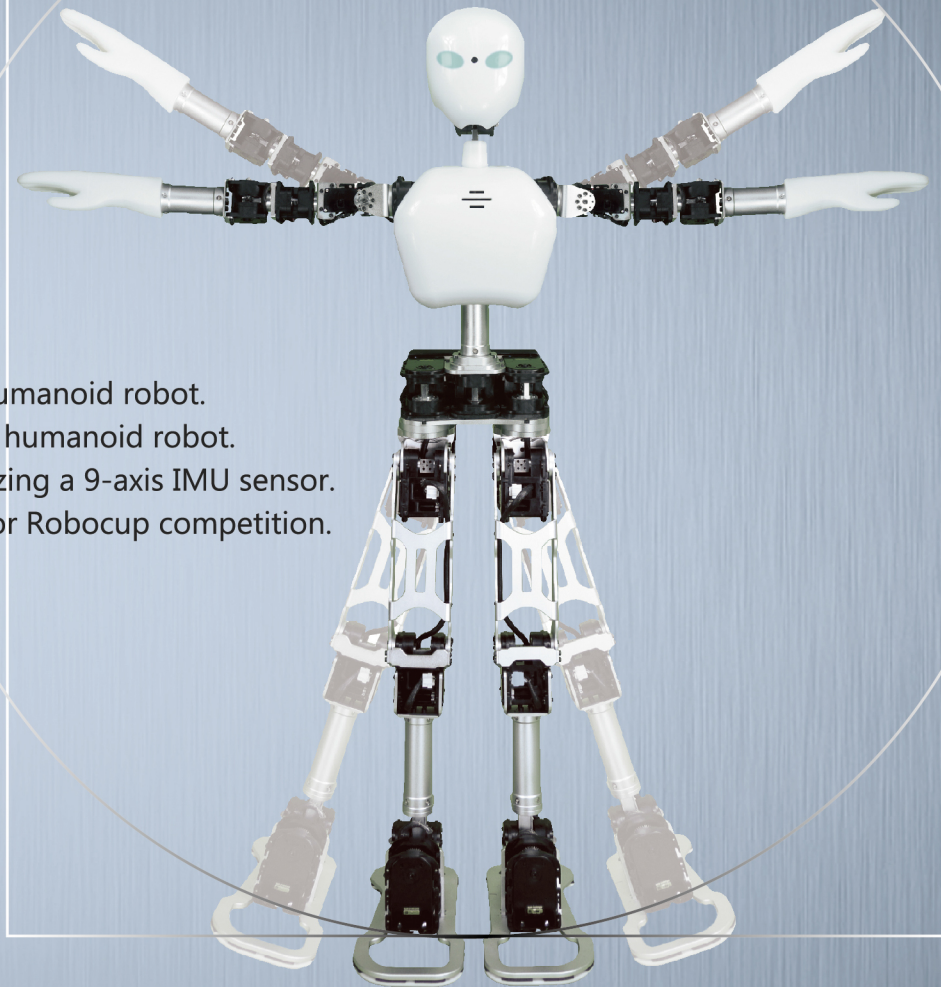


UXA90-Light

Multipurpose Humanoid Robot Platform

**ROBO
BUILDER**



- Well-proportioned 1m tall humanoid robot.
- Walking algorithm for biped humanoid robot.
- Fall detection algorithm utilizing a 9-axis IMU sensor.
- Fully support soccer mode for Robocup competition.
- 300FPS vision processing.



Program Ready



Dance

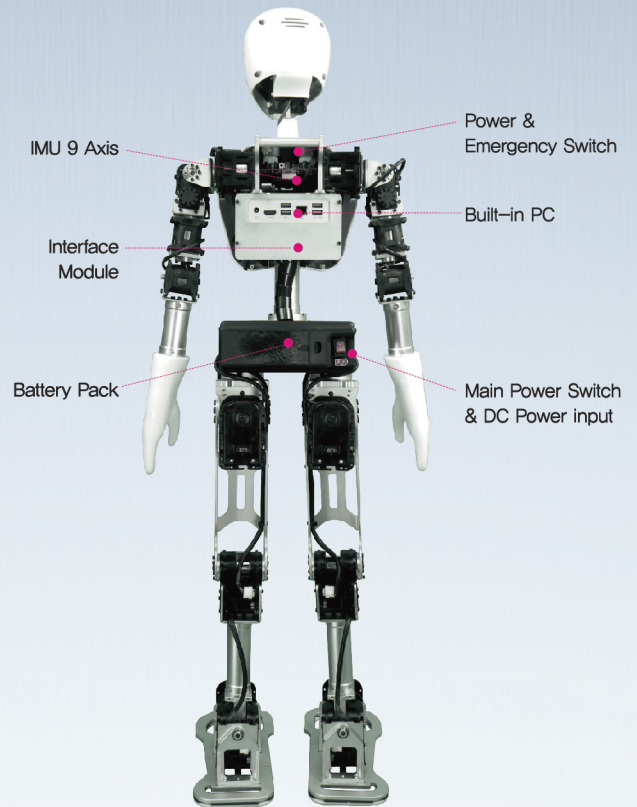
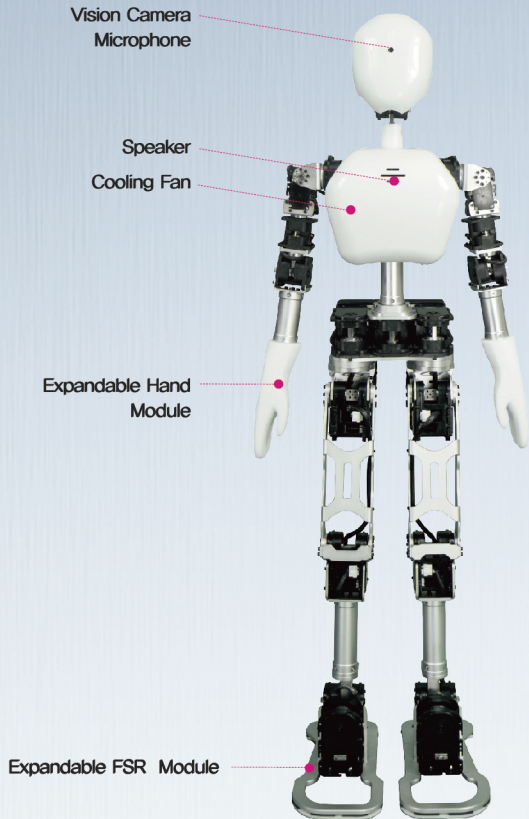


Presentation



Soccer

Specification



The color of robot frame can be vary based on production.

Name	UXA-90 Light
Weight	9.5kg
Height	100cm
Width	35cm
Walking speed	30cm/sec
DOF(Degree of Freedom)	23 DOF 12 DOF for legs 8 DOF for arms 1 DOF for waist 2 DOF for head
Sensor	IMU 2G 9Axis, $\pm 180^\circ$ (Roll/Yaw), $\pm 90^\circ$ (Pitch)
Computer	AMD E2-1800 Processor dual-core 1.7GHz 2GB DDR RAM 64GB(SSD)
Wireless	802.11 b/g/n
External interface	USB2.0 x 2, Ethernet 10/100/1000 Base T USB 3.0 x 2, HDMI x 1
Speaker	1ea
Microphone	1ea
Vision Camera	Logitech C905/HD 1600x1200 pixel
Battery	Lithium Polymer 18.5V, 2250mA
Operation hour	20min ~ 40min
Charging time	30min
O / S	Windows7 Linux Ubuntu 14.04



Software

Provide 3D STEP files for exterior and base frames.

Users can create new appearance by 3D printer.
STEP files include details for assembly such as sizes,
position of devices, and bolt & nuts.

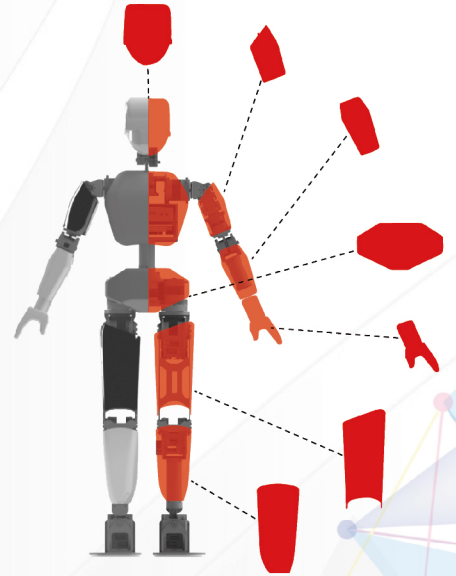


Windows®

Visual C# source code for tracking an object with vision processing.

Management S/W:

- SAM programmer: Manage servo motors.
- Motion builder: Create robot's new behavior.



Platform Body



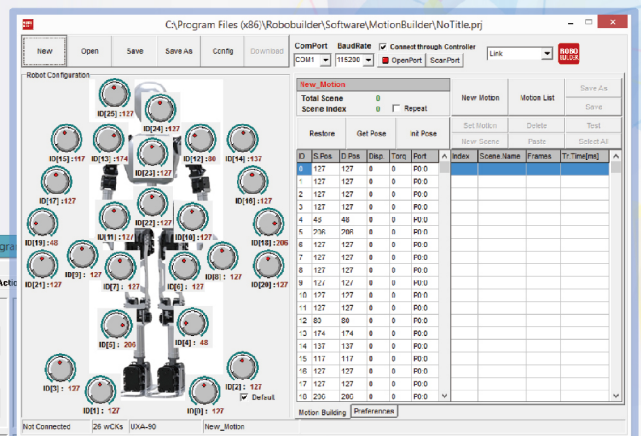
R.O.S based framework.
Includes R.O.S manual and examples for UXA-90.



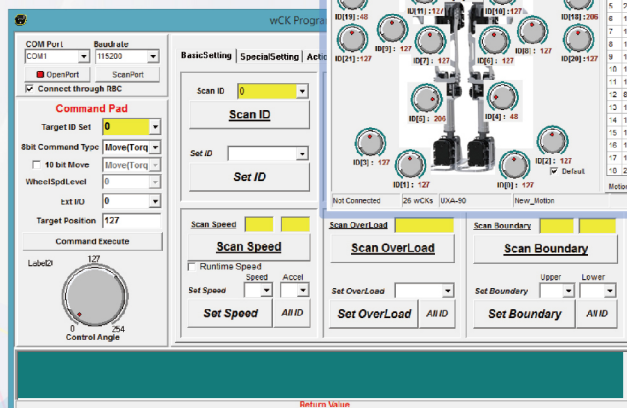
Android app for control and programming
Create new behavior and motion patterns wirelessly.

Management Software

Motion Builder S/W: Create and manage robot's behaviors



SAM Programmer:
Control and manage servo motors

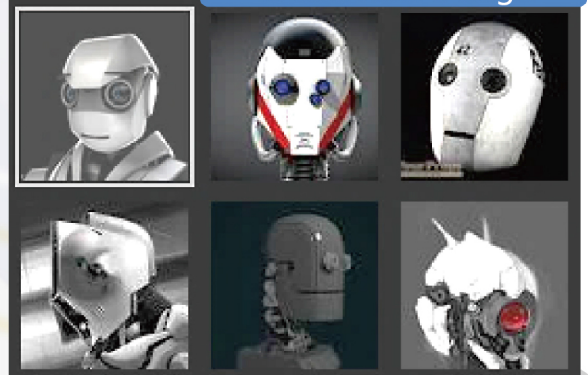


Multipurpose Humanoid Robot

R&D + Education



Create New Design



Create new design with 3D printer based on open 3D sources(Step file)

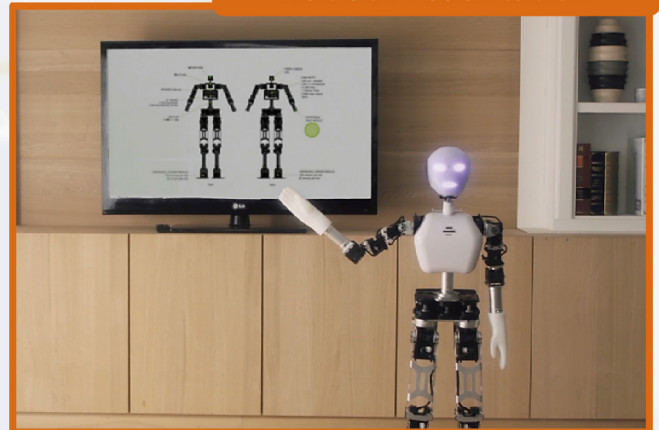
AI: Artificial Intelligence
HRI: Human Robot Interaction
Walking Algorithm
Programming Language
Designing Mechanism



Robot Soccer competition



Robot Presentation

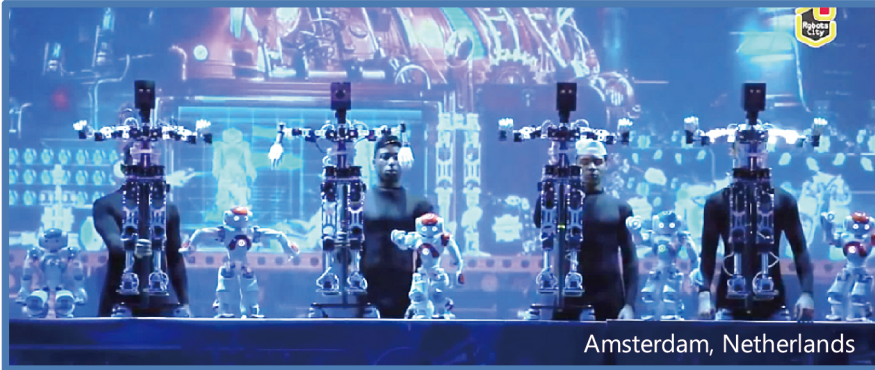


UXA-90 is a well-proportioned 1m tall humanoid shaped robot. It has been designed with a structure to the ratio of the ideal human body.

Since the skeletal structure of the robot imitates the one for a human, it is possible to produce humanlike movement patterns.

It can be controlled in a lot different ways. The robot also has pre-programmed gestures and mouth expressions with synchronized sounds(pre-recorded).

Projects with UXA-90



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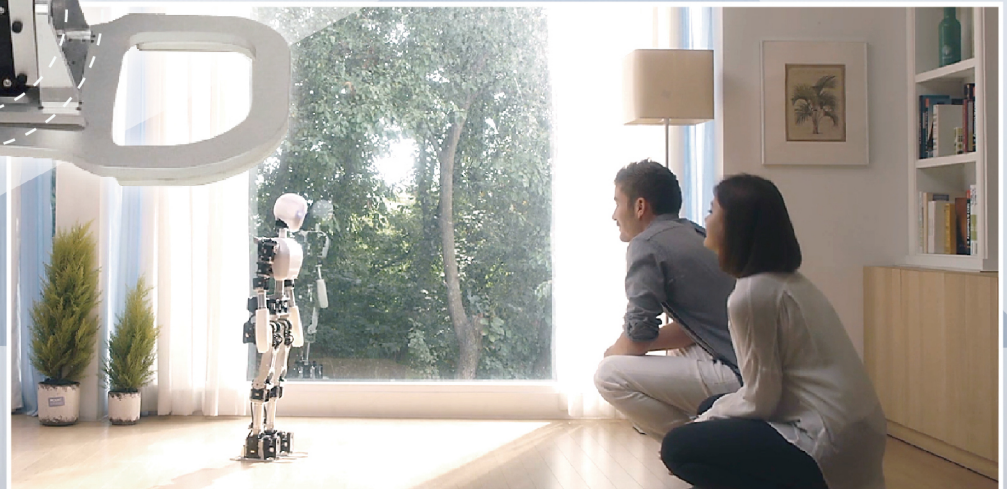
Mobile carrier SK Telecom's 5G robot was showcased at an information technology trade show in Seoul earlier this year.



Developed 5G robot

UXA90-Light

Multipurpose Humanoid Robot Platform



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