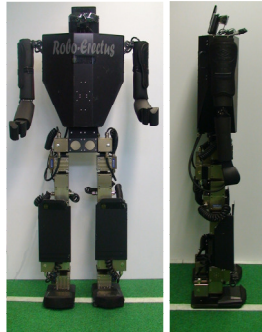


## Specification for Robo-Erectus Senior III (RESr-III): A Teen Size Humanoid Soccer Robot

Liandong Zhang, Changjiu Zhou, Guohua Yu, Wei Hong, Tianwu Yang, Torin, Hendra, Carlos Antonio Acosta Calderon , Rajesh Elara Mohan, Pik Kong Yue

Advanced Robotics and Intelligent Control Centre (ARICC)  
Singapore Polytechnic, 500 Dover Road, Singapore 139651  
Email: ZhouCJ@sp.edu.sg  
Url: www.robo-erectus.org

### Specification of Robo-Erectus Senior III

1. Name: Robo-Erectus Senior III (RESr-III)					
2. Walking Speed and Physical Specifications					
Weight	Dimensions			Speed	
	Height	Width	Depth	Walking	Running
44kg	140cm	28cm	20cm	5m/min	---
3. Degrees of Freedom: 22 DOFs					
Joint	Roll	Pitch	Yaw		
Head			✓		
Shoulder	✓	✓			
Elbow		✓			
Hip	✓	✓	✓		
Knee		✓			
Ankle	✓	✓			
4. Sensors					
Camera	USB camera with up to 640x480 resolution and 30fps				
Compass	1° heading accuracy				
Gyro	6 dimensions				
Force	ATI Mini85 F/T Sensor				
5. Type of motors					
PowerCube PR70			RX-64		
6. Computing Unit					
Features	Main Processor		Vision		Sensor/Actuator
Processor	Intel Celeron		Intel Core Solo		Dual PIC18F8720
Speed	800MHz		1.33GHz		25MHz
Memory	1GB		1GB		8KB
Storage	30GB		16GB		256KB
Interface	CAN BUS, USB, WIFI		USB, WIFI		RS232, RS485