

Research Project/Master's Thesis

Aufbau eines Flugreglers auf einem einfachen Einplatinencomputer



Background

The control of the multicopter currently used in the Flypulator project runs on a stationary PC. The cables required for signal transmission to the drone are a major source of disturbance, especially for precise flight maneuvers. Since small and inexpensive single board computers (SBC) are now available with sufficient computing power to be used as onboard flight controllers for multicopters, an SBC shall be used in this thesis to control the multicopter.

Possible work packages

- Choice of a suitable single board computer
- Installation of a real-time operating system (if not pre-installed)
- Transfer of the existing controller to the SBC
- Integration of the SBC into the existing system (sensors, actuators, user interface)
- Validation and in-flight testing

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Prior Knowledge

- Programming in C++
- Experience with Linux
- ROS (optional)