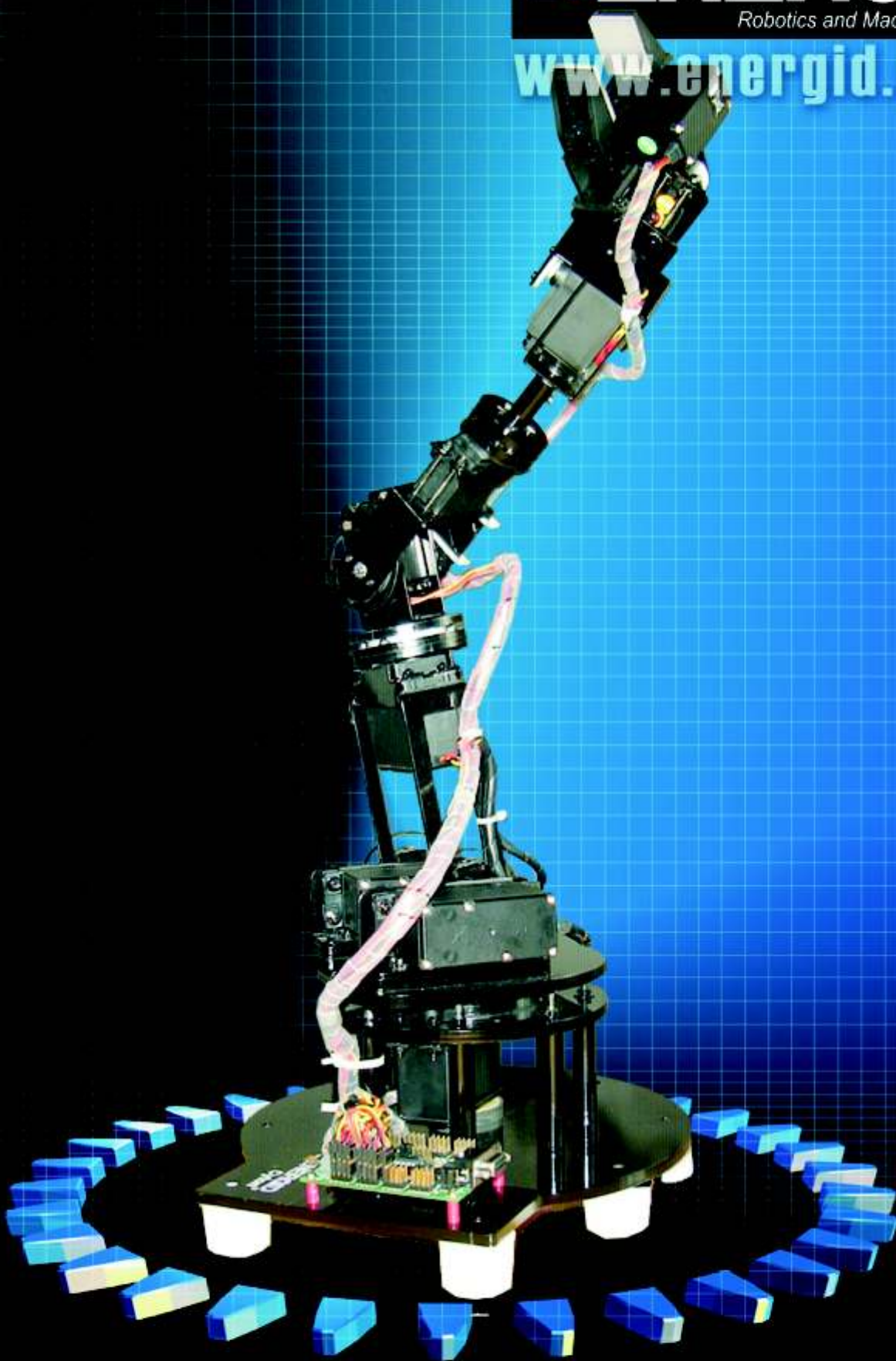


Cyton Alpha 7D-1G 7DOF Humanoid Manipulator

**ENERGID**

Robotics and Machine Vision

[www.energid.co.in](http://www.energid.co.in)



*Cyton Alpha 7D-1G 7DOF*

Humanoid robot arms offer exciting advantages for robotic tasks. With many degrees of freedom, they are able to reach around obstacles, reconfigure for strength, improve accuracy, and manipulate objects with dexterous, fluid motion. Humanoid manipulators have the property of kinematic redundancy that enables the placement of a hand or tool at a desired position and orientation within its workspace in an unlimited number of ways.

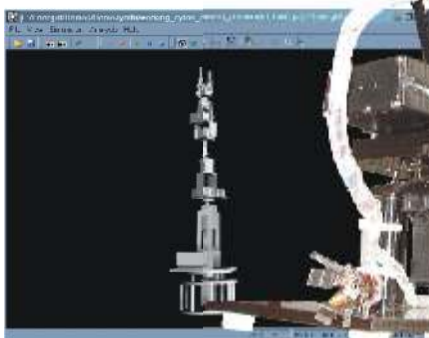
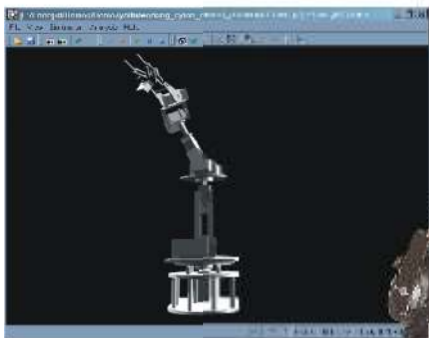
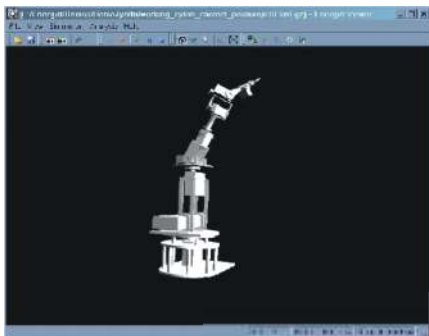
Combined with Energid's 3D visualization, reasoning, and control software, the Cyton Alpha can perform advanced control by exploiting kinematic redundancy. With Energid's networking software, it can be controlled remotely through a local area network or the Internet.

### Specifications

**Mechanical Structure:** 7 DOF plus gripper, all axes completely independent. All axes can be controlled simultaneously. Pitching actions have integrated load balancing springs. Key joints have additional planetary ball bearing support.

**Electronics:** 32 Channel servo controller with 24 free channels for adding end effectors and other peripherals.

**Actuators:** High quality PMDC servo motors with integral gear reduction



Rated Payload	:	300 grams
Maximum Payload	:	500 grams
Rated speed	:	0.2 m/s
Joint speed	:	60 rpm
Height	:	60 cm
Reach	:	48 cm
Repeatability	:	0.23 cm
Hardware interface	:	USB
Control Software	:	XML configurable Actin-Cyton application software with 3D Visualization/Reasoning GUI

### Axes Range

Joint Name	Joint Type	Joint Limit
Shoulder Base	revolute	180°
Shoulder Pitch	revolute	170°
Shoulder Yaw	revolute	180°
Elbow Pitch	revolute	170°
Wrist Roll	revolute	180°
Wrist Yaw	revolute	130°
Wrist Pitch	revolute	135°