

Humanoid Soccer Robot Design by TKU Team for Humanoid League of RoboCup 2010

Ching-Chang Wong, Kai-Hsiang Huang, Yueh-Yang Hu, Hsiang-Min Chan, Hao-Che Chen,


Chih-Hui Hung, Ching-Ching Jiang, and Wei-Ning Hsu

Department of Electrical Engineering, Tamkang University

Tamsui, Taipei, Taiwan

E-mail: wong@ee.tku.edu.tw

Table 1. Specifications of the TWNHR-VI

Specifications				
Name	TWNHR-VI			
Height	56 cm			
Weight	3.7 kg			
Walking Speed	10cm/sec			
Mechanism System				
		Number of DOF	Actuator Torque(kg/cm)	Actuator Speed (sec/60°)
Head	Neck	2	12.5~17.1	0.269
Trunk	Waist	1	28.3~37.7	0.269~0.196
Legs	Hip	3 (×2)		
	Knee	1 (×2)	64.4~77.2	0.167~0.126
	Ankle	2 (×2)	28.3~37.7	0.269~0.196
Arms	Shoulder	2 (×2)	12.5~17.1	0.269~0.196
	Elbow	1 (×2)		
	Wrist	1 (×2)		
Total		23		
Electronic System				
Sensors	Webcam	320x240 resolution		
	Accelerometer	3-axis		
	Gyro	300 degree/sec		
Processor	RoBoard	1GHz		
Power	Lithium battery	16V, 1600mA; 11.1V, 1600mA		