

RoMAA-II, an Open Architecture Mobile Robot

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Abstract— The aim of designing and developing an open architecture mobile robot called RoMAA (in accordance with its name in Spanish) arises from the necessity to have a vehicle suitable for carrying out different experiments in the robotics research field. This vehicle has to have the ability to be easily adapted to different experiments in the research field of mobile robotics and computer vision. The present paper describes in detail the development of the final version of the robot –RoMAA- II– as an improvement of the original version RoMAA. The different parts that compose the robot are described which include the electromechanical components, the onboard embedded system, along with the high level software running in the on-board computer; together with the description of its more relevant characteristics. Nowadays, four fully operational RoMAA-II robots are available in the CIIL, which are regularly used for experiments of different research projects.

Keywords— Mobile robots, Open source hardware, Open source software.

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