

6. Manipulator with 7 degrees of freedom

Humanoid robot arms, with many degrees of freedom, can reach around obstacles and through gaps, reconfigure for strength, and manipulate objects with dexterous fluid motion. This robot has kinematic redundancy, like that of the human arm, that enables placement of a hand or tool at a position and orientation in an unlimited number of ways. Combined with Energid's Actin 3D visualization, reasoning, and control software, the Robai Cyton Gamma can perform advanced control by exploiting its kinematic redundancy. Energid's networking software enables robust remote control through a local area network, internet, radio link, or cellular link.



AXIS RANGE

Total 7 independent axes

- Shoulder Roll (Spin) – 300°
- Shoulder Pitch (Articulate) – 210°
- Shoulder Yaw (Articulate) – 210°
- Elbow Pitch (Articulate) – 210°
- Wrist Yaw (Articulate) – 210°
- Wrist Pitch (Articulate) – 210°

- Wrist Roll (Spin) – 300°

MECHANICAL

- Total weight: 3Kg
- Payload at full reach: 1200g
- Payload at mid reach: 1500g
- Arm length : 76cm (base to tip)
- Reach: 68cm
- Maximum linear arm speed: 45 cm/sec
- Maximum speed (free move): 70 cm/sec
- Repeatability +/-0.5mm
- Gripper: 2 fingers, with choice of prongs
- Opening range: 3.5cm

ENVIRONMENT

- Ambient temperature from 10°C to 35°C
- Can be used under normal atmospheric pressure conditions