

## MINIATURE HUMANOID ROBOT HOAP-1

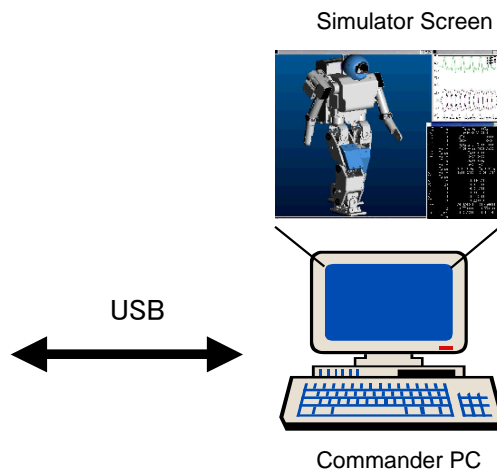
The HOAP-1 is a miniature and easy-to-handle humanoid robot.

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

<p>•Robot Body</p> <p>Height           About 48 cm</p> <p>Weight           About 6 kg, including 0.7kg of battery</p> <p>Joint Mobility   6DOF /foot x 2 4DOF /arm x 2</p> <p>Sensor           Joint angle sensor Optical two-phase incremental encoder Angle encoder resolution : 0.01 degree/pulse or less</p> <p>3-axis accerelation sensor Sensing range : ±2 G Resolution : 0.005 G or less (ADC resolution)</p> <p>3-axis gyrosensor Sensor range : ±60 deg/s Resolution : 0.25 deg/s or less (ADC resolution)</p> <p>Foot load sensor : 4 ch/foot</p> <p>CPU (optional)</p> <p>OS                RT-Linux</p> <p>CPU              MMX Pentium 300MHz or more</p> <p>Memory         RAM 32MB(main memory) 32MB compact flash memory User usable memory : 16MB</p> <p>•Commander PC</p> <p>OS                RT-Linux</p> <p>CPU              Equivalent Pentium III 700MHz</p> <p>Software (CD-R)          •Basic simulator                   •Poser and viewer                   •Robot model(VRML)</p> <p>•Power Requirements</p> <p>DC24V×6.2 A (150W)</p>	<p>Basic System    Robot body (note 1) Commander PC Power unit</p> <p>Communication Interface   USB 1.1, 12Mbps</p> <p>Control Cycle                1ms</p> <p>Control Mode                 Position/speed control changeable Control firmware rewritable (note 2)</p> <p>Extension USB port of robot  8</p>
	<p>Option           Battery and battery charger Wireless data transmission Internal CPU Motor control board (extension) Sensor board (extension)</p> <p>Note 1) Basic robot set is controlled with a PC via cables. Note 2) Firmware development environment is not included in the set.</p>

\* The specification may change without a proir notice.

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