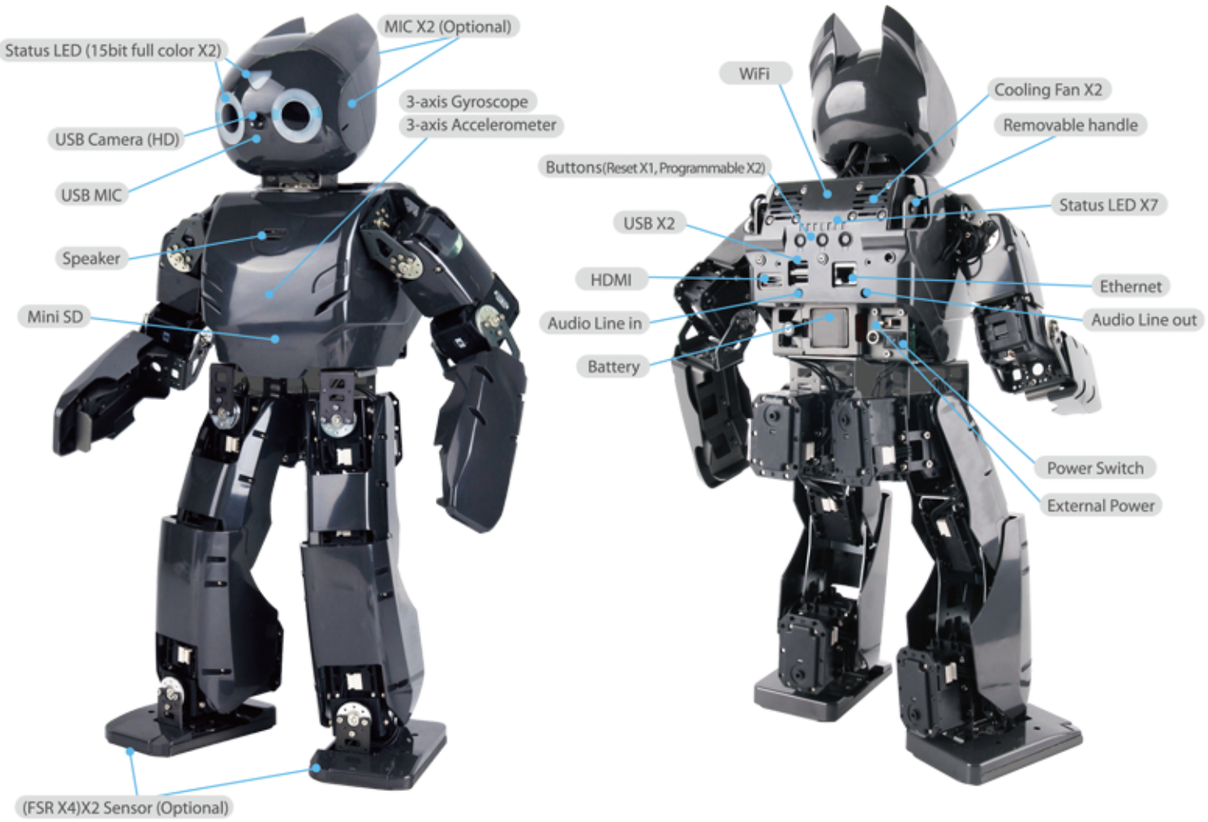
DARwIn-OP

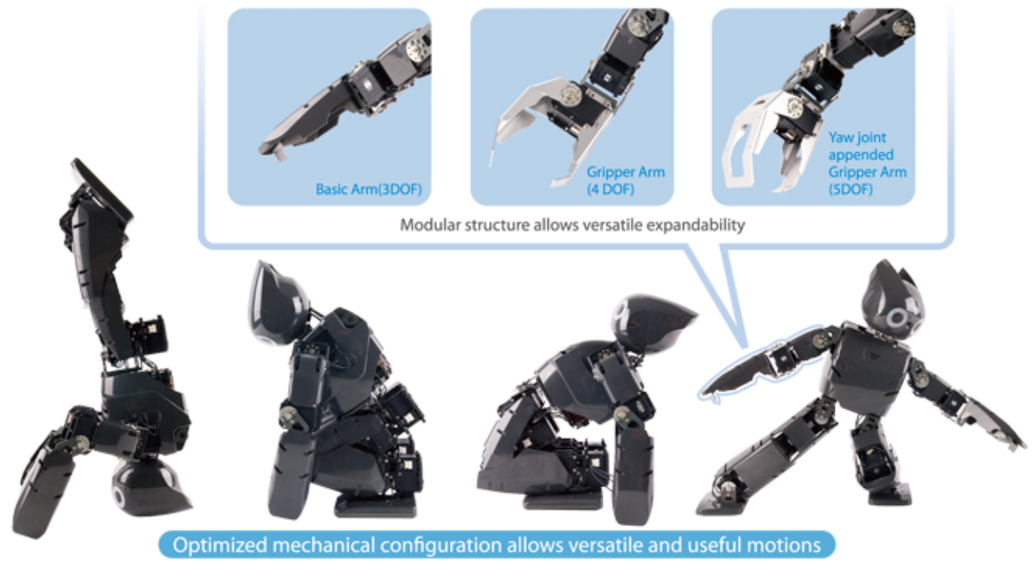
1. Standard PC-based Robot with Convenient Interfaces



2. High Performance and Advanced Features

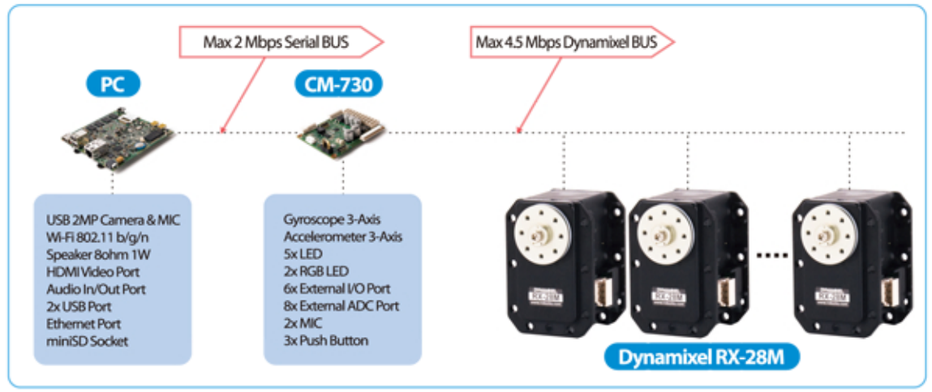
- Default walking speed: 24.0 cm/sec (9.5 in/sec) 0.25 sec/step - user modifiable gait
- Default standing up time from ground: 2.8 sec (from facing down) and 3.9 sec (from facing up) - user modifiable speed
- Built-in PC: 1.6 GHz Intel Atom Z530 on-board 4GB flash SSD
  (specs as of Dec. 2010. Check http://sourceforge.net/projects/darwinop)
- Management controller (CM-730): ARM CortexM3 STM32F103RE 72MHz
- 20 actuator modules (6 DOF leg x2+ 3 DOF arm x2 + 2 DOF neck)
- 1 spare actuator (for maintenance and expansion)
- Actuators with durable metallic gears (Dynamixel RX-28M)
- Self-maintenance kit (easy to follow steps and instructions)
- Standby mode for low power consumption
- 4.5Mbps high-speed Dynamixel bus for joint control
- Battery (30 minutes of operations), charger, and external power adapter
  (Battery can be removed from robot without shutting down by plugging in external power before removal)
- Versatile functionality (can accept legacy, current, and future peripherals)
- 3-axis gyro, 3-axis accelerometer, button x3, detection microphone x2 (optional)

3. Efficient and Versatile Modular Configuration



Optimized mechanical configuration allows versatile and useful motions

4. Simple and Clean Architecture



5. Open Platform (Hardware and Software)

http://sourceforge.net/projects/darwinop

- Mechanics Information
  (Dimensions, Kinematics, Dynamics, CAD data)
- Electronics Information
  (Controllers, Sub B/Ds, Schematics, Part Information)
- Software Information
  (Development Environment, Framework, Source Code)
- Management Information
  (Detailed Assembly Diagrams, User Manintenance Guide)
- Community Resources
  (User-developed Code, Various Application Examples)