THE POSSIBILITIES ARE INFINITE FUJITSU

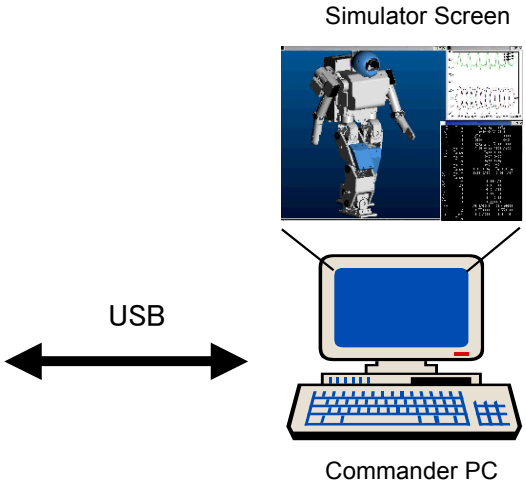
MINIATURE HUMANOID ROBOT HOAP-1

The HOAP-1 is a miniature and easy-to-handle humanoid robot.

It is easily connected a PC and can be used as an experimental tool for study of humanoid robot in the field of motion controls and communications with humans. A simulator software attached helps to develop applications easily, safely, and efficientl

HOAP: Humanoid for Open Architecture Platform

HOAP-1



※The appearance may change without prior notice.

FEATURES

The HOAP-1 system is composed of a robot body, a PC and a power unit.
The robot body is miniature and light so that it is suitable for development of humanoid robot applications in the field of motion controls.
It uses USB interfaces as a inner LAN. The control firmware is rewritable so that it is easy to add new actuators and sensors.
The HOAP-1 is controlled by an outer commandor PC so that it allows to make an advanced programming without the limitation of built-in CPU calculating performance.
The PC uses realtime OS, RT-Linux so that it allows to develop easily re-usable softwares in an open enviroment.

SPECIFICATIONS

・Robot Body

Height	About 48 cm
Weight	About 6 kg, including 0.7kg of battery
Joint Mobility	6DOF／foot x 2
	4DOF／arm x 2
Sensor	Joint angle sensor
	Optical two-phase incremental encoder
	Angle encoder resolution :
	0.01 degree/pulse or less
	3-axis accerelation sensor
	Sensing range : ±2 G
	Resolution : 0.005 G or less (ADC resolution)
	3-axis gyrosensor
	Sensor range : ±60 deg/s
	Resolution : 0.25 deg/s or less (ADC resolution)
	Foot load sensor : 4 ch/foot

CPU (optional)

OS	RT-Linux
CPU	MMX Pentium 300MHz or more
Memory	RAM 32MB(main memory)
	32MB compact flash memory
	User usable memory : 16MB

・Commander PC

OS	RT-Linux
CPU	Equivalent Pentium III 700MHz
Software	・Basic simulator
(CD-R)	・Poser and viewer
	・Robot model(VRML)

・Power Requirements

DC24V×6.2 A (150W)

Basic System	Robot body (note 1)
	Commander PC
	Power unit
Communication Interface	USB 1.1, 12Mbps
Control Cycle	1ms
Control Mode	Position/speed control changeable
	Control firmware rewritable (note 2)
Extension USB port of robot	8

Option	Battery and battery charger
	Wireless data transmission
	Internal CPU
	Motor control board (extension)
	Sensor board (extension)

Note 1) Basic robot set is controlled with a PC via cables.
Note 2) Firmware development environment is not included in the set.

* The specification may change without a proir notice.

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