

# JoiTech Robot Specification

Yuji Oshima<sup>\*1</sup>, Dai Hirose<sup>\*1</sup>, Jongbeom Park<sup>\*1</sup>,  
Yuji Okuyama<sup>\*1</sup>, Ryuhei Sumita<sup>\*1</sup>, Daii Akutsu<sup>\*1</sup>,  
Tomoya Suzuki<sup>\*2</sup>, Kazumasa Shibata<sup>\*2</sup>,  
Takashi Takuma<sup>\*3</sup>, Kazuaki Tanaka<sup>\*1</sup>,  
Hiroki Mori<sup>\*1</sup>, and Minoru Asada<sup>\*1</sup>

<sup>\*1</sup> Adaptive Machine Systems, Graduate School of Engineering  
Osaka University, Osaka, Japan

<sup>\*2</sup> Dept. of Mechanical Engineering, Faculty of Engineering

<sup>\*3</sup> Dept. of Electrical and Electronic Systems Engineering  
Osaka Institute of Technology, Japan

robocup@er.ams.eng.osaka-u.ac.jp

## 1 Specifications

The team JoiTech utilizes a robot, Tichno-RN which has 22 degree of freedom. Mechanical structure of Tichno-RN was developed by Vstone Co.,Ltd. Its link structure and a front view are shown in Fig. 1, and the detailed specification is shown in Table 1.

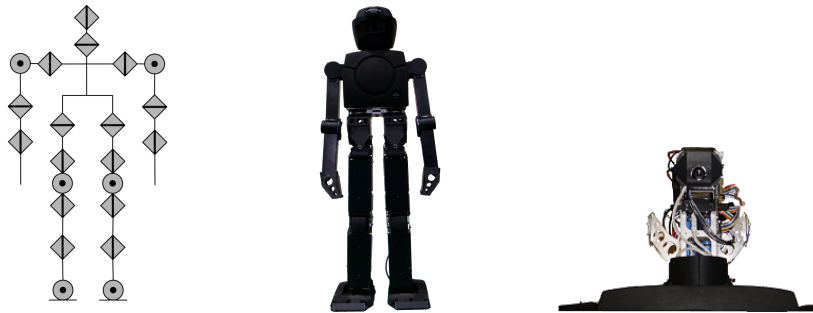


Fig. 1. Tichno-RN robot

**Table 1.** Tichno-RN hardware specifications

| Tichno-RN   |  |                                |
|-------------|--|--------------------------------|
| Height (mm) | 1500   |                                |
| Weight (kg) | 25   |                                |
| DOF         | 22   |                                |
| Actuators   | VS-SV410, VS-SV1150, VS-SV3310               |                                |
| Camera Type | Logicool HD Pro Webcam C920                  |                                |
| Controller  | Main Controller                              | Sub Controller                 |
| CPU         | Panasonic Let's NOTE<br>Intel Core i5 2.6GHz | VS-RC003HV<br>ARM7TDMI LPC2148 |
| ROM         | 223 GB (SSD)                                 | 512 KB                         |
| RAM         | 8 GB   | 40 MB                          |
| OS          | Windows7                                     | None                           |