Robotnik

CROM TORSO

CROM is an upper body robot designed to perform repetitive and accurate tasks in human-robot collaboration manufacturing environments, because it is safe to operate next to people.

Product

CROM is an upper body robot intended for research in manufacturing environments. It's capable of performing repetitive and accurate tasks. This is possible thanks to each one of the most advanced components integrated, from Schunk arms to Barrett Hand.

It requires no safety cages or barriers and it is safe to operate directly next to peolple so it's ideal for research and development of human-collaboration robotics in production environments.

CROM is a modular and extensible platform. It is possible to configure the robot with a variety of sensors and actuators.

CROM uses a open-source and modular architecture based in ROS (http://www.ros.org).

ROS framework defines a well organized architecture and includes hundreds of user contributed packages and sets of packages called meta-packages, that implement a wide number of functionalities and algorithms as mapping, planning, manipulation, perception, etc.

This characteristic simplifies the software development cycle and allows easy integration and reuse of software components whether they are device drivers or state of the art algorithms in vision, point cloud processing, grasping, planning, etc.

CROM torso is configured in MoveIT!, which is state of the art software for mobile manipulation, incorporating the latest advances in motion planning, manipulation, 3D perception, kinematics, control and navigation. It provides an easy-to-use platform for developing advanced robotics applications, evaluating new robot designs and building integrated robotics products for industrial, commercial, R&D and other domains.

Applications

- Research in manufacturing environments.
- Research and development of human robot interaction in manufacturing environments.
- Advanced perception and manipulation tasks.
- Industrial humanoids.
- Artificial intelligence.

Movelt!
moving robots into the future
moveit.ros.org

www.robotnik.eu

Technical specifications

Mechanical

Dimensions	1.612 mm X 855 mm X 448 mm
Weight	105 Kg
Exterior structure	Aluminium alloy cast metal
Degree of freedom (Axes)	23
Head joint	2 axes (pitch and yaw)
Arm joint	12 axes
Waist joint	1 axis (yaw)
Additional devices	Hand (7 axes)
	Gripper (1 axis)
	Frontal screen
	Perception devices (head camerax2, hand camera x2, 3D sensor x1)
Power supply	220VAC, 10A

Control

Operating system	Ubuntu 12.04, 14.04
Interface	LAN port (100 base-T) x1, Control de eje via Can bus
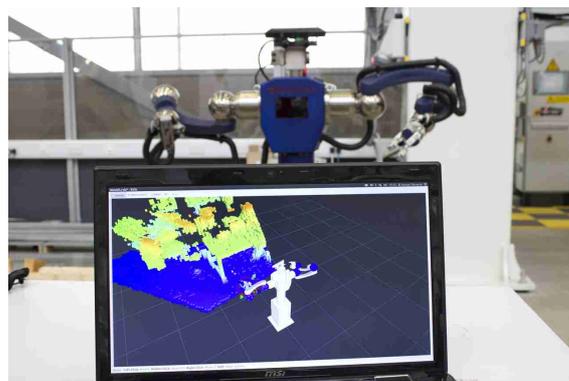
Software

Control	ROS
Operation mode	Point-to-point motion control of all axes, (linear) cartesian trajectories of each arm, being possible to define different TCPs, Euler angles trajectories of both arms.
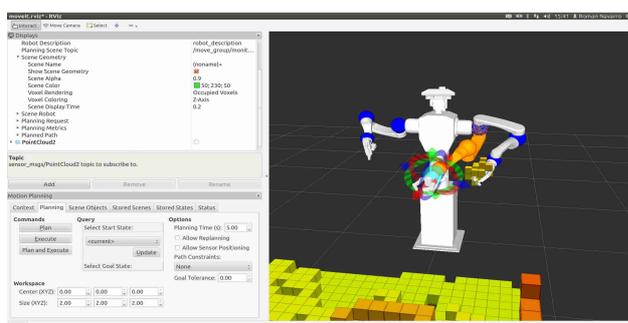
::: ROS.org

C/ Berní y Catalá, 53 bajo izq.
46019 VALENCIA (SPAIN)
Phone: +34 96 338 38 35
info@robotnik.es

www.robotnik.eu