arm	2 x 3 DOF
	Leg	2 x 6 DOF



Software Spec. – Overall

Software	O/S	Linux Ubuntu / Windows XP / Windowx 7
	Framework	open-DARwIn SDK
	Programing Language	C / C++ / Java / Phython / Perl
	Compiler	gcc / MS Visual Studio
	Motion Editor	motion-DARwIn TCP/IP
	Development Environment	Eclipse / QEditor
	Code Management	Subversion
	Remote Management	SAMBA

