

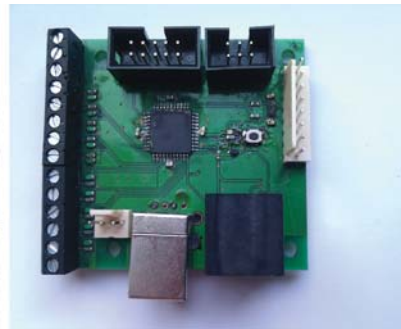


Development of a test bed for the practical experiment "Discrete Event Control Design"

The practical course regulation and control is an integral part of the Mechatronics program at the TU Dresden. For the experiment to the discrete-event control design, a new test stand will be designed and built. As an application should serve the electronics of a car window regulator.

The aim of this study work, it is to the structure of the test stand, specially developed to build a microcontroller board so that participants in the trial according to the design of the control algorithm can implement this into a program in the C programming language on the microcontroller, to actuate the window by using the power window switch.

First, a suitable control algorithm and a thus suitable finite state machine are developed by design skills acquired in the course Ereignisdiskreter Steuerungsentwurf content for the test stand. Serving as test objects car doors have integrated necessary mechanics and electronics already, so that the switch signals should be used as input signals, and the motor signals should be used as output signals.



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