

IP BASED ROBOT CONTROLLING

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The main topic of this document is a custom build presentation of a humanoid robot, focused on the software control part.

The process in general is a hardware and software co-design, the development presents a communication platform that also been considered in the most commercial wireless embedded systems, in example the flexibility in variable system setup, scalability, data encryption policy, modularization of software components, and ability of further function updates.

In the first part, I show an industrial control system, that is being used for as a part of a manufacturing system.

In the second part, I present a package-oriented TCP/UDP communication based on Internet-Protocol, and its usage in a firm-real time system..

In the third part, I expand the mechanical structure of the target robot hardware.