HTL ST. PÖLTEN	**HÖHERE TECHNISCHE BUNDESLEHRANSTALT ST. PÖLTEN** **COLLEGE of ENGINEERING**
	Department: **Elektronische und Technische Informatik** Educational focus: **Wireless- & Embedded Systems**

DIPLOMA THESIS
DOCUMENTATION

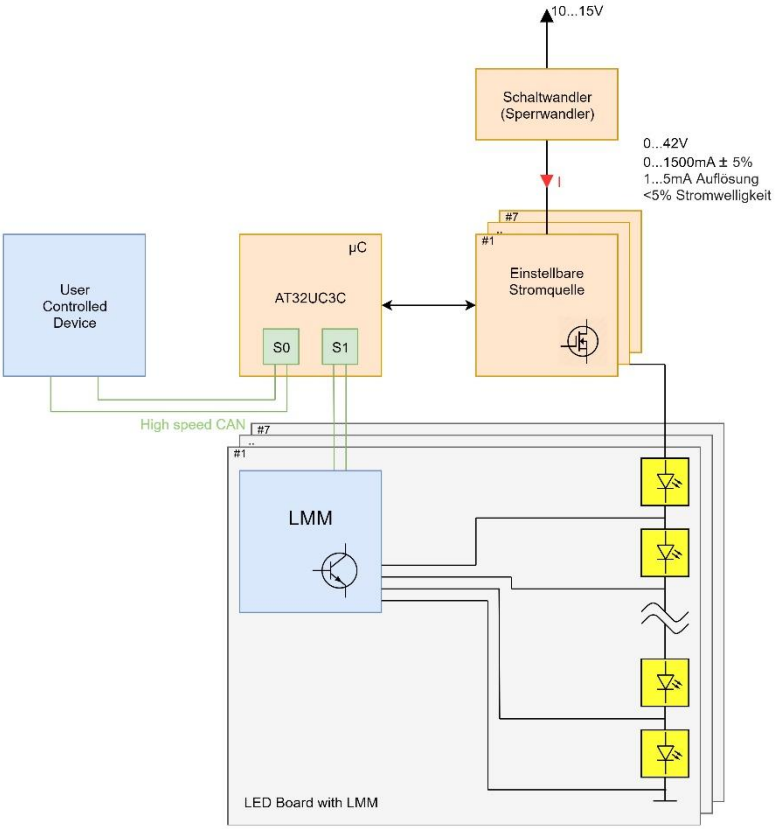
Author(s)	Florian Hintermeier / Dominik Gansch
Form Academic year	5AHELS – 2019/20
Topic	Universal highly-dynamic LED-Driver
Co-operation Partners	ZKW Group GmbH

Assignment of Tasks	The company ZKW wants a universal usable LED-Driver for their in development or in production LED-Devices. It should be able to set the brightness of each LED individually, at a maximum of 84 LEDs.

Realisation	The voltage is converted up or down by the SEPIC circuit, so that it can be set to fit the needed application. The current is set using a digital potentiometer or can be set by hand. The 32-bit microcontroller AT32UC3C allows the communication between the devices.

Results	The circuits for the microcontroller and for the voltage and current setting have been developed. A PCB was developed but could no longer be produced due to the corona crisis. Therefore, no functional tests could be carried out. The programming work of the communications have been done.

HTL ST. PÖLTEN	**HÖHERE TECHNISCHE BUNDESLEHRANSTALT ST. PÖLTEN** **COLLEGE of ENGINEERING**
	Department: **Elektronische und Technische Informatik** Educational focus: **Wireless- & Embedded Systems**

Illustrative Graph, Photo (incl. explanation)	 Block diagram of the LED driver. All essential parts can be seen.

Participation in Competitions Awards	None

Accessibility of Diploma Thesis	The diploma thesis can be seen in the HTL St. Pölten, Waldstraße 3, 3100 St. Pölten

Approval (Date / Signature)	Examiner	Head of College/Department