

# Team Description Paper: HuroEvolution<sup>JR</sup> Humanoid Robot for Robocup 2014 Humanoid League

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## Specification

ROBOT Name	HuroEvolution	
Height of Robot	460mm	
Arm length	600mm	
Weight of Robot	2.8kg	
Walking Speed	Maximum: 22 cm/s	
Type of motor	MX-28(Servo motor)	
Torque	2.3N.m~ 3.1N.m	
Speed	67rpm	
Degree of freedom	20 With Leg: 6 x 2 Arm: 3 x 2 Head: 2	
Computing unit	UDOO(Single Board Computer)	
	Processor:	Freescall i.MX 6 ARM Cortex-A9 CPU Quad core 1GHz
	Operating System:	Ubuntu
Motion Controller	UDOO(Single Board Computer)	
	Processor:	Atmel SAM3X8E ARM Cortex-M3 CPU
Camera	Autofocus Camera 5.0 <ul style="list-style-type: none"> <li>● Image transfer rate <ul style="list-style-type: none"> <li>■ VGA (320x480) @ 120fps</li> <li>■ VGA (640x480) @ 90fps</li> <li>■ 720p @ 60fps</li> <li>■ 1280x960 @ 45fps</li> <li>■ 1080p @ 30fps</li> <li>■ QSXGA (2592x1944) @ 15fps</li> </ul> </li> <li>● Sensitivity: 600mV/lux-sec</li> <li>● Video capture in Full Field of View (FOV):</li> <li>● double sensitivity,improved signal-to.noise ratio (SNR)</li> <li>● Post-binning re-sampling filter for sharper,</li> <li>● crisper contours and colours</li> <li>● Internal anti-shaking engine</li> </ul>	
Batteries	1 x Li-Po 11V 1500mAh , 1 x Li-Po 14.8V 1500mAh	
Accelerometer	LSM303, L3G4200D	