Cyton-Lara Documentation

Release 1.1

Lara-UnB

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Project

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CHAPTER 1

History

Version Alpha

First version. Arm Controled using API for SSC-32. Communication trough serial port RS-323.

Version 1.0 - Feedback Included

Hardware modified to allow direct feedback from robot joints position. Robot controled by USB using a Arduino Mega as interface to SSC-32 board and joint potentiometers.

Version 1.1 - Basic ROS Integration

Robot comunication with ROS trough serial port by the Arduino Mega. Hardware modified allowing use of multiple Serial communication ports.

CHAPTER 2

Authors

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CHAPTER 3

Indices and tables

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Cyton-LARA

Cyton Alpha 7D1G is a 7 DOF Robot Arm developed by Robai. It presents 9 servo motors controlled by a SSC-32 board. However, the servo motors does not provide position feedback. For this reason, the Cyton Alpha only allows open-loop projects, restricting a lot the possibilities of development. This project has as main goal closing the loop of the Cyton arm and developing a Matlab-Arduino user interface with some functions.

Spectification

Description

Servo Motor Feedback

Arduino Mega

Cyton was connected with an Arduino Mega to provided joint angle feedback and allow control trough USB with ROS.

Servo Control - Lynx SSC32

Joing Angles Feedback

Lynx SSC 32

ROS

The Robot Operating System (ROS) is a flexible framework for writing robot software. It is a collection of tools, libraries, and conventions that aim to simplify the task of creating complex and robust robot behavior across a wide variety of robotic platforms.

Robot Description

Rosserial

MoveIt!