Robot Names

Espanto  (Goalkeeper)
Bodoque  (Striker)
Benito    (Striker)
Matute    (Bench)

Specifications

| Physical specs:       | Height: 41.5 cm |
|                       | Weight: 1660 g  |
|                       | Walking speed: 10 cm/s |

Degrees of freedom: 20 DOF

- 6 DOF on each leg
- 3 DOF on each arm
- 2 DOF on the head

Servo motors: 4 HS-8498HB digital servomotors

by HITEC (Karbonite gears)
- 6V-7.4V operating range
- 7.4 kg.cm @ 6V (stall torque)
- 300°/s @ 6V (max speed)

16 HSR-5498SG digital servomotors

by HITEC (Steel gears)
- 6V-7.4V operating range
- 11 kg.cm @ 6V (stall torque)
- 272°/s @ 6V (max speed)

Sensors:

<table>
<thead>
<tr>
<th>Sensor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UI-1226LE-C</td>
<td>by IDS (WVGA: 752x480), 72° aperture angle</td>
</tr>
<tr>
<td></td>
<td>87 fps @ WVGA (max throughput)</td>
</tr>
<tr>
<td></td>
<td>RGB, YUV, YCbC, (color spaces)</td>
</tr>
<tr>
<td>6 DOF IMU</td>
<td>3 accelerometer axes (analog outputs)</td>
</tr>
<tr>
<td></td>
<td>300 mV/g sensitivity, ±3 g range</td>
</tr>
<tr>
<td></td>
<td>3 gyroscope axes (analog outputs)</td>
</tr>
<tr>
<td></td>
<td>0.83 mV/°/s sensitivity, ±300°/s range</td>
</tr>
<tr>
<td>CMPS03 digital compass</td>
<td>by Devantech (I2C interface)</td>
</tr>
<tr>
<td></td>
<td>0.1° resolution</td>
</tr>
</tbody>
</table>

Processing unit: Roboard RB-100

based on the 32-bit x86 Vortex86DX CPU
- 1 GHz
- 256 MB DDR2 RAM
- RS-485, 32 PWM channels, 3 USB 2.0 ports,
- RS-232, SPI/I2C bus, 8 10-bit ADC ports,
- mini PCI socket, microSD slot
- 400 mA @ 5V (power consumption)
- 96 mm x 56 mm, 40 g
Robot Names

Cucho (Striker)

Specifications

Physical specs:
- Height: 60 cm
- Weight: 2400 g
- Walking speed: 15 cm/s

Degrees of freedom:
- 24 DOF
- 6 DOF on each leg
- 4 DOF on each arm
- 2 DOF on the head
- 2 DOF on the torso

Servo motors:
- 3 RX-64 digital servomotors by ROBOTIS (Metal gears)
  - 12 V - 21 V operating range
  - 64.4 kg cm @ 15V (stall torque)
  - 320°/s @ 15V (max speed)
- 19 RX-28 digital servomotors by ROBOTIS (Metal gears)
  - 12 V - 21 V operating range
  - 37.7 kg cm @ 16V (stall torque)
  - 476°/s @ 16V (max speed)
- 2 RX-10 digital servomotors by ROBOTIS (Metal gears)
  - 10 V - 21 V operating range
  - 12.1 kg cm @ 12V (stall torque)
  - 504°/s @ 12V (max speed)

Sensors:
- 1 UI-1226LE-C USB 2.0 camera by IDS (WVGA: 752x480), 72° aperture angle
  - 87 fps @ WVGA (max throughput)
  - RGB, YUV, YCbCr (color spaces)
- 1 6 DOF IMU
  - 3 accelerometer axes (analog outputs)
    - 300 mV/g sensitivity, ±3 g range
  - 3 gyroscope axes (analog outputs)
    - 0.83 mV/°/s sensitivity, ±300°/s range

Processing unit:
- Roboard RB-100
  - based on the 32-bit x86 Vortex86DX CPU
  - 1 GHz, 256 MB DDR2 RAM
  - RS-485, 32 PWM channels, 3 USB 2.0 ports, RS-232, SPI/PC bus, 8 10-bit ADC ports, mini PCI socket, microSD slot
  - 400 mA @ 5V (power consumption)
  - 96 mm x 56 mm, 40 g